PLANNING COMMISSION

RECEIVED
'22 APR -6 A7:54

KAAINA S. HULL, CLERK OF COMMISSION

HELEN COX, CHAIR
FRANCIS DEGRACIA, VICE CHAIR
GERALD AKO, MEMBER
DONNA APISA, MEMBER
MELVIN CHIBA, MEMBER
LORI OTSUKA, MEMBER

Pursuant to Hawai'i Revised Statutes Section 92-3.7, which codified Act 220, SLH 2021, the meetings of the County of Kaua'i Planning Commission will be conducted as follows:

- **The meeting location that will be open to the public with audiovisual connection is:**
  - **Līhu'e Civic Center, Moikeha Building**
  - **Meeting Room 2A-2B**
  - **4444 Rice Street, Līhu'e, Kaua'i, Hawai'i**
- In addition to attendance in-person, the public may also attend the meeting by phone using the "join by phone" telephone number provided on the agenda.
- The public may also attend the meeting through Zoom using link provided on the agenda.
- Also, the meeting will be live streamed and available as an archived meeting after completion at www.kauai.gov/Webcast-Meetings. Please note that the livestream broadcast does not allow interaction between the viewer and Planning Commission. Also, video production services or enhancements of the recorded video will not be available.
- **Written testimony** may be submitted on any agenda item and submitted to planningdepartment@kauai.gov or mailed to the Kauai County Planning Department 4444 Rice Street., Ste A473, Lihue, Hawaii 96766. Written testimony received by the Planning Department at least **24 hours prior** to the meeting will be distributed to all Planning Commissioners prior to the meeting. Any testimony received after this time and up to the start of the meeting will be summarized by the Clerk of the Commission during the meeting and added to the record thereafter.
- **Oral testimony** will be taken during the public hearing portion of the meeting **in-person at the public meeting location, by using the 'join by phone' number, or via Zoom link as an additional accommodation** listed on the agenda.
  - All testifier audio and video will be disabled until it is your turn to testify.
  - Per the Planning Commission's and Chairs practice, there is three-minute time limit per testifier, per agenda item.
  - If there are temporary technical glitches during your turn to testify, we may have to move on to the next person due to time constraints; we appreciate your understanding.
- If the remote telephone connection is lost and cannot be restored within 30 minutes during the meetings, the Planning Commission will continue all matters and reconvene at the next scheduled Planning Commission Meeting.

PLANNING COMMISSION TELECONFERENCE MEETING NOTICE AND AGENDA
Tuesday, April 12, 2022
9:00 a.m. or shortly thereafter

To Join by Phone:
US: +1 720 707 2699 or +1 253 215 8782 or +1 346 248 7799 or
+1 646 558 8656 or +1 301 715 8592 or +1 312 626 6799
Webinar ID: 932 6783 6491
Participant ID: #

To Join by ZOOM Link:
https://us06web.zoom.us/j/93267836491?pwd=N0NTQUlQREtkQ1Y1WitJSGJBMkgyZz09

Webcast Link: https://www.kauai.gov/Webcast-Meetings

A. **CALL TO ORDER**

B. **ROLL CALL**

C. **APPROVAL OF AGENDA**

D. **MINUTES of the meeting(s) of the Planning Commission**

E. **RECEIPT OF ITEMS FOR THE RECORD**

F. **HEARINGS AND PUBLIC COMMENT.** **The Planning Commission will accept written testimony for any agenda item herein. Written testimony indicating your 1) name, and if applicable, your position/title and organization you are representing, and 2) the agenda item that you are providing comment on, may be submitted in writing to planningdepartment@kauai.gov or mailed to the County of Kaua'i Planning Department, 4444 Rice Street, Suite 473, Līhu'e, Hawai'i 96766. Written testimony received by the Planning Department before 9:00 a.m. on Monday, April 11, 2022, will be distributed to all Planning Commissioners prior to the meeting. Written testimony received after 9:00 a.m. on Monday, April 11, 2022, will be summarized by the Clerk of the Commission during the meeting and added to the record thereafter.**

Oral testimony will be taken during the public hearing portion of the meeting in-person at the public meeting location, via Zoom link, or using the "join by phone" number listed on the agenda. After oral testimony has been taken, members of the public may continue watching the meeting via the live stream link found at www.kauai.gov/webcastmeetings.

1. **Continued Agency Hearing**

    a. None for this Meeting

2. **New Agency Hearing**

a. AMENDMENT TO SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-83-4), CLASS IV ZONING PERMIT Z-IV-83-27, and USE PERMIT U-83-17 to allow expansion for an outdoor restaurant use and associated improvements on a parcel situated on the makai side of Lawa'i Road, commonly known as The Beach House Restaurant, further identified as 5022 Lawa'i Road, Tax Map Key: 2-6-005:011, containing a total area of 34,900 square feet **= IP2 LLC (dba The Beach House Restaurant).** [Director's report received 3/22/2022].

1. Director's Report pertaining to this matter (see agenda packet).

b. CLASS IV ZONING PERMIT (Z-IV-2022-6) and USE PERMIT (U-2022-6) to facilitate conversion of an existing building into a pre-school facility containing classrooms, offices, a meeting room and reception area on the St. Catherine's Church/School campus, situated at the Kawaihau Road/Haua'ala Road intersection and further identified as Tax Map Key: (4) 4-6-015:058, containing a total area of approximately 1.09acres feet **= Kamehameha Schools.** [Director's report received 3/22/2022].

1. Director's Report pertaining to this matter (see agenda packet).

c. CLASS IV ZONING PERMIT (Z-IV-2022-7) and USE PERMIT (U-2022-7) to allow construction of a new single-family dwelling unit on a parcel situated at the southern terminus of Aalona Street in Kilauea, situated approximately 300 feet south of its intersection with Lokela Street and further identified as 4433 Aalona Street, Tax Map Key: (4) 5-2-006:014, containing a total area of approximately 16,187 square feet. feet **= Keopele V. & Ashley H. McBride.** [Director's report received 3/22/2022].

1. Director's Report pertaining to this matter (see agenda packet).

d. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-3) to accommodate streambank stabilization repair work involving a parcel along the Hanalei River, along the makai side of Kuhio Highway in Hanalei Town, further identified as 5-5016 Kuhio Highway, Tax Map Key: 5-5-010:067, containing a total area of 2.32 acres **= Hanalei Traders, Inc**.

1. Director's Report pertaining to this matter (see agenda packet).

e. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-4) to allow construction of a new single-family dwelling unit on a parcel situated along the makai side of Pee Road in Poipu, at the eastern terminus of a cul-de-sac, situated approximately 600 feet south of its intersection with Pee Road and further identified as Lot 3 of the Makahuena Estates Subdivision, Tax Map Key: (4) 2-8-021:070, containing a total area of approximately 43,604 square feet **= Makahuena-Preferred A LLC**.

1. Director's Report pertaining to this matter (see agenda packet).

f. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-5) to allow construction of a new single-family dwelling unit on a parcel situated along the makai side of Pee Road in Poipu, situated approximately 500 feet south of its intersection with Pee Road and further identified as Lot 5 of the Makahuena Estates Subdivision, Tax Map Key: (4) 2-8-021:072, containing a total area of approximately 49,005 square feet = **Makahuena-Preferred A LLC**.

1. Director's Report pertaining to this matter (see agenda packet).

3. **Continued Public Hearing**

g. None for this Meeting

4. New Public Hearing

a. ZA-2022-5: A bill for an ordinance amending Chapter 11A, Kaua'i County Code 1987, as amended, relating to Environmental Impact Assessment on Land Development. The proposal amends Sections 11A-1.3 & 11A-2.2 of the Kauai County Code relating to Applicability/Assessment of regulations and more specifically, application of environmental impact assessment fees = **County of Kaua'i, Planning Department**.

1. Director's Report pertaining to this matter (see agenda packet).

b. ZA-2022-6: A bill for an ordinance amending Chapter 8, Kaua'i County Code 1987, as amended, relating to Comprehensive Zoning Ordinance (CZO). The proposal amends Sections 8-15.1 & 8-15.2 of the CZO relating to Additional Dwelling Units (ADU) and more specifically, qualification requirements involving ADUs **= County of Kaua'i, Planning Department**.

1. Director's Report pertaining to this matter (see agenda packet).

c. ZA-2022-7: A bill for an ordinance amending Chapter 8, Kaua'i County Code 1987, as amended, relating to Comprehensive Zoning Ordinance (CZO). The proposal amends Sections 8-1.5, 8-2.4, and Articles 17 & 19 of the CZO relating to Definitions, Table of Uses, and Time Sharing & Transient Vacation Rentals respectively **= County of Kaua'i, Planning Department** .

1. Director's Report pertaining to this matter (see agenda packet).

5. All remaining public testimony pursuant to HRS 92 (Sunshine Law)

G. CONSENT CALENDAR

1. **Status Reports**

a. None for this Meeting.

2. **Director's Report for Project Scheduled for Agency Hearing**

a. None for this Meeting.

H. GENERAL BUSINESS MATTERS

1. Request to amend Condition No. 1 of Class IV Zoning Permit Z-IV-2003-19 and Use Permit U-2003-18 to allow for the installation of an emergency back-up generator = **T-Mobile (previously Voicestream PCS II Corporation)**

    a. Director's Report pertaining to this matter (see agenda packet).

I. COMMUNICATION

1. None for this Meeting.

J. COMMITTEE REPORTS

1. **Subdivision Committee**

    a. Consideration and Action on all Subdivision matters listed on the Subdivision Committee Agenda. **None for this meeting**.

K. UNFINISHED BUSINESS (For Action)

1. None for this Meeting.

L. NEW BUSINESS (For Action)

1. AMENDMENT TO SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-83-4), CLASS IV ZONING PERMIT Z-IV-83-27, and USE PERMIT U-83-17 to allow expansion for an outdoor restaurant use and associated improvements on a parcel situated on the makai side of Lawa'i Road, commonly known as The Beach House Restaurant, further identified as 5022 Lawa'i Road, Tax Map Key: 2-6-005:011, containing a total area of 34,900 square feet **= IP2 LLC (dba The Beach House Restaurant).** [Director's report received 3/22/2022].

    a. Director's Report pertaining to this matter (see agenda packet).

2. CLASS IV ZONING PERMIT (Z-IV-2022-6) and USE PERMIT (U-2022-6) to facilitate conversion of an existing building into a pre-school facility containing classrooms, offices, a meeting room and reception area on the St. Catherine's Church/School campus, situated at the Kawaihau Road/Haua'ala Road intersection and further identified as Tax Map Key: (4) 4-6-015:058, containing a total area of approximately 1.09acres feet **= Kamehameha Schools.** [Director's report received 3/22/2022].

    a. Director's Report pertaining to this matter (see agenda packet).

3. CLASS IV ZONING PERMIT (Z-IV-2022-7) and USE PERMIT (U-2022-7) to allow construction of a new single-family dwelling unit on a parcel situated at the southern terminus of Aalona Street in Kilauea, situated approximately 300 feet south of its intersection with Lokela Street and further identified as 4433 Aalona Street, Tax Map Key: (4) 5-2-006:014, containing a total area of approximately 16,187 square feet. feet **= Keopele V. & Ashley H. McBride.** [Director's report received 3/22/2022].

    a. Director's Report pertaining to this matter (see agenda packet).

4. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-3) to accommodate streambank stabilization repair work involving a parcel along the Hanalei River, along the makai side of Kuhio Highway in Hanalei Town, further identified as 5-5016 Kuhio Highway, Tax Map Key: 5-5-010:067, containing a total area of 2.32 acres = **Hanalei Traders, Inc.**

    a. Director's Report pertaining to this matter (see agenda packet).

5. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-4) to allow construction of a new single-family dwelling unit on a parcel situated along the makai side of Pee Road in Poipu, at the eastern terminus of a cul-de-sac, situated approximately 600 feet south of its intersection with Pee Road and further identified as Lot 3 of the Makahuena Estates Subdivision, Tax Map Key: (4) 2-8-021:070, containing a total area of approximately 43,604 square feet **= Makahuena-Preferred A LLC**.

    a. Director's Report pertaining to this matter (see agenda packet).

6. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-5) to allow construction of a new single-family dwelling unit on a parcel situated along the makai side of Pee Road in Poipu, situated approximately 500 feet south of its intersection with Pee Road and further identified as Lot 5 of the Makahuena Estates Subdivision, Tax Map Key: (4) 2-8-021:072, containing a total area of approximately 49,005 square feet **= Makahuena-Preferred A LLC**.

    a. Director's Report pertaining to this matter (see agenda packet).

7. ZA-2022-5: A bill for an ordinance amending Chapter 11A, Kaua'i County Code 1987, as amended, relating to Environmental Impact Assessment on Land Development. The proposal amends Sections 11A-1.3 & 11A-2.2 of the Kauai County Code relating to Applicability/Assessment of regulations and more specifically, application of environmental impact assessment fees = **County of Kaua'i, Planning Department.**

    a. Director's Report pertaining to this matter (see agenda packet).

8. ZA-2022-6: A bill for an ordinance amending Chapter 8, Kaua'i County Code 1987, as amended, relating to Comprehensive Zoning Ordinance (CZO). The proposal amends Sections 8-15.1 & 8-15.2 of the CZO relating to Additional Dwelling Units (ADU) and more specifically, qualification requirements involving ADUs = **County of Kaua'i, Planning Department.**

    a. Director's Report pertaining to this matter (see agenda packet).

9. ZA-2022-7: A bill for an ordinance amending Chapter 8, Kaua'i County Code 1987, as amended, relating to Comprehensive Zoning Ordinance (CZO). The proposal amends Sections 8-1.5, 8-2.4, and Articles 17 & 19 of the CZO relating to Definitions, Table of Uses, and Time Sharing & Transient Vacation Rentals respectively = **County of Kaua'i, Planning Department.**

    a. Director's Report pertaining to this matter (see agenda packet).

10. Request to amend Condition No. 1 of Class IV Zoning Permit Z-IV-2003-19 and Use Permit U-2003-18 to allow for the installation of an emergency back-up generator = **T-Mobile (previously Voicestream PCS II Corporation)**

    a. Director's Report pertaining to this matter (see agenda packet).

H. EXECUTIVE SESSION

Pursuant to Hawaii Revised Statutes Sections 92-4 and 92-5(a)(4), the purpose of this executive session is to consult with the County's legal counsel on questions, issues, status and procedural matters. This consultation involves consideration of the powers, duties, privileges, immunities, and/or liabilities of the Commission and the County as they relate to the following matters:

1. AMENDMENT TO SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-83-4), CLASS IV ZONING PERMIT Z-IV-83-27, and USE PERMIT U-83-17 to allow expansion for an outdoor restaurant use and associated improvements on a parcel situated on the makai side of Lawa'i Road, commonly known as The Beach House Restaurant, further identified as 5022 Lawa'i Road, Tax Map Key: 2-6-005:011, containing a total area of 34,900 square feet **= IP2 LLC (dba The Beach House Restaurant).** [Director's report received 3/22/2022].

2. CLASS IV ZONING PERMIT (Z-IV-2022-6) and USE PERMIT (U-2022-6) to facilitate conversion of an existing building into a pre-school facility containing classrooms, offices, a meeting room and reception area on the St. Catherine's Church/School campus, situated at the Kawaihau Road/Haua'ala Road intersection and further identified as Tax Map Key: (4) 4-6-015:058, containing a total area of approximately 1.09acres feet **= Kamehameha Schools.** [Director's report received 3/22/2022].

3. CLASS IV ZONING PERMIT (Z-IV-2022-7) and USE PERMIT (U-2022-7) to allow construction of a new single-family dwelling unit on a parcel situated at the southern terminus of Aalona Street in Kilauea, situated approximately 300 feet south of its intersection with Lokela Street and further identified as 4433 Aalona Street, Tax Map Key: (4) 5-2-006:014, containing a total area of approximately 16,187 square feet. feet **= Keopele V. & Ashley H. McBride.** [Director's report received 3/22/2022].

4. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-3) to accommodate streambank stabilization repair work involving a parcel along the Hanalei River, along the makai side of Kuhio Highway in Hanalei Town, further identified as 5-5016 Kuhio Highway, Tax Map Key: 5-5-010:067, containing a total area of 2.32 acres **= Hanalei Traders, Inc**.

5. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-4) to allow construction of a new single-family dwelling unit on a parcel situated along the makai side of Pee Road in Poipu, at the eastern terminus of a cul-de-sac, situated approximately 600 feet south of its intersection with Pee Road and further identified as Lot 3 of the Makahuena Estates Subdivision, Tax Map Key: (4) 2-8-021:070, containing a total area of approximately 43,604 square feet **= Makahuena-Preferred A LLC**.

6. SPECIAL MANAGEMENT AREA USE PERMIT (SMA(U)-2022-5) to allow construction of a new single-family dwelling unit on a parcel situated along the makai side of Pee Road in Poipu, situated approximately 500 feet south of its intersection with Pee Road and further identified as Lot 5 of the Makahuena Estates Subdivision, Tax Map Key: (4) 2-8-021:072, containing a total area of approximately 49,005 square feet **= Makahuena-Preferred A LLC**.

7. ZA-2022-5: A bill for an ordinance amending Chapter 11A, Kaua'i County Code 1987, as amended, relating to Environmental Impact Assessment on Land Development. The proposal amends Sections 11A-1.3 & 11A-2.2 of the Kauai County Code relating to Applicability/Assessment of regulations and more specifically, application of environmental impact assessment fees = **County of Kaua'i, Planning Department.**

8. ZA-2022-6: A bill for an ordinance amending Chapter 8, Kaua'i County Code 1987, as amended, relating to Comprehensive Zoning Ordinance (CZO). The proposal amends Sections 8-15.1 & 8-15.2 of the CZO relating to Additional Dwelling Units (ADU) and more specifically, qualification requirements involving ADUs = **County of Kaua'i, Planning Department.**

9. ZA-2022-7: A bill for an ordinance amending Chapter 8, Kaua'i County Code 1987, as amended, relating to Comprehensive Zoning Ordinance (CZO). The proposal amends Sections 8-1.5, 8-2.4, and Articles 17 & 19 of the CZO relating to Definitions, Table of Uses, and Time Sharing & Transient Vacation Rentals respectively = **County of Kaua'i, Planning Department.**

10. Request to amend Condition No. 1 of Class IV Zoning Permit Z-IV-2003-19 and Use Permit U-2003-18 to allow for the installation of an emergency back-up generator = **T-Mobile (previously Voicestream PCS II Corporation)**

I. ANNOUNCEMENTS

1. Topics for Future Meetings.

2. The following regularly scheduled Planning Commission meeting will be held at 9:00 a.m., or shortly thereafter, on May 10, 2022. The Planning Commission anticipates this meeting to be held in-person at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Hawaii 96766. The Commission also anticipates providing telephone and a virtual platform capability for members of the public to testify remotely. The Commission will announce its intended meeting method via an agenda electronically posted at least six days prior to the meeting date.

J. ADJOURNMENT

NOTE: IF YOU NEED AN AUXILIARY AID/SERVICE, OTHER ACCOMMODATION DUE TO A DISABILITY, OR AN INTERPRETER FOR NON-ENGLISH SPEAKING PERSONS, PLEASE CONTACT THE OFFICE OF BOARDS & COMMISSIONS AT (808) 241-4917 OR ASEGRETI@KAUAI.GOV AS SOON AS POSSIBLE. REQUESTS MADE AS EARLY AS POSSIBLE WILL ALLOW ADEQUATE TIME TO FULFILL YOUR REQUEST.

UPON REQUEST, THIS NOTICE IS AVAILABLE IN ALTERNATE FORMATS SUCH AS LARGE PRINT, BRAILLE, OR ELECTRONIC COPY.

Pursuant to Section 8-27.8 (6) of the Kaua'i County Code (1987), as amended, the following shoreline setback determinations by the Director are disclosed for purposes of public notification.

April 12, 2022

SHORELINE SETBACK DETERMINATIONS

Application No.	Name of Applicant(s)	Property I.D. (Tax Map Key)	Location	Development/Reasons
SSD-2022-35	Makahuena Preferred A, LLC et. Al.	2-8-021:076	Kōloa	Single family dwelling, accessory structures (pool, detached garage, 'ohana unit above garage)/ Rocky shore, required setback 76 feet, proposed setback of pool and SFR 454 feet.
SSD-2022-36	Coconut Plantations Beach Investors	4-3-007:027	Kapa'a	Sand stockpiling for beach restoration project/ Minimum setback required 100 feet. Proposed stockpile setback 140 feet. (Renewal of original SSD-2020-31).
SSD-2022-37	Hokuala Kaua'i	3-005:001:216	Līhu'e	Sales office renovation, Lāna'i addition with flagstone walkway/ Rocky shore, high cliff bluff approximately 100 feet in elevation, required setback 100 feet proposed development 424 feet away from shoreline.
SSD-2022-38	Iurii Iefymenko	5-4-012:011 0043	Princeville	New roof over existing atrium. / Unsubstantial improvement. Required setback 67 feet, Setback for existing building is 373 feet. Property is on a high cliff bluff approx. 150 feet high.

MCCORRISTON MILLER MUKAI MACKINNON LLP

LAUREL LOO 4806
4357 Rice Street, Suite 102
Lihu`e, Kaua`i, Hawai`i 96766
Telephone No.: (808) 632-2267
Facsimile No.: (808) 524-8293

Attorney for Applicants
IP2 LLC dba The Beach House Restaurant

BEFORE THE PLANNING COMISSION

OF THE

COUNTY OF KAUA`I

In the Matter of the Application	)	SMA PERMIT NO. _____
	)	
Of	)	APPLICATION FOR SPECIAL
	)	MANAGEMENT AREA USE PERMIT;
IP2 LLC dba THE BEACH HOUSE	)	SMA (U)-2021; EXHIBITS “A” – “E”
RESTAURANT, affecting real property	)	
at Koloa, Island and County of Kaua`i,	)	
State of Hawai`i, more particularly	)	
Identified as Tax Map Key No.	)	
(4) 2-6-005:011, containing an area of	)	
34,900 square feet, more or less	)	
_____	)	

APPLICATION FOR SPECIAL MANAGEMENT AREA USE PERMIT

I. APPLICANTS AND OVERVIEW

A.. Applicants: The Applicants are IP2 LLC, dba The Beach House Restaurant, which has authorized Laurel Loo of McCorriston Miller Mukai MacKinnon, LLC, to file this Application.

B. Property: The Property is located at 5022 Lawai Road, Koloa, Kauai, Hawaii, and is more particularly identified as Tax Map Key (4) 2-6-005:011. A legal description of the Property is described in the Deed to the Property, attached hereto as Exhibit "A".

C. Overview of Application: The Applicants are seeking to change their temporary Special Management Area ("SMA") Emergency Permit into a permanent SMA permit under the same terms and conditions as allowed under the existing SMA Emergency Permit. The existing SMA Emergency Permit is attached as Exhibit "B". The temporary tent is important to allow outdoor dining options during the pandemic. It is generally taken down every two days and its use is sporadic, as addressed below in Section IV.

II. LAND USE DESIGNATIONS AND DESCRIPTIONS

A. SLUC: The State Land Use is designated Urban.

B. County zoning: County zoning is C-N, Neighborhood Commercial, for approximately .56 acres, and Open along the coastline, or approximately .25 acres. The Property is located in the Visitor Destination Area.

C. The General Plan Designation: The General Plan designation is Natural.

D. Special Management Area: The Property is in the Special Management Area.

E. Shoreline Setback Area. The Property is located on the shoreline and a Shoreline Setback Determination has been filed with the Planning Department on September 28, 2021.

F. Flood: The Property is designated VE, along the coastline in the Open zone. Zone VE is the flood insurance rate zone which corresponds to areas within the 1 percent annual chance coastal floodplain that have additional hazards associated with storm waves. Mandatory flood insurance purchase requirements apply. The remainder of the Property is designated AE, the flood insurance rate zone that corresponds to the 1 percent annual chance floodplains that are determined in the federal Flood Insurance Study by detailed methods of analysis. Mandatory flood insurance purchase requirements also apply.

III. COMPREHENSIVE ZONING ORDINANCE

A. Neighborhood Commercial. The majority of the parcel is designated Neighborhood Commercial. According to Section 8-6.2 of the CZO, "Neighborhood Commercial shall include uses and services which are frequently required and utilized by residents of all ages and which can be compatibly located in close proximity to residential districts."

B. Open. The coastal edge of the Property is designated as Open zoning. Pursuant to Section 8-9.1 of the CZO:

> The Open District is established and regulated to create and maintain an adequate and functional amount of predominantly open land to provide for the recreational and aesthetic needs of the community or to provide for the effective functioning of land, air, water, plant and animal systems or communities.

(a) To preserve, maintain or improve the essential characteristics of land and water areas that are:

(1) of significant value to the public as scenic or recreational resources;
(2) important to the overall structure and organization of urban areas and which provide accessible and usable open areas for recreational and aesthetic purposes;

(3) necessary to insulate or buffer the public and places of residence from undesirable environmental factors caused by, or related to, particular uses such as noise, dust, and visually offensive elements.

(b) To preserve, maintain or improve the essential functions of physical and ecological systems, forms or forces which significantly affect the general health, safety and welfare.

(c) To define and regulate use and development within areas which may be potentially hazardous.

(d) To include areas indicated on the County General Plan as open or as parks.

Under the Neighborhood Commercial zoning, clearly a restaurant is a service which is frequently required and used by residents of all ages and which can be compatibly located in close proximity to residential districts. The Beach House Restaurant is located next to and across the street from hundreds of apartment units, many of which are owned or rented by frequent guests of the restaurant.

As to the Open District Portion of the Property, along the coastline, a temporary tent certainly is important to the "organization of urban areas and which provide accessible and usable open areas for recreational and aesthetic purposes. The open-sided tent will not substantially affect the open area along the coastline.

IV. COASTAL ZONE MANAGEMENT ACT AND SPECIAL MANAGEMENT AREA RULES AND REGULATIONS

The Special Management Area Rules and Regulations of the County of Kaua`i state:

No development shall be approved unless the Director or the Planning Commission has found that:

1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed

by public health, safety, and welfare, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect, and the elimination of planning options;

2) The development is consistent with the objectives and policies, as enumerated in HRS Chapter 205A and as referred to in Section 3.0 above, and the Special Management Area guidelines set forth in these Rules and Regulations; and

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

Chapter 205A of the Hawai`i Revised Statutes lists as its objectives: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, marine resources, recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection and marine resources.

This application is for a temporary tent, which measures 30 feet by 40 feet, with open sides, not easily visible from Lawai Road unless you are approaching the restaurant from the south. The tent was used to add dining area to allow the restaurant to serve patrons in a socially distant, safe manner outdoors and was frequently used for wedding receptions and other functions particularly during the height of the Covid-19 pandemic in 2020 and 2021. It continues to be a popular venue for residents and visitors who want a socially distant venue for celebrations. As Covid-19 variants may come and go, the Applicant views the tent as a necessary tool in allowing it to provide a venue for its customers with an unknown course of Covid-19. A photo of the tent that was used on the

Property in 2020 is attached as Exhibit “C,” and circled in red. A more current photo of the new tent that has replaced the old tent is attached as Exhibit “D”. The new tent is see-through from the side and top. For weddings, chairs may be placed on the lawn as depicted on Exhibit “D.”

The tent is taken down after each use, unless another use is planned within the next day or two. It is never left up longer than two weeks at a time; though more frequently it is taken down every two days to eliminate weathering to the tent.

While the tent is visible from all sides, the fact that it has no sides and a transparent top means there is little or no obstruction of view from any direction, particularly from public spaces toward the ocean as the restaurant blocks most of the view of the tent when viewed from Lawai Road.

Because of the foregoing, the development will not have any substantial or adverse environmental or ecological impact; in fact, the majority of the parcel is not affected by the tent. As such, the development is consistent with the objectives and policies of HRS Chapter 205A and the SMA guidelines adopted by the County.

V. PRIOR PERMITS

A. The Beach House Restaurant existed at this Property since approximately 1961, although there are no records that appear to exist today relating to a 1961-era permit. In 1983, however, after the restaurant was heavily damaged by Hurricane Iwa in 1982, the then-owner of the restaurant and property, C. Paul Sandifur Sr., applied for a zoning permit to reconstruct the Beach House Restaurant and shops.

The Planning Department staff report for that 1982 zoning permit application stated "[t]he Beach House Restaurant and Shops operated for 22 years on this site prior to destruction due to Hurricane Iwa."

The 1983 staff report also noted there were no known sites of historic significance within the parcel and no known ecological resources of significance.

On June 29, 1983, the Kauai County Planning Commission approved SMA and Use permits for the reconstruction of the Beach House Restaurants and shops on the property, which is the permanent structure that exists today. Copies of the 1982 approval letter and staff report are attached as Exhibit "E."

VI. NATIVE HAWAIIAN AND CULTURAL USES

The Applicant is unaware of any current traditional and customary rights practiced in the immediate vicinity. Applicant has never received any requests for access to the property from individuals claiming a traditional use. There are no visible trails or evidence of other uses on the property as the property has been in commercial development since at least 1961.

Applicant has interviewed kupuna in the area, including Julie Souza, who was born and raised about 1/3 of a mile away and still lives in her ancestral home. She states she is unaware of any cultural or traditional practices on the Property. Ms. Souza remembers Mr. Sandifur as a developer who was "one of the good guys" who would have addressed cultural concerns, if there were any raised at the time. Souza notes she is only aware of cultural resources in the area as being located at Prince Kuhio Park, which is about 350 feet from the Property and across Lawai Road. The park is a tribute to Prince Jonah

Kuhio Kalaniaole, who was born in Koloa. The park is a cultural gathering place, and contains a heiau (shrine) and other artifacts.

Applicant has also written to the State of Hawai`i Historic Preservation Division and the Burial Council, advising them of this application, and has received no comments or concerns.

VII. OTHER LAND FEATURES

A. Threatened and Endangered Species. According to the University of Hawaii Rare Species database, there are no known or reported threatened and endangered species within or adjacent to the Property.

B. Critical Habitat. According to date from the Department of Land and Natural Resources and the Division of Forestry and Wildlife, there are no known or reported critical habitats within or adjacent to the Property.

C. Soils. The entire parcel consists of Wet soil (Waikomo rocky silty clay).

D. Constraints District: The Property is designated SH (Shore) and ST (Tsunami).

E. Public Beach Access: Although the area adjacent to Lawai Road of the Property is customarily trafficked by pedestrians as it is located next to a small sandy beach, there are also two existing public beach access easements near the property at the County beach and along the rocky coastline adjacent to the Property.

VIII. IMPACT OF THIS DEVELOPMENT

As stated in Sections IV. And V. above, there are no known historic or ecologic impacts this proposed use would bring.

Outdoor use may affect beachgoers in terms of visibility and noise; however, the temporary tent has been in use under the emergency permits since last year, and there have been no formal complaints from neighbors since then. All music stops at 10 p.m.

Any trash or other impacts caused by usage of the tent will be combined with the permanent restaurant. Patrons of the outdoor tent are allowed use of parking valet and restrooms provided by the main restaurant.

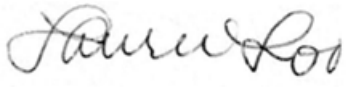
Traffic is not expected to increase dramatically as the use is occasional and not nightly.

IX. CONCLUSION

Applicant respectfully requests the granting of a SMA Use permit to allow the permanent use of a temporary tent and fixtures for outdoor dining, as depicted in the attached exhibits.

DATED: Lihu`e, Kaua`i, Hawai`i, January 14, 2022.

Respectfully submitted,



Laurel Loo

Attorney for Applicant IP2 LLC, dba
The Beach House Restaurant

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
May 16, 2016 8:01 AM
Doc No(s) A – 59800395

/s/ NICKI ANN THOMPSON
REGISTRAR

1 1/7 SKC
B – 32807454

Conveyance Tax: $109,800.00

AFTER RECORDATION, RETURN BY MAIL [X] PICK-UP [ ]
Central Pacific Bank
220 South King Street
Honolulu, HI 96813
Attn: Documentation Center 268

Escrow No: 6840004392 MK
Mitzi Kinoshita
This document contains 12 pages

TITLE OF DOCUMENT:

WARRANTY DEED

PARTIES TO DOCUMENT:

GRANTOR: **THE BEACH HOUSE, INC.**, a Hawaii corporation

GRANTEE: **IP2 LLC**, a Hawaii limited liability company
776 Kailua Road, Suite 201
Kailua, Hawaii 96734

PROPERTY DESCRIPTION:
LOT 5-A
ROYAL PATENT NUMBER 6714
LAND COMMISSION AWARD NUMBER
7714-B TO KEKUAIWA
ISLAND AND COUNTY OF KAUAI
STATE OF HAWAII

LIBER/PAGE/DOCUMENT NO.: 2000-006696

LAND COURT DOCUMENT NO.: N/A

TRANSFER CERTIFICATE OF
TITLE NO(S).: N/A

TAX MAP KEY: (4) 2-6-005-011

340463.1

Exhibit A

WARRANTY DEED

THIS DEED is made as of the 10th day of May, 2016, by and between **THE BEACH HOUSE, INC.**, a Hawaii corporation, whose post office address is 1724 Halama Street, Kihei, Maui, Hawaii 96753 (hereinafter referred to as the "Grantor"), and **IP2 LLC**, a Hawaii limited liability company, whose post office address is 776 Kailua Road, Suite 201, Kailua, Hawaii 96734 (hereinafter referred to as the "Grantee").

W I T N E S S E T H:

That for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby grants, bargains, sells, sets over, delivers, and conveys unto Grantee, as a tenant in severalty, in fee simple absolute, all that certain real property described in Exhibit "A" attached hereto and by reference incorporated herein, together with the reversions, remainders, rents, issues and profits thereof, and all of the estate, right, title and interest of Grantor, both at law and in equity, therein and thereto, and in the fixtures and/or tangible personal property described in said Exhibit "A", if any.

TO HAVE AND TO HOLD the same, together with all improvements, tenements, hereditaments, rights, easements, privileges and appurtenances thereunto belonging or appertaining, unto Grantee, in the tenancy aforesaid, in fee simple absolute, forever.

Grantor hereby covenants that it is the owner in fee simple of the property described in said Exhibit "A" and is the absolute owner of all of said fixtures and/or tangible personal property; that it has good right to sell and convey the same; that said property is free and clear of all liens and encumbrances, except as described in said Exhibit "A"; that Grantee shall quietly enjoy said property without lawful disturbance, except as aforesaid, and Grantor

shall WARRANT and DEFEND the same unto Grantee against the lawful claims and demands of all persons, whomsoever, forever, except as aforesaid.

The covenants made by Grantor and/or Grantee, and all rights and benefits conferred hereunder upon Grantor and/or Grantee, shall be binding upon and inure to the benefit of Grantor and/or Grantee and their respective representatives, successors and assigns.

In interpreting this instrument, the use of any gender shall be construed to include all genders, and the use of any number shall be construed as either singular or plural, as the circumstances may require. The terms Grantor and Grantee, together with any pronouns used in lieu thereof, refer to the singular or plural as the case may be.

The parties hereto agree that this instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties hereto, notwithstanding all of the parties are not signatory to the original or the same counterparts. For all purposes, including, without limitation, recordation, filing and delivery of this instrument, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

All covenants and obligations undertaken by two or more persons or entities shall be deemed to be joint and several unless a contrary intention is clearly expressed elsewhere herein.

[Signatures on following page]

IN WITNESS WHEREOF, Grantor and Grantee have executed this instrument as of the day and year first hereinbefore written.

GRANTOR: **THE BEACH HOUSE, INC.**, a Hawaii corporation

By R Dunn
Name: Roy Dunn
Its: President

By Michael R Hooker
Name: Michael R. Hooker
Its: Vice President

GRANTEE: **IP2 LLC**, a Hawaii limited liability company

By _____
Name: _____
Its: _____

By _____
Name: _____
Its: _____

IN WITNESS WHEREOF, Grantor and Grantee have executed this instrument as of the day and year first hereinbefore written.

GRANTOR: **THE BEACH HOUSE, INC.**, a Hawaii corporation

By _____
Name: _____
Its: _____

By _____
Name: _____
Its: _____

GRANTEE: **IP2 LLC**, a Hawaii limited liability company

By _____
Name: Peter Merriman
Its: Manager

By _____
Name: William Perry
Its: Manager

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this 10 day of May, 2016, before me appeared Roy Dunn, to me personally known (or proved to me to be such person on the basis of satisfactory evidence), who being by me duly sworn or affirmed, did say that such person executed this 11 page *WARRANTY DEED*, dated MAY 10 2016, in the Second Circuit of the State of Hawaii, as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Notary Public, in and for said County and State
Print Name: VICKI M. STEFFAN

My commission expires: 4/30/18

340463.1

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this 10 day of May, 2016, before me appeared Michael L Hoaks, to me personally known (or proved to me to be such person on the basis of satisfactory evidence), who being by me duly sworn or affirmed, did say that such person executed this 11 page *WARRANTY DEED*, dated MAY 10 2016, in the Second Circuit of the State of Hawaii, as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity



Notary Public, in and for said County and State
Print Name: VICKI M STEFFAN

My commission expires: 7/30/18

340463.1

STATE OF HAWAII)
) SS.
~~CITY AND~~ COUNTY OF ~~HONOLULU~~ Maui)

On this 10th day of May, 2016, before me appeared Peter Merriman, to me personally known (or proved to me to be such person on the basis of satisfactory evidence), who being by me duly sworn or affirmed, did say that such person executed this 11 page *WARRANTY DEED*, dated undated at signing, in the ~~First~~ Second Circuit of the State of Hawaii, as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

ANN SAKAMOTO NOTARY PUBLIC No. 03-15 STATE OF HAWAII

Notary Public, in and for said County and State
Print Name: ANN SAKAMOTO

My commission expires: May 23, 2018

340463.1

STATE OF HAWAII)
) SS.
~~CITY AND~~ COUNTY OF ~~HONOLULU~~ Maui)

On this 10th day of May, 2016, before me appeared William Terry, to me personally known (or proved to me to be such person on the basis of satisfactory evidence), who being by me duly sworn or affirmed, did say that such person executed this 11 page *WARRANTY DEED*, dated undated at signing, in the ~~First~~ Second Circuit of the State of Hawaii, as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

Notary Public, in and for said County and State
Print Name: ANN SAKAMOTO

My commission expires: May 22, 2018

ANN SAKAMOTO NOTARY PUBLIC No. 03-15 STATE OF HAWAII

340463.1

EXHIBIT "A"

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Number 6714, Land Commission Award Number 7714-B to Kekuaiwa), situate, lying and being at Kamalaula, Koloa, Kona, Island and County of Kauai, State of Hawaii, being LOT 5-A, and thus bounded and described:

Beginning at the Northeast corner of this parcel of land, on the South side of Lawai Beach Road, being also the Northwest corner of Lot 5-B, the coordinates of said point of beginning referred to Government Survey Triangulation Station "WAHIAWA" being 10,817.63 feet South and 18,222.86 feet East, thence running by azimuths measured clockwise from true South:

1.	0°	52'	30"	223.02	feet along the remainder of Royal Patent Number 6714, Land Commission Award Number 7714-B (Lot 5-B) to the shoreline;
					Thence along the shoreline for the next 10 (ten) courses, the azimuth and distance direct being:
2.	137°	00'		37.00	feet;
3.	111°	12'		101.07	feet;
4.	161°	17'		28.28	feet;
5.	158°	21'		86.33	feet;
6.	93°	38'		46.62	feet;
7.	187°	15'		31.00	feet;
8.	214°	30'		36.70	feet;
9	264°	00'		12.50	feet;
10.	209°	30'		33.00	feet;
11.	186°	16'		26.82	feet;
12.	294°	02'		168.82	feet along the south side of Lawai Beach Road to the point of beginning and

containing an area of 34,900 square feet, more or less.

Together with Parking Stalls numbered 1 through 16, 35 through 63, AND 211 through 215, located on a portion of the Lawai Beach Resort condominium property regime, as described in and granted by that certain Grant of Easement for Parking and Nonexclusive Vehicular Access dated December 7, 1990, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 90-187829, and subject to the terms, provisions, covenants, conditions and reservations contained therein.

Being the premises described in instrument recorded January 18, 2000 in said Bureau as Document No. 2000-006696.

TOGETHER ALSO WITH, all existing fixtures situate on the above-described real property.

SUBJECT, HOWEVER, to the following:

1. Any and all real property taxes assessed for the current tax year but not yet due and payable.

2. Title to all minerals and metallic mines reserved to the State of Hawaii.

3. Any adverse claim based upon the location of the seaward boundary and/or the shoreline setback line of the above described property, as may be established under the laws of the State of Hawaii.

4. A 10-foot road setback line along Lawai Beach Road, as shown on the sketch attached to those certain Affidavits recorded in said Bureau in Book 8466 at Page 48, and in Book 8466 at Page 53.

5. Terms and provisions as contained in the GRANT OF EASEMENT FOR PARKING AND NONEXCLUSIVE VEHICULAR ACCESS dated December 7, 1990, recorded in said Bureau as Document No. 90-187829.

6. An easement affecting that portion of said land and for the purposes stated therein and incidental purposes as provided in the GRANT OF EASEMENT dated September 8, 1983, recorded in said Bureau as Document No. 96-011028, for a nonexclusive 5 foot wide floating easement along the shoreline for public pedestrian access for recreational purposes, and being more fully described therein.

7. An easement affecting that portion of said land and for the purposes stated therein and incidental purposes as provided in the GRANT OF EASEMENT dated November 8, 1999, recorded in said Bureau as Document No. 99-178357, for public recreational purposes over Easement 1, and being more fully described therein.

AMENDMENT recorded June 23, 2000 in said Bureau as Document No. 2000-086511.

8. Any rights, interests or claims which may exist or arise by reason of the facts shown on a survey plat prepared by Dan L. M. Akita, Licensed Professional Land Surveyor, Certificate No. 12749, on February 26, 2016, designated Job No. 1-22704-0-S, as follows:

(A) A concrete curb along Lawai Road crosses into said road by a maximum distance of 0.2' and a length of 38.0'.

(B) A CRM wall along the east property line crosses into the subject lot by a maximum distance of 0.4' and length of 8.5'.

(C) A chain link fence within Lot 5-B extends into the subject lot by 2.2'.

(D) An overhead utility line from EP #15 crosses into the subject property and connects to building.

(E) There are four (4) concrete posts along the east property line that crosses into Lot 5-B by a maximum distance of 0.2'.

-NOTE:- THERE IS HEREBY OMITTED FROM ANY COVENANTS, CONDITIONS AND RESERVATIONS CONTAINED IN ANY INSTRUMENT DESCRIBED HEREIN, ANY COVENANT OR RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN, UNLESS AND ONLY TO THE EXTENT THAT SAID COVENANT OR RESTRICTION (A) IS EXEMPT UNDER CHAPTER 42, SECTION 3607 OF THE UNITED STATES CODE, OR (B) RELATES TO HANDICAP BUT DOES NOT DISCRIMINATE AGAINST HANDICAPPED PERSONS.

END OF EXHIBIT "A"

DEPARTMENT OF PLANNING
THE COUNTY OF KAUA'I
DEREK S. K. KAWAKAMI, MAYOR
MICHAEL A. DAHILIG, MANAGING DIRECTOR

KA'ĀINA S. HULL
DIRECTOR

JODI A. HIGUCHI SAYEGUSA
DEPUTY DIRECTOR

September 13, 2021

The Beach House Restaurant
Sara Hill, CEO
5022 Lāwa'i Road
Koloa, HI 96756

Subject: Special Management Emergency Permit SMA (E)-2022-1
Tax Map Key: (4) 2-6-005:011
Kōloa, Hawai'i
Sara Hill, CEO Applicant

The Planning Department has received and reviewed your request for a Special Management Area (SMA) Emergency Permit regarding the subject parcel.

The Beach House is a full service in-door restaurant and bar that hosts events and weddings. The ability to maintain the risk of spreading COVID-19 to guests, staff, and the community with safe social distancing requirements has becoming challenging.

In order to mitigate the risk of spreading COVID-19 the Beach House Restaurant is proposing to expand the dining area of the restaurant onto the makai lawn of TMK parcel (4)2-6-005:011. A removable tent with furniture fixtures will be used for an outdoor dining area and events. The tent and furniture fixtures will be taken down as needed and will not be left up for more than a period of fourteen (14) consecutive days in duration during any three-month period. The activity will cease no later than 10:00 p.m. nightly.

Currently in effect and in response to the COVID-19 pandemic is the March 4, 2020 Emergency Proclamation issued by Governor David Y. Ige for the State of Hawai'i. This Proclamation states the following:

2. Sections 127A-13 and 127A-12, Hawai'i Revised Statues, in order for county and state agencies to provide emergency relief and engage in emergency management functions as defined in section 127A-2, Hawai'i Revised Statues, as a result of their event, suspend as allowed by federal law, the following statues to the extent necessary for county and state agencies to accomplish the emergency management functions contemplated under this Proclamation:

   ...

   d. Chapter 46, Hawai'i Revised Statues, county organization and administration as any county ordinance, rule, regulation, law or provision in any form applies to any county permitting, licensing, zoning, variance, processes, procedures, fees, or any other requirements that hinder, delay, or impede the purpose of this Proclamation.

Therefore, the proposed work as described above may proceed without further zoning review pursuant to the Governor's March 4, 2020 Emergency Proclamation.

The removable tent and furniture fixtures used for outdoor dining and events would be considered "Development" as defined in Section 1.4(f) of the County's SMA Rules and Regulations.

The Department has completed its review and assessment of the proposed development based on the information submitted and hereby issues a SMA Emergency Permit for the outdoor restaurant use of the respective lawn and it's associated removable tent and furniture fixtures for COVID-19 safe social distancing measures, pursuant to Sec. 11.0(b)(i)(ii)(iii)(iv) of the County of Kaua'i SMA Rules and Regulations. SMA Emergency Permit SMA(E)-2022-1 is hereby **APPROVED** and subject to the following conditions:.

1. The proposed improvements shall be operated as represented. Any changes to said structures and/or facilities shall be reviewed by the Planning Department to determine whether Planning Commission review and approval is warranted.

2. This SMA Emergency Permit shall automatically expire six (6) months from the date of this letter, or the end of the March 4, 2020 Emergency Proclamation issued by Governor David Y. Ige. Whichever comes first.

If the landowner would like to continue the use of the lawn area for the proposed restaurant use after the expiration of the SMA Emergency permit, the landowner is hereby advised to initiate the process to apply for an amendment to the subject property's current SMA Use Permit.

Should there be any questions regarding this matter, please contact Romio Idica of my staff at (808) 241-4056. Aloha!

KA'ĀINA S. HULL
Director of Planning

cc: file

Exhibit C



EXHIBIT D

TONY T. KUNIMURA
MAYOR

AVERY H. YOUN
PLANNING DIRECTOR

TOM H. SHIGEMOTO
DEPUTY PLANNING DIRECTOR

TELEPHONE (808) 245-3919

COUNTY OF KAUAI
PLANNING DEPARTMENT
4280 RICE STREET
LIHUE, KAUAI, HAWAII 96766

June 29, 1983

COPY

Mr. C. Paul Sandifur, Sr.
c/o Herman A. Wilson
4273 Rice Street
Lihue, Hawaii 96766

Subject: Special Management Area Use Permit SMA(U)-83-4
Use Permit U-17-83
Class IV Zoning Permit Z-IV-83-27
TMK: 2-6-05:11 Kukuiula, Kauai

The Planning Commission at its meeting on June 22, 1983, approved the subject permits to re-establish the Beach House Restaurant and shops within the Residential District at Kukuiula. Approval was with the following conditions:

1. The applicant shall establish & record with the Bureau of Conveyances a floating 5-foot wide lateral easement along the shoreline for public access purposes and shall provide proper signage.

2. The applicant shall provide 3 additional parking stalls for a total of 54 stalls, and shall screen the parking areas from Lawai Beach Road. In addition, a portion of the public parking area (9 stalls) shall be retained at the site immediately across from the proposed restaurant as indicated on Exhibit "A".

3. The additional 33 parking stalls for Phase I of Lawai Beach Villas shall be provided prior to issuance of the occupancy permit for the restaurant and shops.

Exhibit E

4. The public parking, shower and restroom facilities shall remain at the site on Exhibit "A" and shall be provided simultaneously with the completion of the proposed restaurant and shops. That portion of the public parking to be relocated shall be provided at the time of completion of Lawai Beach Villas Phase II.

5. A landscape plan shall be submitted for review and approval by the Planning Department prior to applying for building permit.

6. Any major changes to building materials or design shall be subject to design review and approval by this Commission.

7. The applicant shall meet Flood Ordinance No. 416 requirements, and resolve driveway entrance and width matters with the Public Works Department.

8. As recommended by the Water Department, the building permit shall not be granted until the developer submits for review and approval, construction plans of the interior plumbing for the proposed restaurant and of the appropriate backflow prevention device.

9. As recommended by the Department of Health:

   a) The restaurant shall conform to the requirements of Chapter 1-A, Food Service and Food Establishment Sanitation Code, Public Health Regulations, State of Hawaii.

   b) The restaurant shall be connected to the developer's wastewater treatment works.

   c) Dust and soil erosion control measures shall be implemented during all stages of development by the developer.

   d) Due to the general nature of the application, we reserve the right to implement further environmental restriction(s).

10. As required by the Fire Department, the applicant shall comply with all requirements of the Kauai County Fire Code including:

    a) Installation of fire extinguishers.

b) Providing all weather driving surface roadways to the property.

c) Fire hydrants complying with Water Department standards are serviceable and within 250 feet of structure.

11. Hours of operation of the restaurant/bar shall not exceed 1:00 A.M.

12. The applicant is advised that prior to and/or during construction and use, additional government agency conditions may be imposed. It shall be the applicant's responsibility to resolve those conditions with the respective agency(ies).

AVERY H. YOUN
Planning Director

cc: Mayor
Pub. Works Dept.
Water Dept.
Health Dept.
Fire Dept.
Real Property Div.
Sam Lee, DLNR

KAUAI PLANNING DEPARTMENT
LIHUE, KAUAI

STAFF REPORT

PROJECT: Special Management Area Use Permit SMA(U)-83-4
Use Permit U-17-83
Class IV Zoning Permit Z-IV-83-27

APPLICANT: C. Paul Sandifur Sr.
Herman Wilson Agent

FINDINGS

LOCATION: At Kukuiula, Kauai, makai of Lawai Beach Road on the same parcel as the former Beach House Restaurant.

TMK: 2-6-05:11 AREA: 34,900 sq. ft.

LAND USE CLASSIFICATION: Urban
EXISTING USE: Vacant (Restaurant/Retail prior to Hurricane Iwa)
GENERAL PLAN DESIGNATION: Multi-Family Res.
ZONING: R-20/Open

ACTIONS REQUIRED:	REASONS:
SMA Use Permit -	is required as the proposed restaurant and shops reconstruction is deemed a development costing in excess of $65,000. within the SMA.
Use Permit -	is required to re-establish a restaurant and shops within a residential zone.
Class IV Zoning Permit -	is a procedural requirement in obtaining a Use Permit.

PROJECT DESCRIPTION AND USE: The applicant proposes to reconstruct a restaurant and shops which were totally destroyed by Hurricane Iwa. The new structure will be set back 40+ feet from the shoreline. The building appears to be of wood with a hip design shake roof and lava rock walls on the makai side, this side of which is also open to the ocean. The building is single story with a 3-tiered dining area.

LEGAL REQUIREMENTS (Parking, Lot Coverage, etc.):
Height, setback and lot coverage requirements of the CZO appear to have been met. In compliance with Ordinance No. 396, an Environmental Impact Assessment Fee of $100 per minimum number of parking stalls required, is due. The applicant has submitted a certified shoreline survey for the property and all structures are in compliance with provisions of the Shoreline Setback Rules and Regulations.

APPLICANT'S REASONS/JUSTIFICATION:

The Beach House Restaurant and Shops operated for 22 years on this site prior to destruction due to Hurricane Iwa.

FINDINGS (cont'd):

Fifty (51) off-street parking stalls are proposed on the applicant's property directly across Lawai Beach Road. A total of 54 stalls are required, as such, 3 more stalls are needed. Condominium parking that was approved for Phase I of Lawai Beach Villas is existing at the site of the proposed restaurant parking. The applicant now proposes to provide these stalls towards the rear of Phases I and III. The public beach parking that was also proposed at this location will be relocated to the west-end of the applicant's mauka property, fronting Phase II of Lawai Beach Villas.

AGENCY COMMENTS:

PUBLIC WORKS DEPARTMENT:

1. The FIA Flood Map indicates that a portion of the property along the shoreline to be within the high coastal hazard zone (V-11) with flood elevation of 7.0 feet above mean sea level. The limit, according to the map, is between the ocean and a line that approximately follows Lawai Road boundary at a distance of approximately 120 feet.

   Flood Plain Management Ordinance No. 416 prohibits fill if it is being proposed for the porte-cochere and terrace area in the high coastal hazard zone. Additionally, the lowest beam supporting the habitable floor must be elevated above the flood levels. Certification by a registered structural engineer and/or architect that the buuilding has been designed to resist flood forces is also required.

2. The property will have access to the Lawai Road which has a right-of-way width of approximately 30 feet with asphaltic concrete surfacing width of approximately 20 feet for most of its length.

   The right-of-way width is ncarrow and results in substandard road shoulder to accommodate utilities, pedestrian ways and on-street parking. As such, it may be desirable to provide off-street parking for traffic safety purposes.

3. The site plan shows a one-way traffic scheme at the restaurant entrance. We normally prefer to see only one driveway connection to the County roadway in order to preserve as much of the street shoulder for parking. We will alow the proposal if the driveway width of boundary is reduced to 10 feet.

WATER DEPARTMENT: We have no objections to the SMA Use Permit application provided the building permit not be granted until the developer submits to the Department of Water for review and approval, detailed construction plans of the interior plumbing for the proposed restaurant and of the appropriate backflow prevention device.

STATE HEALTH DEPARTMENT:

1. The restaurant shall conform to the requirements of Chapter 1-A, Food Service and Food Establishment Sanitation Code, Public Health Regulations, State of Hawaii.

2. The restaurant shall be connected to the developer's wastewater treatment works.

3. Dust and soil erosion control measures shall be implemented during all stages of development by the developer.

Due to the general nature of the application, we reserve the right to implement further environmental restrictions(s).

FIRE DEPARTMENT: The applicant shall comply with all the requirements of the Kauai County Fire Code which include:

1. Installation of fire extinguishers.

2. Providing all weather driving surface roadways to the property.

3. Fire hydrants complying with Water Department standards are serviceable and within 250 feet of structure.

By Heather M Harvey
Heather Harvey
CZM Planner

5/4/83

RE: Special Management Area Use Permit SMA(U)-83-4
Use Permit U-17-83
Class IV Zoning Permit Z-IV-83-27

APPLICANT: C. Paul Sandifur, Sr.

EVALUATION:

In assessing whether the proposal could be compatible to the area, the following aspects were considered:

Parking - As 54 stalls are required and 51 are proposed, 3 additional stalls must be provided. As well, the parking areas should be screened from Lawai Beach Road in compliance with CZO requirements.

As Phase I of Lawai Beach Villas is completed, and the proposed restaurant/ shops use will utilize a portion of their existing parking, a potential parking shortage could result for Phase I. It is thus important to provide the additional Phase I parking before the restaurant is in operation. According to our calculations, approximately 33 parking stalls would have to be provided. We will recommend to the Building Division that no occupancy permit be issued for the restaurant until the additional parking for Phase I is provided.

Surrounding Community - In assessing the Use Permit, its impact to the neighboring property is considered foremost. This parcel is bounded by visitor-oriented condominium units to the east and across Lawai Beach Road, by a few single-family residential lots to the north, and by the ocean on the remaining sides. It should be noted that the restaurant existed on the parcel before either of the condominium projects. As such, owners of these units purchased such with full knowledge that a restaurant and shops existed at this site.

Since the restaurant use existed for 22 years prior to Hurricane Iwa, there will be no significant increase in the use of the parcel. As parking will now meet CZO standards, the parking situation should improve.

Building Design - The single story structure of wood-frame construction, shake hip roof and lava rock walls proposed appears to be appropriate for this site. Such building materials are acceptable and should be insisted upon in any future design reviews. Any major changes should be subject to design review and approval.

Nature of Operation - The applicant does not indicate days or hours of operation for the restaurant, or whether entertainment will be provided. In the event that complaints are received concerning noise, the Planning Department reserves the right to set limits on the hours of entertainment or operation.

It should be noted that other applications for such uses have been conditionally approved in a Residential District, and the operators of the

C-1a

old and future Beach House Restaurant are currently operating a restaurant within the residential district at Poipu Kai.

In evaluating the proposal for consistency with the objectives and policies of the Special Management Area Rules and Regulations, the following aspects were considered:

A. Recreational Resources - This portion of the Poipu/Kukuiula shoreline is a popular surfing spot. A sandy beach exists on an abutting County parcel for sunbathing, picnicking, etc., while reefs immediately off-shore are popular for snorkeling activities. The applicant was required to provide public parking and restroom facilities as a condition of approval for Lawai Beach Villas. As was explained earlier, the applicant now proposes these facilities at the west-end of the Villas development as parking for this project is to occupy its formerly proposed location.

   It should be noted that the proposed structure would be situated on an existing parking area which was previously used by beachgoers and surfers primarily for parking and beach access, since the restaurant fronts a popular surfing site. Because this access would now be closed-off and the public parking area would be situated approximately 900 feet away, some access and parking problems are anticipated. The applicant's revised plot plan dated May 31, 1983 reflects a floating 5-foot wide lateral easement along the shoreline. Proper signage must be provided to identify the use of said access easement. To minimize future problems, only a portion of the public park and parking should be relocated, with some public parking (at least 9 stalls), restrooms and shower facilities retained at the site initially proposed, along with the 54 stalls required for the subject proposal. The general public should be permitted to use a portion of the proposed restaurant parking stalls in order to use the proposed beach access.

B. Historic Resources - No known sites of historic significance are within the parcel.

C. Scenic Resources - The former Beach House Restaurant was situated directly on the water's edge. As the new structure is proposed 40 feet mauka of the shoreline, a broad belt of open space area will now abut the coast. This belt, along with the single story and open design, should render the new structure less obtrusive than the former Beach House. Although the proposed structure occupies roughly the same square footage as the former building, and is single story in keeping with the design guidelines established in the Kauai Urban Design Plan, its new orientation on the parcel blocks a prominent view corridor from Lawai Beach Road between Kuhio Shores condos and the structure. In order to preserve a substantial portion of this corridor, the applicant will resite or redesign the southern portion of the structure as indicated on the revised plot plan of May 31, 1983.

Along these scenic lines and in compliance with CZO requirement, all uncovered areas should be properly landscaped. A landscape plan reflecting such should be submitted to the Planning Department for their review and approval prior to building permit application.

D. Ecological Resources - There are no known ecological resources of significance on the subject parcel and no adverse ecological effects are anticipated by the proposed reconstruction.

E. Coastal Hazards - Portions of the property fall within the Coastal High Hazard area as delineated on the Federal Flood Insurance Maps. Any portions of the restaurant falling within this zone have been elevated to meet Ordinance No. 416 construction standards.

Furthermore, the proposal DOES NOT:

1) Involve dredging, filling, or otherwise altering of any bay, estuary, salt marsh, river mouth, slough or lagoon.

2) Reduce the size of any beach or other area usable for public recreation.

3) Reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers and streams within the Special Management Area, and the mean high tide line where there is no beach.

4) Interfere with or detract from the line of sight toward the sea from the State Highway nearest the coast, or from existing public views to and along the shoreline.

5) Adversely affect water quality, existing areas of open water free of visible structure, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries, potential or existing agricultural uses of land.

CONCLUSION:

Based on the foregoing findings and evaluation, it is concluded that the proposed restaurant and shops reconstruction will not have substantial adverse environmental or ecological effects. The development, with minor alterations and conditions, can be integrated into the community and satisfies the objectives, policies and guidelines for development within the Special Management Area in that:

1. The use will not be detrimental or injurious to property and improvements in the neighborhood, provided beach access is maintained and adequate parking is provided.

2. The use is not detrimental to the health, safety, peace, morals or comfort and general welfare of the neighborhood.

3. The development will not have any substantial, adverse environmental or ecological effect. Any adverse environmental or ecological effect that may result will be minimized to the extent practicable and is clearly outweighed by public health, safety and welfare, and other compelling public interests. The development will not have adverse effects by itself or in conjunction with other individual developments, the potential cumulative impacts of which would result in a substantial adverse environmental or ecological effect and the elimination of planning options.

4. The development is consistent with: the objectives, policies and special management area guidelines contained in Chapter 205A of the Hawaii Revised Statutes; the objectives and policies contained in Section 3.0 of the Special Management Area Rules and Regulations of the County of Kauai (SMA Rules); and the special management area guidelines contained in Section 4.0 of the SMA Rules.

5. The development is consistent with the County General Plan, the Comprehensive Zoning Ordinance of the County of Kauai, the Subdivision Ordinance of the County of Kauai, and all other applicable ordinances.

It is further concluded that the Planning Commission should reserve the right to impose further conditions should problems arise.

RECOMMENDATION:

Based on the foregoing findings, evaluation and conclusion, it is recommended that Special Management Area Use Permit SMA(U)-83-4, Use Permit U-17-83 and Class IV Zoning Permit Z-IV-83-27 be approved, subject to the following conditions:

1. The applicant shall establish & record with the Bureau of Conveyances a floating 5-foot wide lateral easement along the shoreline for public access purposes and shall provide proper signage.

2. The applicant shall provide 3 additional parking stalls for a total of 54 stalls, and shall screen the parking areas from Lawai Beach Road. In addition, a portion of the public parking area (9 stalls) shall be retained at the site immediately across from the proposed restaurant as indicated on Exhibit "A".

3. The additional 33 parking stalls for Phase I of Lawai Beach Villas shall be provided prior to issuance of the occupancy permit for the restaurant and shops.

4. The public parking, shower and restroom facilities shall remain at the site on Exhibit "A" and shall be provided simultaneously with the completion of the proposed restaurant and shops. That portion of the public parking to be relocated shall be provided at the time of completion of Lawai Beach Villas Phase II.

5. A landscape plan shall be submitted for review and approval by the Planning Department prior to applying for building permit.

6. Any major changes to building materials or design shall be subject to design review and approval by this Commission.

7. The applicant shall meet Flood Ordinance No. 416 requirements, and resolve driveway entrance and width matters with the Public Works Department.

8. As recommended by the Water Department, the building permit shall not be granted until the developer submits for review and approval, construction plans of the interior plumbing for the proposed restaurant and of the appropriate backflow prevention device.

9. As recommended by the Department of Health:

   a) The restaurant shall conform to the requirements of Chapter 1-A, Food Service and Food Establishment Sanitation Code, Public Health Regulations, State of Hawaii.

   b) The restaurant shall be connected to the developer's wastewater treatment works.

   c) Dust and soil erosion control measures shall be implemented during all stages of development by the developer.

   d) Due to the general nature of the application, we reserve the right to implement further environmental restriction(s).

10. As required by the Fire Department, the applicant shall comply with all requirements of the Kauai County Fire Code including:

    a) Installation of fire extinguishers.

    b) Providing all weather driving surface roadways to the property.

    c) Fire hydrants complying with Water Department standards are serviceable and within 250 feet of structure.

11. The applicant is advised that prior to and/or during construction and use, additional government agency conditions may be imposed. It shall be the applicant's responsibility to resolve those conditions with the respective agency(ies).

12. Hours of operation of the restaurant/bar shall not exceed 1:00 A.M.

By Heather M. Harvey
Heather Harvey
CZM Planner

Approved & Recommended to Commission:

Avery H. Youn
Avery H. Youn
Planning Director

COUNTY OF KAUAI
PLANNING DEPARTMENT
LIHUE, KAUAI

ZONING PERMIT APPLICATION (✓)
USE PERMIT APPLICATION (✓)
VARIANCE PERMIT APPLICATION ( )
SPECIAL PERMIT APPLICATION ( )
SMA PERMIT APPLICATION (✓)

For Planning Department Use Only

Zoning Permit No. Z-IV-83-27
Use Permit No. U-17-83
Variance Permit No. _____
Special Permit No. _____
SMA Permit No. SMA(U)-83-4
Zoning Permit Class IV
Date Received March 31, 1983
Date Approved JUNE 22, 1983
Plans By _____

APPLICANT C. PAUL SANDIFUR SR.

ADDRESS c/o HERMAN A. WILSON
4273 RICE ST. LIHUE, HI 96766

PHONE NO. 245-8060 TAX MAP KEY 2-6-05-11 LOT NO. 5-A LOT SIZE 24,900 sf

APPLICANT IS: (check one) ZONING DISTRICT R/2D EXISTING LAND USE _____

A. Owner of Property ✓ As defined by Ordinance No. 317.
B. Lessee of Property _____ *Number of Years Leased _____ From _____ to _____
C. Authorized Agent _____ Attach Letter of Authorization.

NOTE: *Lessee must have an unexpired and recorded lease of five (5) years or more from date of filing this application.

DESCRIPTION OF PROPOSED USE, IMPROVEMENT, ALTERATION, AND/OR CONSTRUCTION: (specify exact use, number of units, etc.)

RE-CONSTRUCTION OF THE BEACH HOUSE RESTAURANT & SHOPS

FOR VARIANCE OR USE PERMITS ONLY

CONDITIONS JUSTIFYING VARIANCE OR USE PERMIT APPLICATION: (use additional sheets as required)

RE-CONSTRUCTION OF THE BEACH HOUSE RESTAURANT & SHOP WHICH OPERATED FOR 22 YEARS ON THIS SITE, PRIOR TO DISTRUCTION DUE TO HURRICANE IWA

The construction, work, use, or activity approved in this permit shall be subject to inspection by the Planning Inspector or authorized personnel of the Planning Department, County of Kauai. The applicant is advised that inspection will occur prior to or during construction and use to ascertain compliance with the provisions of Ordinance No. 164, as amended, (Comprehensive Zoning Ordinance, County of Kauai) and/or other laws which are enforced by the Planning Department.

Signature Herman A. Wilson
Owner/Applicant

Permit Fee $150.00
Received By laf
Date Rec'd. 3/31/83

Ka'āina S. Hull
Director of Planning

Jodi A. Higuchi Sayegusa
Deputy Director of Planning

COUNTY OF KAUA'I
PLANNING DEPARTMENT

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration for an amendment of the permits to allow operation of outdoor dining and conduct special event activities on the parcel.
Permit Application Nos.	Class IV Zoning Permit Z-IV-1983-27 (Amendment) Use Permit U-1983-17 (Amendment) Special Management Area Use Permit SMA(U)-1983-4 (Amendment)
Name of Applicant(s)	IP2 LLC DBA THE BEACH HOUSE RESTAURANT

II. PERMIT INFORMATION

PERMITS REQUIRED	
☐ **Use Permit**	
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☐ **Zoning Permit Class** ☐ IV ☐ III	
☒ **Special Management Area Permit** ☒ Use ☐ Minor	Pursuant to Section 205A of the Hawaii Revised Statutes (HRS) and the Special Management Area Rules and Regulations of the County of Kaua'i, the change in intensity of use of land, including but not limited to the division or subdivision of land; which constitutes "Development". Therefore, a SMA Use Permit is required as defined in Section 7.3 of the SMA Rules.
AMENDMENTS	
☐ **Zoning Amendment**	

☐ **General Plan Amendment**	
☐ **State Land Use District Amendment**	

Date of Receipt of Completed Application: February 7 ,2022
Date of Director's Report: March 15, 2022
Date of Public Hearing: April 12, 2022
Deadline Date for PC to Take Action (60TH Day): June 7, 2022

III. PROJECT DATA

PROJECT INFORMATION			
Parcel Location:	The project is located on the makai portion of Lāwa'i Road adjacent to the Lāwa'i Beach Resort.		
Tax Map Key(s):	(4) 2-6-005:011	**Area:**	0.8012 acres
ZONING & DEVELOPMENT STANDARDS			
Zoning:	Commercial Neighborhood (C-N)/ Open (O)		
State Land Use District:	Urban (U)		
General Plan Designation:	Natural		
Height Limit:	**Commercial Neighborhood (C-N):** No building within a Neighborhood Commercial District shall exceed thirty-five (35) feet in height measured from the ground level of the primary building entrance nor shall the building contain more than two (2) stories. **Open (O):** No single family detached, or single family attached dwelling, or accessory structure shall be more than two (2) stories above and one (1) story below from the finished grade at the main entry, over twenty (20) feet measured from the finished grade at the main entry to the highest exterior wall plate line, and over thirty (30) feet to the highest point of the roof measured at each point along the building from the finished grade at the main entry. The finished grade at the main entry shall not be elevated more than a maximum of four (4) feet from the existing grade.		

	No multiple family buildings, hotel, or motel, shall be more than ten (10) feet higher than any residential building located within thirty (30) feet of the building, or shall not exceed four (4) stories nor exceed forty (40) feet from finished grade at each point along the building to the highest wall plate line. Gables and roof height shall not exceed one-half (1/2) the wall height or fifteen (15) feet, whichever is less.
Max. Land Coverage:	**Commercial Neighborhood (C-N):** 80% max. **Open (O):** 10% maximum
Front Setback:	**Commercial Neighborhood (C-N):** The minimum distance of any building from the right-of-way line of a public or private street or the pavement line of a driveway or parking lot used by the public shall be five (5) feet unless the building is entered from that side by motor vehicles in which case the minimum distance shall be fifteen (15) feet. **Open (O):** 10'-0" minimum
Rear Setback:	**Commercial Neighborhood (C-N):** The minimum distance of any building to a rear property line when adjacent use district is commercial shall be zero. When the adjacent rear use district is other than commercial, the minimum distance to the rear property line shall be ten (10) feet. **Open (O):** Five feet (5') or ½ the wall plate height whichever is greater.
Side Setback:	**Commercial Neighborhood (C-N):** The minimum distance of any building to a side property line when the adjacent use district is commercial shall be zero. When the adjacent use district is other than commercial, the minimum distance to the property line shall be the same as that required for residential use. **Open (O):** Five feet (5') or ½ the wall plate height whichever is greater.
Community Plan Area:	N/A

Community Plan Land Use Designation:	N/A
Deviations or Variances Requested:	N/A

IV. LEGAL REQUIREMENTS

Section 8.0, 9.0, and 10.0 of the Special Management Area Rules and Regulations:	This report is being transmitted to the Applicant and Planning Commission in order to satisfy the requirements of Sections 8.0, 9.0 and 10.0 of the Special Management Area Rules and Regulations. The application was received on February 7, 2022 and the Applicant, through its authorized agent, was notified accordingly of the Planning Department's intent to commence permit processing.
Public Hearing Date:	APRIL 12, 2022

V. PROJECT DESCRIPTION AND USE

The subject property has dual county zoning designations of Commercial-Neighborhood (C-N) and Open (O). The Kaua'i Beach House Restaurant and Shops have been in operation for the past twenty (22) years prior to suffering the destructive forces of Hurricane Iwa in 1982. On June 29, 1983, the Kaua'i Planning Commission approved the reconstruction of the Beach House Restaurant and shops. The Beach House Restaurant and Shops are constructed entirely within the Commercial- Neighborhood (C-N) zoning area of the property. The proposed development involving the outdoor dining area and place for special events occurs on the makai lawn, which is situated in the County Open (O) zone.

During the height of the COVID-19 pandemic in early 2020, safety protocols such as safe social distancing had become a challenge for the applicant in order to allow in-door dining and hold special events. As a result, tthe applicant applied for a Special Management Area Use Emergency Permit (SMA (E)-2022-1 to expand the dining area of the restaurant onto the makai lawn area with a temporary tent and temporary furniture fixtures (see exhibit "C" and "D"). The thirty (30) feet by forty (40) feet tent and furniture fixtures will be taken down as needed and not be left up for more than a period of fourteen (14) consecutive days in duration during any three (3) month period. The activities will cease no later than 10:00 p.m. nightly.

VI. APPLICANT'S REASONS/JUSTIFICATION

The proposed amendment will allow the applicant to continue the operation of the outdoor dining and conduct special event activities in perpetuity. (Refer to Application)

VII. ADDITIONAL FINDINGS

1. The project site is located on the makai area of Lāwa'i Beach road across Lāwa'i Beach Resort, approximately 0.79 miles east of the Kukui'ula Boat Harbor.

2. The State Land Use District (SLUD) designation is "Urban" which allows for urban growth in a specified area.

3. The proposed development is a shoreline property and is within the 500 foot shoreline setback threshold, pursuant to the County's shoreline setback requirements contained in Chapter 8, Article 27 of the Kaua'i County Code (1987), as amended. A Shoreline Setback Determination Application (SSD-2022-12) was submitted and presented to the Planning Commission on October 16, 2021.

4. The commercial zoned portion of the subject property is located within the Visitor Designation Area (VDA), whereas the open zoned area is not. As such, overnight accommodations within the makai lawn area are not permissible.

5. The General Plan designation (GP) is "Natural". According to the GP, areas designated as Natural have limited development due to topography, hazards vulnerability, sensitive resources, and other constraints. They include State Land Use Conservation District lands and some County Open Zoning Districts.

6. The subject parcel area where the existing Kaua'i Beach House Restaurant and Shops is located is within the Zone 'AE' of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map and is susceptible to 1% annual chance of flooding hazards. The makai lawn area is in the Zone "VE" coastal hazard area and the entire parcel is within the tsunami evacuation zone.

7. The topography is relatively flat and no grading of the project area will be done.

8. <u>Special Management Area (SMA)</u>
   In addressing the issues of the Special Management Area and its objectives and policies, the following aspects will be considered and evaluated:

   a. Recreational Resources

   b. Cultural/ Historic Resources

   c. Scenic resources

   d. Coastal Hazard

   e. Coastal Ecosystem

   Furthermore, the proposal does not:

- Involve dredging, filling or otherwise altering any bay, salt marsh, river mouth, slough, or lagoon;

- Reduce the size of any beach or other area usable for public recreation;

- Reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers, and streams within the SMA; and

- Adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries, potential or existing agriculture uses of land.

9. CZO Development Standards
The proposed development is subject to standards prescribed in Section 8-4.3 and Section 8-9.2.

   a. **Setback Requirements:** Front property line setbacks are ten feet (10'-0") and rear property line setback of five feet (5'-0") or half the distance of the plate height. Given the temporary use of the tent and placement of furniture fixtures, setback requirements are not applicable.

   b. **Lot Coverage:** Lot coverage within county Open (O) zoning designation of the makai lawn area is not to exceed 10% of the parcel or lot area. Given the temporary use of the tent and temporary placement of furniture fixtures, lot coverage requirements are not applicable.

   c. **Building Height:** Pursuant to Sec. 8-4.5(b) of the Kaua'i County Code (KCC) 1987 as amended, the allowable height for any dwellings and accessory structures shall not be over thirty (30) feet to the highest point of the roof measured at each point of along the building from finished grade at main entry. Given the temporary use of the tent and temporary placement of furniture fixtures, building height requirements are not applicable.

VIII. AGENCY COMMENTS

See attached Exhibit "A"

IX. PRELIMINARY EVALUATION

In evaluating the Applicant's request to allow the expansion of the dining area of the restaurant onto the makai lawn using a temporary tent and temporary fixture placement, the following are being considered.

1. General Plan
The proposed development satisfies the following policies of the General Plan, as taken from Section 1.3 and 1.4:

A. 1.3, entitled "VISIONS AND GOALS"

1) **Goal #1 "Sustainable Island"** – The proposed expansion of the dining area for the Kaua'i Beach House Restaurant will utilize temporary structures such as the 30' X 40' tent and the temporary placement of fixtures. These will not be intended to be left in place for an extensive period. There will be no permanent structures built along the shoreline.

2) **Goal #2 "Unique and Beautiful Place"** – The temporary tent and fixtures would be taken down as needed and not be left in place permanently or for an extended period. The proposed use should have minimal impacts to the rural character of the area.

3) **Goal #3 "A Healthy and Resilient People"** – The proposed expansion of the dining area helps promote safe social distancing during the COVID-19 Pandemic for tourists and local residents.

4) **Goal #4 "An Equitable Place, with Opportunity for All"** – The applicant intends to use the expansion area on the makai lawn for weddings, family parties, and other special events. This operation can potentially provide jobs for these types of services.

B. Section 1.4, entitled "POLICIES TO GUIDE GROWTH"

1) **Policy #8 "Protect Kaua'i's Scenic Beauty"**– Kaua'i is home to distinctive natural views and landmarks. No permanent structures are proposed along the shoreline. The 30 foot by 40 foot tent will be open at all sides and have a transparent top.

2) **Policy#9 "Uphold Kaua'i as a Unique Visitor Destination"** – The Kaua'i Beach House Restaurant is located within a resort area. The temporary use of the tent and fixture placement will have minimal impacts on existing infrastructure and existing communities. This use will not add any transient vacation rentals to the area.

2. Native Hawaiian Traditional and Cultural Rights
The subject property has been fully developed and in operation since 1961. The applicant has interviewed kupuna in the area and is unaware of any current traditional and customary practices on the subject property. Prince Kūhiō Park which is located across the street from Lāwa'i Beach Road is a cultural gathering place and contains a heiau and other artifacts.

After the Applicant consulted with a kupuna who are familiar with the area and evaluating historical information that was available to the department, the department finds that the proposed Project involving a developed parcel should have no impact on any known Hawaiian traditional or customary practices for the following reasons:

- There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.
- There are no special gathering practices taking place within any portion of the Project Site.
- The Project will not detrimentally affect access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.
- There are no known religious practices taking place within the Project Site.
- There are no known pre-contact cultural or historic sites or resources located within the Project Site.
- There are no known burials within the Petition Area.

3. SMA Rules and Regulations

The COK SMA Rules and Regulations contain objectives, policies and guidelines designed to protect coastal resources. Within the SMA, special consideration is given to recreational opportunities, cultural and historic resources, scenic qualities and open space, coastal ecosystems, and coastal hazards. In evaluating the proposed development relative to the goals and objectives of the SMA Rules and Regulations, the following aspects are taken into consideration:

a. Public Access and Coastal Recreation – The project area has two public beach accesses along its western and eastern boundaries that traverses along the rocky coastline of adjacent to the property. The Applicant would be advised that the temporary tent placement and conduct of special activities should not impede use of the non-exclusive access easement.

b. Cultural/ Historical Resources – The project site has been previously developed and in operation since 1961. During the (1983) reconstruction of the restaurant and shops, it was noted that no known sites of historic significance are within the subject site.

c. Scenic and Open Space Resources – The project is a shoreline parcel. The area of proposed development is an expansion of the existing restaurant and utilizes a temporary tent with temporary fixture placements. The tent will be open and all

sides and have a transparent top. It is visible from the shoreline and adjacent beach. Minimal visual impacts are expected from Lāwa'i Road when approaching the restaurant from the south.

d. Coastal Hazards – It is noted that the parcel is a shoreline property. A portion of the subject parcel where the development is being proposed is located within the Zone 'VE' of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map. The tent and fixtures will not be left on the makai lawn during any storm event or natural disaster.

e. Coastal Ecosystems – The applicant has contacted the Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW), there are no known or reported critical habitats within or adjacent to the property.

X. PRELIMINARY CONCLUSION

Based on the foregoing, it is concluded that through proper mitigative measures, the proposed development can be considered, and it complies with the policies and guidelines of the Special Management Area Rules and Regulations in that:

1. The development will not have any substantial adverse environmental or ecological effect.

2. The development is consistent with the objectives/goals/policies of the County General Plan, the Comprehensive Zoning Ordinance, and other applicable ordinances.

Furthermore, the proposal DOES NOT:

a. involve dredging, filling, or otherwise altering any bay, estuary, salt marsh, river mouth, slough, or lagoon;

b. reduce the size of any beach or other area usable for public recreation;

c. reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers, or streams within the special management area; and

d. adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries, or existing agricultural uses of land.

Furthermore, through proper mitigation measures the proposed development would not have any detrimental impact to the environment or the surrounding area and is in compliance with the criteria outlined for the granting of a Special Management Area Use Permit.

The Applicant should institute the "Best Management Practices" to ensure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those in the surrounding area of the proposal.

The Applicant shall implement to the extent possible sustainable building techniques and operational methods for the project.

XI. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion it is hereby recommend that the amendment to Class IV Zoning Permit Z-IV-1983-27, Use Permit U-1983-17, and Special Management Area Use Permit SMA(U)-1983-4 to be **APPROVED**. If approved, the following conditions shall be added to the existing conditions of approvals for the subject permits:

13. The proposed improvements under the 2022 amendments to the subject permits shall be constructed as represented. Any changes to said development shall be reviewed by the Planning Director to determine whether Planning Commission review and approval is warranted.

14. The tent and furniture fixtures will be taken down as needed and not be left up for more than a period of fourteen (14) consecutive days in duration during any three (3) month period. The activities will cease no later than 10:00 p.m. nightly.

15. The Applicant is advised that the temporary tent placement and conduct of special activities shall not impede use of the non-exclusive access easement to the shoreline area.

16. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050 to determine mitigation measures.

17. In order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, if external lighting is to be used in connection with the proposed project, all external lighting shall be only of the following types: downward-facing, shielded lights. Spotlights aimed upward or spotlighting of structures shall be prohibited.

18. The Applicant shall develop and utilize Best Management Practices (B.M.P's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

19. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, State Historic Preservation Division-DLNR, and the County Departments of Public Works, Fire, Transportation, and Water.

20. To the extent possible within the confines of union requirements and applicable legal prohibitions against discrimination in employment, the Applicant shall seek to hire Kauai contractors if they are qualified and reasonably competitive with other contractors and shall seek to employ residents of Kauai in temporary construction and permanent resort-related jobs. It is recognized that the Applicant may have to employ non-Kauai residents for particular skilled jobs where no qualified Kauai residents possesses such skills. For the purposes of this condition, the Commission shall relieve the Applicant of this requirement if the Applicant is subjected to anti-competitive restraints on trade or other monopolistic practices.

21. The Planning Commission reserves the right to revise, add, or delete conditions of approval in order to address or mitigate unforeseen impacts the project may, create, or to revoke the permits through the proper procedures should conditions of approval not be complied with or be violated.

22. Unless otherwise stated in the permit, once permit is issued, the Applicant must make substantial progress, as determined by the Director, regarding the development or activity within two (2) years, or the permit shall be deemed to have lapsed and be no longer in effect.

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for APRIL 12, 2022, whereby the entire record should be considered prior to decision-making. The entire record should include but not be limited to:

a. Pending government agency comments;
b. Testimony from the general public and interested others; and
c. The Applicant's response to staff's report and recommendation as provided herein.

By _____
ROMIO IDICA
Planner

Approved & Recommended to Commission:

By _____
KA'ĀINA S. HULL
Director of Planning

Date: 3/16/2022

EXHIBIT "A"

(Agency Comments)
For reference

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Romio) February 7, 2022

SUBJECT: Class IV Zoning Permit Z-IV-1983-27, Use Permit U-1983-17, Special Management Are Use Permit SMA(U)-1983-4, Accessory Structure
Tax Map Key: (4) 2-6-005:011, Ip2, Llc Dba The Beach House Restaurant, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

No comments or concerns from Fire

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

St. Catherine Preschool

Use Permit and Class IV Zoning Permit

Kapaʻa, Kauaʻi, Hawaiʻi

TMK: (4) 4-6-015:058

Applicant:

Kamehameha Schools

Authorized Agent:

Wilson Okamoto Corporation

October 2021

TABLE OF CONTENTS

Standard Zoning Permit Application

Attachment

Exhibit A – Landownership Documentation

Exhibit B – Letter of Authorization

Exhibit C – Supporting Figures

Exhibit D – Preliminary Design Drawings

Exhibit E – Reconnaissance Level Survey Form

Exhibit F – Letter dated October 20, 2021 from Mr. Sean Chun

Exhibit G – Traffic Impact Report

DEPARTMENT OF PLANNING

STANDARD ZONING PERMIT APPLICATION

One (1) original; If providing plans, five (5) sets, including original, required
Fees vary based on permits required and range from $30 to over $1000.
Proof of 100% fee ownership rights or authorized agent must be attached.

DEPARTMENT USE ONLY			
Zoning			Intake By:
Use			
Variance			Intake Date:
SMA			
PDU			Acceptance Date/By:
TOTAL FEE:			
Additional Fees:			
Receipt Number			
Building Permit No.			
Associated Permits (e.g. SSD)			

Check One: ☐ Paper Plans ☐ Electronic Plans

This application shall be filled out by all seeking Zoning, Use, Variance, SMA Use or PDU permits pursuant to the Kauai County Code, Hawai'i Revised Statutes Chapter 205A and all relevant rules and regulations of the Planning Commission and Department. Supplemental information may be attached to form. SMA applications may also require additional SMA assessment forms.

Permitting fees may be made via cash or check. All checks shall be made out to: **"Director of Finance"**

Complete Information Below			
Tax Map Key Number	(4) 4-6-015:058	Condominium Number	N/A
Applicant Name(s)	Kamehameha Schools		
Property Address	5021A Kawaihau Road, Kapaa, HI 96746		
Mailing Address	567 South Street, Suite 617, Honolulu, HI 96813		
Parcel Area	1.09 acres	Contact Phone	808-534-8108
Zoning Designation	R-4/ST-P	Contact Email (if applicable)	latakaha@ksbe.edu

Applicant Declarations (incorrect responses may slow your permit review)

Please place an "X" under Yes or No under the following:

		YES	NO	Staff Verification
1	Is this property located in the Special Management Area (SMA)?		X	
2	Is this property part of a Condominium Property Regime (CPR)?		X	
3	Is this property within 500 feet of the shoreline?		X	
4	Is this property within the Agriculture Zoning District?		X	
5	Is there a structure on the property that is 50 years old or older?	X		
6	Do you have an Additional Dwelling Unit Certificate?		X	
7	Is this a permit for an after-the-fact construction or activity?		X	
8	I hold at least a 100% property interest in the property.		X	
9	Are you an agent for the property owner?	X		
10	Has a similar application been previously denied?		X	
11	Is this an application for an agriculture structure under 200 square feet		X	
12	Are there known burials on the site?		X	
13	Are you using water not provided by a domestic water system?		X	
14	Does existing grade under building footprint change by 2' or more in any direction?		X	
15	The proposed residential unit is a Multi-Family Dwelling Unit?		X	
16	Is this a conversion of a legally existing single-family dwelling unit into a multi-family two dwelling unit?		X	
17	Is this structure a guest house?		X	
18	Does guest house contain a kitchen?		X	

1. What is the proposed construction and/or intended use of the structure or parcel (may attach additional info)? Preschool; see Attachment.
2. If this is not the first dwelling unit on the subject property identified on this application, please state how many dwelling units presently exist: N/A

Submittal Checklist

Please **INITIAL** under "Yes" or not applicable "N/A" regarding each of the statements:

		YES	NA	Staff Verification
1	All plot plans I have submitted are drawn to scale.	✓		
2	I have ensured all TMK numbers are visible on all plan sheets.	✓		
3	Any plans I have submitted clearly show all structures and setback dimensions.	✓		
4	My plans provide lot coverage calculations		✓	
5	I have ensured kitchens are marked with the 8' radii required by the Planning Department's Administrative Rules.		✓	
6	Because this application involves a CPR, the plot plan shows all existing structures.		✓	
7	Building plate does not exceed 20 feet from the finished grade at entry.	✓		

Acknowledgements - Please **INITIAL** next to each of the statements:

I UNDERSTAND:	Initial Here
Additional fees and/or the submittal of other application forms may be necessary to complete this application for acceptance and processing.	AWC
Tender of fees by the County does not imply acceptance of this application.	AWC
Errors in self-declaration or missing or incomplete information will delay acceptance and processing of your application.	AWC
Any purposeful misrepresentations in this application may result in delay, denial, permit revocation, violations, fines and even criminal prosecution.	AWC

The owner and/or authorized representative is hereby made aware that the construction, work, use or activity approved in this permit shall be subject to inspection by Planning Department personnel. The applicant is advised that inspection may occur prior to or during construction and use to ascertain the activity is conducted in compliance with the law. Further, I am a duly authorized agent or have 100% ownership rights.

OWNER/AGENT SIGNATURE: _____ DATE: 8/23/2021

FOR PLANNING DEPARTMENT USE ONLY (THIS CONSTITUTES PERMIT IF FILLED OUT BY DEPT.):

APPROVED ☐ DENIED ☐ BY: _____ DATE: _____

DIRECTOR'S CONDITIONS OF APPROVAL (staff to **initial** next to applicable conditions):

This permit shall expire if no building is issued within one (1) year after the approval date and/or if construction does not start within one (1) year of building permit issuance.	
Director's standard conditions for non-residential agricultural structures (attach)	
Should any archaeological or historic resources be discovered during ground disturbing/construction work, all work in the area of the find shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division and the Planning Department to determine mitigation measures.	
Additional Conditions (State):	

ATTACHMENT

I. Summary

Kamehameha Schools ("KS" or "Applicant") proposes to lease the existing structure on the southern portion of TMK (4) 4-6-015:058 ("Subject Property") for use as a preschool. The Subject Property is an approximately 1.09-acre lot located in Kapa'a, Kaua'i, Hawai'i that is currently owned by the Roman Catholic Church ("Landowner"). Various interior and exterior improvements, as well as onsite improvements are proposed to accommodate the new use ("Project"). The Applicant is requesting that the Planning Commission issue a Use Permit and Class IV Zoning Permit for the proposed Project pursuant to CZO requirements.

KS has 29 preschools statewide that enroll over 1,600 *keiki* (children). Each classroom typically consists of about 20 *keiki* ages three and four years old, a qualified teacher, and a teaching assistant. Upon completion of the proposed Project, *keiki* currently attending KS' preschool in Anahola will be relocated and the Anahola location will be closed. The purpose of the Project is to provide educational facilities in alignment with KS' mission to fulfill Bernice Pauahi Bishop's desire to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.

II. Applicant & Property Information

Recorded Fee Owner: Roman Catholic Church
P.O. Box 1550
Honolulu, HI 96806-1550
Contact: Rev. Nicholas Apetorgbor
Phone: (808) 266-0622

Landownership documentation is included in Exhibit A.

Applicant: Kamehameha Schools
567 South Street, Suite 617
Honolulu, HI 96813
Contact: Laura Takahashi, Senior Capital Program Manager
Phone: (808) 534-8108

Agent: Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826
Contact: Rebecca Candilasa, Senior Planner
Phone: (808) 946-2277

A Letter of Authorization from the Landowner is included in Exhibit B.

Tax Map Key:	(4) 4-6-015:058
Lot Area:	Approximately 1.09 acres
Project Site:	Approximately 0.40 acres
State Land Use District:	Urban
General Plan Designation:	Residential Community
County Zoning:	Residential (R-4) / Special Treatment-Public Facilities (ST-P)

III. Graphic & Schematic Requirements

Supporting figures are attached hereto as Exhibit C.

Preliminary design drawings of the proposed Project are attached hereto as Exhibit D.

IV. Project Description

A. Description of the proposed project and proposed uses, operations and management of the proposed use which includes, but is not limited to, proposed employee housing plan, hours of operation;

1. Project Location: The Subject Property is located in Kapa‘a on the east side of Kaua‘i. It is bound by Kawaihau Road to the north, Hauaala Road to the east, St. Catherine School to the south, and a parking lot and park/playground area to the west. Improvements are proposed to occur on approximately 0.40 acres of land situated on the southern half of the Subject Property (“Project Site”). See Figures 1 and 2 of Exhibit C.

2. Existing and Surrounding Uses: The Subject Property is entirely developed with a church and its accessory facilities. Existing structures onsite include St. Catherine Parish situated on the northern half of the property and a Parish Center situated on the southern half of the property. Parking for the facilities is located on an adjacent parcel to the west identified as TMK: (4) 4-1-015:067.

   St. Catherine Parish is open to the public and provides facilities for worship and other religious activities. The Parish Center is used for multiple purposes including offices, meeting rooms, a gift shop, and storage, all of which are accessory to the primary church-related activities occurring at St. Catherine Parish. Since the usage of the Parish Center is based on need, it is not consistently occupied.

The proposed Project involves improvements to the existing Parish Center, which consists of one (1) single-story, U-shaped building with the open side of the U-shape oriented to the south. The existing structure encompasses approximately 4,300 square feet (sf) of the 0.40-acre Project Site. Landscaping and a grass/gravel parking area with a driveway providing ingress and egress from Hauaala Road make up the remainder of the Project Site.

Other surrounding land uses in the vicinity include St. Catherine School, single-family residences, neighborhood businesses, Kapa‘a Elementary School, and Kapa‘a High School. See Figure 1 of Exhibit C.

3. Proposed Project and Proposed Uses: The Applicant proposes to lease the existing structure at the Project Site for use as a preschool. Project improvements consist of various interior and exterior improvements to the existing structure, as well as on-site improvements needed to accommodate the proposed use.

   The proposed interior improvements include reconfiguring the interior layout to accommodate two (2) classrooms, toilets, offices, a meeting space, and a reception area. The existing kitchen space will remain, but the existing interior finishes, casework, and fixtures are proposed to be replaced. All existing electrical systems will be replaced with code compliant systems including updated electrical infrastructure, LED lighting, and a new fire alarm system. New plumbing systems will also be provided throughout the building.

   Proposed improvements to the exterior of the building include repairing the existing roof and installing new gutters, windows, and doors to replace the existing components. Repair of the roof will consist of installing new asphalt shingles similar in color and character to the existing roof. The existing glass jalousie windows will be replaced with vinyl jalousie windows and new metal and sliding glass doors will be installed. The existing plaster exterior finish is proposed to remain and will be repainted in a color scheme consistent with the existing condition and character of St. Catherine Parish. A new covered walkway will be constructed along the south wall of the existing structure to allow children and staff to move between spaces while also providing protection from the elements and shading. The walkway structure will be constructed of the same materials as the building including wood framing and asphalt shingle roofing. An exterior play yard is also proposed in this area and will consist of a new concrete slab enclosed with a 6-foot-high chain-link fence along the perimeter.

   Other onsite improvements include paving the existing grass/gravel lot and driveway with asphalt concrete to meet accessibility and fire access requirements. A new ADA-compliant walkway will also be constructed along the north facing side of the building to provide access from the parking area. In addition, the existing cesspool located onsite will be replaced with a new septic system and leach field.

Preliminary design drawings of the proposed Project are attached hereto as Exhibit D. Construction of the proposed Project is expected to be initiated upon approval of the necessary permits and approvals with anticipated completion by 2022.

4. Operations and Management: The preschool is expected to accommodate a maximum enrollment of 40 students and will be staffed with six (6) full-time employees with an additional one (1) to two (2) staff present onsite to provide support as needed. Hours of operation for the preschool will be Monday through Friday from 7:00 am to 5:00 pm with staff expected to be onsite between 6:45 am and 5:30 pm. It is anticipated that the school will be closed on weekends and holidays.

   Primary access to the project site will be provided via the existing driveway for St. Catherine Parish off Kawaihau Road with secondary access provided via the existing driveway off Hauaala Road. The existing parking lot adjacent to St. Catherine Parish accessed via the driveway off Kawaihau Road will serve as parking for the preschool's pick-up and drop-off operations. This parking lot has 33 paved parking stalls, 3 ADA-accessible stalls, 34 unpaved parking stalls (total of 70 stalls) and a turnaround area. Use of these stalls will be formalized in the terms of the lease agreement. It is anticipated that the Applicant will also have use of the existing grass/gravel parking area at the Project Site for use by staff and visitors. Access to this lot is provided via the driveway off Hauaala Road.

B. Summary of Permits (i.e. Use Permit, Variance Permit, Special Permit, Class IV Zoning etc.) or Land Use Amendments requested, and the application section of the Kaua'i County Code or regulation citing the specific standards and criteria for granting of the permit or amendment being requested;

1. County Zoning Designation: The County of Kaua'i Comprehensive Zoning Ordinance (CZO) lists within each zoning district of the County, those uses, development, and activities, that are "generally permitted" and those which may be allowed only after obtaining a Use Permit. The Subject Property is located within both the County's Residential (R-4) and Special Treatment-Public Facilities (ST-P) District. Special Treatment Districts may overlap any Use District, thereby creating accumulated regulations which more nearly relate to the conditions of the specific location where the development or use may occur. Allowable uses within the R-4 District consist of residential dwelling units constructed to a density of up to four (4) dwelling units per acre. Allowable uses within the ST-P District include:

   > *All public and quasi-public facilities, other than commercial, including schools, churches, cemeteries, hospitals, libraries, police and fire stations, government buildings, auditoriums, stadiums, gymnasiums, which are used by the general public or which tend to serve as gathering places for the general public; and those areas which because of their unique locations are specially suited for such public and quasi-public uses.*

2. Existing Use and Conformance with the CZO: The Parish Center was first built in 1952 and was historically used as a home for nuns ("nunnery") of St. Catherine Parish. With the departure of the nuns in 2005, the nunnery was re-purposed into a Parish Center, which is an accessory use to the church much like the nunnery. Since the building was constructed in 1952 prior to the adoption of the County's CZO in 1972, the building and its use are considered nonconforming. As stated in CZO Section 8-13.2(a):

   > *A non-conforming use of land, buildings, or other structures may continue to the extent that the use existed on September 1, 1972 or any amendment hereto, as provided in this Section 8-13.2 […]*

   Moreover, CZO Section 8-13.1(b) states nonconforming structures may be *"repaired, maintained, or altered in any manner which does not increase nonconformity."* Based on the foregoing reasons, and because the existing use presents no substantial danger to public health or safety, the existing use and structures are in compliance with prevailing land use regulations.

3. Proposed Use and Conformance with the CZO: Under the proposed Project, the Applicant will convert the Parish Center into a preschool that will provide educational programs for *keiki* between the ages of three and four. Pursuant to CZO Section 8-13.1(b), "*[a]ny nonconforming structure, except as otherwise regulated, may be enlarged or expanded provided that any enlargement or addition shall conform to the regulations for the district in which it is located."* Schools are a permitted use in the R-4/ST-P District with a Use Permit consistent with CZO Sections 8-2.4(f)(13) and 8-11.4(a).

4. Permits Requested and Required: The Applicant is requesting that the Planning Commission issue a Use Permit pursuant to CZO Section 8-3.2 for the proposed Project. This permit application is intended to fulfill the requirements for project review in accordance with CZO Section 8-3.2. Likewise, the proposed Project requires issuance of a Class IV Zoning Permit as a condition of the Use Permit approval pursuant to CZO Section 8-8.4(4). Therefore, this permit application submittal also fulfills requirements for project review pursuant to CZO Section 8-3.1(f) pertaining to Class IV Zoning Permits.

5. Use Permit and Zoning Permit Considerations: The primary purpose of the Use Permit process is to assure that a particular activity or use of land can be integrated into and be compatible with its immediate surroundings. Section 8-3.2(e)(1) of the CZO specifies a Use Permit may be granted only if the Planning Commission finds that the use meets the following criteria:

   a. the use must be a compatible use;
      The Project Site is located in a residential neighborhood in the vicinity of several other schools and neighborhood businesses. The proposed use of the Project Site as a preschool will satisfy an essential community need by providing educational programs

and activities that support the growth and development of children in the region. It can be reasonably expected that with education these children will go on to make meaningful contributions to society later in life. The placement of schools within residential neighborhoods and/or in a centralized location further enhances convenience for residents and allows residents to take advantage of available educational opportunities, as evidenced by the location of other schools in the area such as St. Catherine School (Grades K to 5), Kapa‘a Elementary School (Grades K to 6), and Kapa‘a High School (Grades 9 to 12). For the reasons mentioned, the proposed use is compatible with the uses in its immediate surroundings and would not be detrimental to the health, safety, peace, morals, comfort, and the general welfare of persons residing and working in the neighborhood.

b. the use must not be detrimental to persons or property in the area;
Operation of the preschool will be within normal working hours. The proposed Project improvements will be in conformance with the development standards applicable to the R-4/ST-P District in the County's CZO and as conditioned by the Planning Commission with approval of the subject Use Permit. Construction and operation of the Project is not anticipated to be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the community.

c. the use must not cause substantial environmental consequences; and
Construction of the proposed project will not result in any substantial harmful environmental consequences. Project improvements are the minimum necessary to convert the use of the existing structure to a preschool and to ensure the structure is compliant with all prevailing building code requirements and safety regulations. Mitigative measures—such as standard best management practices (BMPs) for construction and adherence to applicable federal, State, and County rules and regulations—will be incorporated into the design to ensure there will be no substantial harmful environmental consequences on the land or on other lands or waters. Following construction, the proposed use is not anticipated to result in any significant environmental consequences beyond what would have previously existed under the former use of the Project Site as a nunnery. A more detailed discussion on potential environmental impacts of the Project by topic is provided below.

Climate and Climate Change: The climate in the project area is characterized as semi-tropical with two seasons: wet and dry. During May through September, it is generally warm and relatively dry, with predominantly northeast trade winds. October through April is associated with lower temperatures and higher rainfall, and less prevalent trade winds. Long term data collected at the Līhu‘e Airport indicated that the northeast wind direction prevails throughout the year with a mean annual wind speed of 20 miles per hour. The average daytime maximum temperature ranges from about 78 degrees in the winter to 85 degrees in the summer. Average annual rainfall is about 43 inches.

Construction and operation of the project is anticipated to result in the release of greenhouse gas emissions. However, these emissions are anticipated to be minimal since the proposed Project involves renovation of an existing structure and trips generated by the project are likely to occur without construction of the Project. In addition, the Project design will incorporate energy efficient fixtures and will aim to utilize passive cooling to avoid energy demands associated with air conditioning.

Topography: No significant changes in topography are proposed. The Project Site sits about 140 feet above mean sea level; see Figure 3 in Exhibit C. It is generally flat and was graded for construction of the existing building onsite. Project improvements involve renovating the existing structure, which would not require any mass grading. Although some grading is proposed to construct the new walkways and play yard area, topography of the site is expected to remain similar to existing conditions.

Soils: According to the U.S. Department of Agriculture, Natural Resources Conservation Services Web Soil Survey, soils underlying the Project Site are classified as Lihue silty clay (LhB); see Figure 4 in Exhibit C. The Lihue series consists of deep, well drained soils that formed in material weathered from basic igneous rock and influences by tropospheric dust. Lihue soils are on uplands and have slopes of 0 to 40 percent.

Surface Water: There are currently no natural surface water resources, such as streams, rivers, lakes, wetlands, reservoirs, and creeks in the vicinity of the Project Site. No impacts to surface waters are anticipated with the proposed Project.

Coastal Waters: The Project Site is located inland and away from the coast. Additional runoff generated by the proposed project will be retained on-site. No impacts to coastal waters are anticipated with the proposed Project.

Drainage: A portion of the project site is already developed with impervious surfaces. Increases in runoff will be minimal and any additional runoff generated by the proposed project will be retained on-site.

Flood Hazard: The Project Site is located within FEMA Flood Zone X, areas determined to be outside the 0.2% annual chance floodplain; see Figure 5 in Exhibit C. No impacts to the flood zone and to downstream properties are anticipated with the proposed Project.

Sea Level Rise: The Project Site is not located in an area vulnerable to sea level rise.

Flora: The project site is entirely developed with vegetation at the site consisting primarily of grass, a plumeria tree, and ornamental plants commonly used for landscaping. No trees are proposed to be removed with the proposed project and no

habitats of state or federally listed, threatened or endangered species will be affected by construction and operation of the proposed Project.

Fauna: The Subject Property is entirely developed and does not serve as a habitat for any state or federally listed, threatened or endangered species. To minimize any potential harm to seabirds that may overfly the project site, the Applicant will utilize downward facing lighting to the maximum extent possible to avoid attracting these birds; and/or to reduce any possible attractive lighting to the extent reasonably possible during the critical two-week period before and after the new moon each October. No significant impacts on fauna within the project site are anticipated from either the construction or operation of the proposed Project.

Noise: Ambient noise in the vicinity of the Project site is predominantly attributed to vehicular operations on the surrounding roadways. Temporary increases in noise levels associated with construction related activity for the proposed project are not anticipated to substantially affect nearby uses due to the temporary and intermittent nature of construction activities. All equipment used during construction will be properly muffled, housed and maintained. Any potential impacts on noise receptors in the area will be mitigated with the implementation of BMPs and by complying with the applicable provisions of State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control."

Air Quality: Air quality within the project site is generally considered to be good due to sparse development surrounding the subject property and the absence of point-source pollutant generators in the vicinity. Temporary increases in fugitive dust are anticipated to have negligible impacts on air quality in the project vicinity as the emissions would be relatively small and readily dissipated. Any potential air quality impacts will be mitigated by implementing BMPs to control fugitive dust and by complying with the applicable provisions of State DOH Administrative Rules, Tile 11, Chapter 60 "Air Pollution Control." No long-term impacts to air quality are anticipated with the proposed Project.

Archaeological/Historic Resources: The existing structure at the Project Site was originally constructed in 1952 making it a historic property as it is over 50 years old in age. The building itself is made up of original materials consisting of CMU block walls finished on the exterior with plaster. The asphalt shingle roof and glass jalousie windows were more recently replaced in 1992 following damage sustained during Hurricane Iniki.

The existing building is not listed on the State or National Register of Historic Places. The National Park Service's guidance document titled *How to Apply the National Register Criteria for Evaluation* states that ordinarily properties owned by religious institutions or used for religious purposes are not considered eligible for the National Register. However, such properties will qualify for eligibility if they fall within the following categories:

- *A religious property deriving primary significance from architectural or artistic distinction or historical importance; or*
- *A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or*
- *A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life; or*
- *A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or*
- *A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or*
- *A property primarily commemorative in intent if design, age, tradition, symbolic value has invested it with its own exceptional significance; or*
- *A property achieving significance within the past 50 years if it is of exceptional importance.*

This historic property does not fall into any of the foregoing categories and is therefore not considered eligible for listing. It is not associated with any significant event or person of interest and the building architecture is not unique to the period it was constructed, nor does it appear to have any historic significance. A Reconnaissance Level Survey prepared by Ushijima Architects is attached hereto as Exhibit E.

There are no other known historic properties within the Project Site. Some ground disturbance is proposed for construction of the new walkways and play yard area, as well as for replacement of the cesspool with a septic tank and leach field. Should there be any inadvertent discoveries, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division and the Planning Department to determine mitigation measures.

Cultural Resources: The proposed Project involves renovation of an existing development and will have no impact on any known traditional or customary practices of native Hawaiian for the following reasons:

- There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.
- There are no special gathering practices taking place within any portion of the Project Site.

- The Project will not detrimentally affect access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.
- There are no known religious practices taking place within the Project Site.
- There are no known pre-contact cultural or historic sites or resources located within the Project Site.
- There are no known burials within the Petition Area.

By letter dated October 20, 2021, Mr. Sean Chun of Wailua, Kaua'i, a known cultural practitioner and kumu of various Hawaiian arts, noted that there are no cultural sites or relevance that would inhibit Hawaiian cultural practices. A copy of the letter is provided in Exhibit F.

A discussion on potential impacts related to visual resources, public services and facilities, traffic, parking, water, wastewater, and solid waste is provided in Sections IV.F. to IV.I. of this application.

d. <u>the use must not be inconsistent with the intent of the CZO and General Plan.</u>
The proposed Project will be designed and developed in conformance with the development standards applicable to the R-4/ST-P District as established in the CZO and as conditioned by the Planning Commission with approval of the subject Use Permit. The proposed use is an allowable use with issuance of a Use Permit, which is the subject of this permit application. Discussion of the project's consistency with the General Plan is discussed in the following sections.

C. Policies and Objectives of the General Plan; the provisions of the Community Development Plan applicable to the application (including design standards and application requirements); the provisions of the applicable zoning district; and an analysis of the extent to which the application, if granted, conforms to these provisions of the applicable district; and an analysis of the extent to which the application, if granted, conforms to these policies, objectives and provisions;

1. <u>County of Kaua'i General Plan (2018):</u> The General Plan Vision & Goals for Kaua'i are series of statements that express the community's values and desired outcomes in the year 2035. The proposed Project is consistent with the following applicable Vision & Goals of the Kaua'i General Plan:

Goal 4: An Equitable Place, with Opportunity for All

The proposed use of the Project Site as a preschool will contribute to the goal of creating an equitable place, with opportunity for all by providing opportunities for and access to early education. Location of the facility in the context of a residential neighborhood will enhance convenience for residents in the community and improve quality of life.

Policies and actions of the Kaua‘i General Plan flow from the Vision & Goals. There are nineteen policies to address the issues most important to Kaua‘i residents in the face of existing issues and future growth. These policies articulate the County’s path forward toward meeting the community’s vision and goals of sustainability, unique character, resilience and equity. The proposed Project is consistent with the following applicable policies of the Kaua‘i General Plan:

Policy 1: Manage Growth to Preserve Rural Character

This policy aims to preserve Kaua‘i’s rural character by limiting the supply of developable land to an amount adequate for future needs, prohibit development not adjacent to towns, and ensure new development occurs inside growth boundaries and is compact and walkable. The proposed Project involves renovation of an existing structure for use as a preschool, which would not require the development of vacant land and open space. Additionally, the Project Site is located within an established neighborhood in Kapa‘a adjacent to residences and other compatible uses.

Policy 4: Design Healthy and Complete Neighborhoods

This policy aims to ensure new and existing neighborhoods have safe roads, functional parks, as well as access to jobs, commerce, transit, and public services. As mentioned previously, the Project Site is located within an established neighborhood in Kapa‘a adjacent to residences and other compatible uses. Location of the facility in the context of a residential neighborhood will enhance convenience for residents in the community and improve quality of life. In addition, the County of Kaua‘i Department of Public Works (DPW) is proposing several Complete Streets and Safe Routes to School improvements in the vicinity. Design of the project will provide appropriate connection to these facilities as appropriate and as coordinated through consultation with DPW.

Policy 17: Nurture Our Keiki

This policy aims to value youth as Kaua‘i’s most treasured resource. It also aims to provide youth with safe communities, great schools and facilities, and financially sustainable jobs, housing, and transportation opportunities so they are able to seek livelihoods on Kaua‘i. The proposed Project involves renovation of an existing structure for use as a preschool that will provide early education opportunities for *keiki* between the ages of three and 4. It can be reasonably expected that with education these children will go on to make meaningful contributions to society later in life.

Policy 19: Communicate with Aloha

This policy notes that Kaua'i's residents care about planning and decision-making. Therefore, the government must share information, encourage input, improve public processes, and be responsive. The scheduling of this Application before the Planning Commission will allow the public to participate in the planning and decision-making process for the proposed Project.

Future Land Use and Community Planning

As shown in Figure 6 of Exhibit C, the Project Site is designated within Residential Community. This designation indicates existing areas that are primarily residential with few to no other uses. The Project Site is also designated within the community planning district of East Kaua'i. One of the preliminary vision and priorities for East Kaua'i residents include the ability of residents to enjoy a high quality of life in a rural setting. The proposed use of the Project Site as a preschool will satisfy an essential community need and allow residents to have convenient access to early education opportunities.

Along with future land use and community planning, there are ten sectors that represent important areas to be addressed when planning Kaua'i's growth and development. The proposed Project is consistent with the following applicable sectors and their actions:

Sector X. Opportunity & Health For All

One of the identified issues in this sector is access to quality education and training. As outlined in the Kaua'i General Plan, the objective for this issue is to support educational programs that foster cultural knowledge, employability, and civic participation of local residents. Some of the implementing actions associated with this objective include increasing access to early education and care and supporting the language, culture, and knowledge of Kaua'i. The preschool will accommodate the same number of students as their location in Anahola. The Hawaiian cultural values of *aloha*, *mālama*, and *kuleana* are an integral part of the KS preschool program experience. KS strives to nurture these values while continuing to provide a learning environment that is safe, educational, culturally-grounded, enjoyable and enriching. By providing a preschool facility, the Project fulfills the purpose of the proposed Project to provide educational facilities in alignment with KS' mission. Approval of the Use Permit will not only allow for the use and development of these facilities, it will also directly implement the permitting and code changes outlined in the Kaua'i General Plan, specifically the following:

> *Support the use, expansion, and development of family childcare homes, preschools, parent/child kindergarten readiness programs, and charter schools.*

2. Kapa‘a-Wailua Development Plan (1973): The adopted version of the Kapa‘a-Wailua Development Plan dates back to 1973. Although efforts were made to update the plan in more recent years, that plan was never officially adopted. Therefore, the goals and objectives of the 1973 Kapa‘a-Wailua Development Plan are still active even though they may not necessarily reflect the current goals and objectives of the residents in the region. It is understood that the more recent, comprehensive community planning process undertaken as part of the development of the Kaua‘i General Plan (2018) more accurately reflects the vision for the East Kaua‘i Community. Therefore, reference should be made to the “Future Land Use and Community Planning” discussion provided in Section IV.C.1. of this application. Nevertheless, the following is a discussion on the Project’s compliance with the applicable goals and objectives of the 1973 Kapa‘a-Wailua Development Plan.

   Objective II. Education & Recreation

   The educational objective states that *“[t]he educational program should be separated into three levels—kindergarten to sixth, seventh to ninth, and tenth to twelfth grades—corresponding to the three “social” levels of attitude.”* Although preschool is not specifically mentioned, it is acknowledged that early education at the preschool level is a part of the broad spectrum of educational pursuits, thereby making the proposed Project consistent with the educational objectives of the Kapa‘a-Wailua Development Plan.

3. County of Kaua‘i Comprehensive Zoning Ordinance*:* Compliance with the use standards of the CZO are the subject of this application and are discussed throughout. Pursuant to CZO Section 8-4.9 pertaining to development of other uses in a residential district:

   > *All permitted uses, all uses requiring a use permit, and all uses allowed by variance other than residential:*
   > *(a) Shall conform to development standards established for the district in which they are normally permitted provided that:*
   > *(1) the minimum distance from property lines shall be the same as that required for Single Family Detached Dwellings; and*
   > *(2) the maximum building heights shall be the same as that required for Single Family Detached Dwellings; or*
   > *(b) Shall conform to the requirements and conditions imposed by the Planning Commission in granting the use permit or variance permit.*

   A Use Permit is required for schools in any district. Therefore, the Project will be designed and constructed in conformance with the requirements of the CZO and the conditions imposed by the Planning Commission in granting the subject Use Permit.

D. Detailed land use history of the parcel, which includes but is not limited to, former and existing State and County land use designations, violations and uses;

The Parish Center on the Subject Property was first built in 1952 and was historically used as a nunnery for the nuns of the St. Catherine Parish. Around 2005, the nunnery was re-purposed as a Parish Center, which is accessory to the primary use of the subject property as a church. The existing State land use designation of the site is Urban and the existing County land use designation of the site is R-4/ST-P. Since the building was constructed in 1952 prior to the adoption of the County's CZO in 1972, the building and use are considered nonconforming. In 1992, repairs to the existing roof and windows were made following Hurricane Iniki. No major modifications to the structure have been undertaken which would have increased its nonconformity and the use presents no substantial danger to public health or safety. Additionally, there are no known land use violations related to the subject property and its existing uses.

E. Status reports of all Zoning Amendment ordinance conditions, existing Land Use Permit conditions, and Subdivision Application conditions pertaining to the project site;

There are no known Zoning Amendment ordinance conditions, existing Land Use Permit conditions, and Subdivision Application conditions pertaining to the project site. There are currently no known violations related to the subject property and its existing uses.

F. Analysis of the secondary impacts of the proposed use on the surrounding area, which includes but is not limited to, increases in property value, population, housing, community services and facility needs, secondary jobs and employment generated, and compatibility with the surrounding uses;

The Project Site is located in an established neighborhood with little to no vacant land available for development. The proposed use fulfills an essential community need and is not likely to induce population growth that would have secondary impacts on the surrounding area, such as an increase in demand for housing or community services and facilities. The Project is also not likely to significantly increase property values as there are already several educational facilities in the area.

It is anticipated that converting the use from the Parish Center, which is not consistently occupied, to a preschool will generate additional traffic in the area. A *Traffic Impact Report for the St. Catherine Preschool* was prepared in July 2021 to assess the traffic impacts resulting from the Project. A copy of the report is provided in Exhibit G. Based on the assessment, traffic operations along Kawaihau Road are generally expected to remain similar to without project conditions. The following recommendations were made for consideration to incorporate into the Project design:

1. *Verify sufficient sight distance for motorists to safely enter and exit all project driveways including the driveways off Kawaihau Road and Hauaala Road.*
2. *Verify adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
3. *Verify adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.*
4. *Verify sufficient turning radii at all project driveways to avoid vehicle encroachments to oncoming traffic lanes.*
5. *Ensure that the existing grass/gravel lot off Hauaala Road that is expected to be used as the preschool's staff parking lot is made accessible in conformance with the Americans with Disabilities Act (ADA) requirements.*
6. *Ensure that pedestrian connections to and from the existing parking area off Kawaihau Road are accessible in conformance with ADA requirements. This lot is expected to be designated as the parking lot for pick-up/drop-off for the preschool.*
7. *Consider providing signage near the project driveway off Hauaala Road to inform students and parents of the preschool where the designated parking for pick-up/drop off is located. In addition, provide information to indicate that the parking lot off Hauaala Road is for staff parking only.*
8. *Coordinate with the County of Kauai to ensure that appropriate modifications for the project driveways are incorporated into their complete streets project and that sufficient sight distances and turning radii are maintained for vehicles entering/exiting the project site.*

DPW is expected to construct a five-legged peanut-shaped roundabout at the intersections of Kawaihau Road with Hauaala Road and Mailihuna Road. These improvements are anticipated to facilitate traffic flow through the intersection and accommodate site-generated trips. Also, with adequate parking available through the lease agreement with the Landowner, no additional parking is anticipated to be required for this Project.

Secondary impacts on visual resources are also not anticipated with the proposed Project as the project will not significantly increase the height of the existing building, nor will it significantly expand the existing development footprint. In addition, all materials and finishes used will be in consonance with the character of the surrounding uses.

G. Water source, supply and distribution system analysis, which includes but is not limited to, methods of irrigation that exists on the parcel and proposed for the application, location and use of groundwater and non-potable water sources;

The proposed project will install a new plumbing system within the building and will use the existing water service provided by the County of Kaua'i Department of Water Supply (DWS). The Applicant will coordinate with DWS regarding the availability of water and any improvements needed to support the proposed use.

H. Sewage Disposal Analysis – A description of a proposed method of sewage disposal;

Wastewater generated by the subject property is collected by an existing cesspool located on-site. Proposed project improvements will include installation of a new septic tank and leach field sized and designed for the collection and treatment of wastewater generated by the proposed use. Closure of the existing cesspool and construction of the new wastewater system will be constructed in compliance with applicable federal, State, and County rules and regulations pertaining to wastewater systems.

I. Solid Waste Disposal Analysis – A description of a proposed method of solid waste disposal, including methods for recycling, reclamation and waste stream diversion; and

During construction, the contractor will be responsible for the disposal of all construction and demolition waste. Following construction, solid waste will continue to be collected by a private contractor. The Applicant will incorporate recycling, reclamation and waste stream diversion practices in day-to-day activities at the preschool to the maximum extent practicable. Additional solid waste that may be generated by the construction and operation of the proposed project is not anticipated to place significant demand on existing solid waste facilities and will have not have a significant impact on future capacity.

J. Description of environmentally sensitive areas, habitat and botanical features, which includes but is not limited to, wetlands, streams, rock outcroppings, endangered plants and animals, and exceptional trees.

1. Surface Water
   There are currently no natural surface water resources, such as streams, rivers, lakes, wetlands, reservoirs, and creeks in the vicinity of the project site. Additional runoff generated by the proposed project will be retained on-site. No impacts to surface waters are anticipated with the proposed Project.

2. Coastal Waters
   The proposed project is located inland and away from coastal waters. Additional runoff generated by the proposed project will be retained on-site. No impacts to coastal waters are anticipated with the proposed Project.

3. Flora
   The project site is entirely developed with vegetation at the site consisting primarily of grass, a plumeria tree, and ornamental plants commonly used for landscaping. The proposed Project involves renovation of an existing structure that will be slightly expanded to accommodate new walkways and a new play area. No trees are proposed to be removed with the proposed project. Furthermore, no habitats of state or federally listed, threatened or endangered species will be affected by construction and operation of the proposed Project.

4. Fauna

   The Subject Property is entirely developed and does not serve as a habitat for any state or federally listed, threatened or endangered species. To minimize any potential harm to seabirds that may overfly the project site, the Applicant will utilize downward facing lighting to the maximum extent possible to avoid attracting these birds; and/or to reduce any possible attractive lighting to the extent reasonably possible during the critical two-week period before and after the new moon each October. No significant impacts on fauna within the project site are anticipated from either the construction or operation of the proposed Project.

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii, U.S.A. 96826
www.wilsonokamoto.com
PH 808-946-2277 FX 808-946-2253

EXHIBIT A

Landownership Documentation

County of Kaua'i
State of Hawai'i

Parcel Information

Parcel Number (TAX MAP KEY)	460150580000
Location Address	HAUAALA RD KAPAA HI 96746
Project Name	
Tax Classification	RESIDENTIAL (Note: This is for tax purposes only. Not to be used for zoning.)
Neighborhood Code	46611-1
Legal Information	
Zoning	R4
Non Taxable Status	
Land Area (acres)	1.0900
Land Area (approximate sq ft)	47,480
Living Units	0

View Map

Owner Information

Owner Names
ROMAN CATHOLIC CHURCH Fee Owner

Mailing Address
ROMAN CATHOLIC CHURCH
C/O FHB - AGENT FOR RCCH (TRUST RE SVCS)
PO BOX 1550
HONOLULU HI 96806 1550

Assessment Information

⊞ Show Historical Assessments

Year	Property Class	Total Market Value	Total Property Assessed Value	Total Property Exemption	Total Net Taxable Value
2021	RESIDENTIAL	$339,900	$339,900	$339,900	$0

How to calculate real property taxes

Assessment Notices

2021 (PDF) 2020-1 (PDF) 2019-1 (PDF) 2018-1 (PDF)

Online Assessment Notices will include one PDF per parcel for each class. For multi-owner copies please contact rpassessment@kauai.gov.

Commercial Improvement Information

Building Number	1	**Effective Year Built**	1939
Building Type		**Building Square Footage**	0
Structure	644-NO COST	**Percent Complete**	0%
Year Built	1939		

Current Tax Bill Information

Tax Period	Description	Original Due Date	Taxes Assessment	Tax Credits	Net Tax	Penalty	Interest	Other	Amount Due
2021-1	Real Property Tax	08/20/2021	$75.00	$0.00	$75.00	$0.00	$0.00	$0.00	$75.00
2021-2	Real Property Tax	02/20/2022	$75.00	$0.00	$75.00	$0.00	$0.00	$0.00	$75.00
	Tax Bill with Interest computed through 08/20/2021		$150.00	$0.00	$150.00	$0.00	$0.00	$0.00	$150.00

Historical Tax Information

Year	Tax	Payments and Credits	Penalty	Interest	Other	Amount Due
⊞ 2021	$150.00	$0.00	$0.00	$0.00	$0.00	$150.00
⊞ 2020	$150.00	($150.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2019	$150.00	($150.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2018	$150.00	($150.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2017	$150.00	($150.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2016	$150.00	($150.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2015	$150.00	($150.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2014	$100.00	($100.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2013	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2012	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2011	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2010	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00

Year	Tax	Payments and Credits	Penalty	Interest	Other	Amount Due
⊞ 2009	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2008	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2007	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2006	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2005	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2004	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2003	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2002	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2001	$25.00	($25.00)	$0.00	$0.00	$0.00	$0.00

Map



No data available for the following modules: CPR/Condo/Apt Unit Information, Appeal Information, Improvement Information, Sketches, Other Building and Yard Improvements, Permit Information, Conveyance Information.

The Kauai County Tax Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation.
User Privacy Policy
GDPR Privacy Notice

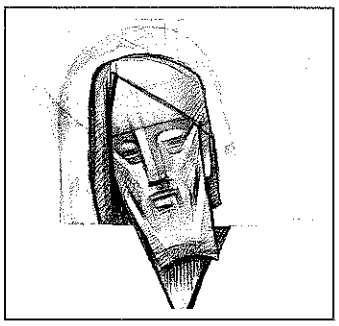
Developed by Schneider GEOSPATIAL

Last Data Upload: 8/6/2021, 3:15:14 AM

Version 2.3.138

EXHIBIT B

Letter of Authorization



ST. CATHERINE PARISH

5021-A Kawaihau Road
Kapaa, HI 96746

August 19, 2021

A Roman Catholic Community

St. Catherine Church
5021-A Kawaihau Road
Kapaa

St. Sylvester Church
2390 Kolo Road
Kilauea

St. William Church
5292-A Kuhio Hwy.
Hanalei

Mass Schedule:

St. Catherine Church
Daily Mon-Sat: 7:00AM
Holidays: 8:00AM
Saturday: 5:00PM
Sunday: 7:30AM
9:30AM
5:00PM

St. Sylvester Church
Wednesday: 5:30PM
Saturday: 5:00PM
Sunday: 7:00AM

St. William Church
Sunday: 9:00 AM

Mr. Ka'āina S. Hull
Director
County of Kaua'i Planning Department
4444 Rice Street, Suite A473
Līhu'e, Hawai'i 96766

Subject: St. Catherine Preschool
Use Permit and Class IV Zoning Permit Application
Tax Map Key (TMK): (4) 4-6-015:058
Kapa'a, Kaua'i, Hawai'i

Dear Mr. Hull:

Roman Catholic Church, owner of TMK (4) 4-6-015:058, does hereby authorize Kamehameha Schools and Wilson Okamoto Corporation to file and process a Use Permit and Class IV Zoning Permit and other related permits for the proposed St. Catherine Preschool project on the subject property.

Sincerely,

Rev. Nicholas Apetorgbor
Parish Administrator in
Roman Catholic Church in the State of Hawaii

EXHIBIT C

Supporting Figures

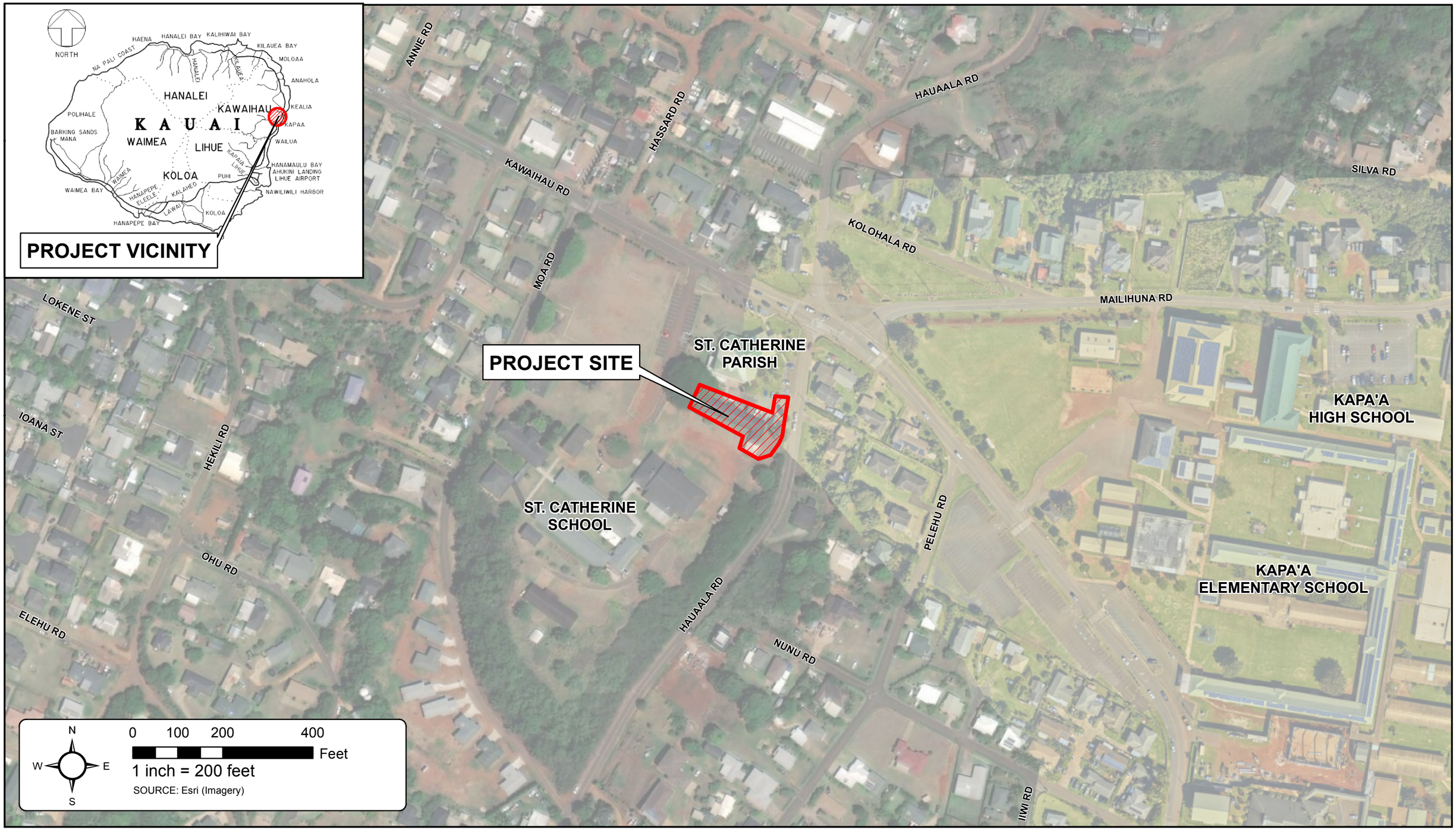


FIGURE 1

LOCATION AND VICINITY MAP

ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I

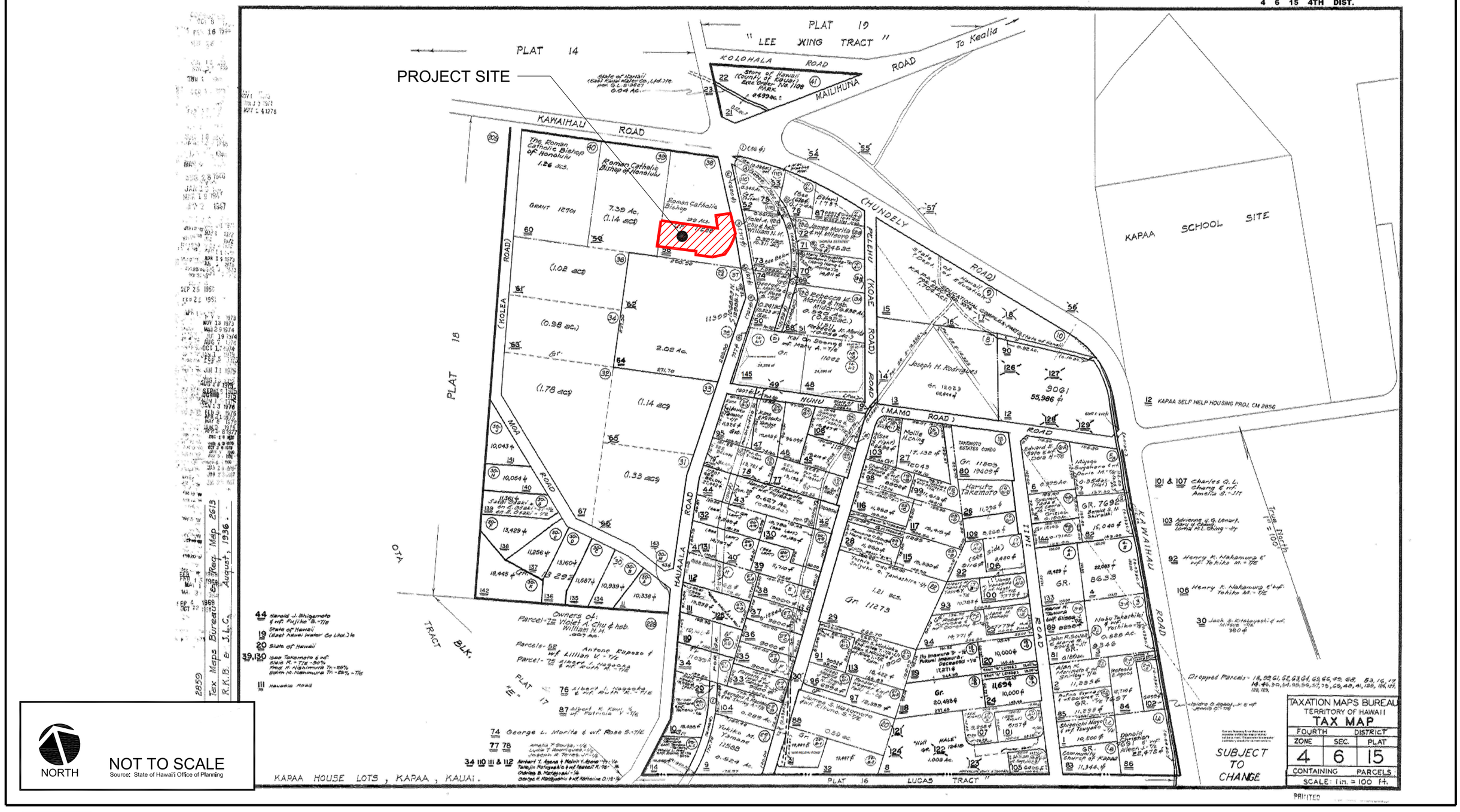


FIGURE 2
TAX MAP KEY

ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I

WILSON OKAMOTO CORPORATION

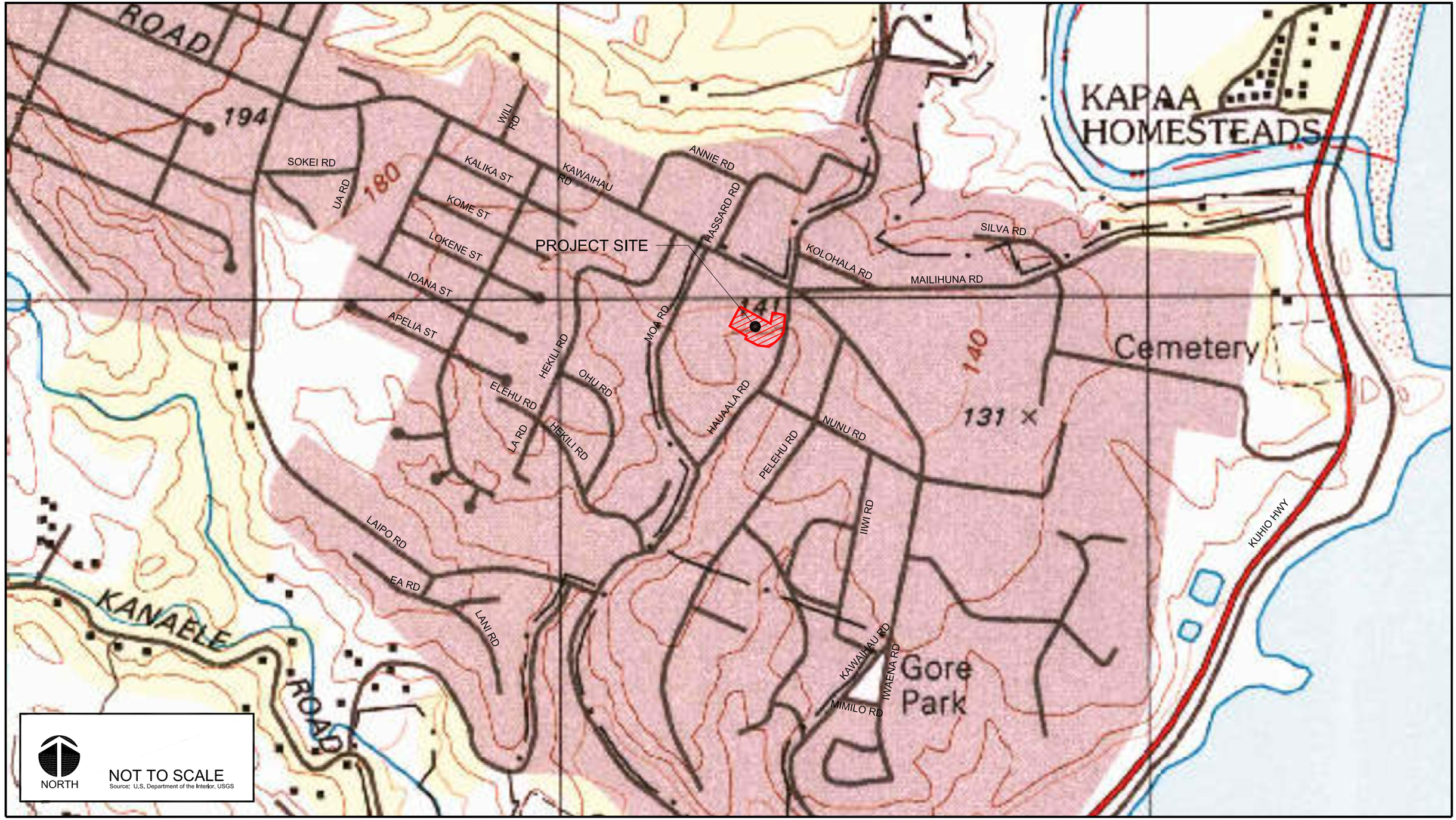
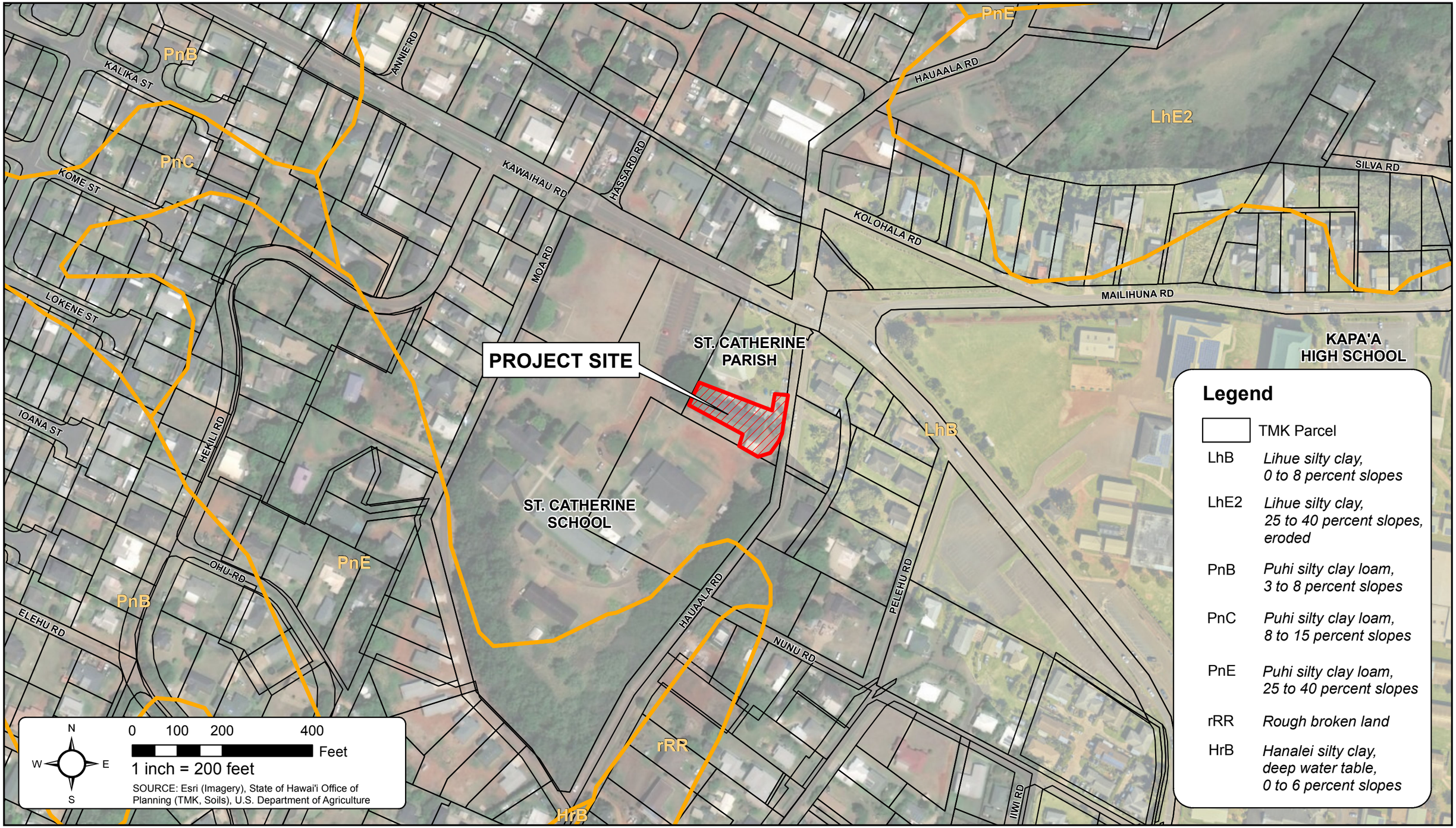


FIGURE 3

USGS TOPOGRAPHIC MAP

ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I

WILSON OKAMOTO CORPORATION

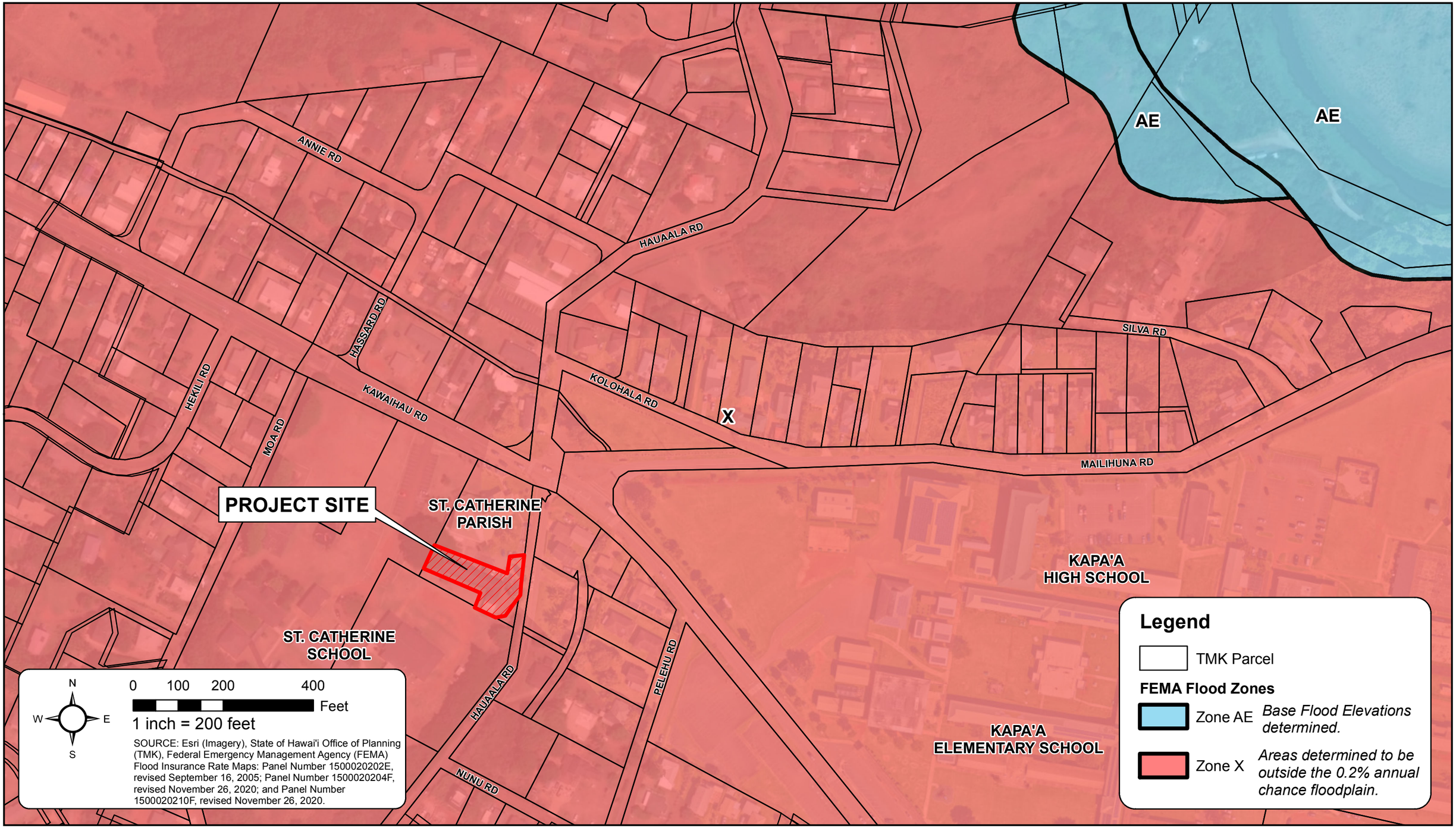


WILSON OKAMOTO CORPORATION

FIGURE 4

SOILS MAP

ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I

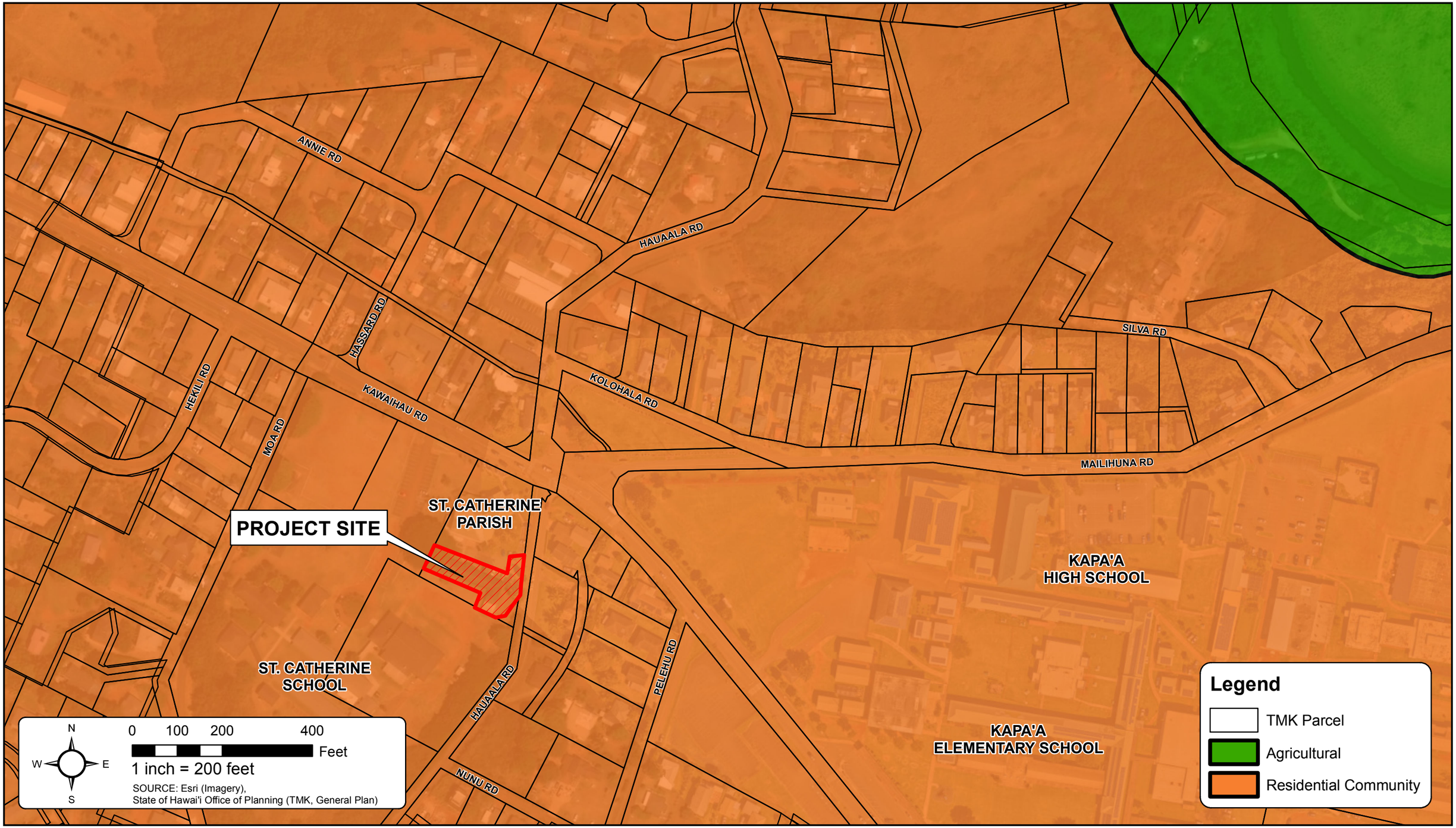


WILSON OKAMOTO CORPORATION

FIGURE 5

FLOOD HAZARD ZONES

ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I

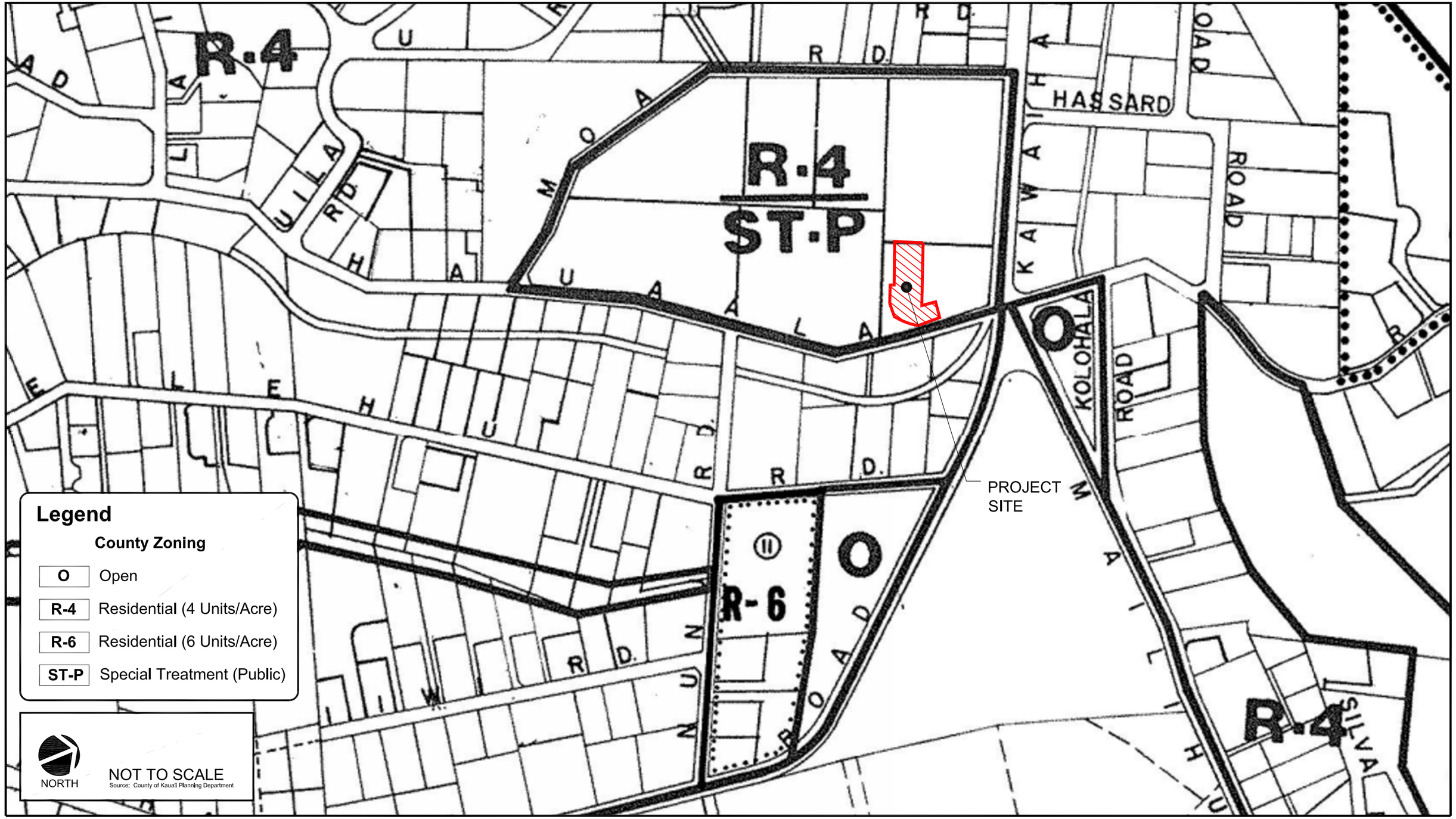


WILSON OKAMOTO CORPORATION

FIGURE 6

GENERAL PLAN

ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I



WILSON OKAMOTO CORPORATION

FIGURE 7

COUNTY ZONING MAP

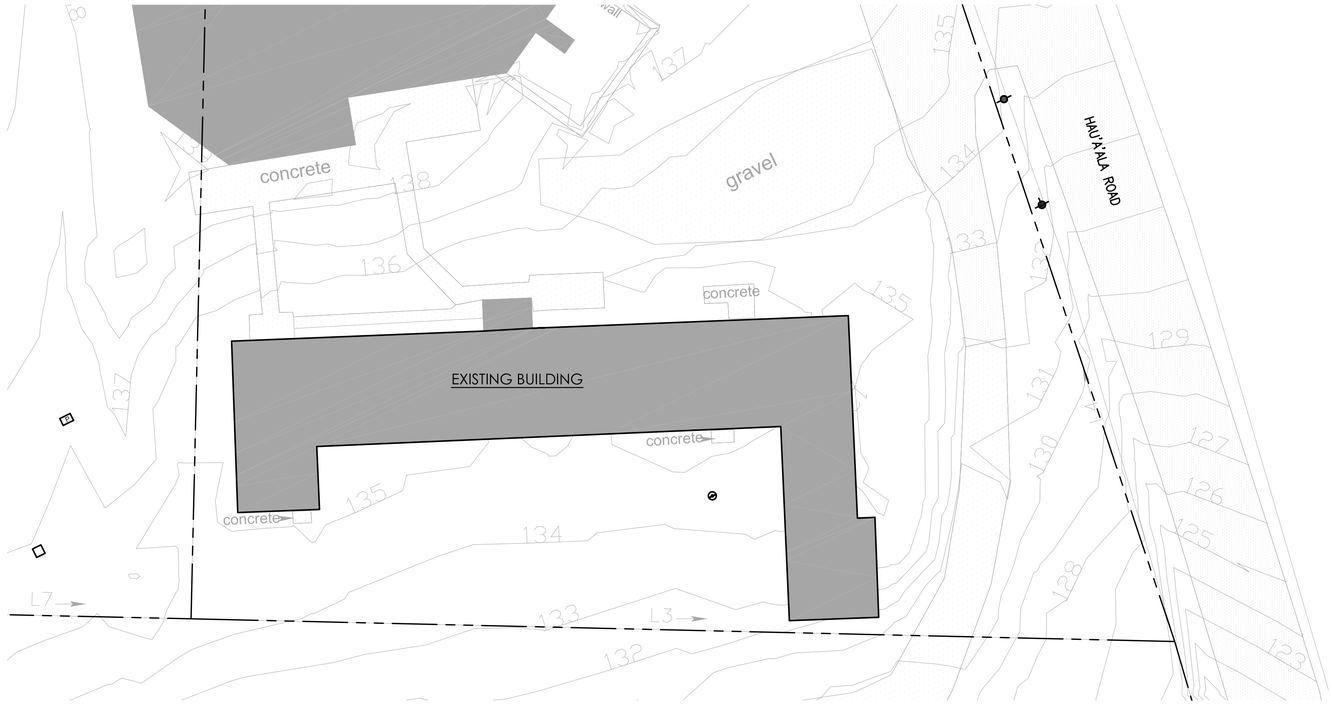
ST. CATHERINE PRESCHOOL
KAPA'A, KAUA'I, HAWAI'I

EXHIBIT D

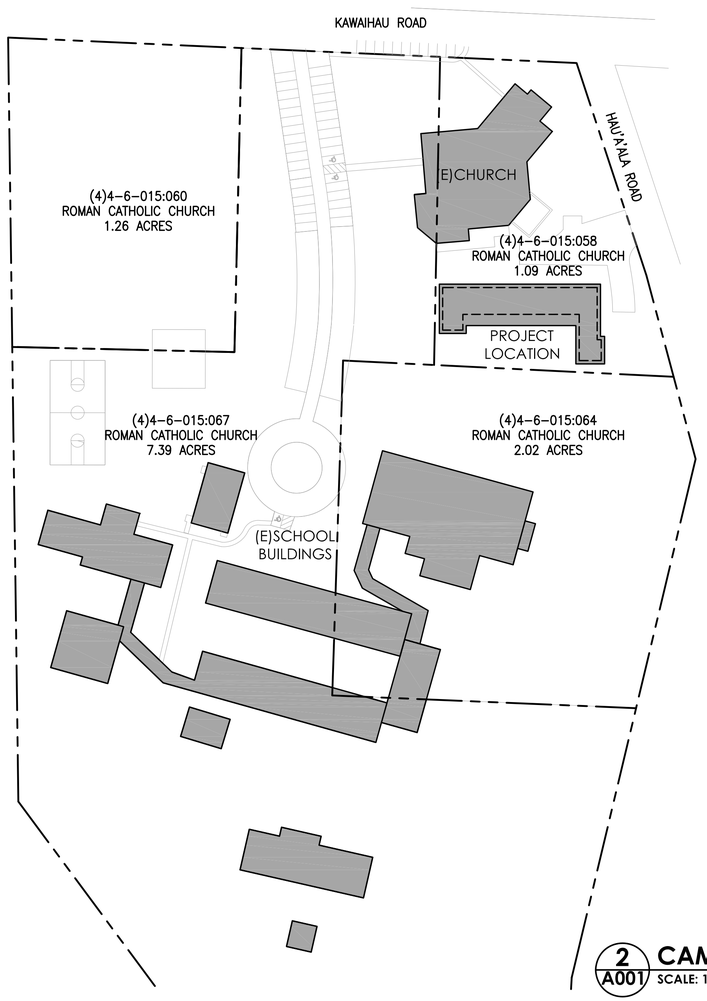
Preliminary Design Drawings



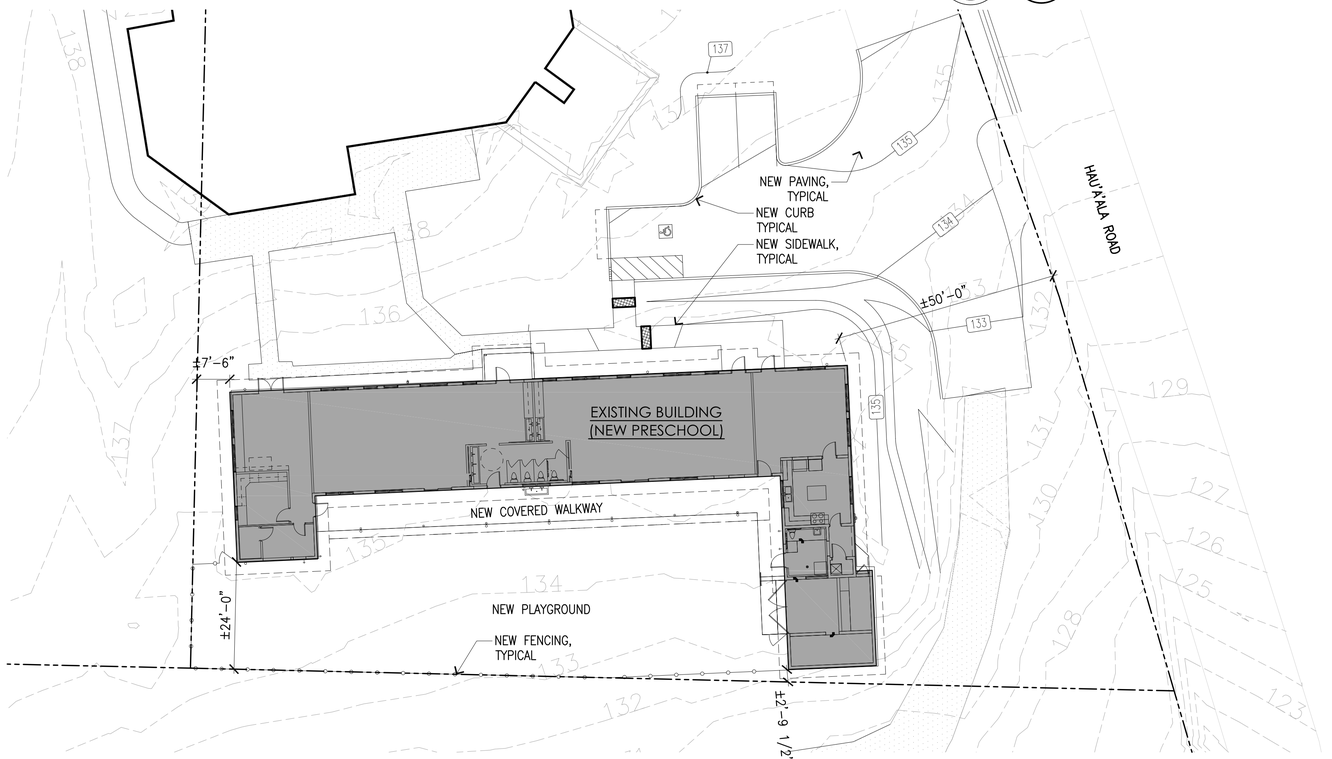
EXISTING AERIAL



1 A001 **EXISTING SITE PLAN**
SCALE: 1/16" = 1'-0"



2 A001 **CAMPUS PLAN**
SCALE: 1/64" = 1'-0"



3 A001 **NEW SITE PLAN**
SCALE: 1/16" = 1'-0"

Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Ph : 808 • 946 • 9644
Fax : 808 • 947 • 4579

USHIJIMA ARCHITECTS

ST. CATHERINE'S PRESCHOOL BUILDING
FOR
KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII
KAPAA, KAUAI, HAWAII

T.M.K.: 4-6-15:58

Revision	By	Date

Title SITE PLAN
CAMPUS PLAN
Project 19-009
Date OCTOBER 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

A001



VIEW 3



VIEW 2



VIEW 1

LEGEND

EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

EXISTING TO BE REMOVED.



VIEW 4

TYPICAL NUN BEDROOM

NORTH

1 A002 **DEMOLITION FLOOR PLAN**
SCALE: 3/16" = 1'-0"

Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Ph : 808 • 946 • 9644
Fax : 808 • 947 • 4579

USHIJIMA ARCHITECTS

ST. CATHERINE'S PRESCHOOL BUILDING FOR KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII
T.M.K.: 4-6-15:58
KAPAA, KAUAI, HAWAII

Revision	By	Date

Title DEMOLITION FLOOR PLAN
Project 19–009
Date OCTOBER 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

A002

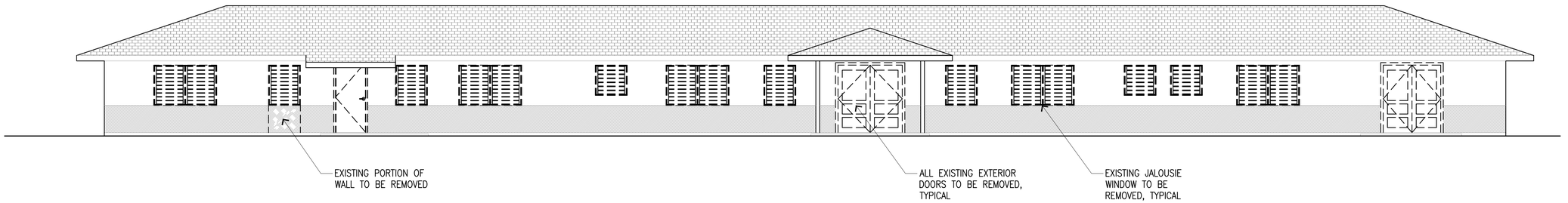
LEGEND

EXISTING TO REMAIN UNLESS NOTED OTHERWISE

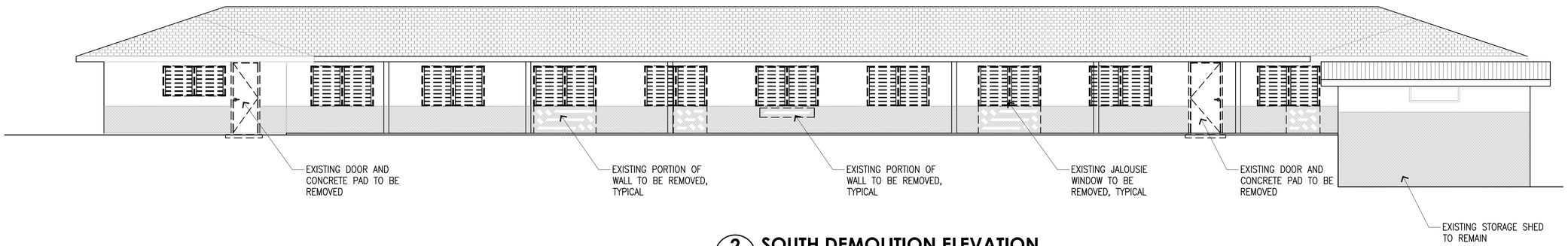
EXISTING TO BE REMOVED

GENERAL NOTES

1. COORDINATE WITH STRUCTURAL DRAWINGS FOR DEMOLITION WORK.
2. PATCH ALL SURFACES AFFECTED BY SELECTIVE DEMOLITION TO MATCH ADJACENT AND/OR EXISTING CONDITIONS UNLESS OTHERWISE NOTED. SELECTIVE DEMOLITION SHALL INCLUDE, BUT NOT LIMITED TO THE CAREFUL REMOVAL OF EXISTING STRUCTURES AS REFLECTED ON DEMOLITION DRAWINGS.
3. CAUTION SHALL BE EXERCISED SO THAT NO EXISTING AREA INTENDED TO REMAIN SHALL BE DAMAGED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY/ALL CORRECTIVE WORK REQUIRED TO RESTORE DAMAGE TO THE SITE, LANDSCAPING OR STRUCTURE TO THE ORIGINAL CONDITIONS.



1 A004 NORTH DEMOLITION ELEVATION
SCALE: 3/16" = 1'-0"



2 A004 SOUTH DEMOLITION ELEVATION
SCALE: 3/16" = 1'-0"

Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Ph : 808 • 946 • 9644
Fax : 808 • 947 • 4579

USHIJIMA ARCHITECTS

ST. CATHERINE'S PRESCHOOL BUILDING
FOR
KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII
KAPAA, KAUAI, HAWAII
T.M.K.: 4-6-15:58

Revision	By	Date

Title CONSTRUCTION PLAN
Project 19–009
Date AUGUST 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

A004

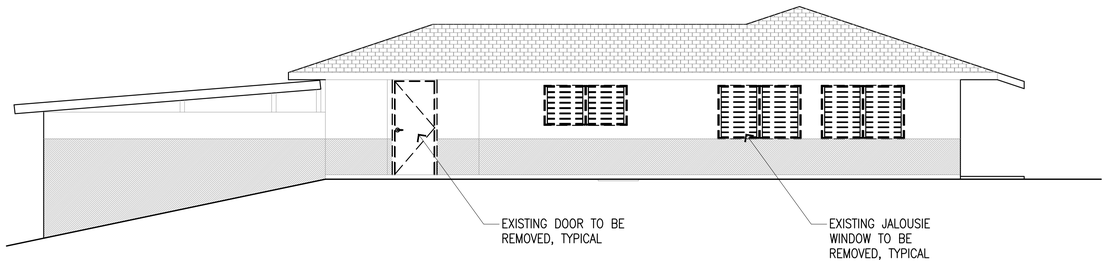
LEGEND

EXISTING TO REMAIN UNLESS NOTED OTHERWISE

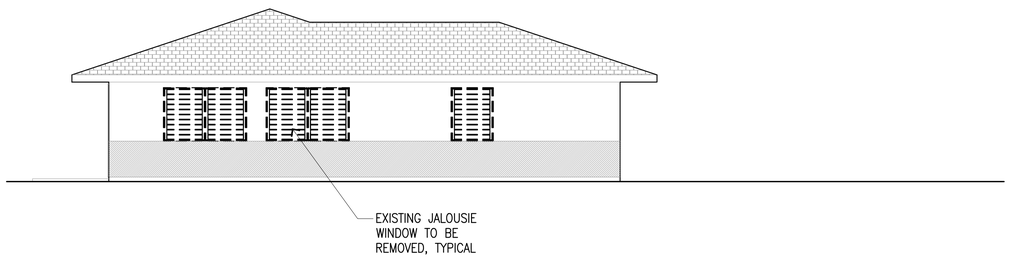
EXISTING TO BE REMOVED

GENERAL NOTES

1. COORDINATE WITH STRUCTURAL DRAWINGS FOR DEMOLITION WORK.
2. PATCH ALL SURFACES AFFECTED BY SELECTIVE DEMOLITION TO MATCH ADJACENT AND/OR EXISTING CONDITIONS UNLESS OTHERWISE NOTED. SELECTIVE DEMOLITION SHALL INCLUDE, BUT NOT LIMITED TO THE CAREFUL REMOVAL OF EXISTING STRUCTURES AS REFLECTED ON DEMOLITION DRAWINGS.
3. CAUTION SHALL BE EXERCISED SO THAT NO EXISTING AREA INTENDED TO REMAIN SHALL BE DAMAGED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY/ALL CORRECTIVE WORK REQUIRED TO RESTORE DAMAGE TO THE SITE, LANDSCAPING OR STRUCTURE TO THE ORIGINAL CONDITIONS.



1 A005 EAST DEMOLITION ELEVATION
SCALE: 3/16" = 1'-0"



2 A005 WEST DEMOLITION ELEVATION
SCALE: 3/16" = 1'-0"

Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Ph. : 808 • 946 • 9644
Fax : 808 • 947 • 4579

USHIJIMA ARCHITECTS

ST. CATHERINE'S PRESCHOOL BUILDING
FOR
KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII
KAPAA, KAUAI, HAWAII

T.M.K.: 4-6-15:58

Revision	By	Date

Title CONSTRUCTION PLAN
Project 19–009
Date AUGUST 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

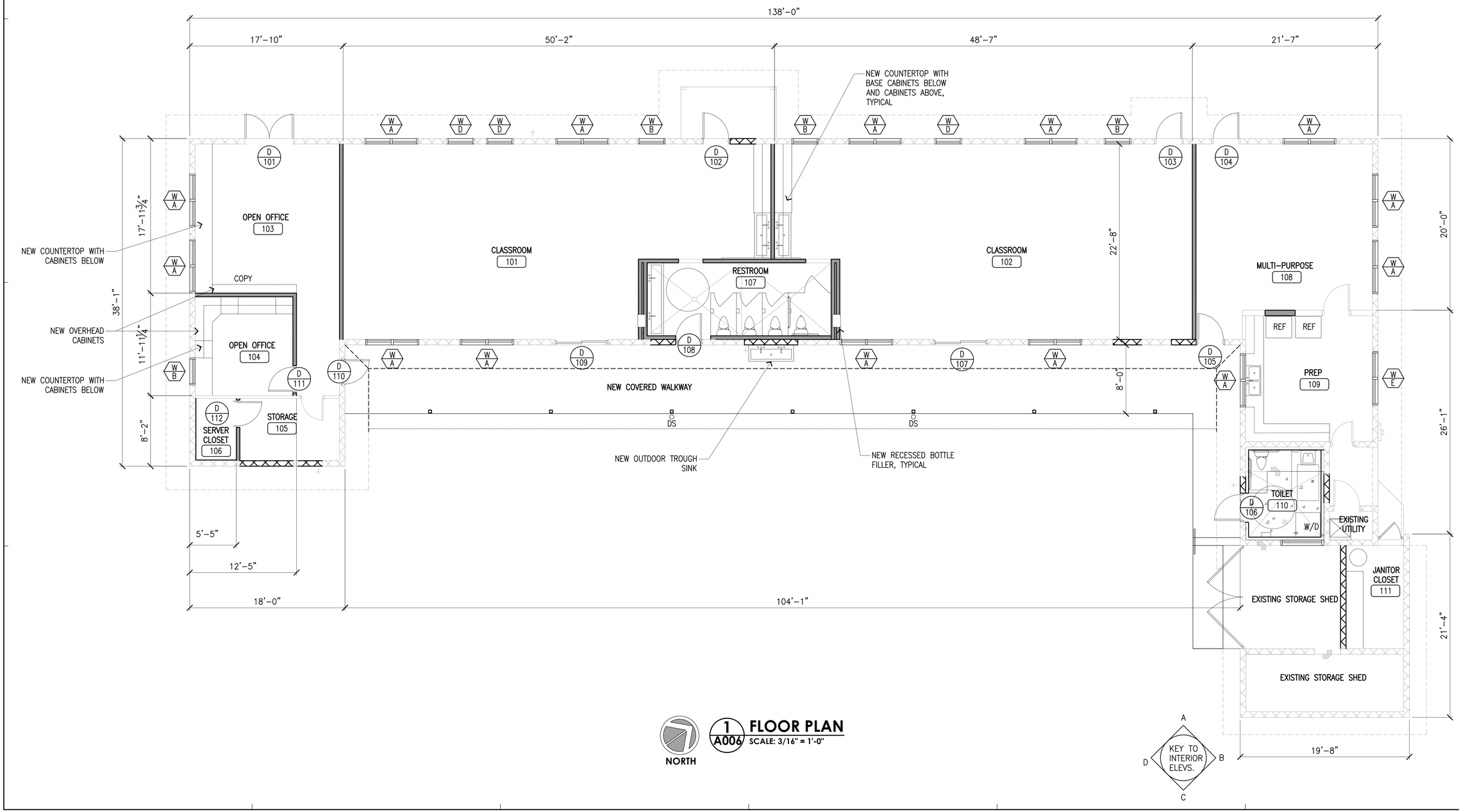
A005

LEGEND

EXISTING TO REMAIN UNLESS NOTED OTHERWISE

NEW WOOD STUD WALL

NEW CMU WALL



USHIJIMA ARCHITECTS
Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Ph : 808 • 946 • 9644
Fax : 808 • 947 • 4579

ST. CATHERINE'S PRESCHOOL BUILDING
FOR
KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII
T.M.K.: 4-6-15:58
KAPAA, KAUAI, HAWAII

Revision	By	Date

Title FLOOR PLAN
Project 19–009
Date OCTOBER 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

A006

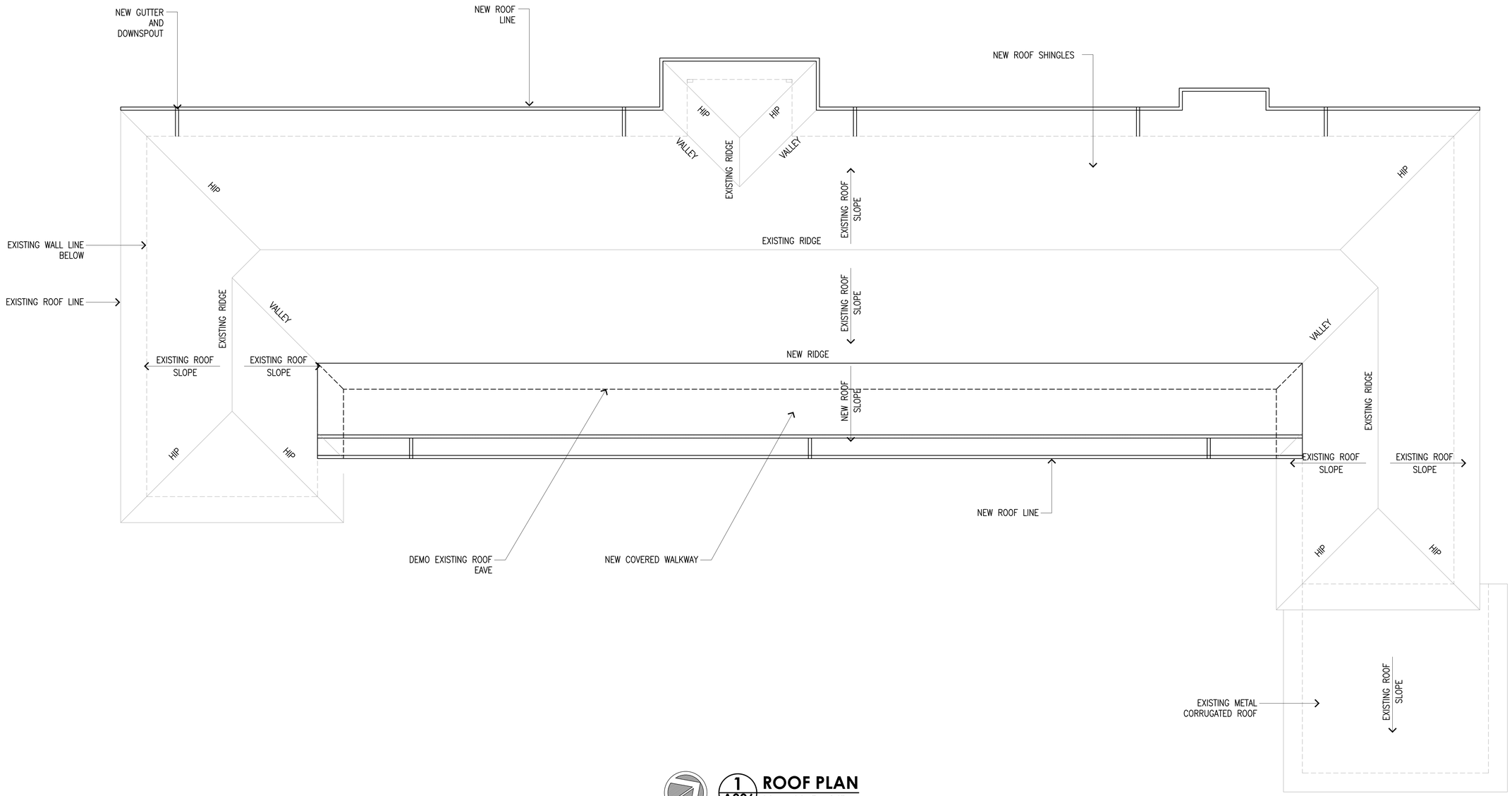
LEGEND

EXISTING TO REMAIN UNLESS NOTED OTHERWISE

NEW PORTION OF ROOF

GENERAL NOTES

1. COORDINATE NEW WORK WITH ELECTRICAL AND MECHANICAL PLANS.
2. REFER TO DETAILS AND ELEVATION DRAWINGS FOR LOCATION AND EXTENT OF WALL FINISHES AND WALL BASE FINISHES NOT SHOWN ON THIS PLAN.



NORTH

1 / A006 **ROOF PLAN**
SCALE: 3/16" = 1'-0"

Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Ph. : 808 • 946 • 9644
Fax : 808 • 947 • 4579

USHIJIMA ARCHITECTS

ST. CATHERINE'S PRESCHOOL BUILDING
FOR
KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII

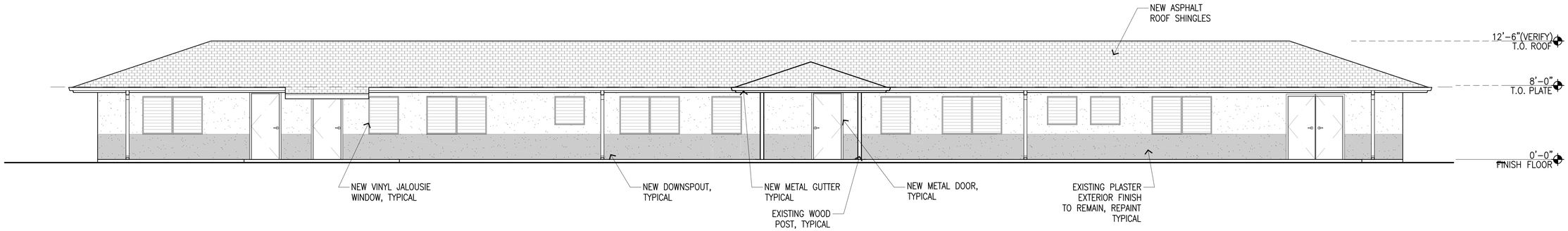
T.M.K.: 4-6-15:58

KAPAA, KAUAI, HAWAII

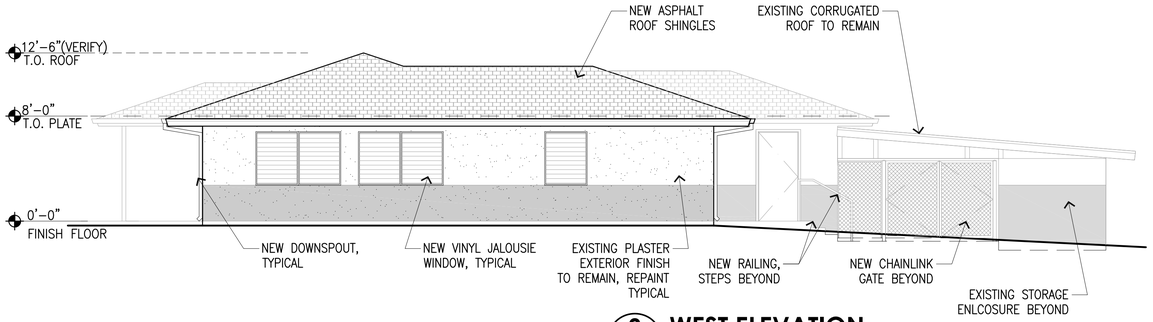
Revision	By	Date

Title ROOF PLAN
Project 19–009
Date AUGUST 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

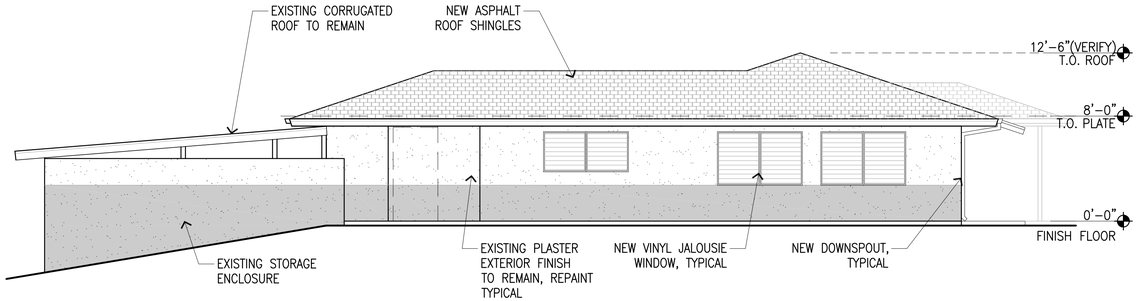
A008



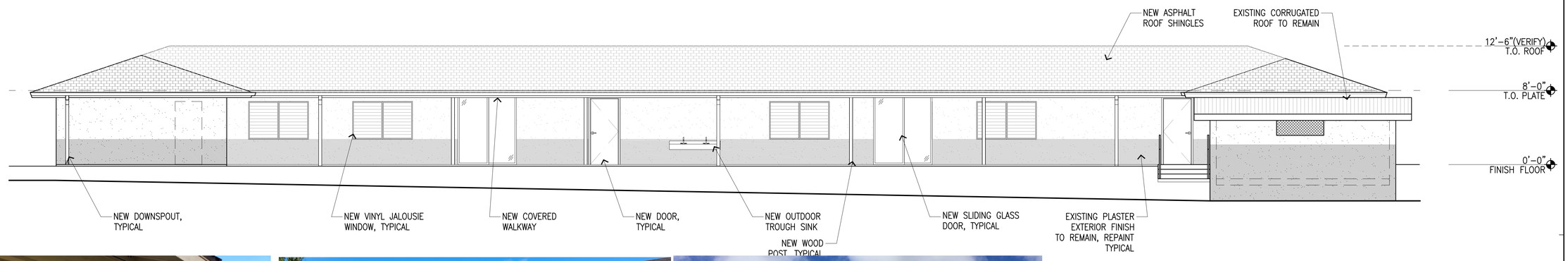
1 A009 NORTH ELEVATION
SCALE: 3/16" = 1'-0"



3 A009 WEST ELEVATION
SCALE: 3/16" = 1'-0"



2 A009 EAST ELEVATION
SCALE: 3/16" = 1'-0"



4 A009 SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



EXTERIOR FINISH TO REMAIN, REPAINTED
EXISTING JALOUSIE WINDOWS TO BE REPLACED



EXTERIOR SHINGLE ROOFING
TO BE REPLACED WITH SIMILAR MATERIAL



EXISTING STORAGE ENLCOSURE
TO REMAIN

Shaun Ushijima, AIA
2226 Young Street, Suite A
Honolulu, Hawaii 96826
Tel : 808 • 946 • 9544
Fax : 808 • 947 • 4579

USHIJIMA ARCHITECTS

ST. CATHERINE'S PRESCHOOL BUILDING
FOR
KAMEHAMEHA SCHOOLS
5021 KAWAIHAU ROAD, KAPAA, KAUAI, HAWAII
T.M.K.: 4-6-15:58

Revision	By	Date

Title EXTERIOR ELEVATIONS
Project 19-009
Date OCTOBER 2021
Drawn UAI
Designed UAI
Checked JMP
Drawing No.

A009

EXHIBIT E

Reconnaissance Level Survey Form

State Historic Preservation Division
Reconnaissance Level Survey – Survey Form

Instructions: Submit this completed form with the completed SIHP request form and 6E Filing Fee Form **electronically.** For details on how to submit to us electronically please visit our website.

https://dlnr.hawaii.gov/shpd

For additionally guidance on completing this form, please see the Architecture Branch Survey Guidelines available on the SHPD website.

---

1. **Review Type: Indicate which review process this survey was requested under**

○ HRS 6E-08, HAR 13-275 ◉ HRS 6E-42, HAR 13-284

2. **Project Information: Indicate the document in which this survey was requested**

2.1) Log No. [e.g. 2017.1234]

2.2) Doc No. [e.g. 1708MB27]

2.3) Other:

3. **Contact Information:**

3.1) Name: 3.2) Company:

3.3) Street Address:

3.4) County: 3.5) State: 3.6) Zip Code: 96766

3.7) Phone: 3.8) Email:

4. **Property Location:**

4.1) TMK [e.g. (3) 1-2-003:004]: (3) 4-6-015:058

4.2) Street Address: 5021A Kawaihau Road, Kapaa, HI 96746

4.3) County: Kauai 4.4) State: Hawaii 4.5) Zip Code: 96766

5. **Property Classification:**

5.1) Ownership:

◉ Private ○ Public

5.2) Classification

◉ Building ○ District ○ Site ○ Structure ○ Object

6. **Property Function:**

6.1) Current: Multi-Purpose (Gift Shop, Offices, Meeting Area, Storage)

6.2) Historic: Nunnery

7. Property Description:

7.1) Date of Construction: 1952

7.2) Provide a description of the property, including the character defining features, summarize alterations to the property, and provide an evaluation of the property's integrity of materials, design, feeling, location, association, workmanship, and setting.

The existing building was constructed around the early 1950's by Matsuda Construction based on St. Catherine's archive records. The original use of the building was to serve as a Nunnery or home for the nuns. The existing building is U-shaped in nature, with the open side of the U-shape facing South. It is approximately 4,000 sf not including approximately 300 sf of an open but covered outdoor storage area. The site has a gentle slope downward from the North Elevation to the Southern end of the property. The center of the building is where the individual bedrooms are located and they are served by a double loaded corridor down the middle. Each room has a closet and a sink. On either side of the corridor, there are toilet rooms and showers. The common areas include living spaces such as a kitchen, dining, and multi-purpose rooms.

The existing building is constructed primary of masonry wall with a concrete slab-on-grade. The hip roof is made of wood trusses and clad with existing asphalt shingles. Windows are of glass jalousie type. The total height of the building is approximately 13'-0" to the roof ape.

The existing building condition can be characterized as fair. The existing jalousie windows are damaged in several locations. Wood decay, cracking, and spalling were observed in some areas but nothing to warrant extreme concern of the structure. The exterior wall plaster finish, window treatments, and roofing are generally intact and consistent with the architectural character of the surrounding buildings.

Around 2005 the building was re-purposed from a Nunnery to a Parish Center with the Nun's departure. As a Parish Center, the building is being used for multiple purposes including offices, meeting rooms, a gift shop, and storage. The usage time is based on need and is not consistently occupied.

Kamehameha Schools is proposing to lease the building and along with the surrounding area to use as a Preschool. The proposed improvements include full interior improvements including reconfiguring the interior layout to accommodate two (2) classrooms, toilets, and offices. The existing kitchen space will remain but the existing interior finishes, casework, and fixtures will be replaced. All existing electrical systems will be replaced with code compliant systems such as an updated electrical infrastructure, LED lighting, and a new fire alarm system.

The exterior play yard is proposed within the void of the U-shaped building. The perimeter will be enclosed with a chain-link fence. A new covered walkway will be constructed to allow circulation outside of the building, while also providing shade structures for the children during inclement weather. The construction will include wood roof joist and wood posts similar to the original architecture.

8. Eligibility Recommendation:

8.1) Provide a recommendation of eligibility to the Hawai‘i Register of Historic Places including applicable criteria and areas of significance.

The building does not appear eligible for the Hawaii Register of Historic Places. The building is approximately 70 years old. However, it is not associated with any significant event or person of interest. The building architecture is not unique to the period it was constructed and does not appear to have any historic significance.

9. Attach Photographs: provide sufficient photographs to illustrate the property's main features. At a minimum provide the following:

Quantity	Description
1-2	Street view(s) of the resource and setting
1-2	Main Facades
1-2	interior photos(s) if applicable

10. Attach Map showing the location of the property

CHECKLIST

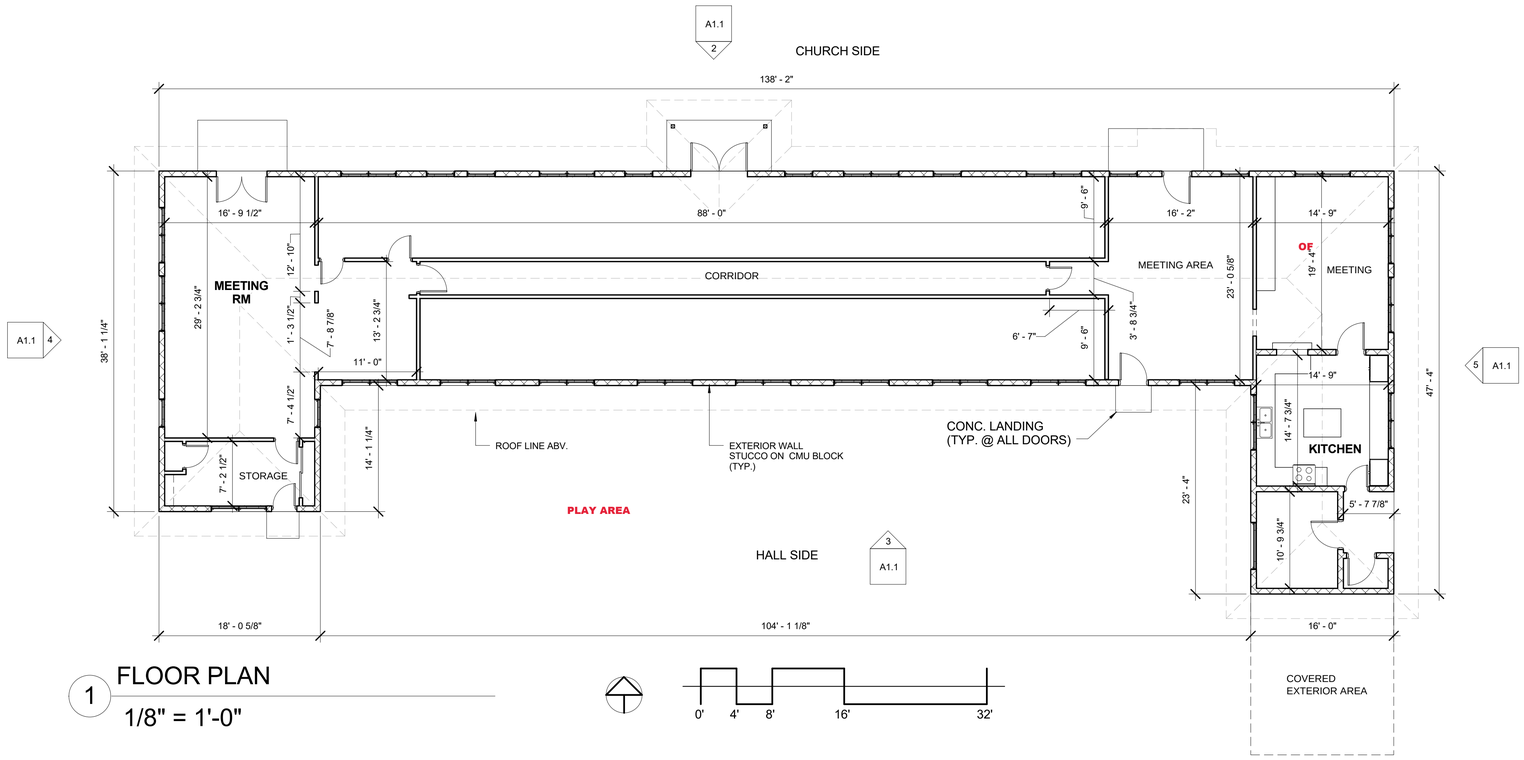
☐ **Reconnaissance Level Survey Form** (this form)

☐ **Photographs**

☐ **Map**

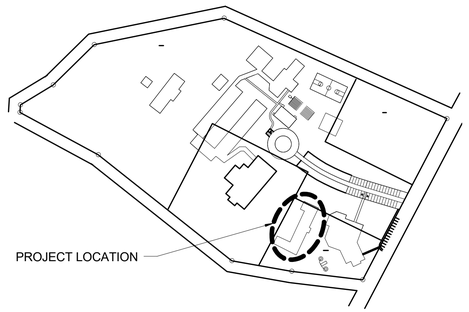
☐ **Filing Fee Form**

☐ **SIHP Request Form**



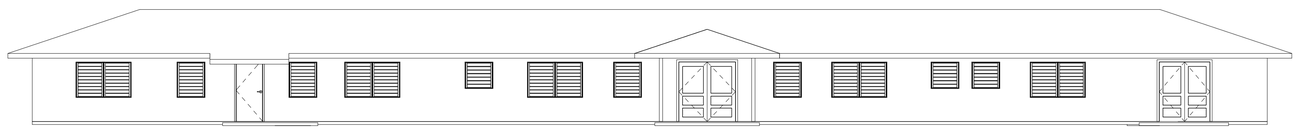
1 FLOOR PLAN

1/8" = 1'-0"



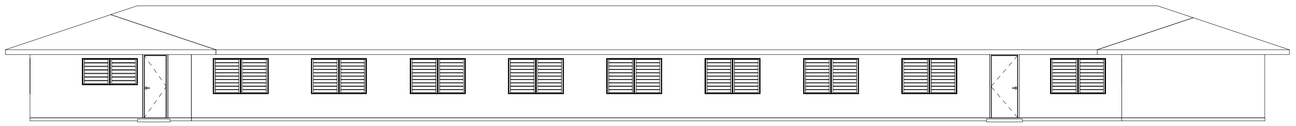
6 KEY PLAN

1" = 200'-0"



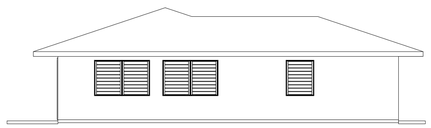
2 FRONT ELEVATION (CHURCH FACING)

1/8" = 1'-0"



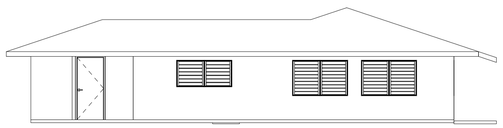
3 REAR ELEVATION (HALL FACING)

1/8" = 1'-0"



4 SIDE ELEVATION

1/8" = 1'-0"



5 SIDE ELEVATION (ROAD FACING)

1/8" = 1'-0"

10/22/2018 3:09:42 PM



Photo of South Elevation



Photo of North Elevation





Photo of East Elevation



View of Building from Hauaala Road





Photo of the Interior Rooms and Kitchen

EXHIBIT F

Letter dated October 20, 2021 from Mr. Sean Chun

Sean Chun
6512 Ahele Dr.
Kapaa, HI 96746
(808)635-5255
seanchun@hawaii.edu

Rebecca Candilasa
Project Manager, Planning
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
T (808) 946-2277 F (808) 946-2253
http://www.wilsonokamoto.com

Re : Cultural Sites at TMK (4) 4-6-015:058 October 20, 2021

Aloha,
My name is Sean Chun of Wailua, Kaua`i. I am a known cultural practitioner of various Hawaiian arts. I am a cultural advocate for a Non-Profit, as well as a kumu of various arts. These arts include, pule (prayer), la`au lap`au (medicinal herbs), lomilomi (massage therapy), ho`oponopono (conflict resolution), and martial arts. I work with various Hawaiian agencies and organizations, and with public and charter schools to educate the community about the Hawaiian culture. I was trained by various known practitioners from Hawai`i, Maui, Moloka`i, O`ahu, Kaua'i, and Ni`ihau.

Regarding TMK (4) 4-6-015:058, a property located in Kapa`a on Kawaihau Rd., currently the St. Catherine Parish and Preschool. There are no cultural sites or relevance that would inhibit Hawaiian cultural practices. I am familiar with the site, and it is currently under use by St. Catherine Parish and Preschool.

If there are any question regarding this issue, please feel free to contact me.

Mahalo,
Sean A. Chun

EXHIBIT G

Traffic Impact Report

Traffic Impact Report

St. Catherine Preschool



Prepared for:
Ushijima Architects, Inc.

Prepared by:
Wilson Okamoto Corporation

July 2021

TRAFFIC IMPACT REPORT

FOR THE

ST. CATHERINE PRESCHOOL

Prepared for:

Ushijima Architects, Inc.
2226 Young Street
Honolulu, HI 96826

Prepared by:

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref #10470-02

July 2021

TABLE OF CONTENTS

		Page
I.	Introduction	1
	A. Purpose of Study	1
	B. Scope of Study	1
II.	Project Description	1
	A. Location	1
	B. Project Characteristics	1
III.	Baseline Traffic Conditions	3
	A. Area Roadway System	3
	B. Baseline Multimodal Facilities	5
	C. Traffic Volumes and Conditions	5
	1. General	5
	a. Baseline Traffic Data	5
	b. Capacity Analysis Methodology	6
	2. Baseline Peak Hour Traffic	6
	a. General	6
	b. Kawaihau Road and Hauaala Road	6
	c. Kawaihau Road and Mailihuna Road	9
IV.	Projected Traffic Conditions	10
	A. Site-Generated Traffic	10
	1. Trip Generation Methodology	10
	2. Trip Distribution	11
	B. Through-Traffic Forecasting Methodology	11
	C. Other Considerations	11
	D. Total Traffic Volumes Without Project	13
	E. Total Traffic Volumes With Project	15
V.	Traffic Impact Analysis	15
VI.	Recommendations	17
VII.	Conclusion	18

LIST OF FIGURES

FIGURE 1	Location Map and Vicinity Map
FIGURE 2	Project Site Plan
FIGURE 3	Baseline Lane Configurations
FIGURE 4	Baseline Peak Hours of Traffic
FIGURE 5	Distribution of Site-Generated Vehicles with Project
FIGURE 6	Year 2023 Peak Hours of Traffic Without Project
FIGURE 7	Year 2023 Peak Hours of Traffic With Project

LIST OF APPENDICES

APPENDIX A	Baseline Traffic Count Data
APPENDIX B	Level of Service Definitions
APPENDIX C	Capacity Analysis Calculations Baseline Peak Period Traffic Analysis
APPENDIX D	Plans for the Kawaihau–Hauaala–Mailihuna Complete Streets Improvements
APPENDIX E	Capacity Analysis Calculations Year 2022 Peak Period Traffic Analysis Without Project
APPENDIX F	Capacity Analysis Calculations Year 2022 Peak Period Traffic Analysis With Project

I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the renovation of an existing building within the St. Catherine Parish in Kapaa, Kauai. The building previously served as a nunnery and will be converted into a preschool.

B. Scope of Study

This report presents the findings and conclusions of the traffic study, the scope of which includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic operations in the vicinity.
3. Analysis of future roadway and traffic conditions without the proposed project.
4. Analysis and development of trip generation characteristics for the proposed project.
5. Superimposing site-generated traffic over future traffic conditions.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendations of improvements, if appropriate, that would mitigate the traffic impacts resulting from the proposed project.

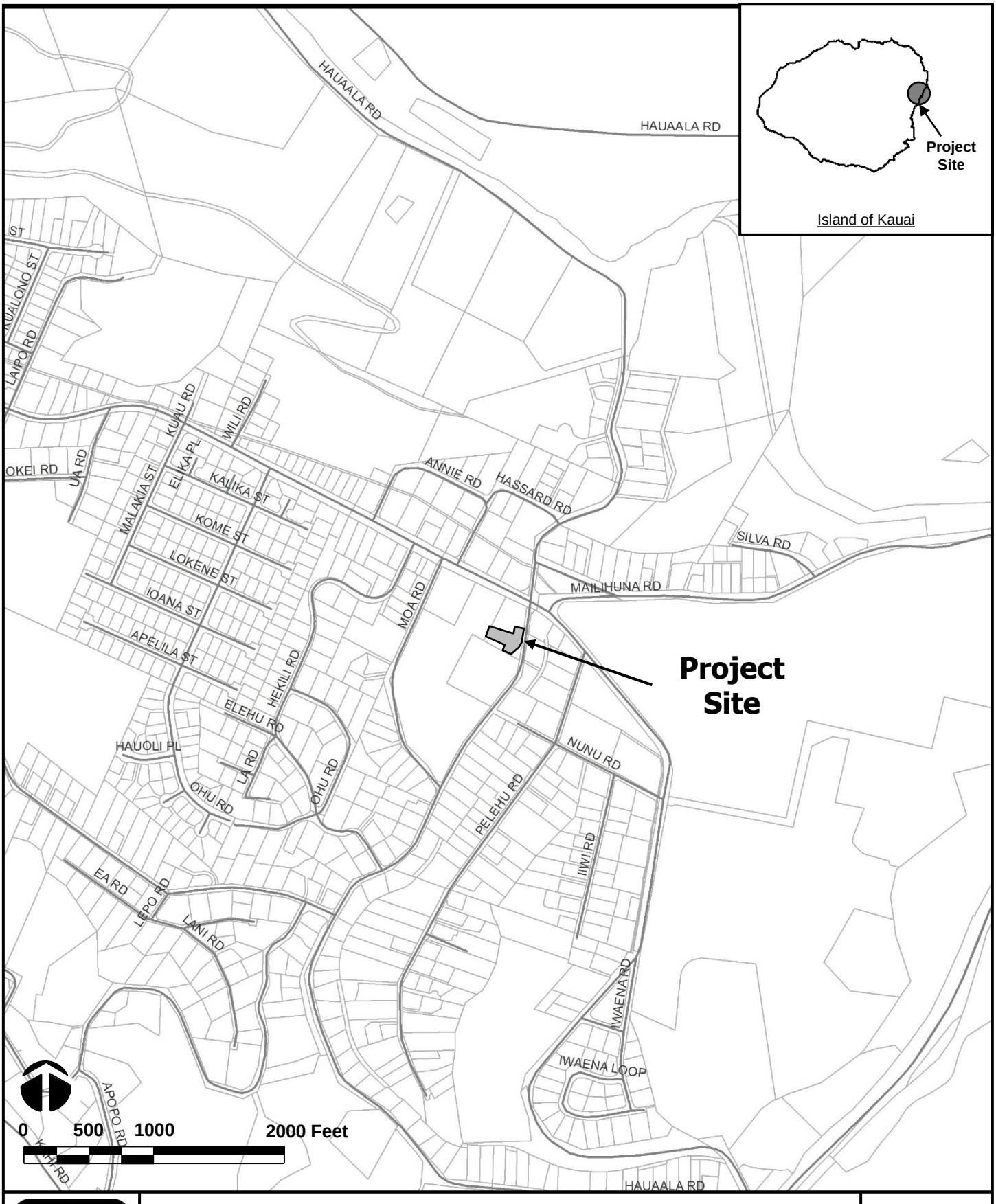
II. PROJECT DESCRIPTION

A. Location

The existing St. Catherine Parish is located adjacent to Kawaihau Road in Kapaa on the island of Kauai (see Figure 1). The parish is bounded by Kawaihau Road to the north, Hauaala Road to the east, Moa Road to the west, and school and residential uses to the south. The building that will house the proposed preschool is located near the center of the site south of the existing St. Catherine Church. Access to the proposed project is expected to be provided via driveways off Kawaihau Road and Hauaala Road.

B. Project Characteristics

The proposed project entails the conversion of an existing building which previously served a nunnery within the St. Catherine Parish. The building will be renovated to include two classrooms and other support facilities for a preschool that is



WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

LOCATION MAP AND VICINITY MAP

FIGURE 1

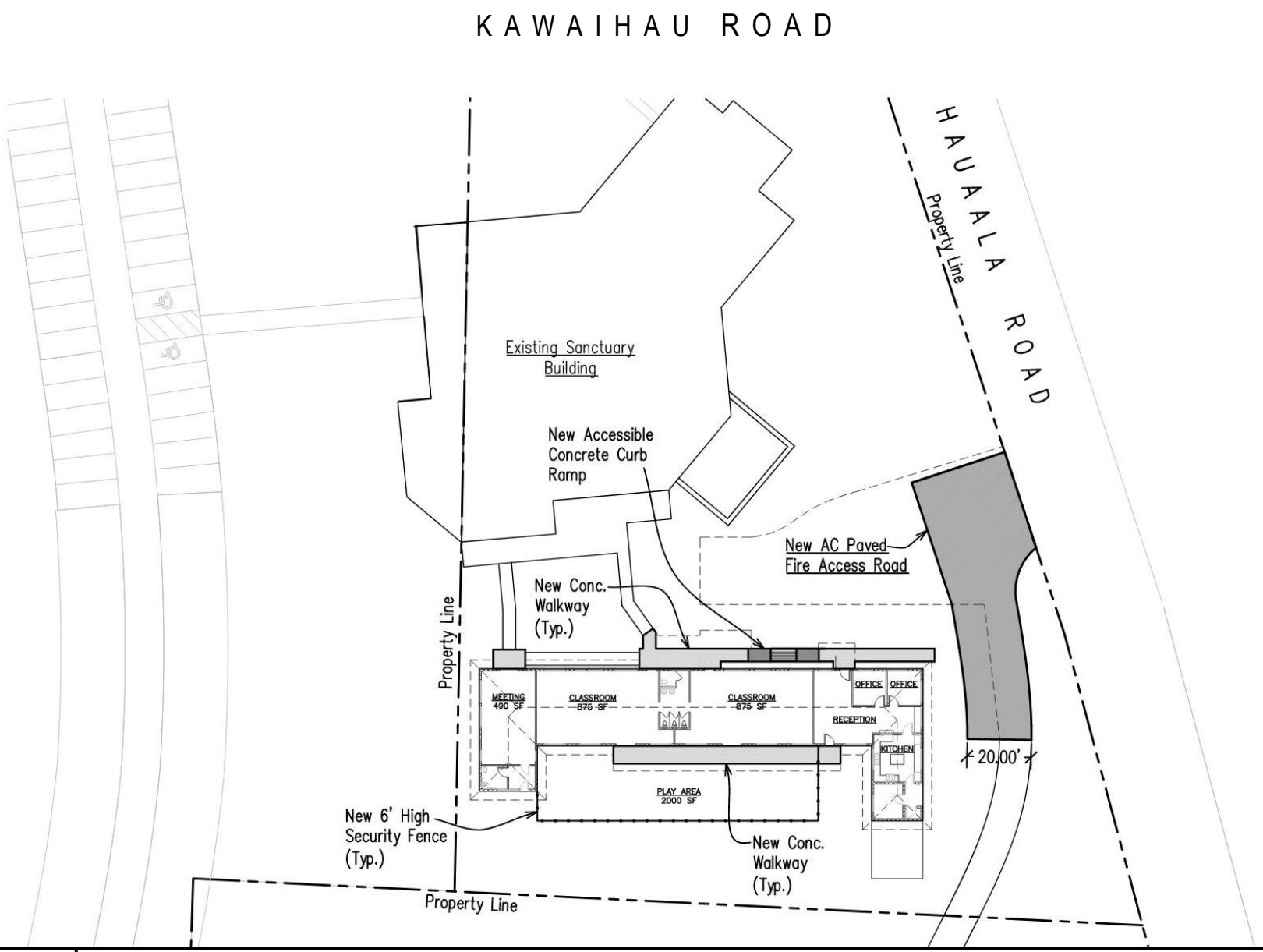
expected to accommodate a maximum of 40 students. Primary access to the project site will be provided via an existing driveway for the St. Catherine Parish off Kawaihau Road with secondary access provided via an existing driveway off Hauaala Road. Parking for the preschool's pick-up and drop-off is expected to be provided via an existing parking lot for the St. Catherine Parish accessed via the driveway off Kawaihau Road. Parking for staff will be provided via an existing grass/gravel lot near the north edge of the preschool building with access to the lot provided via the driveway off Hauaala Road. The project is expected to be completed by Year 2022. See Figure 2 for the proposed site plan.

III. BASELINE TRAFFIC CONDITIONS

A. Area Roadway System

The St. Catherine Parish is located adjacent to Kawaihau Road, a two-way, two-lane County of Kauai roadway generally oriented in the east-west direction serving as a main thoroughfare through Kapaa. Northeast of the project site, Kawaihau Road intersects Hauaala Road. At this unsignalized intersection, the eastbound approach of Kawaihau Road includes one lane that serves all traffic movements. The westbound approach includes one lane that serves through and right-turn movements with a center lane that facilitates left-turn movements. Hauaala Road is a two-way, two lane County of Kauai roadway generally oriented in the north-south direction. At the intersection with Kawaihau Road, the northbound and southbound approaches of Hauaala Road include a stop-controlled lane that serves all traffic movements.

Less than 150 feet east of the intersection with Hauaala Road, Kawaihau Road intersects Mailihuna Road. At this unsignalized T-intersection, the eastbound approach on Kawaihau Road includes a center lane that facilitates left-turn movements and a shared through and right-turn lane. The westbound approach has one lane that serves all traffic movements. Mailihuna Road is a two-lane, two-way County of Kauai roadway that starts as an east-west roadway at the intersection with Kuhio Highway (Route 56) but transitions to a north-south roadway at the intersection with Kawaihau Road. The southbound approach of Mailihuna Road includes one stop-controlled lane that serves all traffic movements.



WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

PROJECT SITE PLAN

FIGURE 2

B. Multimodal Facilities

Multimodal facilities are currently limited in the vicinity of the project site. Pedestrian facilities are limited to roadway shoulders along Kawaihau Road and crosswalks to facilitate pedestrian crossings while there are no existing bicycle facilities around the project site. In addition, transit services in the vicinity are provided by "The Kaua'i Bus" (operated by the County of Kauai) with only one bus stop located within a quarter mile of St. Catherine Parish along Kawaihau Road adjacent to Kapaa High School.

C. Traffic Volumes and Conditions

1. General

a. Baseline Traffic Data

The traffic data used for the purpose of analysis is based on manual turning movement counts collected in Year 2017 and included in Appendix A. The manual turning movement count survey was conducted during the morning peak hours between 6:00 AM and 9:00 AM and during the afternoon peak hours between 2:00 PM and 5:00 PM at the following intersections:

- Kawaihau Road and Hauaala Road
- Kawaihau Road and Mailihuna Road

The traffic data from Year 2017 represents the most recently available traffic data in the vicinity of the project. More recent traffic data could not be collected at this time due to the ongoing COVID-19 pandemic that has resulted in significantly decreased traffic volumes and shifted travel patterns. The State of Hawaii Department of Transportation (HDOT) Highways Division has been tracking traffic volumes along the major regional roadways including those in Kauai. The HDOT traffic data indicates that in general, traffic volumes on the island of Kauai are still slightly below pre-COVID volumes. As such, for the purpose of this report, traffic volumes based on collected in Year 2017 were assumed to represent Year 2021 baseline conditions. It should be noted that an assessment of historical traffic data along the

roadways in the vicinity of the project indicates that traffic volumes in the vicinity were relatively stable pre-COVID.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2010, and the "Synchro" software, developed by Trafficware. The analysis is based on the concept of Level of Service (LOS) to identify the traffic impacts associated with traffic demands during the peak periods of traffic.

LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 indicates that the traffic demand exceeds the road's carrying capacity. The LOS definitions are included in Appendix B.

2. Baseline Peak Hour Traffic

a. General

Figures 3 and 4 show the baseline lane uses and peak hour traffic volumes. The AM peak hour of traffic generally occurs between 7:00 AM and 8:00 AM. The PM peak hour of traffic generally occurs between the hours of 2:15 PM and 3:15 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

b. Kawaihau Road and Hauaala Road

At the intersection with Hauaala Road, Kawaihau Road carries 259 vehicles westbound and 627 vehicles eastbound during the AM

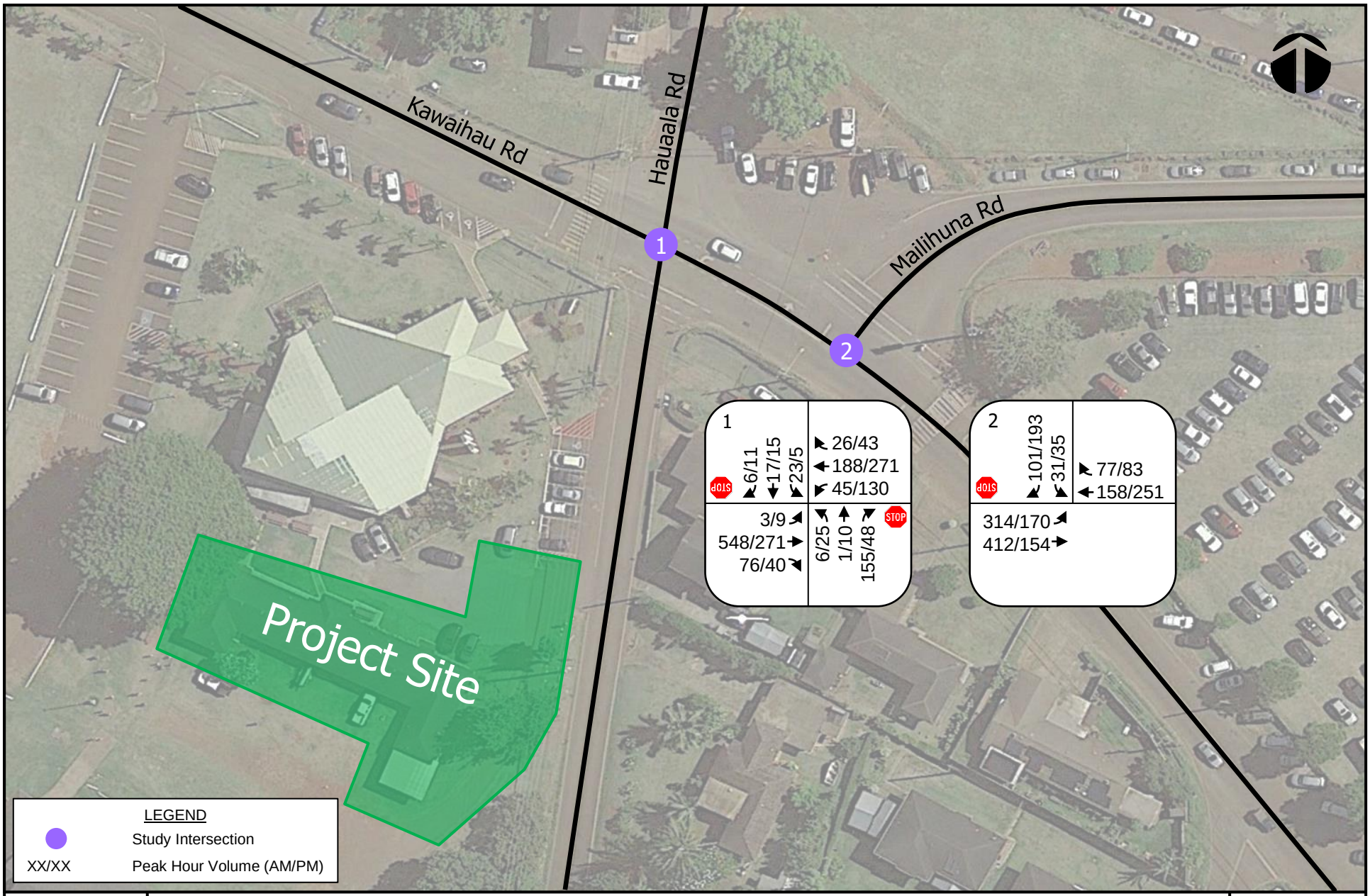


WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

BASELINE LANE CONFIGURATIONS

FIGURE 3



WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

BASELINE PEAK HOURS OF TRAFFIC

FIGURE 4

peak period. During the PM peak period, traffic volumes are less with 444 vehicles traveling westbound and 320 vehicles traveling eastbound. The westbound left-turn lane operates at LOS "A" during both peak periods.

Hauaala Road carries 162 vehicles northbound and 46 vehicles southbound during the AM peak period. During the PM peak period, traffic volumes are less with 83 vehicles traveling northbound and 31 vehicles traveling southbound. The northbound approach operates at LOS "C" during both peak periods while the southbound approach operates at LOS "E" during the AM peak period and LOS "C" during the PM peak period.

Marked crosswalks are provided across Kawaihau Road on the west side of the intersection and across Hauaala Road on the south side of the intersection. During the AM peak period, 1 pedestrian was observed crossing Kawaihau Road on the west side of the intersection while 11 pedestrians were observed crossing Hauaala Road on the south side of the intersection. During the PM peak period, 2 pedestrians were observed crossing Kawaihau Road on the west side of the intersection while 3 pedestrians were observed crossing Hauaala Road on the south side of the intersection. In addition, although there is not a marked crosswalk provided across Hauaala Road on the north side of the intersection, 9 pedestrians were observed crossing at this location during the AM peak period. No pedestrians were observed crossing at this location during the PM peak period.

c. Kawaihau Road and Mailihuna Road

At the intersection with Mailihuna Road, Kawaihau Road carries 726 vehicles eastbound and 235 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with 324 vehicles traveling eastbound and 334 vehicles traveling westbound. The eastbound left-turn lane operates at LOS "A" during both peak periods.

The Mailihuna Road approach of the intersection carries 132 vehicles during the AM peak period and 228 vehicles during the PM peak period. The southbound approach operates at LOS "C" during both peak periods.

Marked crosswalks are provided across Kawaihau Road on the east side of the intersection and across Mailihuna Road on the north side of the intersection. During the AM peak period, 7 pedestrians were observed crossing Kawaihau Road on the east side of the intersection while no pedestrians were observed crossing Mailihuna Road on the north side of the intersection. During the PM peak period, there were no pedestrians observed crossing at this intersection.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 10th Edition," 2017. The ITE trip generation rates are developed empirically by correlating vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per number of students. Table 1 summarizes the trip generation characteristics related to the proposed project applied to the AM and PM peak hours of traffic.

Table 1: Peak Hour Trip Generation

DAY CARE CENTER (PRESCHOOL) INDEPENDENT VARIABLE: Number of students = 40		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	17
	EXIT	14
	TOTAL	31
PM PEAK	ENTER	15
	EXIT	17
	TOTAL	32

2. Trip Distribution

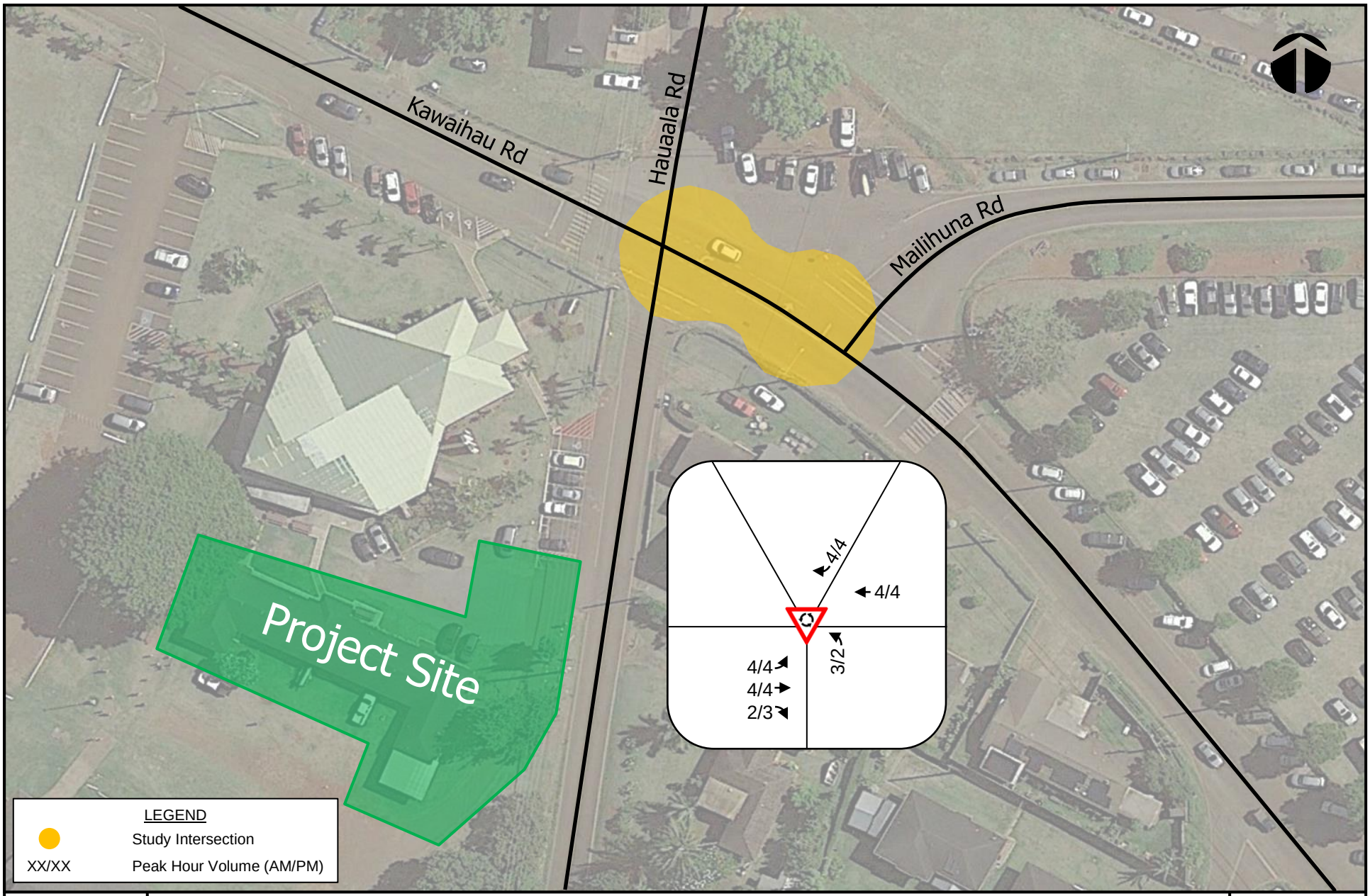
Figure 5 shows the distribution of site-generated traffic during the AM and PM peak periods. Primary access to the project site will be provided via an existing driveway off Kawaihau Road with secondary access to be provided via an existing driveway off Hauaala Road. The driveway off Kawaihau Road is expected to provide access to parking for the preschool's parking for pick-up/drop-off while the driveway off Hauaala Road is expected to serve staff parking. It should be noted that trips associated with the preschool staff are expected to access the project site prior to the peak hour in the morning and depart after the end of the school day. As such, for the purpose of analysis, all site-generated trips were distributed to the project's primary driveway off Kawaihau Road. The directional distribution of all additional site-generated vehicles was based upon the relative distribution of traffic between the surrounding roadways. As such, 35% of trips were assumed to be traveling to/from the west via Kawaihau Road while 25% while trips to the east were split between Kawaihau Road and Mailihuna Road with 25% assumed to travel to/from Kawaihau Road and 25% of trips to travel to/from the project site via Mailihuna Road. 15% of trips were assumed to be traveling to/from the south via Hauaala Road. The distribution of all site-generated vehicles at the study intersections was based upon their assumed origin/destination and the relative convenience of available routes.

B. Through Traffic Forecasting Methodology

The travel forecast is based upon historical traffic count data obtained from the State DOT, Highways Division at survey stations in the vicinity of the project site. The historical data indicates relatively stable traffic volumes in the project vicinity. As such, an annual traffic growth rate of approximately 1.0% was conservatively assumed in the vicinity. Using 2021 as the Base Year, a growth rate factor of 1.01 was applied to the existing through traffic demands along the project roadways to achieve the projected Year 2022 traffic demands.

C. Other Considerations

A roundabout is planned to be installed at the intersection of Kawaihau Road with Mailihuna Road and Hauaala Road by the County of Kauai. Currently, there are



WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

DISTRIBUTION OF SITE-GENERATED VEHICLES WITH PROJECT

FIGURE 5

two separate intersections along this stretch of Kawaihau Road with the approaches from the minor roadways stop-controlled. The proposed Kawaihau–Hauaala–Mailihuna Complete Streets project will convert these intersections into a five-legged peanut-shaped roundabout. In conjunction with this project, new sidewalks will be installed through the roundabout and along a portion of the connecting roadways including Hauaala Road adjacent to St. Catherine's Parish. In addition, new curb ramps and modified crosswalks will be provided to facilitate pedestrian circulation in the vicinity. The proposed project is expected to be completed by the Year 2022 and as such, is incorporated into projected without project conditions. Plans for the Complete Streets improvements at the intersection of Kawaihau Road with Mailihuna Road and Hauaala Road are included in Appendix D.

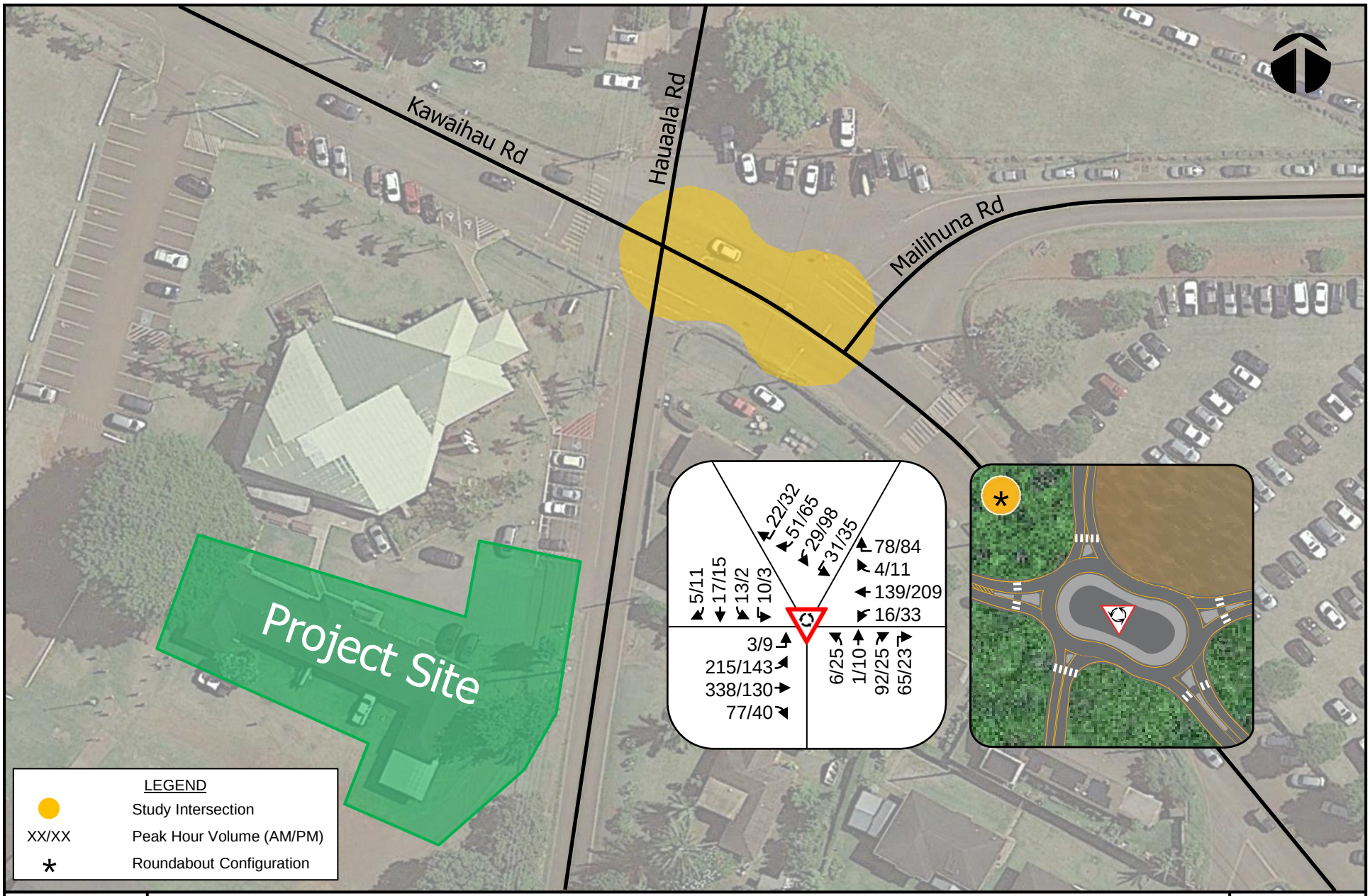
D. Total Traffic Volumes Without Project

The baseline levels of service are shown in Table 2 while the projected Year 2022 AM and PM peak period traffic volumes and operating conditions without the completion of the proposed project is shown in Figure 6 and summarized in Table 3. The analysis incorporates ambient growth in traffic, as well as the completion of the roundabout construction at the intersections of Kawaihau Road with Mailihuna Road and Hauaala Road. LOS calculations are included in Appendix E.

Table 2: Baseline Year 2021 LOS Traffic Operating Conditions

Intersection	Approach/ Critical Movement	AM Baseline	PM Baseline
Kawaihau Rd/ Hauaala Rd/	Westbound (LT)	A	A
	Northbound	C	C
	Southbound	E	C
Kawaihau Rd/ Mailihuna Rd	Eastbound (LT)	A	A
	Southbound	C	C

* *LT = Left-turn*



WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

YEAR 2022 PEAK HOURS OF TRAFFIC WITHOUT PROJECT

FIGURE 6

Table 3: Projected Year 2022 (Without Project)
LOS Traffic Operating Conditions

Intersection	Approach/ Critical Movement	AM w/o Project	PM w/o Project
Kawaihau Rd/ Hauaala Rd/ Mailihuna Rd*	Eastbound	B	A
	Westbound	A	A
	Northbound	A	A
	Southbound	A	A
	Southbound	A	A

*Complete Streets improvements implemented

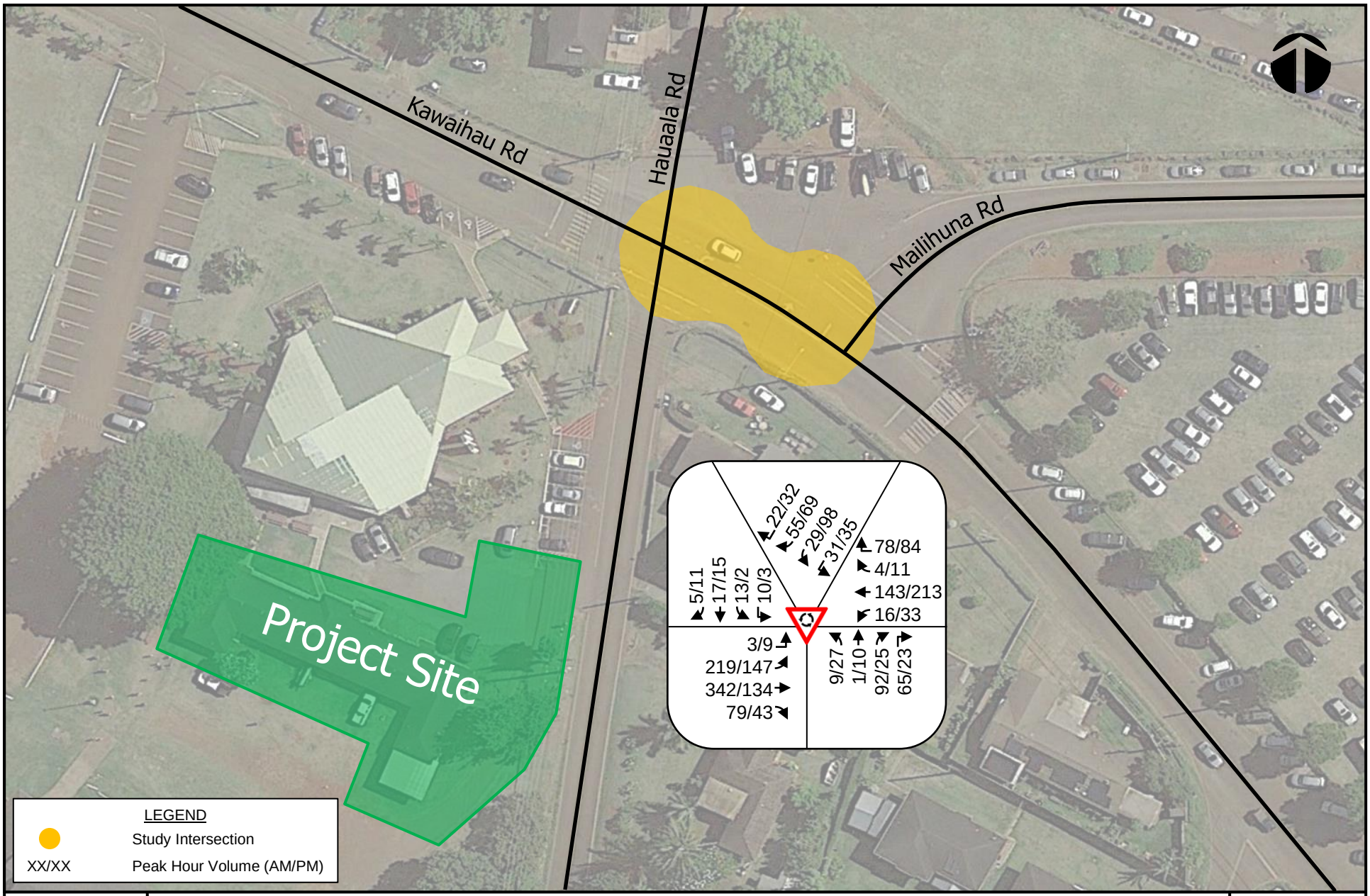
Under Year 2022 without project conditions, traffic operations along Kawaihau Road are expected to improve from baseline conditions. The conversion of the two closely spaced intersections with Hauaala Road and Mailihuna Road into a five-legged peanut-shaped roundabout intersection is expected to facilitate traffic flow through the intersection and improve the levels of service for all approaches. The eastbound approach of Kawaihau Road is expected to operate at LOS "B" and LOS "A" during the AM and PM peak periods, respectively, while the westbound approach is expected to operate at LOS "A" during both peak periods. At the Hauaala Road approaches of the intersection, traffic operations are expected to operate at LOS "A" during both peak periods. Similarly, the Mailihuna Road approach of the intersection is also expected to operate at LOS "A" during both peak periods.

E. Total Traffic Volumes With Project

Figure 7 shows the projected Year 2022 cumulative AM and PM peak hour traffic conditions resulting from the proposed project. The cumulative volumes consist of site-generated traffic with the proposed preschool superimposed over Year 2022 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The projected Year 2022 cumulative AM and PM peak hour traffic conditions resulting from the proposed project are summarized in Table 4. The projected Year 2022 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix F.



WILSON OKAMOTO CORPORATION

ST. CATHERINE PRESCHOOL

YEAR 2022 PEAK HOURS OF TRAFFIC WITH PROJECT

FIGURE 7

Table 4: Projected Year 2022 (Without and With Project) LOS Traffic Operating Conditions

Intersection	Approach/	AM		PM	
		w/o Proj	w/ Proj	w/o Proj	w/ Proj
Kawaihau Rd/ Hauaala Rd/ Mailihuna Rd	Eastbound	B	B	A	A
	Westbound	A	A	A	A
	Northbound	A	A	A	A
	Southbound	A	A	A	A
	Southbound	A	A	A	A

Under Year 2022 with project conditions, traffic operations along Kawaihau Road are generally expected to remain similar to without project conditions. As previously discussed, the conversion of the two closely spaced intersections with Hauaala Road and Mailihuna Road into a five-legged peanut roundabout intersection is expected to facilitate traffic flow through the intersection and accommodate site-generated trips. The eastbound and westbound approaches of Kawaihau Road are expected to continue operating at LOS "B" or better and LOS "A" during the AM and PM peak periods, respectively, whereas the northbound and southbound approaches of Hauaala Road are both expected to continue operating at LOS "A" during both peak periods. The Mailihuna Road approach of the intersection is also expected to remain similar to without project conditions.

VI. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design.

1. Verify sufficient sight distance for motorists to safely enter and exit all project driveways including the driveways off Kawaihau Road and Hauaala Road.

2. Verify adequate on-site loading and off-loading service areas and prohibit off-site loading operations.

3. Verify adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.

4. Verify sufficient turning radii at all project driveways to avoid vehicle encroachments to oncoming traffic lanes.

5. Ensure that the existing grass/gravel lot off Hauaala Road that is expected to be used as the preschool's staff parking lot is made accessible in conformance with the Americans with Disabilities Act (ADA) requirements.

6. Ensure that pedestrian connections to and from the existing parking area off Kawaihau Road are accessible in conformance with ADA requirements. This lot is expected to be designated as the parking lot for pick-up/drop-off for the preschool.

7. Consider providing signage near the project driveway off Hauaala Road to inform students and parents of the preschool where the designated parking for pick-up/drop off is located. In addition, provide information to indicate that the parking lot off Hauaala Road is for staff parking only.

8. Coordinate with the County of Kauai to ensure that appropriate modifications for the project driveways are incorporated into their complete streets project and that sufficient sight distances and turning radii are maintained for vehicles entering/exiting the project site.

VII. CONCLUSION

The proposed project entails the conversion of an existing building within the St. Catherine Parish to a preschool that is expected to accommodate a maximum of 40 students. Primary access to the project site will be provided via an existing driveway off Kawaihau Road with secondary access to be provided via an existing driveway off Hauaala Road. The proposed St Catherine preschool is expected to be completed by Year 2022. With the implementation of the aforementioned recommendations, traffic operations are generally expected to remain similar to without project conditions. Improvements along Kawaihau Road at the intersections with Hauaala Road and Mailihuna Road to convert those intersections into a five-legged peanut roundabout intersection is expected to facilitate traffic flow in the vicinity of the project and accommodate site-generated trips. Although traffic operations in the vicinity are generally expected to remain similar to without project conditions, consideration should be given to ensuring that the pedestrian connections to/from the designated parking areas are accessible in conformance with the American with Disabilities Act requirements.

APPENDIX A

BASELINE TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counted By: HM
Counters: D4-3888
Weather: Clear

File Name : KAW MAI AM
Site Code : 00000001
Start Date : 10/26/2017
Page No : 1

Groups Printed- Bank 1

	Mailihuna Road Southbound					Kawaihau Road Westbound					Pedestrians			
Start Time	LT onto Kawaihau Rd.	RT onto Hauaala Rd.	RT onto Kawaihau Rd.	Thru on Hauaala Rd.	App. Total	LT onto Hauaala Rd.	Thru on Kawaihau Rd.	RT onto Mailihuna Rd.	RT onto Hauaala Rd.	App. Total	Mailihuna Rd. SB	Kawaihau Rd. WB	App. Total	Int. Total
06:00 AM	1	1	1	2	5	1	7	2	0	10	0	0	0	15
06:15 AM	1	1	1	2	5	2	9	4	0	15	0	0	0	20
06:30 AM	3	3	4	7	17	2	12	6	1	21	1	1	2	40
06:45 AM	7	4	5	6	22	1	20	8	2	31	0	0	0	53
Total	12	9	11	17	49	6	48	20	3	77	1	1	2	128
07:00 AM	9	3	4	10	26	4	23	21	2	50	0	0	0	76
07:15 AM	8	5	9	7	29	6	36	22	1	65	0	6	6	100
07:30 AM	7	6	12	6	31	3	46	17	1	67	0	1	1	99
07:45 AM	7	8	25	6	46	3	33	17	0	53	0	0	0	99
Total	31	22	50	29	132	16	138	77	4	235	0	7	7	374
08:00 AM	10	5	9	4	28	4	17	3	0	24	0	0	0	52
08:15 AM	1	4	8	6	19	2	25	11	1	39	0	0	0	58
08:30 AM	3	4	12	5	24	5	32	6	2	45	0	0	0	69
08:45 AM	2	4	6	4	16	4	28	1	0	33	0	0	0	49
Total	16	17	35	19	87	15	102	21	3	141	0	0	0	228
Grand Total	59	48	96	65	268	37	288	118	10	453	1	8	9	730
Apprch %	22	17.9	35.8	24.3		8.2	63.6	26	2.2		11.1	88.9		
Total %	8.1	6.6	13.2	8.9	36.7	5.1	39.5	16.2	1.4	62.1	0.1	1.1	1.2	

	Mailihuna Road Southbound					Kawaihau Road Westbound					Pedestrians	
Start Time	LT onto Kawaihau Rd.	RT onto Hauaala Rd.	RT onto Kawaihau Rd.	Thru on Hauaala Rd.	App. Total	LT onto Hauaala Rd.	Thru on Kawaihau Rd.	RT onto Mailihuna Rd.	RT onto Hauaala Rd.	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 07:00 AM												
07:00 AM	9	3	4	10	26	4	23	21	2	50	0	76
07:15 AM	8	5	9	7	29	6	36	22	1	65	0	94
07:30 AM	7	6	12	6	31	3	46	17	1	67	0	98
07:45 AM	7	8	25	6	46	3	33	17	0	53	0	99
Total Volume	31	22	50	29	132	16	138	77	4	235	0	367
% App. Total	23.5	16.7	37.9	22		6.8	58.7	32.8	1.7			
PHF	.861	.688	.500	.725	.717	.667	.750	.875	.500	.877	.000	.927

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counted By: HM
Counters: D4-3888
Weather: Clear

File Name : KAW MAI PM
Site Code : 00000001
Start Date : 10/26/2017
Page No : 1

Groups Printed- Unshifted

	Mailihuna Road Southbound					Kawaihau Road Westbound					Pedestrians			
Start Time	LT onto Kawaihau Rd.	RT onto Huaala Rd.	RT onto Kawaihau Rd.	Thru on Hauaala Rd.	App. Total	LT onto Hauaala Rd.	Thru on Kawaihau Rd.	RT onto Mailihuna Rd.	RT onto Hauaala Rd.	App. Total	Mailihuna Rd. SB	Kawaihau Rd. WB	App. Total	Int. Total
02:00 PM	4	5	11	16	36	0	28	6	6	40	0	0	0	76
02:15 PM	5	7	8	14	34	0	41	17	1	59	1	3	4	97
02:30 PM	20	15	32	45	112	17	80	43	2	142	1	28	29	283
02:45 PM	4	6	12	18	40	7	37	11	3	58	2	0	2	100
Total	33	33	63	93	222	24	186	77	12	299	4	31	35	556
03:00 PM	6	4	12	20	42	9	49	12	5	75	0	0	0	117
03:15 PM	3	5	10	18	36	5	40	9	2	56	0	0	0	92
03:30 PM	6	3	16	26	51	1	52	6	0	59	0	0	0	110
03:45 PM	5	7	10	22	44	5	32	5	2	44	1	0	1	89
Total	20	19	48	86	173	20	173	32	9	234	1	0	1	408
04:00 PM	5	7	12	32	56	4	41	8	5	58	0	1	1	115
04:15 PM	6	8	14	26	54	6	27	8	5	46	1	0	1	101
04:30 PM	3	7	14	25	49	3	51	8	2	64	0	1	1	114
04:45 PM	2	6	9	19	36	2	50	9	1	62	1	0	1	99
Total	16	28	49	102	195	15	169	33	13	230	2	2	4	429
Grand Total	69	80	160	281	590	59	528	142	34	763	7	33	40	1393
Apprch %	11.7	13.6	27.1	47.6		7.7	69.2	18.6	4.5		17.5	82.5		
Total %	5	5.7	11.5	20.2	42.4	4.2	37.9	10.2	2.4	54.8	0.5	2.4	2.9	

	Mailihuna Road Southbound					Kawaihau Road Westbound					Pedestrians	
Start Time	LT onto Kawaihau Rd.	RT onto Huaala Rd.	RT onto Kawaihau Rd.	Thru on Hauaala Rd.	App. Total	LT onto Hauaala Rd.	Thru on Kawaihau Rd.	RT onto Mailihuna Rd.	RT onto Hauaala Rd.	App. Total	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 02:15 PM												
02:15 PM	5	7	8	14	34	0	41	17	1	59	0	93
02:30 PM	20	15	32	45	112	17	80	43	2	142	0	254
02:45 PM	4	6	12	18	40	7	37	11	3	58	0	98
03:00 PM	6	4	12	20	42	9	49	12	5	75	0	117
Total Volume	35	32	64	97	228	33	207	83	11	334	0	562
% App. Total	15.4	14	28.1	42.5		9.9	62	24.9	3.3			
PHF	.438	.533	.500	.539	.509	.485	.647	.483	.550	.588	.000	.553

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counted By: JK
Counters:D4-5674
Weather: Clear

File Name : KAW HAU AM
Site Code : 00000001
Start Date : 10/26/2017
Page No : 1

Groups Printed- Unshifted

	Hauaala Road Southbound					Kawaihau Road Eastbound					Hauaala Road Northbound					Pedestrians				
Start Time	LT onto Mailihuna Rd.	LT onto Kawaihau Rd.	Thru on Hauaala Rd.	RT onto Kawaihau Rd.	App. Total	LT onto Hauaala Rd.	LT onto Mailihuna Rd.	Thru on Kawaihau Rd.	RT onto Hauaala Rd.	App. Total	LT onto Kawaihau Rd.	Thru on Huaala Rd.	RT onto Mailihuna Rd.	RT onto Kawaihau Rd.	App. Total	Hauaala Rd. SB	Hauaala Rd. NB	Kawaihau Rd. EB	App. Total	Int. Total
06:00 AM	3	5	1	1	10	5	15	36	3	59	2	0	1	3	6	0	0	0	0	75
06:15 AM	1	1	5	1	8	2	28	48	9	87	0	0	1	1	2	0	0	0	0	97
06:30 AM	1	1	3	0	5	2	38	58	10	108	0	0	1	1	2	1	0	0	1	116
06:45 AM	2	4	1	0	7	3	39	75	21	138	3	0	2	4	9	0	0	0	0	154
Total	7	11	10	2	30	12	120	217	43	392	5	0	5	9	19	1	0	0	1	442
07:00 AM	2	2	5	1	10	0	55	78	15	148	1	1	5	6	13	4	1	0	5	176
07:15 AM	5	8	10	1	24	0	61	114	11	186	3	0	16	13	32	0	6	1	7	249
07:30 AM	2	2	0	4	8	0	32	73	23	128	0	0	29	20	49	2	2	0	4	189
07:45 AM	1	1	2	0	4	3	65	70	27	165	2	0	41	25	68	3	2	0	5	242
Total	10	13	17	6	46	3	213	335	76	627	6	1	91	64	162	9	11	1	21	856
08:00 AM	0	0	2	2	4	0	56	42	12	110	3	0	8	6	17	1	4	0	5	136
08:15 AM	0	1	2	1	4	1	31	37	14	83	1	1	6	3	11	1	1	0	2	100
08:30 AM	1	3	2	0	6	2	35	33	9	79	4	0	4	2	10	2	1	1	4	99
08:45 AM	1	4	4	2	11	3	32	31	3	69	0	0	5	4	9	0	1	0	1	90
Total	2	8	10	5	25	6	154	143	38	341	8	1	23	15	47	4	7	1	12	425
Grand Total	19	32	37	13	101	21	487	695	157	1360	19	2	119	88	228	14	18	2	34	1723
Apprch %	18.8	31.7	36.6	12.9		1.5	35.8	51.1	11.5		8.3	0.9	52.2	38.6		41.2	52.9	5.9		
Total %	1.1	1.9	2.1	0.8	5.9	1.2	28.3	40.3	9.1	78.9	1.1	0.1	6.9	5.1	13.2	0.8	1	0.1	2	

	Hauaala Road Southbound					Kawaihau Road Eastbound					Hauaala Road Northbound					Pedestrians	
Start Time	LT onto Mailihuna Rd.	LT onto Kawaihau Rd.	Thru on Hauaala Rd.	RT onto Kawaihau Rd.	App. Total	LT onto Hauaala Rd.	LT onto Mailihuna Rd.	Thru on Kawaihau Rd.	RT onto Hauaala Rd.	App. Total	LT onto Kawaihau Rd.	Thru on Huaala Rd.	RT onto Mailihuna Rd.	RT onto Kawaihau Rd.	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	2	5	1	10	0	55	78	15	148	1	1	5	6	13	0	171
07:15 AM	5	8	10	1	24	0	61	114	11	186	3	0	16	13	32	0	242
07:30 AM	2	2	0	4	8	0	32	73	23	128	0	0	29	20	49	0	185
07:45 AM	1	1	2	0	4	3	65	70	27	165	2	0	41	25	68	0	237
Total Volume	10	13	17	6	46	3	213	335	76	627	6	1	91	64	162	0	835
% App. Total	21.7	28.3	37	13		0.5	34	53.4	12.1		3.7	0.6	56.2	39.5			
PHF	.500	.406	.425	.375	.479	.250	.819	.735	.704	.843	.500	.250	.555	.640	.596	.000	.863

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counted By: JK
Counters: D4-5674
Weather: Clear

File Name : KAW HAU PM
Site Code : 00000001
Start Date : 10/26/2017
Page No : 1

Groups Printed- Unshifted

	Hauaala Road Southbound					Kawaihau Road Eastbound					Hauaala Road Northbound					Pedestrians				
Start Time	LT onto Mailihuna Rd.	LT onto Kawaihau Rd.	Thru on Hauaala Rd.	RT onto Kawaihau Rd.	App. Total	LT onto Hauaala Rd.	LT onto Mailihuna Rd.	Thru on Kawaihau Rd.	RT onto Hauaala Rd.	App. Total	LT onto Kawaihau Rd.	Thru on Huaala Rd.	RT onto Mailihuna Rd.	RT onto Kawaihau Rd.	App. Total	Hauaala Rd. SB	Huaala Rd. NB	Kawaihau Rd. EB	App. Total	Int. Total
02:00 PM	0	0	2	1	3	1	36	19	13	69	3	3	5	6	17	0	0	0	0	89
02:15 PM	0	0	1	0	1	4	45	30	13	92	8	2	6	5	21	0	4	0	4	118
02:30 PM	1	0	6	6	13	3	31	35	13	82	4	2	7	10	23	1	19	4	24	142
02:45 PM	1	2	2	3	8	0	32	27	4	63	3	1	3	2	9	0	0	0	0	80
Total	2	2	11	10	25	8	144	111	43	306	18	8	21	23	70	1	23	4	28	429
03:00 PM	1	0	6	2	9	2	34	37	10	83	10	5	9	6	30	0	2	0	2	124
03:15 PM	3	2	4	0	9	4	33	37	11	85	6	2	6	4	18	0	1	0	1	113
03:30 PM	4	3	2	0	9	0	23	33	10	66	4	2	4	2	12	0	0	1	1	88
03:45 PM	3	2	1	0	6	1	32	34	10	77	6	2	8	7	23	0	0	1	1	107
Total	11	7	13	2	33	7	122	141	41	311	26	11	27	19	83	0	3	2	5	432
04:00 PM	0	1	3	1	5	1	33	33	6	73	4	1	8	4	17	0	0	0	0	95
04:15 PM	1	0	4	3	8	1	27	30	5	63	10	5	8	0	23	0	0	0	0	94
04:30 PM	0	0	5	1	6	3	36	34	3	76	12	2	9	6	29	0	0	1	1	112
04:45 PM	1	1	3	5	10	4	29	22	3	58	4	2	12	7	25	0	0	1	1	94
Total	2	2	15	10	29	9	125	119	17	270	30	10	37	17	94	0	0	2	2	395
Grand Total	15	11	39	22	87	24	391	371	101	887	74	29	85	59	247	1	26	8	35	1256
Apprch %	17.2	12.6	44.8	25.3		2.7	44.1	41.8	11.4		30	11.7	34.4	23.9		2.9	74.3	22.9		
Total %	1.2	0.9	3.1	1.8	6.9	1.9	31.1	29.5	8	70.6	5.9	2.3	6.8	4.7	19.7	0.1	2.1	0.6	2.8	

	Hauaala Road Southbound					Kawaihau Road Eastbound					Hauaala Road Northbound					Pedestrians	
Start Time	LT onto Mailihuna Rd.	LT onto Kawaihau Rd.	Thru on Hauaala Rd.	RT onto Kawaihau Rd.	App. Total	LT onto Hauaala Rd.	LT onto Mailihuna Rd.	Thru on Kawaihau Rd.	RT onto Hauaala Rd.	App. Total	LT onto Kawaihau Rd.	Thru on Huaala Rd.	RT onto Mailihuna Rd.	RT onto Kawaihau Rd.	App. Total	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	0	1	0	1	4	45	30	13	92	8	2	6	5	21	0	114
02:30 PM	1	0	6	6	13	3	31	35	13	82	4	2	7	10	23	0	118
02:45 PM	1	2	2	3	8	0	32	27	4	63	3	1	3	2	9	0	80
03:00 PM	1	0	6	2	9	2	34	37	10	83	10	5	9	6	30	0	122
Total Volume	3	2	15	11	31	9	142	129	40	320	25	10	25	23	83	0	434
% App. Total	9.7	6.5	48.4	35.5		2.8	44.4	40.3	12.5		30.1	12	30.1	27.7			
PHF	.750	.250	.625	.458	.596	.563	.789	.872	.769	.870	.625	.500	.694	.575	.692	.000	.889

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE (LOS) CRITERIA FOR AUTOMOBILES AT A TWO-WAY STOP CONTROLLED (TWSC) INTERSECTIONS

LOS for a TWSC intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns by using criteria shown below. Major-street through vehicles are assumed to experience zero delay. LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The following lists the LOS criteria for a TWSC intersection:

LOS A describes operations with a control delay of 10s/veh or less and a volume-to-capacity ratio no greater than 1.0.

LOS B describes operations with a control delay between 10s/veh and 15s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS C describes operations with a control delay between 15s/veh and 25s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS D describes operations with a control delay between 25s/veh and 35s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS E describes operations with a control delay between 35s/veh and 50s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS F describes operations with a control exceeding 50s/veh and a volume-to-capacity ratio no greater than 1.0 or when the volume-to-capacity ratio exceeds 1.0, regardless of the measurement of the control delay.

"Highway Capacity Manual," Transportation Research Board, 2010.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE (LOS) CRITERIA FOR AUTOMOBILES AT A ROUNDABOUT

Roundabouts are intersections with a generally circular shaped, characterized by yield on entry and circulation around a central island (counterclockwise in the United States). For a roundabout, LOS is based solely on control delay. The LOS criteria for automobiles in roundabouts is shown below. Roundabouts share the same basic controlled delay formulation with two-way and all-way stop-controlled intersections, adjusting for the effect of yield control. LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The following lists the LOS criteria for a roundabout:

LOS A describes operations with a control delay of 10s/veh or less and a volume-to-capacity ratio no greater than 1.0.

LOS B describes operations with a control delay between 10s/veh and 15s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS C describes operations with a control delay between 15s/veh and 25s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS D describes operations with a control delay between 25s/veh and 35s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS E describes operations with a control delay between 35s/veh and 50s/veh and a volume-to-capacity ratio no greater than 1.0.

LOS F describes operations with a control exceeding 50s/veh and a volume-to-capacity ratio no greater than 1.0 or when the volume-to-capacity ratio exceeds 1.0, regardless of the measurement of the control delay.

"Highway Capacity Manual," Transportation Research Board, 2010.

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
BASELINE PEAK HOUR TRAFFIC ANALYSIS

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕		↰	↑			⇕			⇕	
Traffic Vol, veh/h	3	548	76	45	188	26	6	1	155	23	17	6
Future Vol, veh/h	3	548	76	45	188	26	6	1	155	23	17	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	637	88	52	219	30	7	1	180	27	20	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	249	0	0	725	0	0	1039	1040	681	1116	1069	234
Stage 1	-	-	-	-	-	-	687	687	-	338	338	-
Stage 2	-	-	-	-	-	-	352	353	-	778	731	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1317	-	-	878	-	-	209	230	450	185	221	805
Stage 1	-	-	-	-	-	-	437	447	-	676	641	-
Stage 2	-	-	-	-	-	-	665	631	-	389	427	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1317	-	-	878	-	-	183	216	450	105	207	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	183	216	-	105	207	-
Stage 1	-	-	-	-	-	-	435	445	-	673	603	-
Stage 2	-	-	-	-	-	-	600	594	-	232	425	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	20.1	42.1
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	424	1317	-	-	878	-	-	149
HCM Lane V/C Ratio	0.444	0.003	-	-	0.06	-	-	0.359
HCM Control Delay (s)	20.1	7.7	0	-	9.4	-	-	42.1
HCM Lane LOS	C	A	A	-	A	-	-	E
HCM 95th %tile Q(veh)	2.2	0	-	-	0.2	-	-	1.5

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↰	↑			↕			↕	
Traffic Vol, veh/h	9	271	40	130	271	43	25	10	48	5	15	11
Future Vol, veh/h	9	271	40	130	271	43	25	10	48	5	15	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	301	44	144	301	48	28	11	53	6	17	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	349	0	0	345	0	0	971	980	323	988	978	325
Stage 1	-	-	-	-	-	-	343	343	-	613	613	-
Stage 2	-	-	-	-	-	-	628	637	-	375	365	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1210	-	-	1214	-	-	232	250	718	226	250	716
Stage 1	-	-	-	-	-	-	672	637	-	480	483	-
Stage 2	-	-	-	-	-	-	471	471	-	646	623	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1210	-	-	1214	-	-	194	218	718	181	218	716
Mov Cap-2 Maneuver	-	-	-	-	-	-	194	218	-	181	218	-
Stage 1	-	-	-	-	-	-	665	631	-	475	426	-
Stage 2	-	-	-	-	-	-	392	415	-	582	617	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	2.4	19.3	19.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	344	1210	-	-	1214	-	-	277
HCM Lane V/C Ratio	0.268	0.008	-	-	0.119	-	-	0.124
HCM Control Delay (s)	19.3	8	0	-	8.4	-	-	19.8
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0.4	-	-	0.4

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	314	412	158	77	31	101
Future Vol, veh/h	314	412	158	77	31	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	338	443	170	83	33	109

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	253	0	-	0	1331	212
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	1119	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1312	-	-	-	170	828
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	312	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1312	-	-	-	126	828
Mov Cap-2 Maneuver	-	-	-	-	126	-
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	312	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	17.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1312	-	-	-	126	828
HCM Lane V/C Ratio	0.257	-	-	-	0.265	0.131
HCM Control Delay (s)	8.7	-	-	-	43.5	10
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	1	-	-	-	1	0.5

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	170	154	251	83	35	193
Future Vol, veh/h	170	154	251	83	35	193
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	193	314	104	44	241

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	418	0	-	0	985	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	619	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1141	-	-	-	275	679
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1141	-	-	-	224	679
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	537	-

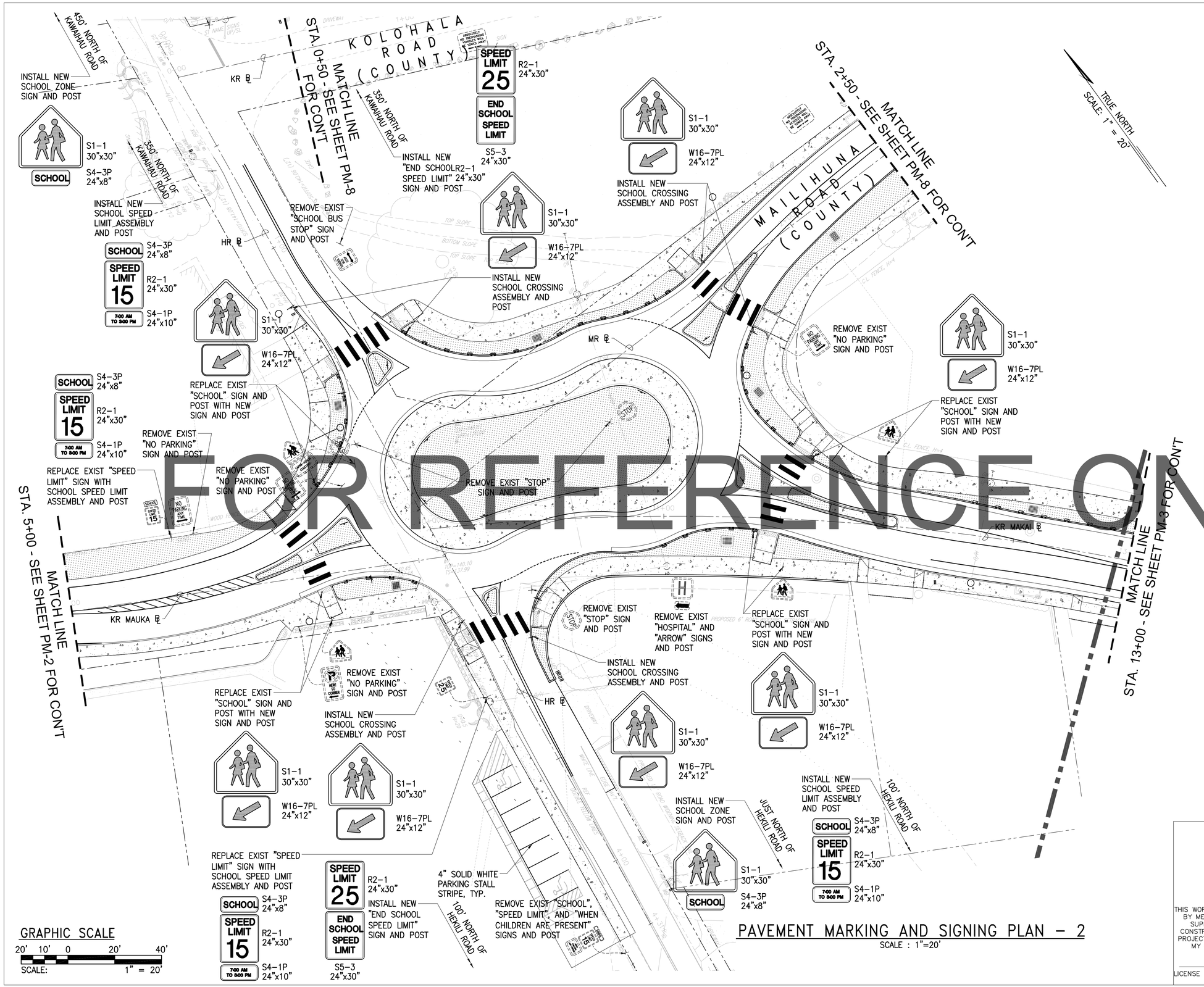
Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	15
HCM LOS			C

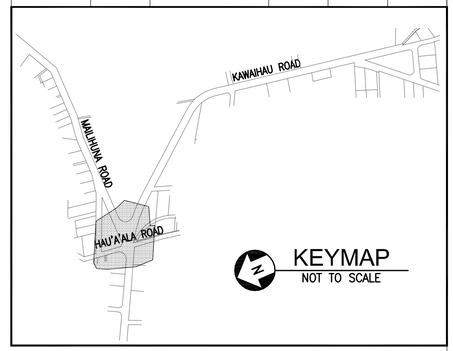
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1141	-	-	-	224	679
HCM Lane V/C Ratio	0.186	-	-	-	0.195	0.355
HCM Control Delay (s)	8.9	-	-	-	24.9	13.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.7	-	-	-	0.7	1.6

APPENDIX D

PLANS FOR KAWAIHAU–HAUAALA–MAILIHUNA COMPLETE STREETS IMPROVEMENTS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	STP-0700(071)	2020		





KEYMAP
NOT TO SCALE

PAVEMENT MARKING LEGEND

1. 4" SOLID YELLOW STRIPE WITH TYPE "D" RPM AT 20' O.C.
2. 4" SOLID WHITE EDGE STRIPE

NOTES

1. SEE LANDSCAPE DWGS FOR IMPROVEMENTS AT ROUNDABOUT.
2. COORDINATE WITH CHURCH/SCHOOL PERSONNEL FOR IMPROVEMENTS ON CHURCH/SCHOOL PROPERTY.

LEGEND

- RIGHT-OF-WAY(ROW) LINE
- BASELINE
- CONCRETE WALKWAY
- GRASS LANDSCAPING
- UTILITY POLE, SEE ELECTRICAL DWGS

GRAPHIC SCALE

20' 10' 0 20' 40'

SCALE: 1" = 20'

PAVEMENT MARKING AND SIGNING PLAN - 2

SCALE : 1"=20'

FOR REFERENCE ONLY

Revision	Date	Description	By	Approved

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUA'I

PAVEMENT MARKING AND SIGNING PLAN - 2

KAWAIHAU - HAU'A'ALA - MAILIHUNA COMPLETE STREETS
KAPA'A, KAUA'I, HAWAI'I
FEDERAL AID PROJECT NO. STP-0700(071)

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

LICENSE EXPIRES 4-30-22

Prepared By: Date: MAR. 2020

Approved:

County Engineer Date
Dept. of Public Works, County of Kaua'i

Designed By: MKK
Drawn By: WOC
Checked By: GK

SHEET PM-2 OF ____ SHEETS

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2022 PEAK HOUR TRAFFIC
ANALYSIS WITHOUT PROJECT

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	633	237	164	45
Demand Flow Rate, veh/h	646	242	167	45
Vehicles Circulating, veh/h	118	333	622	278
Vehicles Exiting, veh/h	205	456	142	30
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.2	7.9	9.7	4.8
Approach LOS	B	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	L	LTR	LTR	LTR
Assumed Moves	L	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	646	242	167	45
Cap Entry Lane, veh/h	1004	810	607	856
Entry HV Adj Factor	0.980	0.980	0.982	0.988
Flow Entry, veh/h	633	237	164	44
Cap Entry, veh/h	984	794	596	846
V/C Ratio	0.643	0.299	0.275	0.053
Control Delay, s/veh	13.2	7.9	9.7	4.8
LOS	B	A	A	A
95th %tile Queue, veh	5	1	1	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	SW
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	133
Demand Flow Rate, veh/h	136
Vehicles Circulating, veh/h	172
Vehicles Exiting, veh/h	403
Follow-Up Headway, s	3.186
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	5.2
Approach LOS	A

Lane	Left
Designated Moves	R
Assumed Moves	R
RT Channelized	
Lane Util	1.000
Critical Headway, s	5.193
Entry Flow, veh/h	136
Cap Entry Lane, veh/h	951
Entry HV Adj Factor	0.981
Flow Entry, veh/h	133
Cap Entry, veh/h	933
V/C Ratio	0.143
Control Delay, s/veh	5.2
LOS	A
95th %tile Queue, veh	0

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	322	337	83	31
Demand Flow Rate, veh/h	329	344	85	31
Vehicles Circulating, veh/h	190	218	329	474
Vehicles Exiting, veh/h	315	194	190	63
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	8.4	5.6	5.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	L	LTR	LTR	LTR
Assumed Moves	L	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	329	344	85	31
Cap Entry Lane, veh/h	934	909	813	703
Entry HV Adj Factor	0.979	0.979	0.974	0.989
Flow Entry, veh/h	322	337	83	31
Cap Entry, veh/h	915	890	792	695
V/C Ratio	0.352	0.379	0.105	0.044
Control Delay, s/veh	7.8	8.4	5.6	5.6
LOS	A	A	A	A
95th %tile Queue, veh	2	2	0	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	SW
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	230
Demand Flow Rate, veh/h	235
Vehicles Circulating, veh/h	302
Vehicles Exiting, veh/h	260
Follow-Up Headway, s	3.186
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	7.5
Approach LOS	A

Lane	Left
Designated Moves	R
Assumed Moves	R
RT Channelized	
Lane Util	1.000
Critical Headway, s	5.193
Entry Flow, veh/h	235
Cap Entry Lane, veh/h	835
Entry HV Adj Factor	0.980
Flow Entry, veh/h	230
Cap Entry, veh/h	819
V/C Ratio	0.281
Control Delay, s/veh	7.5
LOS	A
95th %tile Queue, veh	1

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2022 PEAK HOUR TRAFFIC
ANALYSIS WITH PROJECT

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	643	241	167	45
Demand Flow Rate, veh/h	656	246	170	45
Vehicles Circulating, veh/h	118	340	630	289
Vehicles Exiting, veh/h	216	460	144	30
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.5	8.1	9.9	4.8
Approach LOS	B	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	L	LTR	LTR	LTR
Assumed Moves	L	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	656	246	170	45
Cap Entry Lane, veh/h	1004	804	602	846
Entry HV Adj Factor	0.980	0.980	0.982	0.988
Flow Entry, veh/h	643	241	167	44
Cap Entry, veh/h	984	788	591	836
V/C Ratio	0.653	0.306	0.282	0.053
Control Delay, s/veh	13.5	8.1	9.9	4.8
LOS	B	A	A	A
95th %tile Queue, veh	5	1	1	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	SW
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	137
Demand Flow Rate, veh/h	140
Vehicles Circulating, veh/h	179
Vehicles Exiting, veh/h	407
Follow-Up Headway, s	3.186
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	5.3
Approach LOS	A

Lane	Left
Designated Moves	R
Assumed Moves	R
RT Channelized	
Lane Util	1.000
Critical Headway, s	5.193
Entry Flow, veh/h	140
Cap Entry Lane, veh/h	945
Entry HV Adj Factor	0.981
Flow Entry, veh/h	137
Cap Entry, veh/h	927
V/C Ratio	0.148
Control Delay, s/veh	5.3
LOS	A
95th %tile Queue, veh	1

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	333	341	85	31
Demand Flow Rate, veh/h	340	348	87	31
Vehicles Circulating, veh/h	190	225	337	485
Vehicles Exiting, veh/h	326	198	193	63
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.0	8.5	5.7	5.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	L	LTR	LTR	LTR
Assumed Moves	L	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	340	348	87	31
Cap Entry Lane, veh/h	934	902	807	696
Entry HV Adj Factor	0.980	0.979	0.975	0.989
Flow Entry, veh/h	333	341	85	31
Cap Entry, veh/h	916	883	786	688
V/C Ratio	0.364	0.386	0.108	0.045
Control Delay, s/veh	8.0	8.5	5.7	5.7
LOS	A	A	A	A
95th %tile Queue, veh	2	2	0	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Approach	SW
Entry Lanes	1
Conflicting Circle Lanes	1
Adj Approach Flow, veh/h	234
Demand Flow Rate, veh/h	239
Vehicles Circulating, veh/h	309
Vehicles Exiting, veh/h	264
Follow-Up Headway, s	3.186
Ped Vol Crossing Leg, #/h	0
Ped Cap Adj	1.000
Approach Delay, s/veh	7.6
Approach LOS	A

Lane	Left
Designated Moves	R
Assumed Moves	R
RT Channelized	
Lane Util	1.000
Critical Headway, s	5.193
Entry Flow, veh/h	239
Cap Entry Lane, veh/h	830
Entry HV Adj Factor	0.980
Flow Entry, veh/h	234
Cap Entry, veh/h	813
V/C Ratio	0.288
Control Delay, s/veh	7.6
LOS	A
95th %tile Queue, veh	1

DEPARTMENT OF PLANNING
KA'ĀINA HULL, DIRECTOR
JODI A. HIGUCHI SAYEGUSA, DEPUTY DIRECTOR

DEREK S.K. KAWAKAMI, MAYOR
MICHAEL A. DAHILIG, MANAGING DIRECTOR

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission: Consideration of Class IV Zoning Permit and a Use Permit to facilitate conversion of an existing building into a pre-school facility containing classrooms, offices, a meeting room, and reception area.

Permit Application Nos. Class IV Zoning Permit Z-IV-2022-6
Use Permit U-2022-6

Name of Applicant(s) KAMEHAMEHA SCHOOLS
Rebecca Candilasa, Senior Planner
Wilson Okamoto Corporation

II. PERMIT INFORMATION

PERMITS REQUIRED	
☒ **Use Permit**	Pursuant to Section 8-2.4 of the KCC, 1987, as amended, a Use Permit is required since the project site is within the Special Treatment – Public District (ST-P).
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☒ **Zoning Permit Class** ☒ IV ☐ III	Pursuant to Section 8-8.4 of the KCC, 1987, as amended, a Class IV Zoning Permit is a procedural requirement for obtaining a Use Permit.
☐ **Special Management Area Permit** ☐ Use ☐ Minor	
AMENDMENTS	

☐ **Zoning Amendment**	
☐ **General Plan Amendment**	
☐ **State Land Use District Amendment**	

Date of Receipt of Completed Application: February 2, 2022
Date of Director's Report: March 22, 2022
Date of Public Hearing: APRIL 12, 2022
Deadline Date for PC to Take Action (60TH Day): May 13, 2022

III. PROJECT DATA

PROJECT INFORAMTION			
Parcel Location:	The project site is located on the St. Catherine's Church/School campus, situated at the Kawaihau Road/Haua'ala Road intersection.		
Tax Map Key(s):	4-6-015:058	**Area:**	1.09 acres (approx.)

ZONING & DEVELOPMENT STANDARDS	
Zoning:	Residential District (R-4)/Special Treatment – Public Facilities (ST-P)
State Land Use District:	Urban
General Plan Designation:	Residential Community
Height Limit:	30 feet
Max. Land Coverage:	60%
Parking Requirement:	1 parking stall for every 3 employees = 3 1 parking stall for every 200 sf of office space = 3 **Total stalls required = 6 (minimum)**
Front Setback:	N/A
Rear Setback:	N/A
Side Setback:	N/A
Community Plan Area:	Kapa'a-Wailua Development Plan
Community Plan Land Use Designation:	N/A
Deviations or Variances Requested:	N/A

IV. LEGAL REQUIREMENTS

Section 8-3.1(f), KCC:	This report is being transmitted to the Applicant and Planning Commission in order to satisfy the requirements of Section 8-3.1(f), relating to the provision of the Planning Director's report and recommendation on the subject proposal within sixty (60) days of the filing of a completed application. The application was received on February 2, 2022, and the Applicant, through its authorized agent, was notified accordingly of the Planning Department's intent to commence permit processing.
Public Hearing Date:	**APRIL 12, 2022**

V. PROJECT DESCRIPTION AND USE

As represented, the Applicant is seeking permits to allow conversion of an existing building into a pre-school facility containing classrooms, offices, a meeting room, and reception area. The existing building is identified as the Parish Center, originally built in 1952, and was historically used as a home for nuns ("nunnery"). With the departure of the nuns in 2005, the nunnery was re-purposed into a Parish Center, which was utilized for multiple purposes that served as an accessory to the religious activities associated with St. Catherine's Church.

The Parish Center is a single-story, U-shaped building with the "open side" of the U-shape facing to the south. The existing structure encompasses approximately 4,300 square feet (SF). The proposed preschool is expected to accommodate a maximum enrollment of forty (40) students and will be staffed by six (6) full-time employees with an additional one or two staff members to provide support as needed. Hours of operation will be Monday to Friday, 7:00 am. to 5:00 pm. It is anticipated that the school will be closed on weekends and holidays.

Kamehameha Schools (KS) intends to lease the structure and utilize it as a preschool facility. KS has 20 preschools statewide that enroll over 1,600 *keiki* (children). Each classroom typically consists of about 20 *keiki* ages three and four years old, a qualified teacher, and a teaching assistant. Upon completion of the proposed Project, *keiki* currently attending KS' preschool in Anahola will be relocated and the Anahola location will be closed. The purpose of the Project is to provide educational facilities in alignment with KS' mission to fulfill Bernice Pauahi Bishop's desire to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.

Parking for the facilities is located on an adjacent parcel to the west identified as TMK: (4) 4-6-015:067. Primary access to the project site will be provided via the existing driveway for St. Catherine Church off Kawaihau Road with secondary access provided via an existing driveway off Haua'ala Road. The existing parking lot adjacent to St. Catherine Church is accessed through a driveway off Kawaihau Road that presently serves as parking for the preschool's pick-up and drop-off operations. This parking lot has 33 paved parking stalls, 3 ADA-accessible stalls, 34 unpaved parking stalls (total of 70 stalls) and a turnaround area. Use of these stalls will be formalized in the terms of the lease agreement. It is anticipated that the Applicant will also have use of the existing grass/gravel parking area at the Project Site for use by staff and visitors. Access to this lot is provided via the driveway off Haua'ala Road.

(Please refer to the application for further description)

VI. APPLICANT'S REASONS/JUSTIFICATION

Please refer to sections of the application.

VII. ADDITIONAL FINDINGS

1. Property Information/Surrounding Uses
   The subject property is located at 5021 Kawaihau Road. The site has been designated Special Treatment/Public District as the site is used as a church with a school and accessory uses. The proposed improvements occur on approximately 0.40 acres of land situated on the southern half of the subject parcel.

   Other surrounding land uses in the vicinity include St. Catherine School, single-family residences, neighborhood businesses, Kapa'a Elementary School, and Kapa'a High School further to the east of the project site (refer to Figure 1, Exhibit 'C' of the Application).

2. Project Description/Site improvements
   As represented in Exhibit 'D' of the Application, the extent of the improvements is limited to the Parish Center situated on the norther portion of the parcel that is immediately adjacent to the existing church.

   The Applicant, Kamehameha Schools, plans to lease the existing church building for a preschool operation. Interior and exterior improvements are being proposed to accommodate the preschool use. As represented, the improvements involve:

   a. **Proposed Exterior Improvements**
      1) Roof
         - Replacement of existing shingle roofing with new similar materials

- New gutters
- New extension of the roof for the covered walkway

2) Windows
   - Removal of all existing jalousie windows and replacement with new vinyl jalousie windows
   - Conversion of window openings to doors where required

3) Doors
   - Removal of all existing doors and replacement with new metal doors (front entry and back) and new sliding doors (back).
4) New Play Area
   - New fenced in play area with concrete pad on the south end of the building
5) New Covered Walkway
   - New concrete pad and roofline extension to create a covered walkway along the south wall of the building
6) New Septic System
7) Paving Existing Driveway
8) New ADA walkway on the northern side of the building
9) Other miscellaneous repairs to the building including but not limited to spalling, framing, etc.

b. **Proposed Interior Improvements**

1) Reconfiguration of the Interior Layout
   - Demolition of the existing dormitory style layout
   - Installation of new partitions to create two classrooms, restrooms, offices, meeting space, and a reception area
2) New Plumbing to replace the existing entirely
3) Replacement of electrical system to replace the existing entirely
4) Structural improvements to existing roofing trusses to accommodate

3. Flood Zones

The general topography of the project site is relatively flat, containing a gentle slope from west to east, in the direction of Haua'ala Road. The Federal Emergency Management Agency (FEMA) Flood Insurance Map shows the project site is situated within the flood zone identified as Zone '**X**'. FEMA has identified those areas within the Zone "X" are determined to be outside the 0.2% annual chance floodplain.

4. Kaua'i General Plan (GP)

The General Plan designation for the subject property is "NEIGHBORHOOD GENERAL." This designation is intended for medium intensity mixed-use environments that support the town core with housing, services, parks, civic/institutional, home occupation, and commercial uses. Buildings in this designation are mostly detached, with some attached, 1-2 stories in height that can accommodate a range of multi-

family housing types.

VIII. AGENCY COMMENTS

(See Exhibit "A")

IX. PRELIMINARY EVALUATION

In evaluating the proposed development, the following aspects are being considered:

1. General Plan
   The applicable Goals and Policies, pursuant to Sections 1.3 & 1.4 of the General Plan, are noted as follows:

   a. **SECTION 1.3 VISION AND GOALS**

      1) Goal #1 – A Sustainable Island
      The proposed pre-school extends all young Keiki opportunities to satisfy their aspirations for a better life through early education. The curriculum will, on an elementary level, include teachings of self-reliance for food, energy and other resources through drawings and limited gardening. They will be taught the value of air, water, soil, and living organisms that supports life. The Keiki themselves are a resource that the pre-school will continue to nourish by education to sustain a population that will contribute to a Sustainable Island.

      2) Goal #2 – A Unique and Beautiful Place
      The proposed pre-school will have a curriculum that will, on an elementary level, be taught of the irreplaceable qualities and features of our island that deserve protection.

      3) Goal #3 – A Healthy and Resilient People
      Emphasis, on an elementary level, will made on the importance of strengthening our community's health by growing our own food, by creating healthy walking communities, development of affordable housing and the preservation of our natural areas. The importance of preparing for the aftermath of a weather disaster will also be learned by the students.

      4) Goal #4 – An Equitable Place with Opportunity for All
      The proposed pre-school, though early education, will foster the keiki to become responsible young adults who can contribute to our communities towards the goal of becoming diverse and equitable. The school fulfills the goal by providing opportunities for and access to early education. The location of the facility in the context of a residential neighborhood will

enhance convenience for residents in the community and improve quality of life.

b. **SECTION 1.4 POLICIES TO GUIDE GROWTH**

1) Policy #1: Manage Growth to Preserve Rural Character
This policy aims to preserve Kauai's rural character by limiting the supply of developable land to an amount adequate for future needs, prohibit development not adjacent to towns, and ensure new development occurs inside growth boundaries and is compact and walkable. The proposed Project involves renovation of an existing structure for use as a preschool, which would not require the development of vacant land and open space. Additionally, the Project Site is located within an established neighborhood in Kapa'a adjacent to residences and other compatible uses.

2) Policy #4: Design Health and Complete Neighborhoods
The Project Site is located within an established neighborhood in Kapa'a adjacent to residences and other compatible uses. Location of the facility in the context of a residential neighborhood will enhance convenience for residents in the community and improve quality of life. In addition, the County of Kaua'i Department of Public Works (DPW) is proposing several Complete Streets and Safe Routes to School improvements in the vicinity. Design of the project will provide appropriate connection to these facilities as appropriate and as coordinated through consultation with DPW.

3) Policy #17: Nurture Our Keiki
The This policy aims to value youth as Kauai's most treasured resource. It also aims to provide youth with safe communities, great schools and facilities, and financially sustainable jobs, housing, and transportation opportunities so they are able to seek livelihoods on Kaua'i. The proposed Project involves renovation of an existing structure for use as a preschool that will provide early education opportunities for *keiki* between the ages of 3-4. It can be reasonably expected that with education these children will go on to make meaningful contributions to society later in life.

4) Policy #19: Communicate with Aloha
This policy notes that Kauai's residents care about planning and decision-making. Therefore, the government must share information, encourage input, improve public processes, and be responsive. The scheduling of this Application before the Planning Commission will allow the public to participate in the planning and decision-making process for the proposed Project.

c. **SECTION 3.0 ACTIONS BY SECTOR**

1) Sector I. – Economy. Strengthening Existing Town Centers and Mixed-Use Environments. Through a directed growth policy, our town centers can support a mix of uses that appeals to our millennial and baby boomer population.
2) Sector X. – Opportunity & Health for All. A positive educational experience encourages children to become lifelong learners who contribute to their communities and world.

2. Use Permit

a. Pursuant to Article 3 of the Comprehensive Zoning Ordinance (CZO), Chapter 8 of the Kauai county Code (1987), the purpose of the Use Permit Procedure is to assure the proper integration into the community of uses which may be suitable only in specific locations of a district, or only under certain conditions, or only if the uses are designed, arranged or conducted in a particular manner, and to prohibit the uses if proper integration cannot be assured. Section 8-3.2 of the CZP specifies a Use Permit may be granted only if the Planning Commission finds that the use meets the following criteria:

1) The use must be a compatible use;
2) The use must not be detrimental to persons or property in the area;
3) The use must not cause substantial environmental consequences; and
4) The use must not be inconsistent with the intent of the Comprehensive Zoning Ordinance (CZO) and General Plan.

b. Based on the foregoing, the following aspects are taken into consideration:

1) As noted in the Application, the Project Site is in a residential neighborhood in the vicinity of several other schools and neighborhood businesses. The proposed use of the Project Site as a preschool will satisfy an essential community need by providing educational programs and activities that support the growth and development of children in the region. It can be reasonably expected that with education these children will go on to make meaningful contributions to society later in life. The placement of schools within residential neighborhoods and/or in a centralized location further enhances convenience for residents and allows residents to take advantage of available educational opportunities, as evidenced by the location of other schools in the area such as St. Catherine School (Grades K to 5), Kapa'a Elementary School (Grades K to 6), and Kapa'a High School (Grades 9 to 12). For the reasons mentioned, the proposed use is compatible with the uses in its immediate surroundings and would not be detrimental to the health, safety, peace, morals, comfort, and the general welfare of persons residing and working in the neighborhood.

2) Operation of the preschool will be within normal working hours. The proposed Project improvements will be in conformance with the development standards applicable to the R-4/ST-P District in the County's CZO and as conditioned by the Planning Commission with approval of the subject Use Permit. Construction and operation of the Project is not anticipated to be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the community.
3) Construction of the proposed project will not result in any substantial harmful environmental consequences. Project improvements are the minimum necessary to convert the use of the existing structure to a preschool and to ensure the structure is compliant with all prevailing building code requirements and safety regulations. Mitigative measures—such as standard best management practices (BMPs) for construction and adherence to applicable federal, State, and County rules and regulations—will be incorporated into the design to ensure there will be no substantial harmful environmental consequences on the land or on other lands or waters. Following construction, the proposed use is not anticipated to result in any significant environmental consequences beyond what would have previously existed under the former use of the Project Site as a nunnery.
4) The proposed Project will be designed and developed in conformance with the development standards applicable to the R-4/ST-P District as established in the CZO and as conditioned by the Planning Commission with approval of the subject Use Permit. The proposed use is an allowable use with issuance of a Use Permit, which is the subject of this permit application. Discussion of the project's consistency with the General Plan is discussed in the preceding section.

3. Comprehensive Zoning Ordinance (Chapter 8 of the KCC)

The project is consistent with the development standards contained in the CZO in that:

a. The number of parking spaces as proposed exceeds the minimum required by the CZO. As noted in the Application, there are a total of 70 off-street parking stalls (paved & unpaved) available. Based on the parking standards prescribed by the CZO, a total of 6 stalls is required. There are many parking stalls that are underutilized and as such, it is anticipated that there will be no issues attributed to parking. However, should parking become an issue, the Planning Director can require additional parking pursuant Section 8-6.3(e)(3)(E). The Planning Director reserves the right to review this requirement if complaints arise from the neighboring property owners.

b. The project as proposed could be considered to be a compatible use and not detrimental to the health, safety, peace, morals, comfort and general welfare of

persons residing or working in the area. Additionally, the use should not cause substantial environmental consequences.

c. The project as proposed meets the lot coverage, building height and setback requirements as outlined in the CZO.

Finally, it is uncertain as to whether the Applicant has made provisions for night illumination with the project, based on the preliminary plans that have been submitted. If so, night illumination should be designed to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds. Night lighting should be shielded from above and directed downwards and shall be approved by the U.S. Dept. of the Interior Fish and Wildlife Service. If external lighting is to be used in connection with the proposed project, all external lighting should be only of the following type: *downward-facing shielded lights*. Spotlights aimed upward or spotlighting of structures is prohibited.

4. Traditional Native Hawaiian Cultural Resources

After the Applicant consulted with a known cultural practitioner and kumu of various Hawaiian arts and evaluating historical information that was available to the department, the department finds that the proposed Project involving the renovation of an existing development should have no impact on any known Hawaiian traditional or customary practices for the following reasons:

- There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.
- There are no special gathering practices taking place within any portion of the Project Site.
- The Project will not detrimentally affect access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.
- There are no known religious practices taking place within the Project Site.
- There are no known pre-contact cultural or historic sites or resources located within the Project Site.
- There are no known burials within the Petition Area.

Agency Comments – The Applicant should resolve and comply with all agency requirements as recommended in the permit application review, including but not limited to the fire code requirements as imposed by the County Fire Department, drainage requirements for DPW-Engineering Division, wastewater requirements for the State Department of Health (DOH), and the archaeological/historical requirements of the State Historic Preservation Division (SHPD).

X. PRELIMINARY CONCLUSION

Based on the information contained in the Staff Report Findings and Evaluation, the Planning Department concludes that the proposed development should not have any detrimental impact to the environment or the surrounding area. The proposed use should not be detrimental to persons, property, or the environment in the surrounding area.

The proposal is generally in compliance with the criteria outlined for the granting of a Use Permit and Class IV Zoning Permit. Additionally, the proposal aligns with the goals and policies outlined in the General Plan, as well as the development standards prescribed by the Comprehensive Zoning Ordinance.

The Applicant should institute the "Best Management Practices" to ensure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those in the surrounding area of the proposal.

XI. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion it is hereby recommended that subject request to facilitate conversion of an existing building into a pre-school facility and associated site improvements through Class IV Zoning Permit Z-IV-2022-6 and Use Permit U-2022-6 be **approved** subject to the following conditions:

1. The proposed facility shall be constructed as represented. Any changes to said structures and/or facilities shall be reviewed by the Planning Department to determine whether Planning Commission review and approval is warranted.

2. The Planning Director reserves the right to increase parking requirements when particular uses cause unusual traffic congestion.

3. In order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, all external lighting shall be only of the following types: downward-facing shielded lights. Any spotlights aimed upward or spotlighting of structures, landscaping, or the ocean shall be prohibited.

4. The applicant shall develop and utilize Best Management Practices (B.M.P's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

5. The applicant is advised the should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division and the Planning Department to determine mitigation measures.

6. The Applicant shall comply with the fire code requirements as imposed by the County Fire Department, drainage/flood requirements for DPW-Engineering Division, wastewater requirements for the State Department of Health (DOH), traffic related analysis & requirements for the County DPW & State Highways Division, and the archaeological/ historical requirements of the State Historic Preservation Division (SHPD).

7. Prior to operation/occupancy of the proposed facility, written confirmation of compliance with the requirements from all reviewing agencies shall be provided to the Planning Department.

8. The applicant shall implement to the extent possible sustainable building techniques and operational methods for the project, such as Leadership in Energy and Environmental Design (L.E.E.D.) standards or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system, and strategies, which may include but is not limited to recycling, natural lighting, extensive landscaping, solar panels, low-energy fixtures, low-energy lighting and other similar methods and techniques. All such proposals shall be reflected on the plans submitted for building permit review.

9. The Applicant is advised that prior to construction and/or use, additional government agency conditions may be imposed. It shall be the Applicant's responsibility to resolve those conditions with the respective agency(ies).

10. The Planning Commission reserves the right to revise, add, or delete conditions of approval in order to address or mitigate unforeseen impacts the project may, create, or to revoke the permits through the proper procedures should conditions of approval not be complied with or be violated.

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for APRIL 12, 2022 whereby the entire record should be considered prior to decision-making. The entire record should include but not be limited to:

a. Pending government agency comments;
b. Testimony from the general public and interested others; and
c. The Applicant's response to staff's report and recommendation as provided herein.

By _____
DALE A. CUA, Planner

Approved & Recommended to Commission:

By _____

KA'ĀINA S. HULL
Director of Planning

Date: 8/12/2022

EXHIBIT "A"

(Agency Comments)
For reference

DAVID Y. IGE
GOVERNOR OF
HAWAII

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
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

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

January 7, 2022

IN REPLY REFER TO:
Project No. 2021PR01071
Doc. No. 2111DB06
Archaeology, Architecture

Ka'āina S. Hull, Director
County of Kaua'i
Planning Department
4444 Rice Street, Suite A473
Līhu'e, Hawai'i 96766
khull@kauai.gov

Dear Mr. Hull:

SUBJECT: **HRS Chapter 6E-42 Historic Preservation Review –**
St. Catherine's Catholic Church Preschool Improvements Project
County of Kaua'i Class IV Zoning Permit Application Z-IV-2022; Use Permit U-2022-1
Applicant: Kamehameha Schools
Kapa'a Ahupua'a, Puna District, Island of Kaua'i
TMK: (4) 4-6-015:058

This letter provides the State Historic Preservation Division's (SHPD's) §6E-42, HRS, review of the County of Kaua'i Class IV Zoning Permit Application Z-IV-2022 and Use Permit U-2022-1 for the St. Catherine's Catholic Church Preschool Improvements Project at 5021A Kawaihau Road, Kapa'a. The project area comprises a 0.40-acre portion of the 1.09-acre property.

The SHPD received the initial submittal on August 31, 2021 which included a permit application packet prepared by Wilson Okamoto Corporation on behalf of the applicant, a SHPD HRS 6E Submittal Form, a TMK Map, an aerial site photograph, and associated project construction plans (Submission No. 2021PR01071.001). The permit application packet also included multiple exhibits. SHPD received additional materials via HICRIS on October 26, 2021 which included a revised permit application and an applicant cover letter dated October 25, 2021 (Submission No. 2021PR01071.002).

The project will consist of proposed interior and exterior renovations to the existing Parish Center at St. Catherine's Catholic Church in Kapa'a, which was constructed in 1952 and was later converted for use as a preschool. The Parish Center is a single-story, U-shaped building with the open side of the U-shape oriented to the south. The existing structure encompasses approximately 4,300 sq. ft. Landscaping and a grass/gravel parking area with a driveway providing ingress and egress from Hauaala Road make up the remainder of the project site. There are also proposed modifications to the overall grounds of the property which should involve shallow/minimal ground disturbance, including creating a new covered walkway, an ADA compliant walkway, and paving the parking lot area.

The proposed interior improvements include reconfiguring the interior layout to accommodate two classrooms, toilets, offices, a meeting space, and a reception area. The existing kitchen space will remain, but the existing interior finishes, casework, and fixtures are proposed to be replaced. All existing electrical systems will be replaced with code compliant systems including updated electrical infrastructure, LED lighting, and a new fire alarm system. New plumbing systems will also be provided throughout the building.

Proposed improvements to the exterior of the building include installing a new roof, new windows, and new doors to replace the existing components. A new covered walkway will be constructed along the south wall of the existing

RECEIVED

FEB - 8 2022

County of Kauai
Transportation Agency

County of Kaua'i
PLANNING DEPT

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

22 MAR -3 A3:48

FROM: Kaaina S. Hull, Director (Dale) February 7, 2022

SUBJECT: Class IV Zoning Permit Z-IV-2022-6, Use Permit U-2022-6, School
Tax Map Key: (4) 4-6-015:058, Kamehameha Schools, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

CTA HAS NO FURTHER COMMENT ON THIS PROJECT.
THANKS!

2.24.2022

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

BELLES GRAHAM LLP

IAN K. JUNG 8626
4334 Rice Street, Suite 202
Lihue, Kauai, Hawaii 96766
Telephone: (808) 245-2163
Facsimile: (808) 245-3277
Email: ikj@kauai-law.com

Attorney for Applicants,
KEOPELE MCBRIDE
ASHLEY MCBRIDE

BEFORE THE PLANNING COMMISSION

OF THE

COUNTY OF KAUAI

In The Matter Of The Application Of KEOPELE MCBRIDE and ASHLEY MCBRIDE, for a Use Permit and a Class IV Zoning Permit for real property situated at Kilauea, Kauai, Hawaii, identified by Kauai Tax Map Key No. (4) 5-2-006:014.	USE PERMIT NO. U-2021-_____ CLASS IV ZONING PERMIT NO. Z-IV-2021-_____ **APPLICATION; EXHIBIT LIST; EXHIBITS "A" – "H"**

APPLICATION

TABLE OF CONTENTS

Page

SUMMARY 7

SECTION 1. APPLICANT/SUBJECT PROPERTY/OWNERS 7
1.1 Applicants 7
1.2 Subject Property 7
1.3 Ownership 7

SECTION 2. LOCATION AND LAND USE DESIGNATIONS OF PROPERTY 8
2.1 Location 8
2.2 Land Use Designations 8
a. SLUC 8
b. Kaua'i General Plan 8
c. CZO 8
d. Development Plan Area 8
e. Special Management Area 9
f. Shoreline/Shoreline Setback Area 9
g. Heritage Resources 9
h. Sea Level Rise 9
i. VDA 9
2.3 Workforce Housing Requirements 9
2.4 Permit History 9
a. Subdivision S-2020-10 9
b. Residential Permit 10

SECTION 3. EXISTING AND PROPOSED USES OF SUBJECT PROPERTY 10
3.1 Existing Improvements And Uses 10
3.2 Proposed Improvements
a. Dwelling Unit 10
3.3 Land Coverage 10

SECTION 4. DESCRIPTION OF SUBJECT PROPERTY AND IDENTIFICATION OF SURROUNDING LANDS 11
4.1 Adjacent Property 11
4.2 Natural Environment 11
a. General Description 11
b. Soils 11
c. Rainfall 11
d. Botanical Resources 11
e. Tsunami Hazard 11
f. Wetlands 11

4.3 Present Uses And Built Environment 11
4.4 Potential Future Uses 12

SECTION 5. PERMITS REQUESTED AND REQUIRED 12
5.1 Required Approval 12
5.2 Official Notice/Commission Records 12

SECTION 6. IMPACTS OF DEVELOPMENT 12
6.1 Botanical Resources and Wildlife 12
a. General Site Description 12
b. Mammalian Resources 12
c. Avian Resources 13
d. Botanical Resources 13
6.2 Historical Resources 13
6.3 Air Quality/Noise 13
6.4 Flooding and Drainage 13
6.5 Utilities 14
a. Potable Water 14
b. Electric/Communications 14
6.6 Wastewater Treatment and Disposal 14
6.7 Solid Waste Disposal 14
6.8 Governmental Services 14
a. Fire and Police Services 15
b. Schools 15
6.9 Economics 15
a. Jobs 15
b. Housing 15
c. Property Values 15
6.10 Population 15
6.11 Traffic Circulation 15
6.12 Heritage Resources 16

SECTION 7. SLUC CONSIDERATIONS/STATE PLAN 16
7.1 SLUC Urban District 16
7.2 Development's Compliance with SLUC Urban District Standards 16
7.3 State Planning Act 16
7.4 Compliance with State Plan 16
a. Economy in General 16
b. Physical environment--land-based, shoreline and marine resources 17
c. Physical environment—land, air, and water quality 17

SECTION 8. GENERAL PLAN CONSIDERATIONS 18
8.1 Kaua'i General Plan Land Use Designation 18
8.2 Goals 18

a. Goal 1 – A Sustainable Island 18
b. Goal 2 – A Unique and Beautiful Place 18
c. Goal 3 – A Healthy and Resilient People 18
d. Goal 4 – An Equitable Place, with Opportunity for All 18
8.3 Policies 18
a. Manage Growth to Preserve Rural Character 19
b. Provide Local Housing 19
c. Recognize the Identity of Kaua'i's Individual Towns and Districts 19
d. Design Healthy and Complete Neighborhoods 19
e. Make Strategic Infrastructure Investments 19
f. Reduce the Cost of Living 19
g. Build a Balanced Transportation System 19
h. Protect Kaua'i's Scenic Beauty 19
i. Uphold Kaua'i as a Unique Visitor Destination 19
j. Help Business Thrive 20
k. Help Agricultural Lands Be Productive 20
l. Protect Our Watersheds 20
m. Complete Kaua'i's Shift to Clean Energy 20
n. Prepare for Climate Change 20
o. Respect Native Hawaiian Rights and Wahi Pana 20
p. Protect Access to Kaua'i's Treasured Places 20
q. Nurture Our Keiki 20
r. Honor Our Kūpuna 20
s. Communicate with Aloha 20
8.4 Objectives & Actions by Sectors 21
a. The Watershed 21
b. Housing 21
c. Transportation 21
d. Infrastructure & Services 21
e. Shared Spaces 21
f. Economy 21
g. Heritage Resources 21
h. Energy Sustainability 22
i. Public Safety & Hazards Resiliency 22
j. Opportunity & Health For All 22

SECTION 9. CZO OPEN DISTRICT CONSIDERATIONS 22
9.1 CZO Open District 22
9.2 Permitted Uses And Structures In CZO Open District 23
9.3 Standards For Construction And Use Within An Open District 23
9.4 Development's Compliance with CZO Open District Standards 23

SECTION 10. SPECIAL TREATMENT DISTRICT CONSIDERATIONS 23
10.1 Special Treatment District 23
10.2 Uses 24

10.3 Confirmation Letter 24
10.4 Plans 24
10.5 Aerial Photographs....25
10.6 Additional Information 25
10.7 Supporting Materials....25
a. Subdivision Map Exhibit "D" 25
b. Aerial Photograph Exhibit "H-1" 25
c. Photographs of Subject Property Exhibit "H-2" 25
10.8 Compatibility With Surrounding Uses....25
10.9 Compliance with Special Treatment District Standards 25

SECTION 11. NORTH SHORE DEVELOPMENT PLAN CONSIDERATIONS 26
11.1 Development Plan Goals and Objectives....26
11.2 Development's Compliance with Development Plan Standards....27

SECTION 12. USE PERMIT AND ZONING PERMIT CONSIDERATIONS 27
12.1 Use Permit....27
12.2 Compatibility With Surrounding Uses....27
12.3 Compliance with Use Permit Standards 28
a. A compatible use 28
b. Not detrimental to health of persons residing or working in the neighborhood....28
c. Not detrimental to safety of persons residing or working in the neighborhood....28
d. Not detrimental to peace of persons residing or working in the neighborhood....28
e. Not detrimental to morals of persons residing or working in the neighborhood....28
f. Not detrimental to comfort and general welfare of persons residing or working in the neighborhood....29
g. Not detrimental or injurious to property or improvements in the neighborhood 29
h. Not detrimental to the general welfare of the community 29
i. Not a cause of substantial harmful environmental consequences to the Subject Property, or to other lands or waters 29
j. Not inconsistent with the intent of the CZO....29
k. Not inconsistent with the General Plan 29
12.4 Development's Compliance with CZO Class IV Zoning Permit Standards 29

SECTION 13. HRS CHAPTER 343 (ENVIRONMENTAL IMPACT STATEMENTS) CONSIDERATIONS....30
13.1 HRS Chapter 343 30

SECTION 14. NATIVE HAWAIIAN ISSUES 31
14.1 Impacts on Traditional or Cultural Practices 31

SECTION 15. COMMUNITY CONTACTS 32
15.1 Contact with Community Groups 32

SECTION 16. CONCLUSION 32

APPLICATION

Comes now, KEOPELE MCBRIDE and ASHLEY MCBRIDE, Applicants in the above-captioned proceedings, by and through their undersigned attorney, and hereby requests the Planning Commission of the County of Kauai ("Planning Commission") pursuant to this Application for a Use Permit and Class IV Zoning Permit (collectively, the "Permits"), as set forth herein. This request is made pursuant to Chapter 8 of the Kauai County Code, 1987 as amended ("CZO"), and Chapter 6 of the Rules Of Practice And Procedures Of The County Of Kauai Planning Commission ("PC Rules").

SUMMARY

The Applicant is proposing to construct a dwelling unit and associated utilities on Lot 21-A-1 of the Kilauea Subdivision.

SECTION 1. APPLICANT/SUBJECT PROPERTY/OWNERS.

1.1 Applicants. The Applicants are KEOPELE MCBRIDE and ASHLEY MCBRIDE ("Applicants"). The Applicants have authorized Ian K. Jung of Belles Graham LLP to file this Application pursuant to the Applicants' Authorization attached as ***Exhibit "A"***.

1.2 Subject Property. The property which is the subject matter of this Application ("Subject Property") is described as Lot 21-A-1 of the Kilauea Subdivision, located in Kilauea, Kauai, Hawaii, identified by Kauai Tax Map Key No. (4) 5-2-006:014. The Subject Property contains approximately 16,187 square feet.

1.3 Ownership. The Applicants are the owners of the Subject Property, as shown in the deed identified as ***Exhibit "B"***.

SECTION 2. LOCATION AND LAND USE DESIGNATIONS OF PROPERTY.

2.1 Location. The Subject Property is located in Kilauea, Kauai, Hawaii, and is shown on the Location Map attached hereto as ***Exhibit "C-1"*** and on the Tax Map attached hereto as ***Exhibit "C-2"***.

2.2 Land Use Designations. The respective State Land Use Commission ("SLUC"), Kaua'i General Plan, County of Kauai Comprehensive Zoning Ordinance ("CZO"), and other relevant land use designations for the Subject Property are as follows:

a. SLUC. As shown on the Land Use District Boundary map attached hereto as ***Exhibit "C-3"***, the area of the Subject Property in which the Project development will occur is located in the SLUC Urban District. The Subject Property has been located in the SLUC Urban District since the inception of the SLUC Districts.

b. Kaua'i General Plan. As shown on the General Plan Land Use Map attached hereto as ***Exhibit "C-4"***, the area of the Subject Property in which the Project development will occur is located in the Kaua'i General Plan Residential Community Land Use Designation.

c. CZO. As shown on the Zoning Map attached hereto as ***Exhibit "C-5"***, the Subject Property is located in both the CZO Residential (R-6) District and CZO Open District and Special Treatment (Public) District.

d. Development Plan Area. The Subject Property is located within the North Shore Development Plan Area. The Subject Property has always been located within the North Shore Development Plan Area since the original adoption of the North Shore Development Plan (December 27, 1974).

e. Special Management Area. The Subject Property is not located in the Special Management Area District ("SMA") of the County of Kauai (attached hereto as ***Exhibit "C-6"***)

f. Shoreline/Shoreline Setback Area. The Subject Property is not located along the Shoreline as defined in HRS Chapter 205A, Part III. Project improvements will be located over a mile from the shoreline and in Kilauea Town. As a result, the proposed Project improvements are not subject to provisions of the Shoreline Setback Ordinance as contained in CZO Article 27.

g. Heritage Resources. The Subject Property is shown on the North Shore Heritage Resource Map (Kaua'i General Plan, November 2018), attached hereto as ***Exhibit "C-7"***.

h. Sea Level Rise. The Subject Property in not located in an exposure area as noted in the Sea Level Rise Exposure Area (3.2 ft. scenario). Therefore, the proposed Project is not included in this area.

i. VDA. The Project is not located in the CZO Visitor Destination Area ("VDA").

2.3 Workforce Housing Requirements. The Housing Policy for the County of Kauai (County of Kauai Ordinance No. 860) is not applicable in connection with building or zoning permits for residential development of ten (10) or fewer residential dwelling unit. As a result, no workforce housing assessment is triggered by this Application.

2.4 Permit History.

a. Subdivision S-2020-10. The Subject Property was created by Planning Commission Subdivision No. S-2020-10, The Planning Commission's letter dated

December 14, 2020, approved the Consolidation of Lots B-27, B-29, B-30 and 21-A and Resubdivision of said Consolidation into Lots 21-A-1, 21-A-2 and 21-A-3 as three (3) legal lots of records ("Subdivision Lots"). Lots 21-A-1, 21-A-2 and 21-A-3 are more particularly shown on the Final Subdivision Map as shown in ***Exhibit "D"***.

b. Residential Permit. The Subject Property contains a three (3) bedroom single-family dwelling unit constructed in 1972 under Building Permit No. 4660.

SECTION 3. EXISTING AND PROPOSED USES OF SUBJECT PROPERTY.

3.1 Existing Improvements And Uses. The Subject Property is currently improved with a single-family dwelling unit and attached garage. The existing dwelling unit will be converted to an Additional Dwelling Unit ("ADU").

3.2 Proposed Improvements. The Applicants are proposing the following improvements, as shown in ***Exhibit "E"***:

a. Dwelling Unit. One (1) bedroom, one (1) bath, living area, dining area, kitchen, and two (2) concrete landings.

3.3 Land Coverage. After completion of the Project, the total land coverage on the Subject Property will be approximately 16,187 square feet, or 19.3% of the total area of the Subject Property. Approximately 11.6% in the CZO R-6 District, which is under the 60% allowance. Additionally, the total square footage for the Open District is 6,134 square feet with the dwelling unit amounting to 608 square feet of the allowable 613 square feet, which yields a 9.918% land coverage in the CZO Open District, which is under the 10% allowance.

SECTION 4. DESCRIPTION OF SUBJECT PROPERTY AND IDENTIFICATION OF SURROUNDING LANDS.

4.1 Adjacent Property. The Subject Property is adjacent to, or within 300 feet of the properties identified on the Adjacent Property Index attached hereto as ***Exhibit "F-1"*** and shown on the Tax Map attached hereto as ***Exhibits "F-2"***.

4.2 Natural Environment.

a. General Description. The Subject Property is south of Kilauea Town and is located adjacent to Kilauea Elementary School. The Subject Property is at the end of the Aalona Street cul de sac.

b. Soils. The soils within the project area are relatively varied, as and likely that of Lihue Silty Clay (LhD) as is in areas around the Project area. Soils of the Lihue Series are described as "well-drained soils on uplands on the island of Kauai...developed in material weathered from basic igneous rock".

c. Rainfall. The Subject Property is indicated to receive approximately 59-71 inches of annual rainfall, with increased rainfall at higher elevations. This is more than sufficient for most non-irrigated agriculture and supports diverse vegetation.

d. Botanical Resources. The vegetation within the Subject Property is almost entirely manicured grass and tropical ornamental plants.

e. Tsunami Hazard. The Project area is not located in a Tsunami Hazard zone.

f. Wetlands. There are no wetland designations on the Subject Property.

4.3 Present Uses And Built Environment. The Subject Property lies south of Kilauea Town adjacent to existing residential neighborhoods near the Kilauea Elementary School.

4.4 Potential Future Uses. The Applicants have no present plans to develop the remainder of the Subject Property, except as described herein.

SECTION 5. PERMITS REQUESTED AND REQUIRED.

5.1 Required Approval. This proposed Application requires the approval of the Planning Commission in accordance with Sections 1-6-16 of the PC Rules for the Permits noted above.

5.2 Official Notice/Commission Records. Pursuant to Rule 1-6-17(j) and (k) of the PC Rules, the Applicants request the Planning Commission to take Official Notice of, and to incorporate into the record of this Application, all of the materials, records, files, exhibits, documents, and evidence taken in this matter.

SECTION 6. IMPACTS OF DEVELOPMENT.

6.1 Botanical Resources and Wildlife. By way of summary impacts to the botanical resources and wildlife are as follows:

a. General Site Description. The Subject Property lies south of Kilauea Town adjacent to existing residential neighborhoods near the Kilauea Elementary School. The proposed Project is consistent with residences in and around the neighborhood.

b. Mammalian Resources. With the exception of the endangered Hawaiian hoary bat, or 'ōpe'ape'a as it is known locally, all terrestrial mammals currently found on the Island of Kauai are alien species. Most are ubiquitous. The Project area is already improved with residential use. As such, there is no anticipated impact to the Hawaiian hoary bat.

c. Avian Resources. It is commonly understood that the Laysan Albatross, White-tailed Tropicbird, Red-tailed Tropicbird, Brown Booby, Red-footed Booby, and Great Frigatebird, are indigenous seabirds that nest in the Hawaiian Islands that frequent the nearshore areas of the Kilauea National Wildlife Refuge. All can be readily seen at the Kilauea Point National Wildlife Refuge, located far to the north of the Project area.

It is unlikely that the proposed Project will impact any avian species given the distance of approximately one (1) mile to the Kilauea Point National Wildlife Refuge.

d. Botanical Resources. There are no listed or protected species of plants are known to be on the Subject Property given the predominant feature on the Subject Property is grass and ornamental tropical plants.

6.2 Historical Resources. The Applicants are not aware of any archaeological, cultural or historical resources on the surface of the Subject Property. A surface reconnaissance of the Project Area did not reveal any archeological features. In the event of inadvertent historic site or burial discovery in the future, the Applicants will immediately contact the Historic Preservation Division of the Department of Land and Natural Resources.

6.3 Air Quality/Noise. The Project will have little or no impact on the air quality and ambient noise levels in the area. Air quality and ambient noise levels may be affected at a very minimal level during the Project construction activities. All vehicles or equipment used by the Applicants during construction will be properly muffled, housed and maintained to reduce any noise impacts or emission impacts. The Environmental Protection Agency (EPA) and State of Hawaii air quality standards will not be exceeded.

6.4 Flooding and Drainage. Portions of the Subject Property are situated within Flood Zone X (Areas outside of 500-year flood plain), as shown on the Flood Hazard Report

identified as ***Exhibit "C-8"***. The Project will be located within Flood Zone X and will meet all of the requirements of the Flood Plain Management Ordinance of the County of Kauai, as contained in Chapter 15, Article 1, of the Kauai County Code, 1987. The Project will have no impact on flooding on or around the Subject Property. The Applicant will address drainage resulting from construction activities and from the increase in land coverage through best management practices.

6.5 Utilities.

a. Potable Water. The Subject Property currently obtains water service from the Department of Water of the County of Kauai ("DOW").

b. Electric/Communications. The Subject Property obtains electric service from Kauai Island Utility Cooperative, and communication services from Hawaiian Telcom, Inc. and Time Warner Entertainment Company, L.P. (dba Spectrum). Existing electric and communications facilities are presently adequate to provide the demand for such services that will be generated by the proposed Project.

6.6 Wastewater Treatment and Disposal. The Project will utilize an Individual Wastewater Systems ("IWS") approved by the State Department of Health. The IWS will utilize septic tanks with leach fields.

6.7 Solid Waste Disposal. Solid waste collection will be provided by the County of Kauai and by private means. Solid waste will be taken to the County's Transfer Stations for disposal in the County Landfill.

6.8 Governmental Services. The Project will have the following impacts on governmental services:

a. Fire and Police Services. Fire and police services in the vicinity are located in Princeville, approximately seven (7) miles from the Subject Property. The Project will not significantly increase the need for existing fire and police services.

b. Schools. The closest schools are Kilauea Elementary School located in Kilauea, and Kapaa Intermediate School and Kapaa High School, which are located in Kapaa. The Project will not generate any significant additional enrollment.

6.9 Economics. The Project will have the following economic impacts:

a. Jobs. The development of the Project will result in two (2) jobs (on a full-time and/or temporary basis) will be generated by the construction activities on the Subject Property.

b. Housing. The Project will not result in the need for additional worker housing. All employees will be Kauai residents who are already living on Kauai.

c. Property Values. Since the fair market value of real property is based on the value of the land and physical improvements, the completion of the Project will increase the value of the Subject Property. This will result in increased real property taxes on the Subject Property. However, it will not, in and of itself, have a material impact on the value of, or real property taxes assessed against, surrounding properties.

6.10 Population. The Project will not result in a significant increase in population, other than the fact that the Applicants, who will occupy the dwelling unit on full-time basis.

6.11 Traffic Circulation. The County road which services the Subject Property is Aalona Street. The Project, in and of itself, will not significantly increase traffic on this road.

6.12 Heritage Resources. As shown on the North Shore Heritage Resource Map (Figure 5-14 of the Kauai General Plan), there are no Heritage Sites located on the Subject Property.

SECTION 7. SLUC CONSIDERATIONS/STATE PLAN.

7.1 SLUC Urban District. The area of the Subject Property in which the development of the Project will occur is located within the SLUC Urban District. Permitted uses in the SLUC Urban District are set forth in HRS Section 205-2, which provides for residential dwelling units and accessory structures.

7.2 Development's Compliance with SLUC Urban District Standards. The proposed residential uses include the development Project improvements. All of these proposed improvements are recognized as permissible uses under HRS Section 205-2.

7.3 State Planning Act. The State Planning Act contains Objectives and Policies to assist the State in attaining its long-range planning Goals. Included in the Objectives and Policies are the following:

a. §226-6 Objectives and policies for the economy--in general.

b. §226-11 Objectives and policies for the physical environment--land-based, shoreline, and marine.

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

7.4 Compliance with State Plan. The proposed Project will comply with the State Planning Act as follows:

a. Economy in General. The Project will: provide increased and diversified employment opportunities for Kaua'i residents; strive to achieve a level of construction

activity responsive to, and consistent with, state growth objectives; encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility; stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems; maintain acceptable working conditions and standards for Hawaii's workers; provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures; and promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.

b. Physical environment--land-based, shoreline and marine resources. The Project will: ensure compatibility between land-based and water-based activities and natural resources and ecological systems; take into account the physical attributes of areas when planning and designing activities and facilities; manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage; encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii; and pursue compatible relationships among activities, facilities, and natural resources.

c. Physical environment--land, air, and water quality. The Project will: promote the proper management of Hawaii's land and water resources; encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people; encourage design and construction practices that enhance the physical qualities of Hawaii's communities; and foster recognition of the importance and value of the land, air and water resources to Hawaii's people, their cultures and visitors.

SECTION 8. GENERAL PLAN CONSIDERATIONS.

8.1 Kaua'i General Plan Land Use Designation. As shown on the North Shore Land Use Map (which is contained in the Kaua'i General Plan as Figure 5-7), the Subject Property is located primarily in the Residential Community Land Use Designation.

Land uses in the Residential Community Designation are described in General Plan and allow for residential uses.

8.2 Goals. The overall Goals contained in Section 1.3 of the Kaua'i General Plan, and the Project's compliance therewith, are as follows:

a. Goal 1 – A Sustainable Island. The Project is an example of responsible growth in an area designated for open space uses. The Applicants are establishing housing opportunities in the residentially zoned area of Kilauea Town.

b. Goal 2 – A Unique and Beautiful Place. The Project will attempt to integrate the earth tone colored improvements into the natural, cultural, social and built environmental assets of the Kilauea Community. It will provide uses that are compatible with similar uses in the area. The Applicants will design the exterior of the Project improvements with earth tone colors and landscaping.

c. Goal 3 – A Healthy and Resilient People. The Project will have minimal visual impacts and will have no significant negative impacts on the Subject Property.

d. Goal 4 – An Equitable Place, with Opportunity for All. The Project will support and enhance economic and business opportunities and jobs on Kaua'i.

8.3 Policies. The Project will comply with the Policies contained in Section 1.4 of the Kaua'i General Plan as follows:

a. Manage Growth to Preserve Rural Character. The Project will not detract from the rural characteristics of Kaua'i.

b. Provide Local Housing. The Project will provide additional housing opportunities for Kaua'i residents.

c. Recognize the Identity of Kaua'i's Individual Towns and Districts. The Project will help preserve the conservation values, with limited land coverage over the Subject Property consistent with the planning goals for the North Shore area.

d. Design Healthy and Complete Neighborhoods. The Project will be a compliment to healthy and complete neighborhoods by adding housing to an existing residential community in Kilauea.

e. Make Strategic Infrastructure Investments. The scale of the Project is minimal and not involve strategic infrastructure investments.

f. Reduce the Cost of Living. The Project will have no negative impact on the cost of living for the Kaua'i community.

g. Build a Balanced Transportation System. The Project will not substantially increase traffic or congestion problems.

h. Protect Kaua'i's Scenic Beauty. The Project will have no substantial negative impacts on the visual resources in the Kilauea area.

i. Uphold Kaua'i as a Unique Visitor Destination. The Project will preserve the residential characteristics of this area and will not cause any expansion of visitor facilities outside of designated areas.

j. Help Business Thrive. The Project will provide employment opportunities which in turn will generate increased revenues for business and commercial activities in the Kilauea area.

k. Help Agricultural Lands Be Productive. The Project will have no negative impact on surrounding agricultural uses.

l. Protect Our Watersheds. As discussed above, no wetlands are located in the Project area.

m. Complete Kaua'i's Shift to Clean Energy. The Project will have no negative impact on Kaua'i's shift to clean sources of energy.

n. Prepare for Climate Change. The Project is in the residential corridor of Kilauea, which is elevated well above anticipated sea level rise impact zones.

o. Respect Native Hawaiian Rights and Wahi Pana. The Project will have no substantial impacts on any of the Historic Sites, Hawaiian traditional and cultural practices, or access to streams, shorelines, or areas associated with Hawaiian religious, traditional or cultural practices given the existing residential uses in and around the Project area.

p. Protect Access to Kaua'i's Treasured Places. The Project will have no negative impacts on the public's access to the shoreline, or to public recreational areas.

q. Nurture Our Keiki. The Project will help provide job opportunities that will allow Kaua'i's young people to grow and flourish.

r. Honor Our Kūpuna. The Project will not impact Kūpuna activities.

s. Communicate with Aloha. The scheduling of this Application before the Planning Commission will allow the public to participate in the planning and decision-making process for the Project.

8.4 Objectives & Actions by Sectors. The ten (10) Sectors contained in Section 3.0 of the Kaua'i General Plan (which represent the areas that must be considered in policy implementation), and the Project's compliance therewith, are as follows:

a. The Watershed. The Project is located in the outside of the Kilauea Valley watershed, and 1,000 feet from the Kilauea Stream. The Project will have no negative impact on the flow of water through the Kilauea Stream.

b. Housing. The Project will not increase the demand for residential uses and needs in the Kilauea area.

c. Transportation. The Project will not result in a substantial increase in traffic and will have no significant negative impact on Kaua'i's transportation infrastructure.

d. Infrastructure & Services. The Project will be served by existing utility (water/sewer/electric/cable) systems, none of which will require upgrades to meet Project demands.

e. Shared Spaces. The Project will not overburden the use and enjoyment of public resources and Shared Spaces in the Kilauea area.

f. Economy. The Project will provide additional employment opportunities for residents in support of Kaua'i's economy.

g. Heritage Resources. The Project will have no substantial visual impacts on surrounding lands, and no substantial impacts on the Historic Sites, on Hawaiian cultural or traditional practices, or on access to streams, shorelines, areas associated with Hawaiian cultural or traditional practices, recreational areas or other special places. The Project will not negatively impact any special features or resources that are shown on the North Shore Heritage Resource Map (Kaua'i General Plan Figure 5-14).

h. Energy Sustainability. The Project will have no negative impacts on Kaua'i's energy sustainability goals. It will incorporate energy efficient features in its development.

i. Public Safety & Hazards Resiliency. The existing Project improvements are located at higher elevations and are outside of future seal level rise.

j. Opportunity & Health For All. The Project will provide additional shelter for a local family.

SECTION 9. CZO OPEN DISTRICT CONSIDERATIONS.

9.1 CZO Open District. The Subject Property, including the Project area, is located within the CZO Open District. The purposes of the CZO Open District are set forth in CZO Article 9, which provides in relevant part as follows:

> **"Sec. 8-9.1 Purpose.**
>
> The Open District is established and regulated to create and maintain an adequate and functional amount of predominantly open land to provide for the recreational and aesthetic needs of the community or to provide for the effective functioning of land, air, water, plant and animal systems or communities.
>
> (a) To preserve, maintain or improve the essential characteristics of land and water areas that are:
>
> (1) of significant value to the public as scenic or recreational sources;
>
> (2) important to the overall structure and organization of urban areas and which provide accessible and usable open areas for recreational and aesthetic purposes;
>
> (3) necessary to insulate or buffer the public and places of residence from undesirable environmental factors caused by, or related to, particular uses such as noise, dust, and visually offensive elements.
>
> (b) To preserve, maintain or improve the essential functions of physical and ecological systems, forms or forces which significantly affect the general health, safety and welfare.
>
> (c) To define and regulate use and development within areas which may be potentially hazardous.

(d) To include areas indicated on the County General Plan as open or as parks."

9.2 Permitted Uses And Structures In CZO Open District. CZO Section 2.4(s) contains the Uses and Structures permitted in the CZO Open District, which include single family detached dwellings and accessory uses and structures.

9.3 Standards For Construction And Use Within An Open District. CZO Section 8-9.2 regulates land coverage in the CZO Open District and provides as follows:

"**Sec. 8-9.2 Open District Development Standards.**

(a) Land Coverage:

(1) The amount of land coverage created, including buildings and pavement, shall not exceed ten percent (10%) of the lot or parcel area."

9.4 Development's Compliance with CZO Open District Standards. The proposed uses include the development of dwelling unit and related site utilities. As such, the Project complies with the Generally Permitted Uses And Structures allowed in the CZO Open District pursuant to CZO Section 8-2.4(s).

The Project itself will have no significant impact on the surrounding environment. As such, the Project complies with CZO Section 8-9.1 in that it: will help to preserve, maintain and improve the natural characteristics of the area; will allow the area to remain predominantly free of development; and will be incidental to the use and open character of the surrounding lands.

SECTION 10. SPECIAL TREATMENT DISTRICT CONSIDERATIONS.

10.1 Special Treatment District. The Subject Property is located within the Special Treatment District (Public), as described in CZO Sections 8-9.1(e), 8-11.1, and 8-11.2(a)(3). As such, the Subject Property is subject to the provisions contained in CZO Sections 8-11.3, 8-11.4, and 8-11.5.

10.2 Uses. Pursuant to CZO Sections 8-11.3 and 8-11.4, the Applicants have applied for a Use Permit for the proposed Project. Consistent with CZO Section 8-9.4(a), the proposed uses and structures are Generally Permitted Uses And Structures within the Open District as contained in CZO Section 8-2.4(s).

10.3 Confirmation Letter. Pursuant to CZO Section 8-11.5(b), by letter dated February 2, 2021, prepared by the Applicants to the Planning Director of the County of Kauai ("Planning Director"), and their response, identified as ***Exhibit "G"***, the Applicants requested the particular reasons for the establishment of the Special Treatment District in which the Subject Property is located.

10.4 Plans. Pursuant to CZO Section 8-11.5, certain plans (collectively, the "Plans") as described below have been submitted, which Plans (together with the other exhibits attached hereto) collectively and clearly indicated:

a. The relation of the proposed overall Development to other uses and structures within the Special Treatment District.

b. The ways in which the overall Development is consistent with the reasons for the establishment of the Special Treatment District.

c. The location within the Subject Property of all existing and proposed: (i) topography; (ii) buildings; (iii) walks; (iv) driveways; (v) utilities; and (vi) plant materials.

d. The location on adjacent lands ("Adjacent Lands") (within an area that is: within 200 feet of the common boundary of the Subject Property and such Adjacent Lands that are a public thoroughfare, park or facility; and within 100 feet of the common boundary of the

Subject Property and such Adjacent Lands which are privately owned) of existing or proposed: (i) streets; (ii) sidewalks; (iii) driveways; (iv) trees; (v) buildings; and (vi) topography.

10.5 Aerial Photographs. The Applicants submitted photographs as ***Exhibit "H-1"*** and an aerial photograph identified as ***Exhibit "H-2"***, respectively, to meet the requirements of CZO Section 8-11.5(c).

10.6 Additional Information. Pursuant to CZO Section 8-11.5(d), the Applicants minimal footprint of the structure will not impede any view planes present in and around the Subject Property.

10.7 Supporting Materials. Pursuant to CZO Section 8-11.5(c) and the requirements the Story Pole Photograph best illustrates how the Project settles into the hillside to mitigate view planes.

a. Subdivision Map Exhibit "D".

b. Aerial Photograph Exhibit "H-1".

c. Photographs of Subject Property Exhibit "H-2".

10.8 Compatibility With Surrounding Uses. The Subject Property is surrounded by properties located within the SLUC Urban District, the CZO R-4, R-6, and Open Districts, and the Special Treatment District (Public). Uses on the surrounding lands include commercial uses, residential uses, and agricultural uses. The Subject Property is similar in topography, character and nature with adjacent and surrounding properties, and the Project activities will be consistent with such surrounding uses.

10.9 Compliance with Special Treatment District Standards. The development of the Project on the Subject Property will have no negative impact on the Special Treatment District. The Project is and will be compatible with existing uses in areas on or around the

Subject Property. The Project will not significantly impact public improvements within the Special Treatment District. The Project will not increase runoff or otherwise endanger the coastal ecosystem. The Project will not be located in a coastal hazard area. The Project will have no detrimental impact on recreational, historic, economic or resources. The Project will not have detrimental impacts on beach or marine resources. Approval of the Project will not result in the foreclosure of future management options for development in the area. The design, siting, and landscaping of the Project as proposed will ensure that the proposed Project recognizes, preserves, maintains and contributes to the characteristics of the surrounding lands (which lands are recognized to be of particular significance or value to the general public).

SECTION 11. NORTH SHORE DEVELOPMENT PLAN CONSIDERATIONS.

11.1 Development Plan Goals and Objectives. The goals and objectives of the North Shore Update, as adopted by the North Shore Development Plan Ordinance ("NSDPO"), include the following:

Goal A: To preserve the unique natural beauty of the North Shore Planning Area.

Goal B: To preserve the special rural charm of the North Shore Planning Area.

Goal C: To provide for the safety and welfare of the people of their property of the North Shore Planning Area.

Goal D: To provide for economic development of the North Shore Planning Area.

Goal E: To preserve the wildlife and flora and the North Shore, recognizing man's dependence upon this preservation for his own health and welfare.

Goal F: To insure the preservation of historic-archaeological sites in the North Shore Planning Area.

Goal G: To create a development for evolutionary growth that depends upon a planning process whereby conflicts can be resolved through the establishment of priorities and community participation.

Goal H: To provide for recreational opportunities that are compatible with unique qualities and natural features of the North Shore.

11.2 Development's Compliance with Development Plan Standards. The proposed use of the Subject Property will not conflict with any of the Goals contained in the NSDPO. The design, layout and outside appearance of the Development in general and the Project Improvements in particular is and will be compatible with the natural beauty of the area. As such, the proposed use will not conflict with Goals A or B. The proposed use will provide economic opportunity for Kauai residents and as such will promote Goal D. The proposed use will have no negative impact on the public safety or welfare, on any endangered species of plants or animals, on archaeologic or historic sites, or on recreational opportunities near the Subject Property. As such, it will not conflict with Goals C, E, F or H. The process of filing this Application is consistent with the purposes of Goal G.

SECTION 12. USE PERMIT AND ZONING PERMIT CONSIDERATIONS.

12.1 Use Permit. The Applicants are applying for a Use Permit due to the location of the Subject Property in the Special Treatment (Scenic/Ecological Resources) District.

12.2 Compatibility With Surrounding Uses. The Subject Property is surrounded by parcels that are located within the SLUC Urban District, the CZO R-4, R-6, and Open Districts, and the CZO Special Treatment (Public) District. Uses in the vicinity include, agricultural uses, commercial uses, and residential uses. The Applicants' uses on and development of the Subject Property, if allowed, is not expected to cause problems for its neighbors and, to that extent, is compatible.

12.3 Compliance with Use Permit Standards. The proposed Project improvements on the Subject Property are in compliance with the standards for Use Permits as contained in CZO Section 8-3.2, in that the Project will be:

a. A compatible use. The Project improvements are allowed in the CZO Open District as long as impacts to the area are mitigated. These uses are, and will continue to be, compatible and similar to other uses in the area.

b. Not detrimental to health of persons residing or working in the neighborhood. The Project will not be detrimental to the health of persons residing and working in the neighborhood given the types of surrounding residential activities ("Surrounding Activities") in the area.

c. Not detrimental to safety of persons residing or working in the neighborhood. The Project will not have any substantial impacts on the environment, including noise generation, pollution, the discharge of odors, the discharge of fluid or gaseous materials, or visual impacts ("Environmental Impacts") that will be detrimental to the safety of persons residing and working in the neighborhood. The Project will be similar to and compatible with the types of Surrounding Activities in the area.

d. Not detrimental to peace of persons residing or working in the neighborhood. The Project will not create any Environmental Impacts that will be detrimental to the safety of persons residing and working in the neighborhood.

e. Not detrimental to morals of persons residing or working in the neighborhood. The Project will not involve activities that will be detrimental to the morals of persons residing and working in the neighborhood given the design and construction will be consistent with the existing structures in Kilauea Town.

f. Not detrimental to comfort and general welfare of persons residing or working in the neighborhood. The Project will not create any Environmental Impacts that will be detrimental to the general welfare of persons residing and working in the neighborhood. It will be similar to Surrounding Activities.

g. Not detrimental or injurious to property or improvements in the neighborhood. The Project will not create any Environmental Impacts that will be detrimental to the health of persons residing and working in the neighborhood.

h. Not detrimental to the general welfare of the community. The Project will not create any Environmental Impacts that will be detrimental to the general welfare of the community.

i. Not a cause of substantial harmful environmental consequences to the Subject Property, or to other lands or waters. The Project will not generate Environmental Impacts or negative by-products which would affect the surrounding area.

j. Not inconsistent with the intent of the CZO. As discussed herein, the Project activities are compatible with uses and structures within the CZO R-4, R-6, and Open Districts.

k. Not inconsistent with the General Plan. As discussed herein, the Project activities will be consistent with the Goals, Policies, and Objectives & Actions (Sectors) of the Kauai General Plan.

12.4 Development's Compliance with CZO Class IV Zoning Permit Standards. The Applicants have complied with the procedural provisions for a Class IV Zoning Permit by their filing and processing of this Application.

SECTION 13. HRS CHAPTER 343 (ENVIRONMENTAL IMPACT STATEMENTS) CONSIDERATIONS.

13.1 HRS Chapter 343. The Development is not subject to the provisions of Hawaii Revised Statutes Chapter 343. HRS Chapter 343 requires the preparation of an Environmental Assessment and/or an Environmental Impact Statement for certain activities as specified in HRS Section 343-5. The proposed Development does not fall within such specified activities, in that the Development does not:

a. Propose the use of state or county lands or the use of state or county funds;

b. Propose any use within any land classified as conservation district by the State Land Use Commission under HRS Chapter 205;

c. Propose any use within the shoreline area as defined in HRS Section 205A-41;

d. Propose any use within any historic site as designated in the National Register or Hawaii Register as provided for in the Historic Preservation Act of 1966, Public Law 89-665, or HRS Chapter 6E;

e. Propose any use within the Waikiki area of Oahu, the boundaries of which are delineated in the land use ordinance as amended, establishing the "Waikiki Special District";

f. Propose any amendments to existing county general plans where such amendment would result in designations other than agriculture, conservation, or preservation;

g. Propose any reclassification of any land classified as conservation district by the State land Use Commission under HRS Chapter 205;

h. Propose the construction of new, or the expansion or modification of existing, helicopter facilities within the state; or

i. Propose the construction of a wastewater treatment unit, waste-to-energy facility, oil refinery, or power generating facility.

SECTION 14. NATIVE HAWAIIAN ISSUES.

14.1 Impacts on Traditional or Cultural Practices. As discussed in Section 6.2, the Project is not anticipated to have any significant impacts on any known traditional or customary practices of native Hawaiians occurring on the Project site given the existing residential uses in the Project area. Discussions with people were familiar with the area associated with the Project recognized its current residential uses and nearby elementary school setting.

Document review suggests that Kilauea is understood as meaning "Spewing, much spreading" likely due to the craters of former lava in the vicinity of Kilauea Town. Native Hawaiian legends of Kilauea suggest a large *mo'o* (lizard) clawed the land to distribute water for agriculture in Kilauea's upper region at the request of Mano-kalani-po, a famous ruling chief. The waters of Kahili *Ahupuha'a* provide much resource for subsistence farming for native Hawaiian.

Post-western contact of Kilauea resulted in the establishment of the Kilauea Sugar Plantation after Charles Titcomb purchased the *Ahupua'a* of Kilauea in 1863. Therefore, the land became a sugar industry estate and cultivated for the sugarcane monocrop. Most of the land surrounding Kilauea Town served as residential uses.

By way of summary:

a. The Applicants are not aware of any traditional or customary practices of native Hawaiians that are presently occurring within the Subject Property due to the existing residential use.

b. There are no known special gathering practices taking place within any portions of the Subject Property given the Subject Property is predominantly residential in nature with manicured grass with no special features suggesting any special gathering practices.

c. The Project will not detrimentally affect: access to streams; access to the shoreline or shoreline areas; or fishing and gathering

d. The Applicants are not aware of any known religious practices taking place within the Subject Property.

e. The Applicants are not aware of any identified historic sites located within the Subject Property.

f. There are no known burials within the Subject Property.

SECTION 15. COMMUNITY CONTACTS.

15.1 Contact with Community Groups. The Applicants will submit the Application to the Kilauea Neighborhood Association ("KNA") to discuss the overall development on the Subject Property and seek consultation of any environmental impacts the Project may have on the Subject Property.

SECTION 16. CONCLUSION.

The Applicant respectfully requests that the Planning Commission:

1. Find that the Project will not have any substantial environmental or ecological effect, except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interest.

2. Find that the Project is consistent with permitted uses in the SLUC Urban District, the Kauai General Plan, the North Shore Development Plan, and the CZO.

3. Find that the Project will be in compliance with the provisions of HRS Chapter 6E and Title 13, Subtitle 13, Chapter 284 of the Hawaii Administrative Rules.

4. Find that the Project will be consistent with the provisions of HRS Sections 1-1 and 7-1 and Article 12, Section 7 of the Hawaii State Constitution.

5. Find that the Applicant has satisfied the minimum requirements of Ka Pa'akai O Ka'aina v. Land Use Commission to protect customary and traditional native Hawaiian rights.

7. Approve the Application for the Project on the Subject Property as described herein, subject to such reasonable conditions as the Planning Commission shall impose.

DATED: Lihue, Kauai, Hawaii, 12/22/2021.

BELLES GRAHAM LLP

By _____
IAN K. JUNG
Attorney for Applicants,
KEOPELE MCBRIDE
ASHLEY MCBRIDE

EXHIBIT LIST

EXHIBIT

A. Authorization

Applicant Authorization.....A

B. Deed

Quitclaim Deed.....B

C. Maps

Location Map.....C-1
Tax Card.....C-2
Land Use District Boundary Map.....C-3
General Plan Map.....C-4
Zoning Map.....C-5
SMA Map.....C-6
North Shore Heritage Resource Map.....C-7
Flood Hazard Assessment Report.....C-8

D. Subdivision Status

Subdivision Map.....D

E. Project Plans

Plan Set.....E

F. Adjacent Properties

Adjacent Property Index.....F-1
Tax Map.....F-2

G. Letter to Planning Director

Confirmation Letter to Planning Director and Response Letter from Planning Director Regarding ST-P District.....G

H. Special Treatment (Public) District Requirements

Photographs.....H-1
Aerial Photograph.....H-2

EXHIBIT "A"

AUTHORIZATION

I. APPLICANT.

Name: KEOPELE MCBRIDE and ASHLEY MCBRIDE

Address: 4433 Aalona Street
Kilauea, Kauai, Hawaii 96754

II. AUTHORIZED AGENT.

Name: Ian K. Jung, Esq.

Address: Belles Graham LLP
4334 Rice Street, Suite 202
Lihue, Kauai, Hawaii 96766

Telephone: (808) 245-2163

Facsimile: (808) 245-3277

Email: ikj@kauai-law.com

III. PROPERTY.

Lot 21-A-1 (Subdivision No. 2020-10)
Kilauea, Kauai, Hawaii
Kauai TMK No. (4) 5-2-006:014

IV. AUTHORIZATION.

The Applicant hereby authorizes the Authorized Agent to act on the Applicant's behalf and to file and process on the Applicant's behalf any and all applications necessary to obtain governmental permits relating to the Subject Property, including, but not limited to, the following:

1. Permits and approvals, including but not limited to, ordinances, resolutions, building permits, grading permits, use permits, variance permits, zoning permits, and Special Management Area permits, issued by the County Council, or any department, agency, board or commission, of the County of Kauai.

EXHIBIT "A"

2. Permits and approvals issued by any legislative body or any department, agency, board, or commission of the State of Hawaii, including but not limited to, the Department of Health and the Department of Transportation.

3. Permits and approvals issued by the Board of Land and Natural Resources of the State of Hawaii and/or the Department of Land and Natural Resources of the State of Hawaii.

4. Permits and approvals issued by any legislative body, department, agency, board or commission of the United States of America, including but not limited to, the Army Corps of Engineers.

DATED: 12/10/21.

APPLICANT:

KEOPELE MCBRIDE

ASHLEY MCBRIDE

EXHIBIT "B"

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
March 10, 2021 8:01 AM
Doc No(s) A - 77390290

Doc 1 of 6
Pkg 11717842 KEO

/s/ LESLIE T KOBATA
REGISTRAR

Conveyance Tax: $1.00

LAND COURT SYSTEM | REGULAR SYSTEM

After Recordation, Return by: Mail (X) Pickup ( )
KEOPELE VILLANUEVA MCBRIDE
ASHLEY HANAKO MCBRIDE
4433 AALONA ST
KILAUEA HI 96754

TG: A 202025947 D
TGE: 24219135358
Glenda Matsushima

R/S #1

TYPE OF DOCUMENT:

QUITCLAIM DEED (LOT 21-A-1)

PARTIES TO DOCUMENT:

GRANTOR: KEOPELE VILLANUEVA MCBRIDE and ASHLEY HANAKO MCBRIDE, a married couple; PAUL E. PACUILLA, Trustee of the Paul E. Pacuilla Trust dated March 19, 2004, as amended; and DAN CONCEPCION and NARCISA U. CONCEPCION, husband and wife

GRANTEE: KEOPELE VILLANUEVA MCBRIDE and
ASHLEY HANAKO MCBRIDE, a married couple
4433 Aalona Street
Kilauea, Hawaii 96754

TAX MAP KEY FOR PROPERTY:

TMK Nos. (4) 5-2-009- portion 049 and (4) 5-2-006-014 Lot 21-A-1

EXHIBIT "B"

QUITCLAIM DEED (LOT 21-A-1)

This QUITCLAIM DEED (LOT 21-A-1) is made by KEOPELE VILLANUEVA MCBRIDE and ASHLEY HANAKO MCBRIDE, a married couple; PAUL E. PACUILLA, Trustee of the Paul E. Pacuilla Trust dated March 19, 2004, as amended; and DAN CONCEPCION and NARCISA U. CONCEPCION, husband and wife, hereinafter collectively called the "Grantor", in favor of KEOPELE VILLANUEVA MCBRIDE and ASHLEY HANAKO MCBRIDE, a married couple, whose mailing address is 4433 Aalona Street, Kilauea, Hawaii 96754, hereinafter called the "Grantee."

I. RECITALS

1. The Grantee is the owner of certain real property located in Kilauea, Kauai, Hawaii, known as Lot B-27 designated as Kauai TMK No. (4) 5-2-006-014 ("Lot B-27"), and Lot 21-A designated as Kauai TMK No. (4) 5-2-009-049.

2. PAUL E. PACUILLA, as said Trustee, is the owner of certain real property located in Kilauea, Kauai, Hawaii, known as Lot B-29 designated as Kauai TMK No. (4) 5-2-006-12 (Lot B-29).

3. DAN CONCEPCION and NARCISA U. CONCEPCION, husband and wife, are the owners of certain real property located in Kilauea, Kauai, Hawaii, known as Lot B-30 designated as Kauai TMK No. (4) 5-2-006-011 (Lot B-30).

4. Pursuant to Subdivision S-2020-10, Lots B-27, B-29, B-30 and 21-A were consolidated and resubdivided into Lot 21-A-1 as described in Exhibit "A," Lot 21-A-2 as described in Exhibit "B," and Lot 21-A-3 as described in Exhibit "C", all of which exhibits are attached hereto and incorporated herein by this reference.

4. The Grantor desires to effect the necessary conveyance and transfer of their interest in and to new Lot 21-A-1 to the Grantee such that the Grantee shall be the owner in fee simple of new Lot 21-A-1, free and clear of any interest of the Grantor.

II. GRANT

NOW, THEREFORE, in consideration of the recitals and of the sum of Ten Dollars ($10.00) paid to the Grantor by the Grantee, the receipt of which is hereby acknowledged, the Grantor does hereby grant, convey, transfer, release and quitclaim unto the Grantee, as joint tenants with full rights of survivorship, their heirs and assigns, in fee simple, forever, all of Grantor's right, title and interest in and to the property described as Lot 21-A-1 in Exhibit "A" attached hereto and incorporated herein by reference

TO HAVE AND TO HOLD the property, including the improvements thereon, and all rights, easements, privileges and appurtenances belonging or appertaining to or held and enjoyed with the property, unto the Grantee according to the tenancy herein set forth, forever.

This instrument and the covenants of the Grantor, shall be binding on the Grantor (to the extent applicable) and inure to the benefit of the Grantees. The terms "Grantor" and "Grantees", as and when used herein, or any pronouns used in place thereof, shall mean and include the singular or plural number, individuals, partnerships, trustees and corporations, and each of their respective heirs, personal representatives, successors and assigns. All covenants and obligations undertaken by two or more persons shall be deemed to be joint and several unless a contrary intention is clearly express herein.

This Quitclaim Deed (Lot 21-A-1) may be executed in counterparts. Each counterpart shall be executed by one or more of the parties hereinbefore named and the several counterparts shall constitute one instrument to the same effect as though the signatures of all the parties are upon the same document.

IN WITNESS WHEREOF, the Grantor and the Grantee have duly executed this instrument this 3rd day of March, 2021.

(SIGNATURES CONTINUED ON NEXT PAGE)

GRANTOR:

KEOPELE VILLANUEVA MCBRIDE

GRANTEE:

KEOPELE VILLANUEVA MCBRIDE

STATE OF HAWAII)
) SS:
COUNTY OF KAUAI)

On this 3rd day of March, 2021, before me appeared KEOPELE VILLANUEVA MCBRIDE, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing QUITCLAIM DEED (LOT 21-A-1) dated March 3, 2021, which document consists of 11 page(s), as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.

BRYANNA PACLEB NOTARY 20-33 PUBLIC STATE OF HAWAII

Name of Notary:
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: BRYANNA PACLEB EXPIRATION: February 9, 2024

GRANTOR:

ASHLEY HANAKO MCBRIDE

GRANTEE:

ASHLEY HANAKO MCBRIDE

STATE OF HAWAII)
) SS:
COUNTY OF KAUAI)

On this 3rd day of March, 2021, before me appeared ASHLEY HANAKO MCBRIDE, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing QUITCLAIM DEED (LOT 21-A-1) dated March 3, 2021, which document consists of 11 page(s), as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.

BRYANNA PACLEB NOTARY 20-33 PUBLIC STATE OF HAWAII

Name of Notary:
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

BRYANNA PACLEB
EXPIRATION: February 9, 2024

My commission expires: _____

GRANTOR:

PAUL E. PACUILLA, Trustee of the Paul E. Pacuilla Trust dated March 19, 2004, as amended

STATE OF HAWAII)
) SS:
COUNTY OF KAUAI)

On this 3rd day of March, 2021, before me appeared PAUL E. PACUILLA, Trustee of the Paul E. Pacuilla Trust dated March 19, 2004, as amended, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing QUITCLAIM DEED (LOT 21-A-1) dated March 3, 2021, which document consists of 11 page(s), as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.

GLENDA MATSUSHIMA NOTARY PUBLIC 07-576 STATE OF HAWAII

Name of Notary:
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: GLENDA MATSUSHIMA EXPIRATION: November 18, 2023

GRANTOR:

DAN CONCEPCION

STATE OF HAWAII)
) SS:
COUNTY OF KAUAI)

On this 3rd day of March, 2021, before me appeared DAN CONCEPCION, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing QUITCLAIM DEED (LOT 21-A-1) dated March 3, 2021, which document consists of 11 page(s), as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.

BRYANNA PACLEB NOTARY 20-33 PUBLIC STATE OF HAWAII

Name of Notary:
~~Notary~~ Public, Fifth Judicial Circuit,
State of Hawaii.

BRYANNA PACLEB
EXPIRATION: February 9, 2024

GRANTOR:

NARCISA U. CONCEPCION

STATE OF HAWAII)
) SS:
COUNTY OF KAUAI)

On this 3rd day of March, 2021, before me appeared NARCISA U. CONCEPCION, to me personally known, who, being by me duly sworn or affirmed, did say that such person(s) executed the foregoing QUITCLAIM DEED (LOT 21-A-1) dated March 3, 2021, which document consists of 11 page(s), as the free act and deed of such person(s), and if applicable, in the capacities shown, having been duly authorized to execute such instrument in such capacities.

BRYANNA PACLEB NOTARY 20-33 PUBLIC STATE OF HAWAII

Name of Notary:
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

BRYANNA PACLEB
EXPIRATION: February 9, 2024

EXHIBIT "A"

LOT 21-A-1

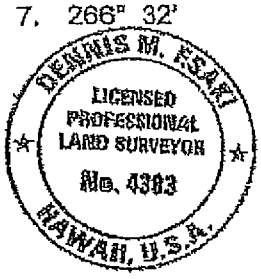
LAND SITUATED AT KILAUEA, KAUAI, HAWAII

Being Portion of Grant 2896 to Charles Titcomb

Beginning at the Northeast corner of this parcel of land, on the South end of Aalona Street, the coordinates of said point of beginning referred to Government Survey Triangulation "KILAUEA" being 5,926.06 feet South and 5,006.53 feet West, thence running by azimuths measured clockwise from true South:

1. 311° 32'	100.64	feet along the remainder of Grant 2896 (Lot B-28);
2. 221° 32'	75.00	feet along the remainder of Grant 2896 (Lot B-28);
3. 311° 32'	40.00	feet along the remainder of Grant 2896 (Lot 21-A-2);
4. 41° 32'	152.88	feet along the remainder of Grant 2896 (Parcel 48);
5. 130° 13'	180.68	feet along the remainder of Grant 2896 (Lot 8-F, Lot 8-E, and Lot 8-D);
6. 221° 32'	42.03	feet along the remainder of Grant 2896 (Lot B-15);
		thence along the south end of Aalona Street, on a curve to the left with a radius 40.00 feet, the chord azimuth and distance being:
7. 266° 32'	56.57	feet to the point of beginning and containing an area of 16,187 Sq. Ft.

DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.



Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2020

EXHIBIT "B"

LOT 21-A-2

LAND SITUATED AT KILAUEA, KAUAI, HAWAII

Being Portion of Grant 2896 to Charles Titcomb

Beginning at the North corner of this parcel of land, on the Southeast side of Aalona Street, the coordinates of said point of beginning referred to Government Survey Triangulation "KILAUEA" being 5,813.77 feet South and 4,907.07 feet West, thence running by azimuths measured clockwise from true South:

1.	311° 32'	140.64	feet along the remainder of Grant 2896 (Lot 21-A-3);
2.	41° 32'	75.00	feet along the remainder of Grant 2896 (Parcel 48);
3.	131° 32'	140.64	feet along the remainder of Grant 2896 (Lot 21-A-1, and Lot B-28);
4.	221° 32'	75.00	feet along the Southeast side of Aalona Street to the point of beginning and containing an area of 10,548 Sq. Ft.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2020

EXHIBIT "C"

LOT 21-A-3

LAND SITUATED AT KILAUEA, KAUAI, HAWAII

Being Portion of Grant 2896 to Charles Titcomb

Beginning at the West corner of this parcel of land, on the Southeast side of Aalona Street, the coordinates of said point of beginning referred to Government Survey Triangulation "KILAUEA" being 5,813.77 feet South and 4,907.07 feet West, thence running by azimuths measured clockwise from true South:

1.	221° 32'	75.00	feet along the southeast side of Aalona Street;
2.	311° 32'	100.64	feet along the remainder of Grant 2896 (Lot B-31);
3.	41° 32'	8.38	feet along the remainder of Grant 2896 (Lot 20-A);
4.	309° 36'	40.02	feet along the remainder of Grant 2896 (Lot 20-A);
5.	41° 32'	67.97	feet along the remainder of Grant 2896 (Parcel 48);
6.	131° 32'	140.64	feet along the remainder of Grant 2896 (Lot 21-A-2) to the point of beginning and containing an area of 10,240 Sq. Ft.

SUBJECT, HOWEVER, to Utility Easement.



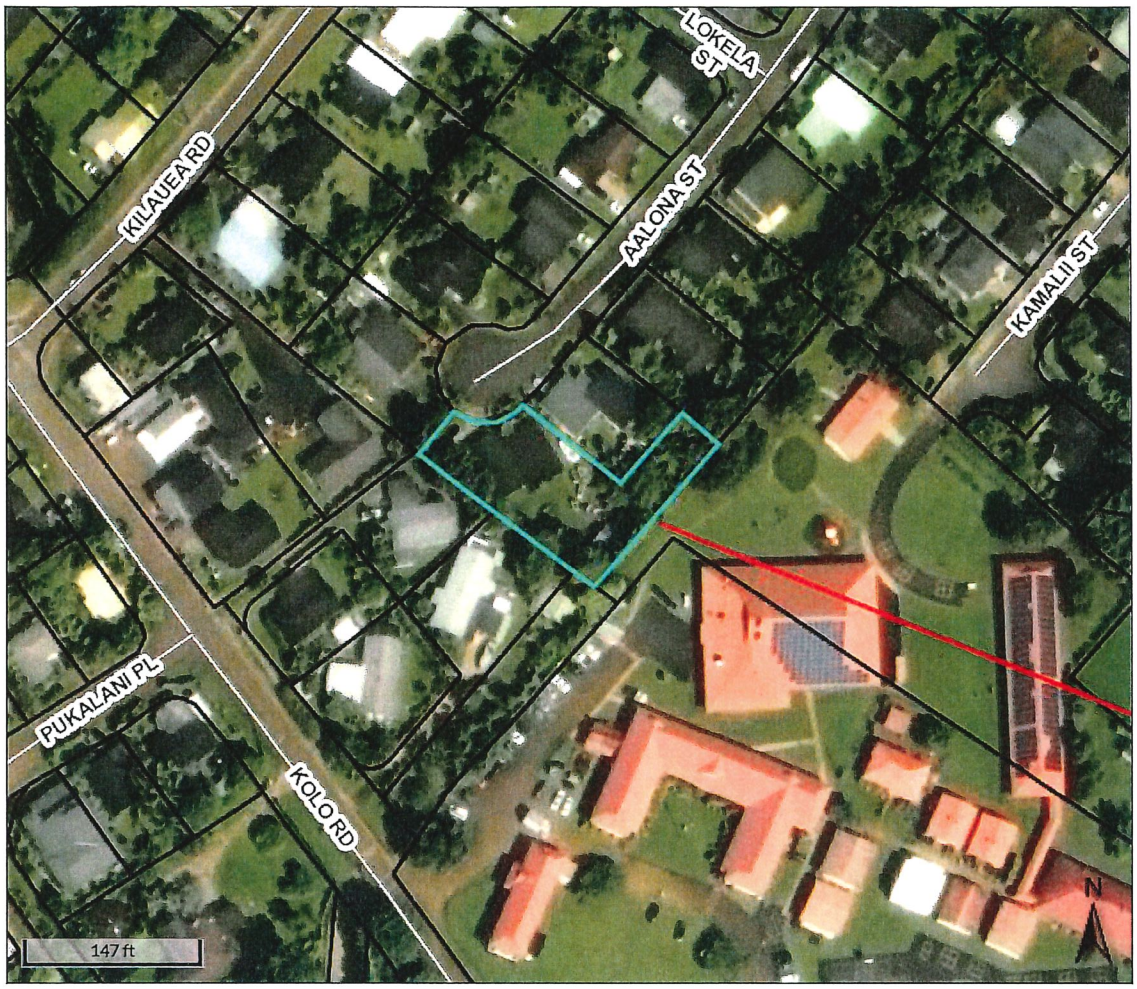
DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2020

EXHIBIT "C-1"

County of Kaua'i
State of Hawai'i



Overview



Legend

- Parcels
- Roads

Parcel ID	520060140000	**Situs/Physical Address**	4433 AALONA ST	**Total Market Value**	$833,900	**Last 2 Sales**		
Acreage	0.3716	**Mailing Address**	MCBRIDE,KEOPELE V	**Total Assessed Value**	$685,500	**Date**	**Price**	**Reason**
Class	COMM HOME USE		4433 AALONA ST	**Total Exemptions**	$160,000	n/a	0	n/a
			KILAUEA HI 96754	**Total Net Taxable Value**	$525,500	n/a	0	n/a

Brief Tax Description LOT 21-A-1 KILAUEA SUBD 16,187 SF DES
(Note: Not to be used on legal documents)

The Geographic Information Systems (GIS) maps and data are made available solely for informational purposes. The GIS data is not the official representation of any of the information included, and do not replace a site survey or legal document descriptions. The County of Kauai (County) makes or extends no claims, representations or warranties of any kind, either express or implied, inluding, without limitation, the implied warranties of merchantability and fitness for a particular purpose, as to the quality, content, accuracy, currency, or completeness of the information, text, maps, graphics, links and other items contained in any of the GIS data. In no event shall the County become liable for any errors or omissions in the GIS, and will not under any circumstances be liable for any direct, indirect, special, incidental, consequential, or other loss, injury or damage caused by its use or otherwise arising in connection with its use, even if specifically advised of the possibility of such loss, injury or damage. The data and or functionality on this site may change periodically and without notice. In using the GIS data, users agree to indemnify, defend, and hold harmless the County for any and all liability of any nature arising out of or resulting from the lack of accuracy or correctness of the data, or the use of the data.

Date created: 12/9/2021
Last Data Uploaded: 12/9/2021 3:39:45 AM

Developed by Schneider GEOSPATIAL

EXHIBIT "C-1"

EXHIBIT "C-2"

County of Kaua'i
State of Hawai'i

Parcel Information

Parcel Number (TAX MAP KEY)	520060140000
Location Address	4433 AALONA ST KILAUEA HI 96754
Project Name	
Tax Classification	COMMERCIALIZED HOME USE (Note: This is for tax purposes only. Not to be used for zoning.)
Neighborhood Code	5281-1
Legal Information	LOT 21-A-1 KILAUEA SUBD 16,187 SF DES
Zoning	R6
Non Taxable Status	
Land Area (acres)	0.3716
Land Area (approximate sq ft)	16,187
Living Units	2

View Map

Owner Information

Owner Names
MCBRIDE,KEOPELE V Fee Owner
MCBRIDE,ASHLEY H Fee Owner
⊞ Show All Owners and Addresses

Mailing Address
MCBRIDE,KEOPELE V
4433 AALONA ST
KILAUEA HI 96754

Assessment Information

⊞ Show Historical Assessments

Year	Property Class	Total Market Value	Total Property Assessed Value	Total Property Exemption	Total Net Taxable Value
2022	COMMERCIALIZED HOME USE	$833,900	$685,500	$160,000	$525,500

How to calculate real property taxes

Assessment Notices

2022 (PDF) 2021 (PDF) 2020-10 (PDF) 2019-10 (PDF)

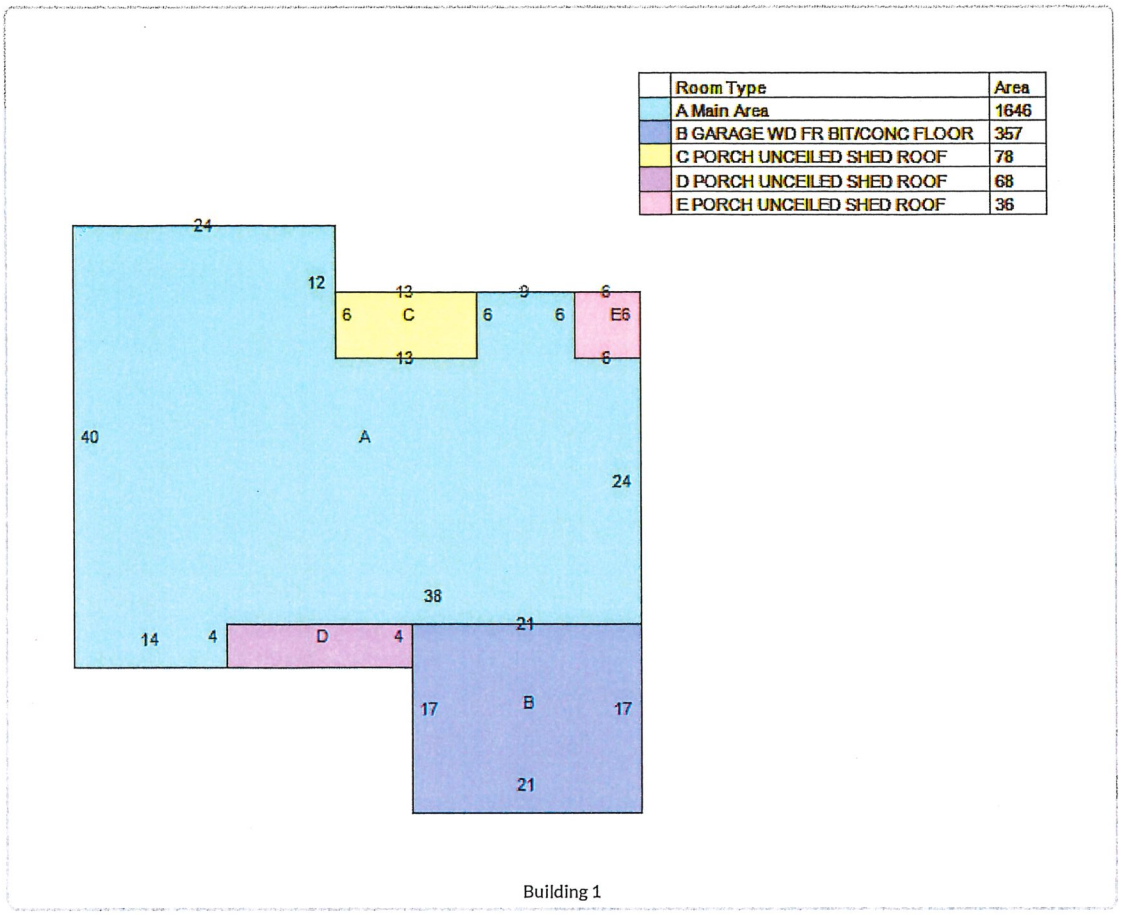
Online Assessment Notices will include one PDF per parcel for each class. For multi-owner copies please contact rpassessment@kauai.gov.

Improvement Information

Building Number	1	Bedrooms	3
Year Built	1972	Full Bath	1
Eff Year Built	1986	Half Bath	1
Living Area	1,646	Percent Complete	

Sketches

EXHIBIT "C-2"



Building 1

Print Sketches

Other Building and Yard Improvements

Description	GARAGE WOOD WOOD FLOOR	Area	120
Quantity	1	Percent Complete	
Year Built	1972		

Permit Information

Date	Permit Number	Reason	Permit Amount
11/20/1990	32881	DWELLING	$7,400
7/17/1979	0013609	SIDING	$7,000
1/19/1972	0004660	DWELLING	$15,337

Conveyance Information

Sale Date	Price	Instrument #	Instrument Type	Date Recorded	Document Number	Cert #	Book/Page	Conveyance Tax	Document Type
03/03/2021	$9,130	21-A-77390292	FEE CONVEYANCE	03/10/2021				9.1	Quitclaim Deed
03/03/2021	$10,200	21-A-77390291	FEE CONVEYANCE	03/10/2021				10.2	Quitclaim Deed
03/03/2021	$1,000	21-A-77390290	FEE CONVEYANCE	03/10/2021				1	Quitclaim Deed
04/30/2019	$700,000	19-A-70650067	FEE CONVEYANCE	05/06/2019				1400	Warranty Deed
06/28/2004	$450,000	04-134314	FEE CONVEYANCE	07/01/2004				450	Exchange Deed
03/12/2004	$0	04-055949	FEE CONVEYANCE	03/18/2004					Warranty Deed
12/07/1992	$0	0000000000							
02/16/1991	$0	9100033908	FEE CONVEYANCE	03/15/1991					
02/16/1991	$0	9100027825	LEASE	03/15/1991					

Current Tax Bill Information

Tax Period	Description	Original Due Date	Taxes Assessment	Tax Credits	Net Tax	Penalty	Interest	Other	Amount Due
2021-2	Real Property Tax	02/20/2022	$1,276.64	$0.00	$1,276.64	$0.00	$0.00	$0.00	$1,276.64
2021-2	- TRASH: BASE &/OR COLL FEE	02/20/2022	$0.00	$0.00	$120.00	$0.00	$0.00	$0.00	$120.00
	Tax Bill with Interest computed through 12/31/2021		$1,276.64	$0.00	$1,396.64	$0.00	$0.00	$0.00	$1,396.64

Historical Payment Information

Year	Tax	Payments and Credits	Penalty	Interest	Other
⊞ 2021	$2,793.29	($1,396.65)	$0.00	$0.00	$0.00
⊞ 2020	$2,842.29	($2,842.29)	$0.00	$0.00	$0.00
⊞ 2019	$1,906.53	($1,906.53)	$0.00	$0.00	$0.00
⊞ 2018	$1,186.83	($1,186.83)	$0.00	$0.00	$0.00
⊞ 2017	$1,109.35	($1,109.35)	$0.00	$0.00	$0.00
⊞ 2016	$1,090.74	($1,090.74)	$0.00	$0.00	$0.00
⊞ 2015	$1,135.28	($1,135.28)	$0.00	$0.00	$0.00
⊞ 2014	$1,023.63	($1,023.63)	$0.00	$0.00	$0.00
⊞ 2013	$1,127.33	($1,127.33)	($7.20)	($0.79)	$0.00
⊞ 2012	$999.84	($999.84)	$0.00	$0.00	$0.00
⊞ 2011	$1,250.78	($1,250.78)	$0.00	$0.00	$0.00
⊞ 2010	$1,589.28	($1,589.28)	$0.00	$0.00	$0.00
⊞ 2009	$1,635.21	($1,635.21)	$0.00	$0.00	$0.00
⊞ 2008	$2,139.15	($2,139.15)	$0.00	$0.00	$0.00
⊞ 2007	$2,272.59	($2,272.59)	$0.00	$0.00	$0.00
⊞ 2006	$2,314.74	($2,314.74)	$0.00	$0.00	$0.00
⊞ 2005	$1,802.09	($1,802.09)	$0.00	$0.00	$0.00
⊞ 2004	$936.34	($936.34)	$0.00	$0.00	$0.00
⊞ 2003	$641.07	($641.07)	($64.10)	($28.21)	$0.00
⊞ 2002	$558.59	($558.59)	($55.86)	($39.93)	$0.00
⊞ 2001	$1,024.63	($1,024.63)	($102.46)	($56.20)	$0.00

Map



No data available for the following modules: CPR/Condo/Apt Unit Information, Appeal Information, Commercial Improvement Information.

The Kauai County Tax Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation.
User Privacy Policy
GDPR Privacy Notice

Developed by Schneider GEOSPATIAL

Last Data Upload: 12/8/2021, 10:39:45 PM

Version 2.3.165

EXHIBIT "C-3"



State of Hawaii Land Use District Boundaries Map - January 2...

EXHIBIT "C-3"

EXHIBIT "C-4"

Figure 5-7 North Shore Land Use Map

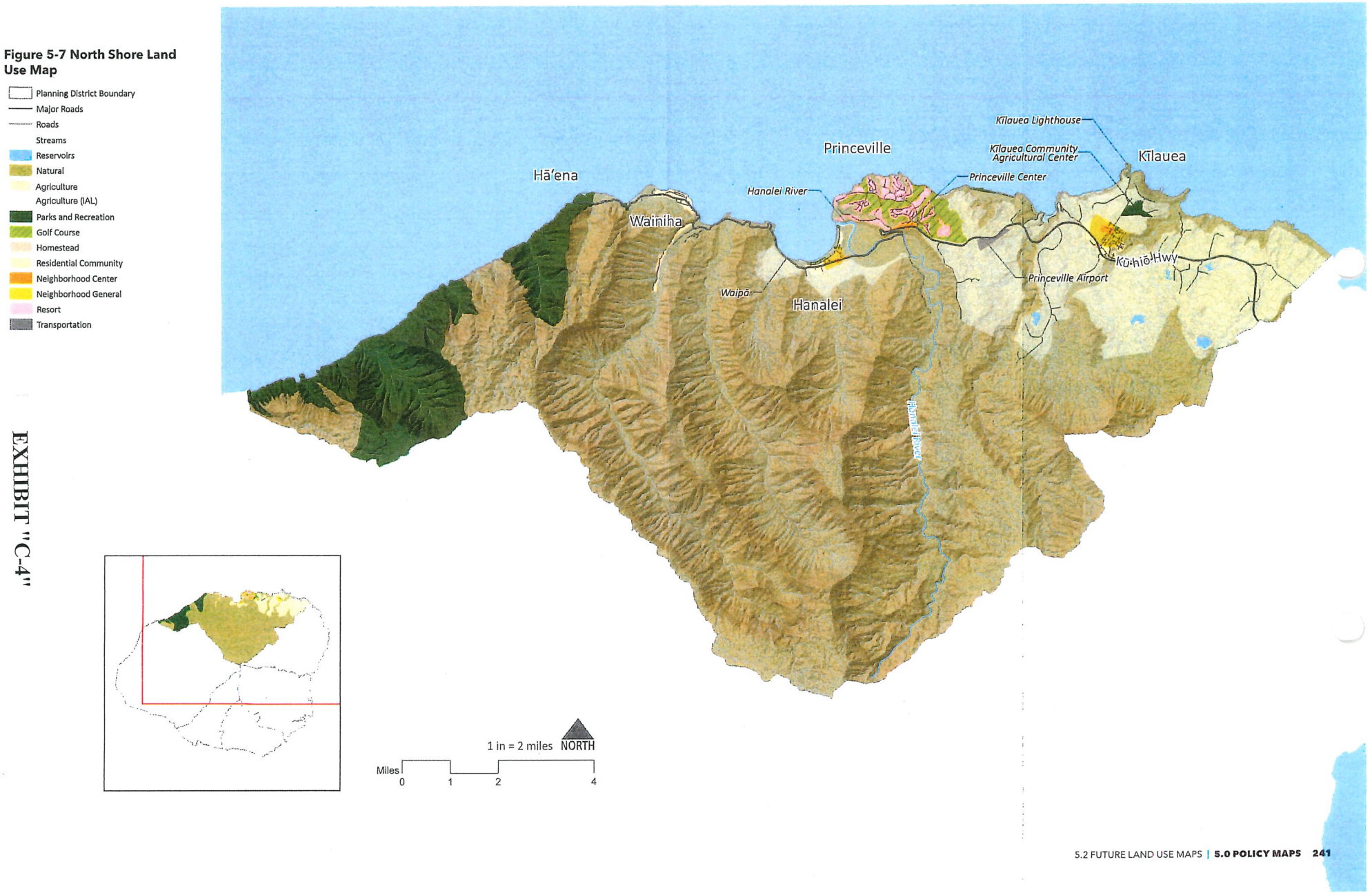
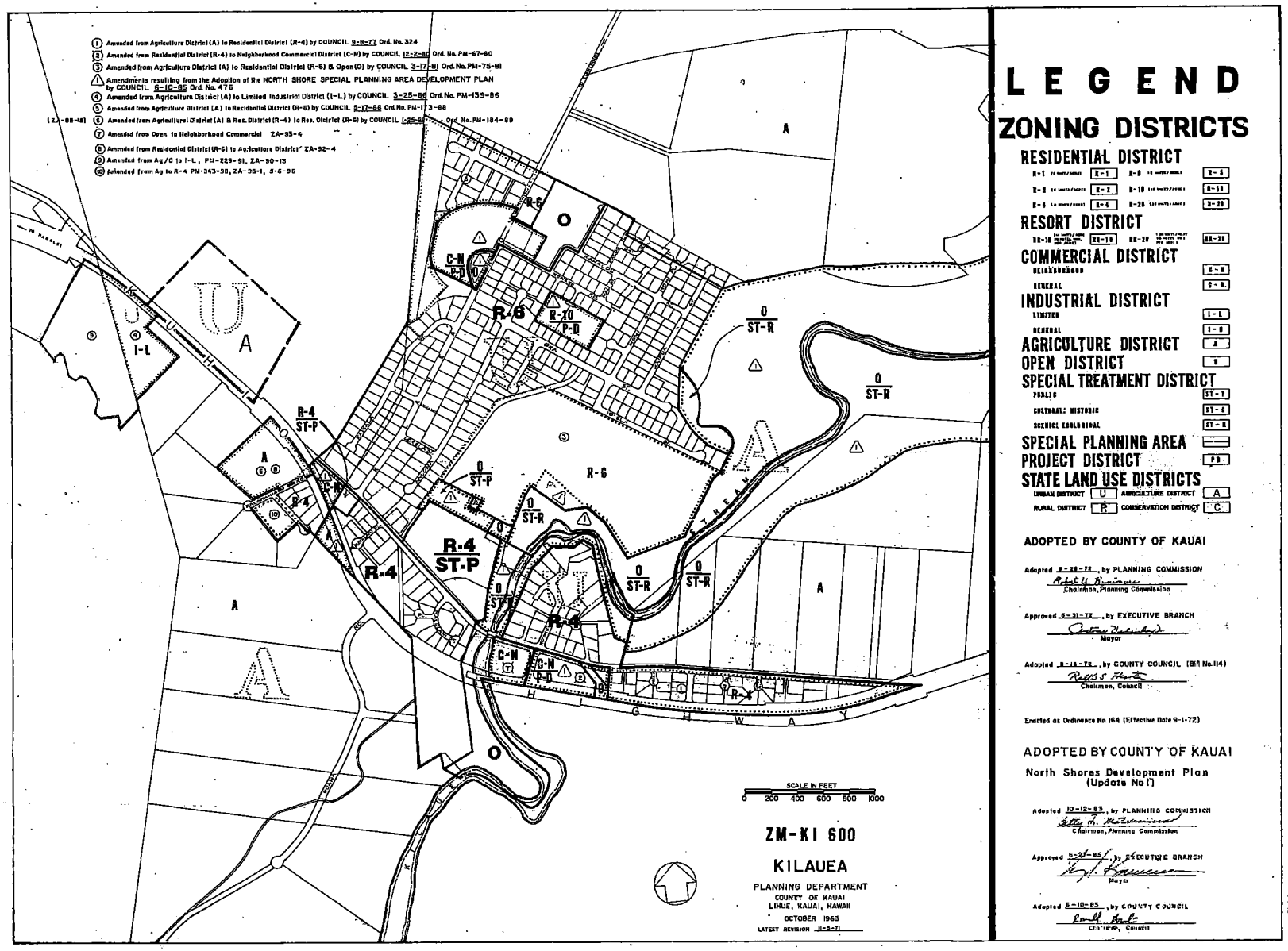


EXHIBIT "C-4"

EXHIBIT "C-5"



1 Amended from Agriculture District (A) to Residential District (R-4) by COUNCIL 9-6-77 Ord. No. 324
2 Amended from Residential District (R-4) to Neighborhood Commercial District (C-N) by COUNCIL 12-2-80 Ord. No. PM-67-80
3 Amended from Agriculture District (A) to Residential District (R-6) & Open (O) by COUNCIL 3-17-81 Ord. No. PM-75-81
1 Amendments resulting from the Adoption of the NORTH SHORE SPECIAL PLANNING AREA DEVELOPMENT PLAN by COUNCIL 6-10-85 Ord. No. 476
4 Amended from Agriculture District (A) to Limited Industrial District (I-L) by COUNCIL 3-25-86 Ord. No. PM-139-86
5 Amended from Agriculture District (A) to Residential District (R-6) by COUNCIL 5-17-86 Ord. No. PM-173-88
(ZA-88-15) 6 Amended from Agricultural District (A) & Res. District (R-4) to Res. District (R-6) by COUNCIL 1-25-89 Ord. No. PM-184-89
7 Amended from Open to Neighborhood Commercial ZA-93-4
8 Amended from Residential District (R-6) to Agriculture District ZA-92-4
9 Amended from Ag/O to I-L, PM-229-91, ZA-90-13
10 Amended from Ag to R-4 PM-243-98, ZA-98-1, 3-6-96
R-6
R-10
P-D
C-N
P-D
O
ST-R
R-4
ST-P
I-L
A
U
STREAM
HIGHWAY
SCALE IN FEET
0 200 400 600 800 1000
ZM-KI 600
KILAUEA
PLANNING DEPARTMENT
COUNTY OF KAUAI
LIHUE, KAUAI, HAWAII
OCTOBER 1963
LATEST REVISION 11-9-71
LEGEND
ZONING DISTRICTS
RESIDENTIAL DISTRICT
R-1 R-2 R-4 R-6 R-10 R-20
RESORT DISTRICT
RR-10 RR-20
COMMERCIAL DISTRICT
NEIGHBORHOOD
GENERAL
INDUSTRIAL DISTRICT
LIMITED I-L
GENERAL I-G
AGRICULTURE DISTRICT A
OPEN DISTRICT O
SPECIAL TREATMENT DISTRICT
PUBLIC ST-P
CULTURAL: HISTORIC ST-C
SCENIC: ECOLOGICAL ST-R
SPECIAL PLANNING AREA
PROJECT DISTRICT PD
STATE LAND USE DISTRICTS
URBAN DISTRICT U AGRICULTURE DISTRICT A
RURAL DISTRICT R CONSERVATION DISTRICT C
ADOPTED BY COUNTY OF KAUAI
Adopted 6-28-72, by PLANNING COMMISSION
Chairman, Planning Commission
Approved 6-31-72, by EXECUTIVE BRANCH
Mayor
Adopted 8-18-72, by COUNTY COUNCIL (Bill No. 114)
Chairman, Council
Enacted as Ordinance No. 164 (Effective Date 9-1-72)
ADOPTED BY COUNTY OF KAUAI
North Shores Development Plan
(Update No. 1)
Adopted 10-12-83, by PLANNING COMMISSION
Chairman, Planning Commission
Approved 6-27-85, by EXECUTIVE BRANCH
Mayor
Adopted 6-10-85, by COUNTY COUNCIL
Chairman, Council

EXHIBIT "C-5"

EXHIBIT "C-6"

EXHIBIT "C-6"


5
KILAUEA
KAUAI COUNTY
HAWAII STATE LAND USE DISTRICTS
CONSERVATION DISTRICT
AGRICULTURE DISTRICT
RURAL DISTRICT
URBAN DISTRICT
SPECIAL MANAGEMENT AREA
ADOPTED BY COUNTY OF KAUAI
AMENDMENTS
LEGEND
SMA Boundary is the Seaward Edge of the Line
Area of Amendment
Area of Federal Lands Exclusion
Kilauea

EXHIBIT "C-7"

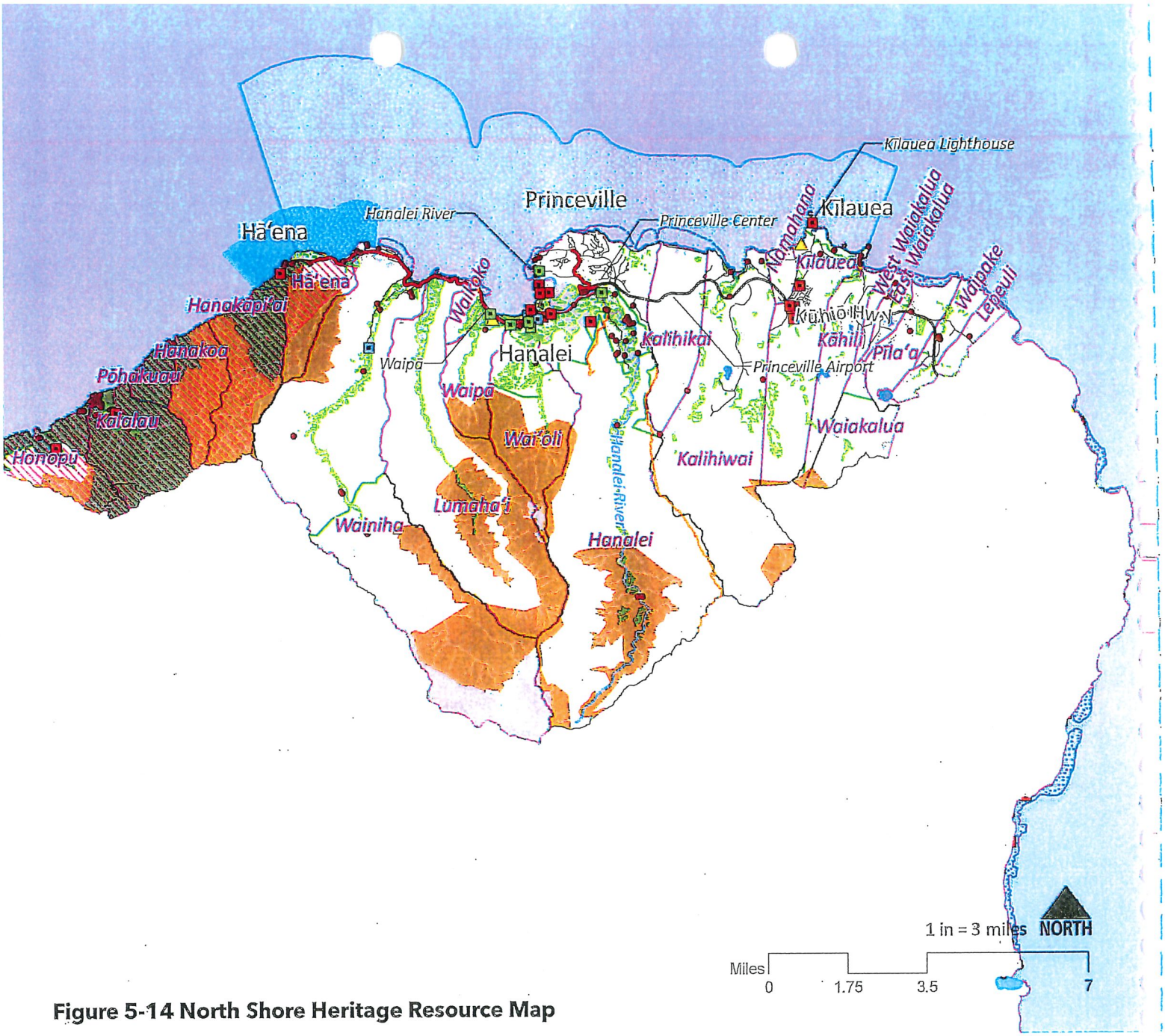


Figure 5-14 North Shore Heritage Resource Map

Registered Historic Sites
- State
- National
- State & National

Cultural Features
Priority Public Access Points
Fish Ponds
Streams & Waterbodies
Major Roads
Roads

Historic Belt Road
Trails
Planning District Boundary
Ahupua'a Boundaries
Wetlands
Coral Reefs
Regulated Fishing Areas
State & County Parks
Preserves

Reservoirs
Traditional Cultivation Areas
Sand Dunes
Open Space Acquisition Priorities
Critical Habitat

Threatened & Endangered Species
- High Density
- Very High Density

EXHIBIT "C-7"

EXHIBIT "C-8"



Flood Hazard Assessment Report

www.hawaiinfip.org

Property Information

COUNTY:	KAUAI
TMK NO:	(4) 5-2-006:014
WATERSHED:	KAUAPEA
PARCEL ADDRESS:	ADDRESS NOT DETERMINED KILAUEA, HI 96754

Notes:

Flood Hazard Information

FIRM INDEX DATE:	FEBRUARY 26, 2021
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL:	1500020060E
PANEL EFFECTIVE DATE:	SEPTEMBER 16, 2005

THIS PROPERTY IS WITHIN A TSUNAMI EVACUTION ZONE: NO
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.

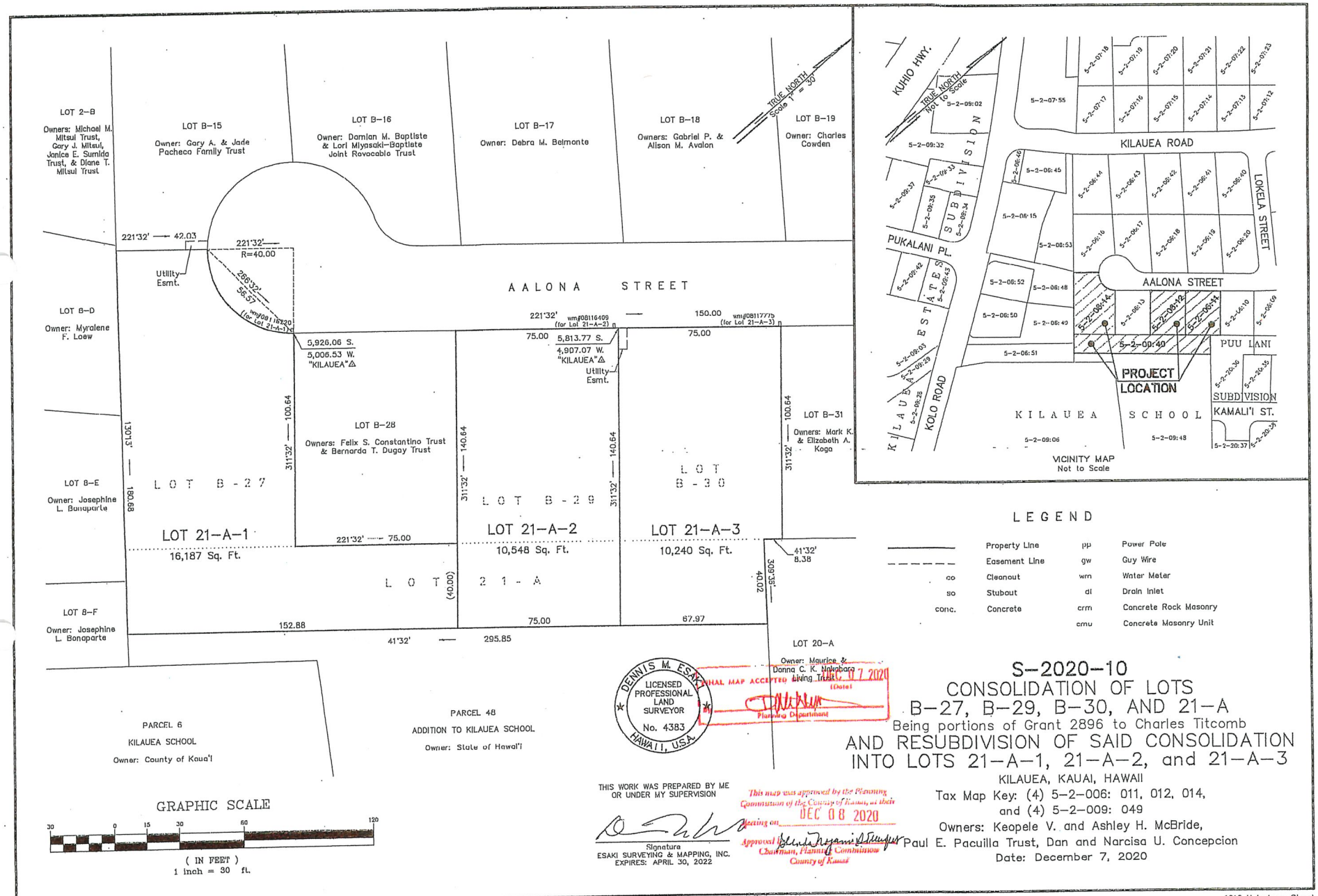
	Zone XS (X shaded): Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	Zone X: Areas determined to be outside the 0.2% annual chance floodplain.

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.

EXHIBIT "C-8"

EXHIBIT "D"

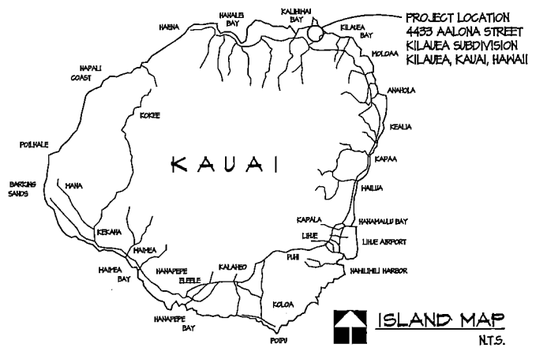


S-2020-10
CONSOLIDATION OF LOTS B-27, B-29, B-30, AND 21-A
Being portions of Grant 2896 to Charles Titcomb
AND RESUBDIVISION OF SAID CONSOLIDATION INTO LOTS 21-A-1, 21-A-2, and 21-A-3

KILAUEA, KAUAI, HAWAII
Tax Map Key: (4) 5-2-006: 011, 012, 014, and (4) 5-2-009: 049
Owners: Keopele V. and Ashley H. McBride, Paul E. Pacuilla Trust, Dan and Narcisa U. Concepcion
Date: December 7, 2020

EXHIBIT "D"

EXHIBIT "E"



PROJECT LOCATION
4433 AALONA STREET
KILAUEA SUBDIVISION
KILAUEA, KAUAI, HAWAII

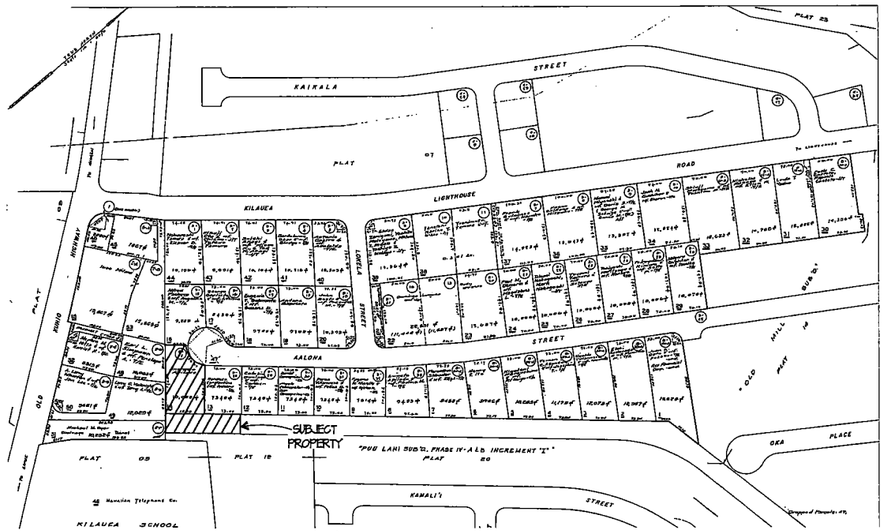
ISLAND MAP
N.T.S.

PROJECT DATA

OWNERS:	MR. AND MRS. KEOPELE & ASHLEY McBRIDE
LOCATION:	4433 AALONA STREET KILAUEA SUBDIVISION KILAUEA, KAUAI, HAWAII 96754
TMK:	(4) 5 - 2 - 006 : 014 LOT 21-A-1
PROPERTY SIZE:	16,187 SQ. FT.

LOT COVERAGE INFORMATION

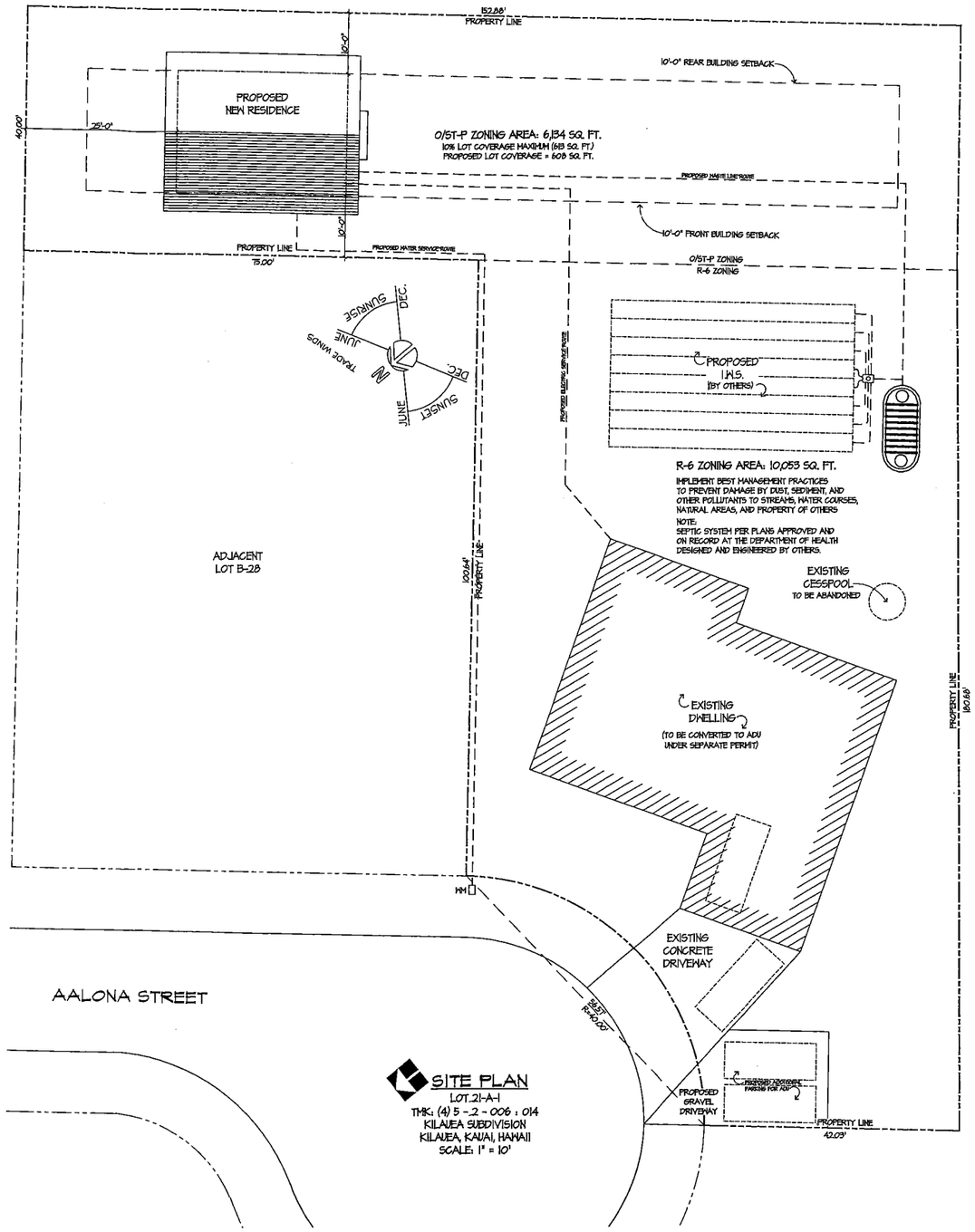
EXISTING LOT COVERAGE OF EXISTING DWELLING (ADU):	2,186 sq. ft.
FOOTPRINT OF PROPOSED NEW DWELLING:	360 sq. ft.
PROPOSED CONCRETE WALKS/ETC:	48 sq. ft.
EXISTING CONCRETE WALKS/ETC:	328 sq. ft.
TOTAL PROPOSED NEW LOT COVERAGE:	3,121 sq. ft.
LOT AREA:	16,187 sq. ft.
% OF TOTAL LOT COVERAGE:	< 19.3 %



VICINITY MAP
N.T.S.

DRAWING INDEX

SHEET #	DESCRIPTION	SCALE
	ARCHITECTURAL	
A01	SITE PLAN	1" = 10'-0"
A02	FLOOR PLANS, EXTERIOR ELEVATIONS, AND D/H SCHEDULES	AS NOTED
	ELECTRICAL	
E01	ELECTRICAL FLOOR PLAN AND INTERIOR ELEVATIONS	AS NOTED
	STRUCTURAL	
S01	FOUNDATION PLAN, ROOF FRAMING PLAN, & BLDG SECTIONS	AS NOTED
S02	DETAIL DRAWINGS	AS NOTED



SITE PLAN
LOT 21-A-1
TMK: (4) 5 - 2 - 006 : 014
KILAUEA SUBDIVISION
KILAUEA, KAUAI, HAWAII
SCALE: 1" = 10'

TIMOTHY M. BRADLEY
REGISTERED PROFESSIONAL ARCHITECT
No. 5124
HAWAII, USA
EXPIRES 4/30/22

I HAVE PERFORMED OR HAVE BEEN IN RESPONSIBLE CHARGE OF THE WORK HEREIN DESCRIBED AND AM THE ARCHITECT OF RECORD FOR THIS PROJECT.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTITUTES ALL OF THE PROJECT FOR WHICH I AM THE ARCHITECT OF RECORD

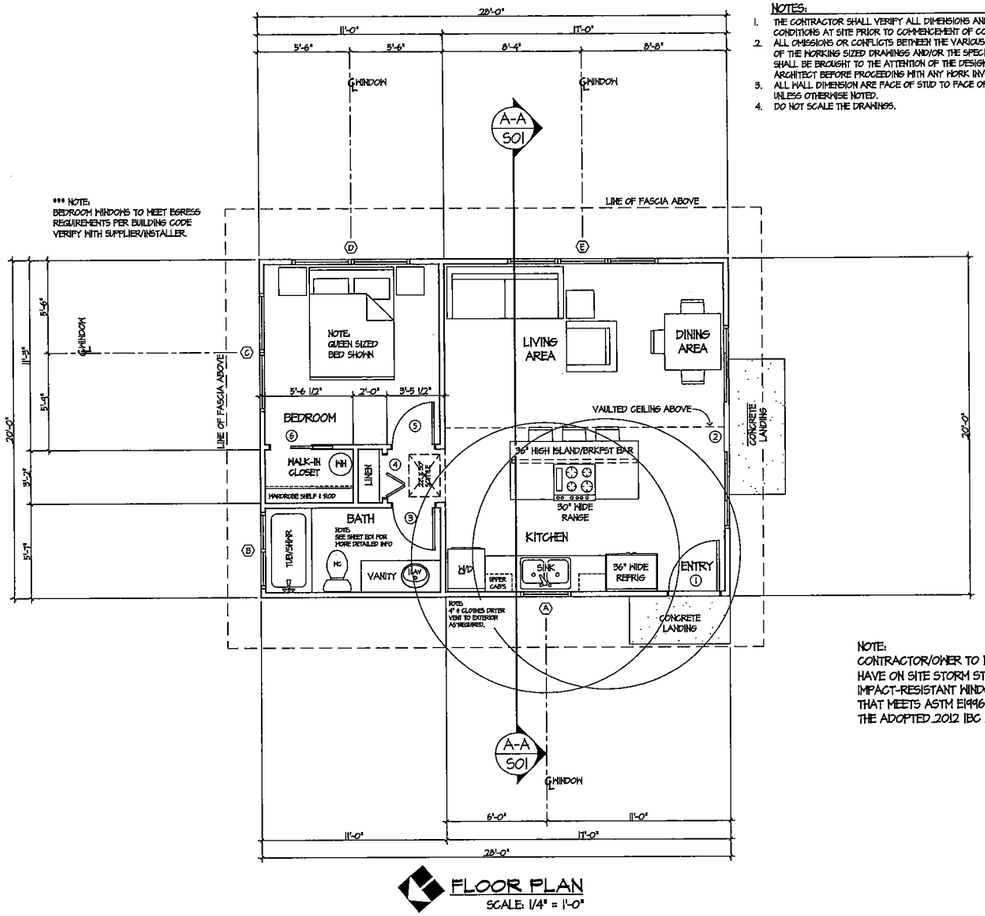
PROPOSED NEW RESIDENCE FOR
KEOPELE & ASHLEY McBRIDE
TMK: (4) 5 - 2 - 006 : 014 LOT 21-A-1

design consultants
P.O. BOX 46, KILAUEA, HI 96754
PHONE: (808) 822-0160
WWW.DESIGNCONSULTANTSKAUAI.COM

PRINT DATE: 3/10/21
PERMISSION SET DATE: 3/10/21
REVISION DATE:

SHEET: A01

EXHIBIT "E"

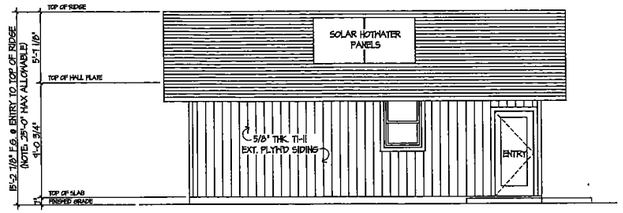


FLOOR PLAN
SCALE: 1/4" = 1'-0"

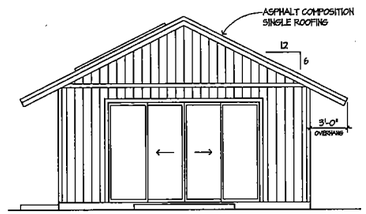
*** NOTE:
BEDROOM WINDOWS TO MEET EGRESS REQUIREMENTS PER BUILDING CODE VERIFY WITH SUPPLIER/INSTALLER.

NOTES:
1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING SIZED DRAWINGS AND/OR THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER OR ARCHITECT BEFORE PROCEEDING WITH ANY WORK INVOLVED.
3. ALL WALL DIMENSION ARE FACE OF STUD TO FACE OF STUD UNLESS OTHERWISE NOTED.
4. DO NOT SCALE THE DRAWINGS.

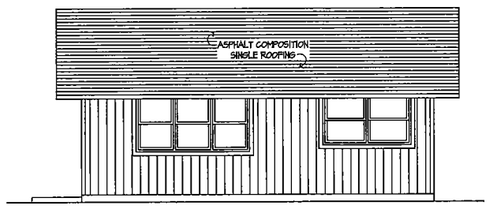
NOTE:
CONTRACTOR/OWNER TO FURNISH, INSTALL, AND/OR HAVE ON SITE STORM STOPPER (OR EQUAL) IMPACT-RESISTANT WINDOW COVERING SYSTEM THAT MEETS ASTM E1996 AND ASTM E1886 PER THE ADOPTED 2012 IBC W/ AMMENDMENTS.



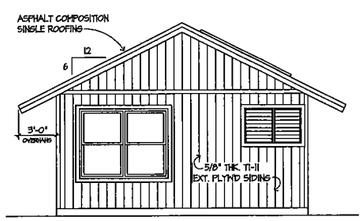
FRONT ELEVATION
SCALE: 3/16" = 1'-0"



RIGHT SIDE ELEVATION
SCALE: 3/16" = 1'-0"



REAR ELEVATION
SCALE: 3/16" = 1'-0"



LEFT SIDE ELEVATION
SCALE: 3/16" = 1'-0"

DOOR SCHEDULE

SYMBOL	NOMINAL DOOR SIZE	DESCRIPTION	TYPE	LOCATION	JAMB (L)	JAMB (R)	HEAD	T.H.	HARDWARE	FINISH	REMARKS
(1)	3'-0" X 6'-8"	1 3/4" THK. EXTERIOR SWING DOOR		MAIN ENTRY TO INTERIOR	D/1	D/1	D/1	D/1	CONFIRM WITH	CONFIRM WITH	
(2)	12'-0" X 8'-0"	OXXO SLIDING GLASS DOOR		EXTERIOR TO INTERIOR	D/2	D/2	D/3	D/4	OWNER I/OR	OWNER I/OR	
(3)	2'-6" X 6'-8"	1 3/8" THK. INTERIOR SWING DOOR		HALL TO BATH	D/5	D/5	D/5	D/5	SEE SPECS	SEE SPECS	
(4)	2'-6" X 6'-8"	1 3/8" THK. INTERIOR SINGLE-FOLD DOOR		LINEN CLOSET	D/6	D/6	D/6	D/6	↓	↓	
(5)	2'-6" X 6'-8"	1 3/8" THK. INTERIOR SWING DOOR		HALL TO BEDROOM	D/5	D/5	D/5	D/5			
(6)	2'-6" X 6'-8"	1 3/8" THK. INTERIOR POCKET DOOR		BEDROOM WALK-IN CLOSET	D/7	D/7	D/7	D/7			

SLIDING GLASS DOOR SPECIFICATIONS:
FLEETWOOD 1000 SERIES SLIDING GLASS DOOR, 4 1/2" NAIL-ON PAINTED ALUMINUM FRAME.
VERIFY COLOR W/ OWNER. GLAZING TO BE 1/4" TEMPERED GLASS.
FURNISH WITH STAINLESS STEEL ROLLERS AND HARDWARE AS APPLICABLE.
HANDLES TO BE SPECIFIED (VERIFY WITH OWNER)

DOOR NOTES
1. DOOR SIZES SHOWN ARE NOMINAL SIZES. VERIFY NET SIZES BY REFERRING TO THE PLANS, DETAILS, SPECIFICATIONS, AND SITE VISIT &/OR THE MANUFACTURERS SPECIFICATIONS.
2. SEE SPECIFICATIONS AND DRAWINGS FOR DOOR FINISHES AND HARDWARE.
3. INTERIOR WOOD DOORS TO BE 80" HEIGHT DOOR SLABS. UNDERCUT DOORS AS APPLICABLY DIMENSIONED IN DETAILS AND ONLY AS NECESSARY.
4. DOOR JAMBS CALLED OUT AS VIEWED FROM THE EXTERIOR/TRAFFIC SIDE OF DOOR.
5. AFTER INSTALLING THE EXTERIOR DOOR FRAMES, INSTALL "WINDOW WRAP" FLASHING TAPE AROUND THE PERIMETER OF THE DOOR FRAMES TO CREATE A WATERPROOF INSTALLATION PRIOR TO INSTALLATION OF EXTERIOR TRIMS. "WINDOW WRAP" FLASHING TAPE MANUFACTURED BY MFM BUILDING PRODUCTS CORP, COSHOCTON, OHIO.

WINDOW SCHEDULE

SYMBOL	NOMINAL WINDOW SIZE	DESCRIPTION	TYPE	LOCATION	JAMB (L)	JAMB (R)	HEAD	SILL	HARDWARE	FINISH	REMARKS
(A)	3'-0" X 4'-0"	VINYL FRAMED DOUBLE-HUNG WINDOW		KITCHEN			H/1	H/1	CONFIRM WITH	CONFIRM WITH	
(B)	4'-6" X 3'-0"	VINYL FRAMED JALOUSIE/JALOUSIE WINDOW		BATH					OWNER I/OR	OWNER I/OR	9 SLAT, OBSCURE GLASS
(C)	7'-0" X 5'-6"	VINYL FRAMED DOUBLE DOUBLE-HUNG WINDOW		BEDROOM			H/1	H/1	SEE SPECS	SEE SPECS	EGRESS WINDOW
(D)	7'-0" X 4'-0"	VINYL FRAMED DOUBLE DOUBLE-HUNG WINDOW		BEDROOM			H/1	H/1	↓	↓	
(E)	9'-0" X 4'-6"	VINYL FRAMED TRIPLE DOUBLE-HUNG WINDOW		LIVING AREA			H/1	H/1			

DOUBLE-HUNG WINDOW SPECIFICATIONS:
FELLA 250 SERIES WHITE VINYL DOUBLE-HUNG WINDOWS.

JALOUSIE WINDOW SPECIFICATIONS:
MILGARD TUSCANY SERIES WHITE VINYL SURROUND.

WINDOW NOTES
1. WINDOW SIZES SHOWN ARE NOMINAL SIZES. VERIFY NET SIZES BY REFERRING TO THE PLANS, DETAILS, SPECIFICATIONS, AND SITE VISIT.
2. FIXED GLASS AND LOUVER GLASS SLATS TO BE 1/4" MINIMUM THICKNESS UNLESS NOTED OTHERWISE.
3. TEMPERED STRUCTURAL GLASS AT FIXED GLASS WINDOWS. 1/4", 5/8" OR 1/2" THICK (VERIFY).
   USE GLASS THICKNESS TO WITHSTAND 20 LBS. PER LINEAR FOOT OF PRESSURE AS REQUIRED BY CODE.
4. ALL LOUVER/JALOUSIE WINDOW BLADES TO BE 4" WIDE.
5. ALL GLASS TO BE CLEAR UNLESS NOTED OTHERWISE AS OBSCURE.
6. VERIFY VINYL WINDOW COLOR WITH OWNER.
7. VERIFY BEDROOM WINDOWS MEET EGRESS REQUIREMENTS PER BUILDING CODE. VERIFY WITH SUPPLIER/INSTALLER.
8. WINDOW JAMBS CALLED OUT AS VIEWED FROM EXTERIOR.
9. AFTER INSTALLING THE WINDOW FRAMES, INSTALL "WINDOW WRAP" FLASHING TAPE AROUND THE PERIMETER OF THE WINDOW FRAMES TO CREATE A WATERPROOF INSTALLATION PRIOR TO INSTALLATION OD EXTERIOR TRIMS. "WINDOW WRAP" FLASHING TAPE MANUFACTURED BY MFM BUILDING PRODUCTS CORP, COSHOCTON, OHIO.

PROPOSED NEW RESIDENCE FOR
KEOPELE & ASHLEY McBRIDE
TMK: (4) 5 - 2 - 006 : 014 LOT 21-A-1

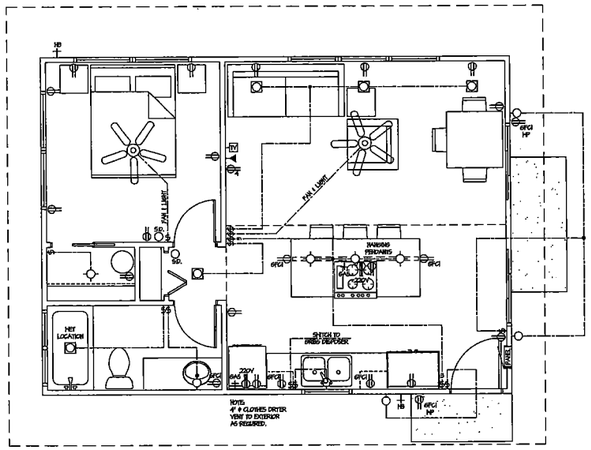
LINDSAY M. BRADLEY
REGISTERED PROFESSIONAL ARCHITECT
No. 5124
HAWAII, USA
EXPIRES 4/30/22

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONTROL OF THIS PROJECT AND I AM RESPONSIBLE FOR ITS CONTENTS

design consultants
PO BOX 46, KILAUEA, HI. 96754
PH: 828-1822 FAX: 828-1823
WWW.DESIGNCONSULTANTSKAUAI.COM

PERMIT DATE: 3/10/21
PERMITTED SET DATE: 3/10/21
REVISION DATE:

SHEET:
A02

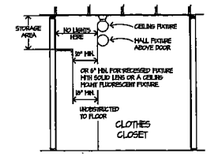


ELECTRICAL FLOOR PLAN

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

SYMBOL LEGEND

- TELEPHONE JACK
- INTERCOM
- CABLE TV JACK
- S.D. SMOKE DETECTOR
- RECESSED CAN LIGHT
- SURFACE MOUNTED LIGHT/HANGING PENDANT
- WALL MOUNTED SCONCE
- SPECIALTY DOWNLIGHT
- FLOOD LIGHT
- LIGHT SWITCH
- 3 WAY LIGHT SWITCH
- DIMMER LIGHT SWITCH
- POWER PATH
- 110V OUTLET
- SWITCHED 110V OUTLET
- WATERPROOF 110V OUTLET
- 6FCI OUTLET IN 110V CIRCUIT
- OUTLET W/ ELEV ABOVE FLOOR
- PLUGS PER OUTLET
- 220V OUTLET
- FLOOR MOUNT OUTLET
- EXHAUST FAN
- RECESSED CAN LIGHT WITH EXHAUST FAN
- HB HOSE BIB
- GAS GAS CONNECTION
- 4' FLUOR. 4' FLUORESCENT CEILING LIGHT
- FLUORESCENT STRIP LIGHT
- CEILING FAN WITH LIGHT
- CEILING FAN

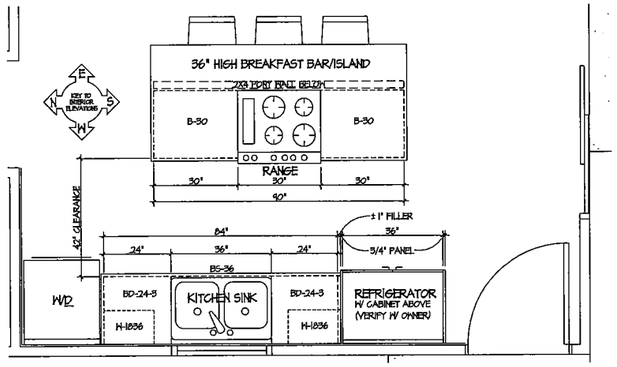


NOTES FOR LIGHT FIXTURES IN CLOTHES CLOSETS

LOCATION: A FIXTURE IN A CLOTHES CLOSET SHALL BE PERMITTED TO BE INSTALLED:

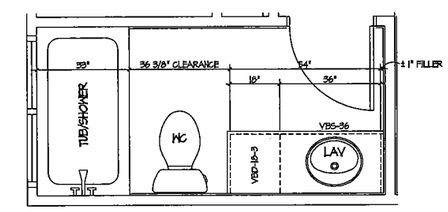
(1) ON THE WALL ABOVE THE CLOSET DOOR, PROVIDED THE CLEARANCE BETWEEN THE FIXTURE AND A STORAGE AREA WHERE COMBUSTIBLE MATERIAL MAY BE STORED WITHIN THE CLOSET IS NOT LESS THAN 18 INCHES OR

(2) ON THE CEILING OVER AN AREA WHICH IS UNOBSTRUCTED TO THE FLOOR, MAINTAINING AN 18-INCH CLEARANCE HORIZONTALLY BETWEEN THE FIXTURE AND A STORAGE AREA WHERE COMBUSTIBLE MATERIAL MAY BE STORED WITHIN THE CLOSET. A FLUSH RECESSED FIXTURE WITH A SOLID LENS OR A CEILING-MOUNTED FLUORESCENT FIXTURE SHALL BE PERMITTED TO BE INSTALLED PROVIDED THERE IS A 6-INCH CLEARANCE, HORIZONTALLY, BETWEEN THE FIXTURE AND THE STORAGE AREA.



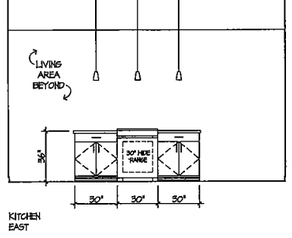
DETAILED FLOOR PLAN AT KITCHEN

SCALE: 1/2" = 1'-0"

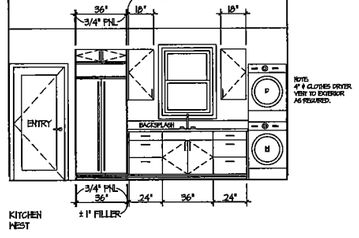


DETAILED FLOOR PLAN AT BATH

SCALE: 1/2" = 1'-0"

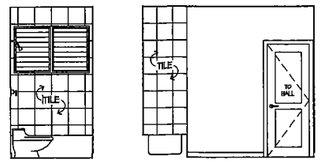


KITCHEN EAST



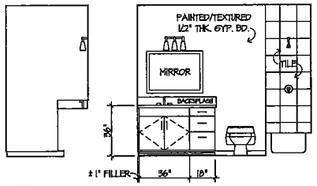
KITCHEN WEST

NOTE:
LOCATE PLUMBING FIXTURE TRIM CENTERED ON GROUT JOINTS OF TILE. VERIFY FINAL LOCATIONS W/ OWNER.



BATH NORTH

BATH EAST



BATH SOUTH

BATH WEST

design consultants
PO BOX 48, KILAUEA HI. 96754
(808) 828-1822 FAX 828-2082
WWW.DESIGNCONSULTANTSKAUAI.COM

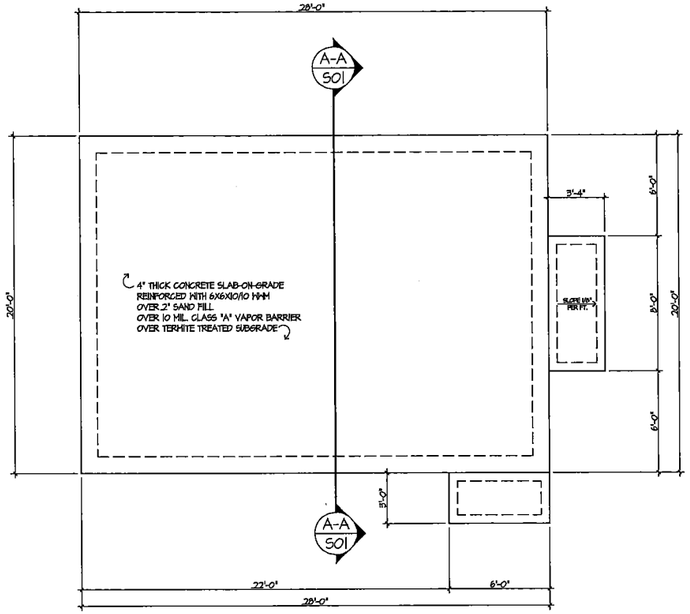
PROPOSED NEW RESIDENCE FOR
KEOPELE & ASHLEY McBRIDE
TMK: (4) 5 - 2 - 006 : 014 LOT 21-A-1

THIS WORK HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND REVIEWED BY ME AND ACCURATELY REFLECTS MY PROFESSIONAL OPINION AND CONFORMS TO APPLICABLE CODES AND REGULATIONS.

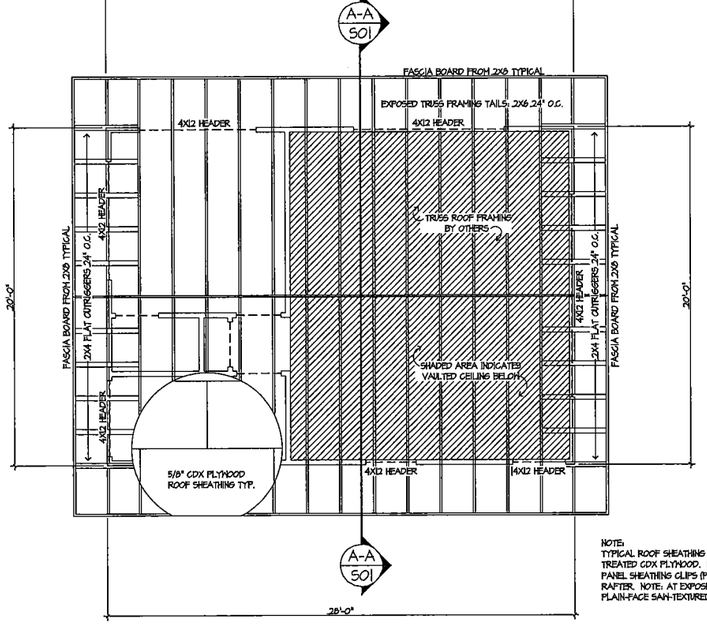
TIMOTHY M. BRADLEY
REGISTERED PROFESSIONAL ARCHITECT
No. 5124
HAWAII, U.S.A.
EXPIRES: 4/30/22

PERMIT DATE: 3/10/21
PERMITTING SET DATE: 3/10/21
REVISION DATE:

SHEET: E01



FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

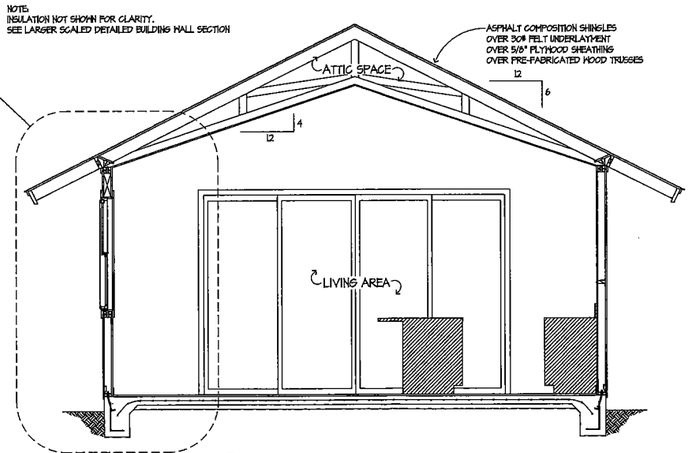


ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

CONCRETE NOTES
1. TYPICAL CONCRETE SLAB CONSTRUCTION: 4" THICK CONCRETE SLAB WITH 6X6-10/10 WWM LAPPED 12" MIN. OVER 2" COMPACTED SANDED FILL OVER 10 MIL. CLASS "A" VAPOR BARRIER OVER TERMITE TREATED COMPACTED SUBGRADE.
2. ALL EXTERIOR FOOTINGS SHALL EXTEND 12" MIN. BELOW GRADE TO BOTTOM OF FOOTING FOR SINGLE STORY STRUCTURES AND SHALL EXTEND 18" MIN. BELOW GRADE TO BOTTOM OF FOOTING FOR TWO STORY STRUCTURES.
3. DETAILS REFERENCED ARE SPECIFIC TO EACH NOTED LOCATION. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS.
4. VERIFY ALL DIMENSIONS WITH OTHER PLANS AND DETAILS. SEE OTHER PLANS AND DETAILS FOR DIMENSIONS NOT SHOWN.
5. POSITION ALL FOUNDATION STRAPS, ANCHORS, AND EMBEDDED ITEMS AS TO NOT INTERFERE WITH DOORS, WINDOWS, AND FRAMING MEMBERS. MORTISE INTO FACE OF FRAMING MEMBERS AS NECESSARY AS TO PREVENT PROFILES AND SHAPES FROM "TELEGRAPHING" THROUGH FINISH MATERIALS.
6. ALL EXTERIOR EXPOSED HORIZONTAL CONCRETE SURFACES (WALKS, LANAIS, LANDINGS, DRIVEWAYS ETC.) SHALL BE SLOPED 1/8" PER FOOT AND FINISHED WITH A "SALT FINISH".
7. ALL FRESHLY PLACED HORIZONTAL CONCRETE SURFACES (FLOORS WALKS, LANAIS, LANDINGS, DRIVEWAYS ETC.) SHALL BE TREATED WITH A CLEAR CURING AND SEALING COATING.

FOUNDATION NOTES
1. SOIL BEARING PRESSURE DESIGN LOAD = 1500 LBS./SQ. FT.
2. TYPICAL CONCRETE SLAB CONSTRUCTION: 4" THICK CONCRETE SLAB WITH 6X6-10/10 WWM LAPPED 12" MIN. OVER 2" COMPACTED SANDED FILL OVER 10 MIL. CLASS "A" VAPOR BARRIER OVER TERMITE TREATED COMPACTED SUBGRADE.
3. ALL CONCRETE AND GROUT TO BE 2500 PSI
4. ALL EXTERIOR FOOTINGS SHALL EXTEND 12" MIN. BELOW GRADE TO BOTTOM OF FOOTING.
5. DETAILS REFERENCED ARE SPECIFIC TO EACH NOTED LOCATION. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS.
6. VERIFY ALL DIMENSIONS WITH OTHER PLANS AND DETAILS. SEE OTHER PLANS AND DETAILS FOR DIMENSIONS NOT SHOWN.
7. POSITION ALL FOUNDATION STRAPS, ANCHORS, AND EMBEDDED ITEMS AS TO NOT INTERFERE WITH FRAMING MEMBERS.

NOTE:
INSULATION NOT SHOWN FOR CLARITY.
SEE LARGER SCALED DETAILED BUILDING WALL SECTION



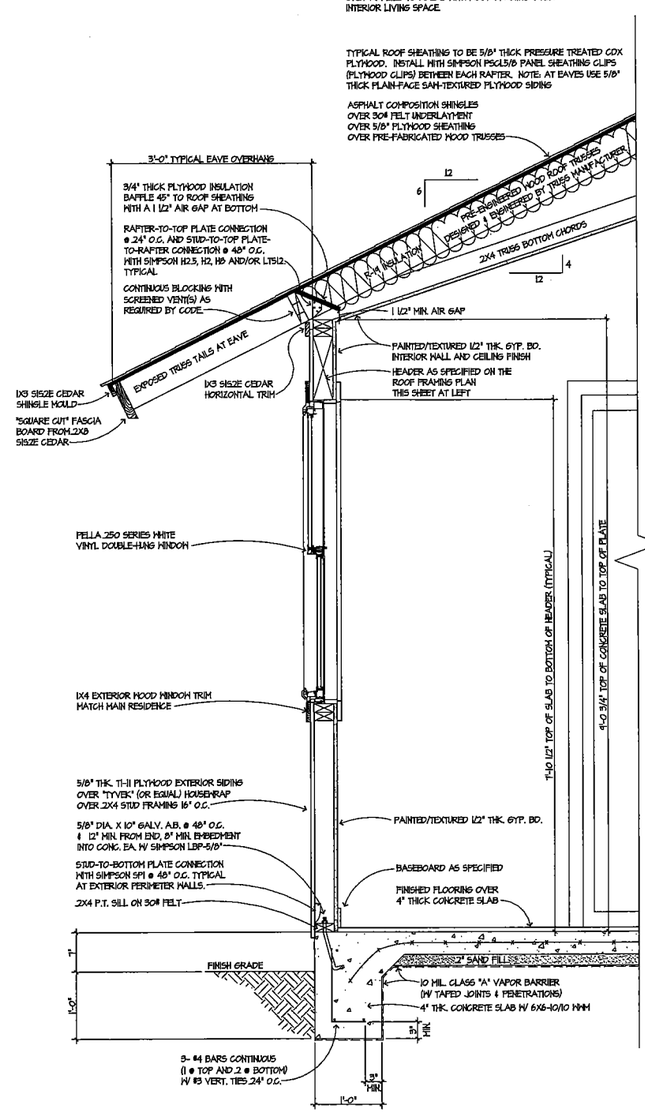
BUILDING CROSS SECTION
A/S01
SCALE: 3/8" = 1'-0"

NOTE:
TYPICAL ROOF SHEATHING TO BE 5/8" THICK PRESSURE TREATED CDX PLYWOOD. INSTALL WITH SIMPSON PSCL5/8 PANEL SHEATHING CLIPS (PLYWOOD CLIPS) BETWEEN EACH RAFTER. NOTE: AT EXPOSED EAVES USE 5/8" THICK PLAIN-FACE SAN-TEXTURED PLYWOOD SIDING

TRUSS ROOF FRAMING DESIGNED & ENGINEERED BY OTHERS
PREFABRICATED WOOD TRUSSES ARE TO BE DESIGNED BY AN ENGINEER REGISTERED AND LICENSED IN THE STATE OF HAWAII FOR THE DEAD AND LIVE LOADS AS REQUIRED BY LOCAL BUILDING CODES. ADDITIONAL TRUSSES SHALL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL OR SPECIAL EQUIPMENT. SHOP DRAWINGS AND CALCULATIONS STAMPED BY THE TRUSS DESIGN ENGINEER SHALL BE SUBMITTED FIRST TO THE ARCHITECT AND/OR ENGINEER FOR REVIEW AND APPROVAL AND SECOND TO THE COUNTY OF KAUAI DEPARTMENT OF PUBLIC WORKS BUILDING DIVISION.

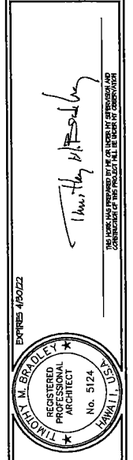
LOAD PATH AND UPLIFT TIES
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH "SECTION R324 COMPLETE LOAD PATH AND UPLIFT TIES" OF THE 2003 INTERNATIONAL RESIDENTIAL CODE (IRC) FOR ALL FRAMING EXECUTION. BLOCKING, BRIDGING, STRAPS, APPROVED FRAMING ANCHORS, AND/OR MECHANICAL FASTENERS SHALL BE DESIGNED AND INSTALLED TO PROVIDE CONTINUOUS TIES FROM THE ROOF TO THE FOUNDATION SYSTEM. SHEET METAL CLAMPS, TIES AND/OR CLIPS, SHALL BE FORMED OF GALVANIZED STEEL AND OTHER APPROVED CORRISION-RESISTANT OR NON-CORROSIVE MATERIAL INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. UPLIFT TIE STRAPS SHALL BE SPACED AT 48" O.C. TO CREATE THE COMPLETE LOAD PATH. UPLIFT TIE STRAPS SHALL MEET THE REQUIREMENTS OF SECTION R802.11 OF THE 2003 IRC.

ROOF INSULATION NOTES:
1. INSTALL R-19 BUILDING INSULATION DIRECTLY BELOW THE PLYWOOD ROOF SHEATHING BETWEEN THE 2X6 TRUSS TOP CHORDS. INSTALL THE INSULATION WITH THE ATTACHMENT "TABS" STAPLED/ATTAGHED TO THE BOTTOM OF THE TRUSS TOP CHORDS. DO NOT ATTACH TO THE SIDES OF THE TRUSS TOP CHORDS.
2. INSTALLATION REQUIREMENTS FOR R-19 INSULATION ONLY APPLIES TO AREAS WITH ROOF FRAMING OVER INTERIOR LIVING SPACE.



TYPICAL DETAILED BUILDING WALL SECTION
A/S01
SCALE: 1" = 1'-0"

DATED 4/8/2022



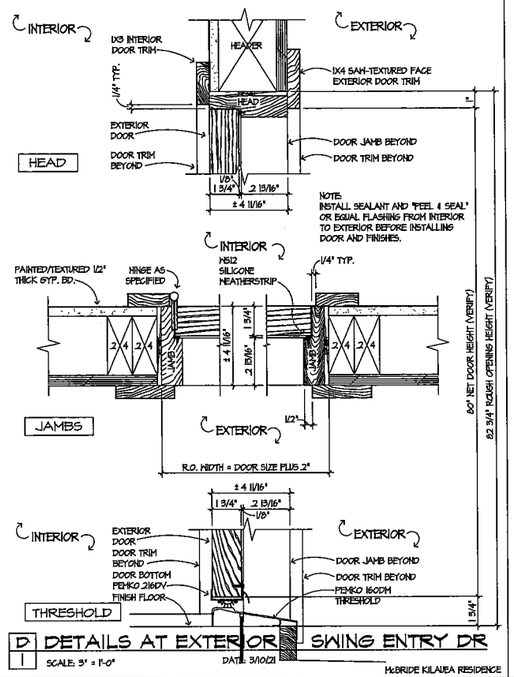
THESE PLANS ARE APPROVED BY AN AUTHORIZED REPRESENTATIVE OF THE COUNTY OF KAUAI FOR COMPLIANCE WITH THE COUNTY'S BUILDING CODES ONLY AND DO NOT AUTHORIZE THE VIOLATION OF ANY COUNTY, STATE OR FEDERAL LAW, CODE, ORDINANCE, REGULATION OR RESTRICTION.

PROPOSED NEW RESIDENCE FOR
KEOPELE & ASHLEY McBRIDE
TMK: (4) 5 - 2 - 006 : 014 LOT 21-A-1

design consultants
PO BOX 48, KILAUEA HI. 96754
P(808) 828-1822 F(808)828-2080
EMAIL: DESIGNCONSULTANTS@KAUAI.COM

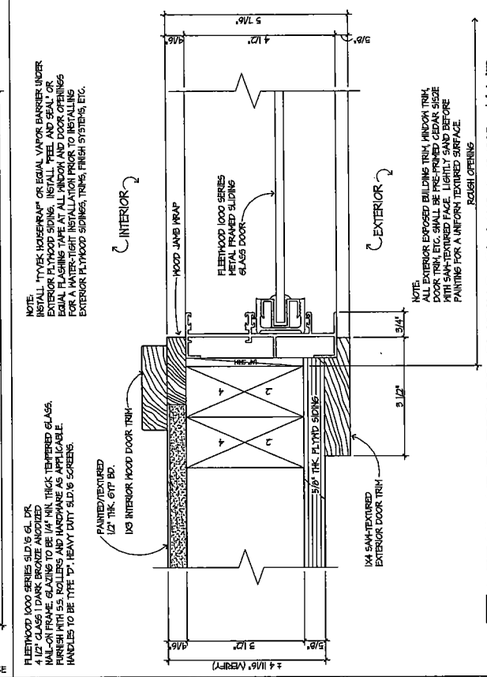
PERMIT DATE:	3/10/21
PERMITTED SET DATE:	3/10/21
REVISION DATE:	

SHEET:
S01



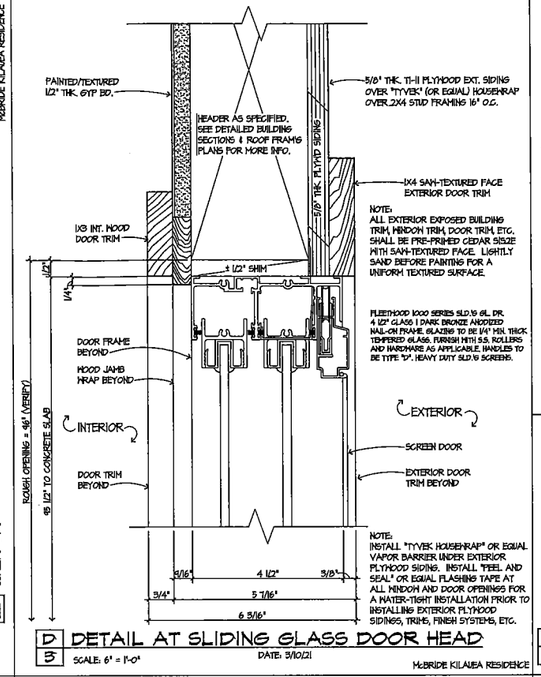
D 1 DETAILS AT EXTERIOR SWING ENTRY DR

SCALE: 3" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



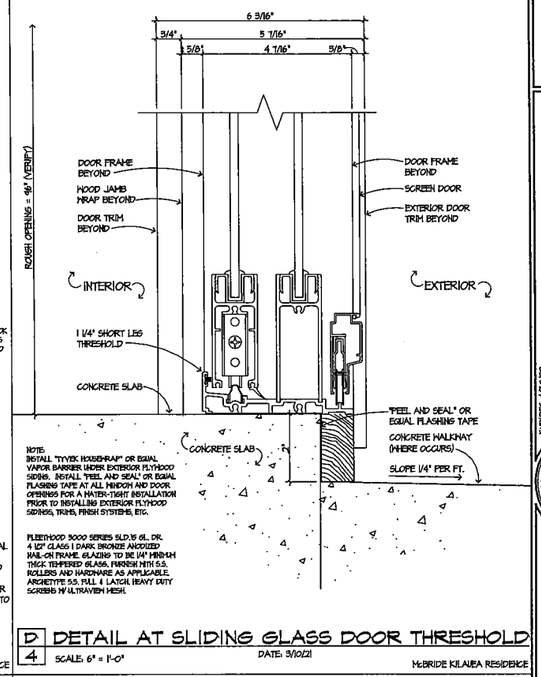
D 2 DETAIL AT EXTERIOR SLIDING GLASS DOOR JAMB

SCALE: 6" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



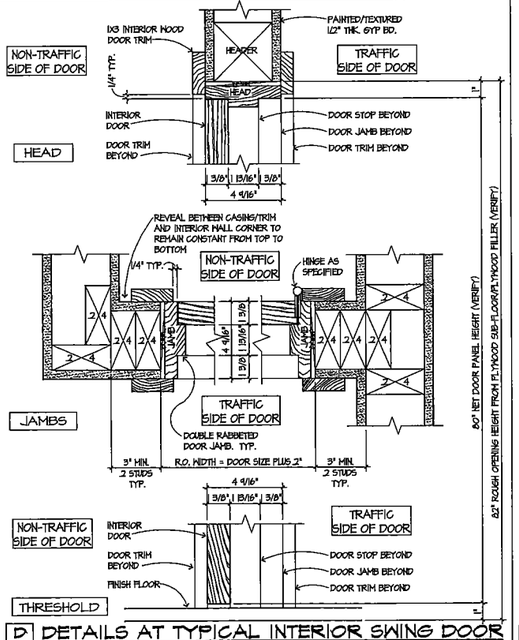
D 3 DETAIL AT SLIDING GLASS DOOR HEAD

SCALE: 6" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



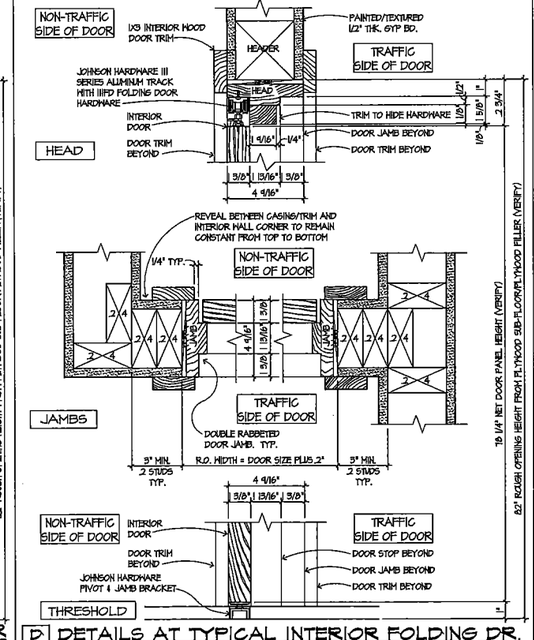
D 4 DETAIL AT SLIDING GLASS DOOR THRESHOLD

SCALE: 6" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



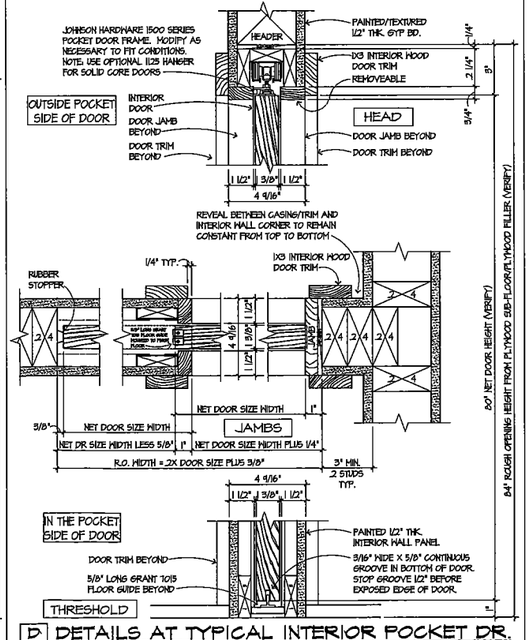
D 5 DETAILS AT TYPICAL INTERIOR SWING DOOR

SCALE: 3" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



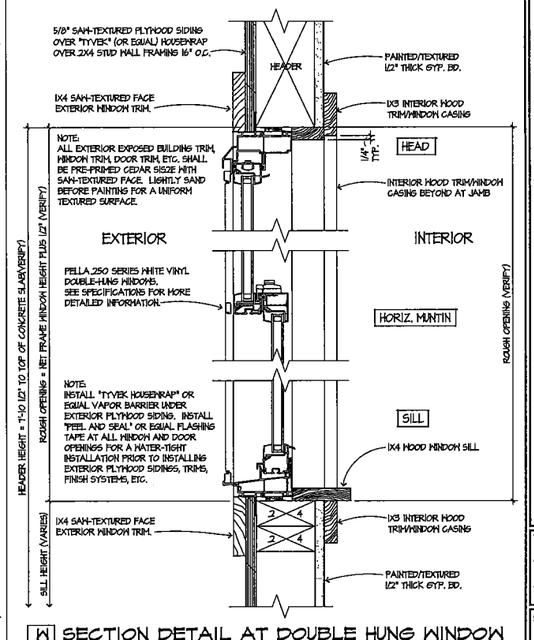
D 6 DETAILS AT TYPICAL INTERIOR FOLDING DR.

SCALE: 3" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



D 7 DETAILS AT TYPICAL INTERIOR POCKET DR.

SCALE: 3" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE



W 1 SECTION DETAIL AT DOUBLE HUNG WINDOW

SCALE: 3" = 1'-0" DATE: 3/10/21 McBRIDE KILAUEA RESIDENCE

EXPIRES: 4/30/22

TIMOTHY M. BRADLEY
REGISTERED PROFESSIONAL ARCHITECT
No. 5124
HAWAII, U.S.A.

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF THE ARCHITECT AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF THE ARCHITECT.

PROPOSED NEW RESIDENCE FOR KEOPELE & ASHLEY McBRIDE

TMK: (4) 5 - 2 - 006 : 014 LOT 21-A-1

design consultants
PO BOX 48, KILAUEA, HI. 96754
PHONE: (808) 828-1305 FAX: (808) 828-1315
WWW.DESIGNCONSULTANTSKAUAI.COM

PERMIT SET DATE: 3/10/21

REVISION DATES:

SHEET: S02

EXHIBIT "F-1"

AVALON,GABRIEL P
4412 AALONA ST
KILAUEA HI 96754

BAPTISTE,DAMIAN M/M-BAPTISTE,LORI ,
4426 AALONA ST
KILAUEA HI 96754

BELMONTE,DEBRA M TRUST
229 KOALELE ST
HONOLULU HI 96819

BONAPARTE,JOSEPHINE L
PO BOX 628
ANAHOLA HI 96703

CARRILLO,KAISEN K
4421 AALONA ST
KILAUEA HI 96754

CASTRO,ADELAIDA
PO BOX 31
KILAUEA HI 96754

COLE,STEVEN
4222 WAILEIA PL
PRINCEVILLE HI 96722

CONCEPCION,DAN
PO BOX 168
KILAUEA HI 96754

COWDEN,CHARLES
PO BOX 496
HANALEI HI 96714

DEL ROSARIO,REID T
PO BOX 933
KILAUEA HI 96754

DUGAY,BERNARDA T TRUST
P.O. BOX 865
KILAUEA HI 96754

FELCHER,GERALD J
2460 KOLO RD
KILAUEA HI 96754

KOGA,MARK K
PO BOX 323
KILAUEA HI 96754

LEE,STEPHANIE L N
3749 HARDING ST
HONOLULU HI 96816

LOEW,MYRALENE F
PO BOX 537
KILAUEA HI 96754

MARTIN,JONATHAN B
4401 AALONA ST
KILAUEA HI 96754

MARTINEZ,IMELDA P
PO BOX 1005
KILAUEA HI 96754

MCBRIDE,KEOPELE V
4433 AALONA ST
KILAUEA HI 96754

MITSUI,GARY J
PO BOX 11
KILAUEA HI 96754

MITSUI,LEO N
PO BOX 11
KILAUEA HI 96754

MITSUI,MICHAEL M TRUST
PO BOX 11
KILAUEA HI 96754

NAGATA,JOYCE N TRUST
PO BOX 237
KILAUEA HI 96754

NAKAHARA,MAURICE & DONNA C K LIVI
PO BOX 306
KILAUEA HI 96754

NITTA,STEPHEN M
PO BOX 175
KILAUEA HI 96754

OBAR,JAIME
PO BOX 84
KILAUEA HI 96754

PACHECO,GARY A & JADE FAMILY TRU
C/O PACHECO,GARY A & JADE TRS
PO BOX 158
KILAUEA HI 96754

PACHECO,STACY A K
4432 AALONA ST
KILAUEA HI 96754

PADRE,ROY R
PO BOX 250
KILAUEA HI 96754

PARONG,JIMMY N
PO BOX 782
KILAUEA HI 96754

PROCTOR BYPASS TRUST
C/O PROCTOR,ROBERTA TTEE
5401 VERNER DR
LA PALMA CA 90623

EXHIBIT "F-1"

RAGASA, ELDEGARDE
PO BOX 647
ANAHOLA HI 96703

ROBBINS, ERIC G
PO BOX 1407
KILAUEA HI 96754

ROGERS, DJANGO
2481 KOLO RD
KILAUEA HI 96754

SPICHAL, JAROSLAV
PO BOX 199
KILAUEA HI 96754

SUMIDA, JANICE E TRUST
3926 HO OHUKI ST
LIHUE HI 96766

TAMURA, GWEN S TRUST
PO BOX 765
KILAUEA HI 96754

TROMBLEY, THOMAS TRUST
2457 KOLO RD
KILAUEA HI 96754

WRIGHT, DARSHAN R
4457 PUKALANI PL
KILAUEA HI 96754

EXHIBIT "F-2"

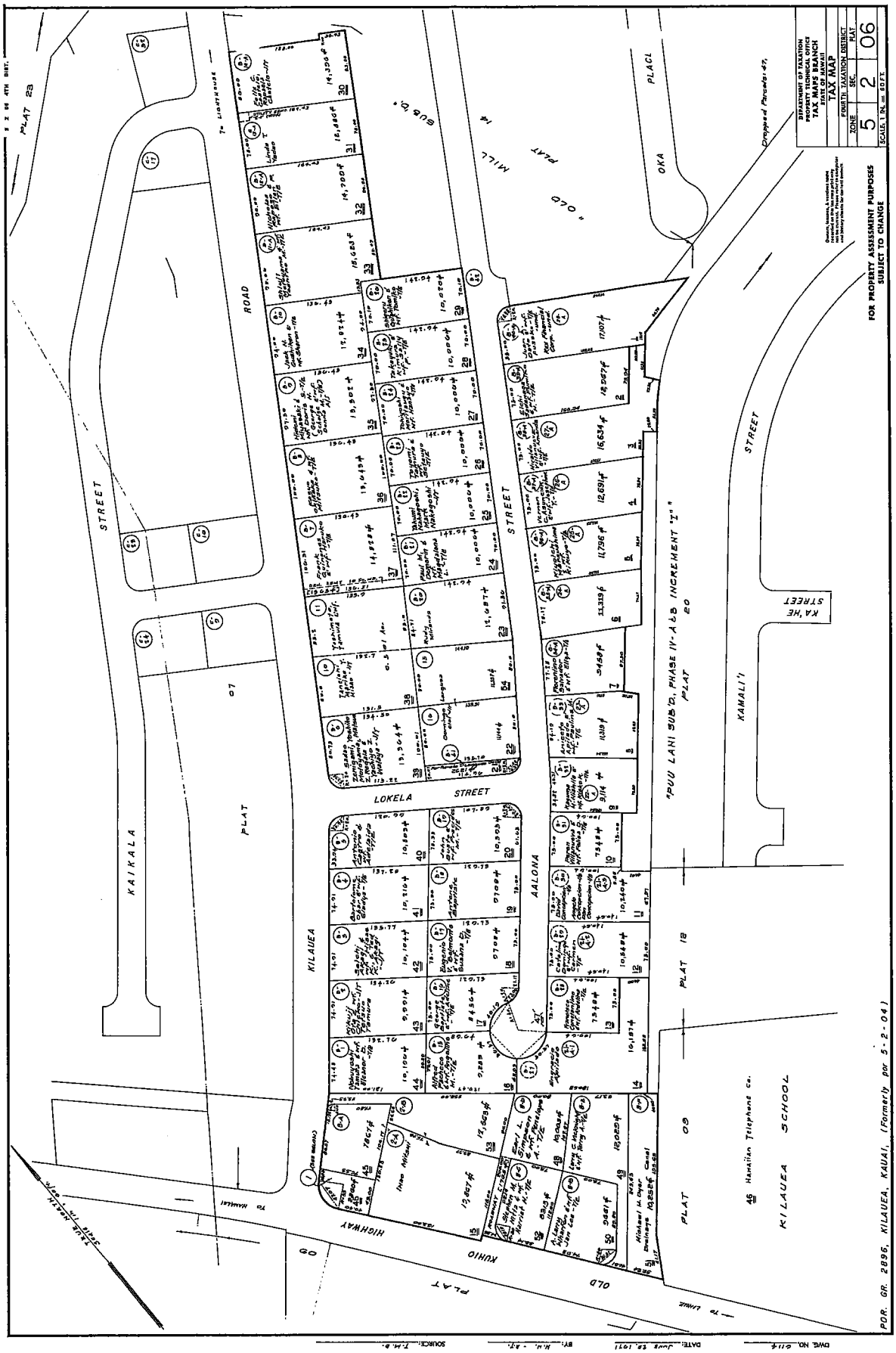

DEPARTMENT OF TAXATION
PROPERTY TECHNICAL OFFICE
TAX MAPS BRANCH
STATE OF HAWAII
TAX MAP
FOURTH TAXATION DISTRICT
ZONE 5
SEC. 2
PLAT 06
SCALE: 1 IN. = 60 FT.
FOR PROPERTY ASSESSMENT PURPOSES
SUBJECT TO CHANGE
KAIKALA STREET
KILAUEA ROAD
LOKELA STREET
AALONA STREET
"OLD MILL SUB'D."
PLAT 14
OKA PLACE
KAMALI'I STREET
KA'HE STREET
"PUU LANI SUB'D., PHASE IV-A & B INCREMENT "I"
PLAT 20
PLAT 18
PLAT 09
PLAT 07
PLAT 23
KUHIO HIGHWAY
OLD PLAT 09
KILAUEA SCHOOL
Hawaiian Telephone Co.
POR. GR. 2896, KILAUEA, KAUAI, (Formerly por 5-2-04)
SOURCE: T.M.B.
DATE: June 22, 1971
BY: H.H. - R.T.
DWG. NO. 6114

EXHIBIT "F-2"

EXHIBIT "G"

BELLES GRAHAM LLP

ATTORNEYS AT LAW

MAX W.J. GRAHAM, JR.
JONATHAN J. CHUN
IAN K. JUNG

Federal I.D. No. 99-0317663

WATUMULL PLAZA
4334 RICE STREET, SUITE 202
LIHUE, KAUAI, HAWAII 96766-1388

TELEPHONE NO: (808) 245-4705
FACSIMILE NO: (808) 245-3277
E-MAIL: mail@kauai-law.com

OF COUNSEL

MICHAEL J. BELLES
DAVID W. PROUDFOOT
DONALD H. WILSON

December 21, 2021

VIA EMAIL AND CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Ka'āina S. Hull
Director of Planning
Planning Department
4444 Rice Street, Suite A-473
Lihue, Kauai, Hawaii 96766

Re: **Keopele McBride and Ashley McBride**
for a Use Permit, and Class IV Zoning Permit concerning
property located at Kilauea, Kauai, Hawaii
Kauai Tax Map Key Nos. (4) 5-2-006:014
Use Permit No. U-2021-____
Class IV Zoning Permit No. Z-IV-2021-

Dear Mr. Hull:

I am writing to you on behalf of Keopele McBride and Ashley McBride ("Applicants"), the owners of the above-described Subject Property. Pursuant to the requirements of Section 8-11.5(b) of the Comprehensive Zoning Ordinance, County of Kauai ("CZO"), I am requesting that your office inform me of the "particular reasons for the establishment" of the Special Treatment Public-Facilities District on Lot 21-A-1 for which the Subject Property is located. This request is being made to allow the Applicant to file an application for the development of a dwelling unit on the Subject Property.

I am providing you with the following information to assist you in your response:

1. The Subject Property is located in Kilauea, Island and County of Kauai, State of Hawaii, and Lot 21-A-1 recently created pursuant to Subdivision No. 2020-10, also described as

Kauai TMK No. (4) 5-2-006:014. Attached hereto as ***Exhibit "1"*** is a copy of the Tax Map for the area in question, showing the Subject Property.

2. According to Zoning Map ZM-KI-600 (***Exhibit "2"***) on file with the Planning Department, the Subject Property is zoned as follows:

a. The Subject Property is split-zoned with a portion in the Residential (R-6) (10,053 square feet) and a portion is located partially in the CZO Open and Special Treatment Public-Facilities District (6,134 square feet).

b. Subdivision No. 2020-10 approved by the Planning Commission, which consolidated the Open Special Treatment Public-Facilities District portion of the Subject Property with the Residential (R-6) District portion of the Subject Property, attached as ***Exhibit "3"***.

c. Our research indicates that the Open Special Treatment Public-Facilities District was set at the CZO's inception in 1972 given the adjacency to the Kilauea School. Further, the land was previously a portion of an old irrigation canal that was abandoned and filled when Kuhio Highway was realigned from the Old Kuhio Highway (now Kolo Road).

3. CZO Section 8-11.2(a)(1) describes the Special Treatment-Public Facilities District as follows:

> "(1) Public Facilities (ST-P). All public and quasi-public facilities, other than commercial, including schools, churches, cemeteries, hospitals, libraries, police and fire stations, government buildings, auditoriums, stadiums, and gymnasiums, which are used by the general public or which tend to serve as gathering places for the general public; and those areas which because of their unique locations are specially suited for such public and quasi-public uses."

4. The Subject Property was placed in the Special Treatment-Public Facilities District as part of the initial adoption of the CZO in 1972. This designation was included in the initial North Shore Special Planning Area Report (September 30, 1972) and was included as part of the North Shore Development Plan Update, which was implemented by Ordinance No. 476.

5. Pursuant to CZO Section 8-2.4(s), the Open District allows for single-family dwelling units. Although the intended use is not for public or quasi-public uses, the proposed new dwelling integrates to the existing neighborhood and establishes another residence within walkable distance to the Kilauea School.

Based on the foregoing, it appears that the Subject Property was included within the Special Treatment-Public Facilities District due to its adjacency to the Kilauea School. However, the prior owner of the irrigation canal filled and sold portions of the land to neighboring owners, such as the Applicants, and Kilauea School will likely not be expanded to the west.

Please let me know if you concur with the above, and whether there are any other reasons why the Subject Property was placed in the Special Treatment-Public Facilities District.

Thank you very much for your attention to this matter.

Sincerely yours,

BELLES GRAHAM LLP

Ian K. Jung

IKJ:jaug
Enclosures

EXHIBIT "1"

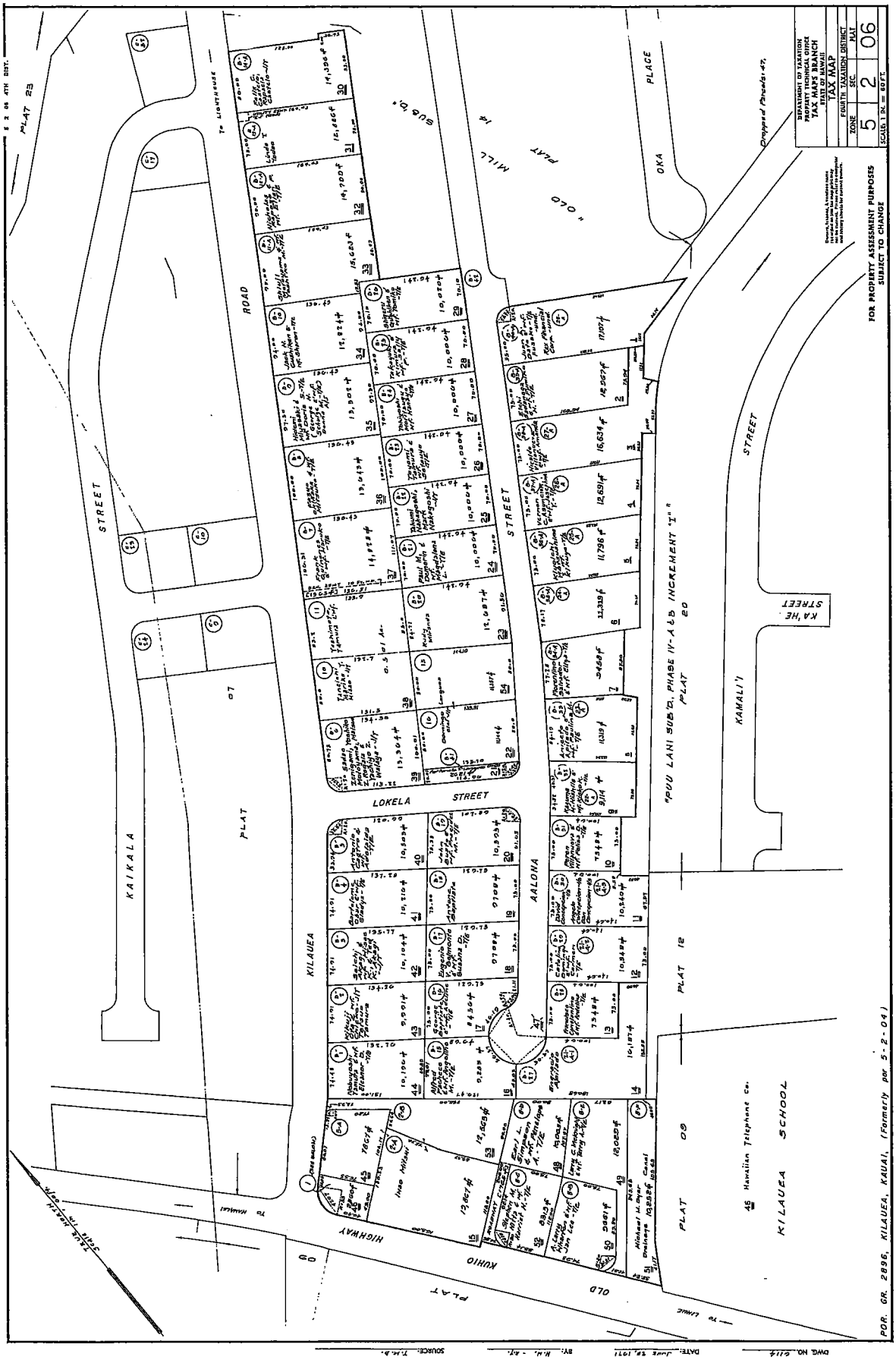

TAX MAP
FOURTH TAXATION DISTRICT
ZONE 5 SEC. 2 PLAT 06
SCALE 1 IN. = 60 FT.
FOR PROPERTY ASSESSMENT PURPOSES
SUBJECT TO CHANGE
POR. GR. 2896, KILAUEA, KAUAI, (Formerly por 5-2-04)
KAIKALA STREET
KILAUEA ROAD
LOKELA STREET
AALONA STREET
KUHIO HIGHWAY
OLD KILAUEA SCHOOL
KAMALII STREET
KA'HE STREET
"PUU LANI SUB'D, PHASE II-A & B INCREMENT 1"
PLAT 20
PLAT 12
PLAT 08
PLAT 09
PLAT 23
Hawaiian Telephone Co.

EXHIBIT "1"

EXHIBIT "2"

EXHIBIT "2"

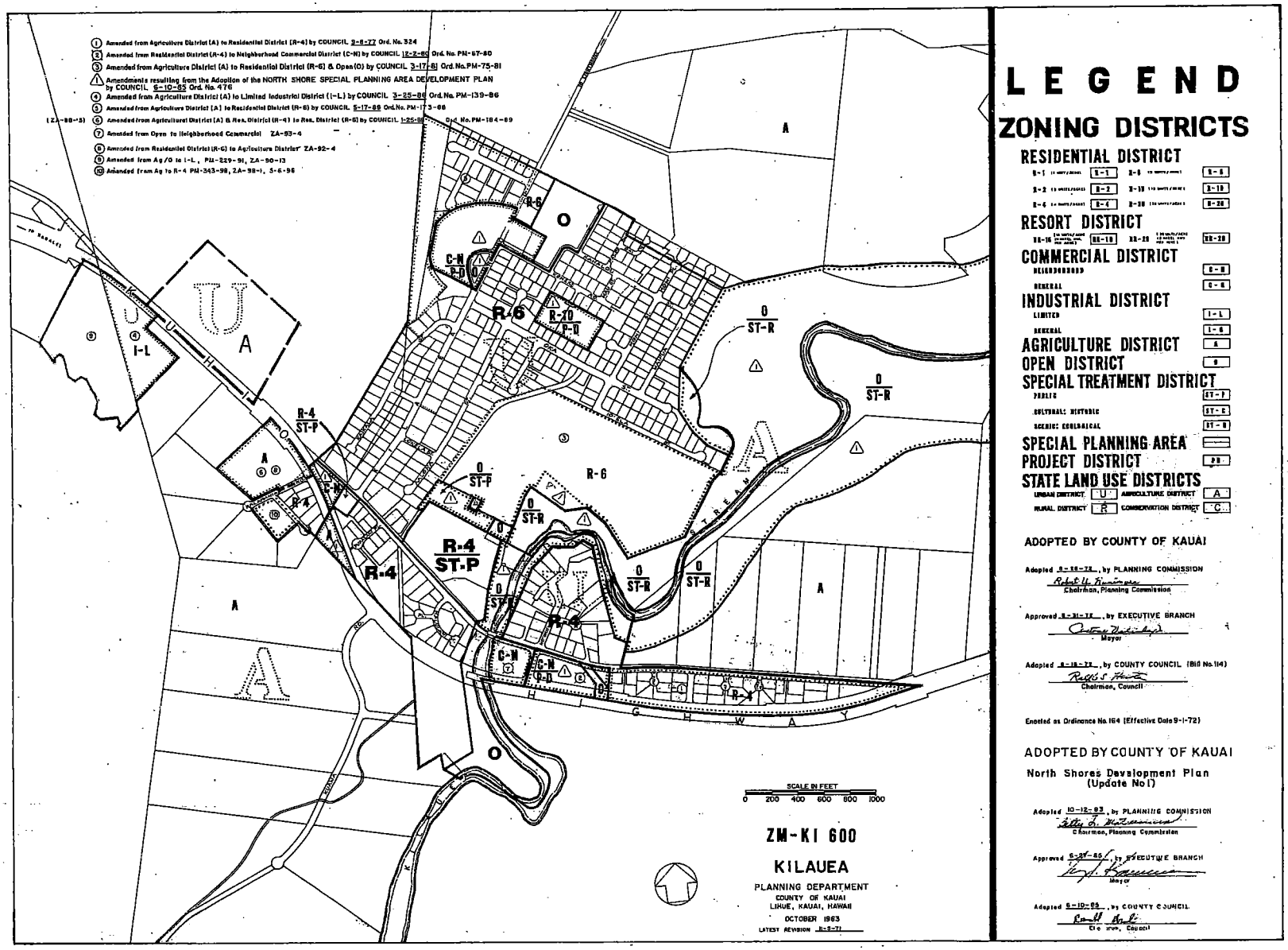
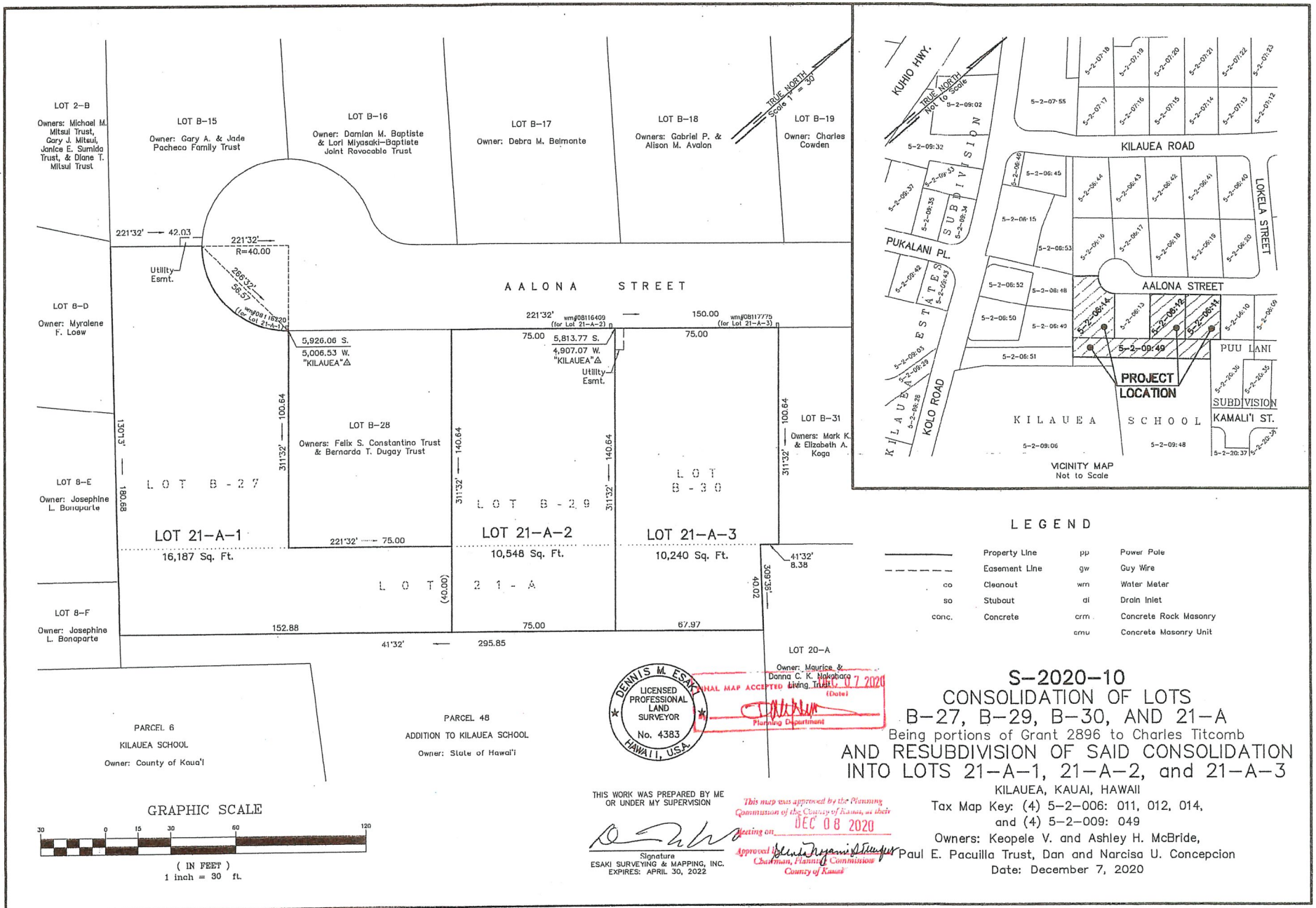

(1) Amended from Agriculture District (A) to Residential District (R-6) by COUNCIL 2-8-77 Ord. No. 324
(2) Amended from Residential District (R-6) to Neighborhood Commercial District (C-N) by COUNCIL 12-2-80 Ord. No. PM-67-80
(3) Amended from Agriculture District (A) to Residential District (R-6) & Open(O) by COUNCIL 3-17-81 Ord.No.PM-75-81
(4) Amended from Agriculture District (A) to Limited Industrial District (I-L) by COUNCIL 3-25-86 Ord.No. PM-139-86
(5) Amended from Agriculture District (A) to Residential District (R-6) by COUNCIL 5-17-88 Ord.No. PM-173-88
(6) Amended from Agricultural District (A) & Res. District (R-6) to Res. District (R-6) by COUNCIL 1-25-89 Ord. No.PM-184-89
(7) Amended from Open to Neighborhood Commercial ZA-93-4
(8) Amended from Residential District (R-6) to Agriculture District ZA-92-4
(9) Amended from Ag/O to I-L, PM-229-91, ZA-90-13
(10) Amended from Ag to R-4 PM-343-98, ZA-98-1, 5-6-98
(ZA-88-5)
A
U
I-L
R-6
O
C-N
P-D
R-10
P-V
R-4
ST-P
ST-R
ST-F
STREAM
GUARDRAIL
GUARDRAIL
GUARDRAIL

EXHIBIT "3"



S-2020-10
CONSOLIDATION OF LOTS B-27, B-29, B-30, AND 21-A
Being portions of Grant 2896 to Charles Titcomb
AND RESUBDIVISION OF SAID CONSOLIDATION INTO LOTS 21-A-1, 21-A-2, and 21-A-3

KILAUEA, KAUAI, HAWAII
Tax Map Key: (4) 5-2-006: 011, 012, 014, and (4) 5-2-009: 049
Owners: Keopele V. and Ashley H. McBride, Paul E. Pacuilla Trust, Dan and Narcisa U. Concepcion
Date: December 7, 2020

EXHIBIT "3"

Job Number: 19-219 MA
Drawing File: 19-219 prefinal.dwg

ESAKI SURVEYING & MAPPING, INC.
Civil Engineers — Land Surveyors — Planners

1610 Haleukana Street
Lihue, Hawaii 96766

EXHIBIT "H-1"

EXHIBIT "H-1"

EXHIBIT "H-2"

McBride

EXHIBIT "H-2"



12/01/2020

Ka'āina S. Hull
Director of Planning

Jodi A. Higuchi Sayegusa
Deputy Director of Planning

COUNTY OF KAUA'I
PLANNING DEPARTMENT

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of Class IV Zoning Permit and Use Permit to allow the construction of a new single-family residential unit and associated site improvements (utilities).
Permit Application Nos.	Class IV Zoning Permit Z-IV-2022-7 Use Permit U-2022-7
Name of Applicant(s)	KEOPELE V. & ASHLEY H. MCBRIDE

II. PERMIT INFORMATION

PERMITS REQUIRED	
☒ **Use Permit**	Pursuant to Article 11, Section 8-11.3 of the KCC, 1987 as amended, a Use Permit is required to allow any development, structures or uses within the Special Treatment District (ST).
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☒ **Zoning Permit Class** ☒ IV ☐ III	Pursuant to Section 8-3.1 of the KCC, 1987, as amended, a Class IV Zoning Permit is a procedural requirement in applying for a Use Permit.
☐ **Special Management Area Permit** ☐ Use ☐ Minor	
AMENDMENTS	
☐ **Zoning Amendment**	
☐ **General Plan Amendment**	
☐ **State Land Use District Amendment**	

Date of Receipt of Completed Application:	February 9, 2022
Date of Director's Report:	March 15, 2022
Date of Public Hearing:	APRIL 12, 2022
Deadline Date for PC to Take Action (60TH Day):	May 21, 2022

III. PROJECT DATA

PROJECT INFORMATION			
Parcel Location:	The project site is located on Lot 21-A-1 of the Kīlauea Subdivision situated at the southern terminus of Aalona Street in a cul-de-sac, situated 300 feet south of its intersection with Lokela Street and approximately 200 yards from Kūhiō Highway. The subject property's rear property line is adjacent to the Kīlauea Elementary School parcel.		
Tax Map Key(s):	(4) 5-2-006:014	**Area:**	16,187 sq. ft.
ZONING & DEVELOPMENT STANDARDS			
Zoning:	Residential District R-6 / Open (O) District / Special Treatment-Public (ST-P) District		
State Land Use District:	Urban		
General Plan Designation:	Residential Community		
Height Limit:	Twenty-Five (25) feet OR as Authorized by the Planning Commission		
Max. Land Coverage:	Residential District = 60% Open District = 10%		
Front Setback:	10'-0"		
Rear Setback:	5' or ½ the wall plate height whichever is greater		
Side Setback:	5' or ½ the wall plate height whichever is greater		
Community Plan Area:	North Shore Development Plan (NSDP)		
Community Plan Land Use Designation:	N/A		
Deviations or Variances Requested:	N/A		

IV. LEGAL REQUIREMENTS

Section 8-3.1(f), KCC:	This report is being transmitted to the Applicant and Planning Commission in order to satisfy the requirements of Section 8-3.1(f), relating to the provision of the Planning Director's report and

	recommendation on the subject proposal within sixty (60) days of the filing of a completed application. The application was received on February 9, 2022 and the Applicant, through its authorized agent, was notified accordingly of the Planning Department's intent to commence permit processing.
Public Hearing Date:	APRIL 12, 2022

V. PROJECT DESCRIPTION AND USE

The applicant is proposing to construct a 560 square foot (SF) single-story dwelling unit that involves one (1) bedroom, one (1) bath, a living area, a dining area, a kitchen, and two (2) concrete landings. The overall lot coverage of the single-family dwelling unit and two concrete landings will be 608 SF.

The project site is located within the Kīlauea Subdivision and identified as Tax Map Key: (4) 5-2-006:014 consisting of approximately 16,187 SF. The property has a County zoning designation of Residential District (R-6), Open (O) District and Special Treatment - Public District. There is an existing three (3) bedroom single-family dwelling unit and attached garage located on the front portion of the property that was constructed in 1972. The proposed 560 SF single-family residential unit will be the second dwelling on the property (aka. Additional Dwelling Unit) that will be located on the rear of the property.

VI. APPLICANT'S REASONS/JUSTIFICATION

Pursuant to Article 11, Section 8-11.3 of the KCC, 1987 as amended, a Use Permit is required to allow any development, structures or uses within the Special Treatment District (ST).

The proposed development is located within the portion of the subject property that is County zoned Open/Special Treatment - Public District. As such, to allow for the construction of a new single-family dwelling unit within the Special Treatment District, the Applicant has applied for a Use Permit.

VII. AGENCY COMMENTS

Comments from applicable government agencies are being sought and are expected at time of the public hearing scheduled on APRIL 12, 2022. At the present time, the department has only received comments from the Fire Department (attached as Exhibit 'A') and has not received comments from other reviewing agencies that includes the COK Public Works – Engineering Division (DPW), COK Water (DOW), the State

Department of Health (DOH) and the State Historic Preservation Division. However, comments are being anticipated and will be presented at the public hearing.

VIII. FINDINGS

1. The subject property (Lot 21-A-1) was part of Subdivision Application No. S-2020-10 that received final subdivision map approval on December 8, 2020. The subdivision involved a four (4) lot consolidation and resubdivision into three (3) lots; the subdivision action consolidated a parcel previously identified as Lot 21-A that is County zoned Open/Special Treatment – Public District with three (3) adjacent residential lots within the Kīlauea Subdivision that are within the Residential (R-6) zoning district. As a result, the total lot area of the subject parcel increased in size from 10,053 SF to 16,187 SF and became split zoned containing Residential District (R-6) and Open / Special Treatment – Public District.

2. Chapter 10, Article 2. North Shore Development Plan of the KCC

   A. The property is situated within the North Shore Planning area and is subject to the applicable regulations of the North Shore Development Plan (NSDP) that includes the following:

      1) Section 10-2.4 (e) entitled "Special Regulations Applicable to All Districts" states:

         "(1) Heights. Except as provided under Ordinance No. 416 (Flood Hazard Areas) Section 15-1.5(c)(4), height limits shall be as established in the Comprehensive Zoning Ordinance; provided, however, that no structure shall be higher than twenty-five (25) feet unless a greater height is authorized by the Planning Commission pursuant to a use permit after review (and recommendation) by the North Shore Improvement Advisory Committee."

         - As represented, the overall height of the proposed dwelling unit is 15' 2-7/8".

         - The proposed development is located within Zone 'X' of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map. FEMA has identified those areas within the Zone "X" to be outside of the 0.2% annual chance floodplain. This area is outside of a Tsunami Evacuation Zone and Dam Evacuation Zone.

3. CZO Development Standards

   A. The proposed development is subject to the standards prescribed in Sections 8-2.4, 8-4.3, 8-4.5 and 8-9.2 of the CZO. The following standards are considered:

1) Section 8-2.4 entitled "Uses in Districts" specifies that "single-family detached dwellings" are a permissible use within the Open (O) Zoning District, pursuant to Section 8-2.4(s)(9) of the CZO.

2) Section 8-4.3(b) entitled "Setback requirements" specifies:

   a. Front setback: Structure should be setback a minimum of ten (10) feet.

   b. Side setback: No structure shall be closer than five (5) feet or one-half (1/2) the total plate height whichever is greater.

   c. Rear setback: No structure shall be closer than five (5) feet or one-half (1/2) the total plate height whichever is greater.

   - As represented, the proposed dwelling unit has an overall height of 15' 2-7/8". The dwelling unit has a front setback of ten (10) feet, a rear setback of 10 feet and a side setback of twenty-five (25) feet to the East property line.

3) Section 8-4.5 entitled "Standards of Development Applicable to All Residential Development" specifies:

   a. Parking Requirements: A minimum of two (2) off-street parking spaces per dwelling unit shall be provided.

   - The Applicant has represented that the subject property has a total of four (4) off-street parking stalls; two stalls for the existing dwelling unit and two stalls for the proposed dwelling unit.

4) Section 8-9.2 entitled "Open District Development Standards" specifies:

   "(1) The amount of land coverage created, including buildings and pavement, shall not exceed ten percent (10%) of the lot or parcel area."

   - As represented, the total square footage of the Open District portion of the subject property is 6,134 square feet. As such, the total allowable lot coverage for the Open District portion is approximately 613.4 square feet. As proposed, the lot coverage for the development that includes the dwelling unit and concrete landings will be approximately 608 square feet.

5) Section 8-15.2 entitled "Additional Dwelling Unit in Residentially Zoned Lots" states:

"(a) Notwithstanding other provisions to the contrary, for any residentially zoned lot where only one single family residential dwelling is permitted, one (1) additional single family residential dwelling unit (attached or detached) may be developed, provided:

(1) All applicable County requirements, not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements."

4. Chapter 8, Article 11. Special Treatment Districts of the KCC

A. Section 8-11.1 entitled "Purpose" species:

"The Special Treatment District specifies the additional performance required when critical or valuable social or aesthetic characteristics of the environment or community exist in the same area as a parcel where particular functions or uses may be developed."

B. Section 8-11.3 entitled "Generally Permitted Uses, Structures and Development" states:

"All uses, structures, or development shall require a Use Permit, except repairs or modifications of land and existing structures that do not substantially change the exterior form or appearance of three (3) dimensional structures or land; provided that no uses, structures, or development shall be allowed in Special Treatment-Open Space Districts without express provision to the contrary…"

C. Section 8-11.4 entitled "Uses, Structures and Development Requiring a Use Permit" specifies:

"(a) Any use, structure or development permitted with or without a Use Permit in the underlying Use District in which the parcel or lot is located that is consistent with an approved plan for development in accordance with Sec. 8-11.5."

5. The subject property is NOT located within the Visitor Designation Area (VDA).

6. The State Land Use District (SLUD) designation is "URBAN" and the project is consistent with improvements typically situated with the urban designation, pursuant to Chapter 205 of the Hawai'i Revised Statutes (HRS).

7. Use Permit

Pursuant to Article 3 of the Comprehensive Zoning Ordinance (CZO), Chapter 8 of the Kauai county Code (1987), the purpose of the Use Permit Procedure is to assure the proper integration into the community of uses which may be suitable only in specific locations of a district, or only under certain conditions, or only if the uses are designed, arranged or conducted in a particular manner, and to prohibit the uses if proper integration cannot be assured. Section 8-3.2 of the CZO specifies a Use Permit may be granted only if the Planning Commission finds that the use meets the following criteria:

1) The use must be a compatible use;
2) The use must not be detrimental to persons or property in the area;
3) The use must not cause substantial environmental consequences; and
4) The use must not be inconsistent with the intent of the Comprehensive Zoning Ordinance (CZO) and General Plan.

IX. PRELIMINARY EVALUATION

In evaluating the Applicant's request to allow the construction of the proposed residence, the following shall be being considered:

1. General Plan
The proposed development satisfies the following policies of the General Plan, as taken from Section 1.3 and 1.4:

A. 1.3, entitled "VISIONS AND GOALS"

1) **Goal #1 "Sustainable Island"** – The proposed construction of a single-family residence in an existing residential neighborhood is an example of responsible growth that will meet future housing needs while using resources in a sustainable manner.

2) **Goal #2 "Unique and Beautiful Place"** – The single-story and modest design of the structure will ensure that the existing scenic views and character of Kilauea town will continue to be a unique and beautiful place.

3) **Goal #3 "A Healthy and Resilient People"** – The proposed residence will contribute towards equitable communities by providing a housing unit in Kilauea that is within walking distance to the school, to jobs, and to other services in the area.

4) **Goal #4 "An Equitable Place, with Opportunity for All"** – The proposed residence will promote a healthy and resilient community by being located in Kilauea Town and in walking distance to the school and nearby services.

B. Section 1.4, entitled "POLICIES TO GUIDE GROWTH"

1) **Policy #1 "Manage Growth to Preserve Rural Character"**– The proposed residence is considered infill development and will accommodate future growth within the existing residential neighborhood. By concentrating growth within the neighborhood, it will reduce the need to develop new areas outside of the town and will thereby preserve the rural character.

2) **Policy #2 "Provide Local Housing"**– The proposed residence will contribute towards the local housing supply.

3) **Policy #4 "Design Healthy and Complete Neighborhoods"** – The proposed application will promote a healthy and complete neighborhood by ensuring that residential housing is located in proximity to schools, jobs, and other services.

4) **Policy#6 "Reduce the Cost of Living"** – By directing the proposed development within the town, the proposed application will reduce the cost of living by being located within walking distance to schools, jobs, and other services.

5) **Policy#8 "Protect Kaua'i's Scenic Beauty"** – The single-story structure design will protect Kauai's scenic beauty by not obstructing or detracting from scenic views and natural landscapes in the surrounding area.

6) **Policy#17 "Nurture our Keiki"** - The proposed residence will nurture keiki by contributing towards a safe and walkable community with access to schools, parks, stores, and housing.

7) **Policy#18 "Honor our Kūpuna"** - The proposed residence will honor our kupuna by directing growth within the town core with safe and walkable access to services and other nearby amenities

2. Use Permit

Pursuant to Article 3 of the Comprehensive Zoning Ordinance (CZO), Chapter 8 of the Kauai county Code (1987), the purpose of the Use Permit Procedure is to assure the proper integration into the community of uses which may be suitable only in specific locations of a district, or only under certain conditions, or only if the uses

are designed, arranged or conducted in a particular manner, and to prohibit the uses if proper integration cannot be assured. Section 8-3.2 of the CZO specifies a Use Permit may be granted only if the Planning Commission finds that the use meets the following criteria:

1) The use must be a compatible use;
2) The use must not be detrimental to persons or property in the area;
3) The use must not cause substantial environmental consequences; and
4) The use must not be inconsistent with the intent of the Comprehensive Zoning Ordinance (CZO) and General Plan.

A. Based on the foregoing, the following aspects are considered:

1) **Compatible Use** – As previously noted, single-family detached dwellings are a permissible use within the Open (O) zoning district. The proposed development is compatible with the surrounding uses and will have no significant impact on the surrounding environment as the project site is located within a residential subdivision and the subject property is surrounded by similar parcels that are located within the State Land Use Urban District, and the County R-4, R-6, and Open zoning districts.

3. North Shore Development Plan Standards
The proposed development does not exceed the maximum allowable height limit of twenty-five feet as specified in Section 10-2.4 of the North Shore Development Plan and is consistent with its policies.

4. CZO Development Standards
As proposed, the project complies with the setback, lot coverage and off-street parking requirements for development within the Open/Special Treatment – Public (O/ST-P) zoning district as specified in Sections 8-2.4, 8-4.3, 8-4.5 and 8-9.2 of the Comprehensive Zoning Ordinance (CZO).

Based on the existing zoning and size of the parcel, the proposed residential structure will be considered an Additional Dwelling Unit (ADU), pursuant to Section 8-15 of the CZO. Prior to building permit approval, the Applicant should complete and execute an ADU Clearance Form per Section 8-15.2(a).

5. Native Hawaiian Traditional and Cultural Rights
The subject property has been developed and in residential use since 1972. The applicant has interviewed kupuna who are familiar with the area and is unaware of any current traditional and customary practices on the subject property. Based on the Applicant's consultation with kupuna and evaluating historical information that was available to the department, the department finds that the proposed Project involving a developed parcel should have no impact on any known Hawaiian traditional or customary practices for the following reasons:

- There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.
- There are no special gathering practices taking place within any portion of the Project Site.
- The Project will not detrimentally affect access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.
- There are no known religious practices taking place within the Project Site.
- There are no known pre-contact cultural or historic sites or resources located within the Project Site.
- There are no known burials within the Petition Area.

X. PRELIMINARY CONCLUSION

Based on the information contained in the Director's Report Findings and Evaluation, the Planning Department concludes the following:

1. The project will not have significant adverse impacts to the environment or the surrounding area. The proposal is generally in compliance with the criteria outlined for the granting of a Use Permit and Class IV Zoning Permit;

2. The proposed development should not be detrimental to persons, property, or the environment in the surrounding area; and

3. The development is consistent with the objectives/goals/policies of the County General Plan and Comprehensive Zoning Ordinance.

The Applicant should institute the "Best Management Practices" to ensure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those in the surrounding area of the proposal.

The Applicant shall implement to the extent possible sustainable building techniques and operational methods for the project.

XI. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion, it is hereby recommended Class IV Zoning Permit Z-IV-2022-7 and Use Permit U-2022-7, be **APPROVED** subject to the following conditions:

1. The project shall be constructed as represented. Any changes to the operation and/or the respective structures shall be reviewed by the Planning Director to determine whether Planning Commission review and approval is warranted.

2. The proposed dwelling unit shall not be utilized for any transient accommodation purposes. It shall not be used as a transient vacation rental (TVR) or as a homestay. This restriction shall be incorporated into the deed restrictions of the subject parcel in the event the property is sold to another party, draft copies of which shall be submitted to the Planning Department prior to building permit application approval.

3. In order to ensure that the project is compatible with its surroundings and to minimize the visual impact of the structures, the external color of the proposed dwelling and landscape plan shall be of moderate to dark earth-tone color. The proposed color scheme should be submitted to the Planning Department for review and acceptance prior to building permit application.

4. Prior to building permit approval, the Applicant shall complete and execute an ADU Clearance form for the proposed residential unit.

5. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050 to determine mitigation measures.

6. In order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, if external lighting is to be used in connection with the proposed project, all external lighting shall be only of the following types: downward-facing, shielded lights. Spotlights aimed upward or spotlighting of structures shall be prohibited.

7. The Applicant shall develop and utilize Best Management Practices (B.M.P's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

8. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, State Historic Preservation Division-DLNR, and the County Departments of Public Works, Transportation, and Water.

9. The Planning Commission reserves the right to revise, add, or delete conditions of approval in order to address or mitigate unforeseen impacts the project may, create, or to revoke the permits through the proper procedures should conditions of approval not be complied with or be violated.

10. The Applicant is advised that prior to construction and/or use, additional government agency conditions may be imposed. It shall be the Applicant's responsibility to resolve those conditions with the respective agency(ies).

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for April 12, 2022 whereby the entire record should be considered prior to decision-making. The entire record should include but not be limited to:

a. Pending government agency comments;
b. Testimony from the general public and interested others; and
c. The Applicant's response to staff's report and recommendation as provided herein.

By Kenneth A. Estes
KENNETH A. ESTES
Planner

Approved & Recommended to Commission:

By
KA'ĀINA S. HULL
Director of Planning

Date: 3/16/2022

EXHIBIT 'A'

(AGENCY COMMENTS)

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Kenneth) February 10, 2022

SUBJECT: Class IV Zoning Permit Z-IV-2022-7, Use Permit U-2022-7, Dwelling, Single Family Detached
Tax Map Key: (4) 5-2-006:014, Keopele V. & Ashley H. Mcbride, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☒	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☐	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

Property to maintain proper fire department access requirements

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

Application for
Special Management Area Use Permit:
Hanalei Traders
Bioengineered River Bank Stabilization

December 2021

Submitted to:
Kaua'i County Planning Department
4444 Rice Street, Ste A473
Lihue, HI 96766

Prepared for:
Hanalei Traders, Inc.
P.O. Box 511
Hanalei, HI 96714

Prepared by:

SUSTAINABLE RESOURCES GROUP INTN'L, INC.
111 Hekili Street, Suite A373
Kailua, HI 96734
Tel/Fax: 808-356-0552 • www.srgii.com

This page intentionally left blank

Contents

Contents i
Acronyms ii
1 Applicant and Property Information 1
1.1 Applicant Information 1
1.2 Introduction 1
1.3 Property Information 1
2 Property Features 2
2.1 Location 2
2.2 Property Features and Boundaries 2
2.3 State Land Use District, County Zone and Kaua‘i General Plan Land Use Designation 2
2.4 Flood Zone 2
2.5 Proposed Structures 2
2.6 Topography 2
2.7 Environmentally Sensitive Areas 2
2.8 Certified Shoreline / Shoreline Setbacks 3
3 Project Description 3
4 Summary of Permits 4
5 Consistency with the County of Kaua‘i General Plan and Zoning Ordinances 4
5.1 County of Kaua‘i General Plan - Section 1.3: Visions and Goals 4
5.2 County of Kaua‘i General Plan – Section 1.4 Policies to Guide Growth 5
5.3 County Zoning Ordinance 6
6 Land Use of the Project Site and Surrounding Area 7
7 Potable Water, Stormwater, Wastewater, Solid Waste Disposal, and Sewage Disposal 7
8 Protected Species 8
9 Environmental Assessment 10
10 Historic and Cultural Considerations 11
10.1 SHPD Consultation 11
10.2 Ka Pa‘akai o ka ‘Aina Analysis (Native Hawaiian Customary and Traditional Rights) 11
10.3 Community Access 12
11 Impacts on Surrounding Area 12
12 BMPs 13

13 Water Quality Monitoring 13
14 SMA Considerations 13
14.1 Recreational Resources 13
14.2 Historic Resources 13
14.3 Scenic and Open Space Resources 14
14.4 Coastal Ecosystems and Coastal Hazards 14
14.5 Economic Uses 14
15 Conclusion 14
Appendix A. Construction Estimate A-1
Appendix B. Photos B-1
Appendix C. Figures C-1
Appendix D. FONSI D-1
Appendix E. Consultation E-1
Appendix F. Applicable Monitoring and Assessment Plan F-1
Appendix G. Special Management Area Permit Assessment Form G-1

Acronyms

BMPs	Best Management Practices
CWRM	Commission on Water Resource Management
CZM	Coastal Zone Management
CZO	Comprehensive Zoning Ordinance
DLNR	Department of Land and Natural Resources
EA	Environmental Assessment
ESA	Endangered Species Act
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawaii Administrative Rules
MBTA	Migratory Bird Treaty Act
MSL	Mean Sea Level
NWP	Nationwide Permit
OHA	Office of Hawaiian Affairs
SHPD	State Historic Preservation Division
SMA	Special Management Area

1 Applicant and Property Information

1.1 Applicant Information

Applicant: Hanalei Traders, Inc., 5-5016 Kuhio Hwy, Hanalei, HI 96714, 808-346-2561

Agent: Andrew Hood, 111 Hekili St. Suite A373, Kailua, HI, 96734, 808-261-0862, ahood@srgii.com

Site Address: 5-5016 Kuhio Hwy. Hanalei, HI, 96714

TMK: (4) 5-5-010:067 **Property Size:** 2.32 acres

State Land Use Designation: Urban District **County Zoning Designation**: Commercial

General Plan Designation: Natural

Nature of Development: Bioengineered River Bank Stabilization

1.2 Introduction

The Hanalei Traders Bioengineered River Bank Stabilization (herein referred to as biowall) project seeks to stabilize an eroding portion of river bank along the Hanalei River. The project was previously granted a Special Management Area (SMA) Minor permit dated April 7, 2017. The Hanalei Traders was unable to initiate the project prior to the expiration of that permit due to a catastrophic flood event that occurred in April 2018 that caused significant structural damages on the property and resulted in financial hardship. The estimated cost of the project in July 2016 was $485,000. Since that time the project costs have increased to $600,000 due to increased material and labor costs, and thus an application for a SMA Use Permit is being submitted. Other than cost, no changes to the project have been made since the previous application. (Construction estimate is included in Appendix A).

1.3 Property Information

The project site is located on the Hanalei Traders property, on the North Shore of Kauaʻi, Hawaiʻi. The property is bordered by Kuhio Highway to the south/southeast, Hanalei River to the north and east, and a privately owned parcel to the west. The property has one large building (Hanalei Dolphin Center), five rental cottages, a small shed, landscaped grounds with walking paths, and several permanent cement outdoor eating tables scattered on the lawn area between the restaurant and the Hanalei River. The Hanalei Dolphin Center lies on the southern portion of the property approximately 20 ft from Kuhio Highway and houses a restaurant, fish market, and gift shop. There are two gravel parking areas that service the Center, one to the east (adjacent to the highway) and the other to the north (adjacent to the river). The cottages are north of the Center and are aligned along and setback from the top of the west bank of the river. Each cottage has designated parking off the gravel driveway that provides access from the Center's north parking lot.

The river bank is eroding at the project site, resulting in an unstable bank that is eight to twelve feet high from its top down to the bed of the river. During high flows the bank erodes inland, resulting in loss of land and narrowing the distance between the top of the bank and buildings and other structures on the property. The opposite bank of the river is overgrown with hau bush (*Hibiscus tiliaceus*) that has encroached into the river over decades. Hanalei Traders, Inc. proposes to stabilize approximately 450 ft of eroding river bank by installing a bioengineered design to address erosion problems and to protect private property and existing infrastructure. Photos of the property and project site are included in Appendix B.

2 Property Features

2.1 Location

The subject property is in Hanalei, Kaua‘i, Hawaii, shown on the Location Map (Appendix C, Figure 1) and on the Tax Map (Appendix C, Figure 2).

2.2 Property Features and Boundaries

The subject property is 2.32 acres. The boundaries as well as several features of the property such as the Hanalei Dolphin Building, the cottages, the *‘auwai* and the highway are shown on Figure 3 (Appendix C).

2.3 State Land Use District, County Zone and Kaua‘i General Plan Land Use Designation

As shown on the State Land Use District Map (Appendix C, Figure 4), the subject property is in the Urban District. The subject property is designated as Commercial in the County of Kaua‘i Comprehensive Zoning Ordinance (CZO). As shown on the Kaua‘i General Plan Land Use Designation Map (Appendix C, Figure 5), the subject property is designated Natural.

2.4 Flood Zone

The Flood Insurance Rate Map (FIRM) Map (FM1500020055E) (Appendix C, Figure 6) shows that the subject property is within Flood Zone AE Floodway (the Special Flood Hazard Area). Zone AE Floodway is within the 100-year floodplain, with a 1% annual chance of a 100-year flood occurring or being exceeded annually and a 26% chance of flooding over the life of a 30-year mortgage. The FIRM Map also shows the project site is within the tsunami evacuation zone. Construction of the biowall will not change the chance of flooding on the Hanalei Traders property, or any of the neighboring properties. The biowall will not change the base flood elevation on the subject property or on properties up and downstream.

2.5 Proposed Structures

The extent of the biowall being used for river bank stabilization is shown in Figure 7 (Appendix C). Figure 8 (Appendix C) depicts a typical section of the biowall.

2.6 Topography

Topography at the project site and the property in general is relatively flat, as is normal within a floodplain area, with elevations ranging from +7.5 to +5 ft mean sea level (msl). The river bank is a near vertical drop of between eight and twelve feet from the subject property edge down to the bed of the river. The proposed project with not change the topography or any of the drainage patterns of the property. No grading will occur. Light grubbing will be conducted to remove the non-native vegetation from the top of the river bank down to the normal high water line along the eroding bank within the project area. Removal of the non-native vegetation within the project site is necessary to complete the biowall.

2.7 Environmentally Sensitive Areas

The only environmentally sensitive areas near the construction site of the biowall are an area of non-native plants along the river bank that are occasionally used by endangered waterbirds for feeding and the waters of the Hanalei River. Practices to avoid any adverse impacts to endangered species and the Hanalei River are described in Section 8 and Section 12.

2.8 Certified Shoreline / Shoreline Setbacks

The subject property is not located along the shoreline as defined in HRS Chapter 205A. As a result, the proposed biowall is not subject to the provisions of the Shoreline Setback Ordinance.

3 Project Description

Hanalei Traders, Inc. proposes to install a bioengineered river bank stabilization design along 450 feet of the Hanalei River. The project will be constructed occur over a twelve-week period beginning shortly after the acquisition of all required permits. Installation of Best Management Practices (BMPs) and construction is expected to take ten weeks, and two weeks have been added to account for potential work stoppages. The biowall will be constructed in increments of approximately 50 linear feet, in that all steps involved in constructing the biowall will be completed before construction begins on the next increment. Construction of each increment will take five days to complete. In-channel work, consisting of placement of boulder rip rap, will only occur during base flow periods as indicated on the Hanalei River gauge station and during periods of no rainfall. This will ensure that high flow events will not occur during in-channel construction. The project involves the following:

- Installation of structural and non-structural site-specific BMPs at the property prior to any delivery of materials or construction on the biowall (Appendix C, Figure 9).
- Installation of floating turbidity barrier prior to any work on each increment.
- Light grubbing to remove existing non-native vegetation from the river bank.
- Placement of washed boulders [2 to 3 ft diameter] from existing bed of river channel against toe of the bank up to the ordinary high water level (1.3 ft msl). Boulders will protect the toe of the bank from erosion and provide the foundation for placement of other materials. Equipment operation for this task will be conducted from the top of the river bank, not “in-water”. A total of 216 cubic yards of washed boulders will be required.
- Placement of woven, porous, geotextile bags filled with grow medium made up of 80% sand and 20% compost from the top of the boulders to the top of the existing bank.
- Use of geogrid fabric to secure and anchor the interlocking geotextile bags to the river bank.
- Installation of plants (three species of native sedges and two species of native shrubs).
    - Sedges will be placed between geotextile bags and geogrid fabric after each layer of bags has been installed.[1]
    - Woody native or Polynesian shrubs will be placed along top of existing bank after completion of the biowall.

[1] The Department of the Army permit requires that no non-native plant species introductions to the river shall result from project related activities.

4 Summary of Permits

Table 1 identifies the status of permits and approvals required for project construction.

Table 1. Required Permits and Approvals

Permit or Approval	Agency	Completed/Permit #	Expires
Nationwide Permit (NWP) #13 (CWA Section 404)	U.S. Army Corps of Engineers	Approval Received: March 27, 2018 Department of the Army File No. POH-2009-00354	March 19, 2022*
Environmental Assessment	Hawai'i DLNR	FONSI Issued October 23, 2016	N/A
CZM Consistency Determination	State of Hawai'i, Office of Planning	Approval Received: March 23, 2018 DTS201803220914NA Department of the Army File No. POH-2009-00354	Valid as long as the NWP from the Army is valid.
Right of Entry	Hawai'i DLNR Land Division, CWRM	Approval Received: June 5, 2018 Ref. No. 13KD-074	N/A
Special Management Area Permit	County of Kaua'i Planning Department	This Application (SMA Use Permit)	-------
Zoning Permit Application	County of Kaua'i Planning Department	Submittal accompanying the SMA Use Permit Application	-------
Stream Channel Alteration Permit	Hawai'i DLNR Land Division, CWRM	Approval Received: August 17, 2021 Permit No. 5687.2	August 17, 2023
Completion Report	Hawai'i DLNR Land Division, CWRM	To be submitted upon completion of the project	-------

*The permit will be renewed prior to construction of the biowall if construction is not anticipated to be complete by the expiration date.

5 Consistency with the County of Kaua'i General Plan and Zoning Ordinances

The proposed project is compatible with all applicable components of the County of Kaua'i General Plan. The proposed project is consistent with the goals and objectives described in the North Shore Development Plan and does not violate any County of Kaua'i Comprehensive Zoning Ordinances.

5.1 County of Kaua'i General Plan - Section 1.3: Visions and Goals

Section 1.3 (Vision and Goals) of the County of Kaua'i General Plan details the overarching goals that will provide for the desired long-range outcome. The four goals are: A Sustainable Island; A Unique and Beautiful Place; A Healthy and Resilient People; and An Equitable Place, with Opportunity for All.

Goal: A Sustainable Island. The proposed project would support this goal by protecting physical infrastructure, both natural (river bank) and man-made (cottages) with a natural systems engineering design, which is a sustainable solution. The streambank stabilization project would reduce the amount of soil being discharged into the Hanalei River during heavy rain events, and support establishment of native

plants. Bank stabilization will also help support a small, locally owned business in Hanalei by protecting its revenue generating elements.

Goal: A Unique and Beautiful Place. Bank stabilization will protect the livelihood of a small business in Hanalei that supports the visitor industry, helping to provide adequate facilities for welcoming tourists to rural Hanalei. If the project is not completed, the river bank in front of the Hanalei Traders cottages will continue to erode at an alarming rate, with the eventual outcome of the buildings being undermined and deemed unsafe for occupancy. This would eliminate a revenue source for the business / property owner.

Goal: A Healthy and Resilient People. The bank stabilization project is planned to help build resilience by employing a natural systems engineering approach to protect elements of the built environment. Recent flooding, in part resulting from a changing climate (more frequent and higher intensity) has had a negative effect on the site in the form of significant bank erosion. This project will help stabilize the bank and minimize potential future impacts from flood events.

Goal: An Equitable Place, with Opportunity for All. The bank stabilization project will allow the property and small business owner to continue to provide hospitality services in the same area that they call home, Hanalei.

5.2 County of Kaua'i General Plan – Section 1.4 Policies to Guide Growth

Section 1.4 (Polices to Guide Growth) of the County of Kaua'i General Plan outlines nineteen policies to address the most important issues to Kaua'i residents regarding existing issues and future growth. Information on how the project is consistent with these policies is included in Table 2.

Table 2. Project Consistency with County of Kaua'i General Plan – Section 1.4 Policies to Guide Growth

Policy #	Policy Title	Project Consistency
1	*Manage Growth to Preserve Rural Character*	N/A
2	*Provide Affordable Housing While Facilitating a Diversity of Privately-Developed Housing For Local Families*	N/A
3	*Recognize the Identity of Kaua'i's Individual Towns and Districts*.	The Hanalei Cottages and the Dolphin Restaurant have been located on the edge of Hanalei since the early 1970s and are part of the fabric of the town. Having small cottages for hosting visitors to Hanalei helps preserve the rural character of the area.
4	*Design Healthy and Complete Neighborhoods*	Having a thriving locally-owned small business in the tourist industry helps keep jobs local to Hanalei.
5	*Make Strategic Infrastructure Investments*	N/A
6	*Reduce the Cost of Living*	N/A
7	*Build a Balanced Multimodal Transportation System*	N/A
8	*Protect Kaua'i's Scenic Beauty*	The proposed biowall will aid in preserving the scenic beauty along a stretch of the Hanalei River. The project would reduce the amount of soil being discharged into the Hanalei River during heavy rain events. The river bank will be stabilized with native plants, which will add to the scenic beauty of the property for

Policy #	Policy Title	Project Consistency
		visitors to the restaurant and the cottages, as well as recreational users of the Hanalei River.
9	*Uphold Kaua'i as a Unique Visitor Destination*	Having a thriving locally-owned small business in the tourist industry helps limit the need for additional resort growth in the area.
10	*Help Business Thrive*	Hanalei Traders is a long-standing local small business and project implementation would allow them to remain in business.
11	*Help Agricultural Lands Be Productive*	N/A
12	*Protect Our Watersheds*	The project would reduce the amount of soil being discharged into the Hanalei River during heavy rain events.
13	*Complete Kaua'i's Shift to Clean Energy*	N/A
14	*Prepare For Climate Change*	The project would help protect the Hanalei Traders property from impacts related to sea level rise resulting from climate change.
15	*Respect Native Hawaiian Rights and Wahi Pana*	No Native Hawaiian cultural sites, customary gathering rights, or traditions would be affected by project implementation.
16	*Protect Access to Kaua'i's Treasured Places*	Project implementation would not change access to the Hanalei River, nor would it impact any subsistence or customary practices.
17	*Nurture Our Keiki*	N/A
18	*Honor Our Kupuna*	N/A
19	*Communicate with Aloha*	N/A

5.3 County Zoning Ordinance

The Hanalei Traders property, including the project area, is located within the County of Kaua'i CZO Commercial District. CZO Section 2.4(s) outlines the Uses and Structures permitted in the CZO Commercial District, which includes accessory uses and structures.

The purposes of the Commercial District per CZO Article 6 are:

(a) To designate areas suitable for commercial and public or private business activities distributed so as to supply goods and services to the public in a convenient and efficient manner.
(b) To relate commercial and business activities to established or projected transport, utility, and community patterns so that they may contribute to the general health, safety, and welfare of the public.
(c) To assure that commercial and business development and uses will not detract from the environmental qualities of the surrounding areas.

With respect to purpose "c", construction of the biowall will improve the environmental quality of the Hanalei Traders property in that it will no longer be eroding into the river. Construction of the biowall will improve water quality in the river since erosion of the river bank in this area is currently contributing to turbidity and increased suspended solids in the river. Construction of the biowall will not affect any of the surrounded properties and will not detract from the environmental qualities of the surrounding areas.

Development standards for commercial properties are outlined in CZO Article 6, Section 8.6(s). The focus of Article 6 is on buildings and their construction (e.g. setbacks, parking, height limitations). One section that is applicable to the project is Section 8-6.3 (g)(4) which states, "All uncovered areas shall be landscaped with living plant material". Project plans include adding living plant material to all areas where non-native plants will be removed for construction of the biowall.

6 Land Use of the Project Site and Surrounding Area

The subject property is located along the Hanalei River estuary, approximately one mile upstream of the Hanalei River mouth at Hanalei Bay. It is a landscaped parcel with several buildings used for commercial purposes (Section 1.3). The proposed project site (the river bank) does not contain any infrastructure, nor it is used for any purpose except river viewing by people.

Water velocities and depths of the river in the vicinity vary with ocean tidal flux and river discharges. Water surface elevations are highest when high discharges are coincident to rising tide levels, and lowest during base flow discharges at mean low low tides. The river channel geometry in this stretch has been altered due to growth of hau bush into the channel, predominantly from the east side of the river. A review of historic air images finds that the channel cross section surface, in the stretch where the subject property is located, has decreased in sections where hau bush has encroached by 20 to 30 feet, thus changing hydrodynamics in that section of the river Surface velocities along the subject property in general (not including flooding discharges) do not appear to exceed three feet per second.

Vegetation found along the river bank and in the river includes non-native emergents and riparian species: California grass (*Brachiria mutica*), wedelia (*Sphagneticola trilobata*), Chinese violet (*Asystasia gangetica*) and umbrella flatsedge (*Cyperus involucratus*). The rest of the property is grassy lawn and landscape plants including non-native, Polynesian introduction, and a few native plants, though the natives do not necessarily represent vegetation that was at the site prior to development. Aside from the river and low areas of the river bank, within the property there is little to no habitat suitable for native species to permanently inhabit.

Ranching (cattle and/or buffalo) occurs on two properties adjacent to the Hanalei Traders property, the Princeville Ranch directly upstream and across Kuhio Highway (south), and the Mowry property across the river (east) (Appendix C, Figure 2). Princeville Ranch also contains some taro *loʻi* in the portion of property closest to the Hanalei Traders property, across the highway. The boundary of the Princeville Ranch property is aligned along an *ʻauwai* that empties into the Hanalei River at the northern most tip of the property. It is used to access the Hanalei River by kayakers and paddlers who rent water equipment from the neighboring property. Further west of the Hanalei Traders property is a residential area.

7 Potable Water, Stormwater, Wastewater, Solid Waste Disposal, and Sewage Disposal

Potable water is obtained from the Department of Water County of Kauaʻi. Storm water runoff from most of the property drains to the west via sheet flow to the *ʻauwai*. Since much of the site has landscaped pervious surfaces surrounding the buildings and other impervious surfaces, storm water runoff is limited. There are no improved drainage systems or natural drainage channels that carry storm water into either the *ʻauwai* or the Hanalei River. Wastewater from the Hanalei Center and the cottages is treated onsite via a series of septic tanks. A leach field located to the west of the cottages is used to dispose of treated effluent. The project does not involve any changes to stormwater drainage, wastewater treatment, or sewage disposal. Freshwater from the potable water system may be used to irrigate the newly installed landscape plants on the top of the river bank, until they become established.

Solid waste generated by the restaurant, fish market, and cottages is disposed of into onsite dumpsters and brought to the County of Kaua'i transfer station. Construction of the biowall will result in very little construction waste. Any green waste generated will be removed from the site and disposed of at the nearest transfer station with a Greenwaste Diversion Program (likely the Hanalei Transfer Station). All solid waste generated will be disposed of at a solid waste disposal facility that complies with the applicable provisions of Title 11, Hawaii Administrative Rules (HAR), Chapter 11-58.1, "Solid Waste Management Control". There will be no open burning of waste, on or off site.

8 Protected Species

Vegetation at the subject property consists of non-native emergents and riparian species along the bank and in the river, and landscape plants and grassy lawn above the bank and throughout the rest of the property. There is no sensitive vegetation (i.e. rare, threatened, endangered, or proposed for listing species) on the property.

There are native and non-native animals, including mammals, birds, reptiles, amphibians, crustaceans, mollusks, insects, and fish that are found in the Hanalei River and on adjacent properties. Most of the animals that potentially use the project site and adjacent river are transients through the area. This includes: one federally listed endangered bat species; four federally listed endangered waterbirds; one State listed endangered bird; several migratory waterbirds protected under the Migratory Bird Treaty Act (MBTA); and one federally threatened species of sea turtle. Protected species that are known to occur, or potentially occur, in the vicinity of the project site are listed in Table 3.

Table 3. Protected Species that Potentially Occur in the Vicinity of the Project Site

Species	Common / Hawaiian Name	Status	Occurs at Project Site
Mammals			
Lasiurus cinereus	Hawaiian hoary bat / ʻŌpeʻapeʻa	Endangered	Potentially
Birds			
Anas acuta	Northern pintail / Koloa mapu	Protected MBTA	Potentially
Anas clypeata	Northern shoveler / Koloa moha	Protected MBTA	Potentially
Anas wyvilliana	Hawaiian duck	Endangered / Protected MBTA	Potentially
Asio flammeus sandwichensis	Hawaiian short-eared owl / Pueo	State listed Endangered	Potentially
Bulbulcus ibis	Cattle egret	Protected MBTA	Confirmed
Fulica alai	Hawaiian coot / ʻAlae keʻokeʻo	Endangered / Protected MBTA	Potentially
Gallinula chloropus sandvicensis	Hawaiian common moorhen / ʻAlae ʻula	Endangered / Protected MBTA	Confirmed
Tringa incana (formerly Heteroscelus incanus)	Wandering tattler / ʻUlili	Protected MBTA	Potentially

Species	Common / Hawaiian Name	Status	Occurs at Project Site
Himantopus mexicanus knudseni	Hawaiian stilt / Ae'o	Endangered / Protected MBTA	Potentially
Nycticorax nycticorax hoactli	Black-crowned night-heron / 'Auku'u	Protected MBTA	Confirmed
Pterodroma sandwichensis	Hawaiian petrel	Endangered / Protected MBTA	Confirmed
Puffinus newelli	Newell's shearwater	Threatened / Protected MBTA	Confirmed
Reptiles			
Chelonia mydas	Green sea turtle / Honu	Threatened	Confirmed

Implementation of the proposed project will not result in any adverse effects to native wildlife species, including those protected under the Endangered Species Act (ESA) and the MBTA. Construction BMPs will be used to avoid any adverse impacts on fish and wildlife (Section 12 and Appendix C, Figure 9). Additionally, as recommended by Department of Land and Natural Resource (DLNR) Department of Fish and Wildlife, the following practices to avoid any adverse impacts specifically to birds and bats will be followed. Two weeks prior to the start of construction a knowledgeable wildlife biologist will inspect the site to determine if there are any nesting waterbirds. In the unlikely event that nesting waterbirds are present, construction will be delayed until all chicks have fledged and left the area. The project will not entail any nighttime work or the use of night construction lights, which if used could attract Newell's shearwaters (*Puffinus newelli*) or Hawaiian petrels (*Pterodroma sandwichensis*) and result in birds becoming disoriented and falling to the ground. No trees greater than 15 ft in height will be removed.

In the long term, implementation of the proposed project will likely be beneficial to fish and wildlife (primarily waterbirds) due to improved habitat conditions in the immediate vicinity of the subject property, as well as decreasing sedimentation in the river in general.

9 Environmental Assessment

An Environmental Assessment (EA) was completed for this project and a Finding of No Significant Impact (FONSI) was issued on October 23, 2016 by DLNR Land Division (Appendix D). Informal Section 7 consultation with the U.S. Fish and Wildlife Service, National Historic Preservation Act Section 106 consultation with the DLNR State Historic Preservation Division (SHPD), and agency and community outreach were conducted during the EA process. Appendix E lists the agencies, citizen groups, and individuals contacted. Relevant points of the EA are discussed below. Table 3 summarizes the environmental consequences detailed in the EA for the proposed action and no action alternatives. The EA can be viewed at http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2016-10-23-KA-FEA-Hanalei-River-Bank-Stabilization.pdf.

Table 4. Summary of Environmental Consequences

Environmental Variable	Alternative 1: Proposed Action	Alternative 2: No Action
	Effect	Effect
Physical Factors		
Location, Land Use, and Infrastructure	Provide protection of existing infrastructure.	Instability of river bank poses threat to infrastructure and land use.
Topography, Geology, and Soils	Greatly reduce erosion.	Continuing erosion.
Water Resources	Negligible effect due to employment of BMPs.	Continuing adverse impacts of increased sedimentation and turbidity.
Air Quality	Negligible effect due to employment of BMPs.	No impacts or changes.
Noise	Small and temporary increase in noise at the subject property.	No impacts or changes.
Scenic Resources	Create a more desirable scenic state both on the river bank and in the water clarity.	Continuing adverse impacts of increased turbidity in the river and lack of vegetation on the river bank.
Biological Factors		
Vegetation	Removal of non-native vegetation and installation of native and Polynesian vegetation.	Continuing removal of existing vegetation from river bank.
Fish and Wildlife	Beneficial effects due to habitat improvements, primarily for fish and native water birds.	Continuing adverse impacts of increased sedimentation.
Habitat	Habitat improvements.	Continuing adverse impacts of increased sedimentation.
Socioeconomic and Cultural Factors		
Socioeconomic Resources	Several benefits to local economy including temporary contractor jobs, maintaining employment of current employees, long term income for property owners and supporting tourism input into the local economy. Benefits residents and tourists through improvements to scenic resources, water quality, and habitat.	Loss of infrastructure value and income. Loss of tax and tourist revenue. Jeopardizes employment of some locals
Recreational Resources	Beneficial due to decreased sedimentation and turbidity.	No impacts or changes.
Historical and Cultural Resources	No impacts or changes.	No impacts or changes.

10 Historic and Cultural Considerations

10.1 SHPD Consultation

Consultation with SHPD was conducted throughout the development of the EA. SRGII consulted with SHPD Kaua‘i to determine if there were any historic or cultural features present within the project area or on the subject property. A review of the National and State Registers of Historic Places and consultation with SHPD revealed that there are no historic properties listed or eligible for listing within or directly adjacent to the subject property. In October 2015 the lead archeologist from the SHPD Kaua‘i office performed a field inspection at the subject property. Although this was not a formal archeological survey, the field inspection did not reveal any positively identified historic or cultural features. The presence of some vertically aligned rocks set perpendicular to the river bank between and adjacent to Cottages 4 and 5, as well as a pile of rocks fronting Cottage 5 just inland from the top of the river bank, was noted. Although the origin of the rocks is not known, they are likely landscaping features that were placed on the property for aesthetic reasons.

The two rock structures located on the property will not be moved or otherwise impacted during any construction work. Although the rocks are not believed to be cultural or historic features, to ensure no damage occurs to the rocks, the construction documents that the contractors will review and sign off on before commencing work will identify their location and show equipment ingress and egress paths that avoid the rock features. Any other rock features encountered on the property that have not been identified will also be protected from any construction impacts. To ensure that any historic or cultural features will be properly identified, an archeologist will be onsite to monitor the construction and inspect the project site, including the river bank, during the first two days of project implementation, which would include the entire grubbing phase. Safeguards and mitigation strategies to avoid any impacts to potential historic or cultural features will be included on construction drawings and site plans.

10.2 Ka Pa‘akai o ka ‘Aina Analysis (Native Hawaiian Customary and Traditional Rights)

The proposed development will not affect any Native Hawaiian customary and traditional rights protected under Article XII, Section 7 of the Hawai‘i State Constitution. The proposed project will not change existing access to the Hanalei River, adversely affect any natural resources (e.g. plants, wildlife, water quality) in the area, or hinder in any fashion the ability of Native Hawaiians to continue to exercise all rights, customarily and traditionally employed for subsistence, cultural, and religious purposes. Other than the river, there are no known valued cultural or historic resources that will be affected by implementation of the project.

During September and October 2015, sixteen non-governmental organizations and individuals, as well as the Office of Hawaiian Affairs (OHA) and the DLNR SHPD, were contacted via email and mailed letters to inquire if they had any knowledge of on-going traditional activities, rights, or resources that might occur in the vicinity of the proposed project, specifically within and along this section of the Hanalei River (Appendix E). Activities were defined to include, but not be limited to, cultural practices, subsistence activities, and religious and spiritual customs. SRGII received one written response to this inquiry, from the Hanalei Canoe Club. The Canoe Club comments were mainly ecological in nature, however they did remark that the installation work should not impede river access for the Club or any other river users. SRGII responded to all comments and included that the installation will not impede river access. Both OHA

and SHPD responded via phone that they did not have any knowledge of on-going traditional activities, rights, or resources that might occur in the vicinity of the proposed project.

10.3 Community Access

There is no public access to the river provided from the Hanalei Traders property. Construction of the biowall would not change public access to or use of the river in any way.

11 Impacts on Surrounding Area

The project is located in the riparian area of the Hanalei River. Implementation of the project will not involve any chemical herbicides or fertilizers. The project will not require any machinery to be placed in the river to complete construction. Impacts to the surrounding area will be negligible or mitigated through project design and project BMPs (Section 12 and Appendix C, Figure 9).

All vegetation removal will be done by light digging, using the minimum amount necessary to remove plants. Sedges newly installed within the biowall, will be planted in a medium made up of 80% sand and 20% compost. No additional fertilizer or other soil amendments will be used. Since no fertilizers will be used, and the amount of compost used in the geotextile bags is very low, there is no expected increase in nutrients (specifically nitrogen and phosphorus) to any surrounding waters.

Plants installed as part of the design are expected to root into the geotextile bags and existing bank material. The sedges will provide food source and cover for several endemic waterbirds that periodically utilize this section of the river. The plants will shade the geotextile bags, decreasing their exposure to UV degradation and increasing their life expectancy.

Large rocks used below the normal low water level are expected to provide habitat for native fish. The river bed and banks are currently made up of fine gravels and silts. Rocks will enhance instream habitat by increasing surface area for algae and other vegetative matter that grows on rock surfaces, which may be utilized by native and endemic fishes. The rocks will also provide cover from predators for some fish.

Installation of the biowall will not affect the floodplain, any shoreline processes, the tsunami evacuation zone, any geologically hazardous land, estuary, freshwater, or coastal water. Installation of the biowall will have a positive effect on the estuary reach of the Hanalei River by enhancing water quality through erosion control.

12 BMPs

BMPs will be used during construction to reduce the potential for releasing sediment, including all applicable BMPs outlined in the *Interim Construction Best Management Practices for Sediment and Erosion Control for the County of Kaua'i*. Prior to commencement, and during all project related activities, the site will be inspected by the Project Manager to verify that all activity-based BMPs are in place. BMPs will be installed in the equipment staging area, the stockpile area, the vehicle wash down area, and the biowall construction site prior to any site disturbance. Locations of the BMPs are shown in Figure 9 (Appendix C).

Grubbing to remove non-native plants will only be done during low tides and outside of flood season. Equipment operation for grubbing will be conducted from the top of the river bank, not "in-water" (no equipment will be placed within the bed of the river channel). Any parts of the mechanical equipment, such as the bucket of the tracked excavator used to place the boulders, will be cleaned of pollutants including any petroleum products (e.g. grease and oil) that could be released into the river. A silt curtain, made of a polystyrene geotextile fabric, with a top floatation device and an anchor chain, will be temporarily placed in the river to catch sediments that may be released during construction. It will be attached to the downstream and upstream project boundaries, forming an arc with a maximum distance from the bank of ten feet. All exposed excavated slopes will be protected at the end of each work day until construction of the biowall has been completed.

13 Water Quality Monitoring

Water quality monitoring of the Hanalei River adjacent to and 50 ft downriver of the project site will be conducted as a condition of the Department of Army NWP. Pre-construction sampling will be done to determine baseline conditions. During-construction sampling will be done to determine any changes related to construction of the biowall. Post-construction sampling will occur weekly for a period of three weeks after construction is completed and all in-water BMPs (floating turbidity barrier) are removed. An Applicable Monitoring and Assessment Program that describes the monitoring requirements and data quality objectives to be met during water quality monitoring has been developed (Appendix F).

14 SMA Considerations

This section highlights findings detailed in the SMA Permit Assessment (Appendix G).

14.1 Recreational Resources

The project will not have any negative impact on any public recreational opportunities located near the subject property. The project will preserve the cottages on the Hanalei property that are utilized by tourists and locals.

14.2 Historic Resources

The project will not affect any known historic, cultural, or archaeological resources. As a precaution, an archaeologist will be present during the grubbing portion of project work to ensure proper identification of any previously undiscovered historic and/or cultural resources.

14.3 Scenic and Open Space Resources

The proposed development will occur on a 450 ft stretch of the Hanalei River. The Hanalei River is designated as an American Heritage River based in part on its value as a scenic resource. The river is valued by locals and tourists for its scenic beauty as well as other resources. The proposed development would benefit scenic resources within the subject property and along a portion of the lower river reach. The biowall would convert an eroding muddy river bank to a stretch of native plant species, which is a more desirable scenic state. Native plants may also improve scenic resources by providing improved habitat for native fauna in the river to linger near the subject property. The visual quality of the water adjacent to the project area, and just downstream, would improve.

14.4 Coastal Ecosystems and Coastal Hazards

Installation of the biowall would not negatively affect the coastal ecosystem. The water quality of the Hanalei estuary would be improved due to the decrease in erosion. The biowall would reduce the loss of property due to erosion, but otherwise would not affect hazards related to tsunami, storm waves, flooding, or subsidence.

14.5 Economic Uses

Installation of the biowall would not result in any changes to public facilities important to the State's economy. Completion of the project would have economic benefits. The construction activities will be contracted out to Kaua'i-based contractors and will provide a temporary benefit to the local economy. The rental cottages will continue to provide income for the property owners, some of which will be spent in the local community for goods and services. Maintaining the cottages as available rental properties supports continued tourism in the area, a major contributor to the local economy of Hanalei and North Shore Kaua'i. Visitors to the Hanalei Dolphin cottages usually spend money for other goods and services while visiting Hanalei, including at the Hanalei Center. The Hanalei Center, including the Dolphin Restaurant, gift shop, and fish market, would continue to operate, and the employment these businesses provide for local residents would continue.

15 Conclusion

Installation of the biowall would not result in any long-term adverse impacts to surrounding properties, the waters of the Hanalei River, any threatened and endangered species, cultural and traditional practices or historic properties. The proposed development is consistent with all applicable components of the County General Plan, North Shore Development Plan and does not violate Zoning Ordinances. Installation of the biowall would result in preserving property of the Hanalei Traders including both the land and the four vacation cottages located on the property.

Appendix A. Construction Estimate

Kobayashi Trucking & Equipment, Inc.
PO Box 44
Hanalei, HI 96714
Ph: 808-826-6284 Fax: 808-826-1783
Lic# C-10072

Andy Hood
Ahood@srgii.com
March 6, 2021

ESTIMATE: Hanalei Traders River Project

Price includes rock and placement of riprap, installation of Earth anchors and placement of Envirolok bags.

Price does not include permits, fees and surveying.

Estimated Cost: $ 600,000.00

GLENN KOBAYASHI
3-17-21

Appendix B. Photos

Photo 1. Hanalei River Looking Upstream at Lower Section of Project Site

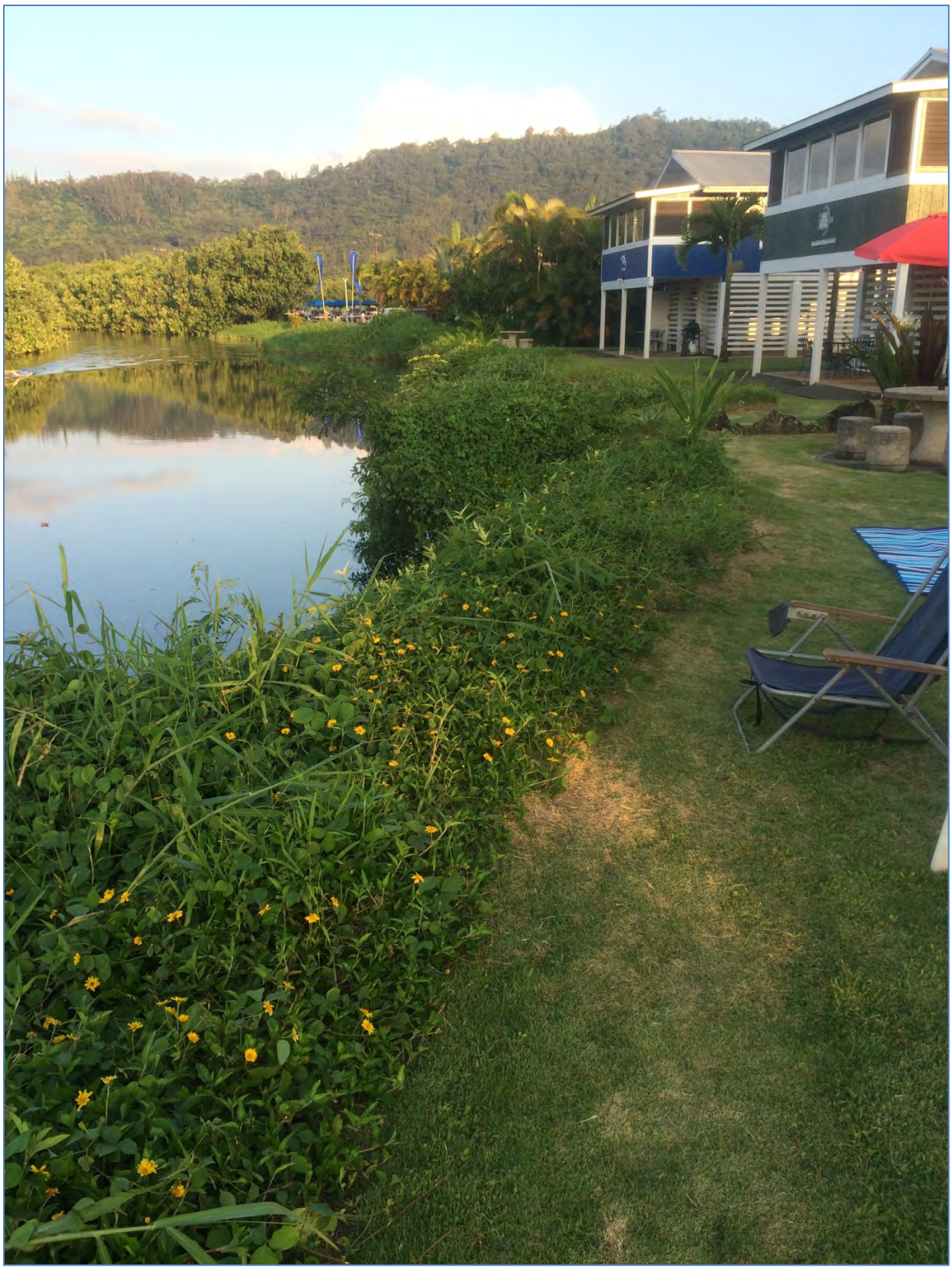


Photo 2. Hanalei River Looking Downstream at Upper Section of Project Site



Photo 3. Hanalei River Looking Upstream at Project Site

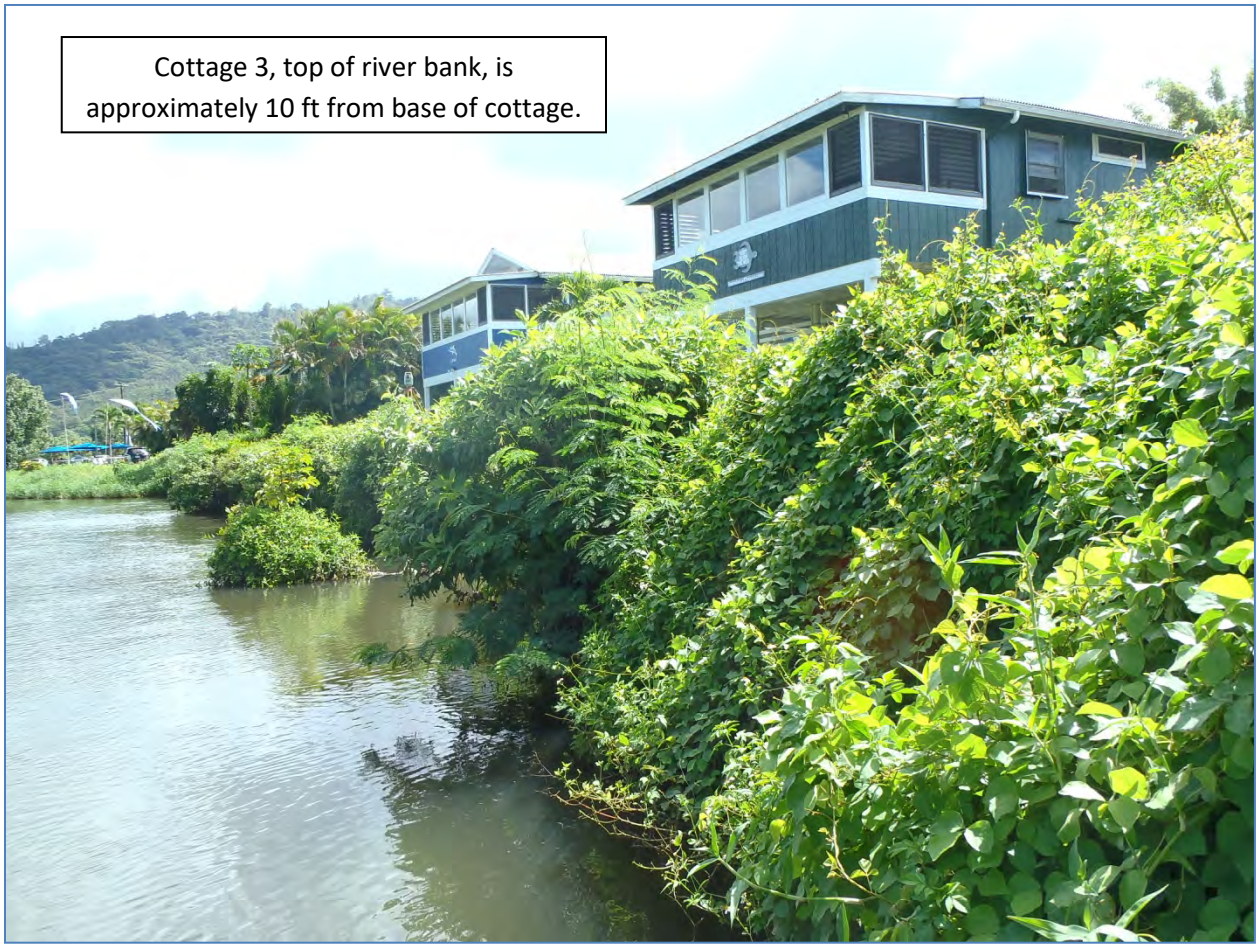


Photo 4. Vertical River Bank along Hanalei Dolphin Center



Photo 5. Hanalei River Bank

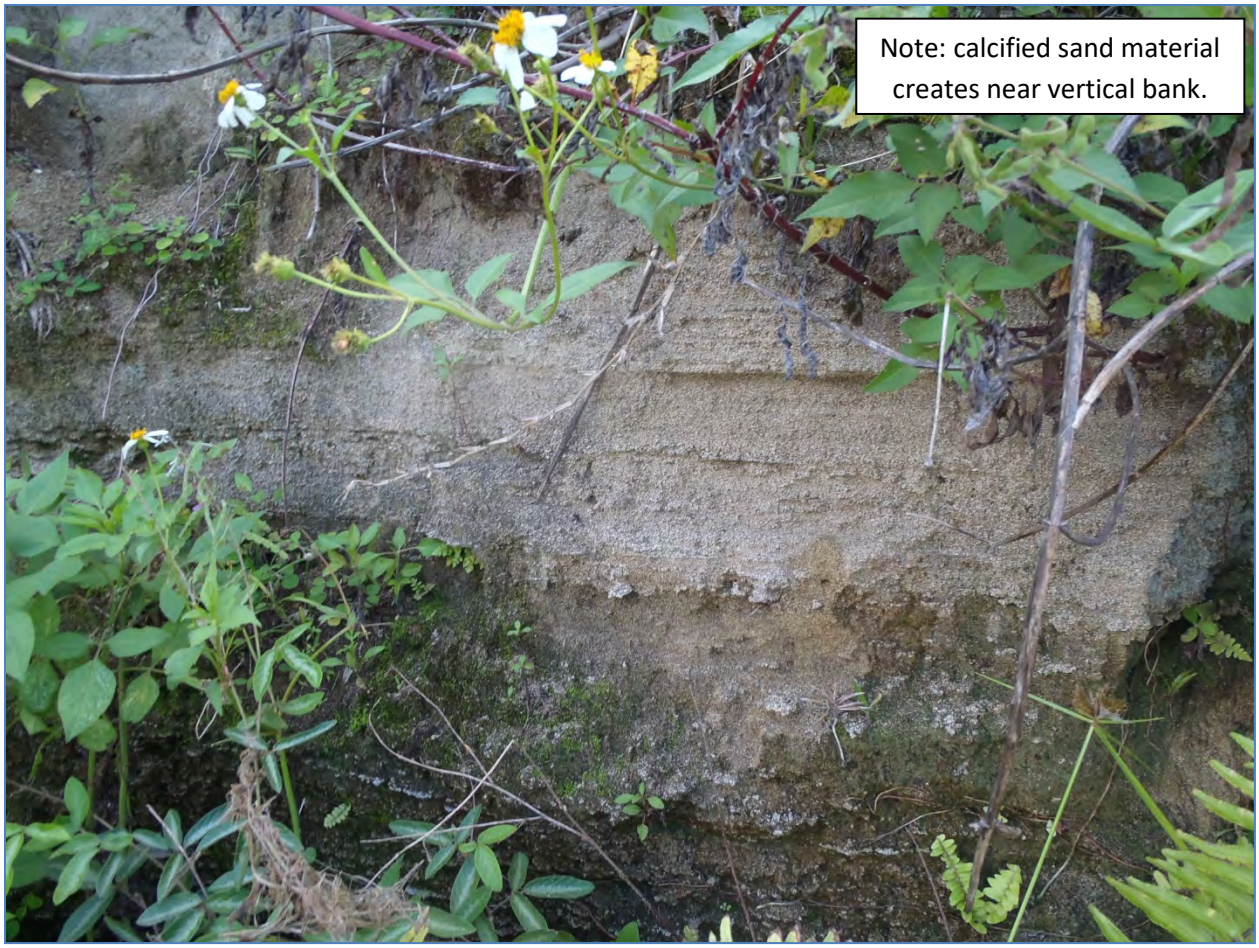


Photo 6. Hanalei River Bank



This page intentionally left blank.

Appendix C. Figures

Figure 1. Location Map

Figure 2. Property Location

Figure 3. Property Map and Limits of Work

Figure 4. State Land Use District location of the Hanalei Traders Property

Figure 5. Kauai County General Plan

Figure 6. FIRM Map

Figure 7. River Bank Stabilization Plan / Biowall

Figure 8. Typical Section of the Biowall

Figure 9. Site Specific Best Management Practices

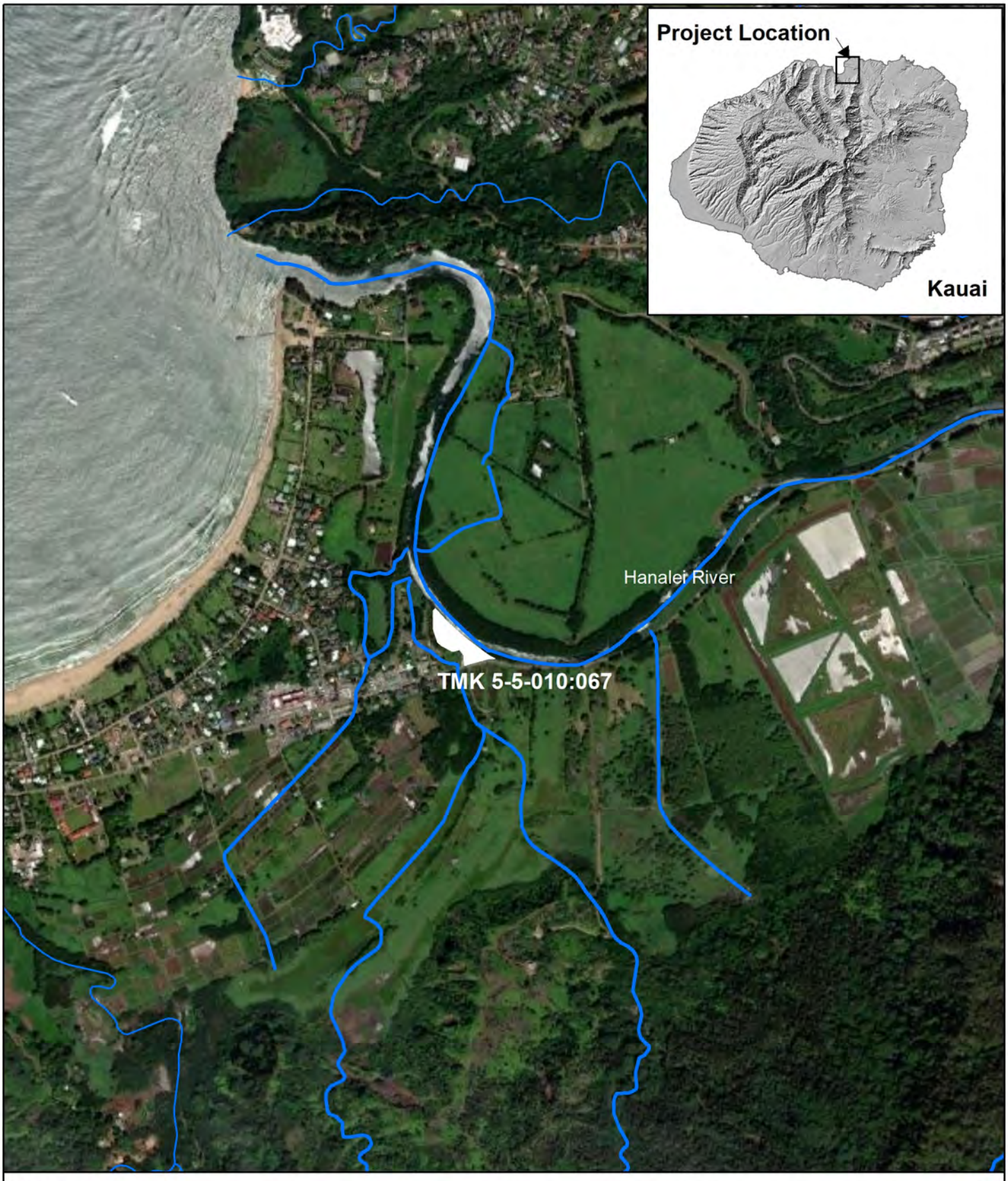


Figure 1.
Location Map: TMK 5-5-010:067

Source: State of Hawaii Data Repository
Satellite image, 1.10.2010

N

0 0.1 0.2 0.4 Miles

December 2021

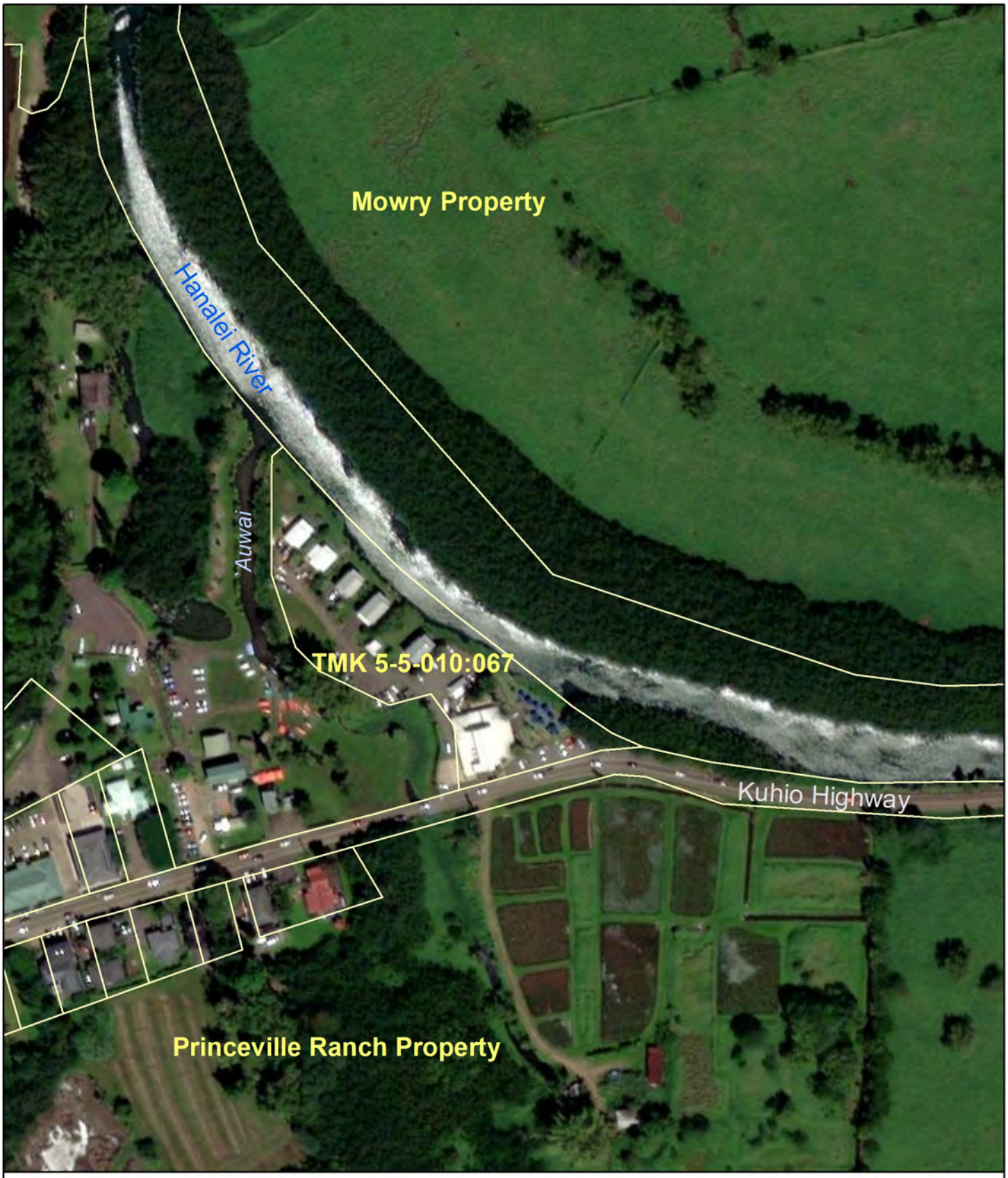


Figure 2.
Property Location: TMK 5-5-010:067

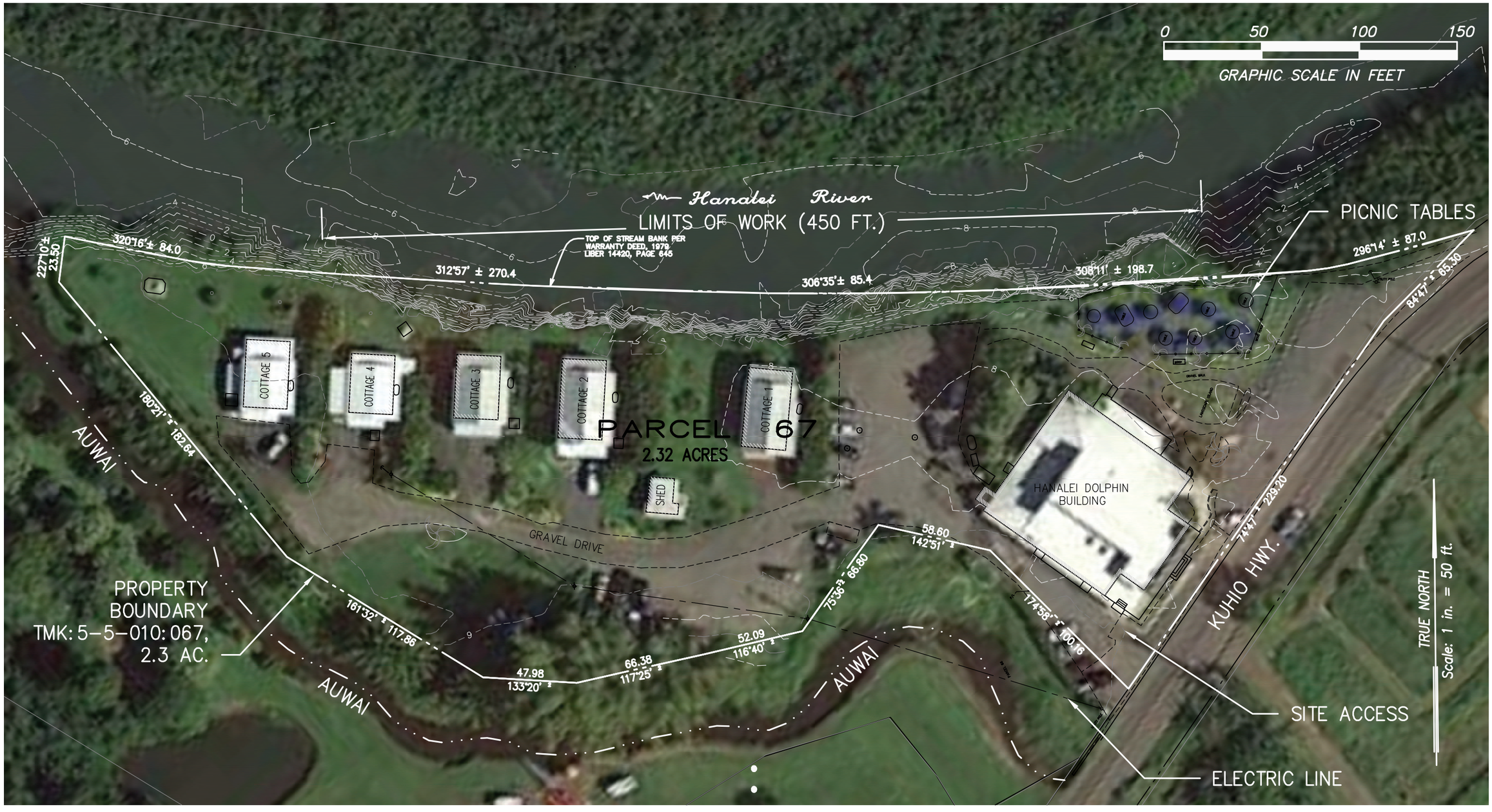
Source: State of Hawaii Data Repository
Satellite image, 1.10.2010

N

0 0.0175 0.035 0.07
Miles

December 2021

This page intentionally left blank



No.	Date	Revision	By

Designed By:

Scale: 1"=50' SC.

Date:

Project: HANALEI TRADERS, INC

Title: FIGURE 3. PROPERTY MAP

Project No:

Sheet No.

The information on this drawing is for conceptual design and should not be used for construction without the signature of a professional engineer. Details should be specific to the project and project site requirements.



Figure 4.
State Land Use Districts: TMK 5-5-010:067

Source: State of Hawaii Data Repository
Satellite image, 1.10.2010

December 2021

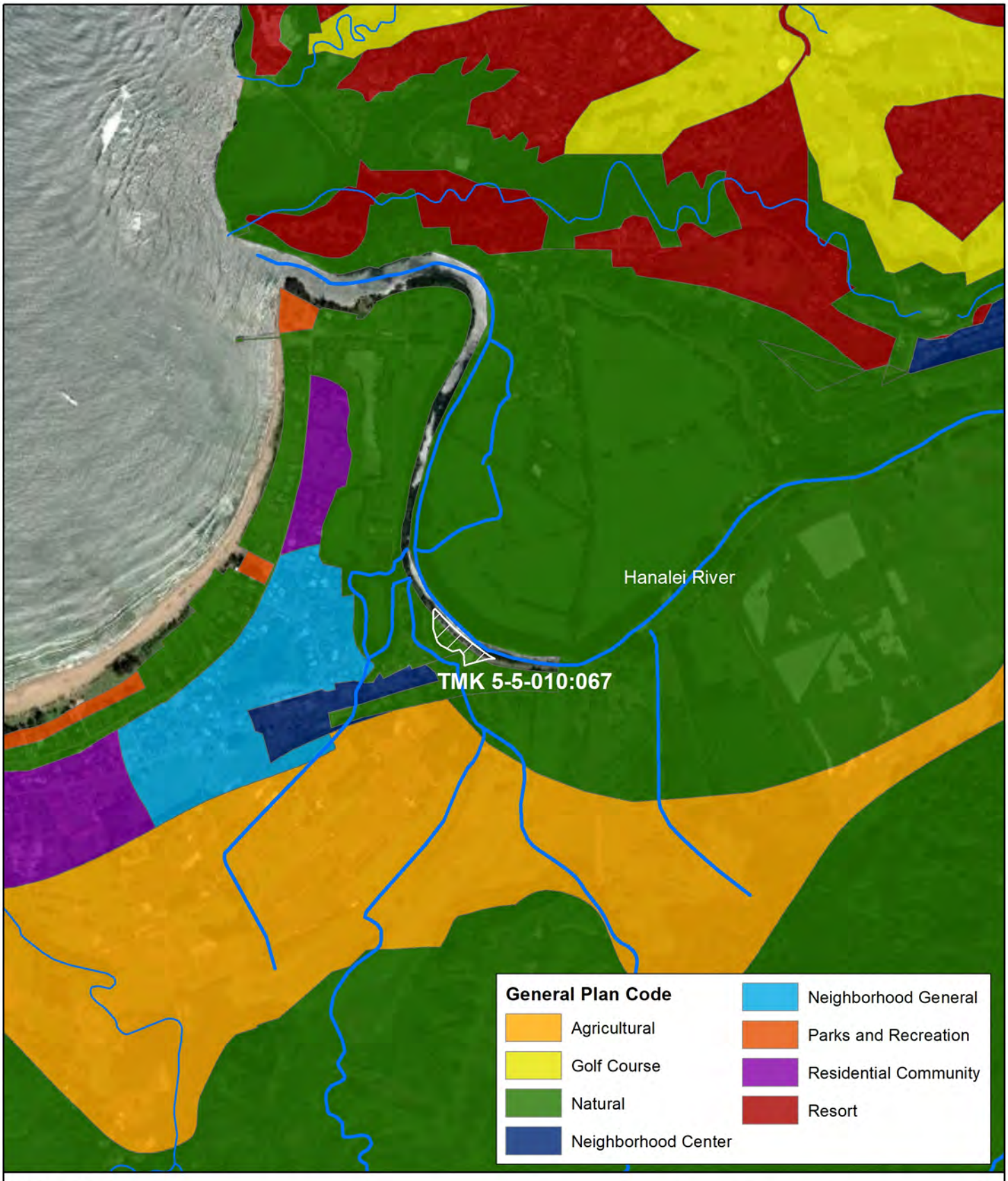


Figure 5.
Kauai County General Plan: TMK 5-5-010:067

Source: State of Hawaii Data Repository
Satellite image, 1.10.2010

December 2021

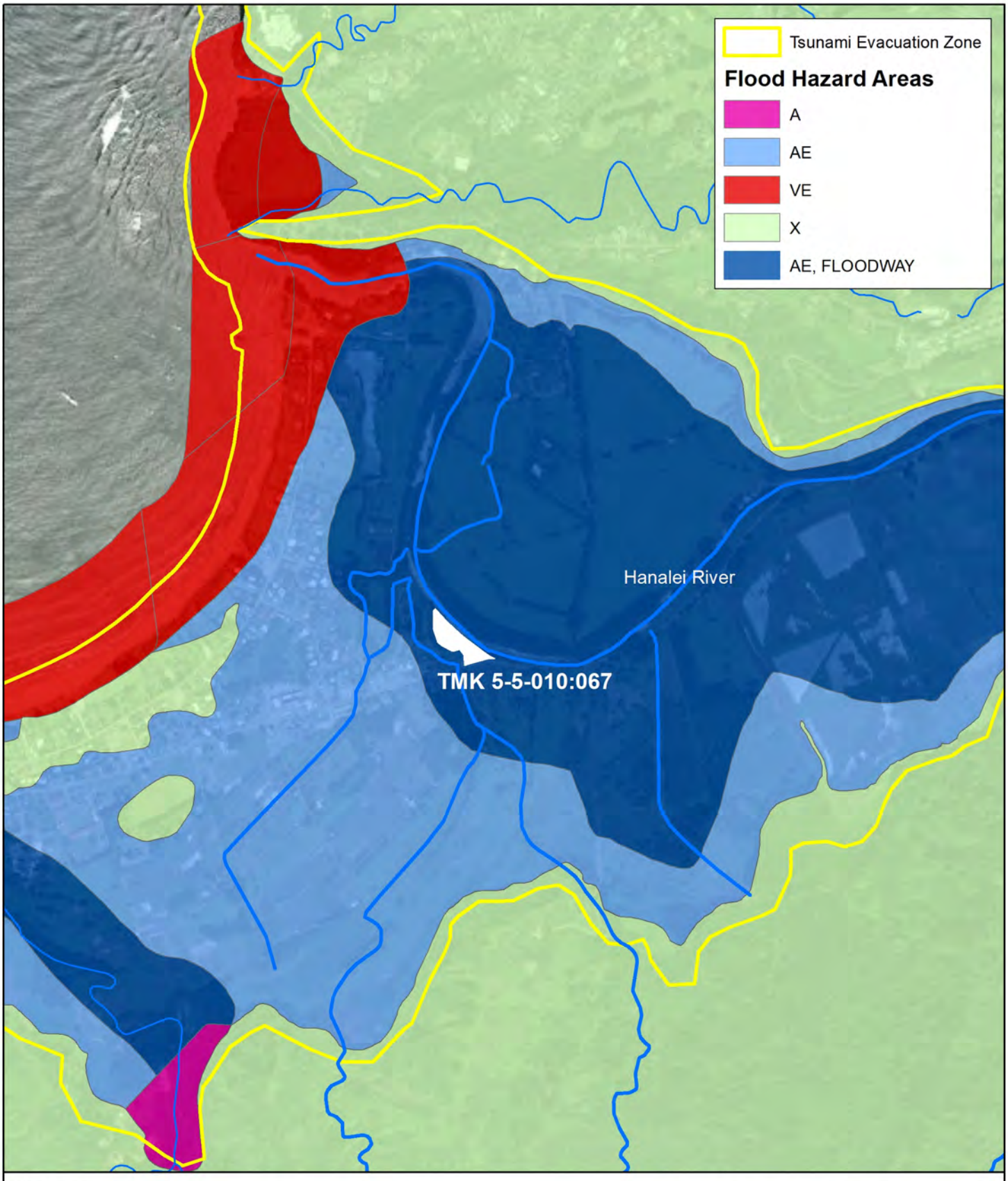


Figure 6.
FIRM Map: TMK 5-5-010:067

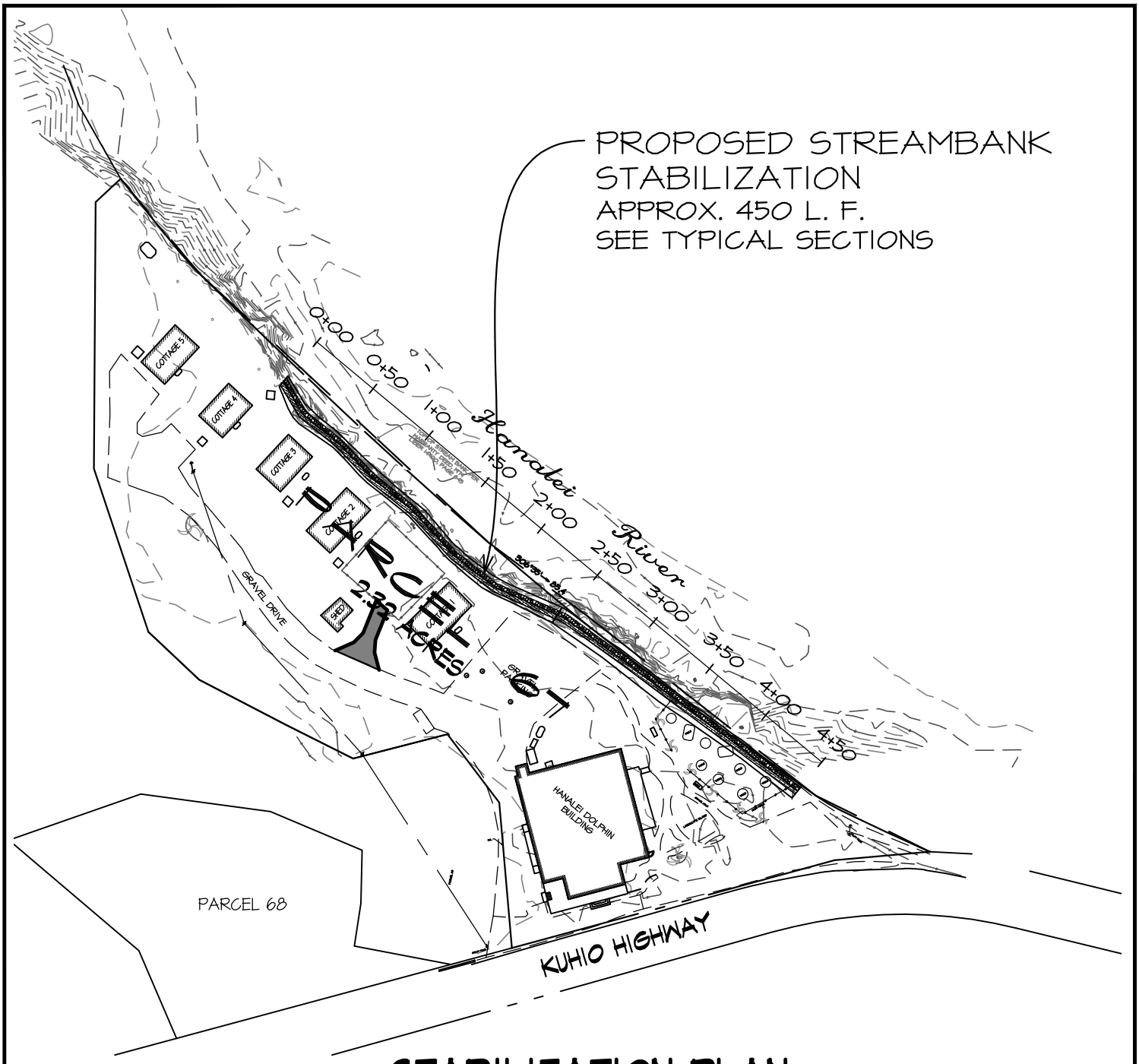
Source: State of Hawaii Data Repository
Satellite image, 1.10.2010

N

0 0.1 0.2 0.4 Miles

December 2021

Honua Engineering, Inc.
P.O. Box 851 Hanalei, HI 96714 (808) 826-7256



STABILIZATION PLAN

1"=100'

NORTH

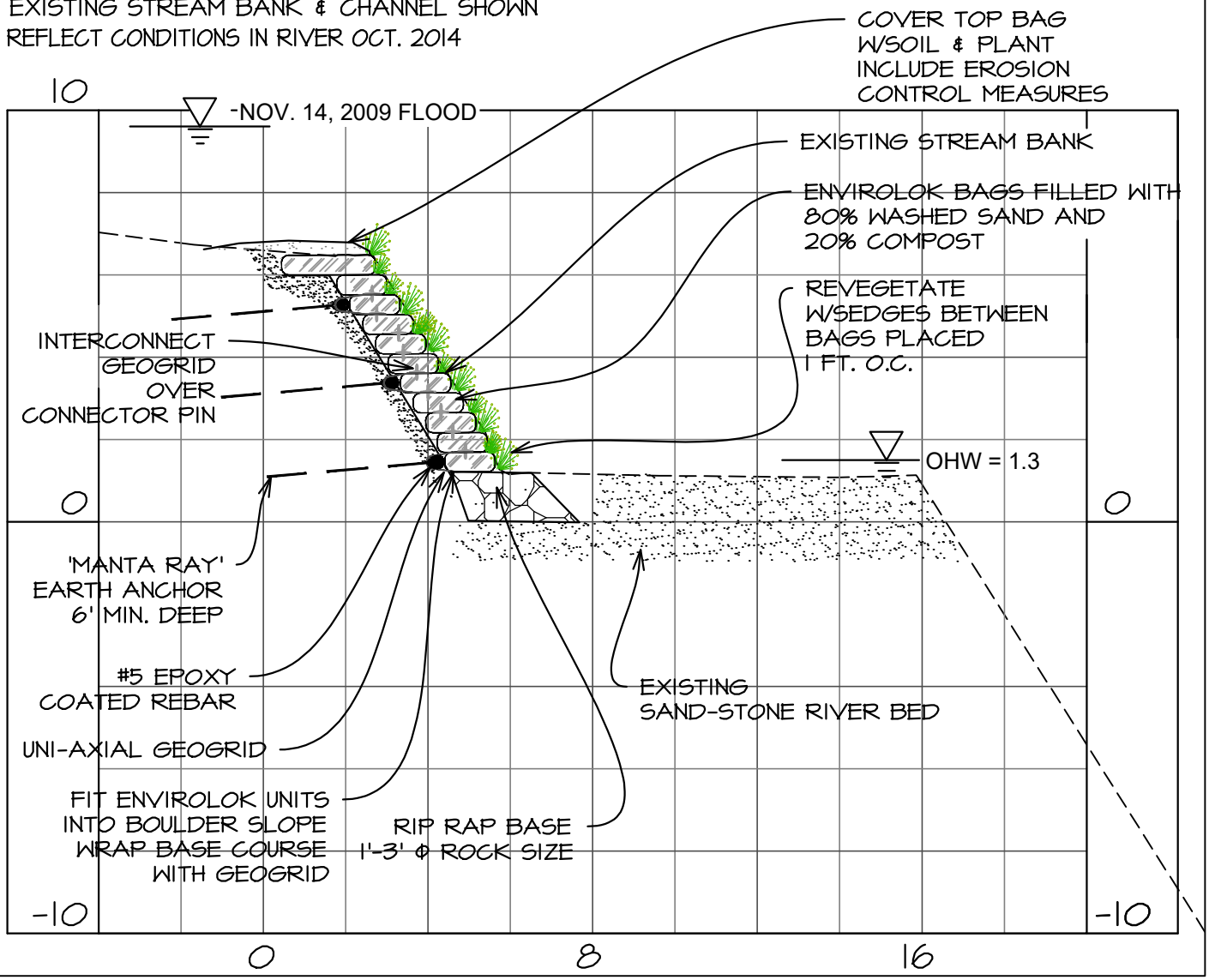
100 0 100 300

Graphic Scale in Feet

SHEET TITLE: FIGURE 7. STABILIZATION PLAN		
PURPOSE: PROTECT PROPERTY	APPLICANT REFERENCE:	PROPOSED: RIVER BANK STABILIZATION
DATUM: MSL, NAD83	ADDRESS: 5-5016 KUHIO HIGHWAY HANALEI, KAUA'I, HAWAI'I	IN: HANALEI RIVER
ADJACENT PROPERTY OWNERS: 1. HALELEA INVESTMENT COMPANY, LLC.	TAX MAP KEY: TMK 5-5-10:67	NEAR/AT: HANALEI COUNTY: KAUA'I STATE: HAWAI'I SHEET OF 14 DATE: MAY 18, 2016

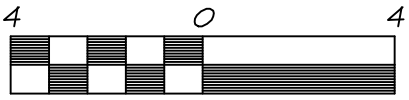
Honua Engineering, Inc.
P.O. Box 851 Hanalei, HI 96714 (808) 826-7256

NOTE:
1. ELEVATIONS ARE IN FEET BASED ON MEAN SEA LEVEL.
2. ALL PROPOSED BOULDERS, RIP-RAP, & GEOTEXTILE TO BE INSTALLED SHALL BE CLEANED PRIOR TO PLACEMENT IN RIVER.
3. EXISTING STREAM BANK & CHANNEL SHOWN REFLECT CONDITIONS IN RIVER OCT. 2014



TYPICAL STABILIZATION SECTION - STA. 3+75 TO 4+50

SCALE: 1"=4'

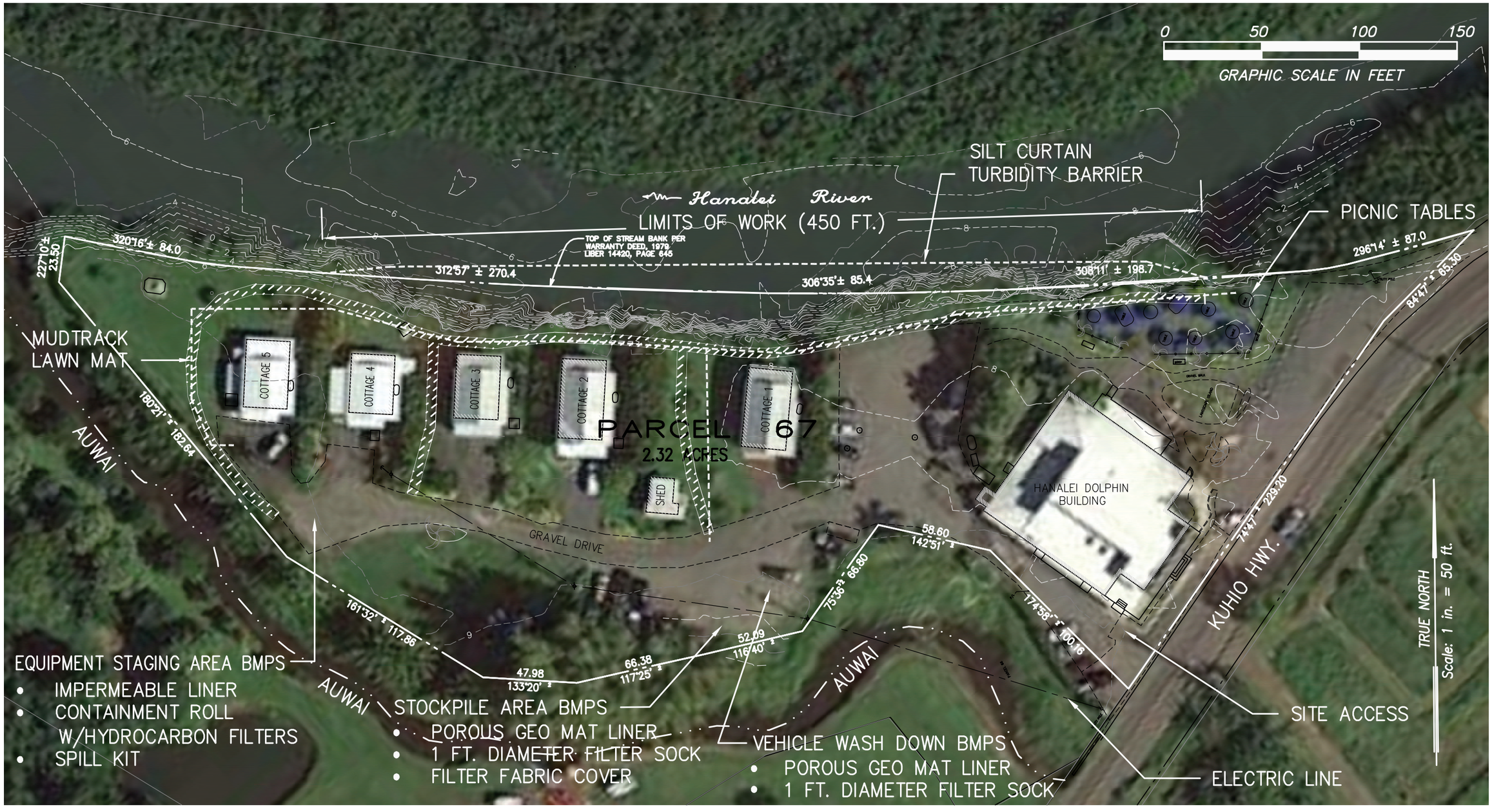


Graphic Scale in Feet

NOTE:
PLACE ANCHOR 4 FT VERTICAL SPACING, 6 FT HORIZONTAL SPACING. (PLACEMENT MAY VARY WITH SPECIFIC SITE CONDITIONS.)

SHEET TITLE: FIGURE 8. TYPICAL RIVER BANK STABILIZATION SECTION		
PURPOSE: PROTECT PROPERTY	APPLICANT REFERENCE:	PROPOSED: RIVER BANK STABILIZATION
DATUM: MSL, NAD83	ADDRESS: 5-5016 KUHIO HIGHWAY HANALEI, KAUA'I, HAWAI'I	IN: HANALEI RIVER
ADJACENT PROPERTY OWNERS: 1. HALELEA INVESTMENT COMPANY, LLC.	TAX MAP KEY: TMK 5-5-10:67	NEAR/AT: HANALEI COUNTY: KAUA'I STATE: HAWAI'I SHEET OF DATE: MAY 18, 2016

This page intentionally left blank



TMK 5-5-010:067

No.	Date	Revision	By

Designed By:

Scale: 1"=50' SC.

Date:

Project: HANALEI TRADERS, INC

Title: FIGURE 9. SITE SPECIFIC BMPS

Project No:

Sheet No.

The information on this drawing is for conceptual design and should not be used for construction without the signature of a professional engineer. Details should be specific to the project and project site requirements.

Appendix D. FONSI

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

W. ROY HARDY
ACTING 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

September 30, 2016

FILE COPY
OCT 23 2016

Ref. No.: 13KD-074
Author: LD-MM

RECEIVED
'16 OCT 12 P4:06
OFC. OF ENVIRONMENTAL QUALITY CONTROL

MEMORANDUM

TO: Scott Glenn, Director
Office of Environmental Quality Control

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

SUBJECT: Finding of No Significant Impact (FONSI) to the Environment for por. LD. CT. App. 1160, Hanalei Beach Section, Hanalei, Halelea, Kauai, Hawaii, (4) 5-5-010:067

The Department of Land and Natural Resources, Land Division, has reviewed the comments received during the 30-day public review period and the applicant's responses to these comments for the above referenced environmental assessment. Accordingly, we have determined that this project will not have a significant environmental effect and have issued a FONSI determination. Please publish this notice in your next scheduled publication of the Environmental Notice.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the final environmental assessment.

If you have any questions, please feel free to contact Marvin Mikasa at (808) 274-3491. Thank you.

Enclosures

cc: Land Board Member
Central Files
District Files

17-168

FILE COPY
OCT 23 2016

APPLICANT PUBLICATION FORM

Project Name:	Final Environmental Assessment: Hanalei Traders Bioengineed River Bank Stabilization
Project Short Name:	Bioengineed River Bank Stabilization
HRS §343-5 Trigger(s):	HRS §343-5 (1) "Propose the use of state or county lands"
Island(s):	Kauai
Judicial District(s):	Hanalei Judicial District
TMK(s):	(4) 5-5-010:067
Permit(s)/Approval(s):	CWA Section 401 Water Quality Certification, Dept. of the Army Permit, CZM, SMA, SCAP
Approving Agency:	
Contact Name, Email, Telephone, Address	Hawai'i Department of Land and Natural Resources Land Division Marvin Mikasa, marvin.t.mikasa@hawaii.gov, (808) 274-3491 DLNR-Land Division, Kauai District, 3060 Eiwa St., Room 208, Lihue, HI 96766
Applicant:	
Contact Name, Email, Telephone, Address	Roger Ross, hanaleidolphin1@yahoo.com, (808) 326-2561 Hanalei Traders, 5-5016 Kuhio Highway, Hanalei, HI 96714
Consultant:	
Contact Name, Email, Telephone, Address	Sustainable Resources Group Intn'l, Inc. Andrew Hood, comments@srgii.com, (808) 356-0552 111 Hekili Street, Suite A373, Kailua, HI 96734

Status (select one)	**Submittal Requirements**
____ 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.
__X__ 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

Mr. Roger Ross owns the Hanalei Traders property located on the west bank of the Hanalei River at river mile one in Hanalei, Kaua'i (Tax Parcel ID (4) 5-5-010:067). The 2.3 acre property hosts the Dolphin Restaurant, a fish market, gift shop, and five river front cottages. In total, 720 feet of the lot fronts the river. Along 450 feet of the river frontage the bank is eroding at an accelerated rate due in part to offsite impacts to the river system. The accelerated erosion has shifted the top of the river bank horizontally approximately 28 feet inland over the past 25 years. River bank erosion threatens structures on the property and is a chronic source of sediment into the river. In order to address erosion problems and to protect private property and existing infrastructure, the project proposes to stabilize the eroding areas by installing a bioengineered design. The project will install a 450 foot long bioengineered wall (biowall) along the eroding river bank comprised of boulders, geogrid fabric, geotextile bags, and native vegetation plantings.

Appendix E. Consultation

The following agencies, citizen groups, and individuals were contacted by telephone, mail, email, or in-person during the preparation of the Environmental Assessment and required permits.

Federal:

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
NOAA NFMS

State of Hawai'i:

Department of Land and Natural Resources:
- Commission on Water Resources Management
- Division of Aquatic Resources
- Division of Boating and Ocean Resources
- Division of Forestry and Wildlife
- Engineering Division
- Land Division
- Office of Conservation and Coastal Lands
- Office of Environmental Quality Control
- Office of Hawaiian Affairs
- State Historic Preservation Division

County of Kaua'i:

Planning Department
Department of Public Works

Private:

Hanalei Hawaiian Civic Canoe Club
Hanalei Land Company LLC
Hanalei River Heritage Foundation
Hanalei Watershed Hui
Hale Halawai 'Ohana 'O Hanalei
Hawaiian Islands Land Trust Kaua'i Office
Hui Maka'āinana o Makana
Ka'ie'ie Foundation
Kaua'i North Shore Community Foundation
Kua'āina Ulu 'Auamo
Waipa Foundation
Bob Butler
Allan Hoe
Rubillite Johnson
Mike Sheehan
Randy Wichman
Ralph Young

The following comments were received and responses were drafted and included in the EA.

Comment	Response
Hanalei Hawaiian Civic Canoe Club (October 12, 2015)	
The Club is aware that this portion of the river bank, lying along an outside curve of the river, has been subject to historic erosion. The Club is also aware that continued erosion of the river bank in this area will eventually undermine the structures on the subject property as well as septic and or cesspool systems on the subject property. Both of these eventualities pose unacceptable dangers to the health of the Hanalei River, and require either reduction in river bank erosion or removal of the structures on the subject property. Accordingly, the Club generally supports the goal of the proposed Project as an initial attempt to solve this problem. The Club however has the following concerns regarding the implementation of the Project:	Comment acknowledged. The Club's support for the project is appreciated.
The installation of stabilization materials is scheduled for the "dry season." The Hanalei River is, however, subject to flooding at all times of the year and the Project should be prepared for this possibility at all times.	We are aware that the Hanalei River is subject to flooding at all times of the year. The installation of stabilization materials would not be possible during a flood event and therefore work would be rescheduled. Weather forecast will be monitored continuously during the construction phase and in the event the forecast indicates moderate to high rainfall, work will cease until the threat has passed.
Installation work should not impede river access for the Club or any other river users. Similarly, the stabilization material should not significantly alter the current river bank by adding material to the bank and thereby narrowing the river channel in the Project area.	There are no plans to impede river access for any river users during construction. Best Management Practices include use of a silt curtain made of a polystyrene geotextile fabric, with a top floatation device and an anchor chain. The silt curtain will be temporarily placed in the river to catch sediments that may be released during construction. It will be attached to the downstream and upstream project boundaries, forming an arc with a maximum distance from the bank of ten feet. This distance will allow unrestricting passage up and down the river by users. No equipment will be placed within the bed or banks of the channel. The bank stabilization will not significantly alter the topography of the current river bank or narrow the river channel.
The Project should provide assurances that the stabilization of this portion of the river bank will not simply shift erosion to adjacent unstabilized portions of the river bank upstream or downstream of the Project site. Increased erosion upstream of the Project would undermine the state highway. The Club understands that at least in some instances the "stabilization" of either river banks or ocean shorelines in one area simply shifts erosion to neighboring property creating the perceived necessity of even more stabilization work which ultimately results in negative overall outcomes.	Over the long term, implementation of the proposed project will reduce erosion and sedimentation from the Hanalei Traders property into the river, which will have beneficial results on water quality. The biowall will have minimal to no effect on riverine and estuarine hydrodynamics. Hydraulic analysis conducted using the HEC-RAS one-dimensional hydraulic model indicates that banks downstream on both sides of the river and upstream from the biowall will not be impacted with respect to erosion or deposition. Cross section stations used in the model were derived from 2009 and 2014 topographic surveys of the project reach. The stations extend from approximately 150 feet downstream of the downstream most limit of the project area, to 100 feet upstream of the upstream limit. The model was run under existing site conditions at a range of discharges (minimum: 70 cfs, maximum: 6,500 cfs). Model output evaluated includes velocity and water surface elevations for each discharge.

Comment	Response
	The model was run a second time with the same discharges and geometry at the stations changed to reflect the proposed geometry. Roughness values were also changed to reflect the biowall. Comparison of model outputs for the two models runs were made at all stations including those upstream and downstream of the project on both sides of the river. Changes to water surface elevations and velocities were minimal at all discharges. Shear stress exerted by the flowing water against bed and bank surface would not change appreciably, and rates of sediment deposition and erosion are not expected to occur from implementation of the design.
Installation should be carried out so as to eliminate or minimize any reduction in the water quality of the river.	Best Management Practices will be implemented during construction in accordance with applicable permits (Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) and as required by Kaua‘i County Sediment and Erosion Control Ordinance No. 808 to minimize any reduction in water quality. Over the long-term, water quality is expected to improve as nitrogen is taken up by plants in the biowall and fine sediments currently being released into the river are reduced as a result of the stabilization.
The property owner conducting this Project should be required to provide assurances that should stabilization material "fail," the property owner will be responsible for its removal and the remediation of the river bank to its natural state.	The natural systems engineering approach adopted by this project will result in a natural bank along the project reach, versus the alternative of hardening the river bank. The property owner will comply with the terms of all permits required for this construction project. In the event there is failure the landowner will remove material from the water and repair the damage.
The Project should consider seeking permission and approvals to remove invasive hau bush from the stream bank opposite the project site. This invasive vegetation along the inside curve of this portion of the river serves to direct the flow of the river against the area of proposed stabilization and likely increases erosion in this area.	Encroachment of hau bush into the channel has altered channel hydrodynamics and most probably is accelerating the rate of erosion along the river bank along the Hanalei Traders property. However, the land on the opposite bank is privately owned and it is beyond the Hanalei Traders Inc. ability to address this issue. We would encourage the Canoe Club to pursue this issue with various government agencies that have management authority regarding the hau bush encroachment.
Approval of the Project should be contingent on some system of regular monitoring in the future to ensure that the Project is not causing any unanticipated harms.	Water quality monitoring will occur prior to and during construction per the requirements of the Applicable Monitoring and Assessment Program for CWA Section 401 WQC.
State of Hawaii Department of Land and Natural Resources, Division of Forestry and Wildlife (November 23, 2015)	
On Tuesday afternoon, October 27, an on-site inspection was made by a staff wildlife biologist to look at the area and take photographs. The embankment contained several non-native plants and no native plant species. The non-native plant species included California grass (Brachiaria mutica) and Hilo grass (Paspalum conjusatum), Napier grass (Penniseitum purpureum) and several sedges. On the other side of the river bank, Hau (Hibiscus tiliaceus), a Polynesian introduced tree was the dominant plant species. The property is a high-use visitor recreational area which includes kayaking, and stand up paddle boarding.	Noted.

Comment	Response
The Hanalei river valley supports feeding and nesting habitat for five state and federally endangered waterfowl species. This includes the Hawaiian coot (Fulica alai), Hawaiian gallinule (Gallinula c. sandvicensis), Hawaiian duck (Anas wyvilliana}, Hawaiian stilt (Himantoyus mexicanus) and Hawaiian goose (Branta sandvicensis). The nearby U.S. Fish and Wildlife Service - Hanalei National Wildlife Refuge supports all five species. During my inspection, I did not observe any listed waterfowl and did not find any evidence of nesting activity in the area. The heavy presence of human activity along that section of the river is most likely the reason for the absence of waterbirds. Although, no waterbirds were observed during the inspection, it is recommended a survey be conducted by a knowledgeable wildlife biologist at least two weeks prior to the start of construction. This is to determine whether waterbird nesting had occurred during the EA review period.	As recommended by DLNR DOFAW, the following practices to avoid any adverse impacts to birds will occur. Two weeks prior to the start of construction a knowledgeable wildlife biologist will inspect the site to determine if there are any nesting waterbirds. In the unlikely event that nesting waterbirds are present, construction will be delayed until all chicks have fledged and left the area.
The Hanalei valley watershed is considered an important nesting ground for two listed seabird species: Newell's shearwater (Puffinus a. newelli) and Hawaiian petrel (Pterodroma sandwichensis). It is well-document that these seabirds transit the area at night during the nesting season which runs from April to mid-December. Therefore, it is imperative that night time work using construction lights are avoided as much as possible, due to the light attraction problem. If the project requires night-time work using construction lights, it is recommended the lights be shielded and pointed downward and not pointed upward toward the night sky. This action would reduce the potential risk of attracting birds to the project area. From mid- September to mid-December, fledging seabirds depart from their mountain nesting grounds to the sea. This is the critical period as young seabirds are highly susceptible to bright lights and falling to the ground. We recommend no use of night construction lights during this period.	As recommended by DLNR DOFAW, the following practices to avoid any adverse impacts to birds will occur. The project will not entail any night time work or the use of night construction lights, which if used could attract Newell's shearwaters or Hawaiian petrels and result in birds becoming disoriented and falling to the ground.
The Hawaiian bat (Lasiurus cinerus semotus) is known to transit the area at night in search of food and their roosting area. Bats roost in native and non-native trees and tail shrubs throughout the island of Kauai. The birthing and pup rearing season is from May 15 to August 15, therefore, it is recommended that no cutting or trimming of trees greater than 15 feet (4.6 meters) during this period. If you foresee that trees will need be cut or removed, we recommend doing so outside of this period. Otherwise, if trees need to be cut or removed inside of the pup rearing season, we recommend that you consult with a knowledgeable wildlife biologist to determine the status of bats in the area prior to cutting or removal.	As recommended by DLNR DOFAW, the following practices to avoid any adverse impacts to bats will occur. There will be no cutting or trimming of trees greater than 15 feet (4.6 meters) during the birthing and pup rearing season from May 15 to August 15.

Comment	Response
State of Hawaii Department of Land and Natural Resources, Engineering Division (November 23, 2015)	
Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone AEF. The National Flood Insurance Program regulates developments within Zone AEF as indicated in bold letters below.	Noted and discussed in EA.
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. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.	As required for any development within a Special Flood Hazard Area, the project will comply with the rules and regulations of the National Flood Insurance Program presented in Title 44 of the Code of Federal Regulations. Specifically, implementation of the proposed action will not increase the flood hazard on other properties and all required federal and state permits will be obtained prior to execution.
State of Hawaii Department of Land and Natural Resources, Commission on Water Resource Management (November 23, 2015)	
A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.	Understood. An application is being filed.
State of Hawaii Department of Land and Natural Resources, Division of Aquatic Resources (November 23, 2015)	
*Though DLNR DAR formally submitted the following comments on the Draft EA during a DLNR review period, it should be noted that DLNR DAR conveyed these same comments during the development of the EA, which were taken into consideration during the analysis and development.	
The Hanalei River is a large (16.2 miles long) and dynamic river on Kauai's north shore, with headwaters in the 'Alaka'i with over 450 inches of rain, and with river flows ranging from 20-50 million gallons per day (mgd) to over 6 billion mgd. Because of its hydrogeographic features, Hanalei River has a large floodplain. It is also one of the 10 "National Heritage Rivers" in the United States, and has a relative abundance of all of the native Hawaiian amphidromous species of 'o'opu, 'opae and hihiwai or wi. The culturally and economically important 'o'opu nakea spawns on basalt boulders and large cobble stones within the Hanalei River estuary, including adjacent to this proposed stream bank stabilization project. About 40 species of native fishes use this estuary for feeding, breeding and as a nursery habitat. Also, the river, riparian and wetland areas along the Hanalei River estuary are commonly used by species of endangered Hawaiian water birds, most notably the Hawaiian gallinule or 'alae ula, the Hawaiian duck or koloa, Hawaiian coot or 'alae ke'oke'o and the Hawaiian	Acknowledged and information has been included in the EA.

Comment	Response
goose or nene. The Hawaiian hoary bat, ape'ape'a, also feeds along the river during the early evening.	
The reasons the Hanalei River bank is eroding at this project location, and adjacent private property is being threatened, are as follows: 1. Riparian trees were removed from along the river bank and riparian area, de-stabilizing the bank, when the property was developed, presumably to give visitors and those staying in the 5 cottages a better view of the river; 2. The river is large with very high water velocities and very large discharge volumes, up to 6 billion gpd; 3. The project location is on the eroding left bank (west side of river) which is on the outside of a very sharp, almost 90 degree, bend (to the east) in the river which directs flood flows (with higher water velocities) into the left bank where the erosion is occurring; this situation is exacerbated by the opposite right bank (east side) being dominated by a very large amount of invasive hau trees, Hibiscus tiliaceus, which are growing emergent into the river, also forcing the main flow of the river against the eroding left bank; 4. Considering that large rivers are dynamic, erode their banks and even make new channels and change their direction of flow, the cottages in question are constructed in the floodplain too close to the river bank.	1. For clarification, the riparian trees were not removed to obtain a better view of the river, they were dislodged as a result of high flow events. Any trees that were not fully dislodged and were hanging out over the river were cut for fear that their failure would dislodge a large amount of soil from the river bank. 2. The section of river fronting the Hanalei Traders property is classified as an estuarine reach, and the velocities at peak flows under the most extreme flood conditions do not reach velocities that are classified as high. The low gradient channel in this reach, coupled with the hydraulic control at the mouth of the channel, result in low velocities. 3. While the river bank fronting the Hanalei Traders property is located along the outside of meander bend, the natural rates of erosion are low due to the tidal controls and low velocities. A review of historic images and conversations with various people shows that the bank was in a state of quasi-equilibrium until the mid-1990s. At this time hau bush along the channel, both across from and upstream on both sides of the Hanalei Traders property, was left to grow unchecked into the river. As a result, the channels' hydraulic radius decreased, in some cross sections by approximately 40 percent. The channel adjusted to this flow constriction by shifting to the west. Additionally, construction of berms on the Mowry parcel and on USFWS land within the floodway cutoff portions of the floodway, decreasing flood water storage on these portions of the floodway and directing flow against the west bank of the river fronting the Hanalei Traders parcel. Adhoc riprap structures were also installed downstream of the Hanalei Bridge along the west bank. It is most probable that the irregular placement of the rocks comprising the riprap further decreased channel hydraulic radius and, similar to the hau bush encroachment, induced rapid channel adjustments downstream. 4. While the Hanalei Traders property is in the AE floodway; this is true of many parcels along the west side of the river, and several downstream along the east side. Moving the Hanalei Traders cabins fronting the river bank inland was investigated, and it was determined this was not feasible due to lack of area and cost.
The proposed filling and hardening of the eroding left bank will likely cause increased bank erosion of adjacent property located downstream. As an alternative to the proposed bank stabilization and erosion control, the following actions are recommended: 1. Working with the USDA/Natural Resources Conservation Service, the US Fish & Wildlife Service and the Division of Forestry and Wildlife, develop a "Soil and Water Conservation Plan" to plant and/or transplant coconut trees, Kukui nut trees, hala trees and other bank stabilizing trees and shrubs as large as possible, and	Hydraulic modeling using HECRAS was conducted under existing and the proposed action scenarios. Velocities downstream of the project site were the same under both scenarios. 1. The vegetation selected as part of the proposed bio-engineered design will aid in stabilizing the river bank. Trees were not selected for use as it was determined they would "load" the top of the bank and create instability. 2. Encroachment of hau bush into the channel has altered channel hydrodynamics and most probably is accelerating the rate of erosion along the river bank along the Hanalei Traders property. However, the land on the opposite bank

Comment	Response
plant them midway between the cottages and the eroding river bank; 2. Working with adjacent land owners, particularly the rancher on the east side of the river, USDA/NRCS, and DLNR, develop an invasive hau tree removal project on the right (east) bank, of the river; this will reduce or nearly eliminate floodwaters being deflected towards the left (west) bank; 3. It may be necessary to develop a plan to move the cottages that are threatened by riverbank erosion to a new location.	is privately owned and it is beyond the Hanalei Traders ability to address this issue. 3. Moving the Hanalei Traders cabins fronting the river bank inland was investigated, and it was determined this was not feasible due to lack of area on the Hanalei Traders property and cost.
Finally, if the proposed filling and hardening of the riverbank is approved, the following actions should be taken: 1. For boulders and fill material to be placed with a river channel, a "Stream Channel Alteration Permit" must be obtained by the CWRM; this permit, if issued, should fulfill the applicant's request for a "right of entry" in order to conduct channel alterations in the river. 2. Also, because the Hanalei River is considered a "Navigable River", permits for river channel alteration may also be required by the US Army Corps of Engineers; 3. All fill and hardening materials use should be relatively smooth basalt boulders and cobble stones of various sized because the 'o'opu nakea prefer smooth surfaces on which to lay their eggs.	1 & 2. Hanalei Traders is securing numerous permits that will be reviewed by County, State, and Federal agencies. The design prepared is expected to control bank erosion and enhance habitat for avian and aquatic native species in the least intrusive manner possible. We understand the ecological, social, and spiritual significance of the Hanalei River and attempted to prepare a design that does not adversely affect the river. 3. DAR advised on their preference for the fill materials earlier on in the design process and the design does incorporate smooth boulders due to the preference of 'o'opu nakea.
Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plans, DAR requests the opportunity to review and comment on those changes.	Acknowledged.

This page intentionally left blank.

Appendix F. Applicable Monitoring and Assessment Plan

Applicable Monitoring and Assessment Plan for Clean Water Act Section 401 Water Quality Certification: Hanalei Traders Bioengineered River Bank Stabilization, Hanalei, Kaua‘i

July 21, 2016,

Revised September 21, 2017

Revised November 30, 2017

Prepared for:

Hanalei Traders, Inc.
P.O. Box 511
Hanalei, HI 96714

Prepared by:

SUSTAINABLE RESOURCES GROUP INTN'L, INC.
111 Hekili Street, Suite A373
Kailua, HI 96734
Tel/Fax: 808-356-0552 • www.srgii.com

Contents

List of Tables i
Acronyms ii
1 Introduction 1
1.1 Background Information 1
2 Project Description 2
3 Monitoring Program 3
3.1 Organization and Responsibilities 3
3.2 Parameters to be Measured 5
3.3 Sampling Locations 5
3.4 Sampling Frequency 6
3.5 Instrument Calibration 7
3.6 Sample Collection 7
3.7 Quality Assurance Plan 9
4 Data Quality Objectives and Criteria for Measurement Data 9
Step 1: State the Problem 9
Step 2: Identify the Goals of the Study 9
Step 3: Identify the Information Inputs 10
Step 4: Define the Study Boundaries 10
Step 5: Develop the Analytic Approach 11
Step 6: Specify Performance/Acceptance Criteria 11
Step 7: Develop the Plan for Obtaining Data 12
Chain of Custody Procedures 12
5 Reports and Assessment 12
6 References 13

List of Figures

Figure 5. Decision Unit Locations 14

List of Tables

Table 1. Summary of Responsibilities and Qualifications 4
Table 2. Sampling Locations 5
Table 3. Typical Accuracy Ranges 7
Table 4. Analytical Methods and Instruments to be Used 8
Table 5. Analytical Hold Times and Preservation Methods 9

Acronyms

AMAP	Applicable Monitoring and Assessment Program
BMP	Best Management Practices
C-DS	Control Downstream
COC	Chain-of Custody
C-US	Control Upstream
CWB	Clean Water Branch
DO	Dissolved Oxygen
DU	Decision Unit
GPS	Global Positioning System
HAR	Hawaii Administrative Rules
HDOH	Hawaii Department of Health
msl	Mean Sea Level
RSD	Relative Standard Deviation
SRGII	Sustainable Resources Group Intn'l, Inc.
TMDL	Total Daily Maximum Load
WQC	Water Quality Certification

1 Introduction

This Applicable Monitoring and Assessment Program (AMAP) accompanies the Section 401 Water Quality Certification (WQC) application for the proposed *Hanalei Traders Bioengineered River Bank Stabilization* project, herein "the project". The AMAP describes the monitoring requirements and data quality objectives to be met during water quality monitoring efforts for the WQC. The intent of the AMAP is to conduct water quality sampling and analysis in order to (1) determine if the BMPs are effectively preventing sediment from the project site from entering the larger Hanalei estuary; and (2) confirm that implementation of the project will not increase sediment contribution into the river longer term, nor will it contribute to increased erosion on adjacent properties. The AMAP includes baseline (pre-construction), during-construction, and post-construction monitoring. If shown to be necessary by the monitoring, BMPs will be modified during construction to protect water quality. This plan has been prepared in accordance with water quality regulations promulgated in Hawai'i Administrative Rules (HAR) Chapter 11-54 (HDOH 2014), Applicable Monitoring and Assessment Plan General Instruction (HDOH 2015), and Data Quality Objectives specified by EPA (EPA 2006).

1.1 Background Information

The project site is located on the Hanalei Traders property, Tax Parcel ID (4) 5-5-010:067, on the north shore of Kaua'i, Hawai'i. It is located on the banks of the Hanalei River estuary. The project site centroid coordinates are 22° 12' 17.65" N and 159° 29' 31.23" W (WGS84) (see Figures 1 & 3 in Appendix A of the WQC application). At the project site the river channel is eroding and has created an unstable bank that is nearly eight to twelve feet vertical from its top down to the bed of the river. During high flows the bank erodes inland, resulting in loss of land and narrowing the distance between the top of the bank and structures. The opposite bank of the river is overgrown with hau bush (*Hibiscus tiliaceus*). In order to address erosion problems and to protect private property and existing infrastructure, Mr. Robert Ross of Hanalei Traders, Inc. proposes to stabilize approximately 450 ft (137 m) of eroding river bank by installing a bioengineered design. The project will install a bioengineered wall (biowall), comprised of boulders and stacks of geotextile roll bags filled with grow medium (see Figure 2 in Appendix A of the WQC application). The grow medium will consist of 80% sand and 20% compost. There will be no additional fertilizer or soil amendments added to the grow medium, specifically to avoid additional input of dissolved inorganic nitrogen and phosphate into the Hanalei River estuary. Native plants will be installed between the geotextile rolls and along the upper portion of river bank.

A floating turbidity barrier made of a polystyrene geotextile fabric, with a top floatation device and an anchor chain, will be deployed to protect water quality and isolate the construction area. The floating turbidity barrier will temporarily be placed in the river adjacent to the active construction area to catch sediments that may be released during construction. It will be attached to the downstream and upstream project boundaries, forming an arc with a maximum distance from the bank of 10 ft (3.05 m). The depth of the river at this location is approximately 7 ft (2.13 m) during a normal high tide. The floating turbidity barrier will be secured to the river bank with reef lines such that contact with the river bed is made throughout.

The waters of Hanalei River in the Project Area are designated as Class 2 estuarine waters in the Hawai'i water quality standards (HDOH 2014). According to the rule, the objective of Class 2 waters is:

> "protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation."

Designated uses are:

> "all uses compatible with protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class."

The Hanalei River, its estuary, and Hanalei Bay are listed on the Clean Water Act 303(d) list of impaired waters (HDOH 2016). The project area is located along the estuary section of the Hanalei River. Per the Hawai'i Department of Health - Clean Water Branch (HDOH-CWB), "inland waters are comprised of water body types such as streams, estuaries, lakes and reservoirs, wetlands, and anchialine pools". The discussion in the *2016 State of Water Quality Monitoring and Assessment Report*, which contains the Clean Water Act 303(d) list of impaired waters, describes the most recent HDOH-CWB assessment of the waters of the Hanalei River estuary. "Hanalei River (end of Weke Road) estuary was initially listed as impaired for enterococcus prior to the 2002 Integrated Report and for turbidity in the 2004 Integrated Report. TDMLs for enterococcus and turbidity were approved in 2008. Newly assessed numerical data indicate Hanalei River estuary continues to not attain Water Quality Standards for enterococcus and turbidity." (HDOH 2016). The 2016 Clean Water Act 303(d) list of impaired waters also lists the Hanalei Bay estuary "upstream of the Dolphin" as not attaining Water Quality Standards for turbidity. Data collected for the upstream decision unit will be reported via: http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/integrated-report-and-total-maximum-daily-loads/

2 Project Description

The project will occur over a twelve week period beginning shortly after the acquisition of all required permits. Installation of BMPs and construction is expected to take ten weeks and two weeks have been added to account for potential work stoppages. The biowall will be constructed in increments of approximately 50 linear ft. For each increment, all steps involved in constructing the biowall will be completed before beginning construction on the next increment. Construction of each increment will take five days to complete. In channel work, consisting of placement of boulder rip rap, will only occur during base flow periods as indicated on the Hanalei river gauge station and during periods of no rainfall. This scheduling will insure that high flow events will not occur during in channel construction. The project will consist of the following:

- Installation of structural and non-structural site specific BMPs to the property prior to any construction on the biowall or delivery of materials (Appendix D)
- Installation of floating turbidity barrier prior to any work on each increment.
- Grubbing of existing vegetation from the river bank
- Placement of washed boulders [2 to 3 ft (0.6 to 0.9 m) diameter] from existing bed of river channel against toe of the bank up to the ordinary high water level (1.3 ft msl). Boulders will protect the toe from erosion and provide the foundation for placement of other materials included in design. Equipment operation for this task will occur from the top of the river bank, not "in-water". A total of 216 cubic yards will be required.

- Placement of grow medium comprised of 80% sand and 20% compost inside woven geotextile bags. The filled, porous, geotextile bags will be installed from the top of the boulders to the top of the existing bank. Geotextile bag dimensions: 4 ft L x 1 ft diameter. A total of 180 cubic yards of grow medium will be required.
- Use of geogrid fabric to secure and anchor the interlocking geotextile bags to the bank of the river.
- Installation of plants (three species of native sedges and two species of native shrubs). Sedges will be placed between geotextile bags from top of boulders to top of existing bank. Shrubs will be placed along top of existing bank. Sedges will be installed concurrent to geotextile bags and geogrid fabric as sedges will be planted after each layer of bags has been installed.
- Woody native or Polynesian shrubs will be placed along top of existing bank after completion of the biowall.

3 Monitoring Program

The monitoring program largely follows the *General Monitoring Guidelines for Section 401 Water Quality Certification Projects* (HDOH 2015).

3.1 Organization and Responsibilities

Table 1 provides the names, responsibilities, and qualifications of the personnel involved with this monitoring program.

Collection of data including: operation, calibration, secondary checks of instruments, narrative of site conditions, photographs, as well as field analysis will only be performed by experienced and qualified SRGII field technicians.[1] Details of SRGII field technician's responsibilities regarding data collection and analysis are detailed throughout Section 3. Information gathered by SRGII field technicians will be included in individual sampling reports.

The construction contractor will assign a representative to perform daily visual inspections and take photographs of the construction site including all BMPs, to ensure that the construction activities do not result in adverse impacts to the water quality of Hanalei River. These observations will be recorded in a field notebook and include at a minimum: date, time, predicted tidal stage, stream flow, weather conditions, precipitation, description of the construction activity, location and condition of any BMPs, and any other observed activities (related or unrelated to construction) that may affect water quality. The assigned representative will maintain a field notebook to accompany the photographs that includes a descriptive narrative of what is being documented by each photograph and a photo orientation map that shows the location and orientation of photos taken. Photographs will include a date and time stamp or that information will be embedded in the metadata associated with the digital photograph files. The Project Manager will ensure the construction contractor's representative is knowledgeable of their responsibilities prior to the project commencing.

[1] According to HDOH-CWB a "qualified sampler" is a person who actively practices environmental science, or has formal training in sampling theory, practices, and techniques. Qualified samplers must be thoroughly knowledgeable of all aspects of the sampling in this AMAP including all equipment, instruments, SOPs, calibrations, secondary checks, limits and reporting requirements.

Table 1. Summary of Responsibilities and Qualifications

Name	Responsibility	Qualification
Andrew Hood SRGII Project Manager 808-261-0862	Ensure quality control for all BMPs and monitoring activities. Inform field technicians of monitoring schedule (providing actual dates) and any changes. Investigate water quality exceedances, inform on corrective actions, and report occurrences and actions to HDOH-CWB. Produce all reports for HDOH-CWB.	SRGII Project Manager, over 20 years project management, laboratory, and field experience. Qualified to oversee monitoring program due to 29 years of experience in water quality monitoring.
SRGII field technicians	Perform all calibration and secondary checks on collection equipment. Collect samples and perform field measurements. Record field observations. Perform photograph monitoring. Submit field notebooks, photographs, and other data to Project Manager. Report any observations of adverse impacts to Project Manager immediately.	Over 5 years experience collecting water samples, performing field measurements in aquatic environments, and monitoring construction contractors working in aquatic environments.
Construction contractor's assigned representative	Notify SRGII and Hanalei Traders Inc. when installation of BMP's and biowall construction will start with enough time to collect 401 WQC pre-construction samples prior to starting work. Project Manager will notify HDOH-CWB. Make daily visual observations of BMPs and construction activity to be logged in a field notebook (SM 2012). Take photographs (with date/time stamp and description) and provide notebook and photographs to SRGII to be used as part of the assessment process. Notify SRGII Project Manager of any compromises to BMPs that might affect performance. Notify SRGII and Hanalei Traders Inc. of any modifications of work plan, BMPs, or AMAP. Project Manager will notify HDOH-CWB. Reports to SRGII Project Manager who will submit information to HDOH-CWB.	Knowledgeable of construction activities as they relate to 401 WQC requirements. Familiar with aquatic environments. Knowledgeable of WQC monitoring requirements for this project.

If visual observations by either SRGII field technicians or the construction contractor's assigned representative include negative impacts to the estuary, such as turbidity plumes or fish kills, the HDOH-CWB will be notified immediately. The SRGII field technicians or assigned representative must take photographs to document the impact and work must cease until the source of the problem has been identified and corrected if the problem is due to construction. A written report of action taken will be submitted by the permittee (or authorized representative) to HDOH-CWB within three business days.

A copy of the contractor's assigned representative's daily observations and photographs will be provided to SRGII for use in preparing the final report.

3.2 Parameters to be Measured

Due to the short duration of construction and the likelihood that there will be no changes in water quality, other than the possibility of a temporary increase in turbidity and TSS, only those general parameters included in the *General Monitoring Guidelines for 401 Water Quality Certification Projects* (HDOH 2015) will be measured. Parameters to be measured in the AMAP include: temperature, salinity, pH, dissolved oxygen (DO), turbidity, and TSS.

3.3 Sampling Locations

Station locations for the three decision units (DU) where the water quality samples will be collected comport with Figure 4: Typical Layout (flowing water) in the *Applicable Monitoring and Assessment Plan General Instructions* (July 10, 2015). Samples will be collected as called for in the Instructions.

Three DU will be established: Control Upstream (C-US), Control Downstream (C-DS), and Impact (Figure 5). The Control DUs will be located 50 ft (15 m) upstream of the most upstream extent of the floating turbidity barrier location (C-US) and downstream of the most downstream extent of the floating turbidity barrier location (C-DS). Control DUs will be static for the duration of sampling. The Impact DU will be located 3.28 ft (1 m) from the downstream extent of the floating turbidity barrier. During pre- and post-construction sampling the location for the Impact DU will be 3.28 ft (1 m) from the furthest downstream extent of the floating turbidity barrier. During construction, the location of the Impact DU will change based on the increment of the stream bank under construction, but will always be located 3.28 ft (1 m) downstream of the floating turbidity barrier. The length of the three DUs will be equal to the width of the river along a transect aligned perpendicular to the flow. Triplicate samples will be collected within the 3.28 ft (1 m) wide transect from the top to the bottom of the stream from bank to bank at the Impact DU. The (C-US) and (C-DS) DUs will have one sample collected for each sampling event. Flagging will be installed on the shoreline to mark the furthest upstream and furthest downstream extent of floating turbidity barrier locations and, along with GPS coordinates, will be used to locate DUs for replication in times when the floating turbidity barrier is not present. If a turbid plume is observed, the plume will be sampled as an independent DU. Sampling locations are provided in Table 2.

Table 2. Sampling Locations

Sample ID	Station	Latitude (N)	Longitude (W)
Upstream Control DU (C-US)	5+00	22° 12' 16.57"	159° 29' 27.97"
Downstream Control DU (C-DS)	-0+50	22° 12' 20.92"	159° 29' 34.69"
Impact DU for pre- and post-construction monitoring	-0+03	22° 12' 19.24"	159° 29' 32.79"

Sample ID	Station	Latitude (N)	Longitude (W)
During Construction Monitoring			
Impact DU 1 (same location as pre- and post-construction monitoring)	-0+03	22° 12' 19.24"	159° 29' 32.79"
Impact DU 2	0+47	22°12' 19.20"	159° 29' 32.60"
Impact DU 3	0+97	22°12' 18.85"	159° 29' 32.55"
Impact DU 4	1+47	22° 12' 18.45"	159° 29' 32.35"
Impact DU 5	1+97	22° 12' 18.15"	159° 29' 32.20"
Impact DU 6	2+47	22° 12' 18.00"	159° 29' 31.85"
Impact DU 7	2+97	22° 12' 17.85"	159° 29' 31.65"
Impact DU 8	3+47	22° 12'17.50"	159° 29' 31.40"
Impact DU 9	3+97	22° 12' 17.35"	159° 29' 30.30"
Impact DU 10	4+47	22° 12' 16.85"	159° 29' 29.85"
Plume		TBD, if needed	TBD, if needed

*Station Relative to stationing set for the biowall where stations 0+00 and 4+50 (ft) are the downstream and upstream boundaries for the limits of work along the river bank.

**GPS Coordinates (Datum WGS84)

3.4 Sampling Frequency

Proposed modifications to the schedule or BMPs are subject to acceptance by HDOH-CWB.

Pre-construction sampling. Prior to construction, samples will be collected from the three DU once every weekday over a period of two weeks for a minimum of ten sampling events. Samples from the Impact DU will be collected in triplicate and the arithmetic mean calculated. The highest pre-construction means will serve as the action levels (turbidity and Total Suspended Solids (TSS)). The highest and lowest pH means will serve as the pH action levels. Dissolved Oxygen (DO), temperature and salinity means may also serve as action levels where these parameters are impacted by the project. All pre-construction data and calculated action levels (as defined in project data quality objectives Section 4 below) for pH, turbidity, and TSS will be submitted to HDOH-CWB prior to the commencement of the proposed construction activities (Section 5). The percent relative standard deviation (RSD) will be calculated to ensure that variability is being adequately captured. If RSD exceeds 20%, sampling will be repeated. The means for the parameters sampled at the Control (C-US) and (C-DS) will be reported and be referenced as baseline conditions.

During-construction sampling. The during-construction sampling period will commence on the first day that construction personnel are present on site for installation of BMPs. During that one week period, expected to last five days, samples will be collected once per week. Once construction of the biowall commences, samples will be collected from the three DU once a day during all grubbing and in-water work. Grubbing and in-water work will require approximately two days during each increment of biowall construction, 18 days in total. The other portion of constructing each increment is expected to take three days. One additional sample collection will occur on the fifth day of each increment's construction. Therefore, there will be three sampling events during construction of each increment. For the Impact DU, samples will be collected in triplicate and the percent RSD calculated. After the biowall is complete, samples will be collect once a week during the planting of shrubs on the top of the river bank and removal of equipment and BMPs from site.

Post-construction sampling. Post-construction sampling will occur weekly for a period of three weeks after construction is completed and all in-water BMPs (floating turbidity barrier) are removed. Longer term, samples will be collected quarterly for two years to determine if the project resulted in ongoing impacts to water quality, and photographs will be taken to assess if the project could be contributing to erosion downstream.[2] Post-construction sampling will occur at all three DU with the Impact DU sampled in triplicate. The percent RSD will be calculated for samples taken at the Impact DU.

3.5 Instrument Calibration

Calibration procedures outlined in the manufacturer's instructions written specifically for the YSI 6-Series Multiparameter Water Quality Sonde will be meticulously followed (YSI Incorporated 2012). Calibration standards were prepared according to details in *Standard Methods for the Treatment of Water and Wastewater* (2012). Instrument calibration procedures will be undertaken prior to field measurements. For each sampling event, secondary checks will be performed prior to and after taking actual field measurements to ensure that the probe was functioning properly during the measurements. If typical accuracy ranges are not attained during the secondary check prior to field measurements, the probe will be recalibrated and the secondary check repeated. If typical accuracy ranges are not attained during the secondary check after field measurements are taken, the data will be discarded and new measurements collected. Table 3 provides typical accuracy ranges for the various parameters.

Table 3. Typical Accuracy Ranges

Parameter	Range	Compare Against
Temperature	± 1° C	NIST thermometer
Salinity	± 5%	Known standard
pH	± 0.2 SU	Standard calibration solution
DO	± 5%	Use same procedure as for calibration
Turbidity	± 5%	Known standard

Any field equipment that has been shown by calibration or otherwise to be defective will be taken out of service until it has been repaired and verified as performing properly. If the equipment or instrument cannot be repaired, it will be taken out of service and replacement equipment will be obtained.

Operation, calibration, secondary checks and field analysis will only be performed by experienced and qualified personnel who have been properly trained in these procedures (Table 1). Documentation of calibration, secondary checks, and any maintenance information will be maintained in field notebooks and submitted to HDOH-CWB as part of reporting efforts.

3.6 Sample Collection

SRGII field technicians will record their name, date, start and end time of sample collection, predicted tidal stage, and GPS location of each sampling site with datum. They will record field notes to include at a minimum weather conditions, precipitation, description of construction activity, unusual site conditions, location and condition of any BMPs and any other observed activities (related or unrelated to construction) that may affect water quality at the time of sample collection. SRGII field technicians will take photographs of each monitoring station at the time of sampling and any areas of potential and actual disturbance. Field technicians will include a descriptive narrative of what is being documented by each

[2] The first quarterly sampling will occur three months after the three week post-construction monitoring period has concluded.

photograph in the field notebook as well as a photo orientation map that shows the location and orientation of photos taken. Photographs will include a time and date stamp or that information will be embedded in the metadata associated with the image file.

A MULTI INCREMENT® sampling approach will be utilized.[3] All DU will be monitored for temperature, salinity, pH, DO, turbidity, and TSS. Samples will be collected in a one liter high density polyethylene sample bottle with two quarter inch holes drilled in the cap. The sampler will move through the entire DU with the bottle immersed horizontally and the holes aligned vertically. The bottle takes approximately one minute to fill and care will be taken to ensure that the entire DU is traversed during that time, providing an equal opportunity for any drop of water to be sampled. When triplicate samples are required, they will be taken within each DU sequentially. All individual results will be recorded on data sheets (Appendix F).

All parameters except TSS will be measured in the field using a YSI 6600 V2-4 Multiparameter Water Quality Sonde. The YSI 6600 V2-4 Sonde contains multiple optical sensors that can simultaneously measure a variety of water properties. After data has been collected using the Sonde, the one liter samples will be chilled on wet ice for delivery/shipment to the laboratory for TSS calculations. Test America will perform analysis for TSS. Analytical methods and instruments are outlined in Table 4. Analytical hold times and field preservation methods are summarized in Table 5.

Table 4. Analytical Methods and Instruments to be Used

Parameter	Range and Units	Method	Instrument	Minimum Detectable	Minimum Sensitivity
Temperature	-5 to +50°C	Temperature 6560 Sensor	YSI 6600 V2-4 Sonde	±0.15°C	0.01°C
Salinity	0 to 70 ppt			0.1 ppt	0.01 ppt
pH	0 to 14 units	pH 6561 Sensor[4]	YSI 6600 V2-4 Sonde	0.2 ppt	0.01 unit
DO	0 to 500%	6150 ROX™ Optical Dissolved Oxygen• % Saturation	YSI 6600 V2-4 Sonde	±1%	0.1%
DO	0 to 50 mg/L	6150 ROX™ Optical Dissolved Oxygen• mg/L	YSI 6600 V2-4 Sonde	± 0.01 mg/L	0.01 mg/L
Turbidity	0 to 1,000 NTU	Turbidity• 6136 Sensor	YSI 6600 V2-4 Sonde	0.05 NTU	0.1 NTU
TSS	0 to 250 mg/l	ASTM D 3977-97	Lab analysis	2-micron meters	0.5mg/l

[3] MULTI INCREMENT® is a registered trademark of EnvironStat, Inc.

[4] pH probes are known to deteriorate over time. The probe will be replaced if pH readings do not stabilize for 8 seconds at the standard value (i.e. 7.00 ± 0.20) within 60 seconds of immersion.

Table 5. Analytical Hold Times and Preservation Methods

Analysis	Hold Time	Field Preservation
Temperature	Immediate	None
Salinity	Immediate	None
pH	Immediate	None
DO	Immediate	None
Turbidity	Immediately	None
TSS	To reach lab within 7 days	Chill on ice to 4°C

3.7 Quality Assurance Plan

SRGII and construction contractor will retain in their records, the analytical procedures used, any relevant quality assurance/quality control information, instrument calibration information, and data results pertaining to specific analysis used in this AMAP. All analytical results and field notes will be entered into a notebook and/or data form established for that purpose, and provided in reports prepared for the monitoring plan (Section 5). The contractor's assigned representative's observations will be available on-site while the project is on-going. Upon project completion, all observations and field notebooks will be available (for at least five years) at the SRGII office for inspection by HDOH-CWB-authorized personnel during normal business hours.

4 Data Quality Objectives and Criteria for Measurement Data

Data quality objectives are qualitative and quantitative statements developed through a seven-step process based on USEPA guidance (USEPA 2006). The project-specific data quality objectives below describe each step and how it pertains to the monitoring and assessment of water quality during this project.

Step 1: State the Problem

The project will stabilize an eroding bank along the Hanalei River by installing a 450 ft (137 m) long biowall comprised of boulders and stacks of geotextile roll bags filled with grow medium. Native plants will be installed between the geotextile rolls and along the upper portion of river bank. Construction associated with installation of the biowall has the potential to temporarily suspend existing sediment and affect the pH level in the Hanalei River estuary in the immediate vicinity of the project site. A floating turbidity barrier made of a polystyrene geotextile fabric, with a top floatation device and an anchor chain, will be deployed to protect water quality and isolate the increment where biowall construction is occurring. The floating turbidity barrier will be temporarily placed in the river to catch sediments that may be released during construction activities. In order to determine if the BMPs are effectively preventing sediment from entering the larger Hanalei estuary, data regarding turbidity and TSS in estuary areas directly downstream of the project site are needed. Additionally, to confirm that implementation of the project will not increase sediment into the river longer term, nor will it contribute to increased erosion on adjacent properties, data regarding turbidity and TSS in estuary areas directly downstream of the project site along with photographs to indicate changes over time, are needed.

Step 2: Identify the Goals of the Study

The goal of this AMAP is to conduct water sampling and analysis that will (1) ascertain that the BMPs for the project are adequate to prevent water pollution; (2) promptly determine if BMPs are inadequate so

that modification of the BMPs can be implemented in a timely manner to bring the activity into compliance; (3) serve as a basis for self-compliance so that activities associated with the proposed action can proceed within the parameters required by Hawai‘i water quality standards; and (4) evaluate if the action is resulting in any long term adverse impacts to the water quality of the Hanalei River estuary or increased erosion to nearby properties.

Step 3: Identify the Information Inputs

Data collected as a part of the AMAP will be used in the decision rules to determine if the objectives listed above are being met. All monitoring results will be provided to HDOH-CWB in written reports (Section 5). Any exceedance above the specified limits identified in Step 5, will be reported to HDOH-CWB immediately.

Pre-construction monitoring results will be used to assess baseline levels for each parameter. Pre-construction field measurements and field notes will be reported to HDOH-CWB.

During-construction monitoring results will be used to assess whether the project is impacting State waters and will be used, if necessary, to modify BMPs. During-construction data will be reported to HDOH-CWB.

Post-construction monitoring data will be used to evaluate if the action is resulting in any long term adverse impacts to the water quality of the Hanalei River estuary or increased erosion to nearby properties. Sampling methodologies and analysis will follow the same protocols as all monitoring phases, but additional photographs will be taken to assist in the evaluation. Additional photographs will include the river bank across from the project area, directly upstream and downstream at both ends of the completed bioengineered wall, and 50 ft (15 m) downstream of the C-DS. One report will be submitted at the end of the three weeks post-construction monitoring period and following that, after each quarterly assessment.

Step 4: Define the Study Boundaries

The project is expected to occur over a twelve week period, with ten weeks of construction within that period. Sampling will occur ten times (once during each weekday for two weeks) during the pre-construction sampling phase; once a day during grubbing and in-water work (approximately 18 days total), and an additional sampling on the fifth day of construction of each biowall increment until the end of the construction phase; once a week for all other “during construction” periods; and once a week for three weeks immediately following construction completion and then quarterly for following two years. Monitoring data will be collected from all three DU (Impact, C-DS, C-US) during all three phases: pre-construction, during construction, and post-construction. During-construction samples will be collected after 8:00 am and before 4:00 pm during ongoing work. All parameters listed in Table 4 will be measured.

The monitoring plan will be limited to the 450 ft (137 m) long project area in Hanalei Estuary and will extend 50 ft (15 m) upstream and 50 ft (15 m) downstream of the project site. The Impact DU will monitor the water quality 3.28 ft (1 m) downstream of the floating turbidity barrier location. During pre- and post-construction monitoring, the Impact DU will be located 3.28 ft (1 m) downstream of the furthest downstream location of barrier. During construction, this location will change based on the increment under construction, but will always be located 3.28 ft (1 m) downstream of the floating turbidity barrier. Station C-US will monitor the water quality 50 ft (15 m) upstream of the project limits. Station C-DS will

monitor the water quality 50 ft (15 m) downstream of the project limits. The study boundaries include all waters from the surface to the bottom within the defined area. Sampling stations are shown on Figure 5.

Step 5: Develop the Analytic Approach

The results of all water quality monitoring, described in Sections 3.4 and 3.6, will be evaluated by comparing the during and post-construction Impact DU results against the results from the upstream and downstream DU and pre-construction monitoring results to determine if the goals outlined in Step 2 are being met. Exceedance of the specified limits for measured parameters at either the Impact DU or the C-DS, when the exceedance is not related to ambient conditions, indicates corrective action is necessary. Repair or modification of the BMPs are likely to be the corrective actions that would improve water quality. Specified limits are the means calculated for each parameter during pre-construction monitoring as well as the C-US results for that sampling period. For turbidity and TSS, the highest means will serve to determine if action is necessary. For pH, the lowest and highest means will serve to determine if action is necessary. The highest and lowest mean for DO will also be calculated and utilized as a baseline as necessary (e.g. if turbidity or TSS exceed the highest mean).

The SRGII field technician will notify the SRGII Project Manager of any exceedance. The Project Manager will notify the contractor's representative. If the field technician notices a problem in the field, he/she will notify the contractor's representative directly, or if the representative is not available, the on-site manager. The contractor's representative or on-site manager will attempt to track the cause of the exceedance. If it is determined that construction is causing the problem, then the activity responsible will cease until the problem is corrected. The contractor will verbally notify the Project Manager (SRGII) who will notify HDOH-CWB of the problem and any corrective action taken. If the discharge event is caused by other factors, then the contractor will report the findings (with material evidence) to the Project Manager who will notify HDOH-CWB. If at any time it is noted that there is a turbidity plume extending beyond the BMPs and the plume is associated with construction, all work will stop until the cause is determined and corrected.

Additionally, during field sampling, SRGII field technicians are required to take field notes (Section 3.6). The construction contractor is also required to maintain field notes. All field notes include data, narrative observations, and photographs. Both the field technicians and construction contractor are required to inform the SRGII Project Manager if observations indicate corrective action is necessary (e.g. water quality results are within accepted means but floating turbidity barrier appears to be more loosely fitted than the previous day).

Step 6: Specify Performance/Acceptance Criteria

Environmental decisions are uncertain. Some uncertainty will be the result of sample design errors and some uncertainty will be the result of measurement errors. When examining the data against the decision rules (Step 5), a decision must be made if the data show the water quality of the river is within the range of ambient conditions (null hypothesis) or if the water quality of the river is affected by construction activities. Two potential decision errors exist: Type I – false rejection of the null hypothesis (conclude a water quality impact has occurred where one has not), or Type II – false acceptance of the null hypothesis (conclude no water quality impact has occurred where one has).

Pre-construction values (10 data sets) will determine the baseline (ambient) conditions (and action level range) in the project area. These will be used in conjunction with the values of the C-US station during

each sampling period. Action levels will be listed on the data recording sheets so the samplers are aware when exceedance has occurred.

MULTI INCREMENT® samples provide values at or very close to the mean. MULTI INCREMENT® samples will be taken in triplicate at all DU during pre-construction monitoring and at the Impact DU during all monitoring days to ensure values are accurate. The percent RSD ensures that variability is being adequately captured and is not to exceed 20%.

Step 7: Develop the Plan for Obtaining Data

The sampling plan was developed in accordance with water quality regulations promulgated in Hawai'i Administrative Rules (HAR) Chapter 11-54 (HDOH 2014), Applicable Monitoring and Assessment Plan General Instruction (HDOH 2015), and Data Quality Objectives specified by EPA (EPA 2006). The sampling locations, frequency, and design are the most effective for providing accurate data efficiently and satisfy the DQOs specified. This sampling program may be modified based on analysis of data, visual observations, changes in construction, changes in environmental conditions, and other information that may become available during construction. Modifications to optimize the design may be necessary if construction is found to be impacting water quality in the Hanalei River estuary. Any modifications to sampling design or schedule are subject to acceptance by and require approval by HDOH-CWB.

Samples will be collected at three locations (four if a plume is observed) near the project site. Monitoring of the project DUs for temperature, salinity, pH, DO, turbidity, and TSS should be adequate to assess the effectiveness of project BMPs. Visual inspections of project BMPs will be documented daily by the construction contractor.

Chain of Custody Procedures

Once the water samples have been obtained and site conditions and field measurements have been properly documented in the field notebook and data sheets, a written record of the chain of custody of the samples must be made for the laboratory analyses. A chain-of-custody (COC) form serves the purpose of accompanying the samples to the laboratory and directly laboratory analysts on the analyses to be performed (Appendix F). The form also identifies the samples so the laboratory can report the analytical results by sample ID. When transferring possession of samples, the sampler should sign and record the date and time on the COC record. Each person who subsequently takes custody should fill in the appropriate section of the COC record. The COC will be filed with the laboratory data and become a part of the permanent record.

5 Reports and Assessment

A pre-construction monitoring report assessing water quality parameters and identifying action levels for pH, turbidity, and TSS will be prepared within two weeks of completion of pre-construction monitoring and analysis. This report will include field notes regarding instrument calibration and secondary checks with the date, time, and values specified. It will also indicate any equipment maintenance performed. SRGII will submit the completed report will be sent via facsimile or email (as a pdf) by SRGII to HDOH-CWB on behalf of Hanalei Traders Inc. prior to the commencement of the proposed construction activities.

Draft results of during-construction monitoring data and field notes will be sent via facsimile or email (as a pdf) by SRGII to HDOH-CWB within 24 hours or the first business day after they become available. SRGII will email a typed report of results to Hanalei Traders Inc. These typed reports will also be sent to HDOH-

CWB via facsimile or email (as a pdf). These reports will have a running statistical summary (provided there are sufficient data for statistical analysis) for each phase of the project. These reports will also include field notes regarding instrument calibration and secondary checks with the date, time, and values specified as well as any equipment maintenance performed.

Post-construction results will be reported to HDOH-CWB by facsimile or email within two weeks of completion of the three analysis period and then after each quarterly analysis.

A final report and water quality assessment will be prepared upon completion of the monitoring program. This report will be submitted via facsimile or email (as a pdf) by SRGII to HDOH-CWB on behalf of Hanalei Traders Inc. within 60 days following completion of all post-construction monitoring and analysis. The final report will identify the methods and procedures for analytical measurements and include all data collected as well as statistical summaries of results by station and activity phase (pre-construction, during-construction, and post-construction). Field notes regarding instrument calibration and secondary checks with the date, time, and values specified will be included as well as any equipment maintenance performed. This report will also assess whether water quality was impacted by the construction activity. Upon completion of the monitoring program, SRGII will retain the original data and field notebook for a minimum of five years.

6 References

Hawai‘i Department of Health (HDOH). 2014. Hawai‘i Administrative Rules, Title 11, Department of Health, Chapter 54, Water Quality Standards. Available at: http://health.hawaii.gov/cwb/files/2013/04/Clean_Water_Branch_HAR_11-54_20141115.pdf Last accessed June 7, 2017.

Hawai‘i Department of Health (HDOH). 2015. Applicable Monitoring and Assessment Plan General Instruction. Available at http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/forms/ (under AMAP guidelines). Last accessed June 12, 2017.

Hawai‘i Department of Health (HDOH). 2016. State of Hawaii Water Quality Monitoring and Assessment Report. Available at: https://health.hawaii.gov/cwb/files/2013/05/Draft-2016-State-of-Hawaii-Water-Quality-Monitoring-and-Assessment-Report.pdf Last accessed June 2, 2017.

Standard Methods (SM). 2012. Standard Methods for the Examination of Water and Wastewater. 22nd Edition. (Rice, Baird, Clesceri, and Eaton, eds.). APHA, AWWA, & WEF. 1496 pp.

US Environmental Protection Agency (USEPA). 1993. Methods for the Determination of Inorganic Substances in Environmental Samples. EPA 600/R-93/100. U.S.

US Environmental Protection Agency (USEPA). 2006. Guidance on Systematic Planning Using the Data Quality Objectives Process: EPA QA/G-4. EPA/240/B-06/001. 121 pp. Available at: http://www2.epa.gov/sites/production/files/documents/guidance_systematic_planning_dqo_process.pdf

YSI, Incorporated. 2012. YSI 6-Series Multiparameter Water Quality Sonde User Manual. 379 pp.

This page intentionally left blank.

Appendix G. Special Management Area Permit Assessment Form

COUNTY OF KAUA'I DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

I. Part A

APPLICANT INFORMATION			
Applicant:	Roger Ross		
Address:	5-5016 Kuhio Hwy. Hanalei, HI 96714	Phone:	(808) 326-2561
Applicant's Status: (Check one)			
☑ Owner of the Property	(Holder of at least 75% of the equitable and legal title)		
☐ Lessee of the Property	Lessee must have an **unexpired and recorded** lease of five (5) years or more from the date of filing of this application. If not, Owner(s) must provide a Letter of Authorization.		
☐ Authorized Agent	Attach Letter of Authorization		
Contact Person:	Andrew Hood	Address:	111 Hekili St. Suite A373 Kailua, HI 96734
Phone:	(808) 261-0862		
Email:	ahood@srgii.com		

PROJECT INFORMATION (attach additional sheets if necessary)			
Site Address:	5-5016 Kuhio Hwy. Hanalei, HI 96714	Tax Map Key:	(4) 5-5-010:067
		Lot Area:	2.32 acres
State Land Use District:	Urban	County Zoning:	Commercial
General Plan Designation:	Open Space		
Nature of Development:	Bioengineered River Bank Stabilization		

* **NOTE**: An Environmental Assessment in accordance with HRS Chapter 343 is required for actions requiring a Shoreline Setback Variance (SSV). Pleasecontact the Planning Department for further information.

Valuation of Development: $600,000
(Estimate Attached)

Date of Application: April 26, 2021

II. Part B:

The petitioner shall be responsible for filing the following required information with the department before an application is considered complete:

1. A **written** description of the proposed project, location and a statement of reasons/ justification for project.

   See Item 3 in Application Packet, Project Description.

2. If property abuts a shoreline, a certified shoreline survey conducted by a registered land surveyor within 6 months of an application shall be submitted, when required by the Planning Agency.

   Not applicable as the property does not abut a shoreline.

3. A plot plan of the property, drawn to scale, with all proposed and existing structures and other pertinent information. Also, preliminary building sketch plans are to be submitted.

   See Item 2, Location Map, Property Map and Site Plan.

4. Any other plans or information requirements by the Director. Note: An Environmental Assessment or Environmental Impact Statement that has been declared adequate under the National Environmental Policy Act (NEPA) or under Chapter 343, HRS, may constitute a valid filing under this section.

   See Item 2, Location Map, Property Map and Site Plan. The Final Environmental Assessment for this project was published in the Environmental Notice on 23 October 2016. A copy of the FONSI is included, see Item 6.

5. Project Assessment:

a. Description of the area and environment involved including flora and fauna, and other features;

   At one mile upstream of the Hanalei river mouth, the subject property is located in the Hanalei River estuary and water velocities and depths vary with tidal flux and discharges. Water surface elevations are highest when high discharges are coincident to rising tide levels, and lowest during base flow discharges at mean low low tides. The river channel geometry in this stretch has been altered due to growth of hau bush into the channel, predominantly from the east side of the river. A review of historic air images finds that the channel cross section surface, in the stretch where the subject property is located, has decreased in sections where hau bush has encroached by 20 to 30 feet, thus increasing velocity. A berm located on the property across the river from the subject property forces the flow of water back towards the channel during flood events resulting in larger volumes and higher velocities along the subject property than would be otherwise. Surface velocities along the subject property in general (not including flooding discharges) do not appear to exceed three feet per second (fps).

Vegetation at the subject property consists of non-native emergents and riparian species along the bank and in the river, and landscape plants and grassy lawn above the bank and throughout the rest of the property. Species occurring along the bank include: California grass (*Brachiria mutica*), wedelia (*Sphagneticola trilobata*), Chinese violet (*Asystasia gangetica*) and umbrella flatsedge (*Cyperus involucratus*). Landscape plants include non-native, Polynesian introduction, and a few native plants, though the natives do not necessarily represent vegetation that was at the site prior to development. The property does not contain any sensitive vegetation such as rare, threatened, endangered, or proposed for listing species.

The Hanalei River and adjacent properties contain both native and non-native animals, including mammals, birds, reptiles, amphibians, crustaceans, mollusks, insects, and fish. Most of the animals that potentially utilize the project site and river adjacent to the project site are transients through the area. This includes: one federally listed endangered bat species; four endemic waterbirds federally listed as endangered; one State listed endangered bird; several migratory waterbirds protected under the Migratory Bird Treaty Act (MBTA); and one species of sea turtle listed as federally threatened.

The subject property is a landscaped area with several buildings used for commercial purposes. Aside from the river and low areas of the river bank, within the property as a whole there is little to no habitat suitable for native species to permanently inhabit. The vegetation on the river bank provides some forage for transient bird species but no nesting areas. Both native and non-native fauna utilize the estuary, even though instream habitat conditions are not ideal, mainly due increased sedimentation and turbidity associated with land use along the lower reach of the river. Neither the project site nor the nearby surrounding areas contain any designated critical habitat for plants or wildlife.

Topography at the project site and the property in general is relatively flat, as is normal within a floodplain area. The river bank is a near vertical drop of between eight and twelve feet from the subject property edge down to the river.

b. Description of the existing land uses of the project site and surrounding areas;

The subject property, located one mile upstream from the river mouth at Hanalei Bay, is 2.32 acres and mostly level with elevations ranging from +7.5 to +5 ft. mean sea level. The property borders consist of Kuhio Highway on the south/southeast, Hanalei River on the north and east, and a privately owned parcel on the west/northwest. The property consists of one large building (Hanalei Dolphin Center), five rental cottages, a small shed, landscaped grounds with walking paths, and several permanent cement outdoor eating tables scattered on the lawn area between the restaurant and the Hanalei River. The Hanalei Dolphin Center lies on the southern portion of the property approximately 20 feet from Kuhio Highway and houses a restaurant and fish market as well as a gift shop. There are two gravel parking areas that service the Center, located to the east (adjacent to the highway) and north (adjacent to the river). The cottages are located north of Center and are aligned along the top of the west bank of the river. Each cottage has designated parking off the gravel driveway that provides access to the cottages from the Center's north parking lot. The west boundary of the property is aligned along an ʻauwai that drains taro loʻi mauka of Kuhio Highway. The ʻauwai empties into the Hanalei River at the northern most tip of the property. It is used to access the Hanalei River by kayakers and paddlers who rent water equipment from the neighboring property. The proposed project site (the river bank) does not contain any infrastructure, nor it is used for any purpose except river viewing by people.

Ranching (cattle and/or buffalo) is conducted on two properties adjacent to the Hanalei Traders property, the Princeville Ranch directly upstream and across the highway (south), and the Mowry property across the river (east). Princeville Ranch also contains some taro lo'i in the portion of property closest to the Hanalei Traders property. There is a 3.2 acre parcel of land that surrounds the Hanalei Traders parcel on two sides (north/northwest/west). It is owned by Halele'a Investment company and contains three structures one of which is a residential home. This is the parcel that is directly downstream of the project site. The structures are approximately 130 ft inland from the west bank of the river bank. Further west of the Hanalei Traders property is a residential area.

c. Description of how the proposed project will affect the area involved and surrounding areas. Specifically the assessment should evaluate if the proposal:

i. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources, including but not limited to, historic sites, Special Treatment Districts as established by the County of Kauai Comprehensive Zoning ordinance, view planes or scenic corridors as outlined in the Community Development Plans, and recreation areas and resources;

Yes	No
	X

Discussion: N/A

ii. Curtails the range of beneficial uses of the environment;

Yes	No
	X

Discussion: N/A

iii. Conflicts with the County's or the State's long-term environmental policies or goals;

Yes	No
	X

Discussion: N/A

iv. Substantially affects the economics or social welfare and activities or the community, County or State;

Yes	No
	X

Discussion: N/A

v. Involves substantial secondary impacts, such as population changes and effects on public facilities;

Yes	No
	X

Discussion: N/A

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

Yes	No
	X

Discussion: N/A

vii. Substantially affect a rare, threatened, or endangered species of animal or plant, or its habitat;

Yes	No
	X

Discussion: N/A

viii. Detrimentally affects air or water quality or ambient noise levels; or

Yes	No
	X

Discussion: N/A

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

Yes	No
X	

Discussion: The project design is being used to stabilize an area that is experiencing accelerated erosion due in part to offsite impacts. The development will not affect the floodplain, any shoreline processes, the tsunami zone, any geologically hazardous land, or coastal water. The development will have a positive effect on the estuary reach of the Hanalei River by enhancing water quality through erosion control.

x. May have a major effect on the quality of the environment or affect the economic or social welfare of the area; and

Yes	No
	X

Discussion: N/A

xi. Would possibly be contrary to the policies and guidelines of the Rules and Regulations, the County's General Plan, Development Plans, and Zoning and Subdivisions Ordinances.

Yes	No
	X

Discussion: N/A

d. Evaluation of the proposed development relative to the objectives and policies as contained in Chapter 205A, HRS and Section 3.0 of the Special Management Area (SMA) Rules and Regulations: (Complete following questionnaire)

RECREATIONAL RESOURCES:	Objective: Provide coastal recreation opportunities accessible to the public.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" it is necessary to elaborate by providing comments in the "Discussion" section below the question you answered "**Yes**".

1. Will the proposed development adversely affect coastal resources uniquely suited for recreational activities that cannot be provided in other areas?

Yes	No
	X

Discussion: N/A

2. Will the project require replacement of coastal resources having significant recreational value, including but not limited to surfing sites, sandy beaches and fishing areas, when such resources will be unavoidably damaged by the proposed development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable?

Yes	No
	X

Discussion: N/A

3. Is the project site near a State or County Park?

Yes	No
	X

Discussion: N/A

4. Will the proposed development affect an existing public access to or along the shoreline?

Yes	No
	X

Discussion: N/A

5. Will the proposed development provide public access to and/or along the shoreline?

Yes	No
	X

Discussion: N/A

6. Will the proposed development encourage expanded recreational use of County, State, or federally owned or controlled shoreline lands and waters having recreational value?

Yes	No
	X

Discussion: N/A

7. Will the development generate point or non-point sources of pollution that will affect recreation value of coastal area?

Yes		No
		X

Discussion: N/A

HISTORICAL RESOURCES:	Objective: Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the Special Management Area that are significant in Hawaiian and American history and culture.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" it is necessary to elaborate by providing comments in the "Discussion" section below the question you answered "**Yes**".

1. Is the project site within a Federal, State and/or County designated historical/cultural district?

Yes	No
	X

Discussion: N/A

2. Is the project site listed on or nominated to the Hawaii or National Register of Historic Places?

Yes	No
	X

Discussion: N/A

3. Does the project site include land(s) which have not been previously surveyed by an archaeologist?

Yes	No
X	

Discussion: Although the project site has not had a formal archeological survey, the Lead Archaeologist of the Hawaii State Historic Preservation Division Kauai (Mary Jane Naone) conducted a field inspection on October 19, 2015.

4. If an archeological survey has been conducted for the project site, has the survey been submitted to the State Historic Preservation Office for review and recommendations?

Yes	No
	X

Discussion: The field inspection, although not a formal survey, was done by SHPD.

5. Has any site survey revealed any information on historic or archaeological resources? (Please provide a copy or reference of survey)

Yes	No
	X

Discussion: The field inspection by SHPD did not reveal any positively identified historic or cultural features. The presence of some vertically aligned rocks set perpendicular to the river bank between and adjacent to Cottages 4 and 5 as well as a pile of rocks fronting Cottage 5 just inland from the top of the river bank was noted. Although the origin of the rocks is not known, they are likely simply landscaping features that were placed on the property for aesthetic reasons. However, all contact with the noted rock piles will be avoided as a precaution. The project will not entail any excavation, only light grubbing to remove non-native plants along the 450 ft. of river bank where the biowall will be constructed. As an additional precaution, an archaeologist will be present on site during the grubbing period of project work to ensure proper identification of any previously undiscovered historic and/or cultural resources.

6. Is the project site within or near a Hawaiian fishpond?

Yes	No
	X

Discussion: N/A

7. Is the project located within or near a historic settlement area? (Cemeteries, burials, heiaus, etc.)

Yes	No
	X

Discussion: N/A

SCENIC AND OPEN SPACE RESOURCES:	Objective: Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" it is necessary to elaborate by providing comments in the "Discussion" section below the question you answered "**Yes**".

1. Does the project site abut or affect a valued scenic resources or landmark within the SMA?

Yes	No
X	

Discussion: The proposed development would occur on a 450 ft. stretch of the Hanalei River. The Hanalei River is designated as an American Heritage River based in part on its value as a scenic resource. The river is valued by locals and tourists alike for its scenic beauty as well as other resources. The proposed development would benefit scenic resources both within the subject property and along a portion of the lower river reach. The biowall would convert an eroding muddy river bank to a stretch of native plant species, which is a more desirable scenic state. Native plants may also improve scenic resources by providing improved habitat for native fauna in the river to linger near the subject property. The visual quality of the water adjacent to the project area, and just downstream, would improve.

2. Does the proposed development affect existing shoreline open space and scenic resources?

Yes	No
	X

Discussion: N/A

3. Does the proposed development involve alteration to natural landforms and existing public views to and along the shoreline?

Yes	No
	X

Discussion: N/A

4. Is the project compatible with the visual environment?

Yes	No
X	

Discussion: The proposed project would result in beneficial effect to the visual environment both within the subject property and along a portion of the lower river reach. The biowall would convert an eroding muddy river bank to a stretch of native plant species, which is a more desirable scenic state. Native plants may also improve the visual environment by providing improved habitat for native fauna in the river to linger near the subject property. The visual quality of the water adjacent to the project area, and just downstream, would improve.

5. Does the proposed action involve the construction of structures visible between the nearest coastal roadway and the shoreline?

Yes	No
	X

Discussion: N/A

6. Is the project site within the Shoreline Setback Area (20 or 40 feet inland from the shoreline)?

Yes	No
	X

Discussion: N/A

COASTAL ECOSYSTEMS:	Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" it is necessary to elaborate by providing comments in the "Discussion" section below the question you answered "**Yes**".

1. Is the project site a habitat for endangered species of flora and fauna?

Yes	No
X	

Discussion: Most of the animals that potentially utilize the project site and river adjacent to the project site are transients through the area. This includes: one federally listed endangered bat species; four endemic waterbirds federally listed as endangered; one State listed endangered bird; and one species of sea turtle listed as federally threatened. The only endangered species known to linger at the site is the Hawaiian common moorhen (*Gallinula chloropus sandvicensis*). The moorhen has been observed foraging in the area adjacent to the project site but is not known to nest there.

Implementation of the proposed development would not result in any adverse effects to native wildlife species, including those protected under the Endangered Species Act (ESA). Construction BMPs will be employed to avoid any adverse impacts on fish and wildlife (BMPs are fully described in the Water Quality Certification application submitted to the Department of Health Clean Water Branch). Over the long term, implementation of the proposed project would likely be beneficial to fish and wildlife (including endangered water birds) due to improved habitat conditions in the immediate vicinity of the property, as well as decreasing sedimentation in the river in general.

2. Will the proposed development adversely affect valuable coastal ecosystems of significant biological or economic importance?

Yes	No
	X

Discussion: N/A

3. Will the proposed involve disruption or degradation of coastal water ecosystems through stream diversions, channelization, and similar land and water uses?

Yes	No
	X

Discussion: N/A

4. Will the proposed development include the construction of special waste treatment facilities, such as injection wells, discharge pipes, septic tank systems or cesspools?

Yes	No
	X

Discussion: N/A

5. Is there a wetland on the project site?

Yes	No
	X

Discussion: N/A

6. Is the project site situated in or abutting a Natural Area Reserve or Wildlife Refuge or Sanctuary?

Yes	No
	X

Discussion: N/A

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

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" it is necessary to elaborate by providing comments in the "Discussion" section below the question you answered "**Yes**".

1. Does the project involve a harbor or port?

Yes	No
	X

Discussion: N/A

2. Is the proposed development related to or near to an existing major hotel, multi-family, or condominium project?

Yes	No
	X

Discussion: N/A

3. Does the project site include agricultural lands designated for such use?

Yes	No
	X

Discussion: N/A

4. Does the proposed development relate to commercial fishing or seafood production?

Yes	No
	X

Discussion: N/A

COASTAL HAZARDS	Objective: Reduce hazard to life and property from tsunami, storm wave stream flooding, erosion, and subsidence.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" it is necessary to elaborate by providing comments in the "Discussion" section below the question you answered "**Yes**".

1. Is the project site within a potential tsunami inundated area as depicted on the National Flood Insurance Rate maps (FIRM)?

Yes	No
X	

Discussion: The project site is within a potential tsunami inundation zone per FIRM FM1500020055E (9/16/05). See Figure 8, Section 2 of this permit application.

2. Is the project site within a potential flood inundation area according to a FIRM?

Yes	No
X	

Discussion: The FIRM FM1500020055E (9/16/05) shows that the subject property is within Flood Zone AEF (the Special Flood Hazard Area). Zone AEF is within the 100-year floodplain, with a 1% annual chance of a 100-year flood occurring or being exceeded annually and a 26% chance of flooding over the life of a 30-year mortgage.

3. Does the project comply with the requirements of the Federal Flood Insurance Program?

Yes	No
X	

Discussion: The proposed action will not add any encroachments that would alter base flood elevations and therefore is complies with the requirements of the Federal Flood Insurance Program.

4. Has the project site or nearby shoreline areas experienced shoreline erosion?

Yes	No
	X

Discussion: The project site is not on a shoreline.

5. Have any seawalls/revetments/etc. been constructed or exist in the immediate vicinity?

Yes	No
	X

Discussion: N/A

PROJECT ASSESSMENT	

e. Evaluation of impacts which cannot be avoided and mitigating measures proposed to minimize that impact;

Discussion: The proposed development would not result in any long-term adverse impacts. All short-term adverse impacts will be avoided by use of construction BMPs.

f. Evaluation of the proposed development relative to Section 4.0 of the SMA Rules and Regulations in accordance with the following aspects:

i. Substantial adverse environmental or ecological effects;

Discussion: No adverse environmental or ecological effects are anticipated as a result of implementation of the proposed development. The potential for creating adverse impacts will be minimized through construction BMPs, negating the need for mitigation measures. The Proposed Action, in conjunction with other actions on and in the project site vicinity, will not result in adverse cumulative effects.

ii. Consistency or compliance of the proposed development relative to the goals and objectives of Chapter 205A, HRS and Section 3.0 of the SMA Rules and Regulations;

Discussion: The proposed development is consistent and in compliance with all of the applicable goals and objectives of Chapter 205A, HRS and Section 3.0 of the SMA Rules and Regulations.

iii. Consistency or compliance of the proposed development relative to the County General Plan, Development Plan, and Zoning Ordinances.

Discussion: The proposed development is consistent with all applicable components of the County General Plan and Development Plan and does not violate Zoning Ordinances.

Andrew P. Hood

April 23, 2021

Signature of Applicant/Representative
Andrew Hood, Sustainable Resources Group Intn'l, Inc.

Date

Ka'āina S. Hull
Director of Planning

Jodi A. Higuchi Sayegusa
Deputy Director of Planning

COUNTY OF KAUA'I
PLANNING DEPARTMENT

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of a Special Management Area Use Permit to allow stabilization of an eroding riverbank along the Hanalei River.
Permit Application Nos.	Special Management Area Use Permit SMA(U)-2022-3
Name of Applicant(s)	HANALEI TRADERS, INC.

II. PERMIT INFORMATION

PERMITS REQUIRED	
☐ **Use Permit**	
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☐ **Zoning Permit Class** ☐ IV ☐ III	
☒ **Special Management Area Permit** ☒ Use ☐ Minor	Pursuant to Section 205A of the Hawaii Revised Statutes (HRS) and the Special Management Area Rules and Regulations of the County of Kaua'i, a SMA Use Permit is required as defined in Section 7.3(C) of the SMA Rules and Regulations where the Director finds that the proposal (1) is a "Development" as defined in Section 1.4F; and (2) is in excess of $500,000.
AMENDMENTS	
☐ **Zoning Amendment**	
☐ **General Plan Amendment**	
☐ **State Land Use District Amendment**	

F.2.d.1.

APR 12 2022

Date of Receipt of Completed Application:	February 10, 2022
Date of Director's Report:	March 23, 2022
Date of Public Hearing:	April 12, 2022
Deadline Date for PC to Take Action (60TH Day):	June 11, 2022

III. PROJECT DATA

PROJECT INFORMATION			
Parcel Location:	The project site is located off Kūhiō Highway approximately one (1) mile west of the Hanalei bridge adjacent to the Hanalei River.		
Tax Map Key(s):	(4) 5-5-010:067	**Area:**	2.32 acres
ZONING & DEVELOPMENT STANDARDS			
Zoning:	Open (O)		
State Land Use District:	Urban		
General Plan Designation:	Natural		
Height Limit:	Twenty-five (25) feet OR Base Flood Elevation (B.F.E.) plus (fifteen)15 feet		
Max. Land Coverage:	3,000 s.f. maximum or not to exceed 10% of the parcel or lot area		
Front Setback:	10'-0"		
Rear Setback:	Five (5) feet or ½ the wall plate height whichever is greater		
Side Setback:	Five (5) feet or ½ the wall plate height whichever is greater		
Community Plan Area:	North Shore Development Plan		
Community Plan Land Use Designation:	N/A		
Deviations or Variances Requested:	N/A		

IV. LEGAL REQUIREMENTS

Section 8.0, 9.0, and 10.0 of the Special Management Area Rules and Regulations:	This report is being transmitted to the Applicant and Planning Commission in order to satisfy the requirements of Sections 8.0, 9.0 and 10.0 of the Special Management Area Rules and Regulations. The application was received on February 10, 2022 and the Applicant, through its authorized agent, was notified

	accordingly of the Planning Department's intent to commence permit processing.
Public Hearing Date:	**APRIL 12, 2022**

V. PROJECT DESCRIPTION AND USE

The proposed development is to stabilize approximately 450 linear feet of eroding riverbank with a bioengineered (bio-wall) wall (see Figure 3. Property Map of the Application). The bio-wall will be constructed in fifty (50) linear foot increments, each increment will be fully completed before the next increment is started. Construction of each increment/ phase will take up to five (5) days to complete. The bio-wall construction will consist of light grubbing to remove non-native plantings. Placement of washed boulders that are two (2) to three (3) feet in diameter will be placed at the toe of the riverbank for foundation. Equipment used for this operation will not be "in-water". A total of 216 cubic yards of boulders will used. Woven, porous, geotextile bags will be placed on the top of the boulders to the top of the existing riverbank. Geogrid fabric will be used to secure and anchor the interlocking geotextile bags to the riverbank. Sedges and woody native or Polynesian shrubs will be placed between the geotextile bags and geogrid fabric as well as the top of the existing bank (see project description page 3 of application).

Current improvements on the subject property includes the Hanalei Dolphin Center and Restaurant, five (5) rental cottages, outdoor seating area, a shed, and landscaped grounds with walking paths. The north-eastern portion of the subject parcel is adjacent the Hanalei River. As shown in the Application, the riverbank is eroding at the project site and resulting in an unstable bank that is eight (8) to twelve (12) feet high from the top of the bank to the bed of the river.

The applicant, Hanalei Traders, Inc., was previously granted a Special Management Area Minor permit SMA(M)-2017-4 for repair of the eroding riverbank. Work could not be initiated prior to the two (2) year expiration date due to the April 2018 rain event. A cost valuation of $485, 000 was submittal in 2016 SMA assessment application which deemed the project to be reviewed as a SMA Minor permit. Due to the present material and labor costs, the project's valuation increased to $600,000 and thus requiring an SMA Use Permit. It is noted that other than the change in costs, the scope of work has not changed since the 2017 SMA Minor permit.

VI. APPLICANT'S REASONS/JUSTIFICATION

(Refer to Application)

VII. ADDITIONAL FINDINGS

1. The project site is located off Kūhiō Highway approximately one (1) mile west of the Hanalei bridge adjacent to the Hanalei River.

2. The State Land Use District (SLUD) designation for this parcel is "Urban", which allows for urban growth in a specified are.

3. The proposed development is not a shoreline property and not within the 500 feet shoreline setback threshold, pursuant to the County's shoreline setback requirements contained in Chapter 8, Article 27 of the Kaua'i County Code (1987), as amended will not be applicable to this project.

4. The General Plan designation (GP) is "Natural". According to the GP, areas designated as Natural have limited development capacity or are not suitable for development due to topography, hazards, vulnerability, sensitive resources, and other constraints. The proposed development is located at the property edge down to the bed of Hanalei River. (see Figure 7 and 8 Appendix C.)

5. The subject parcels are located within the Zone "AEF" of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). Zone "AEF" areas are designated as floodways within Zone "AE". The floodway is the channel of stream plus any adjacent floodplain area that must be kept free from any encroachment so that 1% annual chance of flood is carried without increasing the BFE. The parcels are also within the tsunami evacuation zone.

6. The topography is relatively flat, and no grading of the project area will occur. Light grubbing is proposed to remove non-native vegetation from the top of the riverbank down to normal high-water line. Existing drainage patterns on the property will not be affected.

7. Special Management Area (SMA)
   In addressing the issues of the Special Management Area and its objectives and policies, the following aspects will be considered and evaluated:

   a. Recreational Resources

   b. Cultural/ Historic Resources

   c. Scenic resources

   d. Coastal Hazard

   e. Coastal Ecosystem

   Furthermore, the proposal does not:

   - Involve dredging, filling or otherwise altering any bay, salt marsh, river mouth, slough or lagoon;

   - Reduce the size of any beach or other area usable for public recreation;

- Reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers, and streams within the SMA; and

- Adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries, potential or existing agriculture uses of land.

8. CZO Development Standards
   The proposed development is subjected to standards prescribed in Sections 8-4.3, 8-4.5 and 8-9.2:

   a. **Setback Requirements:** Front property line setbacks are ten feet (10'-0") with a side and rear property line setback of five feet (5'-0") or half the distance of the plate height whichever is greater. As specified in the application, this proposal is the stabilization of an eroding riverbank. Setback requirements are not applicable.

   b. **Setback between buildings:** The distance between buildings shall be ten (10) feet minimum. No buildings are associated with this proposal and not applicable to this project.

   c. **Lot Coverage:** The subject property is within the Open County zone area. Allowable lot coverage is 3,000 square feet maximum or not more than 10% of the parcel or lot area. No increase of lot coverage is anticipated with the riverbank stabilization project.

   d. **Building Height:** The North Shore Development Plan allows dwellings and other structures to be a maximum height of twenty (25) feet or Based Flood Elevation (B.F.E.) plus fifteen (15). No dwellings are proposed, the structure within the proposal is a bio-wall to stabilize an eroding riverbank.

VIII. AGENCY COMMENTS

See attached Exhibit "A"

IX. PRELIMINARY EVALUATION

In evaluating the Applicant's request to allow the construction of the proposed development, the following are being considered.

1. General Plan
   The proposed development satisfies the following policies of the General Plan, as taken from Section 1.3 and 1.4:

   A. 1.3, entitled "VISIONS AND GOALS"

1) **Goal #1 "Sustainable Island"** – The proposed natural engineering system design of the bioengineered wall, will help to reduce the amount of soil discharged into the Hanalei River during heavy rain events.

2) **Goal #2 "Unique and Beautiful Place"** –The Hanalei River is a treasured resource to the island of Kaua'i . Protecting the eroding riverbank will reduce turbidity in the Hanalei River. Keeping the river clean helps protect the river's natural environment.

3) **Goal #3 "A Healthy and Resilient People"** – The Hanalei River near the river mouth at Black pot beach as well as upriver, is widely used for gathering food while promoting healthy lifestyle through recreation opportunities. Protecting the riverbank upstream will minimize impacts such as turbidity.

4) **Goal #4 "An Equitable Place, with Opportunity for All"** – Hanalei Dolphin Center and Restaurant offers a variety of employment in the Hanalei Community. Protecting the eroding riverbank will protect potential property loss will help the Hanalei Dolphin Center and Restaurant remain open to ensure the employees have access to jobs.

B. Section 1.4, entitled "POLICIES TO GUIDE GROWTH"

1) **Policy #3 "Recognize the Identity of Kaua'i's Individual Towns and Distracts"**– The Hanalei Dolphin Center has been in the same location since the 1970's. This establishment contributes to the unique rural character to Hanalei Town.

2) **Policy #8 "Protect Kaua'i's Scenic Beauty" –** The Hanalei River is a valuable and treasured landmark in the Hanalei Town area. Installation of the bioengineered stabilization wall will minimize impacts of turbidity on the Hanalei River due to soil erosion.

3) **Policy #9 "Uphold Kaua'i as a Unique Visitor Destination" –** The riverbank erosion is fronting the existing cottages and outdoor dining area (see appendix "C") of the subject property. The five (5) cottages have an existing non-conforming use for vacation stay which has been grandfathered in. This application is to stabilize the existing riverbank to protect the river and reduce property loss. No new vacation rentals are proposed.

4) **Policy#10 "Help Business Thrive" –** This application is to stabilize an eroding riverbank to protect existing businesses on the subject property, that supports the existing town center of Hanalei.

5) **Policy#12 "Protect Our Watersheds" –** Kaua'i's natural drainage system is mostly natural-comprised of it's streams and rivers. During heavy rain events soil runoff from the riverbank scarp occurs. The construction of the bio-wall to

stabilize the eroding riverbank will reduce the turbidity of the Hanalei River from soil run off.

2. Native Hawaiian Traditional and Cultural Rights

The subject site has been previously developed and in operation since the 1970's. The applicant has reached out to sixteen (16) non-governmental organizations and individuals via email and mailed letters. The inquiry requests if they had any knowledge of on-going Native Hawaiian and Traditional Cultural Rights practices or activities. One (1) written response was received by the applicant from the Hanalei Canoe Club and two (2) organizations, the Office of Hawaiian Affairs (OHA), and State Historical Preservation Department (SHPD) reached out via phone call.

Based on the available information, traditional agriculture and aquaculture practices will not be affected or impaired by the proposed development.

After the Applicant consulted with sixteen (16) non-governmental organizations, three (3) in total responded. The organizations who are familiar with the area and evaluating historical information that was available to the department, the department finds that the proposed Project involving a developed parcel should have no impact on any known Hawaiian traditional or customary practices for the following reasons:

a. There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.

b. There are no special gathering practices taking place within any portion of the Project Site.

c. The Project will not detrimentally affect access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.

d. There are known religious practices taking place within the project site.

e. There are no known pre-contact cultural or historic sites or resources located within the project site.

f. There are no known burials within the petition area.

3. SMA Rules and Regulations

The COK SMA Rules and Regulations contain objectives, policies and guidelines designed to protect coastal resources. Within the SMA, special consideration is given to recreational opportunities, cultural and historic resources, scenic qualities and open space, coastal ecosystems, and coastal hazards. In evaluating the proposed development relative to the goals and objectives of the SMA Rules and Regulations, the following aspects are taken into consideration:

a. Public Access and Coastal Recreation – The project would not negatively impact on any public recreational opportunities located near the project area. Access to the Hanalei River is through the nearby Blackpot Beach Park.

b. Cultural/ Historical Resources – Currently, there are no know historic, cultural, or archeological resources on site. The applicant will have a qualified Archaeologists present during the light grubbing phase of the project to ensure proper identification of any previously undiscovered historic and/ or cultural resources.

c. Scenic and Open Space Resources – In 1998, the Hanalei River was designated as an "American Heritage River" by former President Bill Clinton based in part of its value as a scenic resource. The proposed 450 linear feet of riverbank stabilization should have minimal visual impacts to Hanalei River. Once the bio-wall is completed, a riverbank of native plants would be installed to take the place of the muddy riverbank. The visual water quality would likely to improve by the reduction of turbidity due to the soil run off .

d. Coastal Hazards – The subject property is not a shoreline property and is out of the Coastal High Hazard Area. It is however with in the tsunami evacuation area. Based on the Pacific Islands Ocean Observing System (PacIOOS) State of Hawai'i sea level rise viewer website, the subject parcel was analyzed using the Sea Level Rise Exposure Area (SLRXA) at the 3.2 feet range for potential impacts of passive flooding, annual high wave flooding, and coastal erosion. The subject parcel would be impacted by passive flooding and annual high wave run up at the property boundary edge of the river. The current existing development is currently not affected by passive flooding, annual high wave flooding, and coastal erosion.

e. Coastal Ecosystems – The project would not have any significant impact on the coastal ecosystem and any adjacent properties or its surroundings. The proposed development is out of the shoreline setback area and no erosion-protection structures seaward of the shoreline is being proposed. The property does not contain any sensitive vegetation such as rare, threatened, endangered, or proposed listing species. The Hanalei River and adjacent properties contain both native and non-native animals that are transients through the area. These species include one federally listed endangered bat species, four (4) endemic waterbirds that are federally listed as endangered, one (1) State listed endangered bird, several migratory waterbirds protected under the Migratory Bird Treaty Act (MBTA), and one (1) federally listed threatened sea turtle. An Environmental Assessment (EA) of proposed project was issued a Finding of No Significant Impact (FONSI) by Department of Land and Natural Resources, (DLNR) Land Division on October 23, 2016. Proper Best Management Practices (BMP's) along with water quality monitoring and water quality samples will be taken as stated in the Applicable Monitoring and Assessment Plan (see Appendix F.)

It is unclear based on the information contained in the application as to what sort of post-project maintenance would be necessary to ensure the structural integrity of the bio-wall. Prior to any construction activity, the Applicant should be required to submit a maintenance and monitoring schedule that document responsibilities and timeframes to ensure that any inadvertent failures and water quality impacts due to lack of maintenance are avoided.

X. PRELIMINARY CONCLUSION

Based on the foregoing, it is concluded that through proper mitigative measures, the proposed development can be considered, and it complies with the policies and guidelines of the Special Management Area Rules and Regulations in that:

1. The development will not have any substantial adverse environmental or ecological effect.

2. The development is consistent with the objectives/goals/policies of the County General Plan, the Comprehensive Zoning Ordinance, and other applicable ordinances.

Furthermore, the proposal DOES NOT:

a. involve dredging, filling, or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;

b. reduce the size of any beach or other area usable for public recreation;

c. reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers or streams within the special management area; and

d. adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries or existing agricultural uses of land.

Through proper mitigation measures, the proposed development should not have any detrimental impact to the environment or the surrounding area, and in compliance with the criteria outlined for the granting of a Special Management Area Use Permit. The Applicant should institute the "Best Management Practices" to ensure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those in the surrounding area of the proposal.

The Applicant shall implement to the extent possible sustainable building techniques and operational methods for the project.

XI. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion it is hereby recommended Special Management Area Use Permit SMA(U)-2022-3 to be **APPROVED**. If approved, the following conditions shall be implemented:

1. The proposed improvements shall be constructed as represented. Any changes to said development shall be reviewed by the Planning Director to determine whether Planning Commission review and approval is warranted.

2. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050 to determine mitigation measures.

3. The Applicant shall develop and utilize Best Management Practices (B.M.P's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties. Best Management Practices (BMPs) shall be implemented during construction in accordance with applicable permits (Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) and as required by Kaua'i County Sediment and Erosion Control Ordinance No. 808 to minimize any reduction in water quality. Over the long-term, water quality is expected to improve as nitrogen is taken up by plants in the bio-wall and fine sediments currently being released into the river are reduced as a result of the stabilization.

4. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, State Historic Preservation Division-DLNR, and the County Departments of Public Works, Fire, Transportation, and Water.

5. The Hanalei River is subject to flooding at all times of the year. The installation of stabilization materials would not be possible during a flood event and therefore work should be rescheduled. Weather forecasts shall be monitored continuously during the construction phase and in the event of a forecast of moderate to high rainfall, work shall cease until the threat has passed.

6. All work shall not impede river access for any river users during construction. Best Management Practices (BMPs) include use of a silt curtain made of polystyrene geotextile fabric, with a top floatation device and an anchor chain. The silt curtain will be temporarily placed in the river to catch sediments that may be released during construction. It will be attached to the downstream and upstream project boundaries, forming an arc with a maximum distance from the bank of ten (10) feet. This distance will allow unrestricting passage up and down the river by users. No equipment shall be placed within the bed or banks of the channel. The bank stabilization shall not

significantly alter the topography of the current riverbank or narrow the river channel.

7. The property owner will comply with the terms of all permits required for this construction project. In the event there is a failure of the riverbank stabilization project, the landowner shall remove the material from the water and repair the damage.

8. Water quality monitoring will occur prior to, during construction, and post-construction per the requirements of the Applicable Monitoring and Assessment Program for CWA Section 401 WQC.

9. Two (2) weeks prior to the start of construction a knowledgeable wildlife biologist will inspect the site to determine if there are any nesting waterbirds. In the unlikely event that nesting waterbirds are present, construction will be delayed until all chicks have fledged and left the area.

10. As recommended by DLNR DOFAW, the following practices to avoid any adverse impacts to birds shall occur. The project will not entail any nighttime work or the use of night construction lights, which if used could attract Newell's shearwaters or Hawaiian petrels and result in birds becoming disoriented and falling to the ground.

11. As recommended by DLNR DOFAW, the following practices to avoid any adverse impacts to bats shall occur. There will be no cutting or trimming of trees greater than 15 feet (4.6 meters) during the birthing and pup rearing season from May 15 to August 15.

12. As required for any development within a Special Flood Hazard Area, the project will comply with the rules and regulations of the National Flood Insurance Program presented in Title 44 of the Code of Federal Regulations. Specifically, implementation of the proposed action will not increase the flood hazard on other properties, and all required federal and state permits will be obtained prior to execution.

13. The State DAR (Division of Aquatic Resources) advised that the fill materials to be used in the design incorporate smooth boulders due to the preference of 'O'opu Nakea.

14. The BMPs to be implemented at the project site, which are subject to DOH (Department of Health) review as part of the Water Quality Certification application, state that green waste shall be removed from the project site daily for the duration of the vegetation removal, and that vegetation material will be disposed of at the nearest transfer station with a Green waste Diversion Program (likely Hanalei Transfer Station). No open burning of waste, on or off site shall occur.

15. Prion to any construction activity, the Applicant shall be required to submit a maintenance and monitoring schedule that document responsibilities and timeframes to ensure that any inadvertent failures and water quality impacts due to lack of maintenance are avoided.

16. To the extent possible within the confines of union requirements and applicable legal prohibitions against discrimination in employment, the Applicant shall seek to hire Kauai contractors as long as they are qualified and reasonably competitive with other contractors and shall seek to employ residents of Kauai in temporary construction and permanent resort-related jobs. It is recognized that the Applicant may have to employ non-Kauai residents for particular skilled jobs where no qualified Kauai residents possesses such skills. For the purposes of this condition, the Commission shall relieve the Applicant of this requirement if the Applicant is subjected to anti-competitive restraints on trade or other monopolistic practices.

17. The Planning Commission reserves the right to revise, add, or delete conditions of approval in order to address or mitigate unforeseen impacts the project may, create, or to revoke the permits through the proper procedures should conditions of approval not be complied with or be violated.

18. Unless otherwise stated in the permit, once permit is issued, the Applicant must make substantial progress, as determined by the Director, regarding the development or activity within two (2) years, or the permit shall be deemed to have lapsed and be no longer in effect.

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for APRIL 12, 2022 whereby the entire record should be considered prior to decision-making. The entire record should include but not be limited to:

a. Pending government agency comments;
b. Testimony from the general public and interested others; and
c. The Applicant's response to staff's report and recommendation as provided herein.

By _____
ROMIO IDICA
Planner

Approved & Recommended to Commission:

By _____
KA'ĀINA S. HULL
Director of Planning

Date: 4/1/2022

EXHIBIT "A"

(Agency Comments)
For reference

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Romio) February 10, 2022

SUBJECT: Special Management Are Use Permit SMA(U)-2022-3, Other
Tax Map Key: (4) 5-5-010:067, Hanalei Traders, Inc., Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☒	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☐	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

No comments or concerns from Fire

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

DEPARTMENT OF PLANNING

STANDARD ZONING PERMIT APPLICATION

One (1) original; If providing plans, five (5) sets, including original, required.
Fees vary based on permits required and range from $30 to over $1000.
Proof of 100% fee ownership rights or authorized agent must be attached.

DEPARTMENT USE ONLY				
Zoning				Intake By:
Use				
Variance				Intake Date:
SMA				
PDU				Acceptance Date/By:
TOTAL FEE:				
Additional Fees:				
Receipt Number				
Building Permit No.				
Associated Permits (e.g. SSD)				

Check One: [X] Paper Plans [ ] Electronic Plans

This application shall be filled out by all seeking Zoning, Use, Variance, SMA Use or PDU permits pursuant to the Kauai County Code, Hawai'i Revised Statutes Chapter 205A and all relevant rules and regulations of the Planning Commission and Department. Supplemental information may be attached to form. SMA applications may also require additional SMA assessment forms.

Permitting fees may be made via cash or check. All checks shall be made out to: **"Director of Finance"**

Complete Information Below			
Tax Map Key Number	(4)2-8-021-070	Condominium Number	n/a
Applicant Name(s)	Makahuena-Preferred A LLC et al.		
Property Address	n/a		
Mailing Address	P.O. Box 1205 Lihue, HI 96766		
Parcel Area	1.001 acres	Contact Phone	(808) 521-9297
Zoning Designation	Open	Contact Email (if applicable)	mtrask@cades.com

Applicant Declarations (incorrect responses may slow your permit review)

Please place an "X" under Yes or No under the following:

		YES	NO	Staff Verification
1	Is this property located in the Special Management Area (SMA)?	x		
2	Is this property part of a Condominium Property Regime (CPR)?		x	
3	Is this property within 500 feet of the shoreline?	x		
4	Is this property within the Agriculture Zoning District?		x	
5	Is there a structure on the property that is 50 years old or older?		x	
6	Do you have an Additional Dwelling Unit Certificate?		x	
7	Is this a permit for an after-the-fact construction or activity?		x	
8	I hold at least a 100% property interest in the property.		x	
9	Are you an agent for the property owner?	x		
10	Has a similar application been previously denied?		x	
11	Is this an application for an agriculture structure under 200 square feet		x	
12	Are there known burials on the site?		x	
13	Are you using water not provided by a domestic water system?		x	
14	Does existing grade under building footprint change by 2' or more in any direction?		x	
15	The proposed residential unit is a Multi-Family Dwelling Unit?		x	
16	Is this a conversion of a legally existing single-family dwelling unit into a multi-family two dwelling unit?		x	
17	Is this structure a guest house?		x	
18	Does guest house contain a kitchen?		x	

1. What is the proposed construction and/or intended use of the structure or parcel (may attach additional info)? Two-story Single-Family Dwelling Unit, pool, driveway, walkways, lanai, landscaping and associated improvements.
2. If this is not the first dwelling unit on the subject property identified on this application, please state how many dwelling units presently exist: n/a

Submittal Checklist

Please **INITIAL** under "Yes" or not applicable "N/A" regarding each of the statements:

		YES	NA	Staff Verification
1	All plot plans I have submitted are drawn to scale.	x		
2	I have ensured all TMK numbers are visible on all plan sheets.	x		
3	Any plans I have submitted clearly show all structures and setback dimensions.	X		
4	My plans provide lot coverage calculations	x		
5	I have ensured kitchens are marked with the 8' radii required by the Planning Department's Administrative Rules.	X		
6	Because this application involves a CPR, the plot plan shows all existing structures.		X	
7	Building plate does not exceed 20 feet from the finished grade at entry.	X		

Acknowledgements - Please **INITIAL** next to each of the statements:

I UNDERSTAND:	Initial Here
Additional fees and/or the submittal of other application forms may be necessary to complete this application for acceptance and processing.	MT
Tender of fees by the County does not imply acceptance of this application.	MT
Errors in self-declaration or missing or incomplete information will delay acceptance and processing of your application.	MT
Any purposeful misrepresentations in this application may result in delay, denial, permit revocation, violations, fines and even criminal prosecution.	MT

The owner and/or authorized representative is hereby made aware that the construction, work, use or activity approved in this permit shall be subject to inspection by Planning Department personnel. The applicant is advised that inspection may occur prior to or during construction and use to ascertain the activity is conducted in compliance with the law. Further, I am a duly authorized agent or have 100% ownership rights.

OWNER/AGENT SIGNATURE: _____ DATE: February 10, 2022

FOR PLANNING DEPARTMENT USE ONLY (THIS CONSTITUTES PERMIT IF FILLED OUT BY DEPT.):

APPROVED ☐ DENIED ☐ BY: _____ DATE: _____

DIRECTOR'S CONDITIONS OF APPROVAL (staff to **initial** next to applicable conditions):

This permit shall expire if no building is issued within one (1) year after the approval date and/or if construction does not start within one (1) year of building permit issuance.	
Director's standard conditions for non-residential agricultural structures (attach)	
Should any archaeological or historic resources be discovered during ground disturbing/construction work, all work in the area of the find shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division and the Planning Department to determine mitigation measures.	
Additional Conditions (State):	

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

I. Part A

APPLICANT INFORMATION			
Applicant:	Makahuena - Preferred A LLC et al.		
Address:	c/o Cades Schutte P.O. Box 1205, Lihue, HI 96766	Phone:	(808) 521-9297

Applicant's Status: (Check one)	
☐ Owner of the Property	(Holder of at least 75% of the equitable and legal title)
☐ Lessee of the Property	Lessee must have an **unexpired and recorded** lease of five (5) years or more from the date of filing of this application. If not, Owner(s) must provide a Letter of Authorization.
☑ Authorized Agent	Attach Letter of Authorization

Contact Person:	Mauna Kea Trask	Address:	P.O. Box 1205, Lihue, HI 96766
Phone:	(808) 521-9297		
Email:	mtrask@cades.com		

PROJECT INFORMATION (attach additional sheets if necessary)			
Site Address:	N/A	Tax Map Key:	(4) 2-8-21-70
		Lot Area:	1.001 acres
State Land Use District:	Urban	County Zoning:	Open
General Plan Designation:	Resort		
Nature of Development:	~~Two-story Single-Family Dwelling Unit, pool, driveway, walkways, lanais, landscaping and associated improvements.~~		

* **NOTE**: An Environmental Assessment in accordance with HRS Chapter 343 is required for actions requiring a Shoreline Setback Variance (SSV). Please contact the Planning Department for further information.

Valuation of Development: Over $500,000.00
(Estimate Attached)

Date of Application: February 10, 2022

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

II. Part B

The petitioner shall be responsible for filing the following required information with the department before an application is considered complete:

1. A **written** description of the proposed project, location and a statement of reasons/justification for project.
2. If property abuts a shoreline, a certified shoreline survey conducted by a registered land surveyor within 6 months of an application shall be submitted, when required by the Planning Agency.
3. A plot plan of the property, drawn to scale, with all proposed and existing structures and other pertinent information. Also, preliminary building sketch plans are to be submitted.
4. Any other plans or information requirements by the Director.

   Note: An Environmental Assessment or Environmental Impact Statement that has been declared adequate under the National Environmental Policy Act (NEPA) or under Chapter 343, HRS, may constitute a valid filing under this section.
5. Project Assessment:

   a. Description of the area and environment involved including flora and fauna, and other features;

   See attached.

   b. Description of the existing land uses of the project site and surrounding areas;

   See attached.

   c. Description of how the proposed project will affect the area involved and surrounding areas. Specifically the assessment should evaluate if the proposal:

	YES	NO
i. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources, including but not limited to, historic sites, Special Treatment Districts as established by the County of Kauai Comprehensive Zoning ordinance, view planes or scenic corridors as outlined in the Community Development Plans, and recreation areas and resources;	☐	☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

ii. Curtails the range of beneficial uses of the environment; YES ☐ NO ☑

Discussion:

See attached.

iii. Conflicts with the County's or the State's long-term environmental policies or goals; YES ☐ NO ☑

Discussion:

See attached.

iv. Curtails the range of beneficial uses of the environment; YES ☐ NO ☑

Discussion:

See attached.

v. Substantially affects the economics or social welfare and activities or the community, County or State; YES ☐ NO ☑

Discussion:

See attached.

vi. In itself has no significant adverse effect but cumulatively has considerable effect upon the environment or involves a commitment for larger actions; YES ☐ NO ☑

Discussion:

See attached.

vii. Substantially affect a rare threatened, or endangered species of animal or plant, or its habitat; YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

viii. Detrimentally affects air or water quality or ambient noise levels; or — YES ☐ NO ☑

Discussion:

See attached.

ix. Affects an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water or coastal water; — YES ☐ NO ☑

Discussion:

See attached.

x. May have a major effect on the quality of the environment or affect the economic or social welfare of the area; and — YES ☐ NO ☑

Discussion:

See attached.

xi. Would possibly be contrary to the policies and guidelines of the Rules and Regulations, the County's General Plan, Development Plans, and Zoning and Subdivision Ordinances. — YES ☐ NO ☑

Discussion:

See attached.

d. Evaluation of the proposed development relative to the objective and policies as contained in Chapter 205A, HRS; and Section 3.0 of the Special Management Area (SMA) Rules and Regulations: (complete following questionnaire)

RECREATIONAL RESOURCES:	Objective Provide coastal recreation opportunities accessible to the public.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

		YES	NO
1.	Will the proposed development adversely affect coastal resources uniquely suited for recreational activities that cannot be provided in other areas?	☐	☑

Discussion:

See attached.

		YES	NO
2.	Will the project require replacement of coastal resources having significant recreational value, including but not limited to surfing sites, sandy beaches and fishing areas, when such resources will be unavoidably damaged by the proposed development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable?	☐	☑

Discussion:

See attached.

		YES	NO
3.	Is the project site near a State or County Park?	☐	☑

Discussion:

See attached.

		YES	NO
4.	Will the proposed development affect an existing public access to or along the shoreline?	☐	☑

Discussion:

See attached.

		YES	NO
5.	Will the proposed development provide public access to and/or along the shoreline?	☐	☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

		YES	NO
6.	Will the proposed development encourage expanded recreational use of County, State, or federally owned or controlled shoreline lands and waters having recreational value?	☐	☑

Discussion:

See attached.

		YES	NO
7.	Will the development generate point or non-point sources of pollution that will affect recreation value of coastal area?	☐	☑

Discussion:

See attached.

HISTORICAL RESOURCES:	Objective Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the Special Management Area that are significant in Hawaiian and American history and culture.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

		YES	NO
1.	Is the project site within a Federal, State and/or County designated historical/cultural district?	☐	☑

Discussion:

See attached.

		YES	NO
2.	Is the project site listed on or nominated to the Hawaii or National Register of Historic Places?	☐	☑

Discussion:

See attached.

		YES	NO
3.	Does the project site include land(s) which have not been previously surveyed by an archaeologist?	☐	☑

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

Discussion:

See attached.

4. If an archeological survey has been conducted for the project site, has the survey been submitted to the State Historic Preservation Office for review and recommendations? YES ☑ NO ☐

Discussion:

See attached.

5. Has any site survey revealed any information on historic or archaeological resources? (Please provide a copy or reference of survey) YES ☑ NO ☐

Discussion:

See attached.

6. Is the project site within or near a Hawaiian fishpond? YES ☐ NO ☑

Discussion:

See attached.

7. Is the project located within or near a historic settlement area? (Cemeteries, burials, heiaus, etc.) YES ☐ NO ☑

Discussion:

See attached.

SCENIC & OPEN SPACE RESOURCES:	Objective Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

1. Does the project site abut or affect a valued scenic resources or landmark within the SMA? YES ☐ NO ☑

Discussion:

See attached.

2. Does the proposed development affect existing shoreline open space and scenic resources? YES ☐ NO ☑

Discussion:

See attached.

3. Does the proposed development involve alteration to natural landforms and existing public views to and along the shoreline? YES ☐ NO ☑

Discussion:

See attached.

4. Is the project compatible with the visual environment? YES ☑ NO ☐

Discussion:

See attached.

5. Does the proposed action involve the construction of structures visible between the nearest coastal roadway and the shoreline? YES ☑ NO ☐

Discussion:

See attached.

6. Is the project site within the Shoreline Setback Area (20 or 40 feet inland from the shoreline)? YES ☐ NO ☑

Discussion:

See attached.

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

COASTAL ECOSYSTEMS:	Objective Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

1. Is the project site a habitat for endangered species of flora and fauna? YES ☐ NO ☑

Discussion:

See attached.

2. Will the proposed development adversely affect valuable coastal ecosystems of significant biological or economic importance? YES ☐ NO ☑

Discussion:

See attached.

3. Will the proposed involve disruption or degradation of coastal water ecosystems through stream diversions, channelization, and similar land and water uses? YES ☐ NO ☑

Discussion:

See attached.

4. Will the proposed development include the construction of special waste treatment facilities, such as injection wells, discharge pipes, septic tank systems or cesspools? YES ☑ NO ☐

Discussion:

See attached.

5. Is there a wetland on the project site? YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

6. Is the project site situated in or abutting a Natural Area Reserve or Wildlife Refuge or Sanctuary? YES ☐ NO ☑

Discussion:

However, there are nesting sites for wedge-tailed shear waters nearby. See attached.

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

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

1. Does the project involve a harbor or port? YES ☐ NO ☑

Discussion:

See attached.

2. Is the proposed development related to or near to an existing major hotel, multi-family, or condominium project? YES ☑ NO ☐

Discussion:

The proposed development is bordered by the "Point at Poipu" hotel to the east, and the "Makahuena at Poipu" and the "Poipu Palms" developments to the west.

3. Does the project site include agricultural lands designated for such use? YES ☐ NO ☑

Discussion:

See attached.

4. Does the proposed development relate to commercial fishing or seafood production? YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

5. Does the proposed development relate to commercial fishing or seafood production? YES ☐ NO ☑

Discussion:

See attached.

COASTAL HAZARDS:	Objective Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

1. Is the project site within a potential tsunami inundated area as depicted on the National Flood Insurance Rate maps (FIRM)? YES ☐ NO ☑

Discussion:

See attached.

2. Is the project site within a potential flood inundation area according to a FIRM? YES ☐ NO ☑

Discussion:

See attached.

3. Does the project comply with the requirements of the Federal Flood Insurance Program? YES ☑ NO ☐

Discussion:

See attached.

4. Has the project site or nearby shoreline areas experienced shoreline erosion? YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

5. Have any seawalls/revetments/etc. been constructed or exist in the immediate vicinity? YES ☐ NO ☑

Discussion:

See attached.

PROJECT ASSESSMENT:	

e. Evaluation of the impacts which cannot be avoided and mitigating measures proposed to minimize that impact:

Discussion:

See attached.

f. Evaluation of the proposed development relative to Section 4.0 of the SMA Rules and Regulations in accordance with the following aspects:

i. Substantial adverse environmental or ecological effects;

Discussion:

See attached.

ii. Consistency or compliance of the proposed development relative to the goals and objectives of Chapter 205A, HRS; and Section 3.0 of the SMA Rules and Regulations; and

Discussion:

See attached.

iii. Consistency or compliance of the proposed development relative to the County General Plan, Development Plan, and Zoning Ordinances.

Discussion:

See attached.

Mauna Kea Trask, Authorized Agent — 2-10-2022

[name], [title] — Date

CADES SCHUTTE
A Limited Liability Law Partnership

MAUNA KEA TRASK 8418
P.O. Box 1205
Lihu'e, HI 96766
Telephone: (808) 521-9297
Facsimile: (808) 540-5015
Email: mtrask@cades.com

Attorneys for Applicants
MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA - DW, LLC.

BEFORE THE PLANNING COMMISSION

OF THE

COUNTY OF KAUA'I

In the Matter of the Application Of MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA-DW, LLC, for a Special Management Area Use Permit, for Real Property Situated at Weliweli, Koloa, Kaua'i, Hawai'i, Described as Lot 3 of Makahuena Estates Subdivision, Identified by Kaua'i Tax Map Key No. (4) 2-8-021:070.	SPECIAL MANAGEMENT AREA USE PERMIT SMA(U)-_____ Class III Zoning Permit Z-III-_____ **APPLICATION FOR SPECIAL MANAGEMENT AREA USE PERMIT AND CLASS III ZONING PERMIT; EXHIBIT LIST; EXHIBITS "A" - "T"**

TABLE OF CONTENTS

Page

SECTION 1. APPLICANTS/SUBJECT PROPERTY OWNERS. 1
1.1 Applicants 1
1.2 Property 1
1.3 Ownership 1
SECTION 2. LOCATION & LAND USE DESIGNATIONS OF THE PROPERTY 1
2.1 Location 1
2.2 Land Use Designations 2
a. SLUC 2
b. Kaua'i General Plan 2
c. CZO 2
d. Development Plan Area 2
e. Special Management Area 2
f. Constraint District 2
g. Heritage Resources 2
h. Flood Zone 2
i. Shoreline Setback 3
j. Violations 3
k. Visitor Destination Area 3
l. Soils 3
2.3 Prior Land Use Permits 4
a. SMA (U) 2015-1 4
b. Z-III-2015-1 4
c. S-2015-14 4
SECTION 3. PAST, EXISTING AND PROPOSED USES OF THE PROPERTY. 4
3.1 Past Uses 4
3.2 Existing Uses 5
3.3 Proposed Uses 5
SECTION 4. SUBJECT PROPERTY AND SURROUNDING LANDS 6
4.1 Location 6
4.2 Surrounding Uses 6

TABLE OF CONTENTS
(continued)

Page

SECTION 5. PERMITS REQUESTED AND REQUIRED 7
5.1 Class III Zoning Permit 7
5.2 SMA Use Permit 7
SECTION 6. IMPACTS OF DEVELOPMENT 7
6.1 Botanical Resources 7
6.2 Historical Resources 7
6.3 Air Quality/Noise 8
6.4 Flooding and Drainage 9
6.5 Utilities 9
a. Potable Water 9
b. Electric/Communications 9
6.6 Wastewater Treatment and Disposal 9
6.7 Solid waste Disposal 10
6.8 Governmental Services 10
a. Fire & Police Services 10
b. Schools 10
6.9 Economics 10
a. Jobs 10
b. Housing 10
c. Property Values 10
6.10 Population 11
6.11 Traffic Circulation 11
6.12 Heritage Resources 11
SECTION 7. SLUC CONSIDERATIONS 11
7.1 SLUC Urban District 11
SECTION 8. GENERAL PLAN CONSIDERATIONS 11
8.1 Kauai General Plan Visions and Goals 11
a. Goal # 1: A Sustainable Island 11
b. Goal # 2: A Unique and Beautiful Place 12
c. Goal # 3: A Healthy and Resilient People 12

TABLE OF CONTENTS
(continued)

Page

d. Goal # 4: An Equitable Place, with Opportunity for All 13
8.2 Kauai General Plan Policies to Guide Growth 13
a. Policy # 1: Manage Growth to Preserve Rural Character 14
b. Policy # 3: Recognize the Identity of Kauai's Individual Towns and Districts 14
c. Policy # 4: Design Healthy and Complete Neighborhoods 14
d. Policy # 7: Build a Balanced Multimodal Transportation System 15
e. Policy # 8: Protecting Kauai's Scenic Beauty 15
f. Policy # 9: Uphold Kaua'i as a Unique Visitor Destination Area 15
g. Policy # 14: Prepare for Climate Change 16
h. Policy # 15: Respect Native Hawaiian Rights and Wahi Pana 16
i. Policy # 16: Protect Access to Kauai's Treasured Places 16
8.3 Kauai General Plan Resort Use Designation 16
8.4 Project Compliance with Kauai General Plan Standards 17
SECTION 9. CZO OPEN DISTRICT CONSIDERATIONS. 17
9.1 CZO Open District 17
9.2 Development's Compliance with CZO Open District Standards 17
9.3 Shore Constraint District Considerations 18
SECTION 10. SOUTH KAUAI COMMUNITY PLAN CONSIDERATIONS. 19
10.1 Community Plan Goals and Objectives 19
10.2 Compliance with Development Plan Standards 19
SECTION 11. SMA CONSIDERATIONS. 19
11.1 Recreational Resources 19
11.2 Historic Resources 19
11.3 Scenic and Open Space Resources 20
11.4 Coastal Ecosystems 21
a. In consultation with DLNR/DOFAW, CLDC engaged a landscaping firm and established a new shrub land of native naupaka (Scaevola taccada) on the makai western corner of the subdivision creating more nesting habitat for wedge-tailed shearwaters 22

TABLE OF CONTENTS
(continued)

Page

b. At DOFAW's request, the CLDC hired a pest control firm to conduct trapping for feral cats 22

c. Finally, in order to avoid a potentially dangerous condition for humans, the makai rock wall along the public access way was approved as constructed with ground-level tubes that allow shearwaters to pass through 23

11.5 Economic Uses 23

11.6 Coastal Hazards 23

11.7 Managing Development/Public Participation 24

11.8 Beach Protection/Marine Resources 24

11.9 Value of Development 24

11.10 Compatibility with Surrounding Uses 24

11.11 Significant Adverse Effect to the SMA 25

11.12 Compliance with SMA Guidelines 25

a. Adequate access, via existing public access easements, is provided to nearby beaches, recreation areas, and natural reserves 25

b. Adequate and properly located public recreation areas and wildlife preserves have been reserved 25

c. Provisions have been made for solid and liquid waste treatment, disposition, and management that will minimize adverse effects on SMA resources 25

d. Because the Property is prepared for development, alterations to existing landforms and vegetation will be very minimal, and construction will cause negligible adverse effects to water resources and scenic and recreational amenities 25

e. The development is consistent with the objectives and policies of HRS Ch. 205A and the County SMA Rules 26

f. The development is consistent with the County general plan and zoning ordinances 26

g. No dredging, filing or other altering of any coastal resources will occur whatsoever 26

h. The development will not reduce the size of the coastal access easement area, nor will the development impose any restrictions upon public access to tidal and submerged lands, beaches, or other coastal resources 26

TABLE OF CONTENTS
(continued)

Page

i. The development will not substantially interfere with or detract from the line of sight toward the sea or from existing public views to and along the shoreline 26

j. The development will not significantly adversely affect water quality, or existing and potential fisheries, wildlife habitats, or estuarine sanctuaries 26

SECTION 12. HRS CH 343 ENVIRONMENTAL IMPACT STATEMENT CONSIDERATIONS. 26

12.1 HRS Chapter 343 26

SECTION 13. IMPACTS TO NATIVE HAWAIIAN TRADITIONAL AND CUSTOMARY PRACTICES 27

13.1 Existence of Traditional and Customary Practices 27

SECTION 14. CONCLUSION 29

APPLICATION

Comes now, MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA-DW, LLC, by and through their undersigned attorneys, and hereby submits the following Application to construct a single-family residential dwelling unit ("**SFR**") and associated improvements as described herein.

SECTION 1. APPLICANTS/SUBJECT PROPERTY OWNERS.

1.1 Applicants. The Applicants are , MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA-DW, LLC ("**Applicants**"). Applicants have authorized Mauna Kea Trask of Cades Schutte LLP to file this Application. *See,* Exhibit "A".

1.2 Property. This Application concerns that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kaua'i, State of Hawai'i, being Lot 3 of the Makahuena Estates subdivision, and further identified as Kaua'i Tax Map Key No. (4) 2-8-021-070 (the "**Property**" or "**Lot 3**"). A legal description of the Property is contained in the Deed attached hereto as Exhibit "B".

1.3 Ownership. Applicants are the owners of the Property as shown in Exhibit "B".

SECTION 2. LOCATION & LAND USE DESIGNATIONS OF THE PROPERTY.

2.1 Location. The Property is located in Weliweli, Koloa, Kaua'i, Hawai'i, and is shown on the map attached hereto as Exhibit "C-1".

2.2 Land Use Designations. The State Land Use Commission ("**SLUC**"), Kaua'i General Plan ("**General Plan**"), County of Kaua'i Comprehensive Zoning Ordinance ("**CZO**"), and other relevant land use designations for the Property are described as follows:

a. SLUC. The Property is located in the SLUC Urban District. *See*, Exhibit "C-2".

b. Kaua'i General Plan. The Property is located in the Kauai General Plan Resort Use Designation. *See,* Exhibit "C-3".

c. CZO. The Property is within the County of Kauai Open (O) zoning District. *See,* Exhibit "C-4".

d. Development Plan Area. The Property is located within the South Kauai Planning District. *See,* Exhibit "C-5".

e. Special Management Area. The Property is located within the County's Special Management Area ("**SMA**"). *See,* Exhibit "C-6".

f. Constraint District. The Property is located within the Shore Constraint District (S-SH). *See,* Exhibit "C-7".

g. Heritage Resources. As shown in General Plan (2018) Figure 5-11, South Kaua'i Heritage Resource Map, the Property does not contain any important natural, scenic, or historical features. *See,* Exhibit "C-8".

h. Flood Zone. Initially, FEMA FIRM Panel map 1500020352F, panel; effective date November 26, 2010, included a majority of the Property, including the project site, within the Special Flood Hazard Area (SFHA) Zone VE (EL 10), with small mauka portions of the Property within SFHAS Zone AE (EL 10) and Non-Special Flood Hazard Zone XS. *See*, Exhibit "C-9". However, Letters of Map Revision - Coastal High Hazard Area Determination Document (Removal) 16-09-0378A, dated November 12, 2015; 16-09-0391A, dated November 12, 2015;

and 19-09-1672A, dated June 26, 2019, removed the entire buildable area of Lot 3 from the SFHA Zones VE and AE and placed them within the Non-Special Flood Hazard Area Zone X. *Id.*

i. Shoreline Setback. The Property is a shoreline parcel, and the State previously certified the shoreline in 2014. *See,* Exhibit "C-10". The coastline consists of steep rocky cliff faces and the Property itself is between 41 ft. and 49ft. above sea level. *See,* Exhibit "C-10". The project site is approximately 36 ft. above sea level and will be well mauka of the certified shoreline. *Id*. Further, according to the Kauai Coastal Erosion study, the coastline fronting the Property is unchanging. *Id.*

Although there are no parcels of real property between the Property and the shoreline, there are dedicated coastal access and view easements fronting the Property that create a substantial buffer between the shoreline and the Property, and the proposed development will not impact public beach access. *See,* Exhibit "C-11". Thus, the proposed development will not affect beach processes, impact public beach access, or be affected by or contribute to coastal erosion or hazards.

j. Violations. There are no known land use and zoning violations on the Property.

k. Visitor Destination Area. Pursuant to Ord. PM-2017-410, the Property is within the Visitor Destination Area ("**VDA**"). *See,* Exhibit "C-12".

l. Soils. According to the National Resources Conservation Service ("NRCS") Web Soil Survey, the Property consists of Koloa stony silty clay (KvD) with 15 to 25 percent slopes, and Rock outcrop (rRO). *See,* Exhibit "C-13". However, due to the completion of the subdivision improvements the project site itself has been graded and the development will be built on an existing flat building pad.

2.3 Prior Land Use Permits. The Property is subject to the following land use permits and conditions:

a. SMA (U) 2015-1. On August 26, 2014, the County of Kaua'i Planning Commission approved SMA Use Permit SMA (U) 2015-1, allowing the consolidation and re-subdivision of the larger Makahuena Estates property from a 25-lot subdivision to a 10-lot subdivision subject to 14 conditions. *See,* Exhibit "D".

b. Z-III-2015-1. On August 29, 2014, the County of Kauai Planning Department approved Class III Zoning Permit Z-III-2015-1, allowing the consolidation and re-subdivision of the larger Makahuena Estates property from a 25-lot subdivision to a 10-lot subdivision subject to 14 conditions. *See,* Exhibit "E". The terms and conditions of the Class III zoning permit were the same as SMA (U) 2015-1 discussed above.

c. S-2015-14. On April 14, 2015, the County of Kauai Planning Commission tentatively approved S-2015-14, allowing the consolidation and re-subdivision of the larger Makahuena Estates property from a 25-lot subdivision to a 10-lot subdivision subject to 6 conditions. *See,* Exhibit "F". The County Department of Public Works conducted a final inspection of the subdivision on August 8, 2017, and found construction to be complete and acceptable. *See,* Exhibit "G".

SECTION 3. PAST, EXISTING AND PROPOSED USES OF THE PROPERTY.

3.1 Past Uses. The prior landowner, CIRI Land development Company ("**CLDC**"), acquired the entire area now comprising Makahuena Estates subdivision, approximately 13.1 acres, from the United States federal government on or about March 22, 1996. At the time of CLDC's acquisition, the area consisted of 26 separate lots, which, since 1951, had been used by the Coast Guard as a LORAN-A receiver which used radio waves and provided ships with the ability to triangulate their locations hundreds of miles from a transmitting station. At that time

there were five to six buildings in use, along with a 280-foot-high antenna located makai of the structures. The use of the station, known as LORSTA Kauai, ceased in 1979, following which Hale ʻOpio, Inc., a private nonprofit organization that provided youth-oriented social services, used the properties until Hurricane Iwa devastated Kauai in 1982.

From 2014 to 2015 CLDC sought and received permission from the County to consolidate and re-subdivide the properties from 26 lots to a ten-lot subdivision. After approval was obtained from the County, CLDC proceeded to develop the subdivision and associated infrastructure as approved. On December 4, 2017, the County Department of Public Works sent a memorandum to Planning Director Michael A. Dahilig certifying the completion of the subdivision. *See*, Exhibit "G". Final Subdivision map approval was obtained from the Planning Commission on March 27, 2018. *See*, Exhibit "G-1"

3.2 Existing Uses. The Property is currently "fully-developed" as allowed under SMA (U)2015-1, Z-III-2015-1 and S-2015-14, meaning that it has been graded, grassed and all subdivision infrastructure has been installed. However, no structure has been developed on the Property and to that extent the Property is "vacant".

3.3 Proposed Uses. Applicants are proposing to develop a two-story SFR, pool, and associated driveway, walkways, and lanais. *See,* Exhibit "H". Applicants will also landscape the Property. *See,* Exhibit "I"

Pursuant to CZO § 8-9.2(a)(1), the amount of land coverage created, including pavement, shall not exceed ten percent (10%) of the lot or parcel area. The total square footage of the Property as reflected on the final approved subdivision map is 1.001 acres or 43,603 sq. ft. *See,* Exhibit "G-1". The land coverage of the proposed development is as follows:

Structure	Size	Percentage of Square footage
Two-Story House	2,375 sq. ft.	5.4%
Covered Lanais	604 sq. ft.	1.4%
Pool	486 sq. ft.	1.1%
Garage	850 sq. ft.	1.9%
Total	4,315 sq. ft.	9.8%

See, Exhibit "H", at SP01.

Applicants note that the driveway is composed of gravel that will not prevent normal precipitation from directly reaching the surface of the underlying land and will not be compacted so as to prevent substantial infiltration. Thus, the gravel driveway does not count towards lot coverage pursuant to CZO § 8-1.5. Additionally, Applicant has removed a previously planned pond feature so as to stay within the 10% lot coverage threshold.

SECTION 4. SUBJECT PROPERTY AND SURROUNDING LANDS.

4.1 Location. The Property is located in Weliweli, Koloa, Kaua'i at Makahuena Point near the intersection of Pe'e Road and Maka Place. The Property is about one-half mile to the east of Po'ipū Beach Park and one-half mile to the west of Shipwrecks Beach Park.

4.2 Surrounding Uses. To the west of the Property is the Makahuena at Po'ipū , a 79-unit condominium development (zoned R-20), to the east is the Point at Po'ipū , a 219-unit hotel development, (zoned RR-10), and mauka of the Property are residential houses (zoned R-4). All surrounding properties are within the VDA. Makai of the project site is a rock wall built pursuant to SMA (U) 2015-1, Z-III-2015-1 and S-2015-14 that delineates the mauka boundary of the County's public access easements which are located on the makai portion of the Makahuena Estates subdivision lots.

SECTION 5. PERMITS REQUESTED AND REQUIRED.

5.1 Class III Zoning Permit. Because the Property is within the County Open (O) zoning district and Shore Constraint district (S-SH), the proposed development must obtain a Class III zoning permit from the County of Kauai Planning Department. *See*, CZO §§ 8-9.4(b), 8-8.4(c) and 8-12.5(d) (2).

5.2 SMA Use Permit. Applicant is proposing to develop a two-story SFR, a pool, and associated landscaping and improvements. Although this is the first house on the lot and the proposed development is less than 7,500 sq. ft., Act 16 L 2020 amended Hawaii Revised Statutes ("**HRS**") §205A-22 to exclude the first house exemption from the definition of "Development" within the SMA if the lot is a shoreline parcel. Therefore, the proposed development constitutes "Development" as defined by HRS §205A-22. The total value of the development is estimated to be $2,301,480.00. *See,* Exhibit "J". As such, Applicants are requesting the Planning Commission issue a SMA Use Permit as provided in Section 7.3.C(1)&(2) of the SMA Rules.

SECTION 6. IMPACTS OF DEVELOPMENT.

6.1 Botanical Resources. The Property is located within a fully developed and prepared subdivision, and currently consist of a vacant lot containing a grass lawn. *See,* Exhibit "K". There are no known botanical resources located on the Property and the proposed development will not have any impact on Botanical Resources. .

6.2 Historical Resources. Prior to the County's approval of the subdivision development, CLDC contracted with Haun & Associates to conduct an Archaeological Inventory Survey ("**AIS**") of TMK No. (4) 2-8-021:041, which at the time included the Property. *See,* Exhibit "L". The objective of the AIS was to satisfy historic preservation regulatory review requirements of the Department of Land and Natural Resources - Historic Preservation Division

("**DLNR-SHPD**"), as contained within Hawaii Administrative Rules ("**HAR**"), Title 13, Subtitle 13, State Historic Preservation Rules. *Id.* at ii.

The AIS identified 18 sites with 128 features, consisting of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following: ditch, road, stairs, utility box and walled slab. *Id.* Subsurface testing was undertaken during the project, consisting of the excavation of twenty test units, and no intact sub surface cultural deposits or burials were encountered during the subsurface testing. *Id.* According to the AIS, all of the documented remains were the remnants of U.S. federal government navigation-related infrastructure in operation for over 100 years. *Id.*

The 18 sites were assessed as significant solely for their information content. *Id.* The sites were adequately documented, and no further work or preservation was recommended by Haun & Associates to DLNR-SHPD. *Id.* DLNR-SHPD concurred with Haun & Associates' recommendation subject to certain corrections which were subsequently made. *See,* Exhibit "L", letter from DLNR-SHPD, dated August 27, 2012, and letter from Haun & Assoc., dated December 2, 2012.

Because the subdivision was subsequently developed after the acceptance of the AIS, no historical resources are expected to be encountered during the proposed development and no historical resources will be affected.

6.3 Air Quality/Noise. The development will have little or no impact on the air quality and ambient noise levels in the area. Air quality and ambient noise levels may be affected at a very minimal level during the actual construction activities. All vehicles or equipment used by Applicants for the construction will be properly muffled, housed and

maintained to reduce any noise impacts or emission impacts. The Environmental Protection Agency ("**EPA**") and State of Hawaii air quality standards will not be exceeded.

6.4 Flooding and Drainage. The proposed development is within the Non-Special Flood Hazard Area Zone X. *See,* Exhibit "C-9". The development will meet all of the requirements of the Flood Plain Management Ordinance of the County of Kauai, as contained in Chapter 15, Article 1, of the Kauai County Code, 1987. All drainage resulting from construction activities and from the increase in land coverage will be retained on site in the existing drainage basin that was constructed by CLDC pursuant to its permits to develop the existing subdivision. No additional drainage is anticipated to significantly or negatively impact the surrounding properties or coastal area.

6.5 Utilities. In 2015 all necessary state and county agencies approved the construction plans for the Makahuena estates Subdivision. *See,* Exhibit "M". These plans included the construction of all utilities. On December 4, 2017, the County of Kauai Department of Public Works certified that the Makahuena Estates subdivision was completed and acceptable. *See,* Exhibit "G".

a. Potable Water. The Property currently obtains water service from the County of Kauai Department of Water.

b. Electric/Communications. The Property obtains electric service from Kauai Island Utility Cooperative ("**KIUC**"), and communication services from Hawaiian Telcom, Inc. Existing electric and communications are presently adequate to provide the demand for such services that will be generated by the proposed development.

6.6 Wastewater Treatment and Disposal. Applicants will install a private individual wastewater system (septic tank(s) and leach field(s)) as consistent with the Individual Waste

System (IWS) Report prepared for CLDC by Esaki Surveying & Mapping, Inc. that was prepared for the County and State's review and approval during the subdivision entitlement process. *See,* Exhibit "N".

6.7 Solid waste Disposal. Solid waste collection will be provided by private means. Solid waste will be taken to the County's refuse transfer stations or disposal in the County's landfill as appropriate.

6.8 Governmental Services. Applicants anticipate the development will have the following impacts on governmental services:

a. Fire & Police Services. Fire and Police services are located in Koloa within two to three miles of the Property respectively. The development will not significantly increase the need for existing Fire and Police services.

b. Schools. The closest schools are Koloa Elementary School located in Koloa, and Chiefess Kamakahelei Middle School and Kaua'i High School, both located in Lihue. The development will not generate any significant additional enrollment.

6.9 Economics. Applicants anticipate the development will have the following economic impacts:

a. Jobs. The development will result in the creation of temporary construction jobs during the construction of the project. Thereafter, Applicants anticipate an ongoing need for housekeeping and landscaping and maintenance jobs to maintain the Property.

b. Housing. The Project will not result in the need for additional housing.

c. Property Values. Because fair market value of real property is based on the value of the land and any physical improvements, the development will increase the value and the real property taxes of the Property thus increasing revenues to the County of Kaua'i.

6.10 Population. The development will not result in a measurable increase in population.

6.11 Traffic Circulation. The Property is primarily served by Maka Place, which Applicants understand is a private road built to county standards but not accepted by the County Council. The nearest public road is Pe'e Road, which is about 500 ft. from the Property. The development of the Property will not measurably affect or increase traffic on Pe'e Road.

6.12 Heritage Resources. As stated above in section 2.2.g, according to the General Plan, Figure 5-11 South Kaua'i Heritage Resource Map, the Property does not contain any important natural, scenic, or historical features. *See,* Exhibit "C-8".

SECTION 7. SLUC CONSIDERATIONS.

7.1 SLUC Urban District. The Property is located within the SLUC Urban District. Residential uses are permitted within the SLUC Urban District.

SECTION 8. GENERAL PLAN CONSIDERATIONS.

8.1 Kauai General Plan Visions and Goals. An evaluation of the Kauai General Plan ("**General Plan**") section 1.3 shows that the proposed development is consistent with the Visions and Goals of the General Plan.

a. Goal # 1: A Sustainable Island. The Makahuena Estates subdivision was carefully planned and developed in order to fulfill the requirements of Goal # 1 of the General Plan, and the proposed development of Lot 3 is consistent therewith. The subdivision density was reduced from at least 25 dwelling units to ten, only nine of which are within the VDA. A public parking area and an open space and public access easement were dedicated to the County to protect the natural coastal systems that support life, air, water, soil, and living organisms on the makai portion of Lot 3. *See*, General Plan at 33. The development of the proposed single family dwelling unit on Lot 3 will not negatively affect the sustainability of the island. Rather,

the subdivision is the direct result of well-reasoned actions starting in 2014 that ensure this area remains sustainable and meets the needs of current and future generations without depleting important resources. *Id.*

b. Goal # 2: A Unique and Beautiful Place. Applicant's proposed Development is consistent with Goal # 2 of the General Plan and ensures the care and protection of the treasured resources, traditions, and qualities of the natural, built, and human environment of Makahuena point. *Id.* at 34. Applicant's proposed Development maintains the perpetual protection of the natural coastal ecosystem on the makai portion of Lot 3. *Id*. The Development will not infringe upon the rights of the community to engage in their cultural traditions and practices and provides opportunities for recreation and meditative contemplation along this beautiful coastline. *Id.* The Development is consistent with the tenets of the Public Trust Doctrine as provided in Article 11, Section 1 of the Hawaii State Constitution to, "conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air minerals and energy sources", and "promotes the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State." *Id*. at 34.

c. Goal # 3: A Healthy and Resilient People. General Plan Goal # 3 recognizes that health is influenced by the built environment, including the ability to walk or bicycle to key destinations, and to access the recreational areas that support active lifestyles. *Id*. at 35. The development of a single-family dwelling unit on Lot 3 of Makahuena Estates is consistent with these principles and will not interfere with the community's use of the coastal access area. This specific development is part of a larger well planned and sustainable subdivision project that increased the resilience and vitality of the community and promoted better health outcomes

through improved coastal access opportunities related to the natural, built, and social environment. *Id*. at 35.

d. Goal # 4: An Equitable Place, with Opportunity for All. Goal # 4 of the General Plan aims to foster diverse and equitable communities with vibrant economies, access to jobs and housing, and a high quality of life. *Id*. at 36. Short term and long-term job opportunities will result from the construction and continued maintenance of this specific development as is typical with high-end residential vacation rental properties. However, Goal # 4 is not simply about economic opportunity. Goal # 4 recognizes that reversing Kaua'i's trending inequity means ensuring Kaua'i residents, regardless of factors such as geographic location, age, race, gender, and economic status, have access to, *inter alia*, opportunities for recreation and enjoyment of shared spaces; and making sure that planning and land development decisions do not unfairly burden disadvantaged groups. *Id* at 36. This subdivision was specifically designed and permitted to ensure equitable opportunities for recreation and shared spaces for all of Kaua'i, not just the landowners in the neighborhood. Anyone on Kaua'i can park in the public parking lot at Makahuena Estates subdivision and access the entire coastline all the way to Mahaulepu. The coastal access area allows for fishing off of the makai portion of Lot 3 in perpetuity and such opportunities benefit, not burden, disadvantaged groups on Kaua'i. Applicant embraces this kuleana and has designed the proposed development to complement the environment and character of this special place.

8.2 Kauai General Plan Policies to Guide Growth. The General Plan contains nineteen (19) polices to guide growth that articulate the County's path forward toward meeting the community's vision and goals of sustainability, unique character, resilience, and equity. An

evaluation of Kaua'i General Plan Section 1.4 shows the proposed development is consistent with the following Policies to Guide Growth.

a. Policy # 1: Manage Growth to Preserve Rural Character. The proposed development is consistent with Policy # 1 because it is contained within an existing neighborhood that has been planned for residential subdivision development since the early 20th century. This ensures that Kauai's rural character is preserved as the proposed development is within the Po'ipū growth boundary and is compact and walkable. General Plan at 38.

b. Policy # 3: Recognize the Identity of Kauai's Individual Towns and Districts. The proposed SFR on Lot 3 in consistent with Po'ipū 's distinct character. The SFR will be constructed within the pre-approved building envelope mauka of the rock wall that delineates and preserves the open space coastal access easement. The SFR is low massing and designed to blend into and compliment the rocky-shoreline cliffs. The development will not interfere with Po'ipū 's many costal access opportunities which provide lateral access along the coast from Mahaulepu to Lawai.

c. Policy # 4: Design Healthy and Complete Neighborhoods. General Plan Policy # 4 seeks to guide growth in a way that combats the recent trend of health problems in Hawaii, attributed in part to increasing levels of sedentary lifestyles. The SFR on Lot 3 will not interfere with the coastal open spaces access easement that was dedicated to the County to specifically allow for safe and convenient walking activities makai of the subdivision and provide residents an opportunity to increase physical activity on a daily basis, thereby reducing health risks. The SFR on Lot 3 is part of a low-density, compact and walkable neighborhood that maintains coastal access opportunities consistent with Policy # 4.

d. Policy # 7: Build a Balanced Multimodal Transportation System. Makahuena Estates subdivision was specifically designed and constructed to be consistent with Policy # 7. By reducing the previously permitted subdivision density of at least 25 residential units and voluntarily providing for a public parking area and an open space public access easement, the subdivision is consistent with the County's Multimodal Land Transportation Plan (2013) and provides the community with pedestrian access opportunities along the entire coastline of the south shore. The proposed SFR on Lot 3 will not interfere with these opportunities and is consistent with Policy # 7.

e. Policy # 8: Protecting Kauai's Scenic Beauty. The proposed SFR is consistent with preserving the natural views of Makahuena point. The proposed development is low massing and will be entirely located within the pre-approved building envelope of Lot 3 which was specifically designed to protect and preserve both mauka and makai views along the coastline. The views in this area are not only protected by the reduced subdivision density but also by the open space access easement on the makai portion of Lot 3. And unlike the two neighboring developments to the east and west of Makahuena Estates subdivision, the proposed SFR is specifically designed to complement the rugged coastal cliff area of Makahuena point and incorporates dark earth tones and design features that blend in with the natural environment.

f. Policy # 9: Uphold Kaua'i as a Unique Visitor Destination Area. The proposed SFR is consistent with Policy # 9's purpose of focusing and limiting growth to pre-existing Visitor Destination Areas and reducing visitor impacts on infrastructure. The Makahuena Estates subdivision was specifically designed to ensure that the nine lots within the VDA do not negatively affect the community character of Poʻipū . Further, the location of the SFR within the pre-approved building envelope will limit the physical footprint of transient accommodation uses

and ensure that such uses do not encroach upon the dedicated open space coastal access easement area.

g. Policy # 14: Prepare for Climate Change. The proposed SFR is consistent with Policy # 14 and will not contribute to or exacerbate concerns regarding rising sea levels along Makahuena point. By restricting the development of Lot 3 to the pre-approved building envelope, the proposed SFR will not be affected by any coastal hazards. Further, the makai rock wall fronting Lot 3 is a physical delineation of the shoreline setback line and ensures that no development will occur within or affect the shoreline area along Makahuena point.

h. Policy # 15: Respect Native Hawaiian Rights and Wahi Pana. A cultural impact assessment ("**CIA**") was prepared during the Makahuena Estates subdivision permitting process. See, Exhibit "T". Although the CIA did not identify any traditional and customary practices occurring in the area that is now Lot 3, the CIA stated that fisherman continue to gather and catch a variety of fish for subsistence purposes, including moi, 'o'io and also harvest various marine invertebrates along the shoreline and rocky edges of Makahuena point. Exhibit "T" at 13. In response, the developer dedicated both the public parking lot and coastal open space access easements to the County to ensure these traditional and customary practices may continue in perpetuity.

i. Policy # 16: Protect Access to Kauai's Treasured Places. The proposed SFR is consistent with Policy # 16 by ensuring the continued protection of access to and customary use of the shoreline area, trails, and places along the coast of Makahuena point for religious and cultural observances, fishing, gathering, and recreational activities, such as hiking.

8.3 Kauai General Plan Resort Use Designation. The Property is located in the Kaua'i General Plan Resort Use Designation. *See,* Exhibit "C-3". The Property is also within the

VDA. *See,* Exhibit "C-12". Actions for the Resort Use Designation are found in the Chapter 3, Sector VI. of the General Plan. The General Plan contemplates, in relevant part, strengthening existing town centers and mixed-use environments, revitalizing existing visitor destination areas, and protecting agricultural lands for agricultural production and food self-sufficiency. Because the Property is in the existing VDA and will not take existing agricultural land out of food production, the development complies with the tenets of the General Plan concerning the Resort Use Designation.

8.4 Project Compliance with Kauai General Plan Standards. The proposed Development is a residential use within a completed subdivision development. Therefore, the development itself will have no significant impact on the surrounding environment. The development is consistent with neighboring residential and resort and transient accommodation uses and will not have a significant adverse effect to the surrounding neighborhood. As such, the development complies with the General Plan's policy for the Resort Use Designation and is consistent with the County's "use it or lose it" policy concerning resort development.

SECTION 9. CZO OPEN DISTRICT CONSIDERATIONS.

9.1 CZO Open District. The Open District is established and regulated to create and maintain an adequate and functional amount of predominantly open land to provide for the recreational and aesthetic needs of the community or to provide for the effective functioning of land, air, water, plant and animal systems or communities. CZO § 8-9.1.

9.2 Development's Compliance with CZO Open District Standards. Single-family detached dwelling units and accessory structures are permitted uses within the Open (O) zoning district pursuant to CZO § 8-2.4(s) (1) & (9). The development will not exceed the 10% land coverage limitation contained in CZO § 8-9.2(a) (1). The development itself will have no significant impact on the surrounding environment and is compatible with existing residential

and resort uses in the immediate area surrounding the Property. Further, the coastal portion of the Property, makai of the rock-wall, is encumbered by a coastal access easement held by the County of Kaua'i that provides coastal access to recreational users and fishermen in the area. Therefore, the proposed Development complies with CZO § 8-9.1 and allows for the development of the SFR while providing for the recreational and aesthetic needs of the community and the effective functioning of land, air, water, plant and animal systems or communities.

9.3 Shore Constraint District Considerations. The purpose of the Shore Constraint District is to regulate development or alterations to shore and water areas which have unique physical and ecological conditions in order to protect and maintain physical, biologic and scenic resources of particular value to the public. During the entitlements of the Makahuena Estates subdivision, CLDC prepared and submitted numerous reports that addressed the impact that a 10-lot subdivision would have on the Shore Constraint District. These reports included: Air Quality Assessment (Exhibit "O-1"); Geological Investigation (Exhibit "O-2"); Biological Survey ("O-3"); Visual Analysis of Public Views (Exhibit "O-4"); and Visual Analysis of Private Views (Exhibit "O-5"). All of these studies were accepted and approved thus allowing CLDC to proceed with development of the subdivision improvements.

Because there has been no change in the condition of the subdivision properties in general, or to Lot 3 specifically since the completion of the subdivision improvements, Applicants submit that the existing studies establish that the proposed development will not cause significant harm to: (A) the water quality of the ocean, including, but not limited to, its clarity, temperature, color, taste and odor; (B) fish and aquatic habitats; (C) the natural beauty of the area; (D) navigation, safety or health; or (E) would not substantially interfere with public use

of the ocean waters or underlying lands; and (F) that other facilities are unavailable to the applicant.

SECTION 10. SOUTH KAUAI COMMUNITY PLAN CONSIDERATIONS.

10.1 Community Plan Goals and Objectives. The goals and objectives of the South Kauai Community Plan, as adopted by Ordinance No. 990, include in relevant part, that Kōloa will be a thriving commercial and residential community that maintains its rural feel and historic "old town" charm by preserving, enhancing, and protecting its vast cultural treasures; and that Po'ipū will be a world-class, sustainable resort destination, serving residents and visitors alike, developed responsibly, with clean, healthy beaches and ocean environments, welcoming parks, and preserved heritage resources, all well-connected and accessible to everyone.

10.2 Compliance with Development Plan Standards. The development is consistent with the goals and objectives contained in the South Kauai Community Plan. The design, layout and outside appearance of the development will utilize architectural design elements that will be compatible with the natural beauty of the area. The development will cover less than 10% of the lot, and the dedicated public access easement and view easement makai of the rock-wall ensures that coastal access and open space along the coastline will be maintained in perpetuity.

SECTION 11. SMA CONSIDERATIONS.

11.1 Recreational Resources. An open space public access easement encumbers the portion of the Property makai of the rock-wall. The development will not affect or hinder the continued use of the public access easement in any way. Therefore, the development will not have any significant adverse effect on any public recreational opportunities located on the Property, and the development will not affect any existing public beach or coastal access rights.

11.2 Historic Resources. As stated above in section 6.2, prior to the County's approval of the subdivision development, CLDC (the previous landowner) contracted with Haun &

Associates to conduct an Archaeological Inventory Survey ("**AIS**") of TMK No. (4) 2-8-021:041, which at the time included the Property. *See,* Exhibit "L". The AIS identified 18 sites with 128 features, all of which were the remnants of U.S. federal government navigation-related infrastructure in operation on the larger subdivision Property for over 100 years. *Id.* A comparison of AIS Figure 11 (Site Location Map) and Figure 68 (Distribution of associated Features within Project Area) with the Demolition & Naupaka Preservation/Replanting Plan (Exhibit "S" at 4) indicates that none of the documented historic sites or features were located within Lot 3. It appears that Site 2142 was located within the neighboring Lot 4, and Site 2143 (including features A-C) was located makai of the rock wall near the boundary of Lots 3 and 4.

Site 2142 was recognized as a small roughly oval-shaped concrete pad that was created by pouring concrete into a hole dug into the ground and probably served to anchor wiring. Exhibit "L" at 45 and 49. Site 2143 was recognized as a complex of three features comprised of a concrete slab (Feature A), a stone retaining wall (Feature B), and a concrete pad (Feature C). Exhibit "L" at 49.

DLNR-SHPD concurred with Haun & Associates' recommendation that no further work or preservation was necessary of any of the sites or features discussed in the AIS. *See,* Exhibit "L", letter from DLNR-SHPD dated August 27, 2012, and letter from Haun & Assoc. dated December 2, 2012. The subdivision was subsequently developed after the acceptance of the AIS, and currently there are no historic sites or features located on the Property. Thus, the proposed development will not have any significant adverse effect to any Historic Resources.

11.3 Scenic and Open Space Resources.

When the County granted CLDC's request to consolidate and re-subdivide the larger subdivision property from 25 lots to 10 lots, the County found that the 10-lot subdivision would

not block the line-of-sight towards the ocean from public view planes as the 10-lot subdivision would be less dense and contain more open space compared to a 25-lot subdivision. *See,* Exhibits "O-4" and "O-5".

The proposed development will not have a significant and adverse impact on the scenic and open space resources in the area and will blend into the existing neighborhood motif and the natural environment. See, Exhibit "O-6"[1]. Any visual impacts to the coastline will be sufficiently mitigated as the development itself has been designed to blend in with the rugged coastline by using dark earth tones and modern design elements, including Tahitian Brown roofing materials, black fiberglass windows, stained accent cedar siding, stained cedar siding, stained board formed concrete, and Polynesian landscaping motifs. *See,* Exhibits "H", "I" and "O-6".

11.4 Coastal Ecosystems.

The Property is a shoreline parcel and abuts the ocean and the proposed development of Lot 3 will not significantly and adversely affect the coastal ecosystem. Prior to entitlement of the subdivision, CLDC commissioned a Preliminary Engineering Report which addressed the mitigation of any significant adverse effects that the subdivision would have on the coastal ecosystem. *See,* Exhibit "P". The Preliminary Engineering Report addressed site grading, drainage plans, storm water management and water quality, erosion control plans, roadways, wastewater, the flood zone and the constraint district. *Id.* The recommendations in the Preliminary Engineering Report were included in the approved construction plans of the subdivision (Exhibit "M") which were constructed as approved and certified by the Department

[1] Exhibit "O-6" contains a copy of a survey of the Makahuena Estates subdivision and five (5) pictures. The survey itself indicates where pictures 1-5 were taken, and pictures 1-5 contain a computer image of the potential visual impact of the proposed development. Lot 3 is not visible from Pe'e Road because of the neighboring development The Point at Poʻipū.

of Public Works (Exhibit “”G”). Because all subdivision infrastructure has been constructed and approved, including the necessary drainage basin, the development will not have any significant adverse effect on the coastal ecosystem, and the development will be constructed and maintained so that any erosion or increased run off will stay within the pre-existing drainage allowances and maintained on site in the existing drainage basin.

During the subdivision entitlement process three indigenous Hawaiian bird species were recorded during the Biological Survey of the site: Wedge-tailed Shearwater, White-tailed Tropicbird, and Wandering Tattler. Exhibit “O-3” at 28. Of these three species, only the Wedge-tailed Shearwater was noted to nest along the coast. *Id*. This species is not listed under either federal or state endangered species programs; however, it is protected under the federal Migratory Bird Treaty Act. Id. at 29. The Biological Survey noted that the subject property is not included in any federal Critical Habitat designations, and the development of the site would not impact Critical Habitat. *Id*. at 34. Nonetheless, the County imposed various permit conditions to mitigate any development impacts to the Wedge-tailed shearwaters located in the area. Exhibit “D” at 2-3. Based upon representations of Jan Tenbruggencate, CLDC and Applicant’s consultant, and an analysis of the public record, Applicant understands that all of these requirements were complied with. For example:

a. In consultation with DLNR/DOFAW, CLDC engaged a landscaping firm and established a new shrub land of native naupaka (Scaevola taccada) on the makai western corner of the subdivision creating more nesting habitat for wedge-tailed shearwaters.

b. At DOFAW’s request, the CLDC hired a pest control firm to conduct trapping for feral cats. Exhibit “Q”. The Applicant has continued that contract and animal control specialists

are on the property daily. Exhibit "Q-1". Applicant issued a Right-of-Entry permit to DLNR/DOFAW to allow the State to monitor wedge-tailed shearwaters in the area. Exhibit "R".

c. Finally, in order to avoid a potentially dangerous condition for humans, the makai rock wall along the public access way was approved as constructed with ground-level tubes that allow shearwaters to pass through. Exhibits "S" and "G". However, according to Mr. Tenbruggencate, there is no evidence the birds actually do cross it on foot, as shearwaters that have been seen inside the wall are adults fully capable of flight.

Applicant intends to comply with all existing permitting requirements, including those relating to construction times and any prohibitions against external upward facing and unshielded lighting. Nonetheless, Applicant is aware that predation of Wedge-tailed shearwaters continues along the makai portion of the subdivision largely due to the feeding of feral cats at neighboring properties and in some part unleashed domestic dogs that walk within the open space coastal access easement with their owners. Applicant is working cooperatively with DLNR/DOFAW and the community to find collaborative solutions to further protect the coastal bird population.

11.5 Economic Uses. The Property will be developed for residential purposes and will be allowed to be used as a transient vacation rental as it is within the VDA. The proposed development will create short term economic benefits associated with the construction of the improvements and will create more long-lasting employment opportunities associated with the management and upkeep of a vacation rental property, if the development is used for such purposes. Therefore, the proposed development will not have any significant adverse effect on the economy.

11.6 Coastal Hazards. The Property is a shoreline parcel but its' makai boundary consists of rock cliff face and the Property itself is approximately 36 ft. above sea level. *See*,

Exhibit "C-10". According to the Kauai shoreline change website, developed in partnership with the National Ocean and Atmospheric Administration ("**NOAA**") and the University of Hawaii School of Ocean and Earth Science and Technology, the coastline of the Property is not experiencing any coastal erosion. *Id.* The Property is within the Non-Special Flood Hazard Zone X and all drainage will be maintained on site via an existing drainage basin. As such, no significant risks of coastal hazards are likely.

11.7 Managing Development/Public Participation. The development is consistent with the SMA objectives and policies concerning Managing Development and Public Participation in that the SMA Use Permit process will provide the public with an opportunity to review the proposed development and communicate and participate in the management of coastal resources and hazards.

11.8 Beach Protection/Marine Resources. The development will not have any significant adverse effect on any coastal beach processes because there are no beaches in the vicinity, instead there is a steep, rugged and rocky cliff faced shoreline. Likewise, the development will not significantly adversely affect any open space areas along the shoreline due to the existing county coastal access and view easements encumbering the Property makai of the rock-wall. There are no existing fishponds, seawalls, or revetments in the vicinity of the Property and as such the development will not have any significant adverse effect to Beach Protection or Marine Resources.

11.9 Value of Development. The value of the development is estimated at $2,301,480.00 as shown in the construction estimate attached as Exhibit "J".

11.10 Compatibility with Surrounding Uses. The Property is surrounded by properties located in the SLUC Urban District, County Resort District, and County Residential District and

is the VDA. Uses on the surrounding properties include residential, resort and vacation rental activities. The Property is similar in topography, character and nature with adjacent properties and the development is consistent with surrounding land uses.

11.11 Significant Adverse Effect to the SMA. The development will not have any significant adverse environmental or ecological effect to the SMA, including but not limited to the potential cumulative impact of individual developments, each of which taken by itself might not have a significant adverse effect, and the elimination of planning options. The development is and will be compatible with existing uses in areas surrounding the Property. Further, the design, siting, and landscaping of the development will ensure that any adverse effects of the development are minimized to the extent practical consistent with the special controls on development within the SMA and the State policy to preserve and protect the natural resources of the coastal zone of Hawai'i.

11.12 Compliance with SMA Guidelines. The development is consistent with the SMA Guidelines contained in HRS § 205A-26 and Section 4.0 of the Special Management Area Rules and Regulations of the County of Kaua'i State of Hawai'i ("**SMA Rules**") as follows:

a. Adequate access, via existing public access easements, is provided to nearby beaches, recreation areas, and natural reserves.

b. Adequate and properly located public recreation areas and wildlife preserves have been reserved.

c. Provisions have been made for solid and liquid waste treatment, disposition, and management that will minimize adverse effects on SMA resources.

d. Because the Property is prepared for development, alterations to existing landforms and vegetation will be very minimal, and construction will cause negligible adverse

effects to water resources and scenic and recreational amenities. Further, danger of floods, wind damage, storm surge, landslides, erosion, siltation, or failure in the event of earthquake is not expected.

e. The development is consistent with the objectives and policies of HRS Ch. 205A and the County SMA Rules.

f. The development is consistent with the County general plan and zoning ordinances.

g. No dredging, filing or other altering of any coastal resources will occur whatsoever.

h. The development will not reduce the size of the coastal access easement area, nor will the development impose any restrictions upon public access to tidal and submerged lands, beaches, or other coastal resources.

i. The development will not substantially interfere with or detract from the line of sight toward the sea or from existing public views to and along the shoreline.

j. The development will not significantly adversely affect water quality, or existing and potential fisheries, wildlife habitats, or estuarine sanctuaries.

SECTION 12. HRS CH 343 ENVIRONMENTAL IMPACT STATEMENT CONSIDERATIONS.

12.1 HRS Chapter 343. HRS Ch. 343 requires the preparation of an Environmental Assessment and/or an Environmental Impact Statement for certain activities specified in HRS § 343-5. The development does not constitute an action for which an Environmental Assessment and/or an Environmental Impact Statement must be prepared pursuant to HRS § 343-5.

SECTION 13. IMPACTS TO NATIVE HAWAIIAN TRADITIONAL AND CUSTOMARY PRACTICES.

13.1 Existence of Traditional and Customary Practices. Under Article XII, Section 7 of the Hawaii State Constitution, the State of Hawai'i:

> *[R]eaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.*

For the purpose of practicing [Native Hawaiian] traditional and customary rights, practitioners may gather anywhere that those rights have been traditionally and customarily exercised in that manner – on land that is less than "fully developed." David M. Forman and Susan K. Serrano, Ho'ohana Aku, a Ho'ola Aku: A Legal Primer for Traditional and Customary Rights in Hawaii, December 2012; citing, *Public Access Shoreline Hawaii ("PASH") v. Hawaii County Planning Commission*, 79 Haw. 425, 903 P.2d 1246. If property is deemed "fully developed," i.e., lands zoned and used for residential purposes with existing dwellings, improvements, and infrastructure, it is always "inconsistent" to permit the practice of traditional and customary native Hawaiian rights on such property. *State v. Hanapi*, 89 Haw. 177, 970 P.2d 485.

As part of the subdivision entitlement process, CLDC commissioned the preparation of a Cultural Impact Assessment ("**CIA**") by McMahon Consulting. *See,* Exhibit "T". The CIA analyzed previous archaeological studies, the historical record and detailed consultation with native Hawaiian practitioners and informants in an effort to identify any ongoing practice of traditional and cultural activities and the presence of any valued cultural, historical or natural resources within the subdivision or its vicinity. The CIA further assessed the potential impacts that the proposed development may have on those resources.

In analyzing whether any valued cultural, historical, or natural resources were present within the applicable area, the CIA found a paucity of data in the written record regarding the presence of pre-contact settlement and historic land tenure for the Property and limited mythological and legendary references.

However, in speaking with native Hawaiian practitioners and informants it was determined that the coastline fronting the subdivision has been use for traditional and cultural subsistence fishing practices from pre-historic times to today. Fish caught off of the rock cliffs at Makahuena include: awa (milkfish), ‘o’io (bone fish), he’e (octopus), ula (spiny lobster), akule (big-eye scad), and moi (thread fish). Ha’uke’uke (sea urchin) and ‘opihi (limpet) are also gathered from the rocky cliffs along the coastline. According to cultural informants, at one point in time there were small salt beds in the area, but no salt pans were located during an archaeological inventory by Haun et al in 2011. Exhibit “T” at 12. No further cultural, historical, or natural resources were identified in the area.

All traditional and customary practices and all valued cultural, and natural resources in the area involve subsistence fishing and gathering within the open space access easement makai of the subdivision’s rock wall. As this area is protected and preserved in perpetuity, the development of Lot 3 will not affect or impair these continued practices whatsoever.

No traditional and customary practices were identified on the Property in the area mauka of the rock wall. The construction plans for the subdivision improvements were approved by all governmental regulatory agencies in 2015. A final inspection of the subdivision improvements was conducted on August 8, 2017, and the County Engineer certified that the construction was complete and acceptable on December 4, 2017. As such, the Property is deemed fully developed. *State v. Hanapi*, 89 Haw. 177, 970 P.2d 485. Given the tenets of the law regarding

practice of Native Hawaiian customary and traditional rights on "fully developed" lands, the development will not affect any Native Hawaiian customary and traditional rights protected under Article XII, Section 7 of the Hawai'i State Constitution.

SECTION 14. CONCLUSION.

Applicant respectfully requests the Planning Department and the Planning Commission:

1. Find that the development will not have any substantial environmental or ecological effect, except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interest.

2. Find that the development is consistent with the objectives, policies, and guidelines set forth in HRS Ch. 205A and Sections 3.0 and 4.0 of the SMA Rules.

3. Find that the development is consistent with permitted uses in the SLUC Urban District, the Kauai General Plan, the South Kauai Community Plan, and the CZO.

4. Approve the issuance of a SMA Use Permit and a Class III Zoning Permit for the development on the Property as described herein, subject to such reasonable conditions as the Planning Department and Planning Commission shall impose.

DATED: Lihue, Kauai, Hawaii, February 10, 2022.

CADES SCHUTTE LLP



MAUNA KEA TRASK

Attorneys for Applicants
MAKAHUENA - PREFERRED A, LLC;
MAKAHUENA - CAPITAL A, LLC;
MAKAHUENA - PREFERRED B, LLC;
MAKAHUENA - CAPITAL B, LLC;
MAKAHUENA - TW, LLC; and
MAKAHUENA - DW, LLC

EXHIBIT LIST

Exhibit	Exhibit Description
A	Applicant Authorization
B	Deed
C-1	Lot 3 Tax Map
C-2	Lot 3 State Land Use District Map
C-3	Kauai County General Plan Land Use Designation Map
C-4	Zoning Map ZM-PO 300
C-5	South Kauai Community Plan Land Use Map
C-6	Lot 3 Special Management Area Map
C-7	County Constraint District Map
C-8	Kauai County General Plan South Kauai Heritage Resource Map
C-9	Lot 3 Flood Hazard Assessment Report
C-10	Shoreline Certification and Topography map
C-11	Grant of Pedestrian Access and Parking Easements
C-12	Ordinance No. PM-2017-410
C-13	Natural Resource Conservation Services (NRCS) Lot 3 Soil Survey Map
D	SMA (U) 2015-1
E	Z-III-2015-1
F	S-2015-14
G	Certification of Completion Makahuena Point Subdivision
G-1	Final Approved Subdivision Map S-2015-14
H	Lot 3 House Plans

I	Lot 3 Landscape Plans
J	Lot 3 Construction Estimate
K	Lot 3 Photo Exhibit
L	Archaeological Inventory Survey
M	Approved Construction Plans for Makahuena Subdivision
N	Individual Wastewater System (IWS) Report - Makahuena Subdivision
O-1	Air Quality Assessment
O-2	Geological Investigation
O-3	Biological Survey
O-4	Visual Analysis Public Views
O-5	Visual Analysis Private Views
O-6	View Impact of Lot 3 development
P	Preliminary Engineering Report
Q	Previous Kani Wildlife Contract
Q-1	Existing Kani Wildlife Contract
R	Right-of-Entry with DLNR/DOFAW
S	May 9, 2016 Status Report to Planning Department
T	Cultural Impact Assessment

EXHIBIT A

October __, 2021

TO WHOM IT MAY CONCERN:

Cades Schutte LLLP is authorized on behalf of: (i) (a) MAKAHUENA – PREFERRED A, LLC, a Hawaii limited liability company; and (b) MAKAHUENA – CAPITAL A, LLC, a Hawaii limited liability company, both of whose mailing address is 3214 N. University Ave., #104, Provo, Utah 84604; and (ii) (a) MAKAHUENA – PREFERRED B, LLC, a Hawaii limited liability company, (b) MAKAHUENA – CAPITAL B, LLC, a Hawaii limited liability company, (c) MAKAHUENA – TW, LLC, a Hawaii limited liability company, and (d) MAKAHUENA – DW, LLC, a Hawaii limited liability company; collectively the owners of the property located at Pe'e Rd. and Maka Rd., Koloa, HI 96756, identified as TMK No. (4) 2-8-021:070), in submitting any and all permit assessments, determination requests, and/or permit applications to the various departments and agencies of the State of Hawaii and the County of Kaua`i relative to the above referenced property.

MAKAHUENA – PREFERRED A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – PREFERRED B, LLC,
a Hawaii limited liability company

By: _____

EXHIBIT A

Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL B, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – TW, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – DW, LLC,
a Hawaii limited liability company

By: _____
David Weekes
Its Manager

EXHIBIT B

4117

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
February 05, 2021 8:01 AM
Doc No(s) A – 77060485

/s/ LESLIE T. KOBATA
REGISTRAR

1 1/4 ICL
B – 33661468

Conveyance Tax: $150,887.70

LAND COURT | REGULAR SYSTEM

Return By Mail [X] Pick-Up [ ] To:

RS - 1

TG: 202037204-S
TGE: 20158934
m. dela Sierra

TOTAL NUMBER OF PAGES: 22

TITLE OF DOCUMENT:

WARRANTY DEED

PARTIES TO DOCUMENT:

GRANTOR: **CIRI LAND DEVELOPMENT COMPANY**, an Alaska corporation, whose mailing address is 725 E. Fireweed Lane, Suite 800, Anchorage, Alaska 99503

GRANTEE: (i) (a) **MAKAHUENA – PREFERRED A, LLC**, a Hawaii limited liability company; and (b) **MAKAHUENA – CAPITAL A, LLC**, a Hawaii limited liability company, both of whose mailing address is 3214 N. University Ave., #104, Provo, Utah 84604; and (ii) (a) **MAKAHUENA – PREFERRED B, LLC**, a Hawaii limited liability company, (b) **MAKAHUENA – CAPITAL B, LLC**, a Hawaii limited liability company, (c) **MAKAHUENA – TW, LLC**, a Hawaii limited liability company, and (d) **MAKAHUENA – DW, LLC**, a Hawaii limited liability company, all of whose mailing address is 111 E. Broadway, Suite 1100, Salt Lake City, Utah 84111

TAX MAP KEYS (4) 2-8-021:041 and 069 to 079, inclusive

EXHIBIT B

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS:

That **CIRI LAND DEVELOPMENT COMPANY**, an Alaska corporation, whose mailing address is 725 E. Fireweed Lane, Suite 800, Anchorage, Alaska 99503, hereinafter called the "**Grantor**", for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable consideration to the Grantor paid by (i) (a) **MAKAHUENA – PREFERRED A, LLC**, a Hawaii limited liability company ("**Preferred A**"); and (b) **MAKAHUENA – CAPITAL A, LLC**, a Hawaii limited liability company ("**Capital A**"), both of whose mailing address is 3214 N. University Ave., #104, Provo, Utah 84604; and (ii) (a) **MAKAHUENA – PREFERRED B, LLC**, a Hawaii limited liability company ("**Preferred B**"), (b) **MAKAHUENA – CAPITAL B, LLC**, a Hawaii limited liability company ("**Capital B**"), (c) **MAKAHUENA – TW, LLC**, a Hawaii limited liability company ("**TW**"), and (d) **MAKAHUENA – DW, LLC**, a Hawaii limited liability company ("**DW**"), all of whose mailing address is 111 E. Broadway, Suite 1100, Salt Lake City, Utah 84111 (Preferred A, Capital A, Preferred B, Capital B, TW, and DW are hereinafter collectively called the "**Grantee**"), the receipt whereof is hereby acknowledged, does hereby grant, bargain, sell and convey unto the Grantee all of that certain real property designated on the tax maps of the Fourth Taxation Division, State of Hawaii, as Tax Map Key (4) 2-8-21: 41 and 69 to 79, inclusive, more particularly described in Exhibit "A" attached hereto and made a part hereof (the "**Property**"), subject to the encumbrances noted therein.

AND the reversions, remainders, rents, issues and profits thereof and all of the estate, right, title and interest of the Grantor, both at law and in equity, therein and thereto.

TOGETHER WITH ALL and singular the buildings, improvements, rights, tenements, hereditaments, easements, privileges and appurtenances thereunto belonging or appertaining or held and enjoyed in connection therewith.

TO HAVE AND TO HOLD the same unto the Grantee, as **Tenants in Common**, in fee simple, forever, according to the following percentages: (i) as to Preferred A, an undivided 3.96500% interest in the Property; (ii) as to Capital A, an undivided 32.14700% interest in the Property; (iii) as to Preferred B, an undivided 4.3969% interest in the Property; (iv) as to Capital B, an undivided 40.6192% interest in the Property; (v) as to TW, an undivided 17.0762% interest in the Property; and (vi) as to DW, an undivided 1.79570% interest in the Property.

AND THE SAID GRANTOR does hereby covenant with the Grantee that the Grantor is lawfully seised in fee simple of said granted premises and that the said premises are free

and clear of all encumbrances except as aforesaid, and except for assessments for real property taxes not yet required by law to be paid. And the said Grantor further covenants and agrees that the Grantor has good right to sell and convey the said premises in the manner aforesaid; that the Grantor will WARRANT AND DEFEND the same unto the Grantee against the lawful claims and demands of all persons, except as aforesaid.

AND the Grantor, in consideration of the premises, does hereby grant, sell, transfer and deliver unto the Grantee the items of real and personal property more fully described in said Exhibit A attached hereto and made a part hereof, in their existing "AS IS" condition, WITHOUT WARRANTY OR REPRESENTATIONS, EXPRESSED OR IMPLIED.

Grantee hereby understands and agrees that said real and personal property is being conveyed to Grantee "AS IS", "WHERE IS" and "WITH ALL FAULTS", in its present state and condition. Grantor makes no other representations or warranties, express or implied, with respect to the use, condition, fitness for any particular purpose, merchantability or any other aspect of said real and personal property, and it is expressly understood and agreed that any and all liability for any and all such representations or warranties is expressly disclaimed

This instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties hereto, notwithstanding all of the parties are not signatory to the original or the same counterparts. For all purposes, including without limitation, recordation, filing and delivery of this instrument, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

IT IS AGREED that the terms "Grantor" and "Grantee", as and when used hereinabove or hereinbelow shall mean and include the masculine or feminine, the singular or plural number, individuals, associations, trustees, corporations or partnerships, and their and each of their respective successors in interest, heirs, executors, personal representatives, administrators and permitted assigns, according to the context thereof, and that if these presents shall be signed by two or more grantors, or by two or more grantees, all covenants of such parties shall be and for all purposes deemed to be their joint and several covenants.

[remainder of page left intentionally blank]

IN WITNESS WHEREOF, the Grantor and Grantee have executed these presents on this 25 day of January, 2021.

Grantor:

CIRI LAND DEVELOPMENT COMPANY,
an Alaska corporation

By: _____
Name: Chad Nugent
Its: President

Grantor's signature page to Warranty Deed

Grantee:

MAKAHUENA – PREFERRED A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – PREFERRED B, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL B, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – TW, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – DW, LLC,
a Hawaii limited liability company

By: _____
David Weekes
Its Manager

Grantee's signature page to Warranty Deed (continued)

STATE OF ALASKA)
) SS:
THIRD JUDICIAL DISTRICT)

This is to certify that on this 25 day of January, 2021, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn as such, appeared CHAD NUGENT, in his capacity as President, of CIRI Land Development Company, known to me to be the individual who executed the foregoing instrument and he acknowledged to me that he signed the same freely and voluntarily for the uses and purposes therein set forth.

WITNESS MY HAND and official seal.

Carolyn B. Bickley
Name:

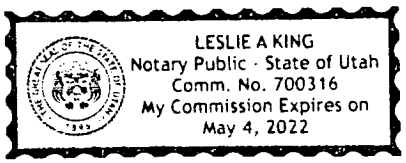
Notary Public for the State of Alaska

My commission expires: 06·25·2022

STATE OF ALASKA
NOTARY PUBLIC
Carolyn B. Bickley
My Commission Expires:

STATE OF UT)
) ss.
COUNTY OF Utah)

On this 25th day of January, 2021, before me appeared TANNER WEEKES, to me personally known, who being duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



(Notary Stamp or Seal)

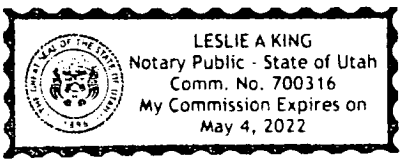
Name: Leslie A King

Notary Public, State of UT

My commission expires: May 4, 2022

STATE OF UT)
) ss.
COUNTY OF Utah)

On this 25th day of January 2021, before me appeared DAVID WEEKES, to me personally known, who being duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Name: Leslie A King

Notary Public, State of Utah

My commission expires: May 4, 2022

(Notary Stamp or Seal)

EXHIBIT A

TMK: (4) 2-8-021-041

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 1, and thus bounded and described:

Beginning at the northeast corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,817.12 feet south and 103.71 feet east, thence running by azimuths measured clockwise from true South:

1.	333°	59'		103.58	feet along the remainder of Grant 1416 (Lot 2) to the shoreline;
2.	27°	55'		45.95	feet along the shoreline;
3.	71°	35'		67.05	feet along the shoreline;
4.	40°	19'		151.41	feet along the shoreline;
5.	112°	35'		210.03	feet along the remainder of Grant 1416 (Lot 2);
6.	63°	59'		218.46	feet along the remainder of Grant 1416 (Lot 2);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 45.00 feet, the chord azimuth and distance being:				
7.	88°	04'	41"	36.74	feet;
8.	153°	59'		10.00	feet along the remainder of Grant 1416 (Road Lot A);
9.	243°	59'		633.18	feet along the remainder of Grant 1416 (Lot 2) to the point of beginning and containing an area of 1.244 acres, more or less.

Tax Key: (4) 2-8-021-069

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 2, and thus bounded and described:

Beginning at the southwest corner of this parcel of land, on the east end of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,154.49 feet south and 397.35 feet west, thence running by azimuths measured clockwise from true South:

Along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 45.00 feet, the chord azimuth and distance being:

1.	152°	38'	34"	58.41	feet;
2.	243°	59'		218.46	feet along the remainder of Grant 1416 (Lot 1);
3.	292°	35'		210.03	feet along the remainder of Grant 1416 (Lot 1) to the shoreline;
4.	40°	19'		54.99	feet along the shoreline;
5.	95°	40'		90.22	feet along the shoreline;
6.	32°	36'	10"	151.30	feet along the shoreline;
7.	120°	50'		182.29	feet along the remainder of Grant 1416 (Lot 3) to the point of beginning and containing an area of 1.027 acres, more or less.

Tax Key: (4) 2-8-021-070

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 3, bearing Tax Key designation (4) 2-8-021-070, and containing an area of 1.001 acres, more or less.

Tax Key: (4) 2-8-021-071

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 4, and thus bounded and described:

Beginning at the northwest corner of this parcel of land, on the south side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,222.54 feet south and 590.12 feet west, thence running by azimuths measured clockwise from true South:

1.	243°	59'		96.07	feet along the remainder of Grant 1416 (Road Lot A);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the right with a radius of 40.00 feet, the chord azimuth and distance being:				
2.	273°	00'	02"	38.81	feet;
3.	333°	58'		315.43	feet along the remainder of Grant 1416 (Lot 3) to the shoreline;

4.	61°	36'	32"	130.12	feet along the shoreline;
5.	153°	59'		339.64	feet along the remainder of Grant 1416 (Lot 5) to the point of beginning and containing an area of 1.001 acres, more or less.

Tax Key: (4) 2-8-021-072

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 5, and thus bounded and described:

Beginning at the northeast corner of this parcel of land, on the south side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,222.54 feet south and 590.12 feet west, thence running by azimuths measured clockwise from true South:

1.	333°	59'		339.64	feet along the remainder of Grant 1416 (Lot 4) to the shoreline;
2.	61°	36'	32"	15.39	feet along the shoreline;
3.	311°	12'	42"	31.84	feet along the shoreline;
4.	42°	29'		105.60	feet along the shoreline;
5.	138°	44'		52.25	feet along the shoreline;
6.	71°	09'	20"	53.58	feet along the shoreline;
7.	167°	00'		365.46	feet along the remainder of Grant 1416 (Lot 6);
					Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:
8.	250°	17'	33"	43.96	feet;
9.	243°	59'		42.21	feet along the remainder of Grant 1416 (Road Lot A) to the point of beginning and containing an area of 1.125 acres, more or less.

Tax Key: (4) 2-8-021-073

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 6, and thus bounded and described: Beginning at the northwest corner of this parcel of land, on the south side of Road Lot A, the

coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,258.50 feet south and 749.26 feet west, thence running by azimuths measured clockwise from true South:

Along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:

1.	268°	07'	07"	79.86	feet;
2.	347°	00'		365.46	feet along the remainder of Grant 1416 (Lot 5) to the shoreline;
3.	71°	09'	20"	58.42	feet along the shoreline;
4.	350°	35'	32"	53.87	feet along the shoreline;
5.	40°	29'	50"	47.40	feet along the shoreline;
6.	152°	15'	56"	63.01	feet along the shoreline;
7.	92°	07'	59"	69.92	feet along the shoreline;
8.	182°	14'	53"	3.39	feet along the remainder of Grant 1416 (Lot 7);
9.	270°	00'		50.48	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
10.	180°	00'		100.00	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
11.	90°	00'		41.41	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
12.	181°	00'		299.81	feet along the remainder of Grant 1416 (Lot 7) to the point of beginning and containing an area of 1.103 acres, more or less.

Tax Key: (4) 2-8-021-074

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 7, and thus bounded and described:

Beginning at the northeast corner of this parcel of land, on the south side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,258.50 feet south and 749.26 feet west, thence running by azimuths measured clockwise from true South:

1.	1°	00'		299.81	feet along the remainder of Grant 1416 (Lot 6);

2.	90°	00'		58.59	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
3.	0°	00'		100.00	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
4.	270°	00'		49.52	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
5.	2°	14'	55"	44.17	feet along the remainder of Grant 1416 (Lot 6) to and along the shoreline;
6.	62°	20'	39"	59.64	feet along the shoreline;
7.	111°	46'	13"	76.25	feet along the shoreline;
8.	188°	37'	53"	49.98	feet along the shoreline;
9.	94°	21'	59"	106.86	feet along the shoreline;
10.	201°	00'		446.94	feet along the remainder of Grant 1416 (Lot 8);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:				
11.	291°	51'		84.63	feet to the point of beginning and containing an area of 1.535 acres, more or less.

Tax Key: (4) 2-8-021-075

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 8, and thus bounded and described:

Beginning at the north corner of this parcel of land, on the west side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,158.50 feet south and 890.71 feet west, thence running by azimuths measured clockwise from true South:

Along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:

1.	317°	31'	56"	93.16	feet;
2.	21°	00'		446.94	feet along the remainder of Grant 1416 (Lot 7) to the shoreline;
3.	94°	21'	59"	10.15	feet along the shoreline;

4.	180°	51'	04"	63.08	feet along the shoreline;
5.	80°	08'	25"	47.72	feet along the shoreline;
6.	190°	27'		163.29	feet along the remainder of Grant 1416 (Parcel 3);
7.	164°	57'	30"	100.65	feet along the remainder of Grant 1416 (Parcel 3);
8.	221°	00'		228.59	feet along the remainder of Grant 1416 (Lot 9) to the point of beginning and containing an area of 1.123 acres, more or less.

Tax Key: (4) 2-8-021-076

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 9, and thus bounded and described:

Beginning at the southeast corner of this parcel of land, on the west side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,158.50 feet south and 890.71 feet west, thence running by azimuths measured clockwise from true South:

1.	41°	00'		228.59	feet along the remainder of Grant 1416 (Lot 8);
2.	164°	57'	30"	199.35	feet along the remainder of Grant 1416 (Parcel 3);
3.	165°	00'		105.91	feet along the remainder of Grant 1416 (Parcel 3);
4.	243°	59'		122.30	feet along the remainder of Grant 1416 (Road Widening Lot);
					Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
5.	287°	29'	30"	27.54	feet;
6.	331°	00'		191.71	feet along the remainder of Grant 1416 (Road Lot A) to the point of beginning and containing an area of 1.004 acres, more or less.

Tax Key: (4)) 2-8-021-77

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 10, as shown on survey map prepared by Dennis M. Esaki, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, Final Map

S-2015-14, approved by the Planning Commission of the County of Kauai, on March 27, 2018, bearing Tax Key designation (4) 2-8-021-077, and containing an area of 1.109 acres, more or less:

Beginning at the northwest corner of this parcel of land, on the south side of Pee Road, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,932.12 feet South and 929.83 feet West, thence running by azimuths measured clockwise from true South:

1.	243°	59'		130.25	feet along the remainder of Grant 1416 (Lot 2);
2.	333°	59'		359.00	feet along the remainder of Grant 1416 (Lot 2 and Road Lot A);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the right with a radius of 150.00 feet, the chord azimuth and distance being:				
3.	108°	31'	47"	202.56	feet;
4.	151°	00'		196.11	feet along the remainder of Grant 1416 (Road Lot A);
	Thence along the remainder of Grant 1416 (Road Lot A and Road widening Lot), on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:				
5.	193°	24'	26"	26.98	feet;
	Thence along the remainder of Grant 1416 (Road Widening Lot), on a curve to the left with a radius of 282.00 feet, the chord azimuth and distance being:				
6.	235°	04'	31"	7.28	feet to the point of beginning and containing an area of 1.109 acres, more or less.

Tax Key: (4)) 2-8-021-78

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being ROAD LOT A, as shown on survey map prepared by Dennis M. Esaki, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, Final Map S-2015-14, approved by the Planning Commission of the County of Kauai, on March 27, 2018, and thus bounded and described:

Beginning at the northwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,982.34 feet south and 1,009.92 feet west, thence running by azimuths measured clockwise from true South:

1.	243°	59'		72.90	feet along the remainder of Grant 1416 (Road widening Lot);
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:				
2.	349°	02'	41"	12.39	feet;
3.	331°	00'		196.11	feet along the remainder of Grant 1416 (Lot 10);
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the left with a radius of 150.00 feet, the chord azimuth and distance being:				
4.	288°	31'	47"	202.56	feet;
5.	153°	59'		9.90	feet along the remainder of Grant 1416 (Lot 10);
6.	243°	59'		215.82	feet along the remainder of Grant 1416 (Lot 2);
7.	333°	59'		10.00	feet along the remainder of Grant 1416 (Lot 1);
	Thence along the remainder of Grant 1416 (Lots 1, 2, and 3), on a curve to the right with a radius of 45.00 feet, the chord azimuth and distance being:				
8.	3°	00'	02"	78.70	feet;
	Thence along the remainder of Grant 1416 (Lot 4), on a curve to the left with a radius of 40.00 feet, the chord azimuth and distance being:				
9.	93°	00'	02"	38.81	feet;
10.	63°	59'		138.28	feet along the remainder of Grant 1416 (Lots 4 and 5);
	Thence along the remainder of Grant 1416 (Lots 5, 6, 7, and 8), on a curve to the right with a radius of 200.00 feet, the chord azimuth and distance being:				
11.	107°	29'	30"	275.38	feet;
12.	151°	00'		191.71	feet along the remainder of Grant 1416 (Lot 9),
	Thence on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:				
13.	107°	29'	30"	27.54	feet to the point of beginning and containing an area of 0.946 acre, more or less.

Tax Key: (4) 2-8-021-79

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being ROAD WIDENING LOT, as shown on survey map prepared by Dennis M. Esaki, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, Final Map S-2015-14, approved by the Planning Commission of the County of Kauai, on March 27, 2018, and thus bounded and described:

Beginning at the northwest corner of this parcel of land, on the south side of Pee Road, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,026.14 feet south and 1,122.46 feet west, thence running by azimuths measured clockwise from true South:

1.	243°	59'		214.35	feet along the south side of Pee Road;
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the right with a radius of 282.00 feet, the chord azimuth and distance being:				
2.	55°	04'	31"	7.28	feet;
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:				
3.	31°	27'	07"	16.50	feet;
4.	63°	59'		195.20	feet along the remainder of Grant 1416 (Road Lot A and Lot 9);
5.	165°	00'		10.19	feet along the remainder of Grant 1416 (Parcel 3) and along the south side of Pee Road to the point of beginning and containing an area of 0.046 acre, more or less.

BEING THE PREMISES ACQUIRED BY QUITCLAIM DEED

GRANTOR: UNITED STATES OF AMERICA, acting by and through the Administrator of General Services, under and pursuant to the powers and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377) as amended, and regulations and orders promulgated thereunder

GRANTEE: CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation

DATED: March 22, 1996
RECORDED: Document No. 96-068054

-AS TO LOTS 1 AND 3 THROUGH 10, INCLUSIVE:-

Together with an easement over and across Easements "AU-4" and "AU-5" for access and utility purposes, as set forth by instrument dated December 24, 2018, recorded as Document No. A-69320634.

-AS TO LOT 2:-

Together with an easement over and across Easements "AU-3", "AU-4", and "AU-5" for access and utility purposes, as set forth by instrument dated December 24, 2018, recorded as Document No. A-69320634.

-AS TO ROAD LOT A:-

Together with an easement over and across Easement "AU-5" for access and utility purposes, as set forth by instrument dated December 24, 2018, recorded as Document No. A-69320634.

SUBJECT, HOWEVER, to the following:

1. Mineral and water rights of any nature.

2. -AS TO LOTS 1 THROUGH 8, INCLUSIVE:-

   Location of the seaward boundary in accordance with the laws of the State of Hawaii and shoreline setback line in accordance with County regulation and/or ordinance.

3. The terms, provisions and easements contained in the following:

   INSTRUMENT: QUITCLAIM DEED

   DATED: March 22, 1996
   RECORDED: Document No. 96-068054

   Said Deed was amended by instrument dated November 14, 2016, recorded as Document No. A-61620060; re: to relocate the road and utility easement.

   The foregoing includes, but is not limited to, matters relating to reservation of a road and utility easement and a visual easement to provide an unobstructed view from the sea to the aid-to-navigation on the lands described therein.

4. -AS TO LOTS 1 THROUGH 9, INCLUSIVE, ROAD LOT A AND ROAD WIDENING LOT:-

   GRANT

   TO: COUNTY OF KAUAI

DATED: March 24, 2017
RECORDED: Document No. A-63020561
GRANTING: non-exclusive easements over and across Easement "AU-1", "AU-2", "AU-5", "AU-6", and "A-1", being more particularly described therein

5. The terms and provisions contained in the following:

INSTRUMENT: MEMORANDUM OF DEED RESTRICTION (RESTRICTED DENSITY FOR CONSOLIDATION OF LOTS 1 THROUGH 3, 45 THROUGH 54, 56 THROUGH 63, PARCELS L-1, L-2 AND L-3, LAAUKAHI ROAD LOT AND EHUKAI ROAD LOT AND SUBDIVISION OF SAID CONSOLIDATION INTO LOTS 1 THROUGH 10, ROAD LOT 2 AND ROAD WIDENING LOT CANCELLATION OF ROAD AND UTILITY EASEMENT, AND DESIGNATION OF EASEMENTS A-1 THROUGH A-5 AT WELIWELI, KOLOA, KAUAI, HAWAII

DATED: July 10, 2017
RECORDED: Document No. A-64070799

6. CONVEYANCE OF WATER FACILITY dated September 29, 2017, recorded as Document No. A-64920742.

7. -AS TO ROAD LOT A AND ROAD WIDENING LOT:-

GRANT

TO: BOARD OF WATER SUPPLY, COUNTY OF KAUAI

DATED: September 29, 2017
RECORDED: Document No. A-64920743
GRANTING: an easement over and across Easements "AU-4" and "AU-5" for water pipeline purposes, being more particularly described therein

8. -AS TO LOT 1, ROAD LOT A, AND ROAD WIDENING LOT:-

GRANT

TO: OCEANIC TIME WARNER CABLE LLC, a Delaware limited liability company

DATED: December 21, 2017
RECORDED: Document No. A-65910545
GRANTING: a right and non-exclusive easement over and across Easements "AU-3", "AU-4", "AU-5" and "E-4" for utility purposes, being more particularly described therein

9. Designation of the following easements, as shown on map prepared by Dennis M. Esaki, Land Surveyor, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, and approved by the Planning Commission of the County Of Kauai on March 27, 2018, S-2015-14 and recorded as Document No. A-66800977:

(a) "AU-1" for public parking, public pedestrian and light station access purposes, as to Lot 9;

(b) "AU-2" for public pedestrian and light station access purposes, as to Lots 7, 8 and 9;

(c) "AU-3" for common access and utility purposes, as to Lot 1;

(d) "AU-4" for access and utility purposes, as to Road Lot A;

(e) "AU-5" for access and utility purposes, as to Road Widening Lot;

(f) "AU-6" for access and utility purposes, as to Road Lot A;

(g) "A-1" for public pedestrian access purposes, as to Lot 1 through 6, inclusive;

(h) "A-2" for open space purposes, as to Lot 7 and 8;

(i) "E-1" for utility purposes, as to Lot 10;

(j) "E-2" for utility purposes, as to Lot 7;

(k) "E-3" for utility purposes, as to Lot 4;

(l) "E-4" for utility purposes, as to Lot 1; and

(m)"P-1" for parking purposes, as to Lot 9.

10. The terms and provisions contained in the following:

INSTRUMENT: DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS FOR MAKAHU'ENA ESTATES

DATED: December 24, 2018
RECORDED: Document No. A-69320634

The foregoing includes, but is not limited to, matters relating to no further subdivision and easements over and across the Common Areas.

11. -AS TO LOTS 1, 4, 7, 10, ROAD LOT A AND ROAD WIDENING LOT:-

GRANT

TO: KAUAI ISLAND UTILITY COOPERATIVE and HAWAIIAN TELCOM, INC.

DATED: May 31, 2017
RECORDED: Document No. A-70310791

GRANTING: a right and easement over and across Easements "AU-5", "AU-4", "AU-3", "E-1", "E-2", "E-3" and "E-4" for utility purposes, being more particularly described therein

12. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other matters which a correct survey or archaeological study would disclose.

EXHIBIT C-1

County of Kaua'i
State of Hawai'i



Overview



Legend

Parcels

Roads

Parcel ID	280210700000	**Situs/Physical Address**	PEE RD	**Total Market Value**	$1,450,400	**Last 2 Sales**		
				Total Assessed Value	$1,450,400	**Date**	**Price**	**Reason**
Acreage	1.001	**Mailing Address**	MAKAHUENA-PREFERRED A LLC	**Total Exemptions**	$0	n/a	0	n/a
Class	RESIDENTIAL		111 E BROADWAY STE 100	**Total Net Taxable Value**	$1,450,400	n/a	0	n/a
			SALT LAKE CITY UT 84111					

Brief Tax Description LOT 3 POR GR 1416 FP 354 MAKAHUENA TRACT 1.001 AC DES
(Note: Not to be used on legal documents)

The Geographic Information Systems (GIS) maps and data are made available solely for informational purposes. The GIS data is not the official representation of any of the information included, and do not replace a site survey or legal document descriptions. The County of Kauai (County) makes or extends no claims, representations or warranties of any kind, either express or implied, inluding, without limitation, the implied warranties of merchantability and fitness for a particular purpose, as to the quality, content, accuracy, currency, or completeness of the information, text, maps, graphics, links and other items contained in any of the GIS data. In no event shall the County become liable for any errors or omissions in the GIS, and will not under any circumstances be liable for any direct, indirect, special, incidental, consequential, or other loss, injury or damage caused by its use or otherwise arising in connection with its use, even if specifically advised of the possibility of such loss, injury or damage. The data and or functionality on this site may change periodically and without notice. In using the GIS data, users agree to indemnify, defend, and hold harmless the County for any and all liability of any nature arising out of or resulting from the lack of accuracy or correctness of the data, or the use of the data.

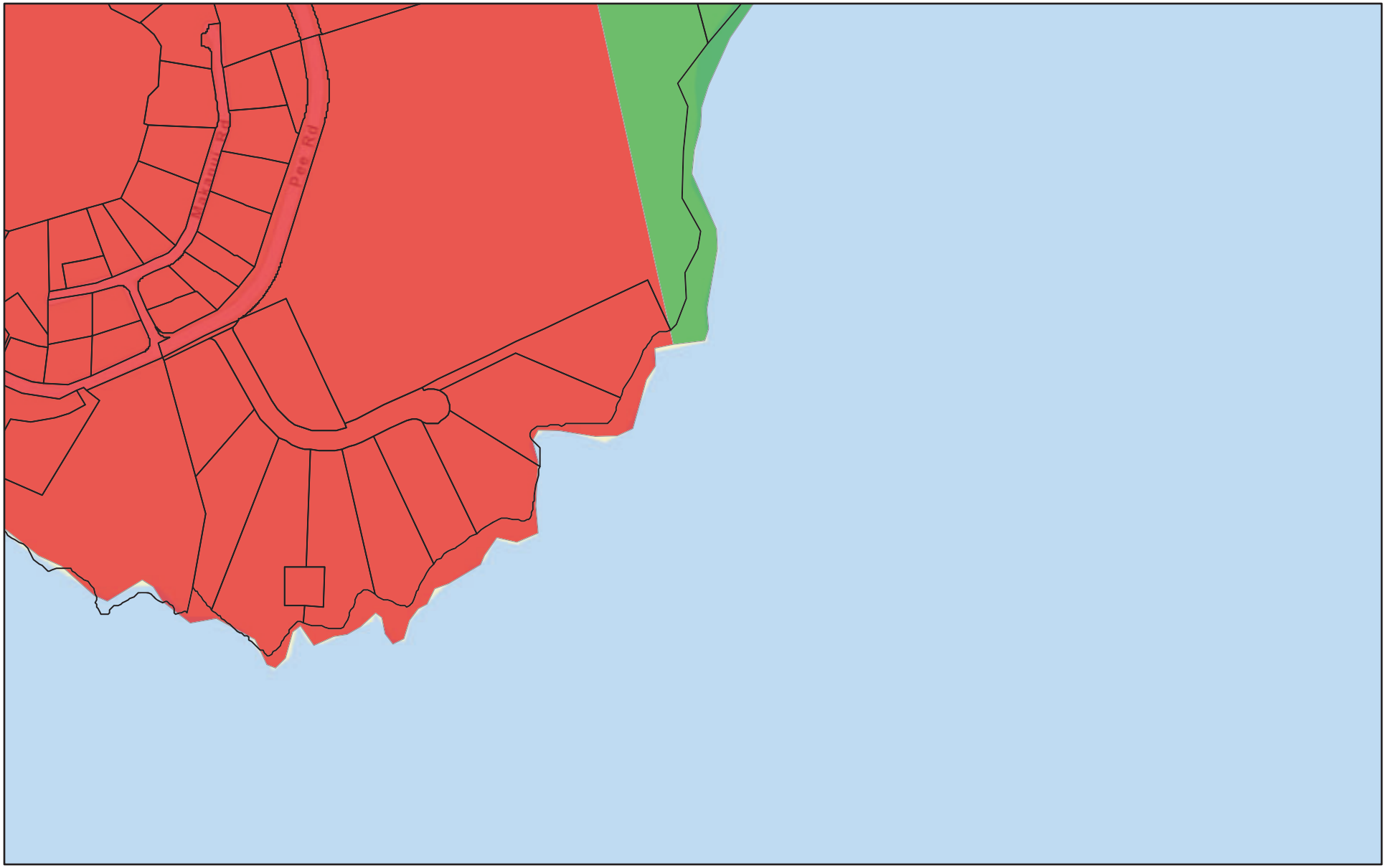
Date created: 9/29/2021
Last Data Uploaded: 9/29/2021 7:08:13 AM

Developed by Schneider GEOSPATIAL

EXHIBIT C-1

EXHIBIT C-2

Hawaii SLUD Locator



September 14, 2020

TMK Parcels

State Land Use Districts

Urban

Conservation

1:4,514

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

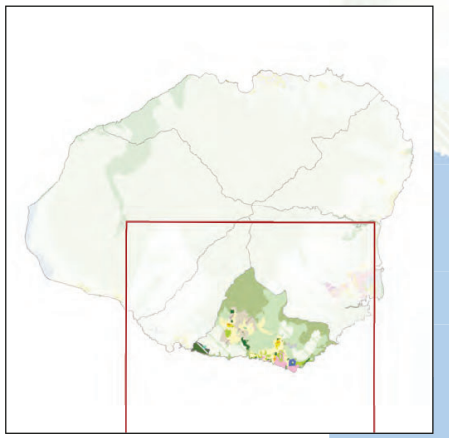
EXHIBIT C-2

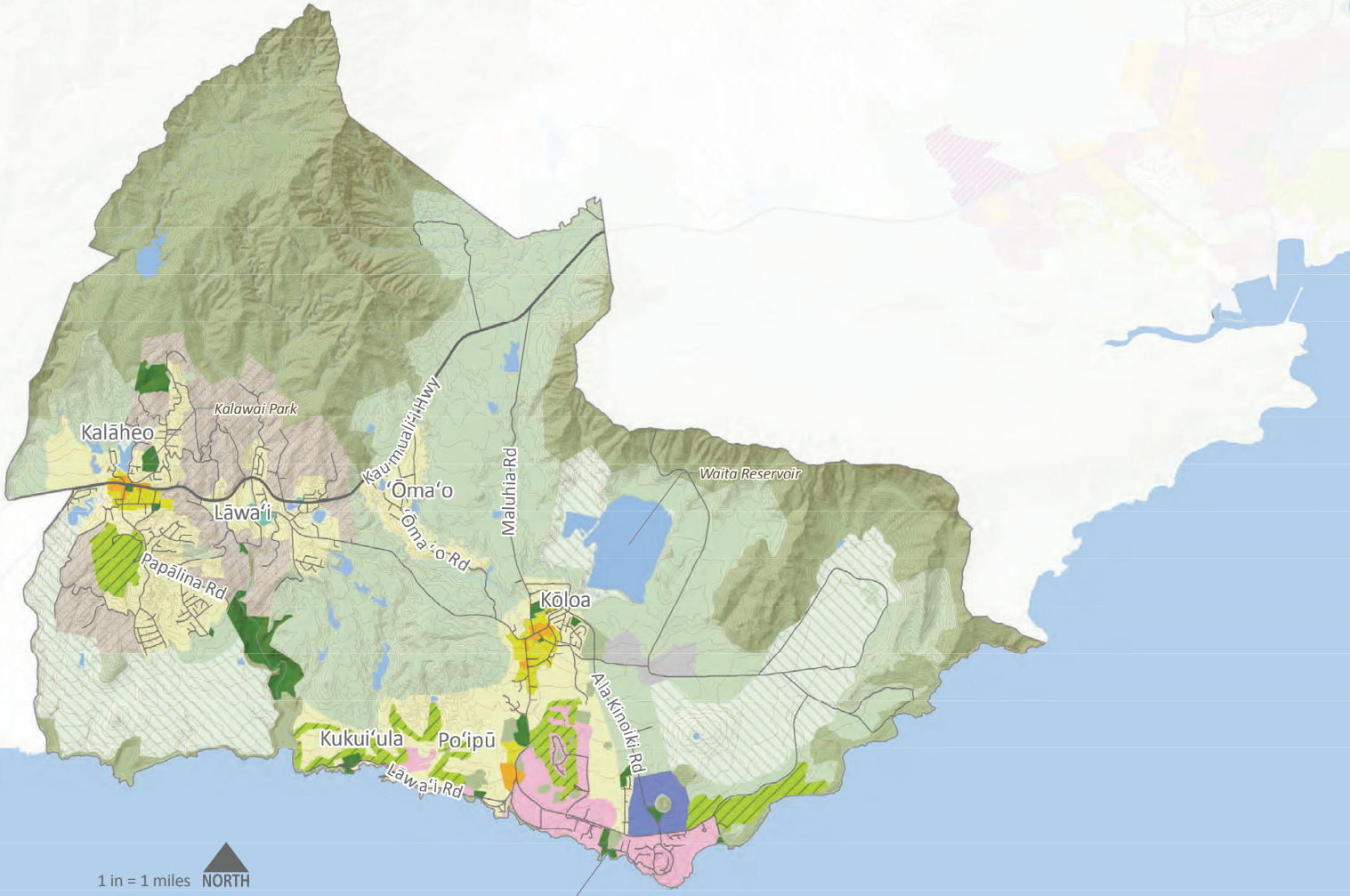
EXHIBIT C-3

ONLINE VERSION

Figure 5-4 South Kaua'i Land Use Map

- Planning District Boundary
- Major Roads
- Roads
- Streams
- Reservoirs
- Natural
- Agriculture
- Agriculture (IAL)
- Parks and Recreation
- Golf Course
- Homestead
- Residential Community
- Neighborhood Center
- Neighborhood General
- Large Town
- Small Town
- Resort
- Industrial
- Transportation
- Provisional Agriculture





ONLINE VERSION

EXHIBIT C-3

EXHIBIT C-4


R-4
R-10
R-6
ST-P
R-4
R-6
R-4
R-10
R-20
C-N
R-10
POIPU
ROAD
R-20
RR-20
R-20
ST-P ST-C
RR-20
R-4
R-10
RR-10
R-4
R-10
R-10
R-4
RR-10
R-20
ST-P
R-20
P A C I F I C
LEGEND
TIME SHARE BOUNDARY
SCALE IN FEET
0 200 400 600 800 1000
ZM-PO 300
POIPU
PLANNING DEPARTMENT
COUNTY OF KAUAI
LIHUE, KAUAI, HAWAII
DECEMBER, 1959
LATEST REVISION
THE PREPARATION OF THIS MAP WAS FINANCED IN PART THROUGH AN URBAN PLANNING GRANT FROM THE HOUSING AND HOME FINANCE AGENCY, UNDER THE PROVISIONS OF SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.
LEGEND
ZONING DISTRICTS
RESIDENTIAL DISTRICT
RESORT DISTRICT
COMMERCIAL DISTRICT
NEIGHBORHOOD
GENERAL
INDUSTRIAL DISTRICT
LIMITED
GENERAL
AGRICULTURE DISTRICT
OPEN DISTRICT
SPECIAL TREATMENT DISTRICT
PUBLIC
CULTURAL/ HISTORIC
SCENIC/ ECOLOGICAL
SPECIAL PLANNING AREA
PROJECT DISTRICT
STATE LAND USE DISTRICTS
URBAN DISTRICT
RURAL DISTRICT
AGRICULTURE DISTRICT
CONSERVATION DISTRICT
ADOPTED BY COUNTY OF KAUAI
Adopted 3-25-72, by PLANNING COMMISSION
Chairman, Planning Commission
Approved 3-31-72, by EXECUTIVE BRANCH
Mayor
Adopted 4-18-72, by COUNTY COUNCIL (Bill No 164)
Chairman, Council
Enacted as Ordinance No. 164 (Effective Date 9-1-72)
ADOPTED BY COUNTY OF KAUAI
KOLOA-POIPU-KALAHEO DEVELOPMENT PLAN
Adopted 11-25-81, by PLANNING COMMISSION
Chairman, Planning Commission
Approved 2-22-83, by EXECUTIVE BRANCH
Mayor
Adopted 3-17-83, by COUNTY COUNCIL
Chairman, Council

EXHIBIT C-4

EXHIBIT C-5

Figure 4-1: Land Use Map

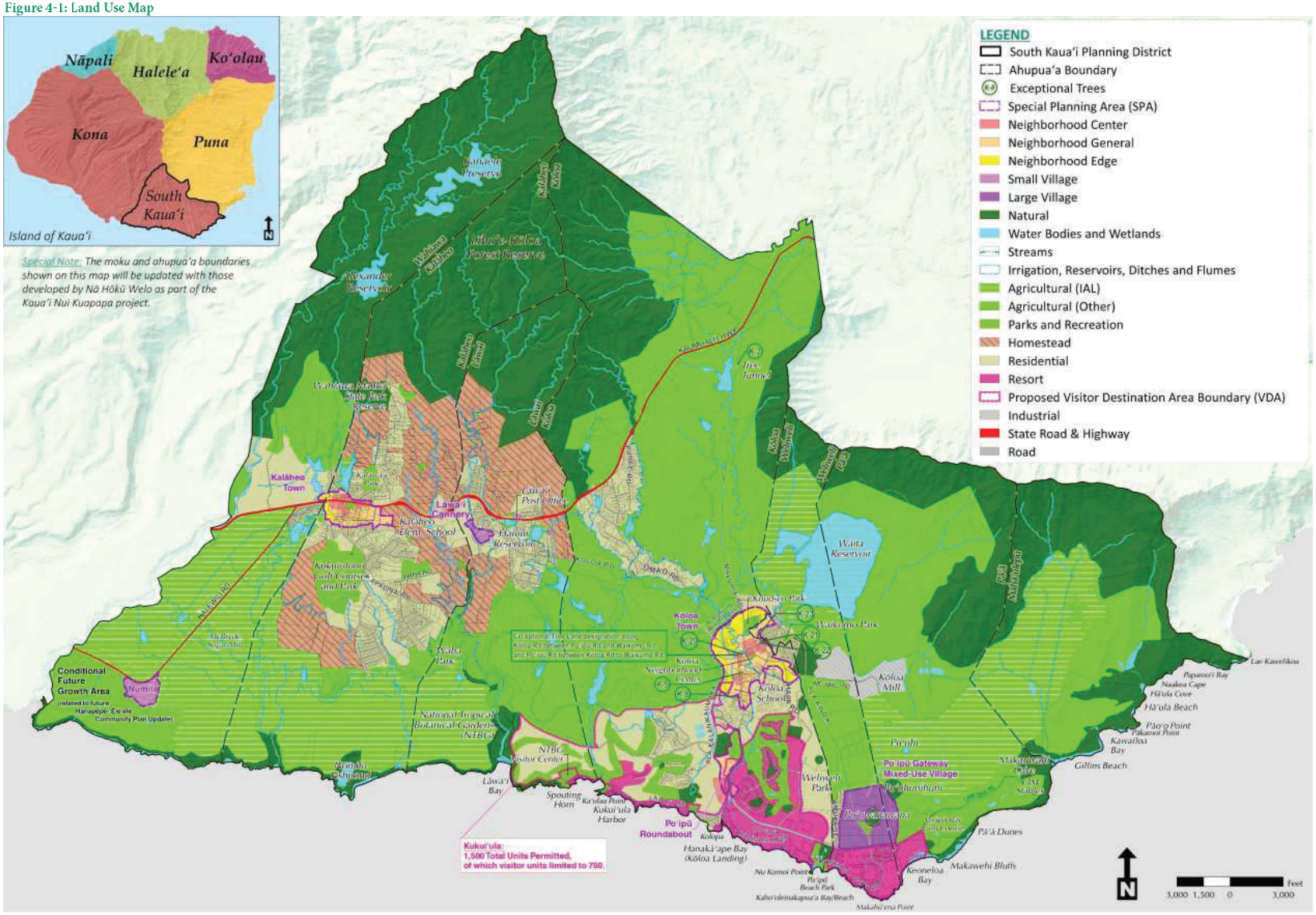


EXHIBIT C-5

EXHIBIT C-6

Hawaii SMA Locator



September 14, 2020

TMK - Neighbor Islands

Special Management Area (SMA)

EXHIBIT C-6

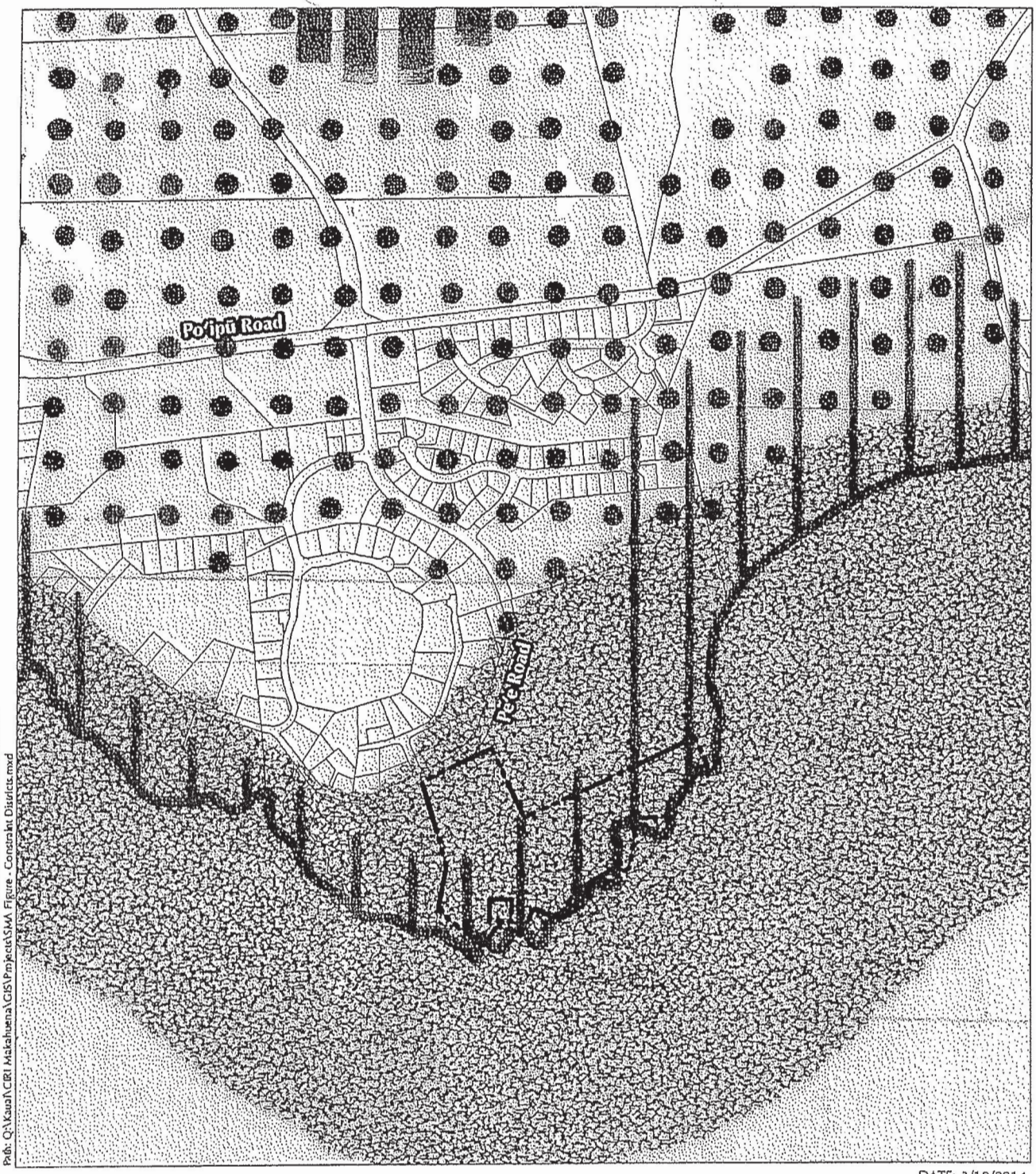
1:4,514

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

EXHIBIT C-7



PDF: Q:\Kauai\CIRI Makahuena\PDF\2013-06 SMA Exhibit\Makahuena Constraint Districts
Path: Q:\Kauai\CIRI Makahuena\GIS\Projects\SMA Figure - Constraint Districts.mxd

DATE: 3/19/2014

LEGEND

Property Boundary

Tax Map Key (TMK) 2012

County Constraint Districts

Flood S-FL

Soils S-SO

Slope S-SL

Shore S-SH

Constraint Districts

Makahū'ena Point

CIRI Land Development Company

Island of Kaua'i

North

Linear Scale (feet)

0 200 400 800

PBR HAWAII & ASSOCIATES, INC.

Source: State Land Use Commission (2010)

Disclaimer: This Graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

EXHIBIT C-7

EXHIBIT C-8

ONLINE VERSION



Figure 5-11 South Kaua'i Heritage Resource Map

Registered Historic Sites
- State
- National
- State & National
- Cultural Features
- Priority Public Access Points
- Fish Ponds
- Streams & Waterbodies
- Major Roads
- Roads

- Kōloa Scenic Byway
- Trails
- Planning District Boundary
- Ahupua'a Boundaries
- Wetlands
- Coral Reefs
- Regulated Fishing Areas
- State & County Parks
- Preserves

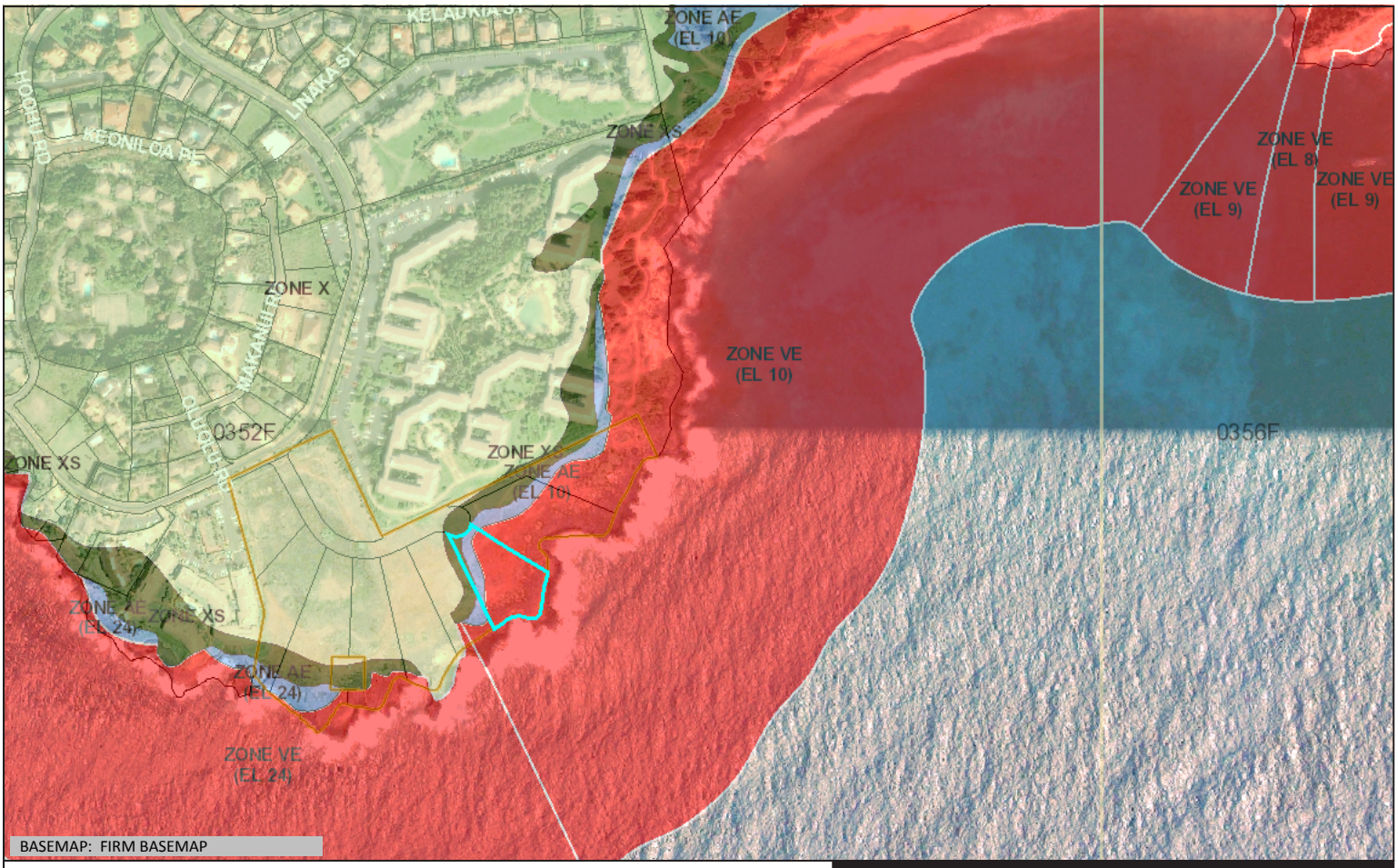
- Reservoirs
- Traditional Cultivation Areas
- Sand Dunes
- Open Space Acquisition Priorities
- Critical Habitat

Threatened & Endangered Species
- High Density
- Very High Density

EXHIBIT C-8

ONLINE VERSION

EXHIBIT C-9



Flood Hazard Assessment Report

www.hawaiinfip.org

Property Information

COUNTY:	KAUAI
TMK NO:	(4) 2-8-021:070
WATERSHED:	MAHAULEPU
PARCEL ADDRESS:	ADDRESS NOT DETERMINED KOLOA, HI 96756

Notes:

Flood Hazard Information

FIRM INDEX DATE:	FEBRUARY 26, 2021
LETTER OF MAP CHANGE(S):	16-09-0378A, 16-09-0391A, 19-09-1672A
FEMA FIRM PANEL:	1500020352F
PANEL EFFECTIVE DATE:	NOVEMBER 26, 2010

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/

0 400 800 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.

EXHIBIT C-9

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	Lots 45 through 47, 58 through 61 and a portion of Parcel L-3, Makahuena Tract, as described in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.870, -159.443 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
L-3	--	Makahuena Tract	--	Portion of Property	X (shaded)	10.0 to 24.0 feet	--	10.0 to 24.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
ZONE V
PORTIONS REMAIN IN THE SFHA

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in a Coastal High Hazard Area or the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the Coastal High Hazard Area and the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

Parcel L-3

BEGINNING at a ½" pipe located at the northeast corner of Lot L-3, a parcel of land being a portion of Grant 1416 to Eke Opunui, Makahuena Tract at Weliweli, Koloa, Island of Kauai, State of Hawaii, Tax Map Key: (4) 2-8-021: 041, having a latitude of 21.870954 and a longitude of -159.441649, and running in bearings measured clockwise from the point of beginning as shown on the attached Exhibit A; thence S26°01'00'E, 110.36 feet; thence S31°46'09"W, 49.24 feet; thence, S77°27'05"W, 63.70 feet; thence, S37°39'37"W, 38.00 feet; thence, S65°05'45"W, 39.07 feet; thence, S37°39'37"W, 30.00 feet; thence, S09°53'44"E, 24.39 feet; thence, S37°39'37"W, 107.44 feet; thence, N69°52'26"W, 90.18 feet; thence, S32°36'10"W, 72.35 feet; thence, S87°31'11"W. 12.22 feet; thence, S32°36'10"W, 15.83 feet; thence, S02°20'20"E, 17.46 feet; thence, S32°36'10"W, 42.00 feet; thence, S36°56'14"E, 89.47 feet; thence, S28°17'21"W, 113.52 feet; thence, S61°36'32"W, 166.40 feet; thence, S72°15'15"W, 42.12 feet; thence, S34°24'32"W, 17.02 feet; thence, S61°36'32W, 20.00 feet; thence, S48°47'18"E, 31.84 feet; thence, S42°14'17"W, 110.80 feet; thence, N31°01'00"W, 167.34 feet; thence, N64°12'18"E, 62.11 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 75.00 feet; thence, N18°59'00"E, 35.36 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 244.80 feet to the POINT OF BEGINNING

ZONE V (This Additional Consideration applies to the preceding 1 Property.)

A portion of this property, but not the subject of the Determination/Comment Document, is located within a Coastal High Hazard Area (Zone V, VE or V1-30). Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. No construction using fill for structural support or that may increase flood damage to other property may take place in these areas.

PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.)

Portions of this property, but not the subject of the Determination/Comment document, may remain in the Special Flood Hazard Area. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	Lots 45 through 47, 58 through 61 and a portion of Parcel L-3, Makahuena Tract, as described in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.870, -159.443 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
45	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	18.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
DETERMINATION TABLE (CONTINUED)

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in a Coastal High Hazard Area or the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the Coastal High Hazard Area and the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

Parcel L-3

BEGINNING at a ½" pipe located at the northeast corner of Lot L-3, a parcel of land being a portion of Grant 1416 to Eke Opunui, Makahuena Tract at Weliweli, Koloa, Island of Kauai, State of Hawaii, Tax Map Key: (4) 2-8-021: 041, having a latitude of 21.870954 and a longitude of -159.441649, and running in bearings measured clockwise from the point of beginning as shown on the attached Exhibit A; thence S26°01'00'E, 110.36 feet; thence S31°46'09"W, 49.24 feet; thence, S77°27'05"W, 63.70 feet; thence, S37°39'37"W, 38.00 feet; thence, S65°05'45"W, 39.07 feet; thence, S37°39'37"W, 30.00 feet; thence, S09°53'44"E, 24.39 feet; thence, S37°39'37"W, 107.44 feet; thence, N69°52'26"W, 90.18 feet; thence, S32°36'10"W, 72.35 feet; thence, S87°31'11"W. 12.22 feet; thence, S32°36'10"W, 15.83 feet; thence, S02°20'20"E, 17.46 feet; thence, S32°36'10"W, 42.00 feet; thence, S36°56'14"E, 89.47 feet; thence, S28°17'21"W, 113.52 feet; thence, S61°36'32"W, 166.40 feet; thence, S72°15'15"W, 42.12 feet; thence, S34°24'32"W, 17.02 feet; thence, S61°36'32W, 20.00 feet; thence, S48°47'18"E, 31.84 feet; thence, S42°14'17"W, 110.80 feet; thence, N31°01'00"W, 167.34 feet; thence, N64°12'18"E, 62.11 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 75.00 feet; thence, N18°59'00"E, 35.36 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 244.80 feet to the POINT OF BEGINNING

DETERMINATION TABLE (CONTINUED)

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	**OUTCOME** WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
46	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	20.0 feet
47	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	20.5 feet
58	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	26.5 feet
59	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	20.5 feet

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	**OUTCOME** WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
60	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	23.0 feet
61	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	33.0 feet

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	Lots 48, 49 and 50, Makahuena Tract, as described in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii
	COMMUNITY NO.: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.870, -159.443 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
48	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	23.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

DETERMINATION TABLE (CONTINUED)

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration



INSET
SEE INSET
SEE INSET
SEE INSET
CIRI Land Development Co.
Poipu Suite Partners
"THE POINTE AT POIPU"
LAUKAHI RD
EHUKAI RD
MAKAHUENA TRACT
OLUOLU RD.
MAKAHUI ROAD
OLILI
TRUE NORTH
NORTH
NTS
WELIWELI PAA BOUNDARY
PORTION OF MAKAHUENA TRACT (FILE PLAN 354), WELIWELI, KOLOA, KAUAI
Owners, lessees, & vendees name recorded on this tax map print may not be current. Please refer to computer and history sheets for current owners.

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

DETERMINATION TABLE (CONTINUED)

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	**OUTCOME** WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
49	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	26.5 feet
50	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	33.0 feet

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	A portion of Makahuena Tract described as Ehukai Road, in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii
	COMMUNITY NO: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.869624; -159.443202 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
Ehukai Road	--	Makahuena Tract	--	Property	X (shaded)	--	--	--

Special Flood Hazard Area (SFHA) – The **SFHA** is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below)

ZONE V

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we determined that the structure(s) on the property is/are not located in a Coastal High Hazard Area or the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the Coastal High Hazard Area and the SFHA located on the effective NFIP map; therefore, the federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

ZONE V (This Additional Consideration applies to the preceding property(ies))

A portion of this property, but not the subject of the Determination/Comment Document, is located within a Coastal High Hazard Area (Zone V, VE or V1-30). Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. No construction using fill for structural support or that may increase flood damage to other property may take place in these areas.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

EXHIBIT C-10

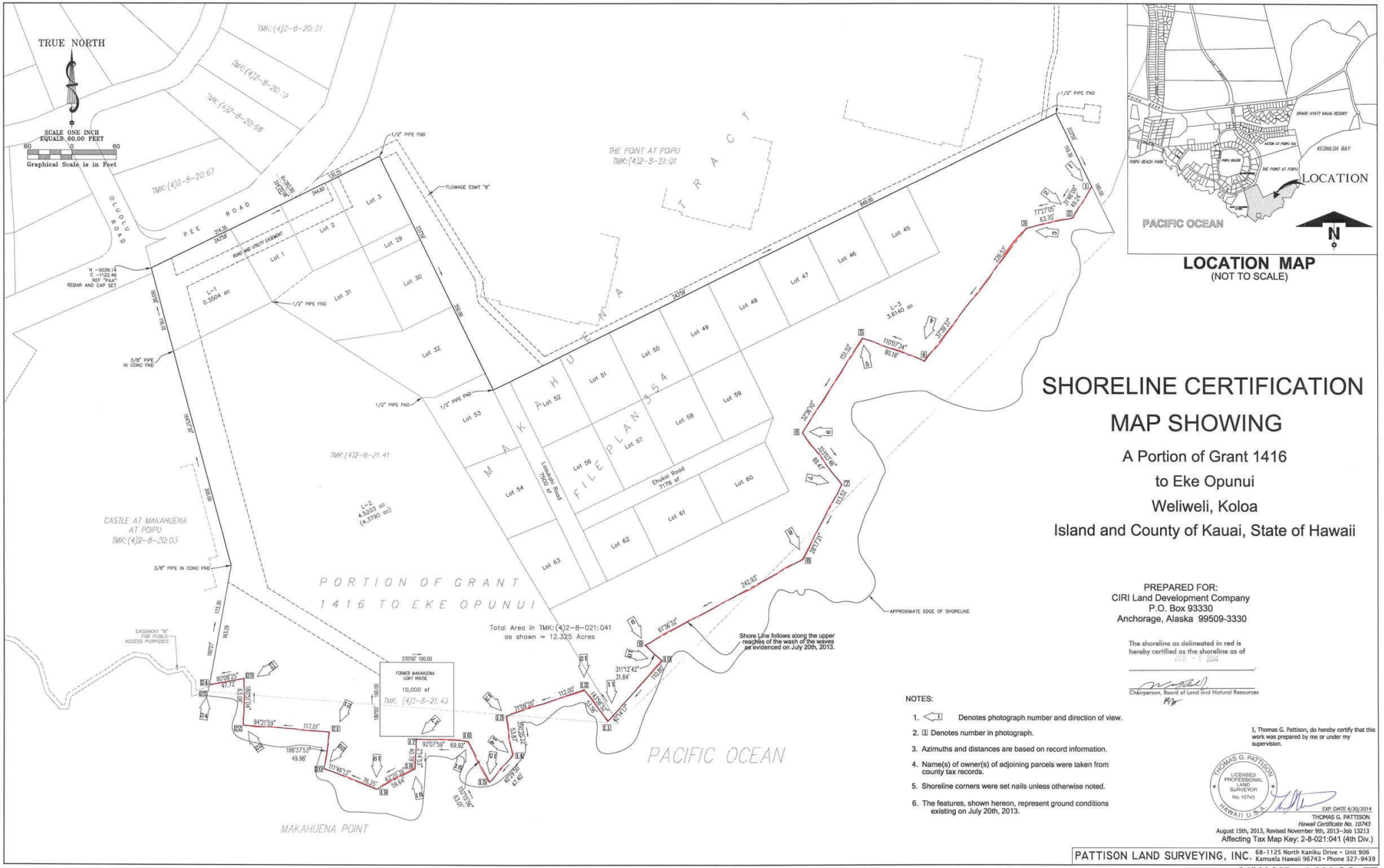
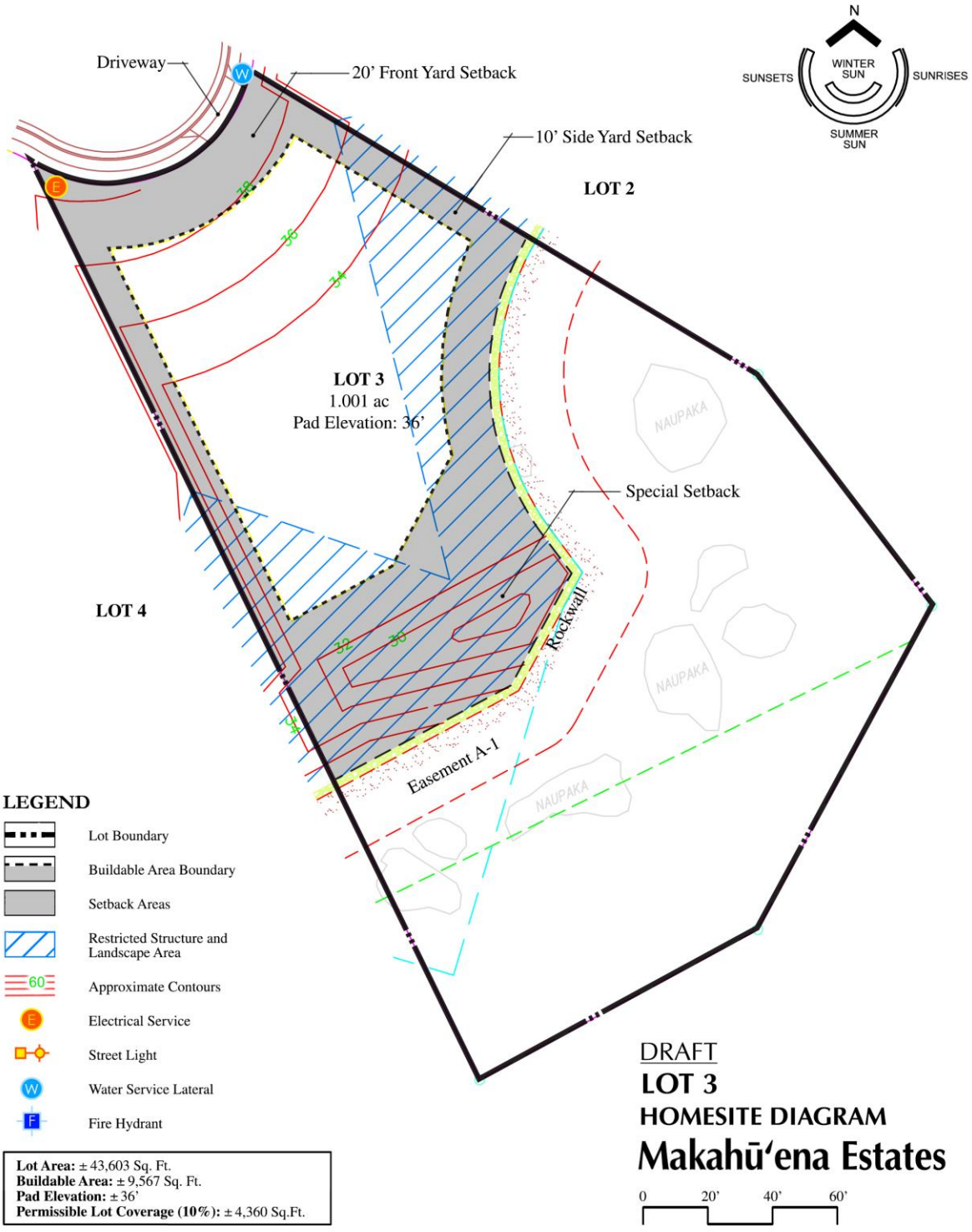

TRUE NORTH
SCALE ONE INCH EQUALS 60.00 FEET
Graphical Scale is in Feet
LOCATION MAP
(NOT TO SCALE)
LOCATION
PACIFIC OCEAN
KEONILOA BAY
SHORELINE CERTIFICATION
MAP SHOWING
A Portion of Grant 1416
to Eke Opunui
Weliweli, Koloa
Island and County of Kauai, State of Hawaii
PREPARED FOR:
CIRI Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509-3330
The shoreline as delineated in red is hereby certified as the shoreline as of
Chairperson, Board of Land and Natural Resources
NOTES:
1. Denotes photograph number and direction of view.
2. Denotes number in photograph.
3. Azimuths and distances are based on record information.
4. Name(s) of owner(s) of adjoining parcels were taken from county tax records.
5. Shoreline corners were set nails unless otherwise noted.
6. The features, shown hereon, represent ground conditions existing on July 20th, 2013.
I, Thomas G. Pattison, do hereby certify that this work was prepared by me or under my supervision.
THOMAS G. PATTISON
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10743
HAWAII U.S.A.
EXP. DATE 4/30/2014
THOMAS G. PATTISON
Hawaii Certificate No. 10743
August 15th, 2013, Revised November 9th, 2013–Job 13213
Affecting Tax Map Key: 2-8-021:041 (4th Div.)
PATTISON LAND SURVEYING, INC. 68-1125 North Kaniku Drive • Unit 906 Kamuela Hawaii 96743 • Phone 327-9439
21" X 32" = 4.666 SQ. FT.
PORTION OF GRANT
1416 TO EKE OPUNUI
MAKAHUENA TRACT
FILE PLAN 354
PACIFIC OCEAN
MAKAHUENA POINT
Total Area in TMK: (4)2-8-021:041
as shown = 12.325 Acres
Shore Line follows along the upper reaches of the wash of the waves as evidenced on July 20th, 2013.
APPROXIMATE EDGE OF SHORELINE
CASTLE AT MAKAHUENA AT POIPU
TMK: (4)2-8-20:03
THE POINT AT POIPU
TMK: (4)2-8-21:01
TMK: (4)2-8-21:41
TMK: (4)2-8-20:21
TMK: (4)2-8-20:19
TMK: (4)2-8-20:58
TMK: (4)2-8-20:67
PEE ROAD
OLUOLU ROAD
FLOWAGE ESMT "8"
1/2" PIPE FND
3/8" PIPE IN CONC FND
EASEMENT "B" FOR PUBLIC ACCESS PURPOSES
FORMER MAKAHUENA LIGHT HOUSE
10,000 sf
TMK: (4)2-8-21:43
Lot 1
Lot 2
Lot 3
Lot 29
Lot 30
Lot 31
Lot 32
Lot 45
Lot 46
Lot 47
Lot 48
Lot 49
Lot 50
Lot 51
Lot 52
Lot 53
Lot 54
Lot 56
Lot 57
Lot 58
Lot 59
Lot 60
Lot 61
Lot 62
Lot 63
Lasukahi Road 7500 sf
Ehukai Road 7178 sf
L-1 0.3504 ac
L-2 4.5203 ac (4.3790 ac)
L-3 3.6140 ac

EXHIBIT C-10



The Developer makes no representations regarding the need for, or the extent of any required finish grading, fill and/or drainage improvements in connection with construction on a Lot. The locations of any features, walls, trees, grades, setbacks, easements areas, zoning lines, buildable area, pad elevation and utilities depicted on this diagram are only approximations and are not intended to be and do not constitute any representations or warranty by the Developer or their agents. Purchasers are required to verify same prior to commencement of construction. The Developer and their agents make no representations, assurances or warranty and shall have no liability with respect to the accuracy of information or other items referred to on this diagram.

Kaua'i shoreline change



July 12, 2021

Kaua'i transects historical shoreline change rates (ft/yr)

> 3.3

< -3.3

Kaua'i low water marks (LWM)

03/04/1988

1927

12/09/2014

10/21/2007

04/12/1975

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Resource Mapping Hawaii, Maxar

EXHIBIT C-11

NCG

C

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
April 03, 2017 8:02 AM
Doc No(s) A – 63020561

/s/ LESLIE T. KOBATA
REGISTRAR

1 1/1 JMV
B – 32971490

LAND COURT REGULAR SYSTEM

Return By Mail [X] Pick-Up [ ] To:

CARLSMITH BALL LLP

OFFICE OF THE COUNTY CLERK
COUNCIL SERVICES DIVISION
4396 RICE STREET SUITE 209
LĪHU'E HI 96766

Telephone: (808) 523-2537

TITLE OF DOCUMENT:

GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS

PARTIES TO DOCUMENT:

GRANTOR: CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation
725 E. Fireweed Lane, Suite 800, Anchorage, AK 99503

GRANTEE: COUNTY OF KAUA'I, a political subdivision of the State of Hawai'i
4444 Rice Street, Suite 220
Līhu'e, Kaua'i, Hawai'i 96766

TAX MAP KEY (4) 2-8-021: 41, 044 - 068 TOTAL NUMBER OF PAGES: 25

C 2017-50

EXHIBIT C-11

LAND COURT | REGULAR SYSTEM

Return By Mail [X] Pick-Up [ ] To:

CARLSMITH BALL LLP
1001 Bishop Street
Honolulu, Hawaii 96813

Attention: Jennifer A. Lim
Telephone: (808) 523-2557

TITLE OF DOCUMENT:

GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS

PARTIES TO DOCUMENT:

GRANTOR: CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation
725 E. Fireweed Lane, Suite 800, Anchorage, AK 99503

GRANTEE: COUNTY OF KAUA'I, a political subdivision of the State of Hawai'i
4444 Rice Street, Suite 220
Līhu'e, Kaua'i, Hawai'i 96766

TAX MAP KEY (4) 2-8-021: 041, 044 - 065 (por.) TOTAL NUMBER OF PAGES: __

4820-9849-3218.7.064510-00001

GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS

This Grant of Pedestrian Access and Parking Easements ("**Grant**") is made this 24th day of March, 2017 by and between CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation whose mailing address is 725 E. Fireweed Lane, Suite 800, Anchorage, AK 99503, hereinafter called the "**Grantor**", and the COUNTY OF KAUA'I, a political subdivision of the State of Hawai'i, whose mailing address is 4444 Rice Street, Suite 220, Līhu'e, Kaua'i, 96766, hereinafter called the "**Grantee.**"

RECITALS

I. WHEREAS, Grantor is the owner of certain land located at Weliweli, Koloa, Island and County of Kaua'i, State of Hawai'i described as Kaua'i Tax Map Key Nos. (4) 2-8-021: 041, 044 - 068. The said property is hereinafter referred to as the "**Grantor's Property**" and;

II. WHEREAS, Grantor wishes to convey to the Grantee certain non-exclusive easements across portions of Grantor's Property identified as: (i) Easement AU-1, as more fully described on **Exhibit A** attached hereto and incorporated herein by reference, Easement AU-5 as more fully described on **Exhibit B** attached hereto and incorporated herein by reference, and Easement AU-6 as more fully described on **Exhibit C** attached hereto and incorporated herein by reference, and identified as being for short-term public parking, public pedestrian, and Light Station access purposes (collectively the "**Parking Easement**"); (ii) Easement AU-2, as more fully described on **Exhibit D** attached hereto and incorporated herein by reference, and identified as being for public pedestrian and Light Station access purposes ("**Shoreline Access Easement**"); and (iii) Easement A-1, as more fully described on **Exhibit E** attached hereto and incorporated herein by reference, and identified as being for public pedestrian access purposes ("**Lateral Access Easement**") (collectively the "**Access Easements**" and the portions of Grantor's Property that are subject to the Access Easements shall be hereinafter referred to as the "**Easement Areas**"), all as depicted on **Exhibit F** attached hereto and incorporated herein by reference (Map Dated October 3, 2016); and

III. WHEREAS, pursuant to the provisions of Hawai'i Revised Statutes ("**HRS**") Section 46-6.5 relating to Public Access, the County of Kaua'i has adopted Kauai County Code Section 9-2.9 relating to Public Accessways for Any Subdivision, which provides for implementation of public access over private property in appropriate locations to the coastal shorelines and mountain areas as applicable, by requiring dedication of land for such public access by right-of-way or easement for pedestrian travel as a condition precedent to final subdivision approval, in cases where public access is not already provided; and

IV. WHEREAS, in order to assure that public access is provided within Grantor's Property to and along designated public access areas, the Grantor agrees to grant and Grantee agrees to accept a perpetual, non-exclusive public pedestrian access easement and vehicular parking easement solely for recreational purposes, as that term is defined under HRS § 520-2.

C 2017-50

GRANT OF EASEMENT

In consideration of the foregoing Recitals and in further consideration of the sum of TEN AND NO/100 Dollars ($10.00) and other good and valuable consideration to it paid by the Grantee and subject to all of the terms, conditions and limitations contained herein, the Grantor does hereby declare, grant and convey unto Grantee the Access Easements.

TO HAVE AND TO HOLD the same unto the Grantee and the Grantee's permitted successors and assigns for the purposes stated herein, forever; subject, however, to all encumbrances of record and all of the terms, conditions and limitations stated herein.

EXCEPTING AND RESERVING HOWEVER, from this Grant the right of the Grantor to make use of the land within the Easement Areas in any manner which is not inconsistent with the rights of the Grantee hereunder, and the right to grant other easements within the Easement Areas for such purposes as are not inconsistent with and shall not unreasonable interfere with the rights of the Grantee hereunder.

In consideration of the rights hereby granted and the acceptance thereof and the obligations hereby assumed, the parties mutually covenant and agree as follows:

1. Intent. Grantor is providing the Access Easements to Grantee and the general public solely for recreational purposes, as that term is understood under Chapter 520, HRS. Grantor's intention is to create theParking Easement to be used for short-term vehicular parking purposes by Grantee and the public solely to facilitate recreational access for Grantee and the general public to the open space area at the shoreline of Grantor's Property, and not parking for any other purposes. Grantor's intention is to create the Shoreline Access Easement to be used by Grantee and the public for pedestrian access purposes to the open space area at the shoreline of Grantor's Property. It is Grantor's intention to create the Lateral Access Easement to be used by Grantee and the public for pedestrian access lateral to the shoreline. Motorized vehicles, bicycles, horses, and other means of transportation shall not be permitted within the Shoreline Access Easement or the Lateral Access Easement.

2. Condition of Easement Area. Grantor has not made and does not make any representation or warranty with respect to the condition of the Easement Areas and the Access Easements, and Grantee hereby accepts the Easement Areas and the Access Easements in their "as is" condition. Grantee acknowledges that portions of the Easement Areas are located in rough, rocky and uneven terrain that may not be safe or practical for use by every member of the general public and Grantee has agreed to enter into this Grant of Easement with full knowledge of the physical and inherent conditions of the Easement Area, after having had full opportunity to inspect the Easement Areas.

3. Grantor's Improvements Within Easement Areas. Grantor reserves the right, but shall have no duty, to construct, install, maintain, reconstruct, replace and repair any and all improvements, including but not limited to, parking facilities, pathways, pedestrian walkways, emergency vehicle access, utilities, drainage facilities, walls, fences, trees, plants and other vegetation, within the Easement Areas ("**Grantor's Improvements**"), provided such improvements do not unreasonably interfere with Grantee's rights hereunder. Unless otherwise

C 2017-50

conveyed or dedicated, any such Grantor Improvements shall be and remain the property of the Grantor.

4. Use. Grantee's rights, and the rights of the general public, under this Grant of Easement shall be strictly limited to those necessary to allow Grantee to utilize the Easement Areas for the purposes intended and described herein, and in a manner consistent with the ten (10) lot single-family residential development at Grantor's Property, and subject to further agreement between Grantor and the County. Grantee shall have no right to utilize the Easement Areas for purposes unrelated to the exercise of Grantee's rights hereunder. The Easement Areas as described hereinabove may be used by any members of the general public having the right to use such Easement Areas for "recreational purposes" within the meaning of the Hawai'i Recreational Use Statute, HRS Chapter 520. The purpose of Chapter 520, HRS, is to encourage owners of land to make land and water areas available to the public for recreational purposes by limiting their liability toward persons entering thereon for such purposes. Grantor is providing the Access Easements granted herein consistent with the purposes under Chapter 520, HRS, of making land and water areas available to the public for recreational purposes, and Grantor and Grantee understand and agree that Grantor shall have no duty of care to keep the Access Easements safe for entry or use by others for recreational purposes, or to give any warning of a dangerous condition, use, structure, or activity on such premises to persons entering for such purposes, or to persons entering for a purpose in response to a recreational user who requires assistance, either direct or indirect, including but not limited to rescue, medical care, or other form of assistance.

a. Prohibited Activities Within Easement Area. Grantee and the members of the general public shall not use the Easement Areas for any purpose not expressly permitted herein. Without limiting the foregoing, the following activities are expressly prohibited within the Easement Areas:

(a) removing, injuring, or killing any form of plant or animal life, except for the taking of aquatic life or wildlife, in accordance with the State of Hawaii fishing and hunting laws or as authorized maintenance activities;

(b) releasing any animals or plants except for re-vegetation efforts approved by the Planning Director;

(c) the possession of alcohol, narcotics or non-prescribed drugs, firearms, explosives or other weapons, including fireworks and firecrackers;

(d) dogs, cats or other animals, unless on a leash at all times;

(e) the operation of motorcycles, motorized vehicles, including motorized bicycles and scooters, except wheelchairs and other devises for persons with disability, or as otherwise necessary for construction of improvements expressly permitted by this Grant of Easement, approved in writing by the Grantor, or for maintenance or improvement purposes,

(f) leaving vehicles unattended; motorized vehicles may access only the Parking Easement for short-term parking in connection with the recreational uses permitted herein, any vehicle left unattended for longer than twenty-four hours shall be considered abandoned, and any

abandoned vehicle may be impounded or towed away by the Grantor or the County, at the expense of the vehicle owner;

(g) vehicle maintenance or washing;

(h) camping, sleeping, residing, or overnight parking;

(i) disorderly conduct, including but not limited to, fighting, violent or tumultuous behavior, gambling, making unreasonable noise (taking into account the residential setting), or offensive, abusive or threatening behavior;

(j) setting fires, including fires for cooking;

(k) draining, dumping, or leaving any litter, waste, debris, trash, animal waste, or human waste;

(l) commercial activities, including soliciting, canvassing, begging or peddling of any kind, including, but not limited to, displaying merchandise, demanding or requesting gifts, money or services, or dispensing information;

(m) leaving or abandoning equipment, or any other items, including but not limited to refrigerators, stoves, household garbage, trash, or other forms of waste or debris;

(n) removing, damaging, or disturbing any notice, signage, markers or structures;

(o) destroying, disturbing, or mutilating any geological or natural feature, or digging or removing sand, earth, gravel, mineral, rock fossil, coral or any other substance, or intentionally or wantonly destroying, injuring, defacing, removing, disturbing or possessing any historic or prehistoric sites, objects, ruins, or remains, geologic or built feature, including buildings, walls, signs, equipment, monuments, markers or other structures;

(p) trespassing upon adjacent private properties;

(q) using the Access Easements for other than parking (as to the Parking Easement), or activities other than transit to or from a permitted recreational activity;

(r) using devices that amplify sounds, such as radios, portable stereos, megaphones, etc., unless the sound is audible only in the immediate vicinity of the user; and

(s) disorderly conduct, as defined in HRS Section 711-1101.

5. Exercise of Rights. Each party shall exercise its rights hereunder in such manner as to occasion as little interference as reasonably necessary with the authorized use of the Easement Areas by the other party.

6. Maintenance. Grantee shall have no responsibility or duty to maintain or repair any of the Grantor Improvements.

7. Condemnation. If at any time the Easement Areas, or any part thereof, shall be condemned or taken for any public project by any governmental authority, Grantee shall have the right to claim or recover from the condemning authority, but not from Grantor, such compensation as is payable for the Access Easement, the Easement Areas and the rights granted herein, and Grantor shall have no obligation to provide Grantee any alternative easements to replace those so condemned.

8. Grantee's Indemnification. Grantee and Grantee's agents, servants, employees, invitees and guests, including all members of the general public, shall use the Access Easements and the Easement Areas at their sole risk. Grantee shall indemnify, defend and hold harmless Grantor and Grantor's successors and assigns, against any and all claims and demands for any liability, costs, expenses, attorneys' fees, loss, damage or injury to persons or property, including the claims of its agents, servants, employees, invitees and guests (including but not limited to the general public) that shall or may arise by reason of the use of the Access Easements or the Easement Areas by Grantee and Grantee's agents, servants, employees, invitees and guests (including but not limited to the general public), except to the extent such claims or demands arise solely by reason of Grantor's willful or malicious failure to guard or warn against a dangerous condition, use, or structure which Grantor knowingly creates or perpetuates or by reason of Grantor's willful or malicious failure to guard or warn against a dangerous activity which Grantor knowingly pursues or perpetuates.

9. Hawai'i Revised Statutes Chapters 520; Kauai County Code Section 9-2.9. The parties intend for this Grant of Easement to promote the purposes of HRS Chapter 520 by making land and water areas available to the public for recreational purposes, and as a result that Grantor shall enjoy the limitations in liability and all other benefits and rights set forth in Chapter 520, HRS, including without limitation the protections afforded in Section 520-4(a) and (b), relating to the limited liability of landowners who directly or indirectly invite or permit without charge any person to access their property for recreational purposes. Similarly, the parties intend for this Grant of Easement to promote the purposes of public access, and therefore acknowledge the Grantee's obligation to indemnify Grantor from injury to members of the public who are injured within the Easement Areas.

10. Covenants To Run With The Land. The rights and obligations set forth herein shall be covenants running with Grantor's Property in favor of Grantee, and shall be binding upon, and inure to the benefit of, Grantor and Grantee and their respective permitted successors and assigns.

11. No Liens. Grantee shall take no action nor refrain from taking any action, nor shall Grantee allow or authorize its agents, employees or contractors to take any action or refrain from taking any action, by or as a result of which the Easement Areas, Grantor's Property or any portion thereof shall be made subject to any mechanics' or materialmen's lien or any other attachment, execution or judgment lien, or any other charge or encumbrance whatsoever. Should any such lien, charge or encumbrance or notice thereof be recorded, filed or attached to Grantor's Property (including but not limited to the Easement Areas), Grantee shall immediately pay off the same and cause the same to be satisfied and discharged of record, all at the sole

expense of Grantee. The recordation, filing or attachment of any such lien shall constitute a default by Grantee under this Grant of Easement.

12. Relocation of Easement Area. Grantor reserves the right to relocate, at its sole cost and expense, the Easement Areas or any portion thereof, provided that any relocated Easement Areas shall fulfill the intent of the parties set forth herein; and the County of Kauai Planning Department shall expeditiously approve the relocation and the subsequent redesignation of the Easement Areas.

13. Assignment. This Grant of Easement may be assigned by Grantee to any duly constituted legal successor of Grantee without first obtaining the consent of Grantor. Any other proposed assignment of this Grant of Easement or the rights and obligations contained herein and on the part of Grantee to be observed or performed may not be made without Grantor's prior written consent, which consent may be granted or withheld in Grantor's sole discretion. Grantor may assign its rights and responsibilities under this Grant to a homeowners or similar association in which all owners of lots, units or other interests in the Grantor's Property shall be members.

14. Default. In the event there is a default by Grantee with respect to any of the provisions of this Grant of Easement or Grantee's obligations under it, Grantor shall give Grantee written notice of such default. After receipt of such written notice, Grantee shall have thirty (30) days in which to cure any default, failing which, without prejudice to any other right or remedy hereunder or at law or in equity, Grantor shall have the right to immediately terminate this Grant of Easement and Grantee's rights hereunder, and to record in the Bureau of Conveyances of the State of Hawai'i a "Notice of Cancellation of Easement" which shall be effective to terminate this Grant of Easement and cancel the Access Easements granted hereby. In lieu of or in addition to the "Notice of Cancellation of Easement" referred to above, the parties agree to cooperate in the drafting, execution and recording of a written cancellation of this Grant of Easement. In no event shall Grantor's termination of this Grant of Easement due to Grantee's default be deemed a violation of Grantor's obligations under HRS § 46-6.5, HRS Chapter 205A, Kauai County Code Chapter 9 (Subdivision - Public Accessways), or any other law, rule, or land use permit applicable to the Grantor's Property.

15. Recordation. This Grant of Easement shall be recorded against the land of the Easement Areas at the State of Hawaii Bureau of Conveyances. The Grantor and Grantee agree the recordation of this Grant of Easement at the Bureau of Conveyances shall constitute full and final compliance with all public access requirements for the development of Grantor's Property pursuant to Hawai'i Revised Statutes Section 46-6.5, Hawai'i Revised Statutes Chapter 205A, and Kauai County Code Chapter 9 (Subdivision - Public Accessways).

16. Service of Notice. Any written notice or request required or authorized to be served hereunder shall be deemed delivered and received either upon the actual personal receipt thereof by the receiving party or within three (3) business days after the notice has been posted with the U.S. Mail, return receipt requested, addressed to the receiving party at its address as stated herein, or at such other address as the receiving party may have previously designated to the sending party in writing.

C 2017-50

17. Severability. If any term or provision of this Grant of Easement is determined by a court or competent jurisdiction to be illegal, invalid or unenforceable for any reason whatsoever, such illegality, invalidity or unenforceability shall not affect the legality, validity or enforceability of the remainder of this Grant of Easement.

18. Headings For Reference Only. The headings of the sections and subsections herein are inserted only for convenience and reference and shall in no way define, limit or describe the scope or intent of any provision of this Grant of Easement.

19. Counterparts. This Grant of Easement may be executed simultaneously in two or more counterparts, each of which shall be deemed on original, but all of which together shall constitute one and the same instrument. Signature pages from separate signed copies may be attached to a single copy for purposes of recording.

20. Interpretation. The Grant of Easement shall be interpreted in accordance with the laws of the State of Hawai'i and no preference in interpretation shall be given to either party, each party hereby acknowledging that it has been represented by legal counsel in the negotiation, drafting and execution of this Grant of Easement.

21. Dedication. In the event the Easement Areas, or any portion thereof, are dedicated to and accepted by any governmental authority in fee simple, this Grant shall automatically terminate as to the area so dedicated, and Grantee shall, at Grantor's request, at any time after said dedication, execute such documents as Grantor reasonably requests for the purpose of terminating this Grant.

[Signatures appear on next page]

C 2017-50

IN WITNESS WHEREOF, the parties have executed this Grant Of Pedestrian Access and Parking Easements this 24th day of March, 2017.

GRANTOR:

CIRI LAND DEVELOPMENT COMPANY, a Alaska corporation

By _____
Name: CHAD NUGENT
Its: VICE PRESIDENT

GRANTEE:

COUNTY OF KAUA'I

By _____
Name:
Its:

By _____
Name: Ken M. Shimonishi
Its: Director of Finance

By _____
Name: JADE K. FOUNTAIN-TANIGAWA
Its: County Clerk

C 2017-50

APPROVED:

Director, Department of Planning
County of Kaua'i

County Chief Engineer, Department of Public Works
County of Kaua'i

APPROVED AS TO FORM AND LEGALITY:

County Attorney
County of Kaua'i

C 2017-90

STATE OF ALASKA)
) SS:
THIRD JUDICIAL DISTRICT)

On this Nov. 21, 2016, before me personally appeared Chad Nugent, to me personally known/proved to me on the basis of satisfactory evidence, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

AMANDA MATSON
NOTARY PUBLIC
STATE OF ALASKA

Name: Amanda Matson

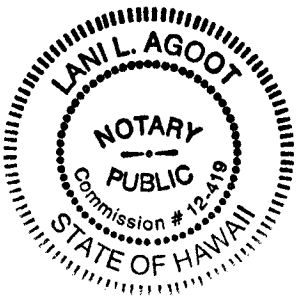
Notary Public, State of Alaska

My commission expires: July 6, 2019

C 2017-50

STATE OF HAWAII)
) SS.
COUNTY OF KAUAI)

On this 11th day of January, 2017, before me appeared Bernard P. Carvalho, Jr., to me personally known, who, being by me duly sworn or affirmed, did say that he is the Mayor of the COUNTY OF KAUAI, a political subdivision of the State of Hawaii, that the seal affixed to the foregoing instrument is the seal of said COUNTY OF KAUAI, that such person executed the foregoing GRANT OF PEDESTRIAN ACCESS ANDPARKING EASEMENTS dated undated at time of notary, which document consists of 23 pages, as the free act and deed of such person and, if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



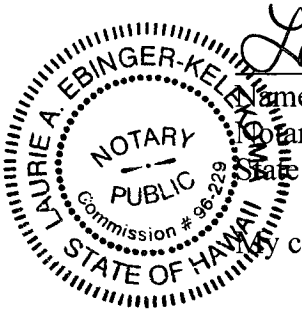
Lani L Agoot
Name of Notary: Lani L Agoot
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: 12.23.20

C 2017-50

STATE OF HAWAII)
) SS.
COUNTY OF KAUAI)

On this 13th day of January, 2017, before me appeared Ken M. Shimonishi, to me personally known, who, being by me duly sworn or affirmed, did say that he is the Director of Finance of the COUNTY OF KAUAI, a political subdivision of the State of Hawaii, that the seal affixed to the foregoing instrument is the seal of said COUNTY OF KAUAI, that such person executed the foregoing GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS dated undated at time of notarization, which document consists of 23 pages, as the free act and deed of such person and, if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Name of Notary: Laurie A. Ebinger-Kelekoma
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: April 10, 2019

C 2017-50

STATE OF HAWAII)
) SS.
COUNTY OF KAUAI)

On this 24th day of March, 2017, before me appeared Jade K. Fountain-Tanigawa, to me personally known, who, being by me duly sworn, did say that she is the County Clerk of the COUNTY OF KAUAI, a political subdivision of the State of Hawaii, that the seal affixed to the foregoing instrument is the seal of said COUNTY OF KAUAI, that such person executed the foregoing GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS dated March 24, 2017, which document consists of 24 pages, as the free act and deed of such person and, if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.

SCOTT K. SATO NOTARY PUBLIC Comm. No. 06-737 STATE OF HAWAII

Name of Notary: SCOTT K. SATO
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: NOVEMBER 19, 2018

SCOTT K. SATO NOTARY PUBLIC Comm. No. 06-737 STATE OF HAWAII

NOTARY PUBLIC CERTIFICATION
Scott K. Sato State of Hawai'i Fifth Judicial Circuit
Commission No. 06-737 Exp: November 19, 2018
No. of Pages: 24 Date of Doc.: mar 24, 2017
Doc. Description: Grant of Pedestrian Access and Parking Easement
Notary Signature: [signature] Date: 05/24/17

c 2017-50

EASEMENT AU-1

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1
Being also Portion of Lot 1 (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the southwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,081.24 feet South and 1,107.69 feet West, thence running by azimuths measured clockwise from true South:

1.	165° 00'	46.86	feet along Parcel 3;
2.	243° 59'	122.30	feet along the remainder of Parcel L-1;
			thence along the remainder of Parcel L-1 and Lot 1, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
3.	287° 29' 30"	27.54	feet;
4.	331° 00'	27.07	feet along the remainder of Lot 1;
5.	63° 59'	152.64	feet along the remainder of Lot 1 and Parcel L-1 to the point of beginning and containing an area of 0.153 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
November 2015

EXHIBIT "A"

C 2017-50

EASEMENT AU-5

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1
Being also Portion of Lot 1 and Lot 2 (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the southwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,026.14 feet South and 1,122.46 feet West, thence running by azimuths measured clockwise from true South:

1.	243° 59'	214.35	feet along the south side of Pee Road;
			thence along the remainder of Lot 2, on a curve to the right with a radius of 282.00 feet, the chord azimuth and distance being:
2.	55° 04' 31"	7.28	feet;
			thence along the remainder of Lot 1 and Lot 2, on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:
3.	31° 27' 07"	16.50	feet;
4.	63° 59'	195.20	feet along the remainder of Lot 1 and Parcel L-1;
5.	165° 00'	10.19	feet along the remainder of Grant 1416 to Eke Oponui to the point of beginning and containing an area of 0.046 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
November 2015

EXHIBIT "B"

L 2017-50

EASEMENT AU-6

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1
Being also Portion of Lot 1 (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the northwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,982.34 feet South and 1,009.92 feet West, thence running by azimuths measured clockwise from true South:

1.	243° 59'	72.90	feet along the remainder of Parcel L-1 and Lot 1;
			thence along the remainder of Lot 1, on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:
2.	349° 02' 41"	12.39	feet;
3.	331° 00'	34.08	feet along the remainder of Lot 1;
4.	63° 59'	50.07	feet along the remainder of Lot 1;
5.	151° 00'	27.07	feet along the remainder of Lot 1;
			thence along the remainder of Lot 1 and Parcel L-1, on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:
13.	107° 29' 30"	27.54	feet to the point of beginning and containing an area of 0.055 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2015

EXHIBIT "C"

C 2017-50

EASEMENT AU-2

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1 and Parcel L-2
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the northwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,081.24 feet South and 1,107.69 feet West, thence running by azimuths measured clockwise from true South:

1.	243° 59'	30.56	feet along the remainder of Parcel L-1;
2.	345° 00'	64.88	feet along the remainder of Parcel L-1 and Parcel L-2;
3.	344° 57' 30"	270.03	feet along the remainder of Parcel L-2;
			thence along the remainder of Parcel L-2, on a curve to the left with a radius of 185.00 feet, the chord azimuth and distance being:
4.	307° 28' 45"	225.13	feet;
5.	270° 00'	60.73	feet along the remainder of Parcel L-2;
6.	1° 00'	30.00	feet along the remainder of Parcel L-2;
7.	90° 00'	60.21	feet along Parcel 43 and the remainder of Parcel L-2;
			thence along the remainder of Parcel L-2, on a curve to the right with a radius of 215.00 feet, the chord azimuth and distance being:
8.	127° 28' 45"	261.64	feet;
9.	164° 57' 30"	270.04	feet along Parcel 3;

EXHIBIT "D"

C 2017-50

10. 165° 00' 59.05 feet along Parcel 3 to the point of beginning and containing an area of 0.450 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
November 2015

C 2017-50

EASEMENT A-1

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcels L-2 and L-3
Being also Portion of Lots 46, 47, 59, (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the northeast corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,817.12 feet South and 103.71 feet East, thence running by azimuths measured clockwise from true South:

1.	333° 59'	25.89	feet along Lot 2;
2.	37° 39' 37"	317.99	feet along the remainder of Parcel L-3;
			thence along the remainder of Parcel L-3, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
3.	73° 53'35.5"	23.64	feet;
4.	110° 07' 34"	50.64	feet along the remainder of Parcel L-3;
			thence along the remainder of Parcel L-3, on a curve to the left with a radius of 60.00 feet, the chord azimuth and distance being:
5.	71° 21' 52"	75.13	feet;
6.	32° 36' 10"	131.04	feet along the remainder of Parcel L-3 and Lot 59 (File Plan 354);
			thence along the remainder of Lots 59 and 60 (File Plan 354) and the remainder of Ehukai Road, on a curve to the left with a radius of 60.00 feet, the chord azimuth and distance being:
7.	357° 49' 58"	68.43	feet;
8.	323° 03' 46"	16.25	feet along the remainder of Lot 60 (File Plan 354);

EXHIBIT "E"

c 2017-50

		thence along the remainder of Lot 60 (File Plan 354), on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
9. 355° 40'33.5"	21.56	feet;
10. 28° 17' 21"	41.64	feet along the remainder of Lot 60 (File Plan 354) and the remainder of Parcel L-3;
		thence along the remainder of Parcel L-3, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
11. 44° 56'56.5"	11.47	feet;
12. 61° 36' 32"	387.22	feet along the remainder of Parcels L-2 and L-3;
13. 71° 09' 20"	33.58	feet along the remainder of Parcel L-2;
14. 90° 00'	76.94	feet along the remainder of Parcel L-2 and Makahuena Point Lighthouse Station;
15. 181° 00'	30.00	feet along the remainder of Parcel L-2;
16. 270° 00'	101.57	feet along the remainder of Parcel L-2;
17. 241° 36' 32"	383.94	feet along the remainder of Parcels L-2 and L-3, and Lots 60 through 62, inclusive (File Plan 354);
18. 208° 17' 21"	41.64	feet along the remainder of Lot 60 (File Plan 354);
19. 143° 03' 46"	16.25	feet along the remainder of Lot 60 (File Plan 354);

		thence along the remainder of Lots 59 and 60 (File Plan 354) and the remainder of Ehukai Road, on a curve to the right with a radius of 80.00 feet, the chord azimuth and distance being:
20. 177° 49' 58"	91.25	feet;
21. 212° 36' 10"	131.04	feet along the remainder of Lots 47 and 59 (File Plan 354) and the remainder of Parcel L-3;
		thence along the remainder of Lots 46 and 47 (File Plan 354) and the remainder of Parcel L-3, on a curve to the right with a radius of 80.00 feet, the chord azimuth and distance being:
20. 251° 21' 52"	100.17	feet;
21. 290° 07' 34"	50.64	feet along the remainder of Parcel L-3;
22. 217° 39' 37"	294.41	feet along the remainder of Parcel L-3;
23. 153° 59'	18.42	feet along the remainder of Parcel L-3;
24. 243° 59'	30.00	feet along Lot 2 to the point of beginning and containing an area of 0.608 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2015

C 2017-50

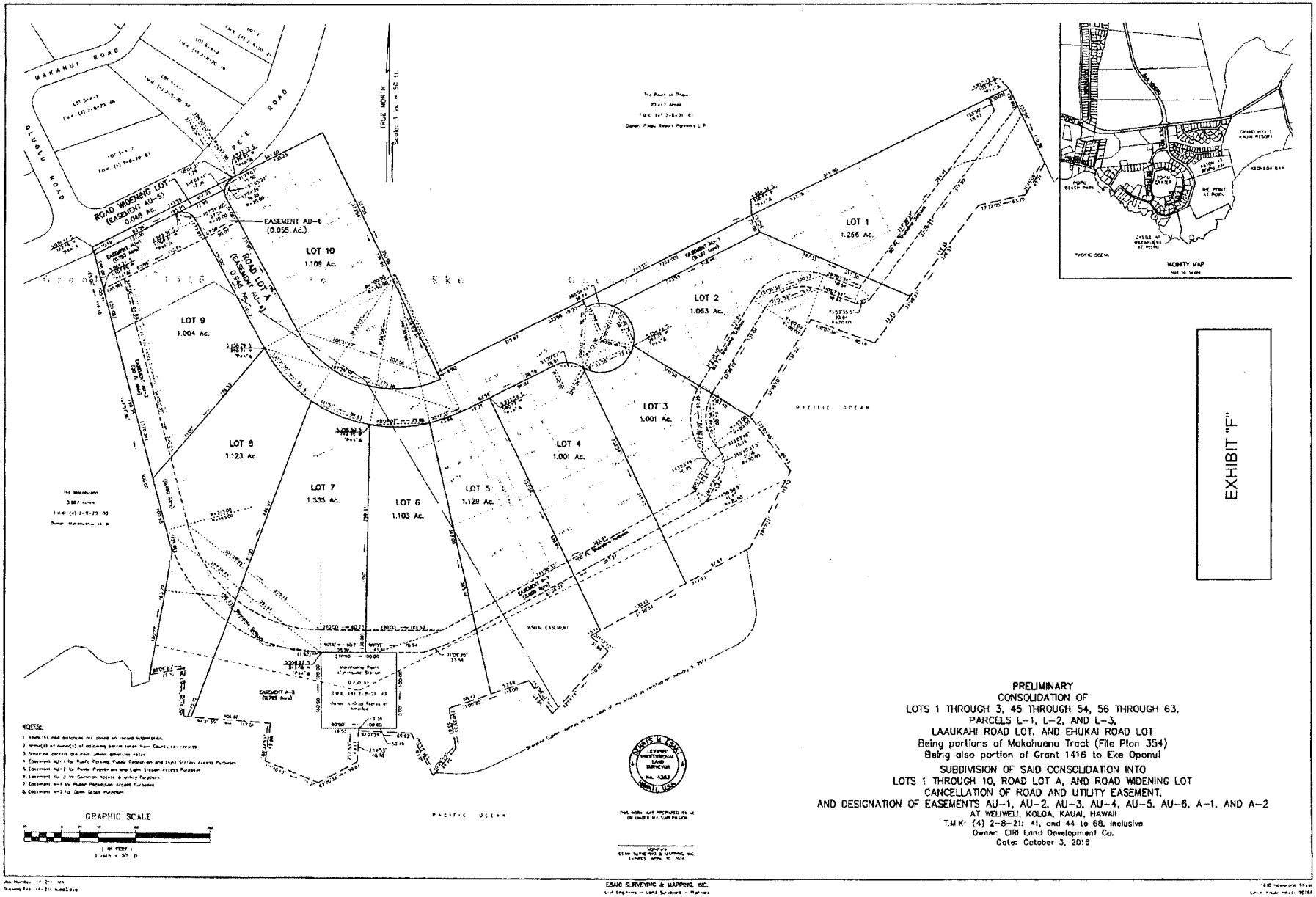


EXHIBIT "F"

PRELIMINARY
CONSOLIDATION OF
LOTS 1 THROUGH 3, 45 THROUGH 54, 56 THROUGH 63,
PARCELS L-1, L-2, AND L-3,
LAAUKAHI ROAD LOT, AND EHUKAI ROAD LOT
Being portions of Makahuena Tract (File Plan 354)
Being also portion of Grant 1416 to Eke Oponui
SUBDIVISION OF SAID CONSOLIDATION INTO
LOTS 1 THROUGH 10, ROAD LOT A, AND ROAD WIDENING LOT
CANCELLATION OF ROAD AND UTILITY EASEMENT,
AND DESIGNATION OF EASEMENTS AU-1, AU-2, AU-3, AU-4, AU-5, AU-6, A-1, AND A-2
AT WELIWELI, KOLOA, KAUAI, HAWAII
T.M.K: (4) 2-8-21: 41, and 44 to 68, Inclusive
Owner: CIRI Land Development Co.
Date: October 3, 2016

ESAKI SURVEYING & MAPPING, INC.

(2017-60)

EXHIBIT C-12

ORDINANCE NO. PM-2017-410 BILL NO. 2647, Draft 1

A BILL FOR AN ORDINANCE AMENDING CHAPTER 8, KAUA'I COUNTY CODE 1987, AS AMENDED, RELATING TO ZONING MAP ZM-PO 300

(CIRI Land Development Company, Applicant) (ZA-2017-2)

BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KAUA'I, STATE OF HAWAI'I:

SECTION 1. The Visitor Destination Area map established in Chapter 8, Article 17, Kaua'i County 1987, as amended, is hereby amended to include the properties shown on Zoning Map ZM-PO 300 (Po'ipū), which is attached hereto and incorporated herein, and identified by Tax Map Key Nos. (4) 2-8-21:041 and 2-8-21:044-068, subject to the following conditions:

a. The issuance of final approval of Subdivision S-2015-14 for a ten-lot subdivision;

b. The exclusion of one (1) lot from the Visitor Destination Area designation as shown on the zoning map attached to the ordinance that amends the zoning district boundary of the subject property;

c. The restriction on each of the ten (10) lots included in Subdivision S-2015-14 to one dwelling per lot. The Applicant shall be required to enter into a Workforce Housing Agreement with the Kaua'i County Housing Agency agreeing to execute a Deed Restriction that will create a restrictive covenant which will run with the land in perpetuity, unless modified per the terms found in the Deed Restriction;

d. Within sixty (60) days of the adoption of this ordinance, a deed restriction that prohibits owners, their heirs, successors, and assigns from causing the development of more than ten (10) dwelling units on the entirety of the subject property must be recorded with the Bureau of Conveyances of the State of Hawai'i.

e. Within sixty (60) days of the adoption of the subject ordinance, this ordinance authorizing the zoning amendment to designate nine (9) of the lots in Subdivision S-2015-14 to the Visitor Destination Area must be recorded with the Bureau of Conveyances of the State of Hawai'i.

SECTION 2. The Director of Planning is directed to note the boundary change on official Zoning Map ZM-PO 300 on file with the Department of Planning. All applicable provisions of the Comprehensive Zoning Ordinance shall apply to the area demarcated by the new boundary.

EXHIBIT C-12

SECTION 3. Severability. The invalidity of any word, section, clause, paragraph, sentence, part or portion of this ordinance shall not affect the validity of any other part of this ordinance that can be given effect without such invalid part or parts.

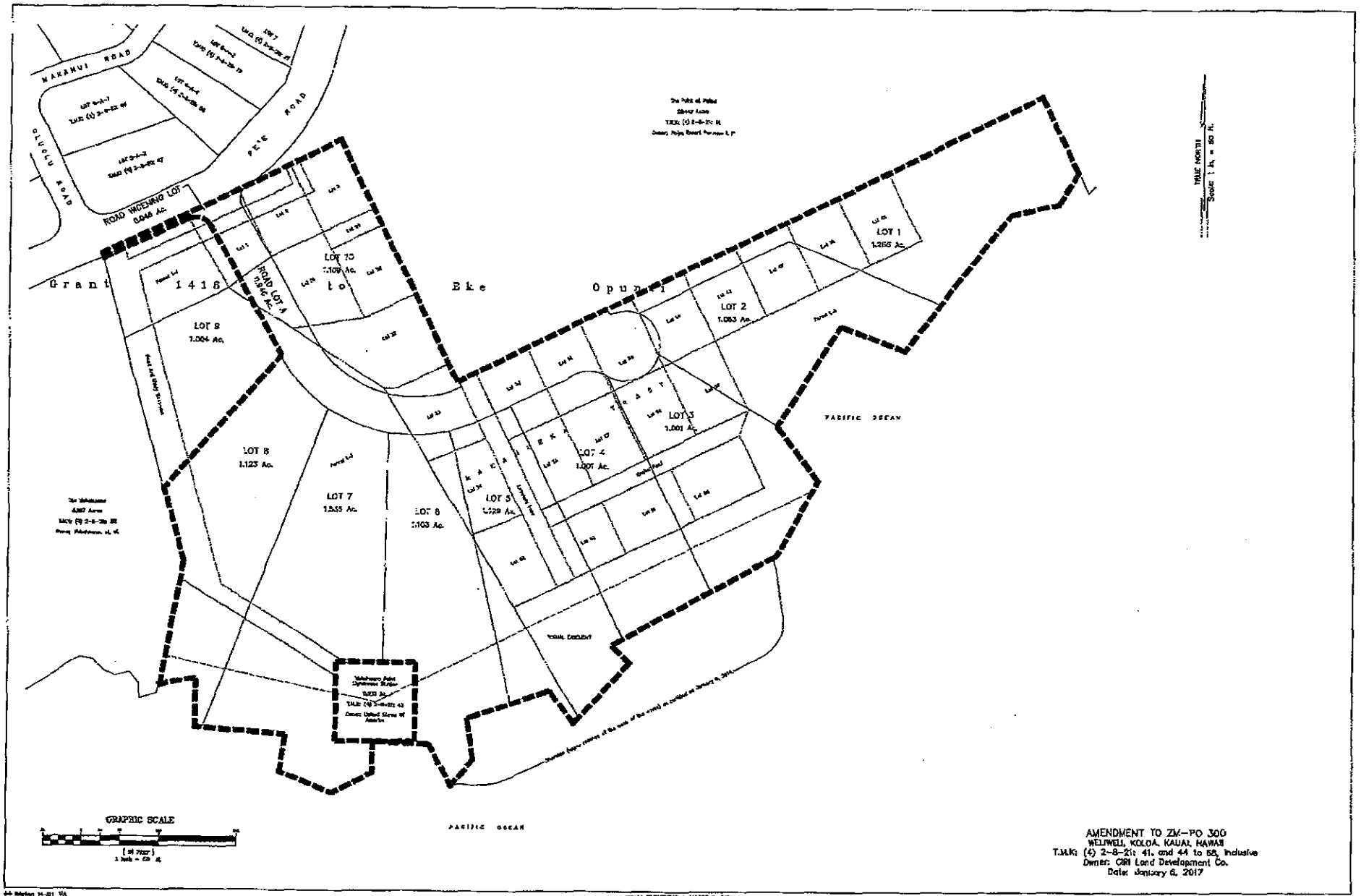
SECTION 4. This ordinance shall take effect upon its approval.

Introduced by: /s/ MASON K. CHOCK
(By Request)

DATE OF INTRODUCTION:

April 12, 2017

Līhu'e, Kaua'i, Hawai'i
V:\BILLS\2016-2018 TERM\Bill No. 2647 D1 AMK_dmc.doc



AMENDMENT TO ZM-PD 300
WELIWELI, KOLOA, KAUAI, HAWAII
T.M.K: (4) 2-8-21: 41, and 44 to 58, inclusive
Owner: CRI Land Development Co.
Date: January 6, 2017

CERTIFICATE OF THE COUNTY CLERK

I hereby certify that heretofore attached is a true and correct copy of Bill No. 2647, Draft 1, which was adopted on second and final reading by the Council of the County of Kaua'i at its meeting held on May 31, 2017 by the following vote:

FOR ADOPTION:	Brun, Chock, Kaneshiro, Kawakami, Rapozo	TOTAL – 5*,
AGAINST ADOPTION:	Yukimura	TOTAL – 1,
EXCUSED & NOT VOTING:	Kagawa	TOTAL – 1,
RECUSED & NOT VOTING:	None	TOTAL – 0.

*Pursuant to Rule No. 5(b) of the Rules of the Council of the County of Kaua'i, Councilmember Chock was noted as silent, but shall be recorded as an affirmative vote for the motion.

Līhu'e, Hawai'i
May 31, 2017

Jade K. Fountain-Tanigawa
County Clerk, County of Kaua'i

ATTEST:

Mel Rapozo
Chairman & Presiding Officer

DATE OF TRANSMITTAL TO MAYOR:

June 1, 2017

Approved this 7th day of

June, 2017.

Bernard P. Carvalho, Jr.,
Mayor
County of Kaua'i

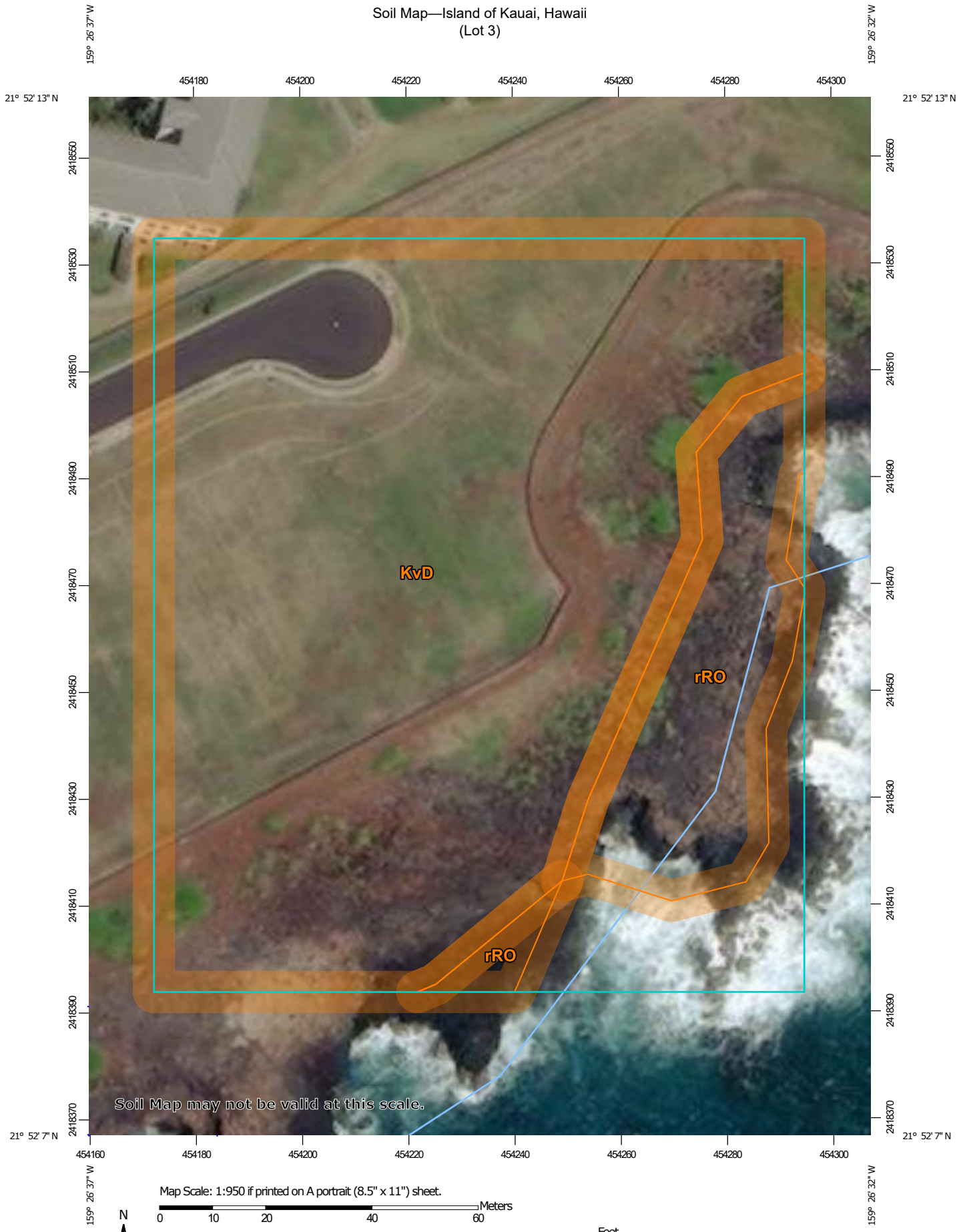
RECEIVED

'17 JUN -8 A9:22

OFFICE OF
THE COUNTY CLERK
COUNTY OF KAUA'I

EXHIBIT C-13

Soil Map—Island of Kauai, Hawaii
(Lot 3)



Map Scale: 1:950 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 4N WGS84

EXHIBIT C-13

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Kauai, Hawaii
Survey Area Data: Version 15, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 29, 2017—Oct 11, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KvD	Koloa stony silty clay, 15 to 25 percent slopes	3.3	77.7%
rRO	Rock outcrop	0.6	14.6%
Totals for Area of Interest		**4.3**	**100.0%**

EXHIBIT D

Jan Kimura
Chair

Angela Anderson
Vice-Chair

Hartwell Blake
Wayne Katayama
John Isobe
Sean Mahoney
Amy Mendonca
Members

PLANNING COMMISSION
County of Kaua'i, State of Hawai'i
4444 Rice Street
Kapule Building, Suite A-473
Līhu'e, Hawai'i 96766-1326
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig
Clerk of the Commission

AUG 29 2014

Jennifer A. Benck, Esq.
CARLSMITH BALL LLP.
ASB Tower, Suite 2200
1001 Bishop Street
Honolulu, Hawai'i 96813

Subject: Special Management Area Use Permit SMA(U)-2015-1
Tax Map Key: (4) 2-8-021:041, 044-068
Po'ipū, Kaua'i
CIRI LAND DEVELOPMENT COMPANY (CLDC), Applicant

Dear Ms. Benck,

This letter memorializes the action taken by the Kaua'i Planning Commission effective **AUGUST 26, 2014** concerning approval of the above subject permit, as amended. The approval by the Planning Commission, per your consent, is subject to the following conditions:

1. The proposed subdivision shall be constructed as represented. Any changes to said structures and/or facilities shall be reviewed by the Planning Department to determine whether Planning Commission review and approval is warranted.

2. Subdivision of the subject property shall conform to the procedural requirements of Chapter 9 of the Kaua'i County Code Subdivision Ordinance.

3. The Applicant is advised that the approval of this SMA permit does not constitute approval of the proposed lot configurations and sizes as they appear on the subdivision layout submitted with the application. Technical requirements will be further reviewed through the subdivision application process.

EXHIBIT D

4. The establishment of a public footpath or constructed path to allow pedestrian access along the makai side of the wall shall be explored at subdivision. As represented on the preliminary subdivision map, the public access, parking, and open space easements shall be identified on the final subdivision map and incorporated into the deed descriptions of the affected lots. Additionally, the Applicant will be responsible for the preparation of the necessary documents and it shall be ready for execution upon final subdivision approval and recordation of the final subdivision map.

5. To protect faunal species, the following shall be required:

    a. Lot 1 shall be developed to avoid disturbing existing Wedge-Tailed Shearwater nesting sites.

    b. The rock wall along Lots 1-7 on the mauka side shall be adjusted so that the seabirds can walk up the slope on the top of the wall. Coastal vegetation such as naupaka shall be encouraged along the makai side of the rock wall.

    c. The Applicant shall allow DLNR access to the property to conduct predator management pursuant to a revocable right of entry.

    d. No night time construction using bright artificial lights shall be permitted in the area. Although shearwaters are not present from January to March, bright lights along coastal areas are known to have a negative impact on the Green Sea Turtle (*Chelonia mydas*) through disorientation

    e. The construction of the subdivision infrastructure shall be accomplished during the non-nesting season from January to March. The placement of all construction material, equipment and machinery is restricted to the residential side of the wall.

    f. The Applicant shall work with DLNR-DOFAW toward restoration of coastal habitat in the Open Space Easement area in the makai western portion of the property. This includes the cost of removal of invasive non-native vegetation and the planting of appropriate seabird-friendly vegetation within the Open Space Easement in the makai western corner of the property.

    g. Furthermore, in order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, if external lighting is to be used in connection with the proposed development, all external lighting shall be only of the following type: *downward facing*

shielded lights. Spotlights aimed upward or spotlighting of structures shall be prohibited.

6. In order to further ensure that the project is compatible with its surroundings and to minimize the visual impact of future residential development, the external color shall be of a moderate to dark earth-tone colors, the structures shall be "low-massing", and the Applicant should provide substantial landscaping. The proposed color scheme, design guidelines and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application or during the subdivision process. Additionally, this provision shall be incorporated into the design covenants of the proposed development.

7. The subject property is located within the Special Management Area (SMA) and any new "Development," as defined in Section 1.4 of the SMA Rules and Regulations of the County of Kaua'i, may require an SMA Permit. If so, the Applicant will be subject to all applicable requirements/conditions of the SMA Permit.

8. The Applicant shall substantially commence construction of the project development within one (1) year from the date of final subdivision approval of the subject permits and shall complete construction of the development within two (2) years from the commencement of construction activities. The Planning Department shall be notified in writing the official date of construction.

9. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, and the County Departments of Public Works & Water.

10. The Applicant shall develop and utilize Best Management Practices (BMP's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

11. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources – Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050.

12. The Applicant is advised that additional government agency conditions may be imposed. It shall be the applicant's responsibility to resolve those conditions with

the respective agency(ies).

13. The Planning Commission reserves the authority to impose additional conditions, modify or delete conditions stated herein, or resolve the permits through proper procedures should the applicant fail to comply with the conditions of approval.

14. Pursuant to Section 8-9.2(a) of the Kaua'i County Code (1987) as amended, the amount of land coverage created on Lots 1 through 10, including buildings and pavement, shall not exceed ten per cent (10%) of the lot area. It is noted that the land coverage on these lots shall exclude areas that are designated for any public improvements (i.e. public access, public parking, open space). As represented on the preliminary subdivision map, the following represents the lot coverage calculations:

Subdivision Lot No.	Proposed Area (acres)	Permissible Lot Coverage (Square Feet)
1	1.265	5,510 SF
2	1.061	4,622 SF
3	1.002	4,365 SF
4	1.002	4,365 SF
5	1.129	4,918 SF
6	1.103	4,805 SF
7	1.535	6,686 SF
8	1.123	4,892 SF
9	1.004	4,373 SF
10	1.023	4,456 SF

The foregoing represents the areas represented in the preliminary subdivision map. If any of the lot areas are revised during the subdivision process, the permissible lot coverage remains at 10% of the lot area and it shall exclude areas designated for public improvements.

Sincerely Yours,

MICHAEL A. DAHILIG
Clerk, Kaua'i Planning Commission

cc: COK – Public Works, Fire, Water, Finance-Real Property Division, Housing
State – Health, DLNR Historic Preservation Division

EXHIBIT E

Bernard P. Carvalho, Jr.
Mayor

Nadine K. Nakamura
Managing Director

Michael A. Dahilig
Director of Planning

Dee M. Crowell
Deputy Director of Planning

PLANNING DEPARTMENT
County of Kaua'i, State of Hawai'i
4444 Rice Street, Suite A-473, Līhu'e, Hawai'i 96766
TEL (808) 241-4050 FAX (808) 241-6699

AUG 29 2014

Jennifer A. Benck, Esq.
CARLSMITH BALL LLP.
ASB Tower, Suite 2200
1001 Bishop Street
Honolulu, Hawai'i 96813

Subject: CLASS III ZONING PERMIT Z-III-2015-1
Applicant – CIRI LAND DEVELOPMENT COMPANY (CLDC)
Project: 10-lot Subdivision
Tax Map Key: (4) 2-8-021:041, 044-068
Po'ipū, Kaua'i

This letter hereby advises you that the subject Class III Zoning Permit for a proposed 10-lot subdivision development on a parcel situated in Po'ipū, is APPROVED and subject to the following conditions:

1. The proposed subdivision shall be constructed as represented. Any changes to said structures and/or facilities shall be reviewed by the Planning Department to determine whether Planning Commission review and approval is warranted.

2. Subdivision of the subject property shall conform to the procedural requirements of Chapter 9 of the Kaua'i County Code Subdivision Ordinance.

3. The Applicant is advised that the approval of this SMA permit does not constitute approval of the proposed lot configurations and sizes as they appear on the subdivision layout submitted with the application. Technical requirements will be further reviewed through the subdivision application process.

4. The establishment of a public footpath or constructed path to allow pedestrian access along the makai side of the wall shall be explored at subdivision. As represented on the preliminary subdivision map, the public access, parking, and open space easements shall be identified on the final subdivision map and incorporated into the deed descriptions of the affected lots. Additionally, the Applicant will be

EXHIBIT E

responsible for the preparation of the necessary documents and it shall be ready for execution upon final subdivision approval and recordation of the final subdivision map.

5. To protect faunal species, the following shall be required:

   a. Lot 1 shall be developed to avoid disturbing existing Wedge-Tailed Shearwater nesting sites.

   b. The rock wall along Lots 1-7 on the mauka side shall be adjusted so that the seabirds can walk up the slope on the top of the wall. Coastal vegetation such as naupaka shall be encouraged along the makai side of the rock wall.

   c. The Applicant shall allow DLNR access to the property to conduct predator management pursuant to a revocable right of entry.

   d. No night time construction using bright artificial lights shall be permitted in the area. Although shearwaters are not present from January to March, bright lights along coastal areas are known to have a negative impact on the Green Sea Turtle (*Chelonia mydas*) through disorientation

   e. The construction of the subdivision infrastructure shall be accomplished during the non-nesting season from January to March. The placement of all construction material, equipment and machinery is restricted to the residential side of the wall.

   f. The Applicant shall work with DLNR-DOFAW toward restoration of coastal habitat in the Open Space Easement area in the makai western portion of the property. This includes the cost of removal of invasive non-native vegetation and the planting of appropriate seabird-friendly vegetation within the Open Space Easement in the makai western corner of the property.

   g. Furthermore, in order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, if external lighting is to be used in connection with the proposed development, all external lighting shall be only of the following type: *downward facing shielded lights*. Spotlights aimed upward or spotlighting of structures shall be prohibited.

6. In order to further ensure that the project is compatible with its surroundings and to minimize the visual impact of future residential development, the external color shall be of a moderate to dark earth-tone colors, the structures shall be "low-massing", and the Applicant should provide substantial landscaping. The

proposed color scheme, design guidelines and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application or during the subdivision process. Additionally, this provision shall be incorporated into the design covenants of the proposed development.

7. The subject property is located within the Special Management Area (SMA) and any new "Development," as defined in Section 1.4 of the SMA Rules and Regulations of the County of Kaua'i, may require an SMA Permit. If so, the Applicant will be subject to all applicable requirements/conditions of the SMA Permit.

8. The Applicant shall substantially commence construction of the project development within one (1) year from the date of final subdivision approval of the subject permits and shall complete construction of the development within two (2) years from the commencement of construction activities. The Planning Department shall be notified in writing the official date of construction.

9. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, and the County Departments of Public Works & Water.

10. The Applicant shall develop and utilize Best Management Practices (BMP's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

11. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources – Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050.

12. The Applicant is advised that additional government agency conditions may be imposed. It shall be the applicant's responsibility to resolve those conditions with the respective agency(ies).

13. The Planning Commission reserves the authority to impose additional conditions, modify or delete conditions stated herein, or resolve the permits through proper procedures should the applicant fail to comply with the conditions of approval.

14. Pursuant to Section 8-9.2(a) of the Kaua'i County Code (1987) as amended, the amount of land coverage created on Lots 1 through 10, including buildings and pavement, shall not exceed ten per cent (10%) of the lot area. It is noted that the

land coverage on these lots shall exclude areas that are designated for any public improvements (i.e. public access, public parking, open space). As represented on the preliminary subdivision map, the following represents the lot coverage calculations:

Subdivision Lot No.	Proposed Area (acres)	Permissible Lot Coverage (Square Feet)
1	1.265	5,510 SF
2	1.061	4,622 SF
3	1.002	4,365 SF
4	1.002	4,365 SF
5	1.129	4,918 SF
6	1.103	4,805 SF
7	1.535	6,686 SF
8	1.123	4,892 SF
9	1.004	4,373 SF
10	1.023	4,456 SF

The foregoing represents the areas represented in the preliminary subdivision map. If any of the lot areas are revised during the subdivision process, the permissible lot coverage remains at 10% of the lot area and it shall exclude areas designated for public improvements.

MICHAEL A. DAHILIG
Director of Planning

xc: COK – Public Works, Fire, Water, Finance-Real Property Division
State – Health Dept.

EXHIBIT F

(7) 14.211

Angela Anderson
Chair

Sean Mahoney
Vice-Chair

Louis Abrams
Wayne Katayama
Kimo Keawe
Amy Mendonca
Members

PLANNING COMMISSION
County of Kaua'i, State of Hawai'i
4444 Rice Street
Kapule Building, Suite A-473
Līhu'e, Hawai'i 96766-1326
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig
Clerk of the Commission

received
4/27/15

APR 23 2015

Mr. Dennis M. Esaki
ESAKI SURVEYING & MAPPING, INC.
1610 Haleukana Street
Līhu'e, Hawai'i 96766

Subject: Consolidation of Lots 1 through 3, 45 through 54, 56 through 63, Parcels L-1, L-2 & L-3, Laaukahi Road Lot and Ehukai Road Lot and subdivision of said consolidation into Lots 1 through 10, Road Lot A, and road widening lot cancellation of road and utility easement, and designation of Easements A-1 through A-5 at Weliweli, Kōloa Kaua'i, Hawai'i. **(S-2015-14, CIRI Land Development Company)**

Dear Mr. Esaki,

This letter memorializes the action taken by the Kaua'i Planning Commission effective APRIL 14, 2015 concerning **TENTATIVE APPROVAL** of the above subject application. Final subdivision map approval, per your consent, is subject to the following conditions:

1. Requirements of the Planning Department:

   a. An updated preliminary title report for the existing lot shall be submitted to the Planning Department for review.

   b. All existing and proposed easements shall be identified in the deed descriptions of affected lots and shown on the final subdivision map. Draft copies of the deed descriptions shall be submitted to the Planning Department for review and approval.

   c. Pursuant to section 9-3.8(b) of the Subdivision Ordinance, Kaua'i County Code (1987), the Applicant shall submit to the Planning Department an electronic record (digitized format) of the final subdivision map(s) on disk for record keeping purposes prior to final subdivision approval.

EXHIBIT F

d. An Environmental Impact Assessment Fee of Three Thousand Dollars ($3,000.00) shall be paid to the County of Kaua'i.

e. The Applicant shall pay a Park Dedication fee pursuant to Section 9-2.8 of the Kaua'i County Code Subdivision Ordinance. An appraisal report and price list shall be provided to the Planning Department to forward to the Real Properties Division to help calculate the fee amount.

f. The Applicant shall prepare and obtain construction plan approvals for necessary road, water, drainage, electrical and telephone utilities and facilities, and either construct the same or post a surety bond for completion.

g. Relative to the requirements/standards set forth in the Kaua'i County Code, 1987 as amended, Chapter 9, Sec. 9-2.9, the subdivider shall resolve with the Planning Department the requirement for public access ways. If a public access way is required, the Applicant shall propose an access plan identifying the access location(s) for the review and approval of the Planning and Public Works Departments. Pursuant to the Interpretative Administrative Rules and Regulations of the Kauai Planning Commission Rule 9-2.9, the Planning Department shall refer the proposed public access way to the Public Access, Open Space, and Natural Resources Preservation Fund Commission for input concerning the location of the public access way. Furthermore, proper documents shall be prepared and ready for execution prior to final subdivision approval. The Planning Department reserves the right to impose additional conditions relating to this matter while in the process of resolving this condition.

h. The Applicant shall obtain a Shoreline Certification within six (6) months prior to date of final subdivision map approval and the certified shoreline shall be shown on the final subdivision map.

i. Prior to final subdivision map approval, the Applicant shall comply with the applicable requirements of Special Management Area Use Permit SMA(U)-2015-1 & Class III Zoning Permit Z-III-2015-1. Specifically, the following conditions shall apply:

Conditions of SMA(U)-2015-1

- 4. (establishment of public footpath for pedestrian access)
- 5. (protection of faunal species)
- 6. (mitigation of visual impact)

j. Relative to Condition No. 14 of SMA(U)-2015-1, the following represents the permissible lot coverage calculations based on the lot area as shown on the preliminary subdivision map:

Subdivision Lot No.	Proposed Area (acres)	Permissible Lot Coverage (Square Feet)
1	1.266	5,515 SF
2	1.063	4,630 SF
3	1.001	4,360 SF
4	1.002	4,365 SF
5	1.129	4,918 SF
6	1.103	4,805 SF
7	1.535	6,686 SF
8	1.123	4,892 SF
9	1.004	4,373 SF
10	1.109	4,831 SF

k. The subdivider is made cognizant that the subject property is located within the Special Management Area (SMA). Additional lots within the SMA or any new "Development," as defined in Section 1.4 of the SMA Rules and Regulations of the County of Kaua'i, may require an SMA Permit and if so, the applicant is subject to all applicable requirements/conditions of the SMA Permit.

2. Requirements of the Department of Public Works (DPW):

a. Based on panel no. 325F of the Federal Insurance Rate Maps (FIRM) dated November 26, 2010, the subject property is susceptible to flooding. The FEMA flood zoning, panel no., and the date of the FIRM shall be shown on the final map as well as the base flood elevations. The nearest FEMA RM (reference markers) with its elevation and description needs to be provided on the final map. The applicant and future owners shall be advised that construction of new structures in flood prone areas presents flood risks and associated flood problems.

b. Impermeable surfaces such as roads, driveways and new buildings will increase the storm water runoff. A drainage study needs to be prepared to address the increase in storm runoff and propose mitigating drainage measures to keep flow rates and drainage patterns to pre-existing conditions.

c. No access provision needs to be provided along Pe'e Road for Lots 9 and 10.

d. A grading permit will be required for this project. The property size is more than 10 acres. The maximum area that may be opened for grading, or grubbing at any one time is ten (10 acres). Grading/grubbing shall be accomplished in increments not more than 10 acres.

3. Requirements of the Department of Water (DOW):

   a. The subdivider shall pay the Department of Water, a Facilities Reserve Charge of $46,000 (10 lots at $4,600 per lot). The subdivider shall pay any rate increase and/or applicable charges in effect at the time of receipt.

   b. The subdivider shall prepare and receive Department of Water's approval of construction drawings for necessary water system facilities and either construct said facilities or post a performance bond for construction. These facilities shall also include:

      1) The distribution waterlines.
      2) The domestic service connection.
      3) The fire service connection.
      4) The interior plumbing with the appropriate backflow prevention device, if applicable.

   c. If a bond is filed, to secure final subdivision approval, the subdivider shall clearly letter the following on the approved construction plans, final subdivision map, and deeds:

      "Domestic water service will not be available until the required construction improvements for this subdivision are completed and accepted by the Department of Water, County of Kaua`i."

      The subdivider shall record this deed restriction with the Bureau of Conveyances within ninety (90) days of final subdivision approval by the Planning Department.

   d. Submit a formal request for water service for our review and approval. Include detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments may change depending on the approved water demand calculations.

   e. Receive a "Certification of Completion" for the construction of the necessary water system facilities from DOW.

4. Requirements of the State Department of Health (DOH):

   a. The use of individual wastewater systems is allowed for single family residences. The type and number of individual wastewater systems to be used on each lot will be determined by the wastewater rules in effect at the time of building permit application.

   b. Noise will be generated during the clearing and construction phases of this project. The applicable maximum permissible sound levels as stated in Chapter 11-46, entitled

"Community Noise Control", Title 11, HAR, shall not be exceeded unless a noise permit is obtained from the Department of Health.

c. The property may harbor rodents which will be dispersed to the surrounding areas when site-clearing activities occur and are completed. In accordance with Chapter 11-26, entitled "Vector Control", Title 11, HAR, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

d. Temporary fugitive dust emissions could be emitted when development begins. At that time, in accordance with Chapter 11-60.1, entitled "Air Pollution Control", Title 11, HAR, effective air pollution control measures shall be provided to minimize or prevent any fugitive dust emissions caused by the construction work from impacting the surrounding areas. This includes the off-site roadways used to enter/exit the project. The control measures include but are not limited to the use of water wagons, sprinkler systems, dust fences, etc.

e. In accordance with Chapter 11-58.1, entitled "Solid Waste Management Control", Title 11, HAR, the disposal of the grubbed material and construction waste that will be generated when the subdivided lots are further developed shall be at a solid waste disposal facility that is in compliance with the State Department of Health. The open burning of any of these wastes on or off site is prohibited.

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

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

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

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

g. Please call the Army Corps of Engineers at (808) 438-9258 to see if this project requires a Department of the Army (DA) permit. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.

h. You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or

Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

1) Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

2) Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the start of the construction activities.**

3) Treated effluent from leaking underground storage tank remedial activities.

4) Once through cooling water less than one (1) million gallons per day.

5) Hydro-testing water.

6) Construction dewatering effluent.

7) Treated effluent from petroleum bulk stations and terminals.

8) Treated effluent from well drilling activities.

9) Treated effluent from recycled water distribution systems.

10) Storm water from a small municipal separate storm sewer system.

11) Circulation water from decorative ponds or tanks.

i. You must submit a separate NOI form for each type of discharge at least 30 days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 before to the start of construction activities.

j. For types of wastewater not listed in Item 3 above or wastewater discharging into Class 1 or Class AA waters, you must obtain an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 days before the commencement of the discharge.

k. You must also submit a copy of the NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.

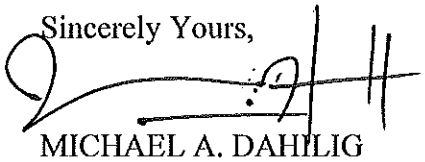
l. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with the water quality requirements contained in HAR, Chapter 11-54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

5. Requirements of the State Historic Preservation Department (SHPD):

   a. As recommended by the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DLNR), in the event that historic resources, including human skeletal remains are identified during routine construction activities, all work needs to cease in the immediate vicinity of the find, and the finds need to be protected from additional disturbance, and the State Historic Preservation Division, Kaua'i section, needs to be contacted immediately at (808)692-8015.

6. The applicant is advised that prior to and/or during construction and use additional conditions may be imposed by government agencies. Should this occur, the applicant shall resolve these conditions with the respective agency(ies).

Sincerely Yours,



MICHAEL A. DAHILIG
Clerk, Kaua'i Planning Commission

xc: COK Public Works Dept.
COK Water Dept.
COK Real Property – Assessment Div.
State Dept. of Health
State Historic Preservation Dept.

14-211

Sean Mahoney
Chair

Louis Abrams
Vice-Chair

Roy Ho
Wayne Katayama
Kimo M. Keawe
Glenda Nogami-Streufert
Members

PLANNING COMMISSION
County of Kaua'i, State of Hawai'i
4444 Rice Street
Kapule Building, Suite A-473
Līhu'e, Hawai'i 96766-1326
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig
Clerk of the Commission

7/18/16

JUL 13 2016

Mr. Dennis Esaki
ESAKI SURVEYING & MAPPING INC
1610 Haleukana St,
Lihue, HI 96766.

Subject: Consolidation of Lots 1 through 3, 45 through 54, 56 through 63, Parcels L-1, L-2 & L-3, Laaukahi Road Lot and Ehukai Road Lot and subdivision of said consolidation into Lots 1 through 10, Road Lot A, and road widening lot cancellation of road and utility easement, and designation of Easements A-1 through A-5 at Weliweli, Kōloa Kaua'i, Hawai'i. **(S-2015-14, CIRI Land Development Company)**

2016

This letter memorializes the action taken by the Kaua'i Planning Commission effective June 14, 2014 granting your request for an extension until **December 31, 2017** to file the final subdivision maps involving the development referenced above.

Please be advised that if further subdivision extension requests are sought, an *updated status report* on the subdivision that includes a detailed time chronology on the progress of the tentative approval requirements shall be submitted to the Planning Department no later than sixty days (60) from the expiration date of the extension.

MICHAEL A. DAHILIG
Clerk, Kaua'i Planning Commission

xc: COK Public Works Dept.
COK Water Dept.
COK Real Property – Assessment Div.
State Dept. of Health

EXHIBIT G

MEMORANDUM

TO: Michael A. Dahilig, Planning Director

FROM: Michael Moule, P.E., Chief of Engineering

VIA: Lyle Tabata, Acting County Engineer

SUBJECT: Certification of Completion of Makahuena Point Subdivision

DATE: December 4, 2017

A final inspection conducted on August 8, 2017 found construction to be complete and acceptable for the subject subdivision. Grassing establishment has been approved and the grading permit closed. All infrastructure within this subdivision is private. The County of Kaua'i did not inspect all details of the installation of the infrastructure, such as monitoring concrete pours and checking placement and grades of the infrastructure.

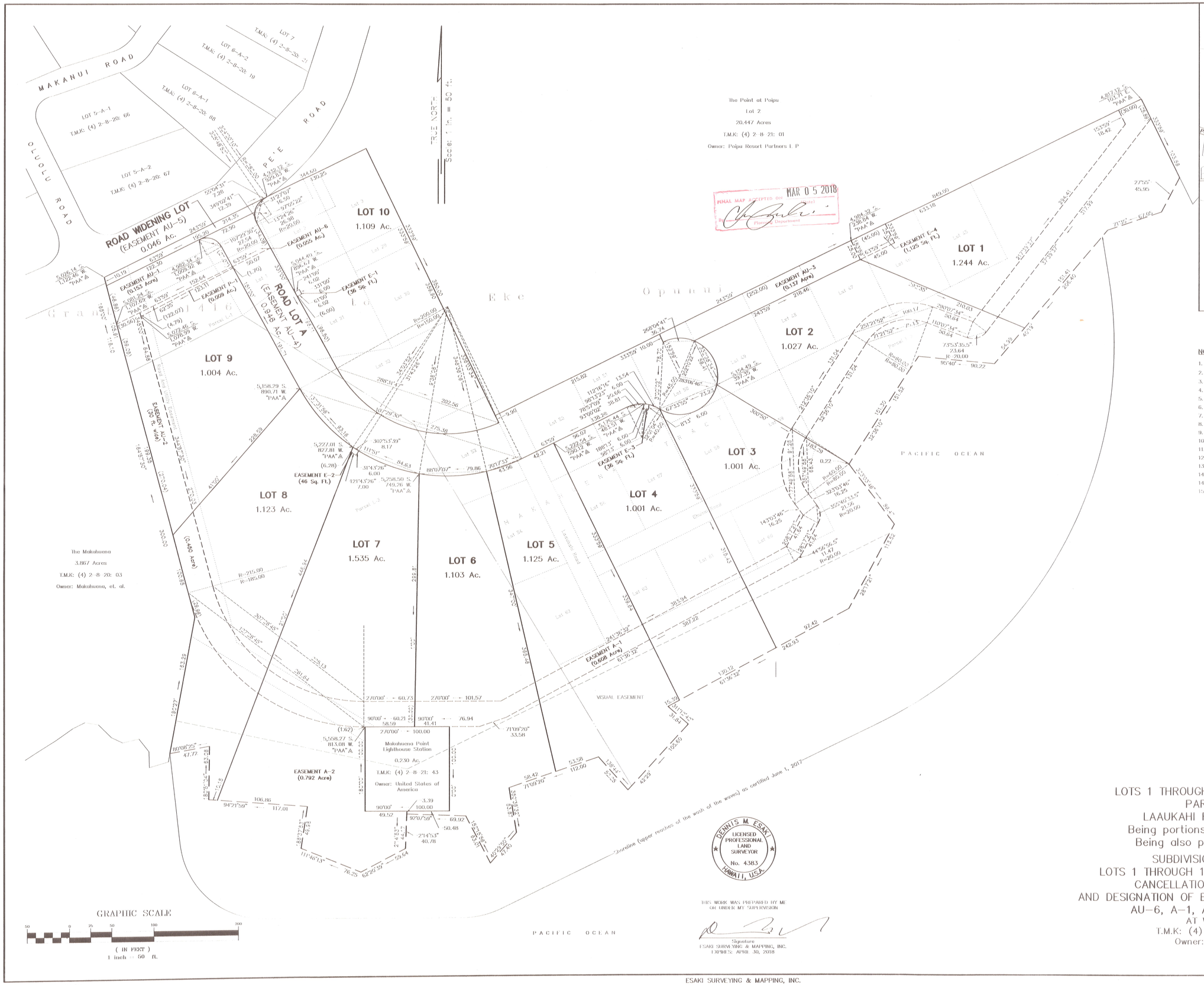
Should you have any questions, please contact Devin Quinn at (808) 241-4995 or Donald Fujimoto at (808) 241-4882.

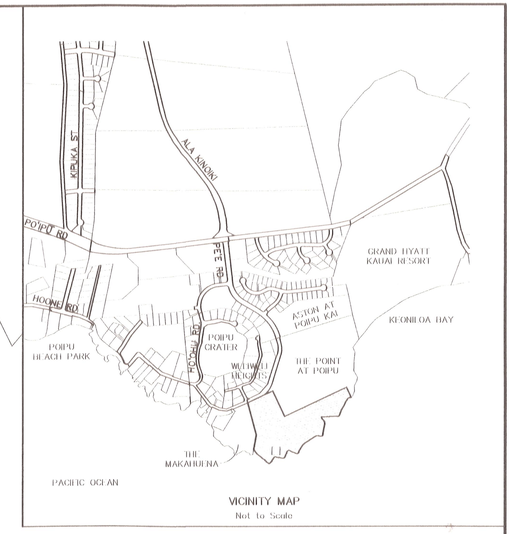
DQ

cc: Construction Inspection
Road Maintenance
Public Works Fiscal

EXHIBIT G

EXHIBIT G-1





VICINITY MAP
Not to Scale

NOTES:

1. Azimuths and distances are based on record information.
2. Name(s) of owner(s) of adjoining parcel taken from County tax records.
3. Shoreline corners are nails unless otherwise noted.
4. Easement AU-1 for Public Parking, Public Pedestrian and Light Station Access Purposes.
5. Easement AU-2 for Public Pedestrian and Light Station Access Purposes.
6. Easement AU-3 for Common Access & Utility Purposes.
7. Easement AU-4 for Access & Utility Purposes.
8. Easement AU-5 for Access & Utility Purposes.
9. Easement AU-6 for Access & Utility Purposes.
10. Easement A-1 for Public Pedestrian Access Purposes.
11. Easement A-2 for Open Space Purposes.
12. Easement E-1 for Utility Purposes.
13. Easement E-2 for Utility Purposes.
14. Easement E-3 for Utility Purposes.
14. Easement E-4 for Utility Purposes.
15. Easement P-1 for Parking Purposes.

This map was approved by the Planning Commission of the County of Kauai, at their Meeting on MAR 2 7 2018
Approved by RH
Chairman, Planning Commission
County of Kauai

S-2015-14
CONSOLIDATION OF
LOTS 1 THROUGH 3, 45 THROUGH 54, 56 THROUGH 63,
PARCELS L-1, L-2, AND L-3,
LAAUKAHI ROAD LOT, AND EHUKAI ROAD LOT
Being portions of Makahuena Tract (File Plan 354)
Being also portion of Grant 1416 to Eke Oponui

SUBDIVISION OF SAID CONSOLIDATION INTO
LOTS 1 THROUGH 10, ROAD LOT A, AND ROAD WIDENING LOT
CANCELLATION OF ROAD AND UTILITY EASEMENT,
AND DESIGNATION OF EASEMENTS AU-1, AU-2, AU-3, AU-4, AU-5,
AU-6, A-1, A-2, E-1, E-2, E-3, E-4, AND P-1
AT WELIWELI, KOLOA, KAUAI, HAWAII
T.M.K: (4) 2-8-21: 41, and 44 to 68, inclusive
Owner: CIRI Land Development Company
Date: February 23, 2018

Job Number: 14-211 MA/JH
Drawing File: 14-211 subd tentative.dwg

ESAKI SURVEYING & MAPPING, INC.
Civil Engineers -- Land Surveyors -- Planners

1610 Haleukana Street
Lihue, Kauai, Hawaii 96766

EXHIBIT H



1 SITE PLAN
1" = 10'-0"

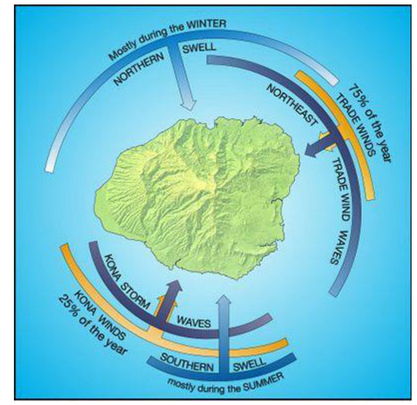
COVERAGE:

HOUSE	2375 SF	5.4%
COVERED LANAIS	604 SF	1.4%
POOL	486 SF	1.1%
GARAGE	850 SF	1.9%
COVERAGE	4315 SF	9.8%
SITE AREA:	43603 SF	

NOTE: DRIVEWAY IS GRAVEL. CONCRETE APPROACH IS NOT ON PROPERTY

AREA CALCULATIONS:

MAIN LEVEL	2375 SF	
MAIN COVERED LANAIS	604 SF	
UPPER LEVEL	1705 SF	(55%)
UPPER COVERED LANAIS	170 SF	(5%)
TOTAL COVERED	4958 SF	
GARAGE	850 SF	
OPEN LANAIS	2472 SF	
POOL	486 SF	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number 00
Date 7-16-2021

SITE PLAN

SP01

Scale 1" = 10'-0"

2/1/2022 4:06:20 PM

36'
35'
34'
POOL AND AC
AC WH
1
A6
2
A6
BUNK ROOM
15'-10" x 12'-6"
DN
DN
BAHA
POOL
30' X 11'
POOL FENCE
SPA
POOL GATE
STAIR T YARD
POOL GATE
COVERED LANAI
23'-0" X 23'-0"
BBQ
LANDSCAPE
37' - 6"
FRONT YARD SB
LANDSCAPE
38' - 0"
ENTRY
GARAGE
33'-0" X 27'-0"
UP
UP
DECK
37' - 11"
GREAT ROOM
21'-0" X 24'-6"
DINING
11'-0" X 24'-6"
2 1/2"
R 8' - 0"
R 8' - 0"
KITCHEN
10'-0" X 24'-6"
Range
Refrigerator
Freezer
Refrigerator
PANTRY
LAUND
7'-6" X 16'-0"
Dryer
Washer
MASTER 2
17'-4" X 12'-6"
38' - 0"
SIDEYARD SB
1
MAIN LEVEL
1/4" = 1'-0"
NORTH

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone: 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

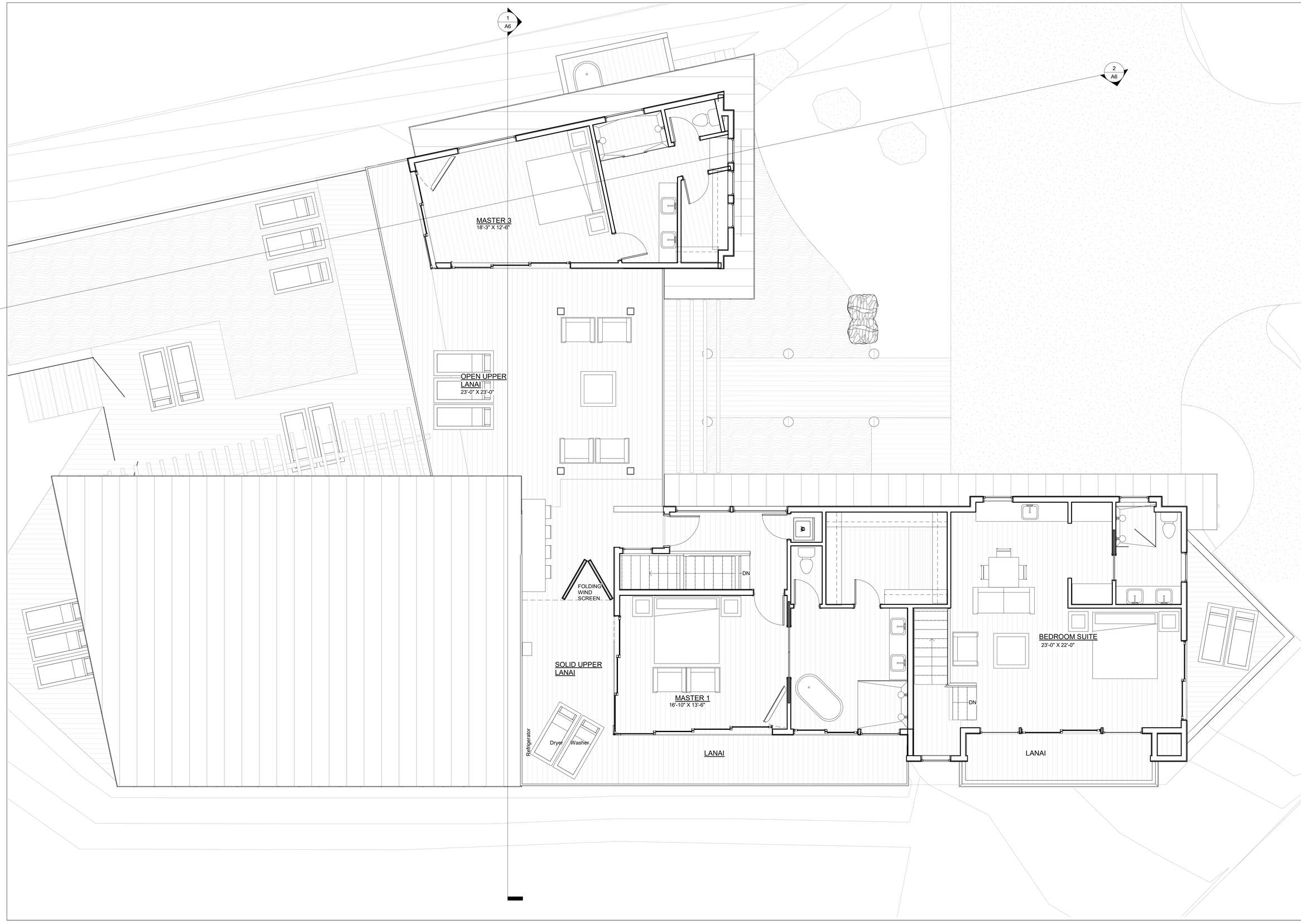
Project number 00
Date 7-16-2021

MAIN LEVEL

A1

Scale 1/4" = 1'-0"

8/5/2021 7:59:31 AM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA

MY LICENSE EXPIRES
APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number	00
Date	7-16-2021

UPPER
LEVEL

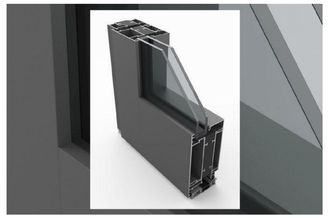
A2

Scale 1/4" = 1'-0"

8/5/2021 7:59:50 AM



ETCHED GLASS AND ALUM. GARAGE DOOR



ALUMINUM SLIDING DOORS



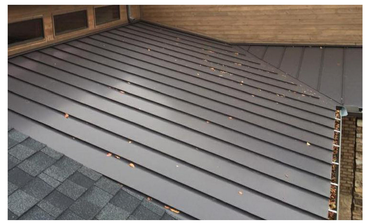
STAINED CEDAR SIDING



STAINED ACCENT CEDAR SIDING



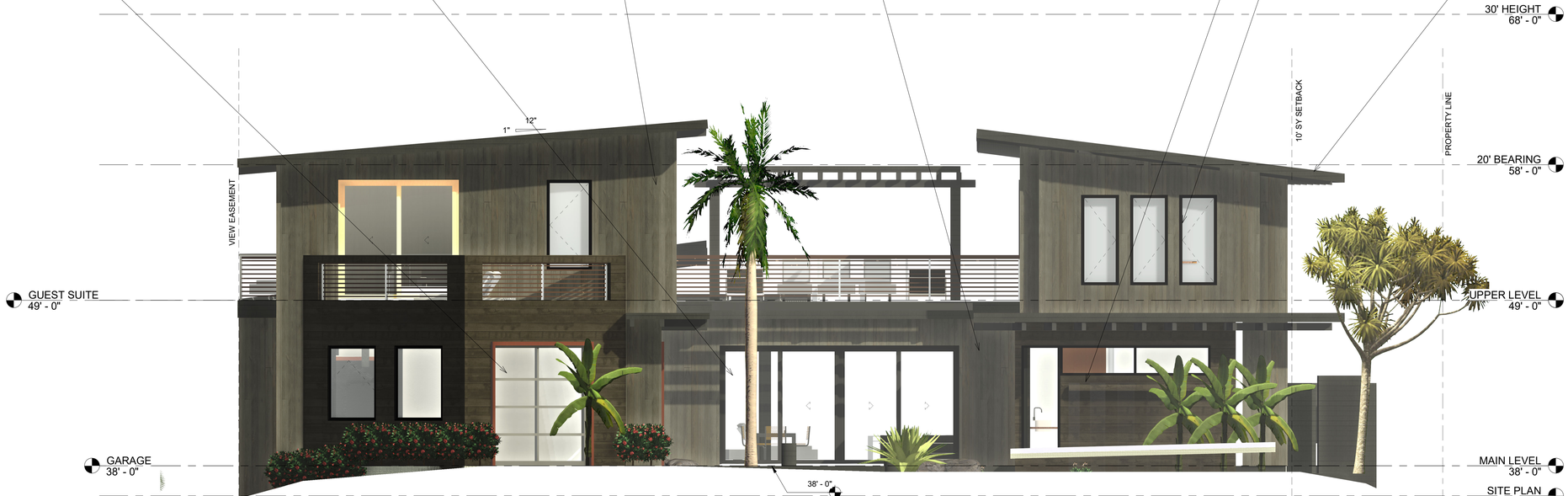
STAINED BOARD FORMED CONCRETE



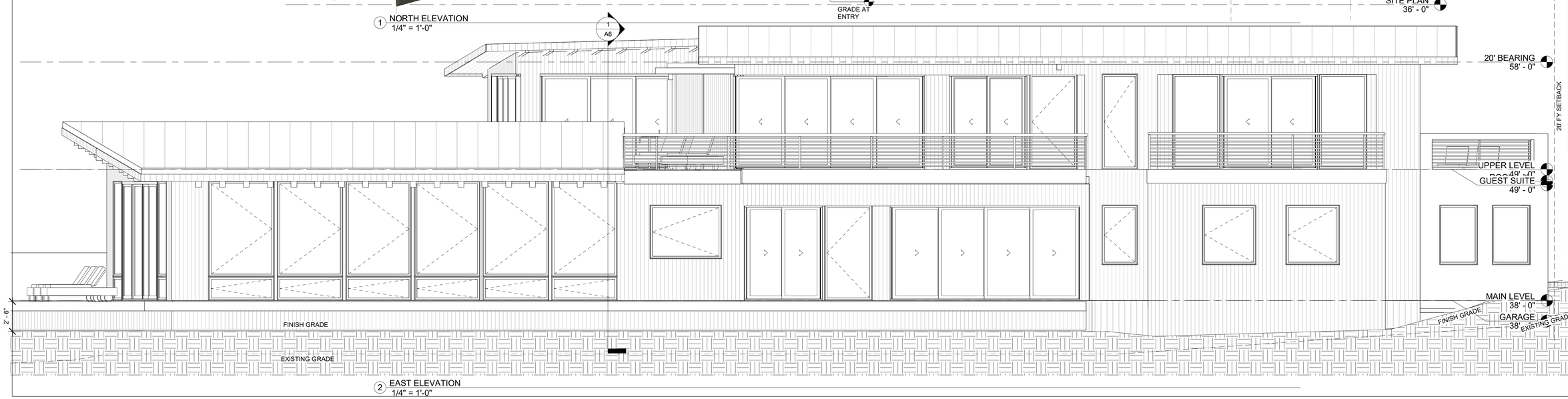
TAHITIAN BROWN
STANDING SEAM



MILGARD FIBERGLASS BLACK



1 NORTH ELEVATION
1/4" = 1'-0"



2 EAST ELEVATION
1/4" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

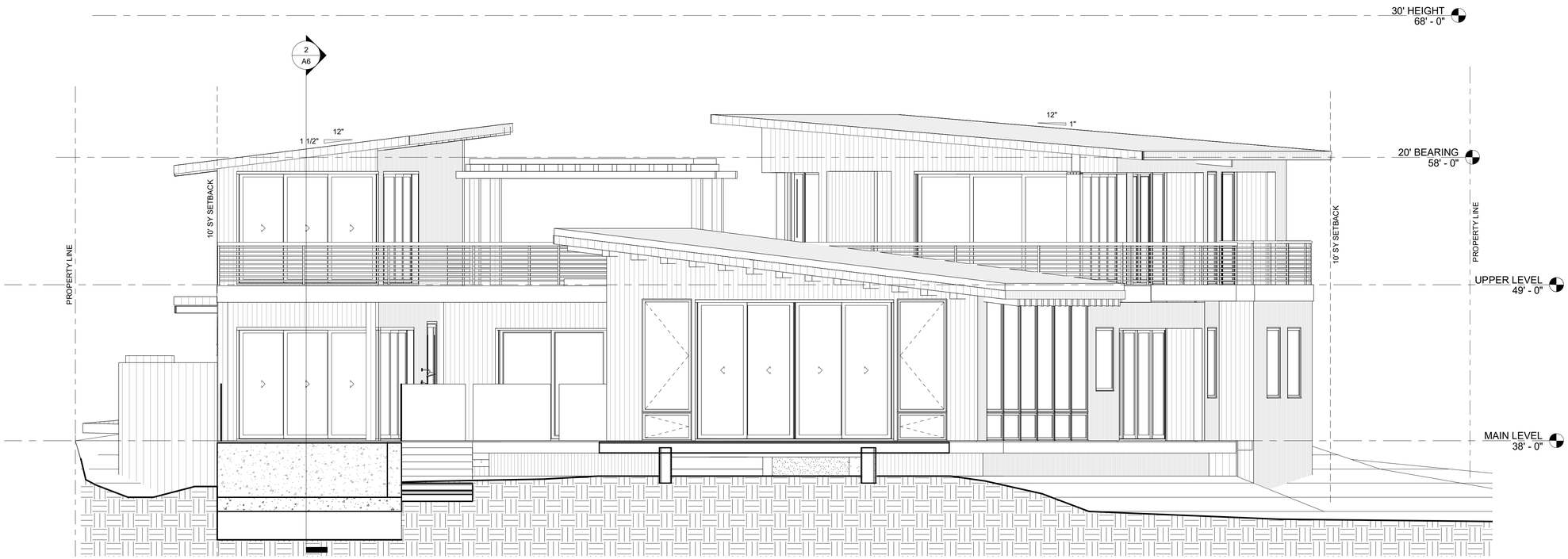
Project number	00
Date	7-16-2021

EXTERIOR ELEVATIONS

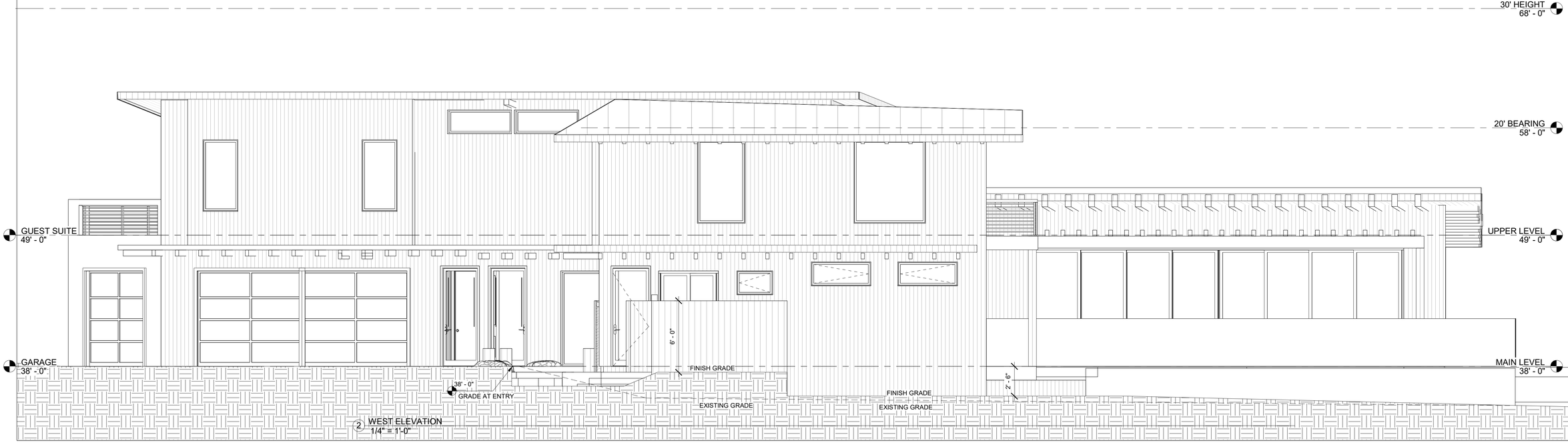
A3

Scale 1/4" = 1'-0"

8/5/2021 8:00:15 AM



1 SOUTH ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVIOR AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII - USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number	00
Date	7-16-2021

EXTERIOR ELEVATIONS

A4

Scale 1/4" = 1'-0"

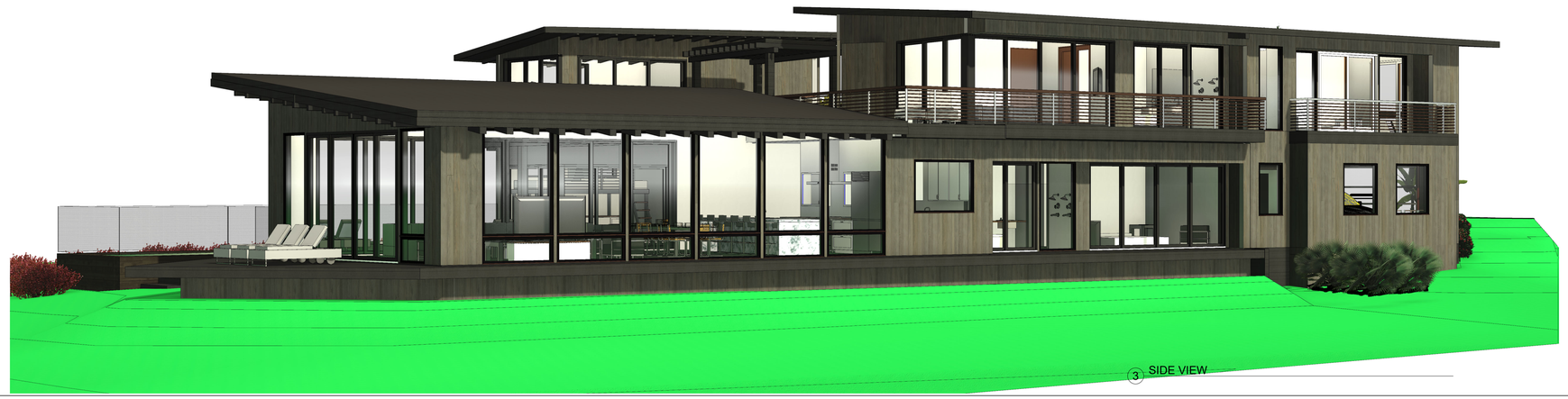
8/5/2021 8:00:27 AM



1 GARAGE VIEW



2 POOL VIEW



3 SIDE VIEW

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA

MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070

Koloa Kauai HI

No.	Description	Date

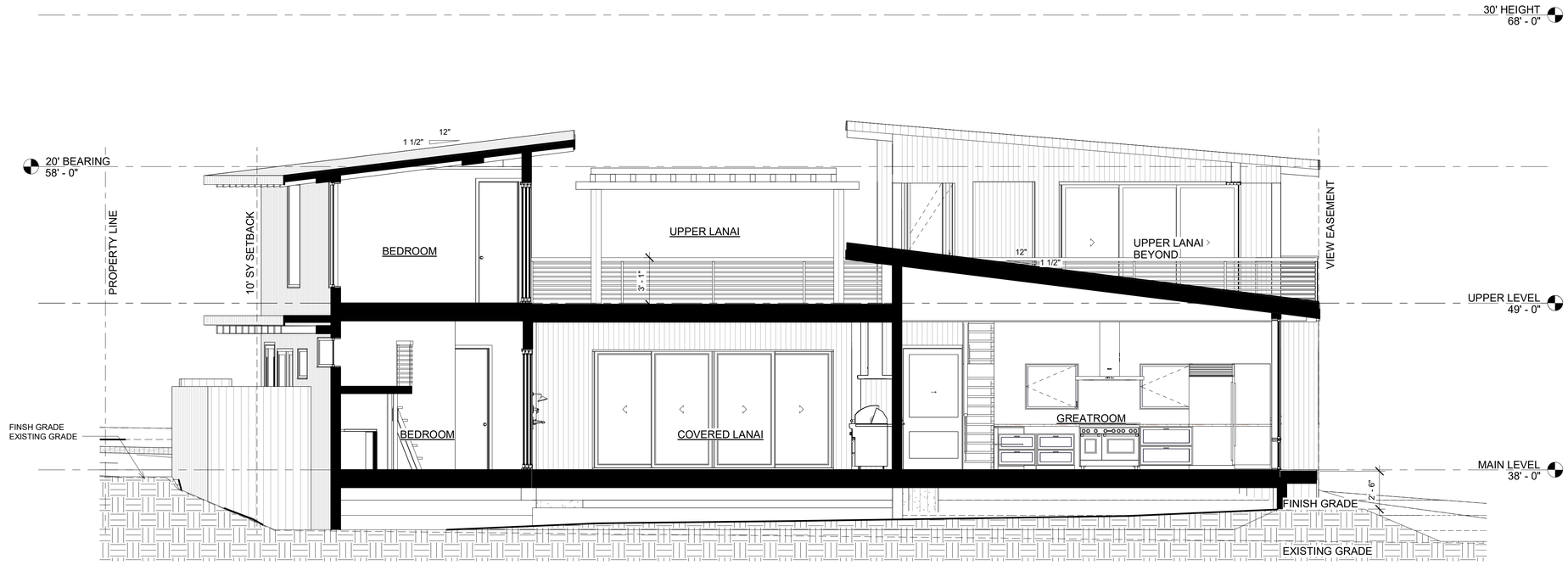
Project number 00
Date 7-16-2021

EXTERIOR VIEWS

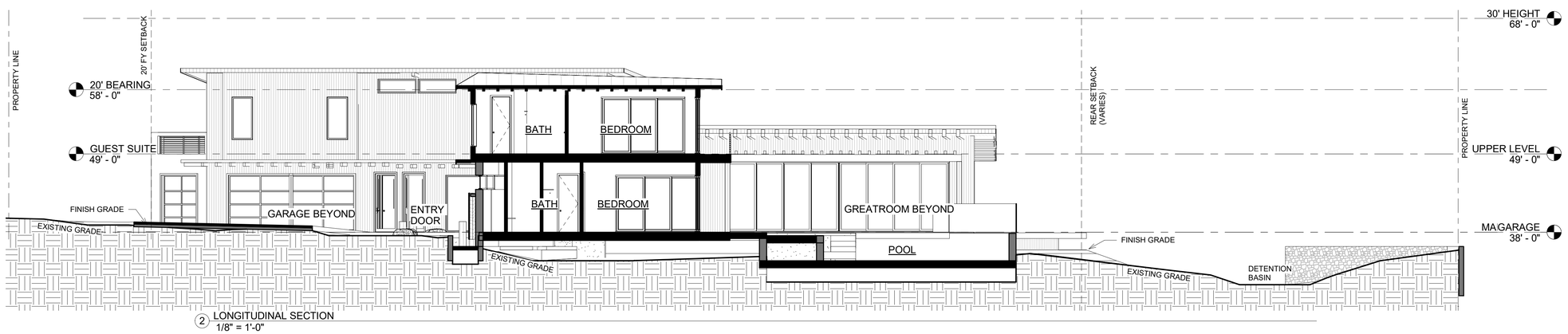
A5

Scale

8/5/2021 8:01:19 AM



1 CROSS SECTION
1/4" = 1'-0"



2 LONGITUDINAL SECTION
1/8" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone: 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number	00
Date	7-16-2021

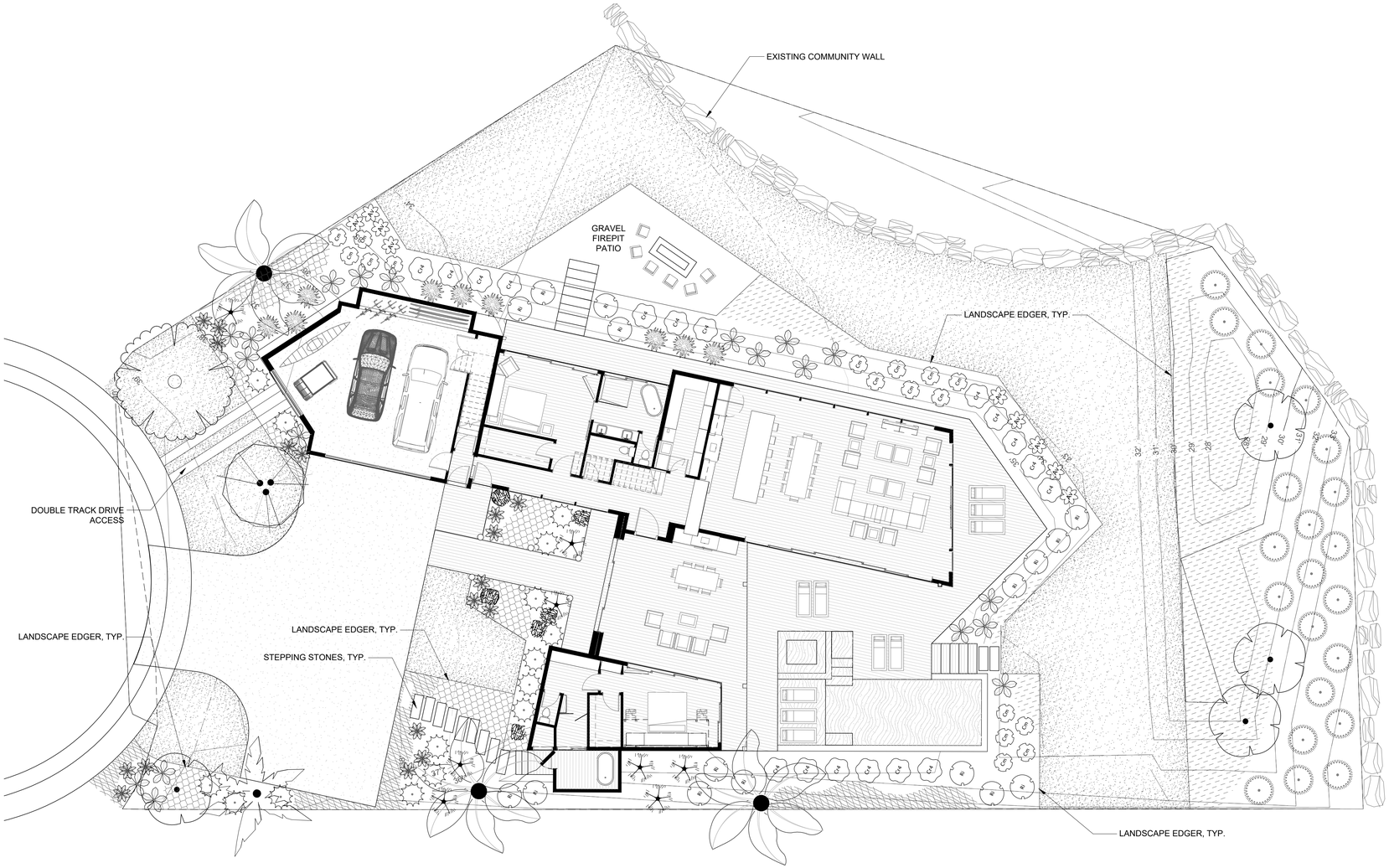
SECTIONS

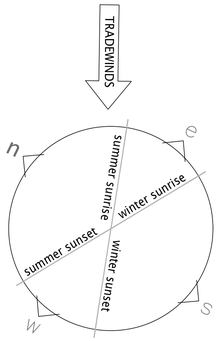
A6

Scale As indicated

8/5/2021 8:01:30 AM

EXHIBIT I





PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME
	CLUSIA ROSEA / AUTOGRAPH TREE
	PLUMERIA OBTUSA `SINGAPORE` / SINGAPORE PLUMERIA MATURE SIZE H:15` X W:15'
	VITEX TRIFOLIA / ARABIAN LILAC

PALM TREES	BOTANICAL / COMMON NAME
	COCOS NUCIFERA / COCONUT PALM MATURE SIZE H:50` X W:25`
	PHOENIX ROEBELENII / PYGMY DATE PALM
	SABAL PALMETTO / CABBAGE PALMETTO

SHRUBS	BOTANICAL / COMMON NAME
	AECHMEA BLANCHETIANA / ORANGE BROMELIAD
Av	ALOE VERA / MEDICINAL ALOE
Cm	CARISSA MACROCARPA 'PROSTRATA' / PROSTRATE NATAL PLUM
Cr4	CHRYSOBALANUS ICACO 'RED TIP' / RED TIP COCOPLUM
	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY
	DRACAENA REFLEXA 'SONG OF JAMAICA' / SONG OF JAMAICA
	GARDENIA TAITENSIS 'DOUBLE' / DOUBLE TAHITIAN GARDENIA
Ri	RHAPHIOLEPIS INDICA / INDIAN HAWTHORN
	SCAEVOLA FRUTESCENS / BEACH NAUPAKA

GROUND COVERS	BOTANICAL / COMMON NAME
	BACOPA MONNIERI / HERB OF GRACE
	MICROSORUM SCOLOPENDRIA / WART FERN
	WEDELIA TRILOBATA / CREEPING WEDELIA
	ZOYSIA JAPONICA `EL TORO` / KOREAN GRASS

LANDSCAPE DESIGN NOTE:
THIS LANDSCAPE WAS DESIGNED BY OR UNDER THE DIRECTION OF

CORY SHUPE

A LICENSED LANDSCAPE ARCHITECT IN THE STATE OF UTAH

THE STAMP IS UNDER

KEVIN D. HORN

A LICENSED ARCHITECT IN THE STATE OF HAWAII

Scale: 1" = 10'-0"

0 5 10 20 30

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT
....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	yy/mm/dd	DESCRIPTION

Stamp

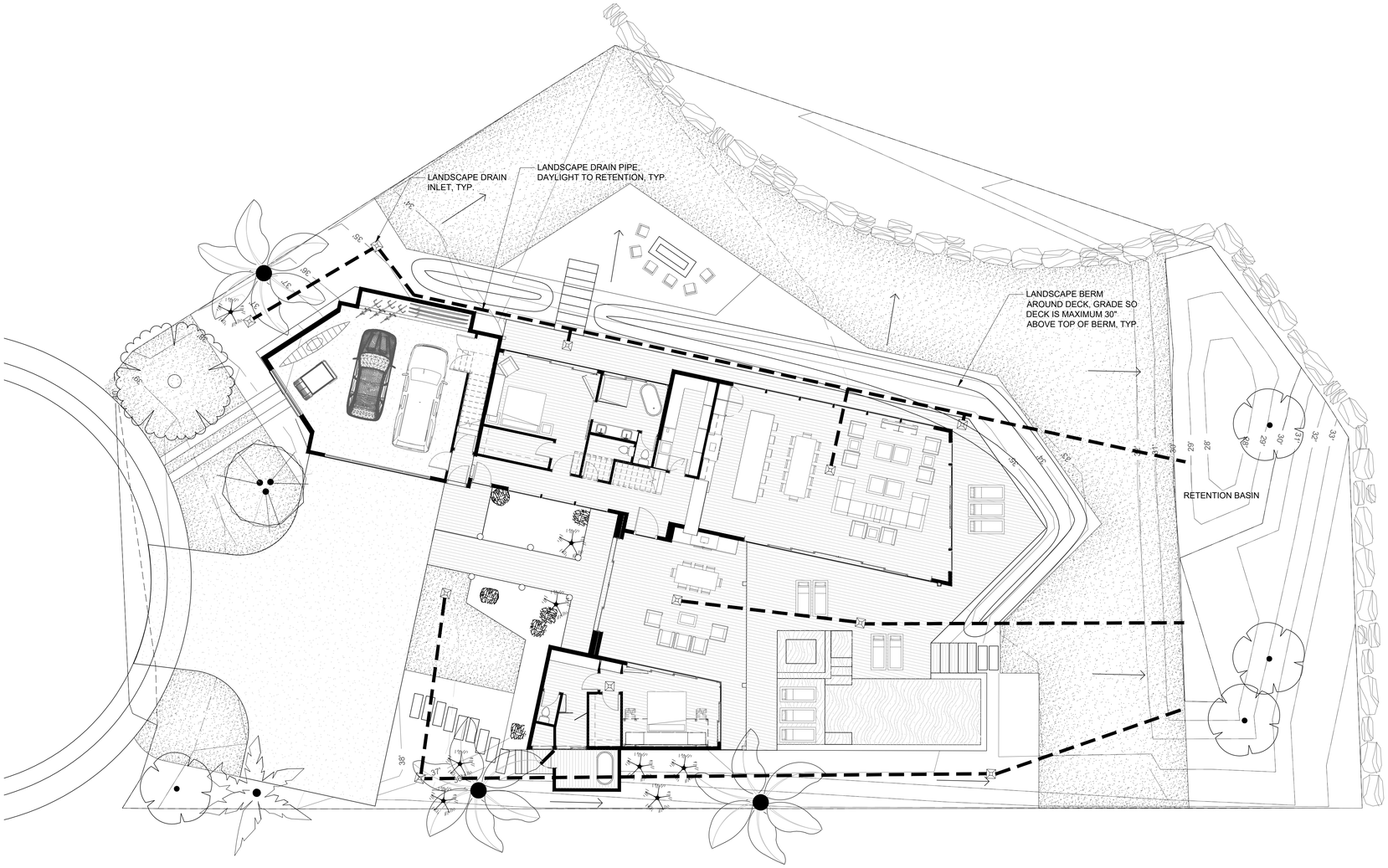
Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

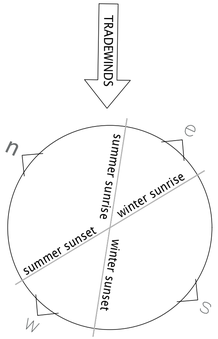
Drawing Title

OVERALL LANDSCAPE PLAN

Drawing number

LP101





LANDSCAPE DESIGN NOTE:
THIS LANDSCAPE WAS DESIGNED BY OR UNDER THE DIRECTION OF

CORY SHUPE

A LICENSED LANDSCAPE ARCHITECT IN THE STATE OF UTAH

THE STAMP IS UNDER

KEVIN D. HORN

A LICENSED ARCHITECT IN THE STATE OF HAWAII

Scale: 1" = 10'-0"

0 5 10 20 30

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT
....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	(yr/mm/dd)	DESCRIPTION

Stamp

Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

LANDSCAPE GRADING PLAN

Drawing number

LP201

PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	CLUSIA ROSEA / AUTOGRAPH TREE	25 GAL.	8-12` HT	1
	PLUMERIA OBTUSA `SINGAPORE` / SINGAPORE PLUMERIA MATURE SIZE H:15` X W:15'	25 GAL.	6-8` HT	1
	VITEX TRIFOLIA / ARABIAN LILAC	25 GAL.	8-12` HT	4

PALM TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	COCOS NUCIFERA / COCONUT PALM MATURE SIZE H:50` X W:25`	50 GAL.	20-25` HT	3
	PHOENIX ROEBELENII / PYGMY DATE PALM	10 GAL.	6` HT MIN.	8
	SABAL PALMETTO / CABBAGE PALMETTO	25 GAL.	12-15` HT	1

SHRUBS	BOTANICAL / COMMON NAME	CONT	
	AECHMEA BLANCHETIANA / ORANGE BROMELIAD	5 GAL	17
AV	ALOE VERA / MEDICINAL ALOE	5 GAL	9
Cm	CARISSA MACROCARPA 'PROSTRATA' / PROSTRATE NATAL PLUM	5 GAL	17
Cr4	CHRYSOBALANUS ICACO 'RED TIP' / RED TIP COCOPLUM	5 GAL	18
	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY	5 GAL	19
	DRACAENA REFLEXA 'SONG OF JAMAICA' / SONG OF JAMAICA	5 GAL	9
+	GARDENIA TAITENSIS 'DOUBLE' / DOUBLE TAHITIAN GARDENIA	5 GAL	15
RI	RHAPHIOLEPIS INDICA / INDIAN HAWTHORN	5 GAL	16
+	SCAEVOLA FRUTESCENS / BEACH NAUPAKA	5 GAL	22

GROUND COVERS	BOTANICAL / COMMON NAME	CONT	SPACING	
	BACOPA MONNIERI / HERB OF GRACE	1 GAL		269 SF
	MICROSORUM SCOLOPENDRIA / WART FERN	1 GAL	24" o.c.	96
	WEDELIA TRILOBATA / CREEPING WEDELIA	1 GAL	24" o.c.	323
	ZOYSIA JAPONICA `EL TORO` / KOREAN GRASS	SOD		5,285 SF

LANDSCAPE NOTES:

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST CITY AND STATE STANDARDS AND GUIDELINES AND SHALL ADHERE TO THE MAKAHU'ENA ESTATES DESIGN GUIDELINES.

2. ALL PLANT MATERIAL SHALL BE GROWN IN CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THIS WORK AND SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 UNLESS OTHERWISE NOTED. PROVIDE TREES OF NORMAL GROWTH AND UNIFORM HEIGHTS, ACCORDING TO SPECIES, WITH STRAIGHT TRUNKS AND WELL DEVELOPED LEADERS, LATERALS, AND ROOTS.

3. EXISTING UTILITIES, EASEMENTS, AND STRUCTURES SHOWN ON THE DRAWINGS ARE IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE, TYPE, AND STRUCTURES TO BE ENCOUNTERED ON THE PROJECT PRIOR TO ANY EXCAVATION AND CONSTRUCTION IN THE VICINITY OF THE EXISTING UTILITIES AND STRUCTURES.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL REQUIRED PERMITS, LICENSES, AND APPROVALS REQUIRED TO LEGALLY AND RESPONSIBLY COMPLETE THE WORK.

5. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL, DISPOSAL, OR RELOCATION OF ALL OBSTRUCTIONS AND DEBRIS WITHIN THE DELINEATED CONSTRUCTION AREA PRIOR TO STARTING NEW CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY DEBRIS RESULTING FROM NEW CONSTRUCTION.

6. DAMAGE TO ANY EXISTING IMPROVEMENTS OR TO ANY PORTION OF THE PROJECT'S SURROUNDING AREA DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

7. ALL COMPACTED AREAS DEVELOPED THROUGH CONSTRUCTION WITHIN PROPOSED LANDSCAPE AREAS SHALL BE SCARIFIED AND LOOSENED TO A DEPTH OF 12" PRIOR TO LANDSCAPE AND IRRIGATION WORK BEGINNING.

8. NO PLANT SPECIES SUBSTITUTIONS WILL BE MADE WITHOUT APPROVAL OF OWNER.

9. ALL PLANT LAYOUT SHALL BE VERIFIED AND APPROVED IN FIELD BY OWNER PRIOR TO PLANTING. FAILURE TO RECEIVE APPROVAL MAY RESULT IN RE-WORK BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

10. ALL AREAS WITHIN AND AFFECTED BY THIS PROJECT SHALL HAVE POSITIVE DRAINAGE. POSITIVE DRAINAGE SHALL BE PROVIDED TO DIRECT STORMWATER AWAY FROM ALL STRUCTURES.

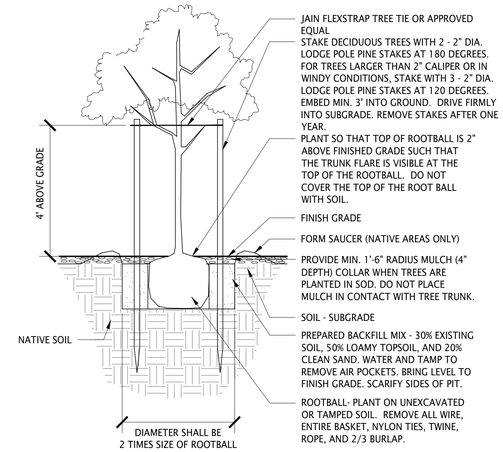
11. ALL CLARIFICATIONS OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SITE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO BEGINNING OF WORK.

12. ALL PLANT MATERIAL SHALL BE IRRIGATED WITH A FULLY AUTOMATED IRRIGATION SYSTEM (SEE IRRIGATION PLAN).

13. ALL PLANTING BEDS SHALL RECEIVE 2" TOP DRESSING OF GRAVEL MULCH AS APPROVED BY OWNER. TREES WITHIN LAWN AREAS SHALL RECEIVE A MIN. 5' DIA. ORGANIC MULCH RING.

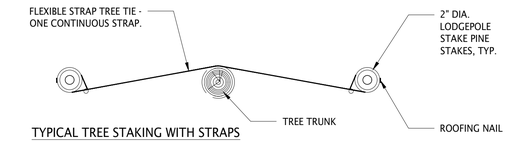
14. ALL LAWN AREAS SHALL RECEIVE A MIN. 4" DEPTH OF TOPSOIL. ALL PLANTING BEDS SHALL RECEIVE A MIN. 6" DEPTH OF TOPSOIL. CONTRACTOR MAY USE AVAILABLE EXISTING TOPSOIL ON SITE IF SUITABLE. IF NOT SUITABLE OR SUFFICIENT TO PROVIDE THE NECESSARY QUANTITY, THE CONTRACTOR SHALL IMPORT ADDITIONAL TOPSOIL.

15. LANDSCAPE EDGER: BENDA BOARD (BROWN COLOR) INSTALLED PER MANUFACTURER RECOMMENDATIONS.

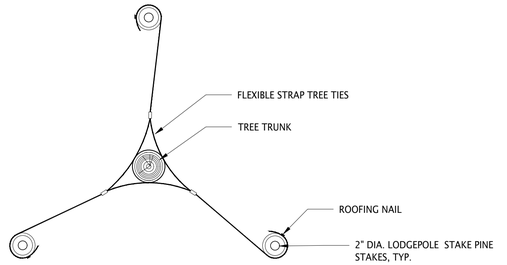


1 TREE PLANTING

NOT TO SCALE



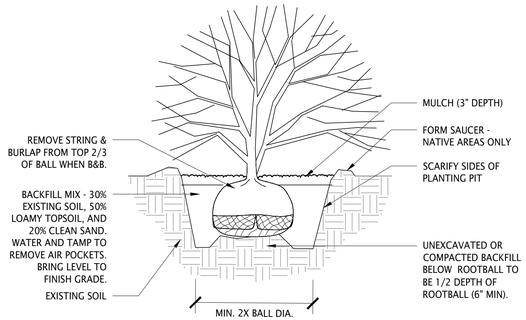
TYPICAL TREE STAKING WITH STRAPS



TREES IN WINDY CONDITIONS OR LARGER THAN 2" CAL.

2 TREE STAKING - FLEX STRAPS

NOT TO SCALE



NOTE:
PLANT SO THAT TOP OF ROOT BALL IS 2" ABOVE FINISHED GRADE

3 SHRUB DETAIL

NOT TO SCALE

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	symmetry	DESCRIPTION

Stamp

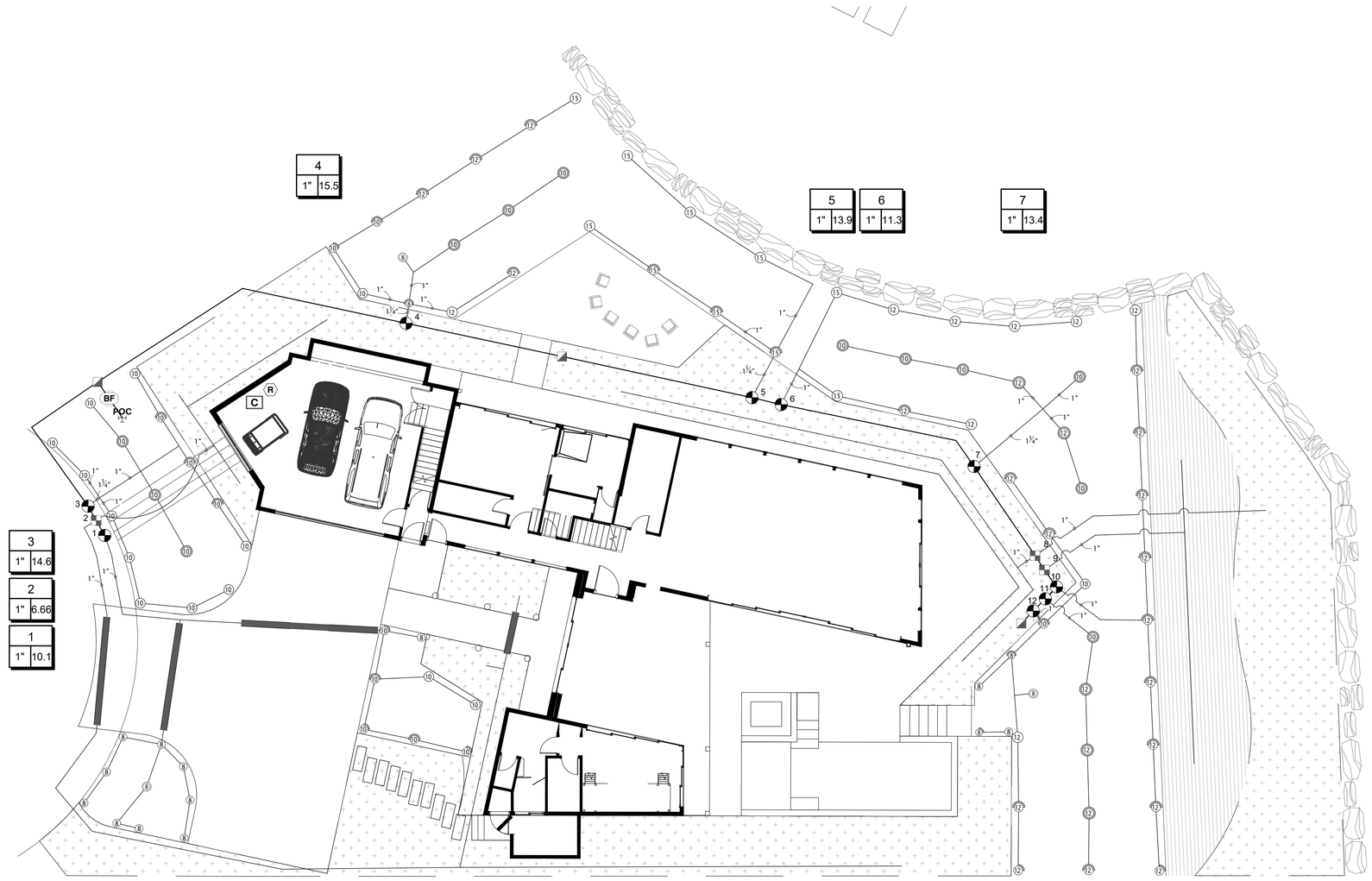
Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

LANDSCAPE DETAILS

Drawing number

LP501



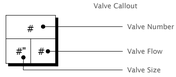
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
8 Q, 8 T, 8 H, 8 F	RAIN BIRD 1804-U-SAM-PRS U8 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
10 Q, 10 T, 10 H, 10 F	RAIN BIRD 1804-U-SAM-PRS U10 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
12 Q, 12 T, 12 H, 12 TT, 12 TQ, 12 F	RAIN BIRD 1804-U-SAM-PRS U12 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
13 Q, 13 T, 13 H, 13 TT, 13 TQ, 13 F	RAIN BIRD 1804-U-SAM-PRS U15 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
8 08HE-VAN, 10 10HE-VAN, 12 12HE-VAN, 15 15HE-VAN	RAIN BIRD 1804-U-SAM-PRS ADJ TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD XCZ-100-PRB-COM WIDE FLOW DRIP CONTROL KIT FOR COMMERCIAL APPLICATIONS. 1" BALL VALVE WITH 1" PESB VALVE AND 1" PRESSURE REGULATING 40PSI QUICK-CHECK BASKET FILTER. 0.3GPM TO 20GPM.
	AREA TO RECEIVE DRIP EMITTERS RAIN BIRD XB-PC SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS. FLOW RATES OF 0.5GPH=BLUE, 1.0GPH=BLACK, AND 2.0GPH=RED. COMES WITH A SELF-PIERCING BARB INLET X BARB OUTLET. Emitter Notes: 1.0 GPH emitters (1 assigned to each 1 Gal plant) 2.0 GPH emitters (2 assigned to each 5 Gal plant) 2.0 GPH emitters (4 assigned to each B&B, 2" Cal plant) 2.0 GPH emitters (4 assigned to each B&B, 6` HT MIN. plant)
	AREA TO RECEIVE DRIPLINE NETAFIM TLCV-04-18 TECHLINE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE. 0.4 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.
	RAIN BIRD 33-DRC 3/4" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, THERMOPLASTIC RUBBER COVER, DOUBLE TRACK KEY LUG, AND 2-PIECE BODY.
BF	BACKFLOW PREVENTER - ZURN 375XLVSR 1" INSTALL IN INSULATED VIT STRONGBOX ALUMINUM ENCLOSURE - SIZE TOFIT
C	RAIN BIRD ESP4ME3 WITH (3) ESP-SM3 13 STATION, HYBRID MODULAR OUTDOOR CONTROLLER. FOR RESIDENTIAL OR LIGHT COMMERCIAL USE. LNK WIFI MODULE AND FLOW SENSOR READY.
R	RAIN BIRD WR2-RFC WIRELESS RAIN AND FREEZE SENSOR COMBO, INCLUDES 1 RECEIVER AND 1 RAIN/FREEZE SENSOR TRANSMITTER.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40
	PIPE SLEEVE: PVC SCHEDULE 40 SIZE: TWICE (2X) DIAMETER OF PIPE WITHIN, MIN. 4". LIMIT ONE PIPE PER SLEEVE

Valve Callout



Scale: 1" = 10'-0"

0 5 10 20 30

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	yy/mm/dd	DESCRIPTION

Stamp

Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

OVERALL IRRIGATION PLAN

Drawing number

LI101

IRRIGATION NOTES

1. THIS DRAWING IS DIAGRAMMATIC AND IS INTENDED TO CONVEY THE GENERAL LAYOUT OF IRRIGATION SYSTEM COMPONENTS. ALL IRRIGATION EQUIPMENT SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE. LOCATE MAINLINE AND VALVES NEAR WALKS WHERE FEASIBLE.

2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE AT THE SITE PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES BETWEEN THE WATER PRESSURE SHOWN ON THE DRAWINGS AND ACTUAL PRESSURE READINGS AT THE POINT OF CONNECTION TO THE LANDSCAPE ARCHITECT. WATER PRESSURE AT THE POINT OF CONNECTION IS EXPECTED TO BE A MINIMUM OF **50-55** PSI. IN THE EVENT THAT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL STRUCTURES, SITE IMPROVEMENTS, WALKS, UTILITIES, AND GRADE CHANGES. COORDINATE LAYOUT OF THE IRRIGATION SYSTEM WITH OTHER TRADES SO THAT CONSTRUCTION CAN CONTINUE IN A NORMAL SEQUENCE OF EVENTS. ADJUSTMENTS MAY BE NECESSARY TO MAINTAIN FULL COVERAGE DEPENDING ON ACTUAL SITE CONDITIONS. ANY SIGNIFICANT CHANGES WILL REQUIRE WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO PLACEMENT. ALL MODIFICATIONS SHALL BE RECORDED ON 'AS-BUILT' DRAWINGS.

4. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM WHEN IT IS APPARENT IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADING DIFFERENCES MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

5. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT SITE CONDITIONS AND EXISTING IRRIGATION SYSTEM (IF ANY). IN THE EVENT THAT THE CONTRACTOR DAMAGES, DISPLACES OR OTHERWISE CAUSES OTHER TRADES WORK TO BE REINSTALLED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION AT HIS OWN EXPENSE.

6. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM PERFORMANCE. INSTALL HEADS WITH THE APPROPRIATE ARC AND RADIUS FOR THE AREA TO BE COVERED. ADJUST NOZZLES TO ELIMINATE OVERSPRAY ONTO WALKS, BUILDINGS, ETC.

7. IRRIGATION CONTROLLER SHALL BE GROUNDED PER ESTABLISHED ASIC GUIDELINES. MOUNT CONTROLLER BEHIND REAR WALL ENCLOSURE.

8. IRRIGATION CONTROL WIRES SHALL BE COLOR CODED WIRE FOR DIRECT BURIAL. COMMON, HOT, & SPARE WIRES SHALL BE 14 AWG (WHITE, RED & YELLOW RESPECTIVELY). FOR CONTROL WIRE RUNS EXCEEDING 3000 FEET OR COMMON WIRE RUNS EXCEEDING 1500 FEET, USE 12 AWG WIRE. CONTRACTOR SHALL RUN 1 DEDICATED SPARE WIRE 'HOMERUN' FROM CONTROLLER TO TERMINUS OF EACH WIRE LEG. ALL WIRE SPLICES TO BE LOCATED IN VALVE BOX. ALL WIRE CONNECTIONS SHALL BE 3M DBRY.

9. ALL MAINLINES, LATERAL LINES, AND CONTROL WIRES UNDER PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES.

10. ALL MAINLINE AND LATERAL LINE PIPE SHALL BE SCHEDULE 40 PVC. ALL LATERAL LINE FITTINGS SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED. ALL MAINLINE FITTINGS SHALL BE SCHEDULE 80 PVC.

11. CONTRACTOR SHALL USE WELD-ON P-70 PRIMER AND 711 LOW VOC CEMENT FOR ALL SOLVENT WELDED JOINTS.

12. ALL LINES SHALL SLOPE TO DRAIN. ADD MANUAL DRAINS AT ALL MAINLINE LOW POINTS AS NECESSARY FOR COMPLETE DRAINAGE OF THE ENTIRE SYSTEM. INDICATE ALL DRAIN LOCATIONS ON 'AS-BUILT' DRAWINGS.

13. ALL VALVE BOXES AND LIDS TO MATCH COLOR OF SURROUNDING AREA. VALVE BOXES AND LIDS IN LAWN AREAS ARE TO BE STANDARD GREEN. ALIGN VALVE BOXES PARALLEL WITH EDGE OF PAVEMENT/PLANTING BEDS. WHERE FEASIBLE, LOCATE THE EDGE OF VALVE BOX 12"-18" FROM EDGE OF PAVEMENT. ALL VALVE BOXES TO BE LOCATED WITHIN 3 FEET OF THE BUILDING.

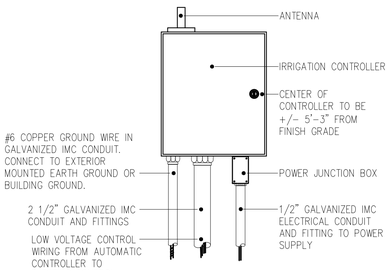
14. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE. HEADS SHALL BE LOCATED 6" AWAY FROM AND 1/4" BELOW ADJACENT CURBS, WALLS, AND WALKS. ALL HEADS LOCATED ADJACENT TO MOWSTRIPS SHALL BE LOCATED 1" AWAY AND 1/4" BELOW.

15. DRIP DISTRIBUTION TUBING TO BE BURIED BELOW MULCH AND STAKED AT MIN. 6' O.C. DRIP FITTINGS SHALL BE BARBED INSERT TYPE FITTINGS, COMPRESSION TYPE FITTINGS WILL NOT BE ACCEPTED. EMITTERS SHALL BE LOCATED ON UPHILL SIDE OF PLANTS. INSTALL DRIP FLUSH VALVE AT LOW POINT OF EACH DRIP ZONE AND AT THE END DRIP LINES.

16. GUARANTEE: ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF ACCEPTANCE AGAINST ALL DEFECTS IN MATERIAL, EQUIPMENT, AND WORKMANSHIP. GUARANTEE SHALL COVER REPAIR OF DAMAGE TO ANY PART OF THE PREMISES RESULTING FROM LEAKS OR OTHER DEFECTS IN MATERIAL, EQUIPMENT, OR WORKMANSHIP TO THE SATISFACTION OF THE OWNER. REPAIRS, IF REQUIRED, SHALL BE DONE PROMPTLY AND AT NO ADDITIONAL COST TO THE OWNER.

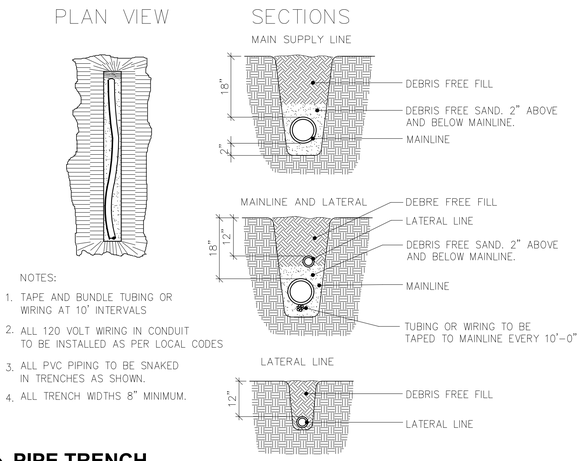
17. SEE DETAILS FOR ADDITIONAL INFORMATION. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

18. CONTRACTOR IS REMINDED THAT THE 10 FT WIDE STREET PARKWAY FRONTING THEIR LOT MUST BE INCLUDED IN THAT SPECIFIC LOTS PRIVATE IRRIGATION SYSTEM AND MUST BE IRRIGATED AND MAINTAINED AS PART OF THE LOT LANDSCAPING. THEREFORE, THE ASSOCIATION'S EXISTING NON-POTABLE WATER MAIN WILL SIMPLY BECOME A "PASS THROUGH" SYSTEM SERVING TO IRRIGATE OTHER AREAS ON EITHER SIDE OF THE LOT.



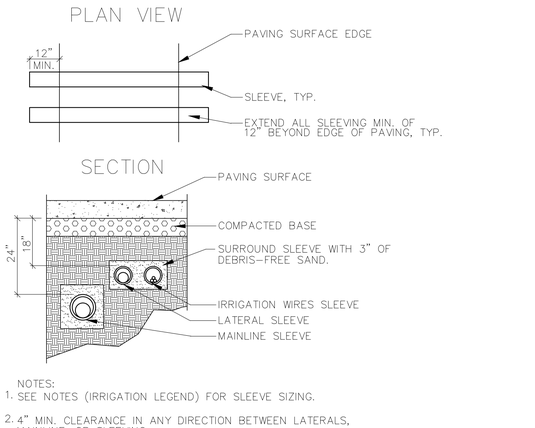
1 IRRIGATION CONTROLLER - WALL MOUNT

SCALE: NOT TO SCALE



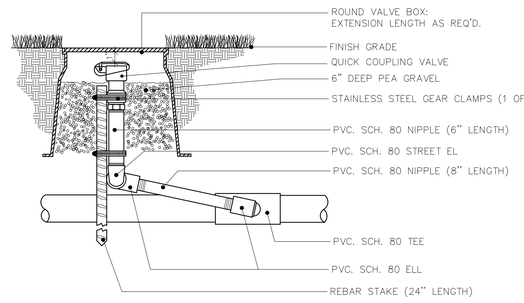
2 PIPE TRENCH

SCALE: NOT TO SCALE



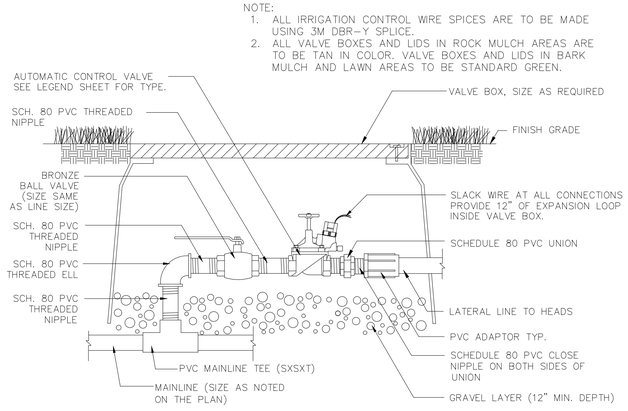
3 PIPE SLEEVE

SCALE: NOT TO SCALE



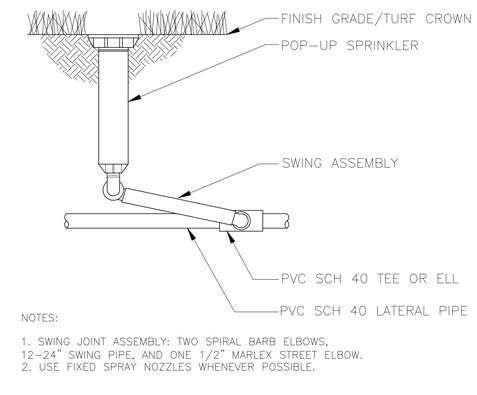
4 QUICK COUPLER

SCALE: NOT TO SCALE



5 IRRIGATION CONTROL VALVE

SCALE: NOT TO SCALE



6 POP-UP SPRAY/ROTARY

SCALE: NOT TO SCALE

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

(4) 2-8-021:070

MAKAHUENA
LOT 3 TMK No.
KOLOA KAUAI, HI

REVISIONS

NO.	symmetry	DESCRIPTION

Stamp

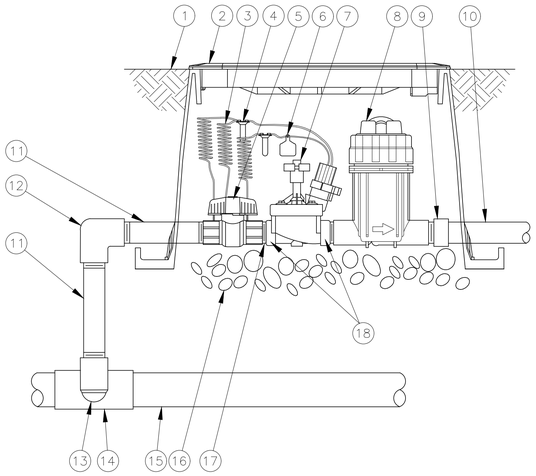
Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

IRRIGATION DETAILS

Drawing number

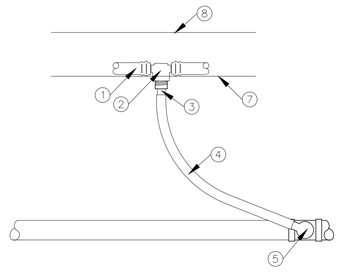
LI501



1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB–STD
3. 30–INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1 INCH BALL VALVE (INCLUDED IN XCZ–PRB–100 KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUDED IN XCZ–100–PRB–COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB–QKCHK–100 (INCLUDED IN XCZ–100–PRB–COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2–INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3–INCH MINIMUM DEPTH OF 3/4–INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ KIT)
18. ACTION MANIFOLD FITTINGS, (2 EA.) BUTTRESS NIPPLE 18011–X SPIGOT/SLIP ADAPTOR 18012–X

1 DRIP CONTROL ZONE KIT

SCALE: NOT TO SCALE

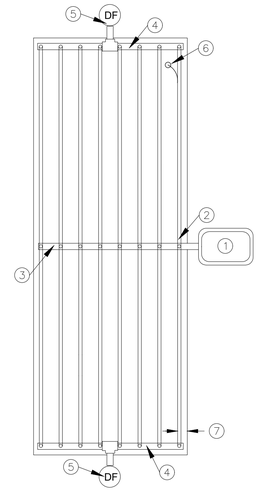


1. DRIP TUBING
2. 3/4" COMBINATION TEE
3. 3/4" MPT ADAPTER
4. FLEXIBLE POLY TUBING
5. PVC TEE OR ELBOW WITH 3/4" MPT ELBOW
6. PVC LATERAL LINE
7. FINISH GRADE
8. TOP OF MULCH

NOTE:
1. INSTALL A MINIMUM OF ONE PVC TO DRIP TUBING CONNECTION FOR EVERY 5 GPM OF FLOW.
2. CONSULT MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM RUN LENGTH.

2 PVC TO DRIP TUBING CONNECTION

SCALE: NOT TO SCALE

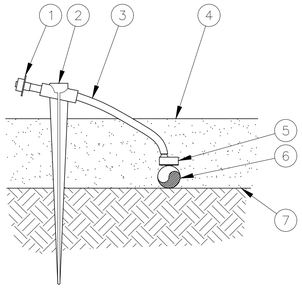


1. IRRIGATION CONTROL VALVE
2. PVC TO DRIP TUBING CONNECTION (SEE DETAIL)
3. PVC SUPPLY HEADER
4. PVC EXHAUST HEADER (DRIP TUBING MAY BE USED IN PLACE OF PVC FOR SUB HEADERS PER MANUFACTURER'S DESIGN GUIDELINES)
5. DRIP FLUSH VALVE (SEE DETAIL)
6. INDICATOR EMITTER – (1) 1 GPH EMITTER INTO IN–LINE DRIP TUBING
7. MAINTAIN 4" GAP BETWEEN DRIP TUBING AND PERIMETER OF IRRIGATED AREA

NOTE:
1. INSTALL A MINIMUM OF ONE PVC TO DRIP TUBING CONNECTION FOR EVERY 5 GPM OF FLOW.
2. CONSULT MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM RUN LENGTH.

3 CENTER FEED INLINE DRIP

SCALE: NOT TO SCALE

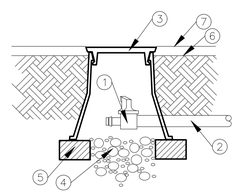


1. DIFFUSER BUG CAP: RAIN BIRD DBC–025
2. UNIVERSAL ¼" TUBING STAKE: RAIN BIRD TS–025
3. ¼" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)
4. TOP OF MULCH
5. SINGLE–OUTLET BARB INLET X BARB OUTLET EMITTER: RAIN BIRD XERI–BUG EMITTER
6. ½" POLYETHYLENE TUBING: RAIN BIRD XT–700 XERI–TUBE
7. FINISH GRADE

NOTES:
1. USE RAIN BIRD XERIMAN TOOL XM–TOOL TO INSERT EMITTER DIRECTLY INTO ½" POLYETHYLENE TUBING.

4 DRIP EMITTER

SCALE: NOT TO SCALE



1. DRIP FLUSH VALVE
2. DRIP TUBING
3. 10" ROUND VALVE BOX
4. GRAVEL SUMP – ONE CUBIC FOOT
5. BRICK SUPPORTS (2)
6. FINISH GRADE
7. TOP OF MULCH

NOTE:
1. INSTALL DRIP FLUSH VALVE(S) AT LOW POINT OF EACH DRIP ZONE AND AT END OF LINES.
2. ALL VALVE BOXES AND LIDS IN ROCK MULCH AREAS ARE TO BE TAN IN COLOR. VALVE BOXES AND LIDS IN BARK MULCH AND LAWN AREAS TO BE STANDARD GREEN.

5 DRIP FLUSH VALVE

SCALE: NOT TO SCALE

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	symmetry	DESCRIPTION

Stamp

Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

LANDSCAPE DETAILS

Drawing number

LI501

EXHIBIT J

Lot 3
1645 Pee rd
Koloa, HI 96756

Main Residence
Living Space 2375 SF/ Garage 850 SF/ Covered Lanais 604 SF/ Pool 486 SF

TOTAL: $ 2,301,480.00

Item	Description	Total
Soft Costs		$ 172,850.00
Plans and Engineering		$ 45,300.00
Permits and Fees		$ 16,600.00
Overhead	Office work and management.	$ 81,900.00
Other Soft Costs	Insurance, financing, etc.	$ 29,050.00
Hard Costs		$ 2,128,630.00
GRADING & BACKFILL	Post & Beam	$ 54,000.00
SEPTIC & PERCULATION		$ 49,800.00
CONCRETE WORK	Foundation, retaining walls, flatwork	$ 127,000.00
FRAMING MAT'LS		$ 225,600.00
FRAMING LABOR		$ 179,800.00
PLUMBING		$ 87,150.00
PLUMBING FIXTURES	Sinks, faucets, toilets, tubs	$ 24,900.00
ELECTRICAL	Includes Low Voltage	$ 91,300.00
ELECTRICAL FIXTURES	Can lights, pendants, sconces	$ 24,900.00
HVAC		$ 58,100.00
ROOFING	Standing seam and membrane	$ 91,600.00
SIDING MAT'LS	Vertical Lap siding	$ 51,500.00
EXTERIOR DOORS	Bi-folds, multi-slides, and hinged doors	$ 113,200.00
INTERIOR DOORS	Stain grade	$ 22,300.00
WINDOWS		$ 69,500.00
GARAGE DOORS		$ 11,500.00
INSULATION & DRYWALL	Smooth finish	$ 59,500.00
RAILING		$ 40,500.00
FLOORING	Hardwood and Tile	$ 62,000.00
FINISH CARPENTRY		$ 125,010.00
CABINETS	Kitchen, laundry, bathrooms	$ 65,800.00
COUNTERTOPS	Quartz	$ 35,200.00
PAINT		$ 73,500.00
GLASS & HARDWARE	Shower Enclosures, mirrors, etc.	$ 25,500.00
WINDOW COVERINGS		$ 16,550.00
GUTTERS		$ 18,500.00
APPLIANCES	Stainless Steel	$ 49,000.00

EXHIBIT J

LANDSCAPE		$ 93,000.00
POOL	Infinity Edge and spa	$ 125,000.00
FENCE & STONEWORK		$ 16,600.00
DUMPSTER		$ 6,640.00
CONSTRUCTION TOILET		$ 2,490.00
SITE CLEANUP		$ 4,150.00
UTILITIES		$ 3,320.00
MISC SHIPPING		$ 20,900.00
MAT'L STORAGE		$ 3,320.00
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -

EXHIBIT K



EXHIBIT K



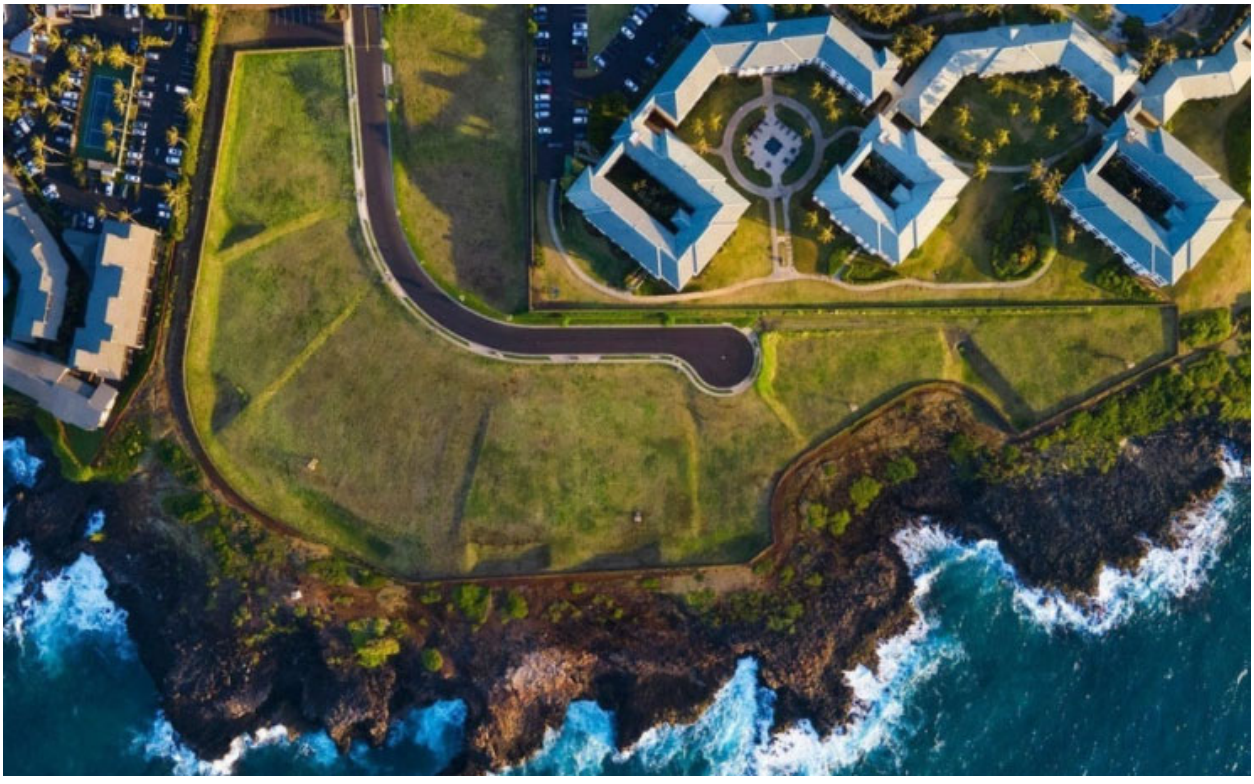


EXHIBIT L

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona, Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

December 2, 2012 Project 810

Pua Aiu, Ph.D., SHPD Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, Hawai'i 96707

Subject: Final Archaeological Inventory Survey for a 13.6-acre Project Area
Weliweli Ahupua'a, Koloa District, Island of Kauai
TMK: (4) 2-8-021:041
(A.E. Haun, D. Henry and S. Kailihiwa 2011, Report 810-042611)

Dear Dr. Aiu:

The subject final archaeological inventory survey (AIS) is enclosed. The draft AIS was revised based on Division review comments dated August 27, 2012 (LOG NO: 2011.1830; DOC NO: 1208SL18). The 12 review comments listed in the ATTACHMENT to the review letter are listed below followed by our response and associated revisions.

Project Area Description

1. **Revise (page 1) from "the project are varies" to "the project area varies".**
Response: Corrected

2. **Revise Fig 1 caption to include map date.**
Response: Revised as requested, listing map date of 1996

Previous Archaeological Research

3. **Revise Thrum (1907) to Thrum (1906).**
Response: Revised as requested

4. **Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".**
Response: Revised to read, "He also identified a series of walls designated as".

5. **Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".**
Response: Revised as requested

6. **Revise Table 1- to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.**
Response: Revised as requested. Date of Hill *et al.* changed from 1996 to 2005, which is the correct date

7. **Revise Fig 8 - to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005**
Response: Revised as requested

EXHIBIT L

Findings

8. **Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19-1ast 4 paragraphs; page 24 - 3rd paragraph; page 26-1st paragraph (see also __ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.**
Response: Revised as requested

Subsurface Testing

9. **Revise (page 57) from "Five of the units were located" to "Four of the units were located".**
Response: Revised as requested

10. **Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks - i.e., layers I and II should both apply to TU-18.**
Response: Revised as requested

11. **Revise (page 61) Fig 64 stratum I label in TU-14.**
Response: Revised as requested

References Cited

12. **Revise - Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907.* Honolulu.**

Response: Firor 1992 changed to Firor & Rosendahl 1992 in Table 1, Figure 8 and references
Firor et al. 1991 added to references
Knutson 1914 changed to 1913 on page 7 – correct in references
Kamakau 1992 added to references
Thrum 1906 citation modified in references

If you have any further questions, or require any additional information, please contact me at (808) 325-2402.

Sincerely,

Alan E. Haun, Ph.D.
Principal Investigator

Encl. Report, CD, Copy of Review Letter

cc: CIRI Land Development Co.

810 Rec'd 9/1/12

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

PAUL J. CONROY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
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

HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

601 Kamokila Boulevard, Suite 555
Kapolei, HI 96806

August 27, 2012

Dr. Alan E. Haun, Principal Investigator
Haun &Associates
73-1168 Kahuna A'o Road
Kailua-Kona, Hawaii 96740

LOG NO: 2011.1830
DOC NO: 1208SL18
Archaeology

Dear Dr. Haun:

SUBJECT: **Chapter 6E-42 Historic Preservation Review -**
Archaeological Inventory Survey Report for 13.6 Acres, Makahuena Point
Weliweli Ahupua'a, Kōloa District, Island of Kaua'i
TMK: (4) 2-8-021:041

Thank you for the opportunity to review the draft report titled *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011). This document was received by our office on June 6, 2011; we apologize for the delayed review and thank you for your patience. This report presents the findings of an archeological inventory survey that was conducted on a 13.6-acre parcel and involved a 100% pedestrian surface survey. Sites were defined as clusters of features less than 15 m apart. The exception was a site designation applied to a series of widely scattered, nearly identical small concrete pads. The archaeological survey identified 18 sites comprised of a total of 128 features. All of the sites and features are identified as remnants of US federal government navigation-related infrastructure. The majority of the remains are associated with the former US Coast Guard Long Range Navigation (LORAN) station that operated at the point from 1951 to 1979. The documented features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following: ditch, road, stairs, utility box, and wall slab. Subsurface testing consisted of the excavation of 20 test units. No intact subsurface cultural deposits were identified during the testing.

The 18 sites are assessed as significant solely under Hawaii Register of Historic Places (HRHP) Criterion "d" for their information content, and are recommended as having been adequately documented. No further work or preservation is recommended. Although no subsurface cultural deposits were identified during subsurface testing, archaeological monitoring is recommended for future ground-disturbing activities because significant deposits and burials were found on the adjacent property. SHPD agrees with the proposed significance assessments and treatment recommendations.

The archaeological inventory survey report provides an excellent discussion of field methods, archival and historical background, previous archaeological investigations, and the project findings and sites. This report meets the requirements of Hawaii Administrative Rule 13-276-5 and is accepted by SHPD with the understanding that **some minor revisions are made** in the final document (see attachment). Please make these corrections and send one hardcopy of the document, clearly marked **FINAL**, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. Please contact Susan A. Lebo at (808) 692-8019 or Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Theresa K. Donham
Archaeology Branch Chief

ATTACHMENT

Comments and Questions: *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011).

Project Area Description

(1) Revise (page 1) from "the project are varies" to "the project area varies".
(2) Revise Fig 1 caption to include map date.

Previous Archaeological Research

(3) Revise Thrum (1907) to Thrum (1906).
(4) Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".
(5) Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".
(6) Revise Table 1 – to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.
(7) Revise Fig 8 – to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005.

Findings

(8) Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19- last 4 paragraphs; page 24 – 3rd pargagraph; page 26-1st paragraph (see also (__ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.

Subsurface Testing

(9) Revise (page 57) from "Five of the units were located" to "Four of the units were located".
(10) Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks – i.e., layers I and II should both apply to TU 18.
(11) Revise (page 61) Fig 64 stratum I label in TU-14.

References Cited

(12) Revise – Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907*. Honolulu.

Report 810-111312

FINAL

ARCHAEOLOGICAL INVENTORY SURVEY

TMK: (4) 2-8-021:041

MAKAHUENA POINT, WELIWELI AHUPUA'A

KŌLOA DISTRICT, ISLAND OF KAUA'I

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

FINAL

ARCHAEOLOGICAL INVENTORY SURVEY

TMK: (4) 2-8-021:041

MAKAHUENA POINT, WELIWELI AHUPUA'A

KŌLOA DISTRICT, ISLAND OF KAUA'I

By:

Alan E. Haun, Ph.D.

Dave Henry, B.S.

and

Solomon H. Kailihiwa, III, B.A.

Prepared for:

CIRI Land Development Company
2525 C Street, Suite 500
Anchorage, Alaska 99503

June 2011
(Revised November 2012)

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

SUMMARY

At the request of CIRI Land Development Company, Haun & Associates conducted an archaeological inventory survey of the 13.6-acre TMK: (4) 2-8-021:041 located in Weliweli Ahupua'a, Kōloa District, Island of Kaua'i. The objective of the survey was to satisfy historic preservation regulatory review requirements of the Department of Land and Natural Resources-Historic Preservation Division (DLNR-SHPD), as contained within Hawaii Administrative Rules, Title 13, DLNR, Subtitle 13, State Historic Preservation Rules.

The archaeological survey identified 18 sites with 128 features. The 128 features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following; ditch, road, stairs, utility box and walled slab. Feature function includes utility (n=79), foundation (31), marker (5), transportation (4), boundary (1), disposal (1), recreation (1), soil retention (1), water diversion (1) and indeterminate (4). Subsurface testing was undertaken during the project, consisting of the excavation of twenty test units. No intact subsurface cultural deposits were encountered during the subsurface testing.

All of the documented remains are the remnants of U.S. federal government navigation-related infrastructure in operation for over 100 years. A navigation aid was established at Makahuena Point in 1908 and continues to function today. The majority of the remains are associated with the former U.S. Coast Guard Long Range Navigation (LORAN) station that was in operation from 1951 until 1979.

The 18 sites present within the parcel are assessed as significant solely for their information content. These sites have been adequately documented and no further work or preservation is recommended. Although extensive subsurface testing did not identify subsurface cultural deposits or burials, it is recommended that any future development-related land disturbance be archaeologically monitored during the initial site work because significant deposits and burials were found on the adjacent property. The monitoring would be guided by a monitoring plan prepared for DLNR-SHPD review and approval.

CONTENTS

Introduction....1

Scope of Work....1

Project Area Description....1

Field Methods....4

Archaeological and Historical Background....6

Historical Documentary Research....6

Previous Archaeological Work....13

Project Expectations....18

Findings....19

Site Descriptions....19

Subsurface Testing....57

Conclusion....64

Discussion....64

Significance Assessments....68

Recommended Treatments....69

References....70

ILLUSTRATIONS

Figure 1. Portion of 1996 USGS Koloa Quadrangle showing Project Area....2

Figure 2. Tax Map Key 2-8-21 showing Project Area....3

Figure 3. Project Area Overview....5

Figure 4. Project Area Overview....5

Figure 5. 1935 Map of Kōloa Plantation....10

Figure 6. 1961 Photograph of LORAN Station Facility....12

Figure 7. 1966 Photograph of LORAN Station Staff and Adjacent Property....12

Figure 8. Previous Archaeological Work....14

Figure 9. The Basic Schematic of the Kōloa Field System....16

Figure 10. Raised *'auwai* in the Kōloa Field System....16

Figure 11. Site Location Map....20

Figure 12. Plan Map of Site 2130 Complex....22

Figure 13. Plan Map of Site 2130, Features A-F....23

Figure 14. Site 2130, Feature G Staircase....24

Figure 15. Site 2130, Feature H Road and Feature I Ditch....25

Figure 16. Site 2130, Feature J Path....25

ILLUSTRATIONS (cont.)

Figure 17. Site 2130, Feature K Wall....26
Figure 18. Site 2130, Feature L Path....27
Figure 19. Site 2130, Feature M Concrete Pad with Vertical Poles....27
Figure 20. Site 2130, Feature N Concrete Box....28
Figure 21. Site 2130, Feature O Walled Concrete Slab....28
Figure 22. 1961 Photograph of LORAN Station Showing Identified Features....30
Figure 23. Site 2131, Feature A Concrete and Stone Block....31
Figure 24. Site 2131, Feature B Concrete Blocks....32
Figure 25. Site 2131, Feature C Terrace....32
Figure 26. Site 2131, Feature D Terrace....33
Figure 27. Site 2131, Feature E Concrete Pad and Feature F Artifact Scatter....33
Figure 28. Site 2132, Feature B Concrete and Stone Block....35
Figure 29. Site 2133, Feature A and B Concrete Pads....35
Figure 30. Site 2133, Feature C Concrete Pad....36
Figure 31. Site 2134 Concrete Post....36
Figure 32. Site 2135, Feature A Concrete Block....38
Figure 33. Site 2135, Feature B Concrete Pad with Inscription....38
Figure 34. Site 2135, Feature C Artifact Scatter....39
Figure 35. Site 2135, Feature D Concrete Pad with Inscription....39
Figure 36. Site 2136, Feature A Concrete Pad....40
Figure 37. Site 2136, Feature B Artifact Scatter....40
Figure 38. Site 2136, Feature B Engine....41
Figure 39. Site 2137, Feature A Concrete Block....41
Figure 40. Site 2137, Feature B Concrete Pad with Inscription....43
Figure 41. Site 2138 Jumbled Concrete Blocks....43
Figure 42. Site 2139, Feature A Concrete Post....44
Figure 43. Site 2139, Feature B Concrete Block....44
Figure 44. Site 2139, Feature C Concrete Pad....46
Figure 45. Site 2139, Feature D Concrete and Metal Post....46
Figure 46. Site 2140 Concrete Block....47
Figure 47. Site 2141 Concrete Pad....47
Figure 48. Site 2142 Concrete Pad....48
Figure 49. Site 2143, Feature A Concrete Slab....48
Figure 50. Site 2143, Feature B Retaining Wall....50

ILLUSTRATIONS (cont.)

Figure 51. Site 2143, Feature C Concrete Pad.....50
Figure 52. Site 2144, Feature A Concrete Block.....51
Figure 53. Site 2144, Feature B Concrete Pad.....51
Figure 54. Site 2144, Features C, D and E Concrete Pads.....52
Figure 55. Site 2144, Feature D Concrete Pad with Inscription.....52
Figure 56. Site 2145, Feature A and B Concrete Pads.....54
Figure 57. Site 2146, Feature A Concrete Block.....54
Figure 58. Site 2146, Feature B Concrete Pad.....55
Figure 59. Site 2147 Concrete Pads.....55
Figure 60. Concrete Pad at Site 2147.....56
Figure 61. Concrete Pad at Site 2147.....56
Figure 62. West Face Profiles of TUs 1-5.....59
Figure 63. West Face Profiles of TUs 6-10.....60
Figure 64. West Face Profiles of TUs 11-15.....61
Figure 65. West Face Profiles of TUs 16-20.....62
Figure 66. Post-excavation of TU-3.....63
Figure 67. Post-excavation of TU-6.....63
Figure 68. Distribution of Associates Features within Project Area.....67

TABLES

Table 1. Summary of Previous Archaeological Research.....15
Table 2. Summary of Identified Sites.....21
Table 3. Summary of Test Unit Stratigraphy.....58
Table 4. Summary of Concrete Objects.....65

INTRODUCTION

At the request of CIRI Land Development Company, Haun & Associates has prepared an archaeological inventory survey of the 13.6-acre TMK: (4) 2-8-021:041 located in Weliweli Ahupua'a, Kōloa District, Island of Kaua'i (*Figures 1* and *2*). The objective of the survey was to satisfy historic preservation regulatory review requirements of the Department of Land and Natural Resources-Historic Preservation Division (DLNR-SHPD), as contained within Hawaii Administrative Rules, Title 13, DLNR, Subtitle 13, State Historic Preservation Rules (2003).

The survey fieldwork was conducted April 3-7, 2011 by Project Supervisors Solomon and Juliana Kailihiwa, B.A., under the direction of Dr. Alan Haun. The fieldwork required 160 person hours to complete. Described in this final report are the project scope of work, field methods, background information, survey findings, and significance assessments of the sites with recommended further treatments.

Scope of Work

Based on DLNR-SHPD rules for inventory surveys, the following specific tasks were determined to constitute an appropriate scope of work for the project:

1. Conduct background review and research of existing archaeological and historical documentary literature relating to the project area and its immediate vicinity--including examination of Land Commission Awards, *ahupua'a* records, historic maps, archival materials, archaeological reports, and other historical sources;

2. Conduct a high intensity, 100% pedestrian survey coverage of the project area;

3. Conduct detailed recording of all potentially significant sites including scale plan drawings, written descriptions, and photographs, as appropriate;

4. Conduct subsurface testing (manual excavation) at selected sites as necessary to determine site function and elsewhere to test for buried cultural deposits;

5. Analyze background research and field data; and

6. Prepare and submit Final Report.

Project Area Description

The project area is an irregularly-shaped 13.6-acre parcel located in coastal Weliweli Ahupua'a at Makahuena Point. It is bordered by the coastline along the south and by resort developments to the west (Makahuena at Po'ipū) and northeast (The Point at Po'ipū). Pe'e Road parallels the north project boundary in the western portion. The project area varies in elevation from c. 10 to 45 ft above sea level. Rainfall in the project area vicinity ranges from 30 to 40 inches per year (Juvik and Juvik 1998:56).

There is a large oval-shaped depression present in the western portion of the project area. This depression is 138.0 m long (north-northwest by south-southeast), 82.0 m wide and c. 10.0 m depth below the surrounding ground surface. This depression occupies c. 1.99-acres or 14.6% of the total project area. This depression appears to represent a collapsed volcanic crater. A modern navigational aid consisting of an automated light is located in the southwestern coastal portion of the project area within a separate tax map key parcel (2-8-021:43 – see *Figure 2*).



Figure 1. Portion of 1996 USGS Koloa Quadrangle showing Project Area

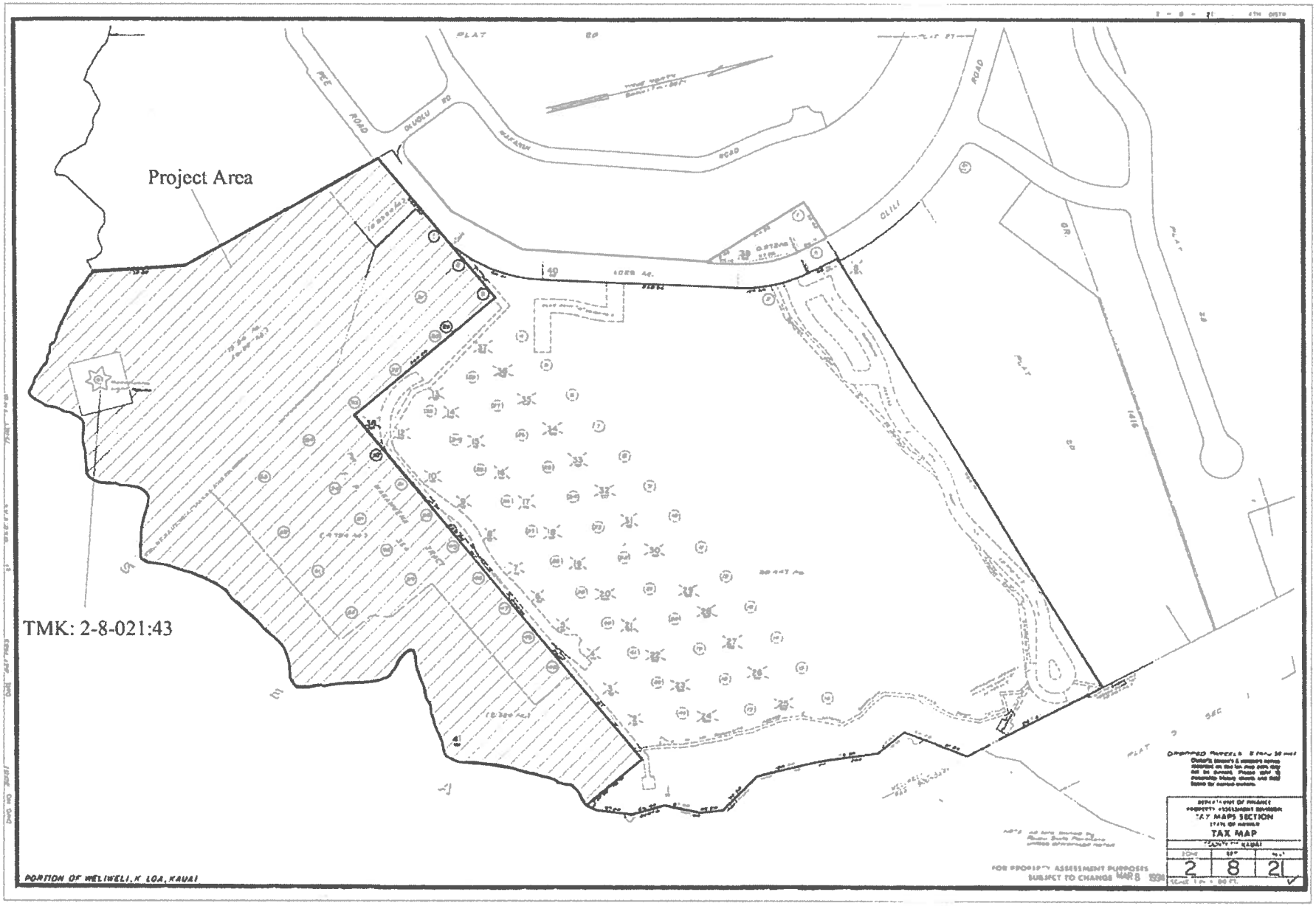


Figure 2. Tax Map Key 2-8-21 showing Project Area

The vegetation within the depression portion of the project area is comprised of *koa haole* (*Leucaena glauca*), bougainvillea (*Boerhavia spectabilis* Willd.), *panini* cactus (*Opuntia ficus-indica*), plumera (*Plumeria acuminata* Ait.), lantana (*Lantana camara* L.) and grasses and vines. There is a line of ironwood trees (*Casuarine equisetifolia* L.) present along the northern project boundary paralleling Pe'e Road. The vegetation throughout the remainder of the parcel primarily consists of beach *naupaka* (*naupaka-kahakai – Scaevola sericea* Vahl).

The soil through the inland portion of the parcel is comprised of Koloa stony silty clay on 15-25% slopes. This soil has a medium runoff potential and a moderate to severe erosion hazard. It developed in material weathered from basic igneous rock with multiple layers of silty clay to depths of 20 inches over pahoehoe bedrock (Foote et al. 1972:74). It is classified as suitable for irrigated sugarcane, pasture, woodland and wildlife habitat. The coastal portions of the parcel are classified as Rock land, which is defined by Foote et al. as, "areas where exposed bedrock covers more than 90 percent of surface (1972:119). Project area overviews are presented in *Figures 3* and *4*.

Field Methods

The project area was subjected to a 100% surface examination with surveyors spaced at 10 meter intervals. Ground surface visibility was fair within the more vegetated depression portion of the project area, although was excellent throughout the remainder of the parcel.

The identified sites and features were subjected to varying levels of documentation. The length, width, height and orientation of the majority of the concrete features within the parcel were obtained using hand tapes and compasses. The large complex in the northwestern portion of the project area was subjected to detailed recording consisting of the completion of a scaled plan map and standardized site/feature forms. All sites and features were photographed.

The location of the sites and features within the project area were plotted on a scaled project area map with the aid of hand-held Garmin Global Positioning System (GPS) Model 60 devices using the NAD 83 datum. The accuracy of these GPS devices for a single point is +/- 3-5 m. This accuracy is increased to less than c. 2-3 meters by taking multiple points including property corners and overlying the plotted points on a scaled map using AutoCAD software.

The sites, as defined for this study, consist of features situated less than 15 m apart. Features located more than 15 m apart were assigned separate site designations. The only exception to the 15 m distance threshold was a site designation applied to a series of widely scattered, nearly identical small concrete pads that were poured directly onto the exposed, coastal bedrock surface.

Subsurface testing consisted of the excavation of twenty 0.5 m by 0.5 m test units in the inland portions of the project area, inland of coastal lava areas. The units were excavated in arbitrary levels within stratigraphic layers and were terminated on bedrock or within an overlying, culturally sterile saprolitic clay deposit. Standardized excavation records were prepared after the completion of each stratigraphic layer. The soil removed during excavation was screened through ¼ "mesh. Portable remains collected were placed in paper bags labeled with the appropriate provenience information. Following the excavation, a section drawing depicting the stratigraphy was prepared and post-excavation photographs were taken. Cultural remains recovered during testing were transported to Haun & Associates' office for analysis.



Figure 3. Project Area Overview, view to southeast



Figure 4. Project Area Overview, view to northeast

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Historical Documentary Research

Weliweli Ahupua'a is situated in Kōloa District on Kaua'i's southern coast. It is bordered by Kōloa Ahupua'a to the east and Pā'ā Ahupua'a to the west. The word *weliweli* is a reduplication of *weli* that means "violent, dreadful, horrible, fearful, ferocious; revered; respectful, as of the chief; [or] full of fear" depending upon the context (Pukui and Elbert 1986:384). Relatively little legendary and historical information about Weliweli Ahupua'a is available.

One specific mention of Weliweli concerns the legendary gourd of La'amaomao, a calabash that the winds of Hawai'i were stored in. This calabash belonged to Paka'a, a servant of Keawenuiaumi, the son of 'Umi and a ruling chief of Hawai'i Island. The gourd was named after Paka'a's mother, La'amaomao, who had the ability to control the winds because the winds listened to her (Fornander 1918:72). Kuapaka'a, son of Paka'a, called to all of the winds from all of the islands when he first meets his father's master, Keawenuiaumi, to discredit the advisers that have replaced Paka'a at the king's side. In his chant to the winds, Kuapaka'a named the wind that blows through Weliweli, *Kuiamanini* (Fornander 1918:96).

Additional information relating to Weliweli is derived from the history of Kōloa District, formerly known as Kona District, and the adjoining *ahupua'a* of Kōloa and Pā'ā. Kōloa is the closest part of Kaua'i to O'ahu and was a desirable canoe landing to mount an invasion of Kaua'i. Westervelt (1917) records the story of a late 13th Century Hawai'i Island chief (*ali'i*) named Kalauniuohua, who sought to unite all of the islands under his rule. Before undertaking his conquest of the islands, he attempted to sacrifice a prophetess by the name of Waahia (*ibid.*). Waahia came to the chief and told him how to kill her so that her sacrifice would insure success in his campaign.

> You may try everywhere to kill me and I shall not die. There is only one place. This is the temple of Keeku. Burn that temple in the fire then I shall die. When you burn that place you stay quietly in your house from morning till night. Do not go outside. If you hear the outcry of the people seeing strange signs in the sky, do not go out to see. Do not open the doors of your house. If you do these things you shall not live. Wait patiently in your house until night comes, then open the door. If you obey perfectly you shall have all the islands even to Kauai. If not, the gods shall leave you. The name of my god is Kane-opepe-nui-o-Alakai [The great bundled-up man of Alakai]. He is willing that I should die (Westervelt 1917).

Kalauniuohua followed Waahia's instructions and stayed inside his house after she was thrown into the temple of Keeku and burned. The people that witnessed Waahia's death saw various signs rise up out of her funeral pyre: two roosters fighting, a pig, scintillating thunder clouds that changed color and finally two large black clouds that turned into giant *alae* birds [*Gallinula chloropus sandvicensis*] fighting each other. The chief wanted to see what has happening outside of his house. Lightning was striking wherever the birds' feet touched the ground and the people were shouting loudly at this spectacle. It was near sundown when Kalauniuohua could no longer help himself and made a hole in the wall of his house with his right hand. The birds flew away as the chief heard a voice say to him, "You have kept from sunrise to near sundown. Then you lost the time until night. You shall win for a time and then lose" (Westervelt 1917).

Kalauniuohua went on to conquer Maui, Molokai, and O'ahu. He took the rulers of these islands as prisoners and took them with him to conquer Kaua'i. They landed at Kōloa and were defeated by the Kaua'i ruler, Kukona in the battle named Ka-wele-wele or "the battle after refusing to fulfill the command of the gods" (*ibid.*). Kukona freed the chiefs from Maui, Molokai and O'ahu, and took Kalauniuohua as a prisoner. Kalauniuohua was eventually freed. Kukona gifted the islands of Hawai'i, Maui, Molokai, and O'ahu to the chief of Maui and kept the other three rulers on Kaua'i, where, Westervelt says, "they were

lost or mixed with the people, their followers from the other islands changing even the language of old Kauai so that it became more like the speech of the other islands" (*ibid.*).

According to a story told to Augustus Knudsen (1913) by a man named Puako, Kamehameha I was also defeated at the same site as Kalauniuohua by the forces of Kaumuali'i. Knudsen recounts that in 1893 he met with two or three of men from Kaua'i that were alive during this battle between Kamehameha's forces and the people of Kaua'i.

> But in 1893 I had two or three of the old men gathered around telling stories of ancient Hawaii, and again they told me the story so that I got it direct from the lips of men who, while not participating in the battle, had participated in the excitement of the day and the thousands giving offerings in the temples when next day the victory was celebrated (Knudsen 1913:137).

Puako describes that upon hearing of Kamehameha's conquest of O'ahu the people of Kaua'i were worried about an impending attack from Kamehameha. Warriors were posted to keep watch for Kamehameha's invasion force which they expected to land "on the Kona coast, where there was smooth sea for the landing and where, in case of defeat, the canoes putting to sea would not have to battle with wind and wave" (*ibid.*:137-138). Kamehameha's invasion force was observed in the early hours of the morning before dawn and the word was spread around the Island of Kaua'i. The warriors of Kaua'i were then assembled to meet Kamehameha's forces before the sun came up.

> But in the gloom of the darkness before dawn, the chiefs, gathered at Koloa, decided that they had a sufficient force, for the warriors of Weliweli had reconnoitered and again reported that there were probably not more than six thousand warriors on the beach. And so the march was started and before dawn the attack made on the resting warriors, who had dragged the their canoes above the reach of the high surf (*ibid:* 138).

The forces of Kaua'i enveloped the invading force and handily routed the forces of Kamehameha. Puako even states that the forces of Kaua'i came very close to capturing Kamehameha's feathered image of his war god, which Puako named as Kalaipāhoa. "Kalaipahoa, the war god that carried the standards of Kamehameha triumphantly through the battles of his conquest of the whole archipelago, was for the first time in danger. To lose that was to lose the kingdom; and probably the dynast was then in peril" (ibid: 139). Kamehameha's casualties for this battle included one half of his canoe fleet either destroyed or captured, 4000 men dead on the field and 543 men taken as prisoners of war (*ibid.*:139, 140).

Stokes (1946) questions the veracity Puako's story recorded by Knudsen. He asserts that Kaumuali'i would not have been in charge of Kaua'i when Kamehameha's aborted attempt on the island occurred. According to Joesting (1987) Keawe and Kaumuali'i were battling over control for the island at the time of Kamehameha's first attempt to land on Kaua'i.

> Strife-torn Kauai could have offered little resistance to the invasion armada of Kamehameha. Keawe had declared to Captain Bishop that he would join the forces of Kamehameha if he had not defeated Kaumualii by the time the invasion came, and in April 1796 the two were still battling for control of Kauai. If it had not been for the winds and currents of the wild Kaieie Waho Channel, Kauai would certainly have fallen to the forces of Kamehameha (Joesting 1987:59-60).

The second point that Stokes makes is that Puako incorrectly names Kamehameha's war god as Kālaipāhoa (Stokes 1946). Kamehameha's war god was an *akua hulu* (feathered god) named Kukailimoku that was bequeathed to him by his uncle, Kalaniopu'u, the *mo'i* (ruling chief) of Hawai'i Island, on Kalaniopu'u's death bed. Kālaipāhoa was Kamehameha's poison god cut from a *kālaipāhoa* tree (*Alphitonia ponderosa*) on Molokai (Westervelt 1916:74). Kālaipāhoa was a carved wooden image that "had an elliptical cavity in its back, extending from neck to buttocks, to hold poison" (Krauss 1993:114).

Stokes also argues that Puako was most likely relating the story of Kalauniuohua's defeat rather than Kamehameha's defeat (Stokes 1946:43). Stokes adds:

> Nevertheless the improbability or impossibility of the affair is clearly shown by the journal entries of foreigners recorded at Kauai immediately before and after the time of the alleged event. Information gathered by reliable authorities more than a century ago proves that the raconteur was ignorant of the name of the chief, and of the current history and native customs of the time in which he claimed to have lived, and implies that then he was not even born" (Stokes1946:45).

According to the dates and ages given by Knudsen for his informant, Puako, he would have been well over 100 years of age. Kamehameha's first attempt at invading Kaua'i took place in the spring of 1796. Puako claimed to have been 12 years of age at that time when he witnessed the events described. Knudsen recorded the story told to him by Puako in 1893, which means that Puako had to be the unlikely age of 109 when he told Knudsen his story. According to Kamakau (1992), Kamehameha's invading forces never reached Kaua'i, thwarted by rough seas in the channel between the island and 'Oahu that swamped many canoes forcing them to retreat.

In the summer of 1867, Sanford B. Dole wrote a letter to Jeffries Wyman, Hersey Professor of Anatomy at Harvard College detailing the large number human remains that could be found at Keoneloa (Wyman 1868). Dole mentions that the remains could be the result of a large battle that took place at this location and describes events similar to that of Puako's story. He has no specifics such as where the invading army was from or who was its leader because the people from the area did not know. Dole also states that due to the large number of infant burials associated with the area that these remains could be from a plague that swept through the islands after initial contact.

> *Dear Sir*:
>
> On the Southern shore of the Island of Kauai, for about four miles, there is a series of low, volcanic hills facing the sea, with precipices varying in height from twenty to sixty feet. Between these hills are several low sand beaches, from which the sand is ever carried inland by the trades. The windward slopes of these hills are covered with white sand of varying depth.
>
> Over this whole extent of sand beaches and hills, human bones are thickly scattered, and here it was that I collected the skulls. Ten years ago they were much more numerous than now. The wind is constantly uncovering the skeletons, and, when exposed, they are quickly destroyed by the weather and the feet of cattle. At the time I speak of, it was easy to find perfect skeletons in the exact position in which they were buried. This is now impossible, and even perfect crania are becoming more scarce with every year. In olden times the natives often made use of the soft sand-banks for sepulture, but the immense number that was buried here forbids the idea that it was any common burying place. The present generations of natives know nothing definite on the subject. One of their traditions, as near as I can remember, is, that a fight between two large fleets of canoes took place off the coast, and that the defeated party was driven ashore at this place, and many of them killed. A second tradition is this; a tribe passing along the coast in canoes, and having landed in a secluded little cove which is now pointed out, to bathe and refresh themselves, a rival tribe charged down from the hills around and cut off almost the whole party.
>
> Those who have studied the subject, I think, give to the great pestilence, *Mai Ahulau*, which raged through the islands soon after their discovery, the credit of peopling this and other similar graveyards. Infant skulls are sometimes found, and also skulls that appear as if they had been pierced by spears, or fractured with clubs. The skulls which I collected for you were some of them above, and some below, the surface of the sand.
>
> Yours Truly,
> S.B. Dole. (*ibid*: 447, 450)

Wyman analyzed the crania that he received from Dole. He concluded that there was no evidence of death from violent trauma and that some of the crania showed signs of periosteal inflammation giving credence to the cause of death being from disease.

> The collection is the more valuable, from the fact that the crania were all obtained from the same place, and from an island not commonly mentioned in the catalogues. Dr. J. Barnard Davis, in his Thesaurus Craniorum, out of one hundred and thirty-nine Kanaka skulls, does not mention one from Kauai. They are nearly all adult, No. 13 being the only one belonging to a child. As far as they go, they do not afford evidence of having been killed in battle, as they bear no marks of injuries inflicted by weapons. A few show signs of disease, as if they had been the seat of periosteal inflammation (*ibid*: 450).

The first historical documentation of the Island of Kaua'i was by Captain James Cook during his voyage to the Pacific Ocean to determine the practicability of a northern passage between Europe and Asia (Cook 1784). Cook anchored and went ashore at the southern end of Kaua'i and describes his admiration for the fields of taro, sweet potato, sugar and banana. Cook also notes that while there is an abundance of food being grown, the area is capable of sustaining a much larger population.

> What we saw of their agriculture, furnished sufficient proofs that they are not novices in that art. The vale ground has already been mentioned as one continued plantation of *taro*, and a few other things, which have all the appearance of being well attended to. The potatoe fields, and spots of sugar-cane, or plantains, on the higher grounds, are planted with the same regularity; and always in some determinate figure; generally as a square or oblong; but neither these nor the others, are inclosed with any kind of fence, unless we reckon the ditches in the low grounds such; which, it is more probable, are intended to convey water to the *taro*. The great quantity and goodness of these articles may also, perhaps, be as much attributed to skillful culture, as to natural fertility of soil, which seems better adapted to them than to bread-fruit and cocoa-nut trees; the few of which we saw of those latter not being in a thriving state, which will sufficiently account for the preference given to the culture of the other article, though more labour be required to produce them. But notwithstanding this skill in agriculture, the general appearance of the island shewed [showed], that it was capable of much more extensive improvement, and of maintaining, at least, three times the number of inhabitants that are at present upon it; for the far greater part of it, that now lies quite waste, seemed to be as good a soil as those parts of it that are in cultivation. We must therefore conclude, that these people, from some cause, which we were not long enough amongst them to be able to trace, do not increase in that proportion, which it would make necessary to avail themselves of the extent of their island, toward raising a greater quantity of its vegetable productions for their subsistence (Cook 1784:244-245).

In 1839, John K. Townsend visited the Kōloa region of Kaua'i. He describes it as being well maintained agriculturally much like the Island of O'ahu, which he visited before Kaua'i.

> This part of the island of Kauai exhibits no particularly interesting features: from the beach to the mission station there is a good road made by the natives over a gentle ascent of about two miles, on each side of which taro patches, yam, and maize fields abound. Back from the ocean at right angles with it, are seen several ranges of long, high hills, with narrow valleys between; the hills are covered with low trees of *Tu-tui* and *Pandanus*, and the valleys with dense bushes, tall ferns, and broad leaved bananas (Townsend 1839:206).

Organized sugar plantations began in the 1830s in the Kōloa District when local Chinese built a mill in Māhā'ulepū to grind sugar grown in the area. This operation went out of business once Ladd & Co. began operations a few years later in 1835 (Yorck *et al.* 2005:10). Kōloa became a center of commerce, initially provisioning whaling ships and later, the California gold rush in the 1850s. In 1857, sweet potato

production reached 10,000 barrels annually at Koloa. The crop furnished nearly all the potatoes sent to California from Hawaii (Judd 1935:326).

Ladd & Co. negotiated a lease with Kamehameha III and Kaikioewa, governor of Kaua'i, for almost 1,000 acres at Kōloa in 1835. The lease was a 50 year lease at $300 a month (Ching 1985). After 10 years Dr. Robert W. Wood became the sole owner of Ladd & Co. and renamed it Koloa Plantation (*ibid.*; *Figure 5*). In 1855 Royal Patent1754 was issued to Dr. Wood giving him clear title to the entirety of Pā'ā Ahupua'a, which he bought from Pi'ikoi, who was awarded the majority of the Pā'ā as LCA 10605, and upland portions of Weliweli Ahupua'a (Alexander 1985:54).

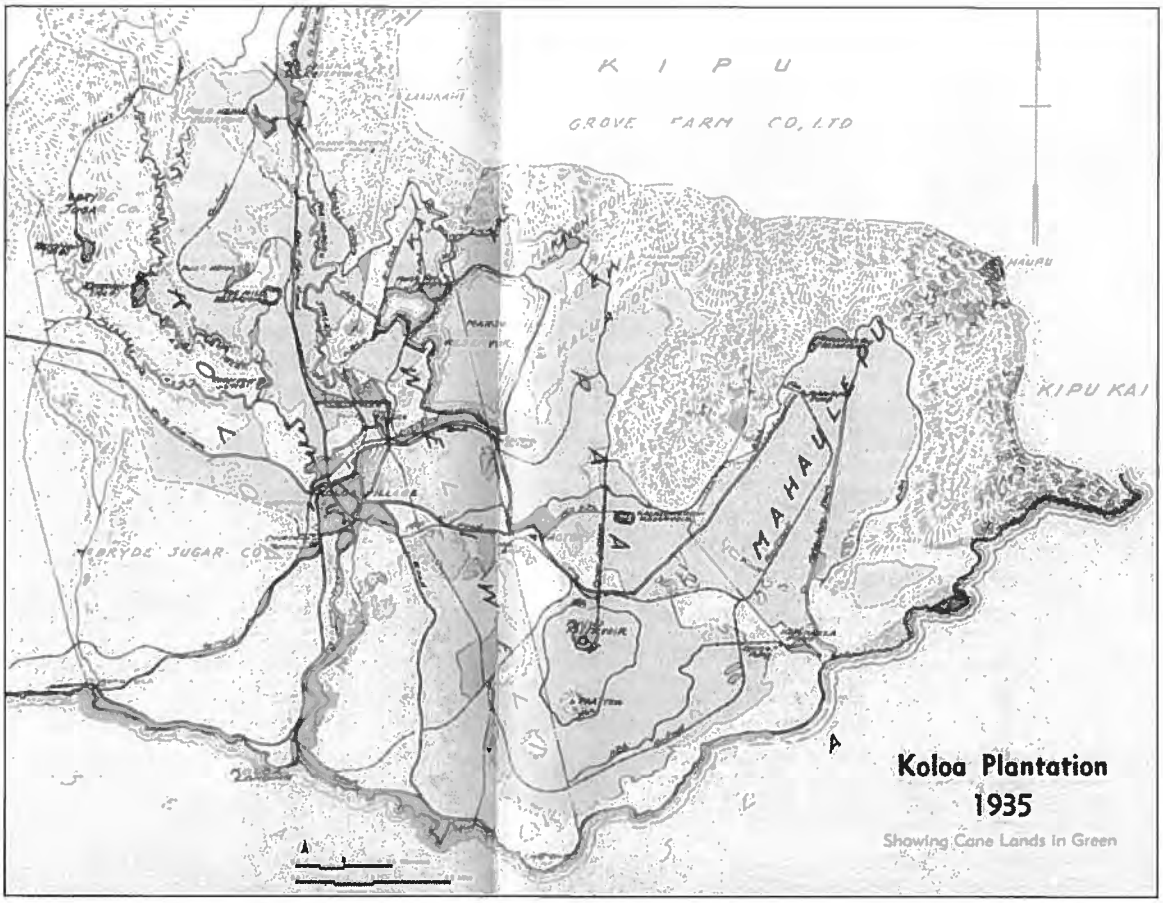


Figure 5. 1935 Map of Kōloa Plantation.

Sugar production diverted water away from the traditional crops and caused most of the other plantations to become dry and brown. Weliweli suffered from the loss of water and is described as follows:

> Weliweli is about like Pa'a (very dry, bananas, yams, and bananas were planted in the gulches). Both of these narrow land sections lie on a slight seaward promontory, Makahuena Point. W. C. Bennett (1931, p.118) found an irrigation ditch and terraces, indicating that there used to be some wet taro grown in an area which is now dry. Desiccation may have been partly caused by clearing the woodland when the first sugar plantation on Kauai was established (Handy et al. 1991:427-428).

One Land Commission Award (LCA) was granted in Weliweli in the *'ili* of Kahoana to Punipu. It consisted of dry *lo'i* (taro paddies), a *kula* (field) and house lot. The rest of Weliweli was reserved as

government land (Hammatt and Toenjes 1991). Testimony in support of Punipu's land claim for LCA 5219 was provided by Pohina:

> Pohina, sworn, says, I know the land of [the] Clmt [claimant]. It is in the ahupuaa of Weliweli, and ili of "Kahoana" lua. It consists of several dry loi, a kula and house lot. [Hala] is planted in some places (Papakilo Database).

In 1870, Eliza Sinclair bought most of Kōloa Ahupu'a and gave it as a dowry to his daughter Anne and her husband Valdemar Knudsen. After Vlademar's death the land was leased initially to Grove Farm and later the McBryde Sugar Company (Mitchell *et al.* 2005). The McBryde Sugar Company was created by Benjamin Dillingham in the 1890s from lands previously controlled by the Kōloa Agricultural Company, 'Ele'ele Plantation and Waiawa Ranch (*ibid.*). The company was able to expand lands under cultivation through development of railroad transportation system in the late 1800s to early 1900s. Kōloa Plantation was sold to Grove Farm Co. in 1948 (Smith 1991 in Walker and Goodfellow 1991).

In 1908 a lighthouse was established in the seaward portion of project area by the Lighthouse Service, which at that time was part of the U.S Commerce and Labor Department (www.uslhs.org). In 1914, the facility is described in lighthouse records as a white house with a 40 ft high lead-colored mast and a red fixed light. Between 1930 and 1951 the facility is described as a 20 ft high white pyramidal concrete tower with a white light flashing every 6 seconds. In 1984, it is characterized as an "NR on pole" and in 1988 and 2004 as a "NB on a post". Both were 20 ft high with white lights flashing every 2.5 seconds.

During World War II a Long Range Navigation (LORAN) system was developed at the Massachusetts Institute of Technology under the supervision of the National Defense Research Council. LORAN used radio waves and gave ships the ability to triangulate their locations hundreds of miles from a transmitting station (USCG 1946). In the spring of 1944, Construction Detachment C began construction of a LORAN monitoring station, Unit 207, at near Port Allen, Kaua'i. Once testing of the LORAN station was completed it was turned over to the District Coast Guard Officer of the 14th Naval District on November 8, 1944 (ibid: 65). The Port Allen LORAN facility was disestablished in 1948.

In 1951, following an initial site survey in 1950, a new station for a LORAN-A receiver was established by the Coast Guard at Makahuena Point in the project area (loran-history.info). The first commanding officer was Lt. Harley E. Dilcher. The facility was "on air" as a "dual rate low power" station in December 1951 and was operational as a "dual rate high power" facility on October 25, 1952 (*ibid.*). *Figure 6* depicts the facility in 1961. The photograph shows 5-6 buildings including a two story structure that was built in the inland portion of the large depression on the property. The large, 280 ft high antenna is situated seaward of the buildings. A website for Coast Guard veterans (fredsplace.org) includes a reference to the construction of a barbeque facility in 1974 that is still present today. The barbeque was constructed in the vicinity of the sign and flagpole shown in a 1966 photograph (*Figure 7*). The station, known as LORSTA Kaua'i was disestablished in 1979 (*ibid.*).

After the LORAN station was closed, the former Coast Guard facility was utilized by Hale 'Opio, Inc., a private nonprofit organization, that provides youth-oriented social services. The organization relocated following Hurricane Iwa that devastated the Island of Kaua'i in 1982 (Burgess, pers. communication). Since Hurricane Iwa, the project area has been vacant.

Archival research and interviews conducted for a cultural impact assessment of the property (Kailihiwa *et al.* 2011) documented traditional cultural resources in the vicinity of the project area. The area is known as a place of bountiful fish. Local fishermen continue to gather *hā'uke'uke* (sea urchin) and *'opihi* (limpet), and to catch *awa* (milkfish), *akule* (big-eyed scad fish), *moi* (thread fish), *'ō'io* (bonefish), *he'e* (octopus), and *ula* (spiny lobster). Formerly, depressions were made from clay soil in the vicinity to evaporate seawater and obtain salt. Community members continue to conduct cultural protocols at Kāne'aukai Heiau, every October during the *makahiki* season, and at a large sand dune burial site. Both sites are situated *mauka* (inland) of the project area within the grounds of The Point at Po'ipū.



Figure 6. 1961 Photograph of LORAN Station Facility (from www.loran-history.info), view to south



Figure 7. 1966 Photograph of LORAN Station Staff and Adjacent Property (from www.loran-history.info) view to north-northeast

Previous Archaeological Research

A search of DLNR-SHPD archaeological report database and other sources identified more than 30 archaeological studies for the Kōloa District. *Figure 5* shows the locations of the projects and *Table 1* summarizes the projects. Not included in the table are the studies by Thrum (1906), Bennett (1931), Kikuchi (1963) and Ching et al. (1974).

Thrum (1906) compiled a list of *heiau* on the islands of Kauai and Oahu. He identified two ceremonial sites in the project area vicinity. Weliweli Heiau is situated in the Land of Weliweli and Waiopili Heiau is in Māhā'ulepū. According to Thrum, Waiopili Heiau measures 60 by 40 ft and Weliweli Heiau is a "...paved heiau of large size, pookanaka class; walls 4 feet high; portions of same said to be still standing" (1906:36). Thrum reported that Weliweli Heiau was covered with stones cleared from an adjacent sugarcane field.

Bennett (1931) conducted a survey of archeological sites on Kaua'i for the Bishop Museum in 1928-1929. He recorded several sites in the general vicinity of the project area, including Weliweli Heiau, which he designated as Site 83. Additional sites documented by Bennett consisted of sand dune burials (Site 82) and a petroglyph complex (Site 84) at Keoneloa Beach.

In 1963, Kikuchi conducted an archaeological survey of the coastal lands in Kōloa District. He noted several sites in the project vicinity consisting of the Keoneloa Dune Burials, which he assigned State Inventory of Historic Places (SIHP) site number 97, the Keoneloa Beach Petroglyphs (Site 98) and Weliweli Heiau (Site 99). He also identified a series of walls designated as Site 100. These sites were also examined by Ching et al. (1974) during a survey of the coastal lands of Māhā'ulepū, Pā'ā and Weliweli.

The surveys in *Table 1* cover over 3,100 acres identifying 154 sites with 457 features. To aid in reconstructing settlement patterns, features were quantified by probable age and function. Traditional Hawaiian features were categorized as habitation, agricultural, ritual and burial. Density per acre values are given for the sites and features. Overall, the studies have identified 253 habitation features, 293 agricultural features, 43 burials and possible burials and 15 ritual features. Historic features were not segregated by function. Miscellaneous features are comprised of petroglyphs, salt pans and bait cups. The historic features are generally associated with the sugarcane industry or ranching activity.

One of the most notable sites in the region is the Kōloa Field System, a modern term used to describe the large system of agricultural fields that formerly extended from Lāwa'i to Weliweli and served as the main food source for the people of the Kōloa district (Mitchell *et al.* 2005). The Kōloa Field System is atypical for Hawai'i because it is an irrigated system that is not topographically restricted to the confines of a valley. It is spread out over the broad plain of Kōloa District that is broken up by ridges formed by lava channels (*ibid.*). The irrigation ditches (*'auwai*) that watered the fields were constructed along the crests of the ridges, extending from Waikomo Stream for distances of nearly 2,400 m (*ibid.*).

In its simplest form, the Kōloa Field System was a series of parallel *'auwai* with a network of feeder ditches branching off the main *'auwai* to irrigate the agricultural fields (*Figure 9*). Aqueducts were constructed within the system to convey water over low-lying ground (*Figure 10*). The field system is estimated to have covered at least 700 acres. It is likely that the acreage is much higher, but evidence of the system has been destroyed by commercial sugarcane cultivation (*ibid.*).

Several projects conducted in the vicinity of the project area were surveys of large parcels that ranged in area from 210 acres to more than 1,400 acres in extent. Walker and Rosendahl (1990) conducted an inventory survey of approximately 210 acres for the Hyatt Regency Kauai in the adjacent Land of Pā'ā. This survey identified 12 sites with 14 component features consisting of two habitation sites, four ceremonial sites, three walls assigned a boundary function and two indeterminate mounds.

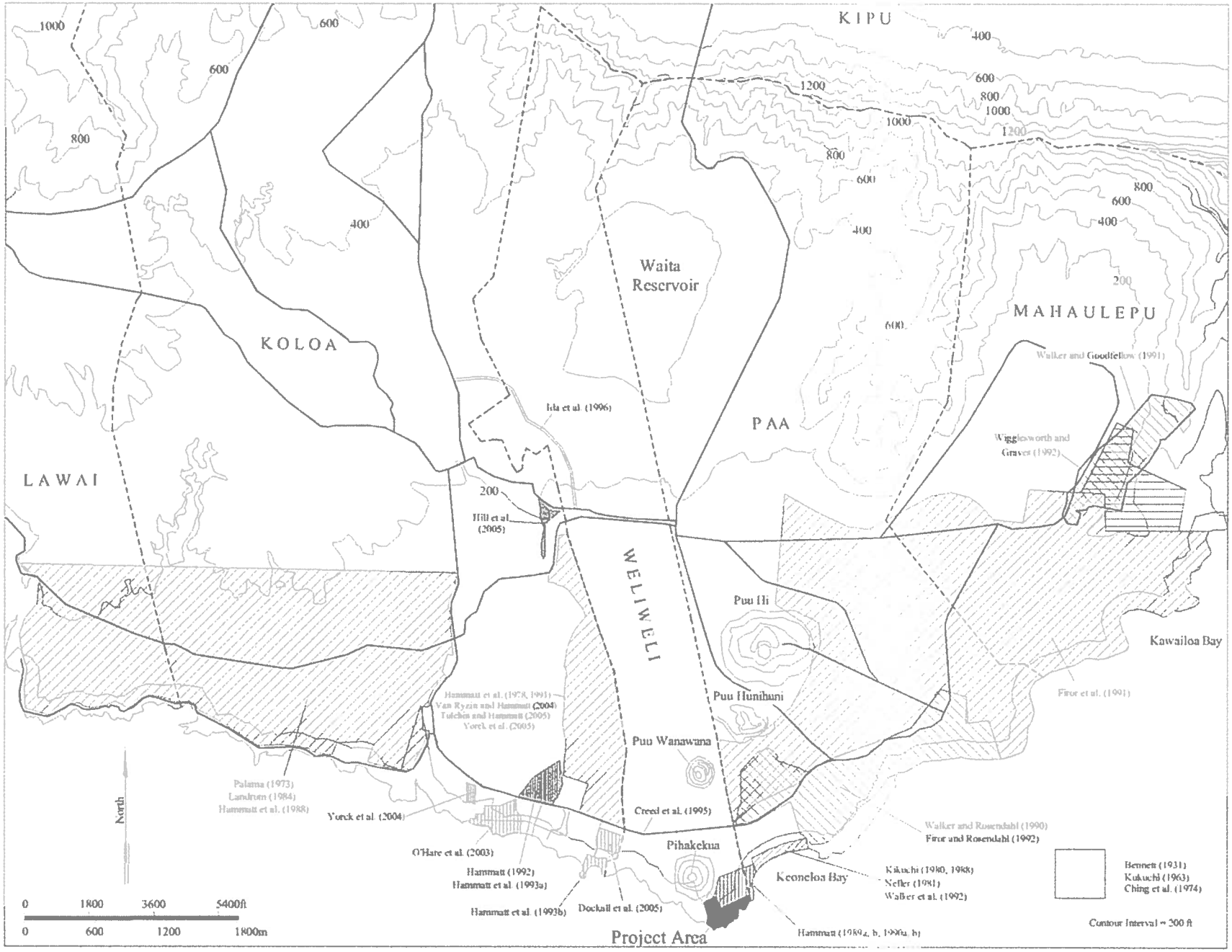


Figure 8. Previous Archaeological Work

Table 1. Summary of Previous Archaeological Work

Author	Land	Study Type*	Elevation (ft AMSL)	Location	Area (ac)	Total sites	Sites per acre	Total feas	Feas per acre	Hab Feas	Ag Feas	Ritual Feas	Burial Feas	Historic Feas	Misc. Feas	Comment
Hammatt et al. (1993b)	Koloa	AS, EX, Mon	0-10	Coastal	5.7	1	0.18	1	0.18	1						Found subsurface deposit during excavation and auger coring. - Submitted 3 radiocarbon samples with dates ranging from AD 1282-1414 to 1678-1940.
Kikuchi (1980, 1988), Neller (1981), Walker et al. (1992)	Paa	RN, EX, DR	0-10	Coastal	10.6	8	0.75	20	1.89	2		3	10	4	1	Identiifed Keoneloa Sand Dune Burials, Kaneaukai (Weliweli) Heiau and Keoneloa Beach Petroglyphs
Walker and Rosendahl (1990), Firor and Rosendahl (1992)	Paa	IS	0-70	Coastal	210	12	0.06	14	0.07	2		6		4	2	Hyatt Regency Kauai
Firor et al. (1991)	Paa, Mahaulepu	IN	0-160	Coastal, Lower slopes	1430	31	0.02	38	0.03	24	3	1	2	6	2	Grove Farm
Dockall et al. (2005)	Koloa	IS	5-10	Coastal	6.3	8	1.27	68	10.79		67				1	Identified fishpond and agricultural features
O'Hare et al. (2003)	Koloa	IS	5-20	Coastal	19	2	0.11	15	0.79	5					10	Identified coastal salt pans and bait cups potentially representing Bennetts (1931) Site 76
Hammatt (1989a, b, 1990a, b)	Weliweli, Paa	IS	20-30	Lower slopes	20	1	0.05	28	1.40				28			Excavatrions within dune deposits containing multiple burials
Creed et al. (1995)	Koloa	IS	20-30	Coastal	25	3	0.12	5	0.20		5					Survey along Poipu Road
Yorck et al (2004)	Koloa	IS	20-30	Lower slopes	9.4	7	0.74	12	1.28					12		Subsurface testing at 2 sites with no cultual remains
Hammatt (1992), Hammatt et al. (1993a)	Koloa	RN, IS	20-30	Lower slopes	7.6	4	0.53	17	2.24	8	8	1				Large portions bulldozed
Palama (1973), Landrum (1984), Hammatt et al. (1988)	Koloa, Lawai	IS	20-300	Coastal, Lower slopes	1000	57	0.06	235	0.24	134	89	4	1	11		Hammatt et al. (1988) survey encompasses previous studies
Hammatt et al. (1978, 1991), Van Ryzin and Hammatt (2004), Tulchin and Hammatt (2005), Yorck et al. (2005)	Koloa	IS	40-160	Coastal, Lower slopes	196	91	0.46	216	1.10	76	121		1	18		Village at Poi'pu Project Area
Walker and Goodfellow (1991), Wigglesworh and Graves (1992)	Mahaulepu	IS	60-240	Lower slopes	158	5	0.03	5	0.03	1			1	3		Overlapping Project Areas - Identified a total of 5 sites including a flume, two water diversion walls, a habitation site and a habitation burial site - Walker and Goodfellow excavated 9 backhoe trenchs
Ida et al. (1996)	Weliweli, Koloa	AS	180-240	Lower slopes	8.2	0										Road corridor through cane fields. No sites
Hill et al. (2005)	Koloa	IS	180-205	Lower slopes	8.6	1	0.12	1	0.12					1		Historic flume present - Part of Village at Poipu Project Area
Total/Average					**3114.4**	**154**	**0.32**	**457**	**1.45**	**253**	**293**	**15**	**43**	**59**	**16**	

**** - IS = Inventory Survey, RN - Reconnaissance Survey, AS = Assessment, EX = Excavation, Mon = Monitoring***

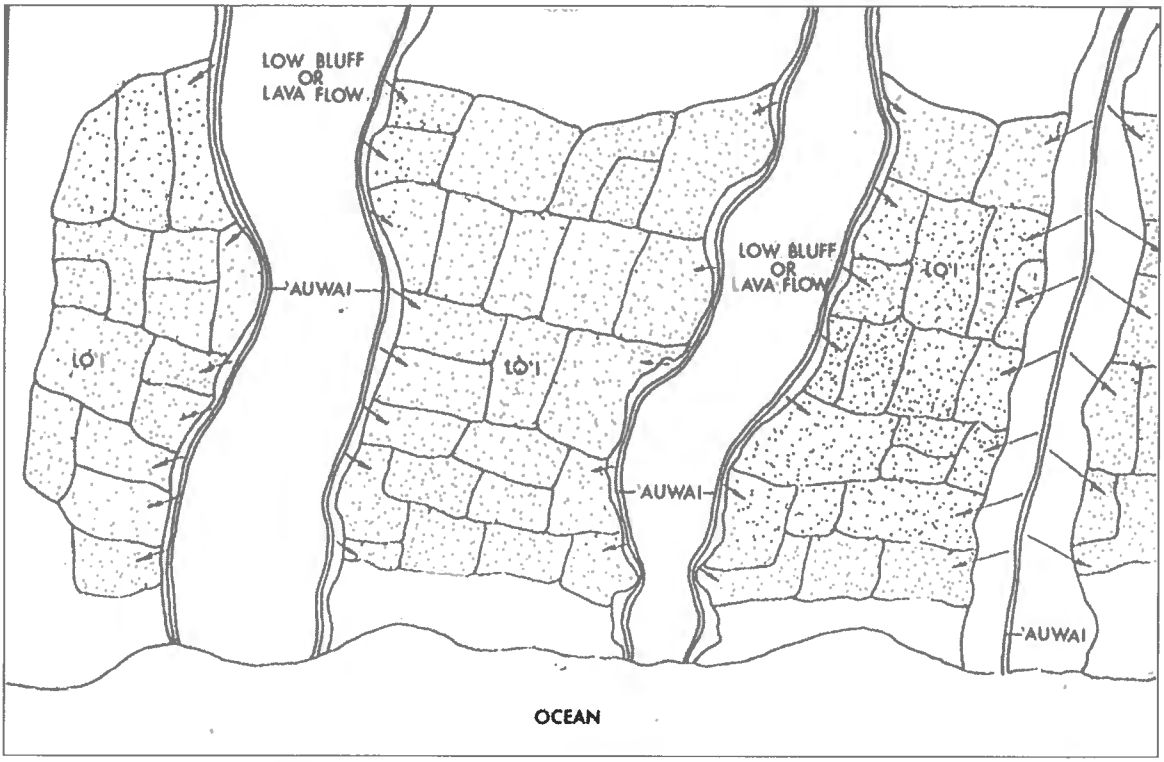


Figure 9. The basic schematic of the Kōloa Field System (from Mitchell et al., 2005:21).

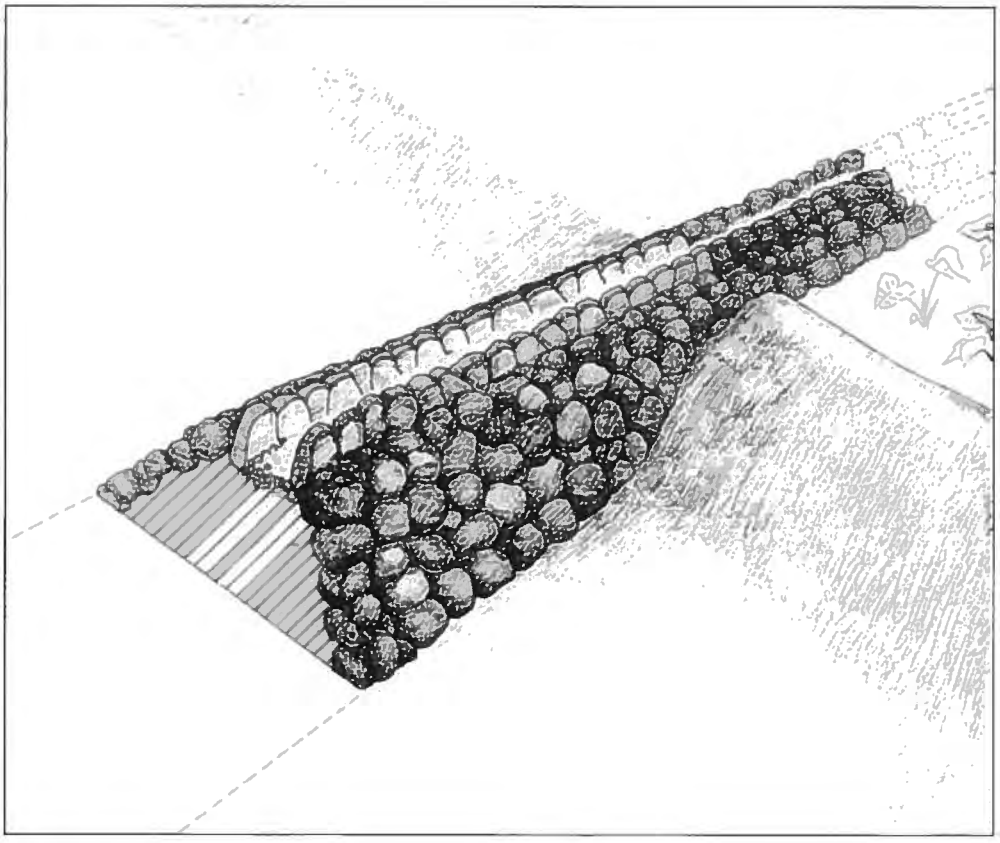


Figure 10. Raised *'auwai* in the Kōloa Field System (from Mitchell *et al.*, 2005:21).

Further data collection was subsequently undertaken within the Walker and Rosendahl (1990) project area by Firor (1992). This additional work consisted of plane table mapping, surface collection, photography and excavations. Charcoal collected from these excavations was submitted for radiometric age determination. One sample yielded a modern date, with the 19 additional samples producing dated age ranges spanning the period between AD 650 and 1954 with most ranges falling between AD 1170 and 1818.

In 1990, Firor et al. (1991) conducted an inventory survey of a c. 1,430-acre parcel situated in the Lands of Pā'ā and Māhā'ulepū. This study identified 31 sites with 38 component features. Feature functions consisted of habitation (n=34), agriculture (3), ceremonial (1), burial (2), petroglyph (20) and historic (6). The historic features consisted of an erosion control wall and five boundary walls.

A survey of a 196-acre parcel within the Land of Koloa was conducted by Cultural Surveys Hawaii (Hammatt 1991). This project was preceded by a Hammatt (1978) reconnaissance survey of the parcel. This survey identified 91 sites with 216 features. The features included 76 habitation features, 121 agricultural features, 1 burial feature and 18 historic features.

A survey of the c. 1,000-acre Kukui'ula Bay Planned Community in Kōloa and Lāwa'i was undertaken by Cultural Surveys Hawaii (Hammatt et al. 1988). This project included areas that were previously surveyed by Palama (1973) and Landrum (1984). Fifty-seven sites with 235 features were documented in this area. Feature functions consist of 135 habitation, 89 agricultural, 4 ceremonial, 1 burial and 11 historic features.

Ladd (1981) conducted archaeological surveys of four lighthouse sites for the U.S. Coast Guard in 1981. Makahuena Point was one of the four sites surveyed. Ladd noted that the project area had been heavily impacted by bulldozer clearing activities, jeep trails, and construction activities (*ibid*:1). Ladd noted a midden scatter, various concrete pads, and a series of rocks that had been painted white outlining a jeep trail (*ibid*:7). According to Ladd, none of the identified remains met the significance criteria for National Register of Historic Places (NRHP) eligibility (*ibid*: 2).

In 1991, Nancy McMahon (1991) conducted a synthesis of archaeological and historical literature relating to the location of Kāne'aukai Heiau. McMahon utilized 26 archaeological reports and historical texts attempting to pin point the location of the *heiau*. The first mention of Kāne'aukai in literature is in a report written by a student attending Lahainaluna School in Maui in 1885; however, there is no detailed description in the report. Archaeological studies of the area have assigned Kāne'aukai three different numbers, Site 83, Site 3089, and Site 477. Weliweli Heiau, Kauakahai'a fishing altar and Hali'i fishing altar are all names that have been used in the area with Kāne'aukai in various locations. McMahon concluded that there is no empirical evidence that Kāne'aukai is extant, and that it is only preserved in the present through oral histories.

In April of 2011, Haun & Associates conducted an archaeological inventory survey of the current project area. The survey identified 18 sites with 128 features. The features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following; ditch, road, stairs, utility box and walled slab. Most of these features are remnants of the U.S. Coast Guard LORAN station that was in operation from 1951 until 1979.

Subsurface testing consisted of twenty test units that were excavated throughout the inland portion of the project area. These excavations ranged in depth from 0.08 to 0.4 m. Cultural remains recovered from the excavations were limited to relatively recent (1900s) historic materials (glass, metal, wire). No prehistoric sites or deposits were identified during the study.

PROJECT EXPECTATIONS

Based on background research prehistoric use of the project area is potentially evidenced by coastal habitation sites dating to as early as the 1200s. Habitation sites would consist of platforms, enclosures, caves and small walled shelters. Trails and petroglyphs may also be present. Unlike adjacent parcels, no sand dunes are present within the project area, reducing the potential for subsurface burial features. Sites dating to the mid- to late 1800s would primarily consist of ranching and agriculture-related features such as walls, corrals, and clearing piles of stone associated with agriculture and pasture improvement.

Later historic utilization of the parcel would likely be evidenced by the remnants of U.S. federal government navigation-related infrastructure. These remains could consist of concrete foundations, roads, utilities and associated materials.

FINDINGS

The archaeological survey identified 18 sites with 128 features. The 128 features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following; ditch, road, stairs, utility box and walled slab. Feature function consists of utility (n=79), foundation (31), marker (5), transportation (4), boundary (1), disposal (1), recreation (1), soil retention (1), water diversion (1) and indeterminate (4). The location of the sites is presented in *Figure 11* and the sites are summarized in *Table 2* and are described below. Subsurface testing was undertaken during the project, consisting of the excavation of twenty 0.5 by 0.5 m test units. The results of these test excavations are discussed below in a following section.

Standard measurements are used in the following descriptions, in addition to metric values, for features/sites likely built using that measurement system. Slabs are defined as formed concrete surfaces that are usually rectangular and exceed 10 ft in maximum dimension. In most instances, slabs are structural foundations that also served as interior floors. Pads are formed concrete surfaces that are smaller than slabs in maximum dimension, less than 8 ft (most are less than 6 ft), and likely served a variety of functions as foundations for small structures, footings for larger structures, and supports for equipment or utilities. Pads that are greater than 2 ft in height are termed blocks.

Site Descriptions

Site 2130 is a complex of 15 features located in the northwestern portion of the project area, seaward of Pe'e Road. The features consist of two concrete slabs (Features A and B), five concrete pads (Features C-E and M), a set of concrete stairs (Feature G), an asphalt road (Feature H), a concrete ditch (Feature I), two boulder and concrete paths (Features J and L), a mortared stone wall (Feature K) a buried utility box (Feature N) and a walled slab (Feature O). The overall site encompasses an overall area 125 m long (northeast by southwest) and 72 m wide, an area of approximately 2.2 acres (*Figure 12*).

The Feature A and B concrete slabs are located on a level bench just below the rim of the large depression (*Figure 13*). The main portion of Feature A is rectangular in shape and is 13' 7 ¾" (4.16 m) long (north-northwest by south-southeast) by 7' 11 ⅝" (2.41 m) wide. The sides of the feature range in height from 9 ⅞" (0.25 m) to 2' 5 ½" (0.75 m). There is a rectangular projection at the southeast corner of the main slab that is 4' 11 ⅜" (1.51 m) long (north-northwest by south-southeast) and 1' 10" (0.56 m) wide. A step is located below the projection to the southeast, measuring 3' 4 ⅝" (1.21 m), 2' 7 ½: (0.8 m) wide and 1' 8 ⅞" (0.53 m) in height above the surrounding ground surface A second step is situated at the southeast end of the main slab, measuring 8' (2.44 m) long (east-northeast by west-southwest) and 2' 2 ¾" (0.68 m) wide. The step is 1' 5 ⅓" (0.44 m) high and 8 ⅝" (0.22 m) below the surface of the main slab. Electrical wires are present on the surface of the slab. A linear projection extends 9' 4 ¼" (2.85 m) to the north-northwest from the northeast corner of Feature A. This projection is 9 ⅞" (0.25 m) in height on the west side and is level with the ground surface on the east. Features D and F are located adjacent to this projection to the east.

The Feature B concrete slab is located 16' 1 ⅓" (4.91 m) to the northeast of Feature B. The area between the two slabs is level soil with concrete rubble. The main portion of Feature B is rectangular in shape and is 14' 3 ⅝" (4.36 m) long (north-northwest by south-southeast) by 7' 11 ¼" (2.42 m) wide. The sides range in height from 7 ⅞" (0.2 m) to 1' 7 ¼" (0.49 m) above the surrounding ground surface.

A rectangular projection is present along the east side of the slab, measuring 8 ⅝" (0.22 m) long north-northwest by south-southeast) and 4' 9 ½" (1.46 m) wide. A step extends across the southeast end of the main slab that is 7 ' 11 ¼" (2.42 m) long and 2' 2 ¾" (0.68 m) wide. The step is 11" (0.28 m) in height above the surrounding ground surface and is 8 ⅝" (0.22 m) below the surface of the main slab.

The Feature C concrete pad is located 2' 8 ⅝" (0.83 m) to the north of the northeast corner of Feature B, along the northern edge of the large depression. This pad is roughly rectangular in shape and is 3' ⅝" (0.93 m) long (east-northeast by west-southwest) and 2' 8 ⅝" (0.83 m) wide. The sides of the pad are

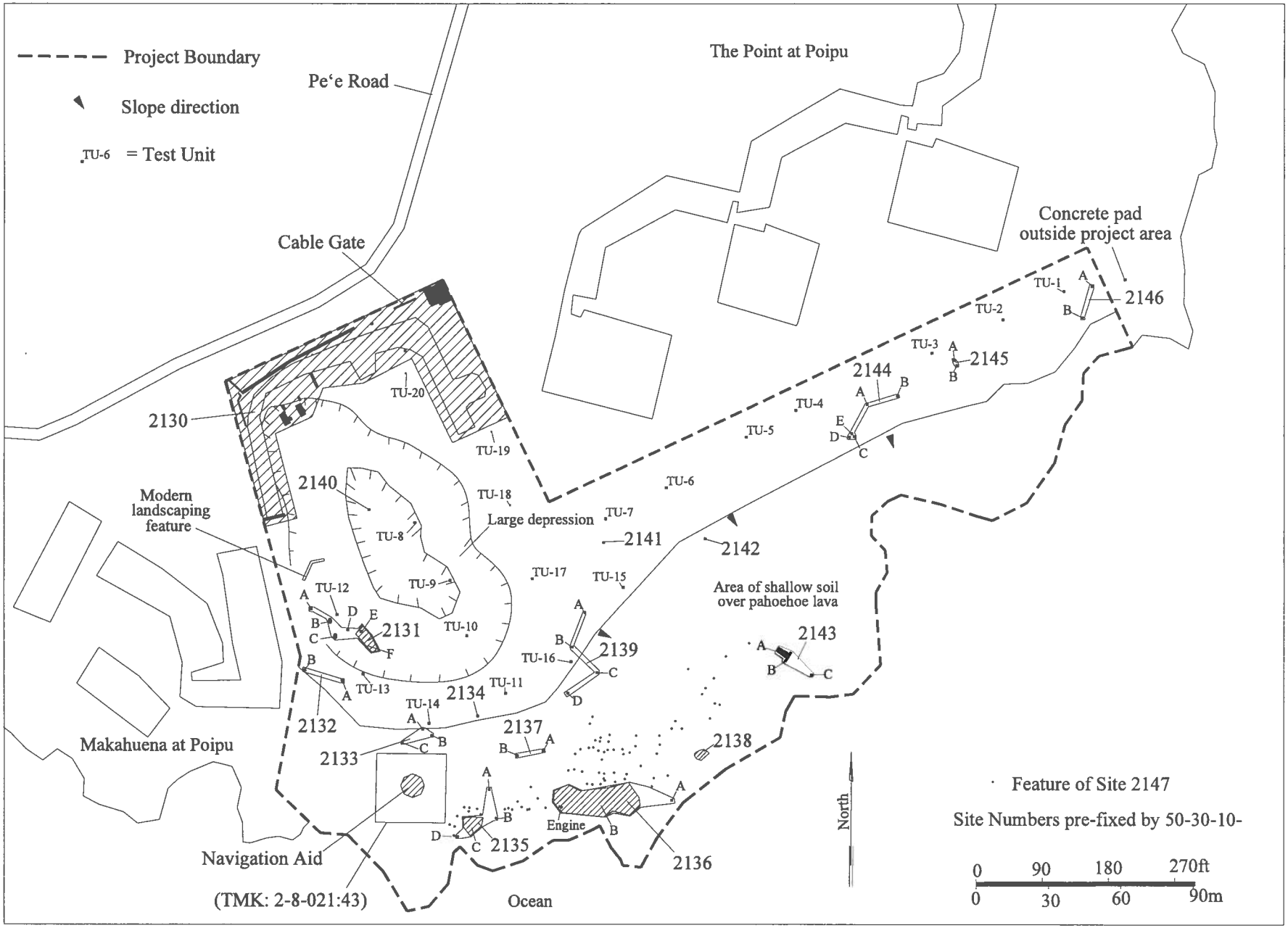


Figure 11. Site Location Map

Table 2. Summary of Sites

SIHP Site No.	Formal Type	Function	No. of Features	Formal Type														Function									Easting	Northing	Temp. Site No.
				Pad	Block	Artifact scatter	Post	Terrace	Slab	Path	Wall	Ditch	Road	Stairs	Box	Walled slab		Utility	Foundaiton	Marker	Transportation	Boundary	Disposal	Recreation	Soil Retention	Water diversion	Indeterminate			
2130	Complex	Foundation, Transportation, Utility, Boundary, Marker, Water diversion, Indeterminate	15	5					2	2	1	1	1	1	1	1		3	2	1	4	1		1		1	2	454100	2418585	1-5, 13-17
2131	Complex	Foundation, Indeterminate	6	1	1	1		3											5								1	454032	2418457	6, 7, 8
2132	Complex	Foundation	2	1			1												2									454037	2418430	30, 31
2133	Complex	Foundation	3	3															3									454077	2418403	9
2134	Concrete post	Foundation	1				1												1									454101	2418413	11
2135	Complex	Foundation, Marker, Indeterminate	4	2	1	1													1	2							1	454102	2418371	10, 18a, 18b
2136	Complex	Foundation	2	1		1												1					1					454148	2418382	19, 20
2137	Complex	Foundation	2	1	1														1	1								454124	2418397	18c, 18d
2138	Artifact scatter	Foundation	1			1													1									454194	2418396	21
2139	Complex	Foundation, Utility	4	1	1		2											1	3									454147	2418439	18e-18h
2140	Concrete block	Foundation	1		1														1									454056	2418498	12
2141	Concrete pad	Foundation	1	1															1									454153	2418485	27
2142	Concrete pad	Foundation	1	1															1									454195	2418486	26
2143	Complex	Foundation, Utility, Soil retention	3	1					1		1							1	1						1			454232	2418431	22, 25
2144	Complex	Foundation, Marker	5	4	1														4	1								454262	2418541	24
2145	Complex	Foundation	2	2															2									454299	2418559	28
2146	Complex	Foundation	2	1	1														2									454354	2418585	23
2147	Complex	Utility	73	73														73										454151	2418389	10.01-0.7, 18.01-09, 19.02-60
Total			**128**	**98**	**7**	**4**	**4**	**3**	**3**	**2**	**2**	**1**	**1**	**1**	**1**	**1**		**79**	**31**	**5**	**4**	**1**	**1**	**1**	**1**	**1**	**4**			

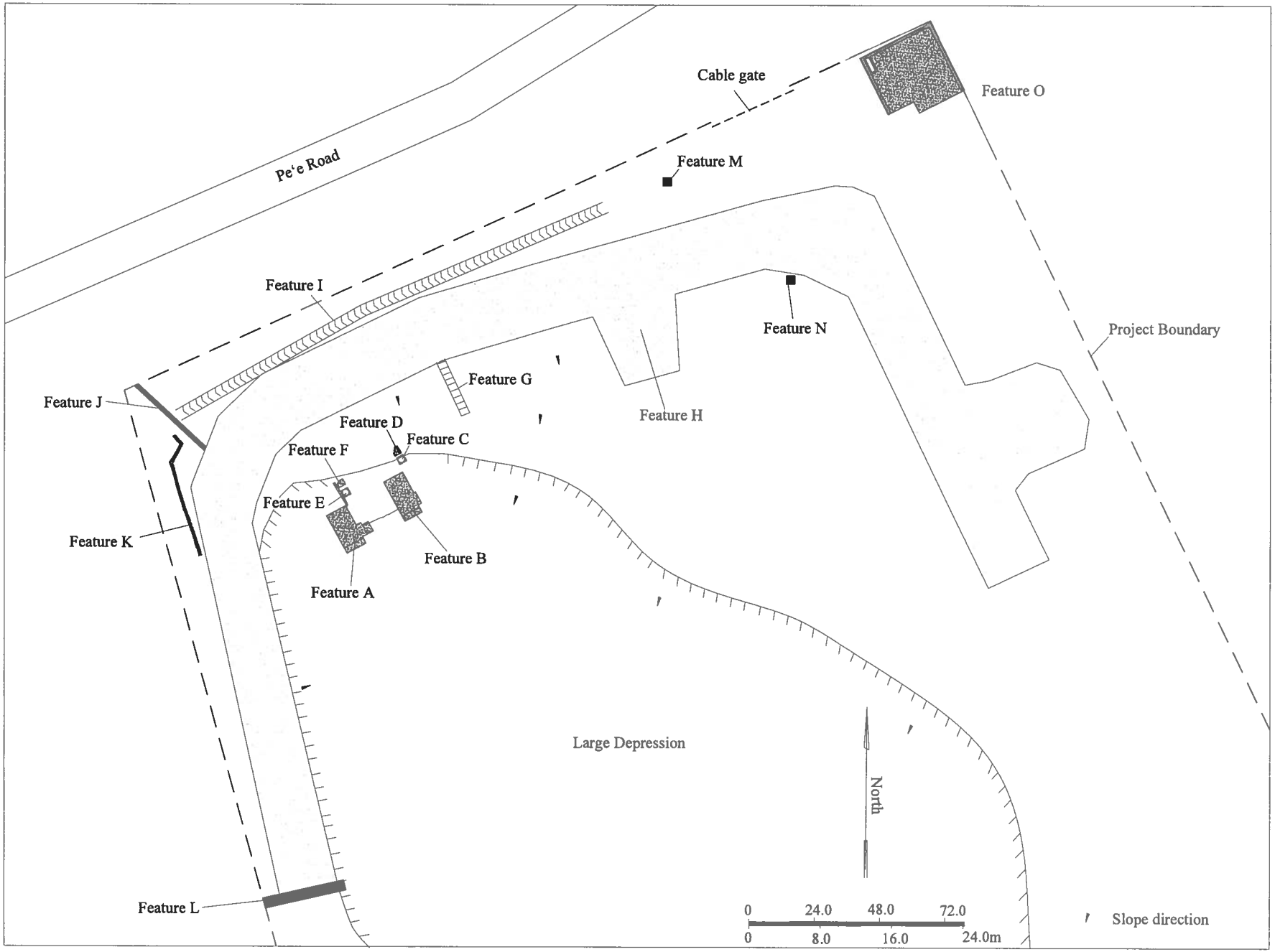


Figure 12. Plan Map of Site 2130 Complex

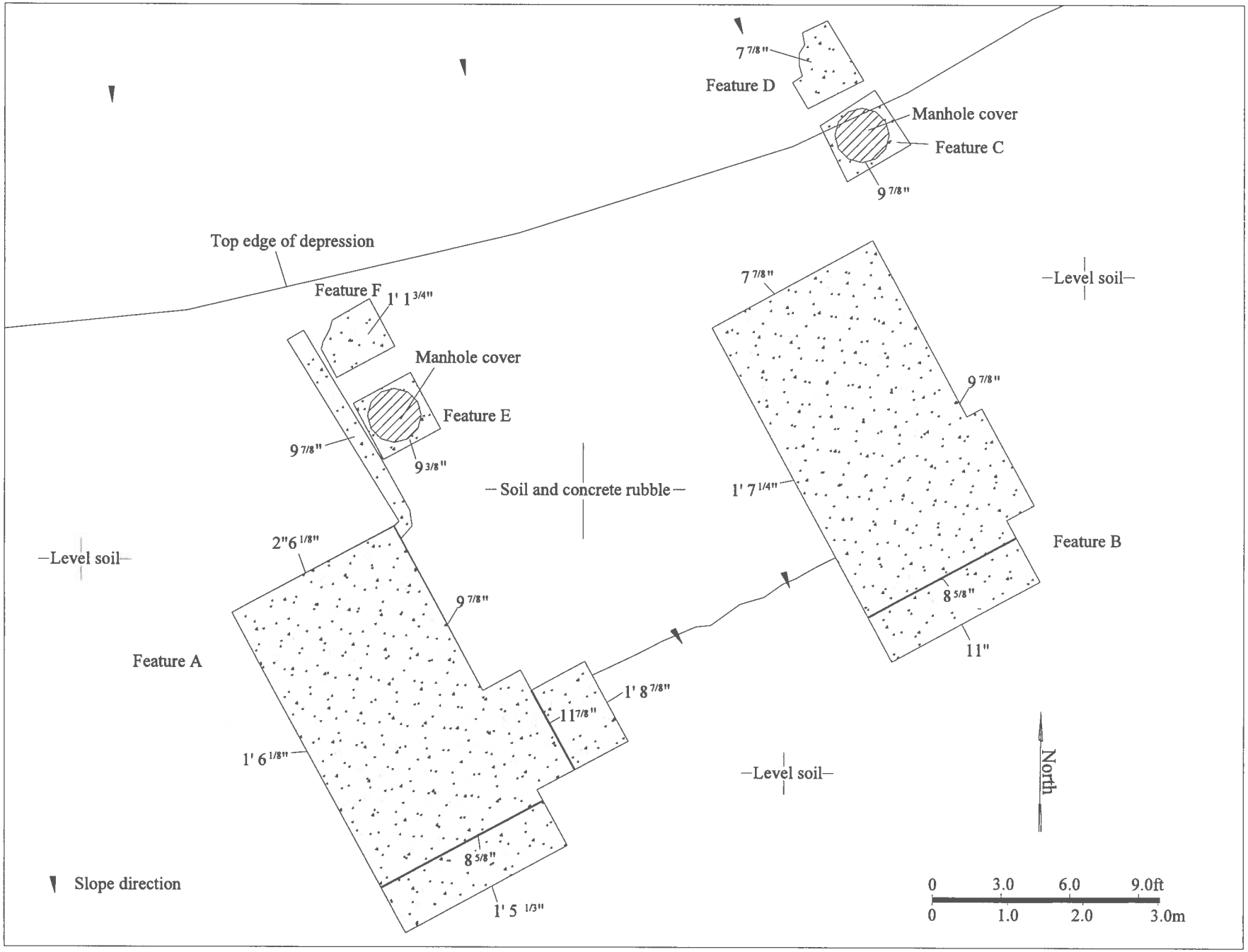


Figure 13. Plan Map of Site 2130, Features A-F

9 ⅞" (0.25 m) in height. There is a circular metal manhole cover located on top of the pad that is 2' 3 ⅞" (0.71 m) in diameter.

The Feature D concrete pad is located adjacent to Feature C to the north-northwest, above the edge of the large depression. This pad was originally rectangular in shape although the northwestern corner is missing. The pad is 3' ⅝" (0.93 m) long (north-northwest by south-southeast), 2' 8 ⅝" (0.83 m) wide and 7 ⅞" (0.2 m) in height. No cultural remains are present.

Feature E is a square concrete pad located adjacent to the northern projection at Feature A. This pad is similar to Feature C and is 2' 9 ⅞" (0.86 m) square by 9 ⅜" (0.2 m) in height. There is a 2' 3 ⅞" (0.71 m) diameter metal manhole cover in the center of the pad. No cultural remains are present.

The Feature F pad is located adjacent to Feature E to the north. This pad is rectangular in shape and the northwest corner is broken. It is 2' 10 ¼" (0.87 m) long (northeast by southwest), 2' 3 ½" (0.7 m) wide and 1' 1 ¾" (0.35 m) in height. No cultural remains are present.

Feature G is a concrete stairway located 8.5 m to the northeast of Feature D. The stairs lead down the slope from the Feature H asphalt road to the Feature A-F vicinity. It measures 22' 7 ½" (6.9 m) long (north-northwest by south-southeast) and 3' 1 ¾" (0.96 m) wide with 3 ⅞" (0.1 m) high risers (*Figure 14*). There are 19 steps, all with yellow reflective safety paint. No cultural remains are present.



Figure 14. Site 2130, Feature G Staircase, view to north

Feature H is a U-shaped asphalt road that parallels the project area boundary (see *Figure 12*). The road has an overall length of 545' 7 ½" (166.3 m) and ranges in width from 20' (6.1 m) to 37' 8 ¾" (11.5 m; *Figure 15*). From the southeastern end the road extends 149' 7 ¼" (45.6) m to the north-northwest, then turns 90 degrees to the west-southwest. It extends in this direction past the Feature A-F complex and the Feature G stairs a distance of 231' 7 ½" (70.6 m). It then angles to the south-southwest for 164' 4 ½" (50.1 m), following the edge of the large depression where it terminates at the Feature L path.

There are two projections that extend off the main road; one to the east and one to the south. The eastern projection is 36' 10 ⅞" (11.25 m) long (northeast by southwest) and 36' 8 ⅞" (11.2 m) wide. The southern projection is 29' 6 ⅓" (9.0 m) long (north-northwest by south-southeast) and 21' 3 ⅞" (6.5 m) to 32' 1 ⅞" (9.8 m) wide. No cultural remains are present at the feature.

Feature I is a concrete-lined ditch situated between the northern project area boundary and the north side of the Feature H road (see *Figure 12*). The ditch originates at the west side of the Feature J path and extends 173' 2 ¾" (52.8 m) to the east-northeast where it terminates. The ditch is 2' 11 ½" (0.9 m) wide at the top, 2' 3 ½" (0.7 m) wide at the base, with an average depth of 1' 5 ¾" (0.45 m - see *Figure 15*). No cultural remains are present.



Figure 15. Site 2130, Feature H Road and Feature I Ditch, view to west-southwest



Figure 16. Site 2130, Feature J Path, view to southeast

Feature J is a path located in the northwest corner of the site. The path originates along the northern project area boundary and extends 34' 5 ⅓" (10.5 m) to the southeast, terminating at the south side of the Feature H road. The path is 1' 7 ⅝" (0.5 m) wide and is comprised of a level linear surface bordered on the east side by a concrete and basalt stone curb, 10 ⅝" (0.27 m) in height (*Figure 16*). No cultural remains are present at the feature.

Feature K is a mortared stone wall located to the south of the Feature J path and to the west of the Feature H road. The wall has an overall length of 48' 6 ⅝" (14.8 m). From the north end the wall extends 5' 6 ⅛" (1.68 m) to the southeast, then turns to the southwest for 7' 6 ⅛" (2.29 m – *Figure 17*). It then angles to the south-southeast for 35' 9 ⅛" (10.9 m) where it terminates. The wall is 11 ⅞" (0.3 m) wide and 1' 5 ¾" (0.45 m) in height. No cultural remains are present.



Figure 17. Site 2130, Feature K Wall, view to west

Feature L is a path situated at the southern end of the western portion of the Feature H wall. The path originates outside of the project area to the west. From the western project boundary it extends 31' 2" (9.5 m) to the east-northeast, where it terminates at the western edge of the large depression. The path is 3' 11 ¼" (1.2 m) wide and is comprised of mortared stones (*Figure 18*). No cultural remains are present.

Feature M is a formed concrete pad situated along the northern portion of the site complex, north of the Feature H road and west of the Feature I ditch. The pad is rectangular in shape and is 4' 11" (1.5 m) long (north-south), 4' 1 ¼" (1.25 m) wide and 3 ¼" (0.08 m) in height (*Figure 19*). There are two 3" (0.075 m) diameter poles set vertically in the pad, spaced 1' 3 ¾" (0.4 m) apart. The poles were once painted red and are 4' ¾" (1.24 m) in height above the surface of the pad. No cultural remains are present.

Feature N is a concrete box set into the ground, located adjacent to the Feature H road to the south. The box is 2' 11 ½" (0.9 m) long (east-west) and 1' 7 ⅝" (0.5 m) wide (*Figure 20*). The sides of the



Figure 18. Site 2130, Feature L Path, view to north



Figure 19. Site 2130, Feature M Concrete Pad with Vertical Poles, view to north



Figure 20. Site 2130, Feature N Concrete Box, view to south-southeast



Figure 21. Site 2130, Feature O Walled Concrete Slab, view to north

box are level with the surrounding ground surface. There is a concrete lid sealing the box, with two metal handles set into the lid. The sides and lid of the box are cracked. No cultural remains are present.

Feature O is a walled concrete slab located in the northeastern corner of the site complex, bordering the project boundary (*Figure 21*). The feature is roughly rectangular in shape and is 29' 2 ⅓" (8.9 m) long (northeast by southwest) and 22' 11 ½" (7.0 m) to 27' 6 ⅝" (8.4 m) wide.

A mortared stone wall extends along the northeast, northwest and southwest sides of the feature, measuring 1' 4 ⅞" (0.43 m) wide and 3' 11 ¼" (1.2 m) to 4' 1 ¼" (1.25 m) in height above the slab. There is a barbeque grill located in the northwest corner of the structure that is 6' 2" (1.88 m) long (northwest by southeast), 2' 11 ⅜" (0.9 m) wide and 3 1 ⅜" (0.95 m) in height. A copper pipe is present within the grill indicating that it was fueled with propane. No cultural remains are present.

As discussed in the preceding Background section, the project area was once the site of the U.S. Coast Guard LORAN station that was in operation from 1951 until 1979. The station was known as LORSTA Kaua'i. Several of the features described above are shown in a 1961 photograph of the station (*Figure 22*).

The Feature A and B slabs, located within the large depression in northwest portion of the project area, appear to have functioned as the foundation for the large, two-story structure in the right-hand corner of the photograph. The apparent size of this structure suggests that the two slabs and the level soil area with concrete rubble that separates them, served as the foundation for this building (see *Figure 13*). The Feature H asphalt road is clearly visible in the *Figure 22* photograph. This road provided access to the buildings within the complex. Feature M, a concrete pad with two vertical metal pipes (see *Figure 19*) is present in the location of the sign located at the entrance to the facility.

The Feature G stairs functioned to access the two-story structure within the depression, represented by the Feature A and B slabs. The Feature C and E pads with manhole covers and the Feature N box functioned as associated utility features. It is possible that the manhole covers were used to access a subterranean sewer system and the concrete box potentially served as a junction box for the electrical or water lines. The Feature K wall likely served as a boundary marker for the complex and the Feature D and E pads served as foundations of undetermined specific function. The Feature O walled slab is a recreational area based on the presence of the barbeque grill.

The remnants of the other LORAN facility structures depicted in *Figure 22* are no longer present within the project area. These structures were likely destroyed with the materials removed from the property, following the abandonment of the facility after Hurricane Iwa in 1982. The tower present seaward of the facility has also been removed. The remaining remnants of the LORAN facility, designated as Features A through O of Site 2130 are assessed as significant for their information content. The site is altered and in poor to fair condition.

Site 2131 is a complex of six features located along the western side of the project area, on the western rim and upper slope of the large depression. The features consist of three terraces (Features A, B and C), a block (Feature D), a concrete pad (Feature E) and a scatter of historic debris, located in an area 33.0 m long (northwest by southeast) and 9.0 m wide. Features A, B, C and D are recently constructed features built from a combination of local stone and concrete objects that were probably collected from the immediate area.

These features were likely built by occupants of the adjacent parcel as landscaping features and although the features are modern constructions, the use of older historic materials led to their inclusion within Site 2131. A fifth modern planting feature is located 12.0 m north of Feature A, although no historic debris was noted in this location (see *Figure 11*).

Feature A is a mortared concrete and stone block capped with a cement veneer, located at the northwestern end of the site. The block measures 3' 3 ⅓" (1.0 m) long, 2' 4 ¾" (0.73 m) wide and 2' 3 ½"

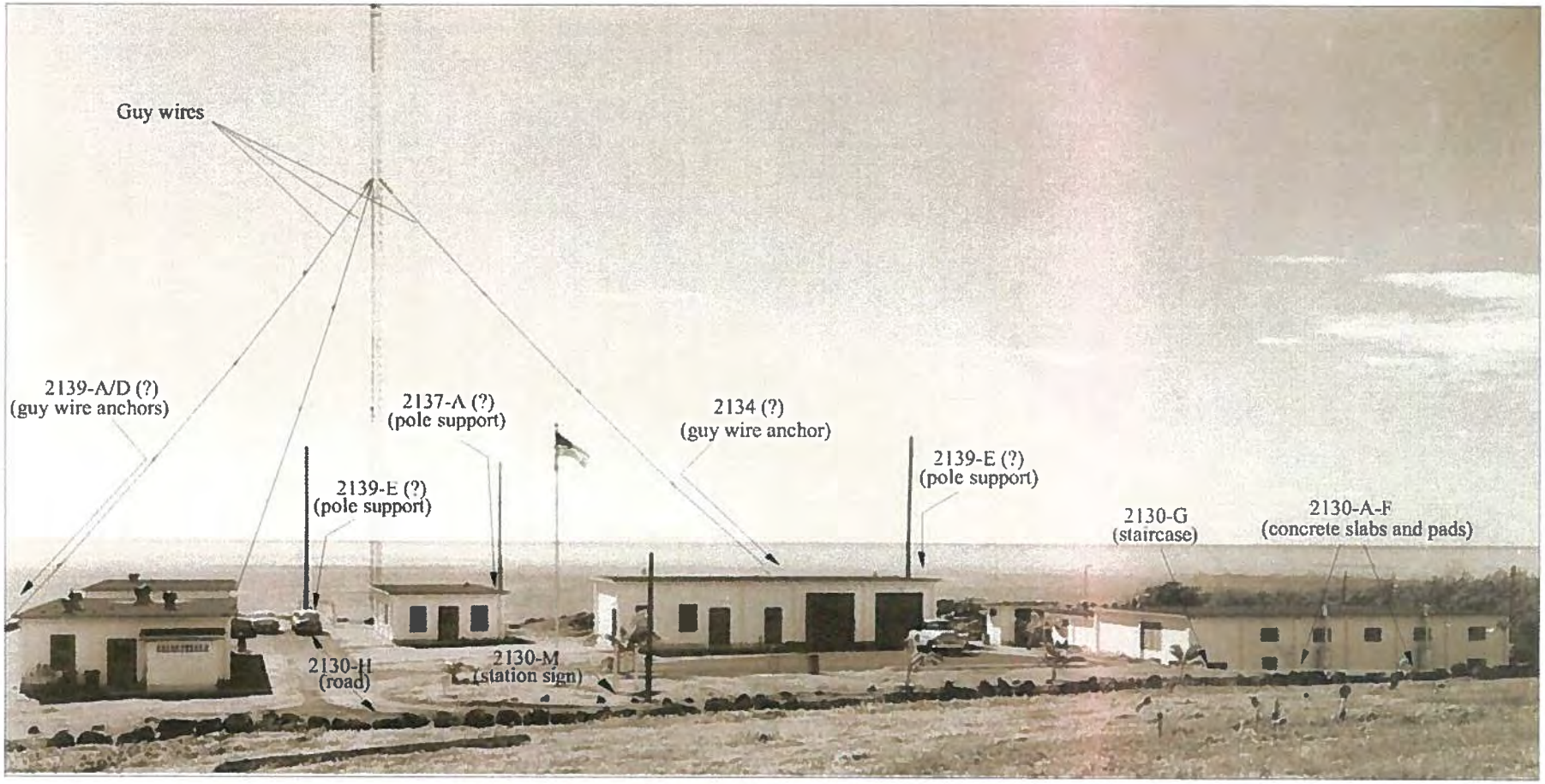


Figure 22. 1961 Photograph of LORAN Station Showing Identified Features (www.loran-history.info), view to south

(0.7 m) in height (*Figure 23*). The block has been positioned at the base of a slope with ornamental plants placed above it. A wooden crate is located upslope of the feature to the southwest.



Figure 23. Site 2131, Feature A Concrete and Stone Block, view to west

Feature B is a pair of concrete blocks that form a rough terrace located 7.5 m southeast of Feature A. Soil has been placed between the blocks planted with ornamental plants in the soil fill and below the feature to the north (*Figure 24*). The feature measures 4' 3 ⅛" (1.3 m) long, 3' 3 ½" (1.0 m) wide and 2' 11 ½" (0.9 m) in height. No cultural remains are present.

Feature C is a stone terrace located 4.7 m south (upslope) from Feature B. This feature is roughly oval in shape and is 3' 3 ½" (1.0 m) long, 2' 7 ½" (0.8 m) wide and 1' 7 ⅝" (0.5 m) in height, built of stacked and piled basalt cobbles (*Figure 25*). Several broken fragments of formed concrete are incorporated into the structure. No cultural remains are present. Feature D is terrace similar in construction to Feature C, located 4.5 m to the northeast. This terrace is 2' 3 ½" (0.7 m) long, 1' 11 ⅝" (0.6 m) wide and 2' 7 ½" (0.8 m) in height (*Figure 26*). Concrete fragments are also incorporated into Feature D.

Feature E is a formed concrete pad located 4.5 m to the east of Feature D. The pad is nearly square measuring 2' 11 ¾" (0.91 m) long, 2' 11" (0.89) m wide and 5 ⅞" (0.15 m) in height (*Figure 27*). There is a triangular configuration of bolts present on the surface. No cultural remains are located on the feature, though elements of the Feature F artifact scattered surround it.

Feature F is a scatter of historic materials that extend to the southeast from the Feature E pad. These material include metal and concrete fragments and are located in an area 11.6 m long (northwest by southeast) and 4.3 m wide (see *Figure 27*).

As stated, Features A-D are modern features that incorporated pieces of concrete that are likely the remnants of the LORAN station structures. The Feature E pad is a probable tower base based on the



Figure 24. Site 2131, Feature B Concrete Blocks, view to southeast



Figure 25. Site 2131, Feature C Terrace, view to south-southwest



Figure 26. Site 2131, Feature D Terrace, view to south



Figure 27. Site 2131, Feature E Concrete Pad and Feature F Artifact Scatter, view to southeast

presence of the bolts on the surface. The Feature F scatter potentially represents the rusted remnants of a structure or piece of equipment.

Site 2132 is a complex of two features located near the western project area boundary, south of the large depression. The features consist of a concrete pad (Feature A) and a concrete and stone post (Feature B). The Feature A pad is formed concrete and is situated at the east end of the site. It is rectangular in shape and is 1' 3 ¾" (0.4 m) long (east-west), 1' 1 ¾" wide and 2 ¾" (0.07 m) in height above the surrounding ground surface. No cultural remains are present.

Feature B is located 14.5 m to the west of Feature A adjacent to the western project area boundary. It consists of a post or block made of basalt stones and concrete (*Figure 28*). The feature is lying on its side and is 3' 7 ¼" (1.1 m) long, 1' 5 ½" (0.75 m) wide and 1' 7 ⅝" (0.5 m) thick. No cultural remains are present. The two features at the site are probable foundations based on their formal type and appearance. The site is assessed as significant for its information content. It is altered and in poor to fair condition.

Site 2133 is a complex of three concrete pads situated in the southwestern portion of the project area in an area of shallow soil. The pads are located in an area 14.3 m long (east-west) and 5.1 m wide. Feature A is situated at the western end of the site and is comprised of a rectangular formed concrete pad that measures 2' 9 ¾" (0.86 m) long (northwest by southeast), 2' 5 ⅛" (0.74 m) wide and 3 ⅞" (0.1 m) in height (*Figure 29*). There is a rectangular configuration of four bolts that appear to have been sheared off level with the surface of the pad. These bolts are 1 ¾" (0.045 m) diameter and are in an area 1' 5 ⅜" (0.44 m) long (east-west) and 9" ⅛" (0.235 m) wide. There is a metal plate present within the configuration of bolts that is 6 ¾" (0.175 m) long (north-south), 1 ⅜" (0.035m) and ⅜" (0.01m) in height. No cultural remains are present.

The Feature B pad is situated 3.75 m to the southeast of Feature A (see *Figure 29*). This feature is irregular in shape and appears to have been created by pouring concrete into a hole dug into the ground and troweling the surface level. It measures 5' 10 ¾" (1.8 m) in length (northwest by southeast) and 5' 6 ¾" (1.7 m) wide and is level with the surrounding terrain. No cultural remains are present.

The Feature C pad is located 9.0 m to the southwest of Feature A. This feature is similar to the Feature B pad in that it appears to have been created by pouring concrete into a hole dug into the ground and leveling the surface (*Figure 30*). It is roughly rectangular in shape and measures 4' 3 ⅛" (1.3 m) long (northwest by southeast) by 2' 3 ½" (0.7 m) wide. The surface is level with the surrounding terrain. No cultural remains are present.

The site is a complex of foundations that are likely associated based on the features' proximity, formal type, similar orientation and appearance. The presence of the aligned bolts and metal plate at Feature A suggest it likely served as a mount for a tower or piece of equipment. The specific function of the Feature B and C pads is unclear. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2134 is a concrete post located in the western portion of the project area, south of the large depression and 19.5 m east-northeast of the Site 2133 complex. The post is made of formed concrete and measures 1' (0.305 m) square by 2' 7 ½" (0.8 m) in height (*Figure 31*). It is embedded in the ground and is leaning to the west. A large diameter (5" or 0.13 m) cable is extending out of the top of the block attached to it by a series of 1" (0.027m) threaded bolts. A metal turnbuckle is attached to the cable base by a hinged metal plate. The turnbuckle is 1' 11 ½" (0.6 m) m long with threaded bolts extending out of it on both sides. The cable is coated in a woven mesh material and the connecting bolts and cable base are wrapped in a stiff cloth. No associated cultural remains are present at the site.

The site probably is an anchor for a tower based on its formal type and appearance. The cable probably served as a guy wire for a large tower, likely the one shown in the 1961 photograph of LORSTA Kaua'i (see *Figure 22*). The turnbuckle probably was attached to a secondary guy wire that stabilized the anchor based on its attachment to the base of the large cable attachment bracket (see *Figure 31*). The site is assessed as significant for information content. It is unaltered and in good condition.



Figure 28. Site 2132, Feature B Concrete and Stone Block, view to west



Figure 29. Site 2133, Feature A and B Concrete Pads, view to east



Figure 30. Site 2133, Feature C Concrete Pad, view to northeast



Figure 31. Site 2134 Concrete Post, view to south-southeast

Site 2135 is a complex of four features located along the coastal escarpment in the southwestern portion of the project area. A modern navigational aid is located adjacent to the site to the northwest. The features are comprised of a concrete block (Feature A), two concrete pads (Features B and D) and a scatter of rusted metal fragments (Feature C) located in an area 25.0 m long (northeast by southwest) and 8.5 m wide (see *Figure 11*).

The Feature A block is located at the north end of the site. It is made of formed concrete and is 4' 11 ¾" (1.52 m) square and 1' 11 ⅝" (0.6 m) in height above the surrounding ground surface (*Figure 32*). Forms marks are visible on the sides of the feature. No cultural remains are present.

The Feature B concrete pad is located in an area of bare lava 11.0 m to the south of Feature A. This feature is roughly oval in shape and is comprised of concrete that has been poured into a cavity in the surface lava. It measures 1' 9 ¼" (0.54 m) long (north-south) and 1' 6 ½" (0.47 m) wide (*Figure 33*). The surface of the pad is level with the surrounding ground surface and no cultural remains are present. An inscription has been imprinted into the surface of the pad reading:

Feb 16
1922

The Feature C scatter of rusted metal fragments is located 5.0 m to the west of Feature B. These fragments are present in an area 28' 6 ½" (8.7 m) long (north-south) and 26' 10 ⅞" (8.2 m) wide (*Figure 34*). No additional cultural remains, other than the metal are present.

The Feature D formed concrete pad that has been poured directly onto bedrock, 4.0 m to the west of the Feature C scatter. This pad is roughly square and is 11 ⅞" (0.3 m) long, 9 ⅞" (0.25 m) wide and 3 ⅞" (0.1 m) in height (*Figure 35*). No cultural remains are present as the feature. A metal pipe is positioned vertically in the center (0.04 m) in height. The initials "US" and "LHS" are imprinted in the surface of the pad above and below the pipe.

As discussed in the Background section of this report, "LHS" denotes the Lighthouse Service, a U.S. federal government agency that originally was part of the Department of Commerce that was transferred to the U.S. Coast Guard in 1939. The Feature A block is interpreted as a foundation based on its formal type and appearance, although its specific function is undetermined. The Feature B pad served as a marker dating to 1922. The Feature D pad potentially is a mount for a sign or piece of equipment. Alternatively, it could be a survey marker. The Feature C metal scatter potentially represents the rusted remnants of an a tower or piece of equipment. The site is unaltered and in poor to good condition. It is assessed as significant for its information content.

Site 2136 is a complex of two features located along the coastal escarpment to the east of Site 2135. The features consist of a formed concrete pad (Feature A) and a scatter of historic debris (Feature B) located in an area 52.0 m long (east-west) and 13.0 m wide.

The Feature A pad is located at the eastern end of the site. It is rectangular in shape and is 7' 7 ½" (2.3 m) long (northwest by southeast) and 6' 10 5/8" (2.1 m) wide (*Figure 36*). The pad is 10 ½" (0.27 m) in height above the surrounding lava flow surface. There is a raised pad on top of the feature along the northeast side. This pad is 2' 4 ⅓" (0.72 m) long (northwest by southeast), 2' 3 ½" (0.7 m wide) and 8 ¼" (0.21 m) in height. A rectangular configuration of four bolts is present on top of this pad. A rusted metal projection is present within this bolt pattern. There are five short plastic pipes that extend vertically out of the ground, adjacent to the pad to the southeast.

Feature B consists of a large scatter of historic debris located 13.0 m west of Feature A. The feature is covers an area 34.0 m long (east-west) and 13.6 m wide. The majority of the debris consists of small rusted metal pieces (*Figure 37*). A rusted engine is also present, located at the western end of the metal scatter (*Figure 38*).



Figure 32. Site 2135, Feature A Concrete Block, view to west



Figure 33. Site 2135, Feature B Concrete Pad with Inscription, view to south-southwest



Figure 34. Site 2135, Feature C Artifact Scatter, view to south-southeast



Figure 35. Site 2135, Feature D Concrete Pad with Inscription, view to east



Figure 36. Site 2136, Feature A Concrete Pad, view to northeast



Figure 37. Site 2136, Feature B Artifact Scatter, view to west-southwest



Figure 38. Site 2136, Feature B Engine, view to west-southwest



Figure 39 Site 2137, Feature A Concrete Block, view to south-southwest

The Feature A pad potentially supported a tower or served as a mount for a piece of equipment that required electrical and monitoring/communication connections. This is based on the presence of the vertical pipes adjacent to the pad that likely served as wire conduits. The Feature B artifact consists of rusting metal fragments and machinery parts, possibly remnants of a metal tower and associated equipment.. The site is unaltered and in fair condition. It is assessed as significant for its information content.

Site 2137 is a complex of two concrete features located in the southwestern portion of the project area, 17.0 m northeast of Site 2135 and 16.0 m northwest of Site 2136. The features are comprised of a concrete block (Feature A) and a concrete pad (Feature B). The Feature A block is located at the east end of the site. It is constructed of formed concrete and is 5' 6 ⅞" (1.7 m) square at the base, 4' 7 ⅞" (1.42 m) square at the top and 3' 8 ½" (1.13 m) in height (*Figure 39*). There is a recessed area on top of the block that is 2' 1 ⅛" (0.64 m) square by 1' 3 ¾" (0.4 m) deep. Horizontal form marks are visible on the sides of the block. No cultural remains are present.

The Feature B pad is situated 9.7 m west-southwest of Feature A. The pad is rectangular and is comprised of formed concrete. It measures 2' 8 ¼" (0.82 m) long (east-west), 1' 11 ½" (0.6 m) wide and 10 ½" (0.27 m) in height above the surrounding ground surface (*Figure 40*). Several fragments of rusted metal and a coil of old rope are present on the pad. The remnants of two rusted metal bolts are located in the approximate center and "U.S.C.G." (United States Coast Guard) has been stamped into the pad above the bolts. There is an inscription that has been carved into the top of the pad, above the "U.S.C.G" that reads:

7-16-74
MK1 BLACHOWSKI

The Feature A block probably supported a large "telephone" pole-sized post based on its similarity to an identical block at Site 2140 (see below) that still supports an intact post base. Its location roughly correlates with a pole situated immediately to the left of the flagpole shown in the 1961 photograph of LORSTA Kaua'i (see *Figure 22*). The inscription on Feature B indicates it was constructed by the Coast Guard in 1974 and probably served as a tower foundation or equipment mount based on the presence of bolts. The site is unaltered and in good condition.

Site 2138 is a scatter of concrete blocks and fragments located in a jumbled pile on the coastal escarpment, 19.5 m to the northeast of Site 2136. The site encompasses an area 5.5 m long (northeast by southwest), 4.0 m wide and 1.2 m in height, though the majority of the materials are located in a pile that is 4.0 m in diameter (*Figure 41*). The majority of the concrete objects consist of rectangular blocks that range in length from 1' 7 ¾" (0.5 m) to 3' 3 ⅓" (1.0 m) and 9 ¾" (0.25 m) to 2' 11 ½" (0.9 m) in width. The remainder of the material consists of irregularly shaped concrete fragments. The materials appear to have been impacted by wave activity. No additional cultural remains are present.

The site is interpreted as the disturbed remnant of a foundation based on the appearance of the concrete blocks. The original size and shape of the foundation is undermined as is its specific function. The site is assessed as significant for information content, is altered and in poor condition.

Site 2139 is a complex of four features located in the west-central portion of the project area to the southeast of the large depression. The features consist of two concrete posts (Features A and D), a concrete block (Feature B) and a concrete pad (Feature C) located in an area 33.5 m long (north-south) by 12.0 m wide.

Feature A consists of a formed concrete post located at the northern end of the site. It is set in the ground and is leaning slightly to the south (*Figure 42*). The post is 11 ¾" (0.3 m) square and 1' 7 ⅝ (0.5 m) in height. A metal anchor is present on top of the post. No cultural remains are present.

Feature B consists of a formed concrete block situated 14.5 m to the southwest of Feature A. It measures 5' 7 ¾" (1.72 m) square at the base, 4' 8 ¼" (1.43 m) square at the top and 3' 5 ¼ " (1.05 m) in height above the surrounding ground surface (*Figure 43*). There is a square recessed area on top of the



Figure 40. Site 2137, Feature B Concrete Pad with Inscription, view to west



Figure 41. Site 2138 Jumbled Concrete Blocks, view to southeast



Figure 42. Site 2139, Feature A Concrete Post, view to south



Figure 43. Site 2139, Feature B Concrete Block, view to west

block that is 2' 3 ⅛" (0.69 m) on each side and 2' 2 ¾" (0.68 m) in depth below the top of the block. A jumble of white and red wires is located within the recessed area. No cultural remains are present.

Feature C is a formed concrete pad located 14.0 m southeast of Feature B. It is 4' 11 ¾" (1.52 m) square and 1 ½" (0.04) m in height above the surrounding ground surface (*Figure 44*). No cultural remains are present.

Feature D is a formed concrete post located 13.5 m southwest of Feature C. The post is set vertically in the ground and is 1' 7 ½" (0.5 m) square and 4' 3 ⅛" (1.3 m) in height (*Figure 45*). Reinforcing metal rebar is visible on the broken sides of the post and a metal strap extends out of the side. A metal bracket is bolted to the post, extending 5 ⅞" (0.15 m) above the top. No cultural remains are present.

The Feature A and D posts potentially functioned a guy wire anchors like Site 2134. The more substantial Feature D post has a metal bracket that potentially served to attach a large cable like the one attached to the Site 2140 concrete post. The Feature D post lacks a metal bracket, but otherwise closely resembles the Site 2140 concrete post in form and size. The Feature B block probably supported a large post based on its similarity to an identical block at Site 2140 (see below) that still supports an intact post base. Its location roughly correlates with a pole situated immediately to the left of the main metal tower shown in the 1961 photograph of LORSTA Kaua'i (see *Figure 22*). Feature C is a concrete pad that likely functioned as a foundation for a small structure or piece of equipment. The site is unaltered and in fair to good condition. It is assessed as significant for its information content.

Site 2140 is a formed concrete block located in the base of the large depression in the northwestern portion of the project area. The pier is 4' 7 ¾" (1.42 m) by 4' 7 ¾" (1.24 m) at the top, 5' 6 ¾" (1.7 m) by 5' 7 ¾" (1.72 m) at the base and 3' 8 ½" (1.13 m) in height above the surrounding ground surface (*Figure 46*). Form marks from 6" (15 cm) planks are visible on the sides of the block. A wooden pole is set vertically into the top of the block, within a recessed area that is 1' 11 ½" (0.6 m square) by 7 ¾" (0.2 m) deep). The pole has been cut off above the top of the block, within the remaining portion measuring 1' ½" (0.32 m) in diameter and 1' 1 ¾" (0.35 m) in height. Tar is smeared on top of the block and within the recessed area. No cultural remains are present at the site.

The block functioned as a support for a large post, the base of which is still present. Its location roughly correlates with a pole situated behind the possible shop building (right bay door) in the central portion of the LORSTA Kaua'i facility shown a 1961 photograph (see *Figure 22*). The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2141 is a small, rectangular formed concrete pad located in the central portion of the project area. The pad measures 2' 9 ¾" (0.86 m) long (east-west), 2' 4 ¾" (0.75 m) wide and 2 ⅜" (0.06 m) high (*Figure 47*). There is a rectangular configuration of four bolts that appear to have been sheared off flush with the surface of the pad. These bolts are 1 ¾" (0.045 m) diameter and are in an area 1' 5 ⅜" (0.44 m) long (east-west) and 9" ⅛" (0.235 m) wide. There is a metal plate present within the configuration of bolts that is 6 ¾" (0.175 m) long (north-south), 1 ⅜" (0.035m) wide and ⅜" (0.01m) in height. No cultural remains are present at the site.

The site is interpreted as a foundation for a tower or piece of equipment based on its formal type and presence of bolts and metal plate. The site is assessed as significant for information content, is unaltered and is in good condition.

Site 2142 is a small roughly oval-shaped concrete pad located in an area of shallow soil, 41.0 m to the east of Site 2141. The pad is 1' 3 ¾" (0.4 m) long (east-west), 8 ¼" (0.21 m) wide and 1 ½" (0.04 m) in height above the surrounding ground surface (*Figure 48*). The pad is irregular and appears to have been created by pouring concrete into a hole dug into the ground. Stone aggregate within the concrete is visible indicating the pad was not trowel finished. No cultural remains are present.

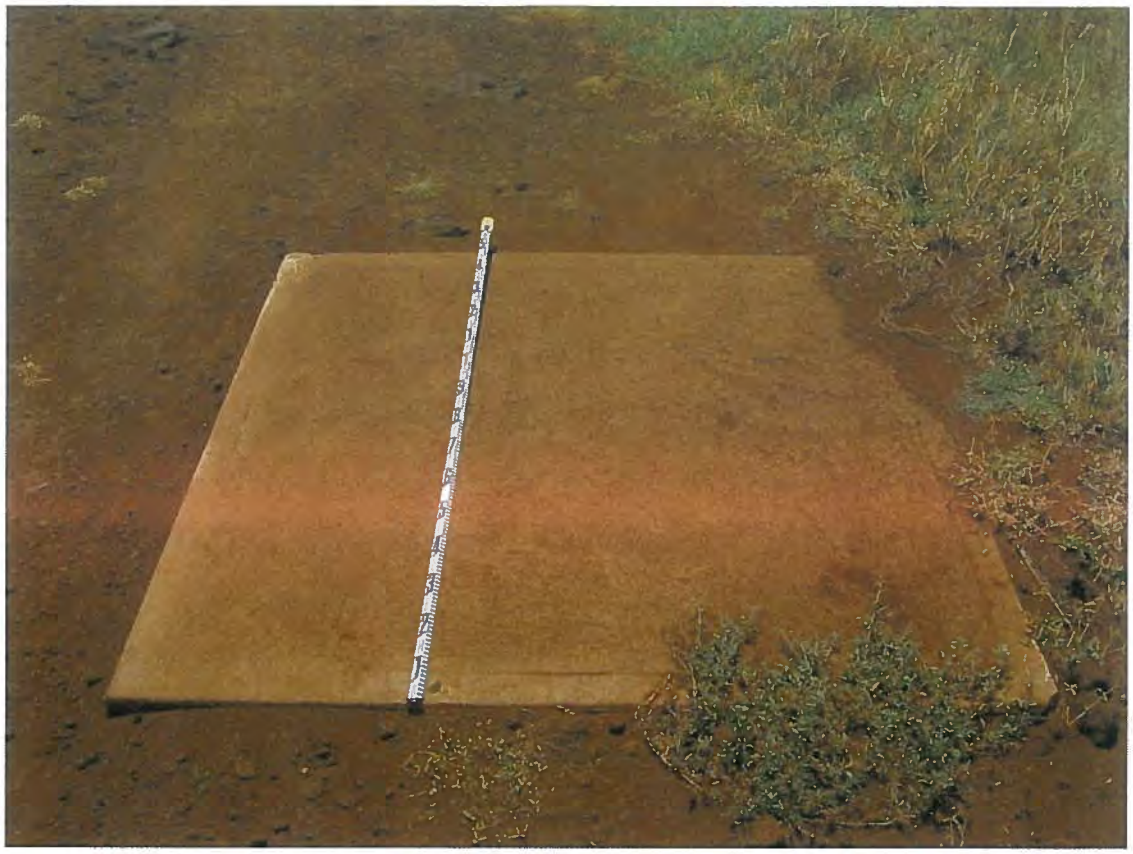


Figure 44. Site 2139, Feature C Concrete Pad, view to southwest



Figure 45. Site 2139, Feature D Concrete and Metal Post, view to east



Figure 46. Site 2140 Concrete Block, view to northwest



Figure 47. Site 2141 Concrete Pad, view to east



Figure 48. Site 2142 Concrete Pad, view to south



Figure 49. Site 2143, Feature A Concrete Slab, view to south-southwest

The site probably served to anchor wiring similar to the unformed pads at Site 2147. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2143 is a complex of three features located central seaward portion of the project area on the coastal escarpment. The features are comprised of a concrete slab (Feature A), a stone retaining wall (Feature B), and a concrete pad (Feature C) located in an area 16.5 m long (northwest by southeast) and 4.5 m wide.

Feature A consists of a rectangular, formed concrete slab located at the northwestern end of the site. The slab measures 14' 9 ⅛" (4.5 m) long (northwest by southeast), 6' 8 ¼" (2.04 m) wide and 10 ½" (0.27 m) in height (*Figure 49*). There are two 3' (0.92 m) diameter manhole covers present on top of the slab; one at the northwest end and one at the southeast end. Both manholes are positioned on raised concrete seats that are 3 ½" in height above the slab surface. The southeast seat is square and the northwest seat is broken with remnants remaining. Both manhole covers were rusted shut. No cultural remains are present.

Feature B consists of a linear cobble and small boulder retaining wall located adjacent to Feature A to the southeast. The wall is 14' 9 ⅛" (4.5 m) long (northeast by southwest) and 1' 11 ½" (0.6 m) wide, built of stacked stones and soil (*Figure 50*). The inland (northwest) side is level with the sloping terrain and the seaward (southeast) side has been built up to a maximum height of 1' 5 ⅝" (0.45 m). No cultural remains are present.

Feature C is an unformed concrete pad that was poured onto an outcrop 8.0 m to the southeast of Feature B. It is 1' 11 ½" (0.6 m) long (northwest by southeast) and 1' 3 ¾" (0.4 m) wide (*Figure 51*). The inland (northeast) side is 1" (0.03 m) in height above the outcrop and the seaward side is 1' 9 ⅝" (0.55 m) in height, extending down the side of the outcrop. The surface has been troweled level. There is a scatter of rusted metal fragment located to the northwest of the feature.

The Feature A slab is a component of a utility system, potentially for wastewater based on the presence of the manholes. The Feature B retaining wall appears to have functioned to retain the slope below Feature A. Feature C probably served to anchor wiring similar to the unformed pads at Site 2147. The site is unaltered and in fair condition. It is assessed as significant for its information content.

Site 2144 is a complex of five concrete features located in the northwestern portion of the project area. The features consist of a block (Feature A) and concrete pads (Features B-D) located in an area 27.0 m long (northeast by southwest) and 5.0 m wide.

The Feature A block is situated in the central portion of the site. This feature is a rectangular formed concrete block that was painted green. It is 5' 6 ¼" (1.68 m) square at the base, 4' 8 ⅝" (1.44 m) square at the top and 3' 6 ⅛" (1.07 m) in height (*Figure 52*). There is a column of reinforced concrete extending vertically out of the center of the block that is 10 ¼" (0.26 m) square and 1' 10 ½" (0.57 m) in height. No cultural remains are present.

The Feature B concrete pad is located 12.0 m to the east-northeast of Feature A. This pad is constructed of formed concrete and is roughly square, measuring 5' 1" (1.55m) by 4' 11 ¾" (1.52 m) and 6 ¼" (0.16 m) in height (*Figure 53*). No cultural remains are present.

Features C, D and E are formed concrete pads situated 12.5 m to the southwest of Feature A. The Feature C pad appears to be in original location although Features D and E appear to have been moved to this location because the features are chipped and not level (*Figure 54*). The Feature C pad is 4' 11 ¾" (1.52 m) square and 1' 3" (0.38 m) in height. No cultural remains are present.

Feature D is situated adjacent to Feature C to the southwest. This pad is rectangular in shape and is 2' 7 ¾" (0.81 m) long (north-south), 1' 11 ½" (0.6 m) wide and 10 ½" (0.27 m) thick. There is a piece of rusted metal that probably was for attachment, extending out of the center of the pad. "U.S.C.G" is



Figure 50. Site 2143, Feature B Retaining Wall, view to west


Figure 51. Site 2143, Feature C Concrete Pad, view to east



Figure 52. Site 2144, Feature A Concrete Block, view to northwest



Figure 53. Site 2144, Feature B Concrete Pad, view to east



Figure 54. Site 2144, Features C, D and E Concrete Pads, view to west



Figure 55. Site 2144, Feature D Concrete Pad with Inscription, view to west

stamped into the concrete above the metal (*Figure 55*). There an inscription stamp that reads, "7-17-74 - Little SKI" over a heart with an arrow through it. No cultural remains are present.

The Feature E pad is located to the northwest of Feature C. It is rectangular and is 2' 8 ¼" (0.82 m) long (north-south), 2' ¼" (0.62 m) wide and 1' 2 ½" (0.37 m) thick. No cultural remains are present.

Features A, B, C and E are interpreted as foundations based on their formal type and appearance. The Feature A foundation served as a support for a concrete post. It is identical in dimensions to the post support foundation at Site 2140 and several other features. The specific function of the other features is undetermined, although the metal embedded in Feature D suggests that it was a mount for a tower or piece of machinery. The site is altered and in fair to good condition.

Site 2145 is a complex of two adjacent formed concrete pads located in the northeastern portion of the project area, 25.5 m northeast of Site 2144 (*Figure 56*). The Feature A pad is rectangular in shape and is 6' 5 ½" (1.97 m) long (east-west), 3' ¼" (0.92 m) wide and 2 ¼" (0.06 m) in height. The pad appears to have been poured in two pieces, evidenced by a seam in the concrete that bisects it longitudinally. The southeastern corner of the pad is broken.

The Feature B pad is located 1.85 m to the southeast of Feature A. This pad is roughly square and is 3' 2 ½" (0.98 m) long (north-south), 3' ¼" (0.92 m) wide and 3 ½" (0.09 m) in height. No cultural remains were present in association with either feature.

The site likely functioned as two associated foundations based on their spatial proximity. The foundations are too small to have supported buildings and likely were used for equipment or tower facilities. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2146 is a complex of two concrete features located in the northeastern portion of the project area. The features are comprised of a concrete block (Feature A) and a concrete pad (Feature B). A second concrete pad very similar to Feature B is located outside the boundaries of the present project to the east of Feature A.

The Feature A block is constructed of formed concrete and has been painted green (*Figure 57*). The block measures 4' 7 ⅞" (1.42 m) square at the top, 5' 7 ¾" (1.72 m) square at the base and 3' 6 ⅛" (1.07 m) in height. There is a recessed area on top of the block that is 1' (0.3 m) square) and 1 ¼" (0.03 m) deep. No cultural remains are present.

The Feature B concrete pad is located 12.0 m to the south-southwest of Feature A. This feature is comprised of formed concrete and is 4' 11 ¾" (1.52 m) square and 1 ½" (0.04 m) in height above the surrounding ground surface (*Figure 58*). No cultural remains are present.

The features at Site 2146 are interpreted as foundations based on their formal type and appearance. The Feature A foundation likely served as a support for a concrete post. It is identical in dimensions to the post support foundation at the nearby Feature C at 2144, Site 2140 and several other features, except unlike the others, the interior cavity is filled with concrete. The Feature B foundation is too small to have supported a building and likely was used for equipment or a tower facility. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2147 is a complex of 73 small oval-shaped, unformed concrete pads created by pouring concrete directly onto stone outcrops. These features are present in the seaward portion of the project area, extending between Sites 2135 in the west to Site 2143 in the east (see *Figure 11*). These feature vary slightly in size and shape but most are oval in plan and average 1' 1 ¾" (0.35 m) in length and 9 ⅜" (0.24 m) in width (*Figures 59, 60* and *61)*. Most of these features have been troweled smooth on the surface. Electrical wires (bare copper and white plastic coated) extend from the long ends of these pads.



Figure 56, Site 2145, Feature A and B Concrete Pads, view to east



Figure 57. Site 2146, Feature A Concrete Block, view to northwest



Figure 58. Site 2146, Feature B Concrete Pad, view to north



Figure 59. Site 2147 Concrete Pads, view to east

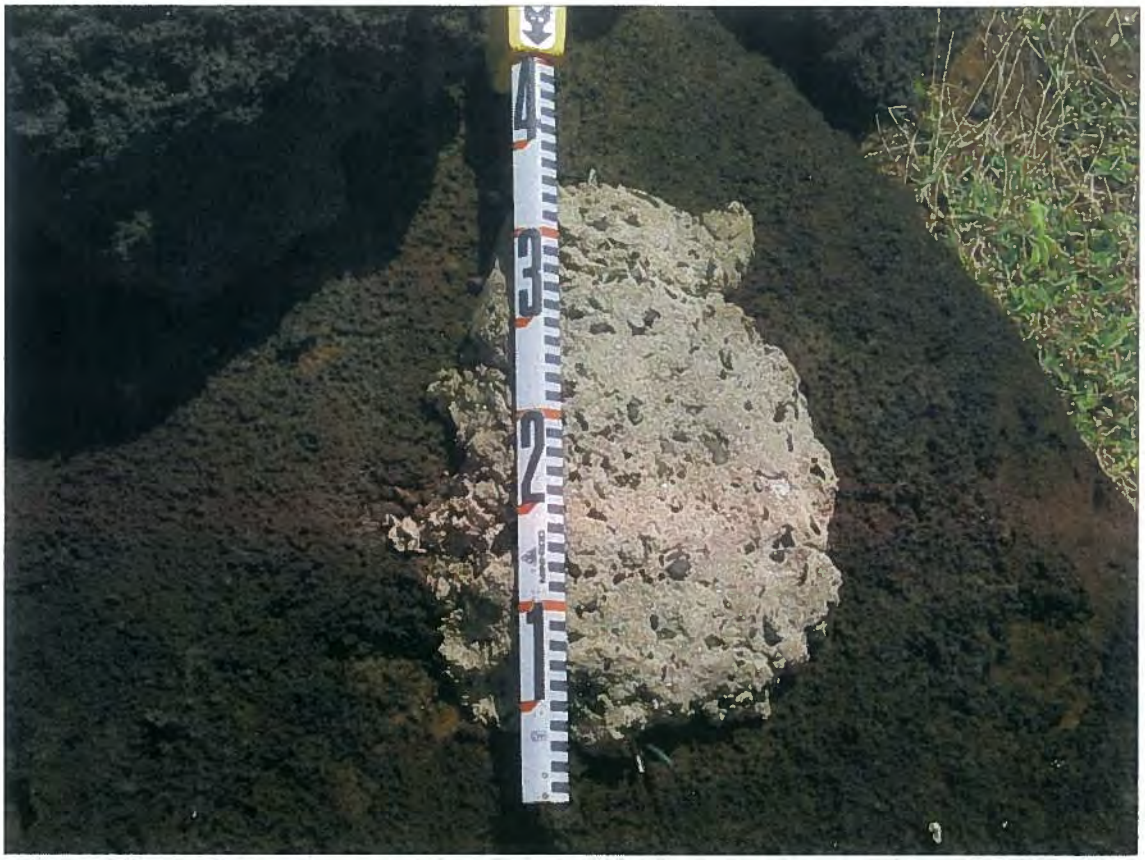


Figure 60. Concrete Pad at Site 2147, view to west



Figure 61. Concrete Pad at Site 2147, view to west

The Site 2147 concrete pads apparently functioned to secure wiring that served the towers and associated equipment. The bare copper wiring probably served to ground-protect towers and equipment during electric storms. The other wires probably provided electric power and monitoring communication. The site is unaltered and in fair to good condition.

Subsurface Testing

Subsurface testing was undertaken in 20 locations during the project. This testing involved the excavation of 20 0.5 m by 0.5 m test units, located in the inland half of the project area (see *Figure 11*). Four of the units were located within the large depression in the northwestern portion of the project area (TU-8, -9, -10 and -12) and eight were located to the north, south and east (TU-11, -13, -14, -16 thru -20). The eight remaining units (TU-1 thru -7, and -15) were located along the northern project boundary to the east of the depression.

The excavations revealed similar stratigraphy throughout the parcel consisting of a surface layer over decomposing bedrock (*Table 3*). The profiles for the 20 units are depicted in *Figures 62* through *65*. The surface layer consists of a dark reddish brown sandy silt to clay silt with 10 to 50% cobble, pebble and small boulder inclusions. This layer varied in thickness from 0.07 to 0.4 m with an average depth of 0.19 m.

The layer was designated Layer I in 19 of the units although in TU-18 it was overlain by a layer of decaying organic material. Wires were present in two of the test units (TU-2 and -16) and clear glass and waterworn coral were present in one unit (TU-3). No cultural remains were present in the deposit in the remaining units.

A sand lens was noted at the base of Layer I in two of the test units (Layer II in TU-1 and -2), located at the northeastern end of the parcel. This deposit consisted of 0.02 to 0.06 m of a brown sand. Marine shells (2 *Nerita picea* and 1 waterworn shell) and one bird bone were present in Layer II in TU-1, although no cultural remains were present in TU-2.

The subsoil throughout the parcel was comprised of a dark reddish sandy silt to clay silt saprolite with 0 to 60% pebble inclusions. This deposit is represented by Layer II in TU-8, -9, -11 and -15 and by Layer III in TU-1 and -2. The remaining units were terminated on the saprolitic layer, with the exception of TU-14 and -15, which were terminated on saprolite and bedrock. No cultural remains were present within this deposit. Examples of the test units examined during the present project are illustrated in *Figures 66* and *67*.

Table 3. Summary of Test Unit Stratigraphy

Test Unit No.	Layer	Thickness (m)	Depth (m bs)	Color	Munsell	Soil Type	Comment
1	I	0.08-0.14	0.14	Dark reddish brown	5YR 3/4	Sandy silt with 50% cobble, pebble and small boulder inclusions	No cultural remains
	II	0.03-0.06	0.18	Brown	10YR 4/3	Sand	*Nerita picea* (n=2, 0.4 grams), bird bone (n=1, 2.0 g), waterworn marine shell (n=1, 0.2 g)
	III	0.05-0.14	28	Dark reddish brown	2.5YR 3/4	Sandy silt with 60% pebble inclusions	No cultural remains; Saprolite
2	I	0.08-0.12	0.12	Dark reddish brown	5YR 3/4	Sandy silt with 50% cobble, pebble and small boulder inclusions	Wire present
	II	0.02-0.05	0.14	Brown	10YR 4/3	Sand	No cultural remains
	III	0.06-0.17	0.28	Dark reddish brown	2.5YR 3/4	Sandy silt with 60% pebble inclusions	No cultural remains; Saprolite
3	I	0.16-0.25	0.25	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	Clear glass (n=1, 0.3g), waterworn coral (n=3, 0.2 g); Terminated on saprolite
4	I	0.28-0.29	0.29	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
5	I	0.03-0.15	0.15	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
6	I	0.18-0.19	0.19	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
7	I	0.1-0.12	0.12	Dark reddish brown	2.5YR 3/4	Clay silt with 20% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
8	I	0.13-0.17	0.17	Dark reddish brown	5YR 3/3	Clay silt with 30% cobble and pebble inclusions	No cultural remains
	II	0.03-0.17	0.3	Dark reddish brown	5YR 3/4	Clay silt with 60% pebble inclusions	No cultural remains; Saprolite
9	I	0.16-0.17	0.17	Dark reddish brown	5YR 3/3	Sandy silt with 30% cobble and pebble inclusions	No cultural remains
	II	0.12-0.13	0.3	Dark reddish brown	5YR 3/4	Clay silt with 60% pebble inclusions	No cultural remains; Saprolite
10	I	0.05-0.34	0.34	Dark reddish brown	5YR 3/3	Silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
11	I	0.14-0.15	0.15	Dark reddish brown	5YR 3/3	Sandy silt with 20% cobble and pebble inclusions	No cultural remains
	II	0.14-0.15	0.3	Dark brown	7.5YR 3/3	Clay silt with no inclusions	No cultural remains; Terminated on saprolite
12	I	0.21-0.26	0.26	Dark reddish brown	5YR 3/3	Clay silt with 20% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
13	I	0.14-0.2	0.2	Dark reddish brown	5YR 3/3	Clay silt with 30% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
14	I	0.06-0.19	0.19	Dark reddish brown	5YR 3/3	Clay silt with 30% cobble and pebble inclusions	No cultural remains; Terminated on saprolite and bedrock
15	I	0.16-0.17	0.17	Dark reddish brown	5YR 3/3	Clay silt with 40% cobble and pebble inclusions	No cultural remains
	II	0.09-0.14	0.31	Dark brown	7.5YR 3/3	Clay silt with 15% pebble inclusions	No cultural remains; Terminated on saprolite and bedrock
16	I	0.34-0.4	0.4	Dark reddish brown	5YR 3/3	Sandy silt with no inclusions	Wire present; Terminated on saprolite
17	I	0.08-0.17	0.17	Dark reddish brown	5YR 3/4	Clay silt with 20% pebble inclusions	No cultural remains; Terminated on saprolite
18	I	0.07-0.09	0.09	Decaying organic material	-	-	No cultural remains
	II	0.03-0.08	0.16	Dark reddish brown	5YR 3/4	Clay silt with 5% pebble inclusions	No cultural remains; Terminated on saprolite
19	I	0.06-0.07	0.07	Dark reddish brown	2.5YR 3/4	Clay silt with 30% pebble inclusions	No cultural remains; Terminated on saprolite
20	I	0.07-0.09	0.09	Dark reddish brown	2.5YR 3/4	Clay silt with 10% pebble inclusions	No cultural remains; Terminated on saprolite

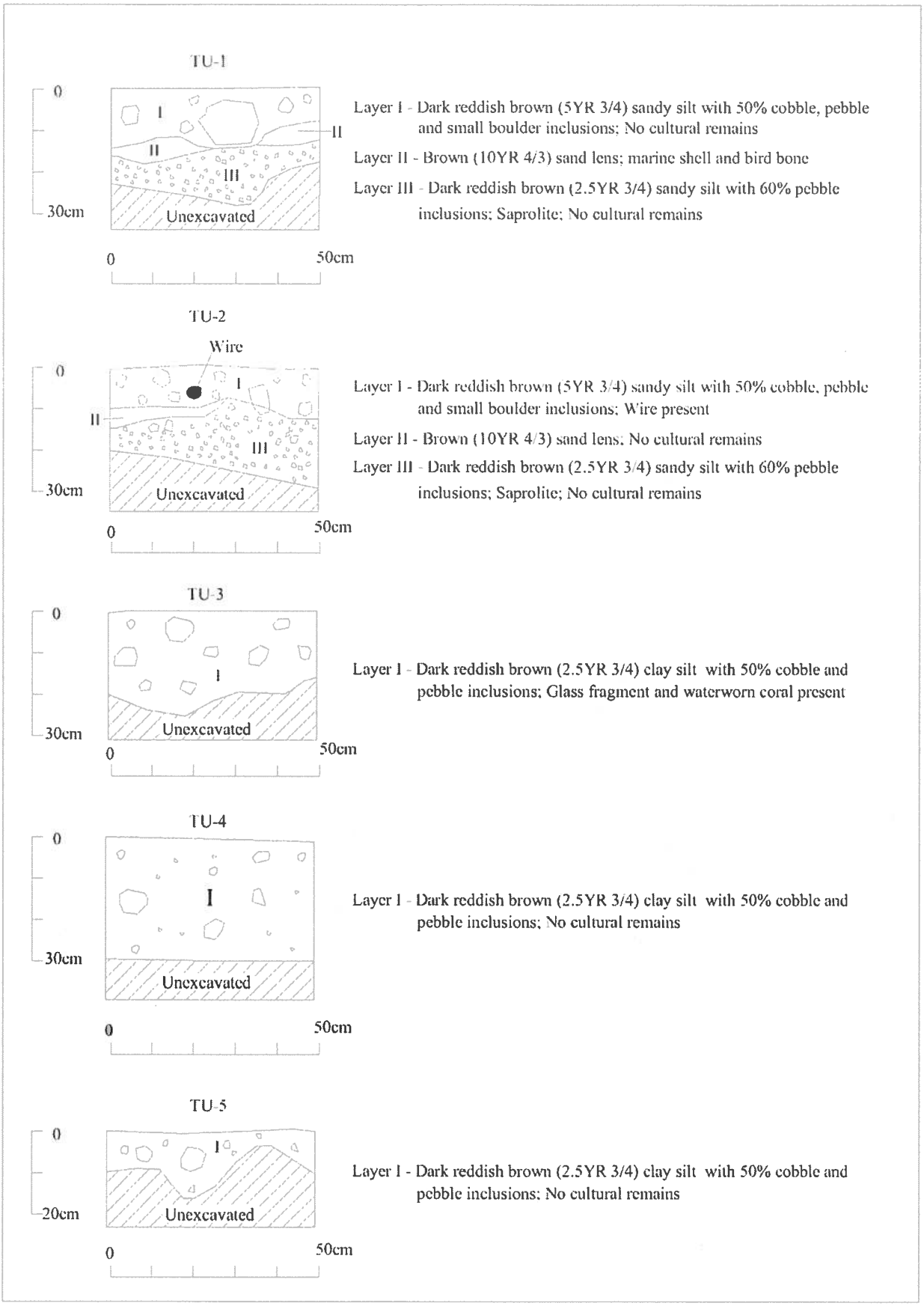


Figure 62. West Face Profiles of TUs 1-5

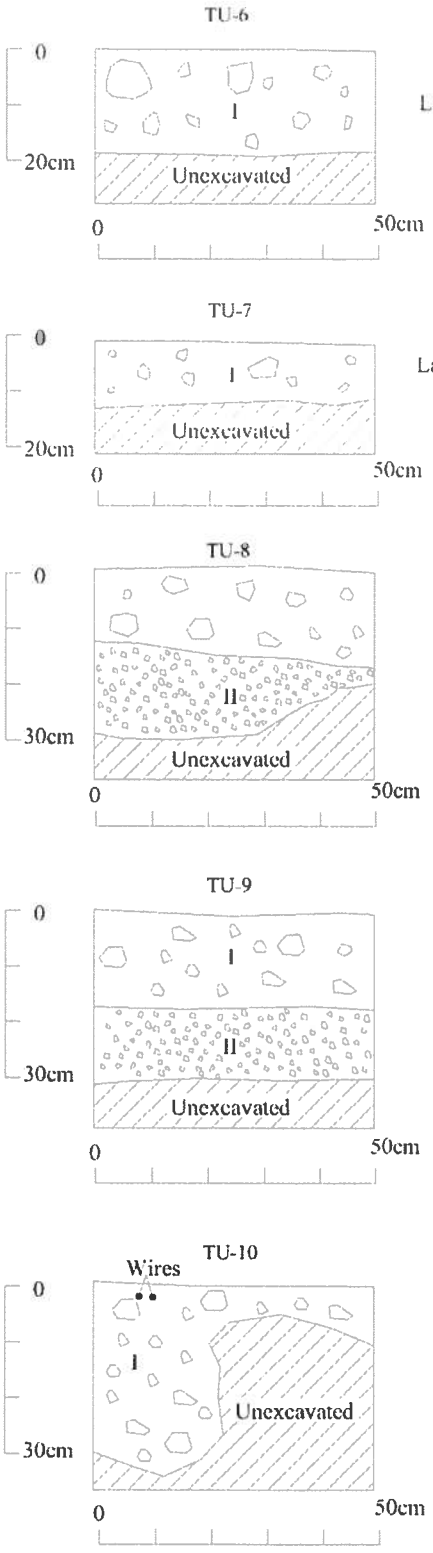
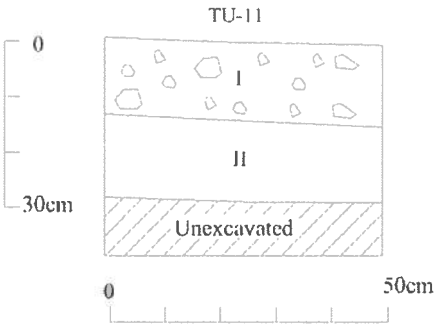
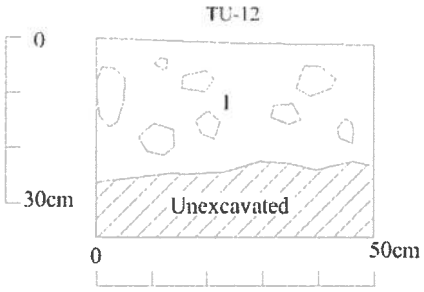


Figure 63. West Face Profiles of TUs 6-10

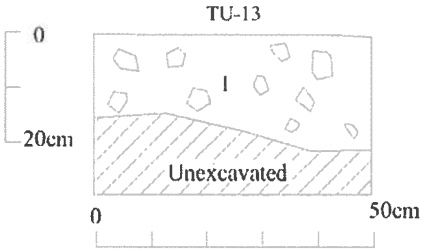


Layer I - Dark reddish brown (5YR 3/3) sandy silt with 20% cobble and pebble inclusions; No cultural remains

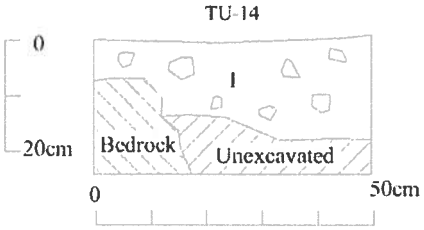
Layer II - Dark brown (7.5YR 3/3) clay silt; No cultural remains



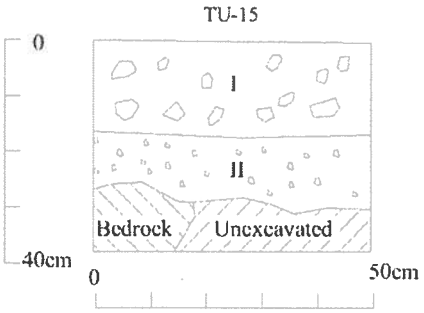
Layer I - Dark reddish brown (5YR 3/3) clay silt with 20% cobble and pebble inclusions; No cultural remains



Layer I - Dark reddish brown (5YR 3/3) clay silt with 30% cobble and pebble inclusions; No cultural remains



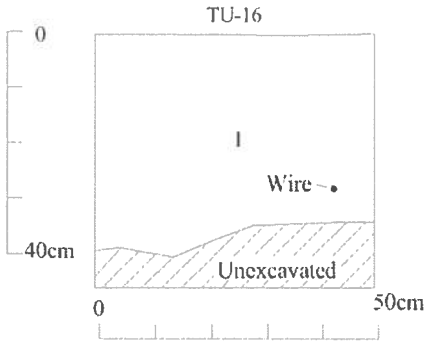
Layer I - Dark reddish brown (5YR 3/3) clay silt with 30% cobble and pebble inclusions; No cultural remains



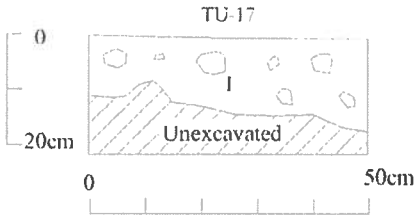
Layer I - Dark reddish brown (5YR 3/3) clay silt with 40% cobble and pebble inclusions; No cultural remains

Layer II - Dark brown (7.5YR 3/3) clay silt with 15% pebble inclusions; Saprolite; No cultural remains

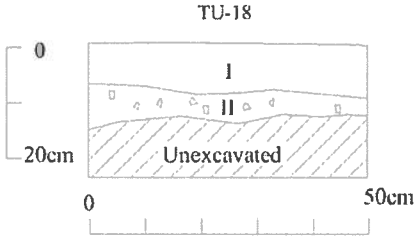
Figure 64. West Face Profiles of TUs 11-15



Layer I - Dark reddish brown (5YR 3/3) sandy silt ; Wire present

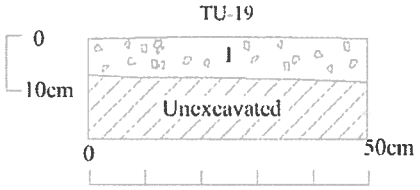


Layer I - Dark reddish brown (5YR 3/4) clay silt with 20% pebble inclusions; No cultural remains

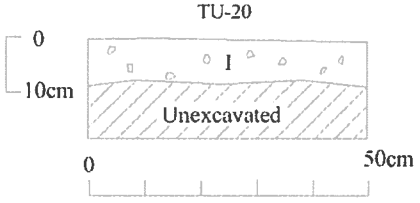


Layer I - Mulch; No cultural remains

Layer II - Dark reddish brown (5YR 3/4) clay silt with 5% pebble inclusions; No cultural remains



Layer I - Dark reddish brown (2.5YR 3/4) clay silt with 20% pebble inclusions; No cultural remains



Layer I - Dark reddish brown (2.5YR 3/4) clay silt with 10% pebble inclusions; No cultural remains

Figure 65. West Face Profiles of TUs 16-20



Figure 66. Post-excavation of TU-3, view to northeast

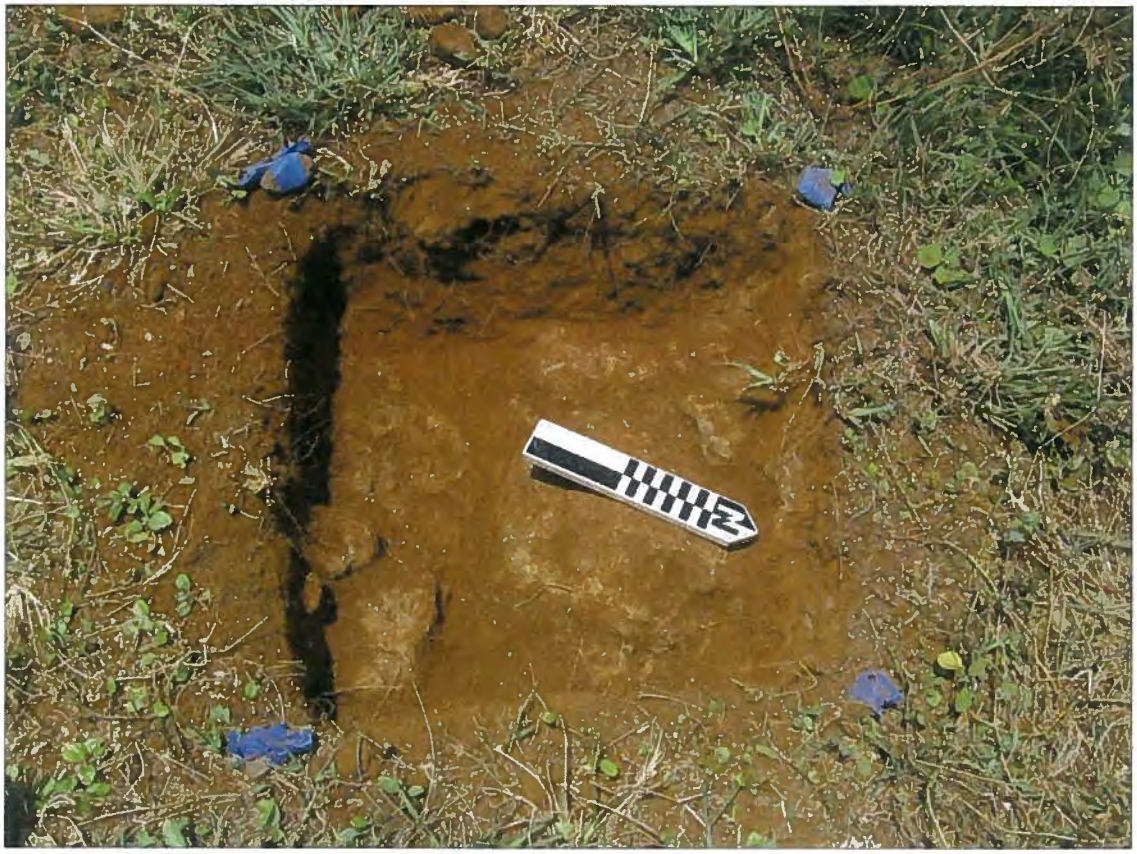


Figure 67. Post-excavation of TU-6, view to west

CONCLUSION

Discussion

The survey results generally confirm the expectations derived from historical and archaeological background research. No traditional Hawaiian sites were identified within the parcel. The absence of such sites is not surprising given the extensive historic use of the area. The survey documented 18 sites with 128 features consisting of concrete pads, concrete slabs, concrete blocks, posts, artifact scatters, terraces, paths, walls, a ditch, a road, stairs, a utility box and a walled slab.

Subsurface testing was conducted throughout the inland portion of the project area revealing a shallow surface layer of dark reddish brown sandy silt to clay silt overlying decomposing bedrock. Historic debris consisting of wire and clear glass were present in three of the units. One unit contained a sand lens that yielded a small quantity of marine shell and a bird bone.

Most of the identified features are remnants of the U.S. Coast Guard LORAN Station (LORSTA Kauai) that was in operation between 1951 and 1979. A few features on the periphery of TMK: 2-8-021:43, where a USCG LHS navigation aid is situated, may have been associated with previous facilities that were initially installed in 1908 and continue in use today.

As discussed, the majority of the features consist of formed concrete structures of varying size and shape. These features are summarized in *Table 4.* The features can be grouped into several categories based on morphology and function as follows: (1) features associated with the main LORAN station, (2) wiring anchors, (3) tower bases/equipment mounts, (4) possible wastewater utility features, (5) guy wire anchors, (6) 5' square pads, (7) 5'6-8" square post supports, (8) foundations of indeterminate function, and (9) modern landscaping features. The distribution of these categories is presented in *Figure 68.* The main buildings of the station are represented by the Site 2130 complex in the northwestern portion of the project area. These features consist of concrete structural foundations, roads, paths, and utility and drainage features.

Site 2142, Feature C at Site 2143, and the 72 features of Site 2147 all consist of small, unformed concrete pads poured directly on exposed bedrock that apparently served as wiring anchors. The features are clustered in the central seaward portion of the project area (see *Figure 11*). The features apparently secured wiring for the antenna array and associated equipment. Wires protruding from these pads consist of bare copper and plastic-sleeved wires that functioned as grounds, and to transmit electrical power and monitoring communications.

There is a large area covered with a deposit of small rusted metal fragments (Site 2136, Feature B; see *Figure 37*) that is centrally located on the seaward side of the anchor cluster (see *Figure 68*). The dense deposit of gravel-sized fragments rusted metal probably came from the large, 230 ft high metal tower that was the main antenna of the LORAN antenna array (see *Figure 22*). Rust removal and associated maintenance was probably necessary on a regular basis for such metal structures sited adjacent to the ocean.

One small concentration of eight anchors is situated adjacent to Feature C of Site 2135 (see *Figure 34*) next to the navigation aid at the west end of overall anchor cluster. Feature C is an area covered with a similar deposit of rusted metal fragments that also likely indicate the former presence of a metal tower. Two inscriptions are present on concrete pads adjacent to Feature C (see *Figure 68*, Inscriptions 1 and 2) that indicate a US LHS facility and a date of February 1922.

No anchors are present on the seaward sides of these metal fragment concentrations, possibly because the towers were designed to send/receive radio signals primarily in a southerly direction. At least three features (Site 2134, and 2139, Features A and D) are probably anchors for guy wires that stabilized the main metal tower.

Table 4. Summary of Concrete Features

Site	Feature	Type	Length	Width	Height/ Depth	Shape	Construction	Associated elements	Potential function	Similar features in project area
2130	A	Slab	13' 7 ¾"	7' 11⅝"	2' 5½"	Rectangular	Formed concrete	Projections and steps	Foundation for LORSTA building	
2130	B	Slab	14' 3⅝"	7' 1¼"	1' 7¼"	Rectangular	Formed concrete	Projections and steps	Foundation for LORSTA building	
2130	C	Pad	3' ⅝"	2' 8 ⅝"	9 ⅞"	Rectangular	Formed concrete	Manhole cover in center	Utility feature (wastewater?)	2130-E and 2143-A
2130	D	Pad	3' ⅝"	2' 8 ⅝"	7 ⅞"	Rectangular	Formed concrete	-	Foundation for ?	2130-F
2130	E	Pad	2' 9 ⅞"	2' 9 ⅞"	9 ⅞"	Square	Formed concrete	Manhole cover in center	Utility feature (wastewater?)	2130-C and 2143-A
2130	F	Pad	2' 10¾"	2' 3 ½"	1' 1 ¾"	Rectangular	Formed concrete	-	Foundation for ?	2130-D
2130	G	Stairs	22' 7 ½"	3' 1 ¾"	3 ⅞"	Linear	Formed concrete	-	Transportation	-
2130	I	Ditch	173' 2 ¾"	2' 11 ½"	1' 5 ¾" deep	Linear	Formed concrete	-	Water diversion	-
2130	J	Path	34' 5 ½"	1' 7 ⅝"	10 ⅝"	Linear	Concrete and stone	-	Transportation	2130-L
2130	K	Wall	48' 6 ⅝"	11 ⅞"	1' 5 ¾"	Linear	Mortared stone	-	Boundary	-
2130	L	Path	31' 2"	3' 11 ¾"	0	Linear	Concrete and stone	-	Transportation	2130-M
2130	M	Pad	4' 11"	4' 1 ¾"	3 ¾"	Rectangular	Formed concrete	2 vertical poles	Foundation for sign	-
2130	N	Box	2' 11 ½"	1' 7 ⅝"	0	Rectangular	Formed concrete	2 metal handles on lid	Utility junction box	-
2130	O	Walled slab	29' 2 ½"	27' 6 ⅝"	4' 1 ¾"	Rectangular	Formed concrete and mortared stone	BBQ grill	Recreation	-
2131	A	Block	3' 3½ "	2' 4 ⅜"	2' 3 ½"	Irregular	Stone and concrete	Modern landscaping feature with historic elements	Undetermined	
2131	B	Terrace	4' 3 ⅜"	3' 3 ½"	2' 11 ½"	Linear	Concrete and soil	Modern landscaping feature with historic elements	Undetermined	
2131	C	Terrace	3' 3 ½"	2' 7 ½"	1' 7 ⅝"	Oval	Stone and concrete	Modern landscaping feature with historic elements	Undetermined	
2131	D	Terrace	2' 3 ⅜	1' 11 ⅜"	2' 7 ½"	Oval	Stone and concrete	Modern landscaping feature with historic elements	Undetermined	
2131	E	Pad	2' 11 ¾"	2' 11"	5 ⅞"	Square	Formed concrete	Triangular configuation of bolts	Tower base	
2132	A	Pad	1' 3 ¾"	1' 1 ¾"	2 ¾"	Rectangular	Formed concrete	-	Foundation for ?	
2132	B	Post	3' 7 ¼"	1' 5 ½"	1' 7 ⅝"	Irregular	Stone and concrete	-	Foundation for ?	
2133	A	Pad	2' 9 ¾"	2' 5 ⅜"	3 ⅞"	Rectangular	Formed concrete	Rectangular configuration of bolts and plate on surface	Tower base or equipment mount	2141
2133	B	Pad	5' 10 ¾"	5' 6 ¾"	0	Irregular	Poured into ground	-	Foundation for ?	
2133	C	Pad	4' 3 ⅜"	2' 3 ½	0	Irregular	Poured into ground	-	Foundation for ?	
2134	-	Post	1'	1'	2' 7 ½"	Square	Formed concrete	Turnbuckle and cable	Guy wire anchor	2139-A, 2139-D
2135	A	Block	4' 11 ¾"	4' 11 ¾"	1' 11 ¾"	Square	Formed concrete	-	Foundation for ?	2139-C, 2144-C, 2146-B
2135	B	Pad	1' 9 ¼"	1' 6 ½"	0	Oval	Poured into ground	Inscription "Feb 16 1922"	Marker	
2135	D	Pad	11 ⅞"	9 ⅜"	3 ⅞"	Square	Formed concrete	Inscription "US LHS"	Marker, sign or equipment mount	
2136	A	Pad	7' 7 ½"	6' 10 ⅝"	10 ½"	Rectangular	Formed concrete	Rectangular configuration of bolts and plate on surface	Tower base or equipment mount	
2137	A	Block	5' 6 ⅞"	5' 6 ⅜"	3' 8 ½"	Square	Formed concrete	Recessed area on top	Post support	2139-B, 2140, 2144-A, 2146-A
2137	B	Pad	2' 8 ¼"	1' 11 ½"	10 ½"	Rectangular	Formed concrete	Bolts, Inscription "USGS" and "7-16-74 MK1 BLACHOWSI"	Tower base or equipment mount	2144-D
2138	-	Scatter	18'	13' 1 ½"	3' 11 ¾"	Irregular	Formed concrete	-	Undetermined	
2139	A	Post	11 ¾"	11 ¾"	1' 7 ⅝"	Square	Formed concrete	Metal anchor on top	Guy wire anchor	2139-D, 2134
2139	B	Block	5' 7 ¾"	5' 7 ¾"	3' 5 ¾"	Square	Formed concrete	Electrical wires	Post support	2137-A, 2140, 2144-A, 2146-A
2139	C	Pad	4' 11 ¾"	4' 11 ¾"	1 ½"	Square	Formed concrete		Foundation for ?	2135-A, 2144-C, 2146-B

Table 4. Summary of Concrete Features (cont.)

Site	Feature	Type	Length	Width	Height/ Depth	Shape	Construction	Associated elements	Potential function	Similar features in project area
2139	D	Post	1' 7 ½"	1' 7 ½"	4' 3 ½"	Square	Formed concrete and metal	Metal bracket and strap	Guy wire anchor	2134, 2139-A
2140	-	Block	5' 7 ¾"	5' 6 ¾"	3' 8 ½"	Square	Formed concrete	Recessed area on top with wood pole	Post support	2137-A, 2139-B, 2144-A, 2146-A
2141	-	Pad	2' 9 ¾"	2' 4 ¾"	2 ¾"	Rectangular	Formed concrete	Rectangular configuration of bolts and plate on surface	Tower base or equipment mount	2133-A
2142	-	Pad	1' 3 ¾"	8 ¼"	1 ½"	Oval	Poured into ground	-	Wiring anchor	2143-C, 2147
2143	A	Slab	14' 9 ½"	6' 8 ¼"	10 ½"	Rectangular	Formed concrete	Two manhole covers	Utility feature (wastewater?)	2130-C and E
2143	C	Pad	1' 11 ½"	1' 3 ¼"	1' 9 ¾"	Irregular	Poured onto outcrop		Wiring anchor	2142, 2147
2144	A	Block	5' 6 ¼"	5' 6 ¼"	3' 6 ¼"	Square	Formed concrete	Vertical concrete column in center	Post support	2137-A, 2139-B, 2140, 2146-A
2144	B	Pad	5' 1"	4' 11 ¾"	6 ¼"	Square	Formed concrete	-	Foundation for ?	
2144	C	Pad	4' 11 ¾"	4' 11 ¾"	1' 3"	Square	Formed concrete	-	Foundation for ?	2135-A, 2139-C, 2146-B
2144	D	Pad	2' 7 ¾"	1' 11 ½"	10 ½"	Rectangular	Formed concrete	Metal attachment, "7-17-74", "Little SKI" and Heart with arrow	Tower base or equipment mount	2137
2144	E	Pad	2' 8 ¼"	2' ¼"	1' 2 ½"	Rectangular	Formed concrete	-	Foundation for ?	
2145	A	Pad	6' 5 ½"	3' ¼"	2 ¼"	Rectangular	Formed concrete	-	Foundation for ?	
2145	B	Pad	3' 2 ½"	3' ¼"	3 ½"	Rectangular	Formed concrete	-	Foundation for ?	
2146	A	Block	5' 7 ¾"	5' 7 ¾"	3' 6 ¼"	Square	Formed concrete	Recessed area on top	Post support	2137-A, 2139-B, 2140, 2144-A
2146	B	Pad	4' 11 ¾"	4' 11 ¾"	1 ½"	Square	Formed concrete	-	Foundation for ?	2135-A, 2139-C, 2144-C
2147	72 feas.	Pad	1' 1 ¾"	9 ¾"	2 ¾"	Oval	Poured onto outcrop	-	Wiring anchors	2142, 2143-C

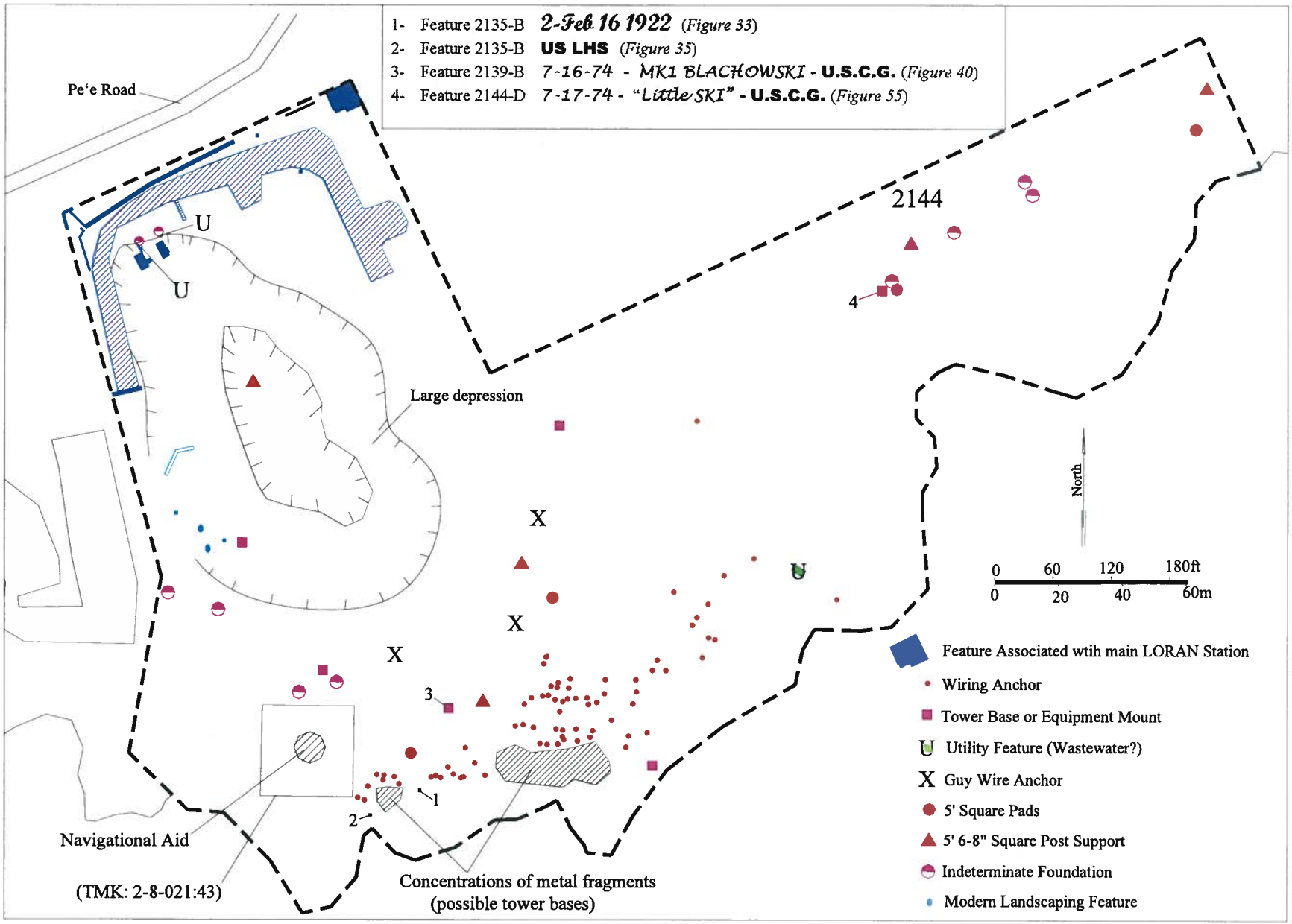


Figure 68. Distribution of Associated Features within Project Area

Three features (Site 2143-A and Site 2130-C and –E; see *Figures 13* and *49*) are formed concrete surfaces with round metal manhole covers. The covers resemble ones usually associated with wastewater transmission systems. The two at Site 2130 would have been located in or adjacent to the two story building in the depression at the west side of the main LORAN facility (see *Figure 22*). The location of these features at the lowest elevation within the main facility would be consistent with a main facility-wide gravity-fed wastewater drainage system.

Feature 2134-A has two manhole covers and is situated in a relatively isolated location at the coast in the central portion of the project area. The isolated, coastal location may indicate that the system was designed to drain into the ocean; however, no evidence of a buried pipeline connecting the two facilities was observed during the survey. Much of the intervening terrain is exposed bedrock or bedrock covered with a shallow soil deposit that would have required substantial effort to excavate. It is possible that the pipeline was on the surface and was subsequently removed. Alternatively, these manhole covers may represent access points to subterranean vaults unrelated to wastewater, potentially electrical utilities.

Six features within the project area likely functioned as tower bases or mounts for equipment based on the presence of bolts and other metal hardware protruding from formed, concrete pads (see *Figure 68*). These consist of Features 2131-E, 2133-A, 2136-A, 2137-B, 2141, and 2144-D. Four of these features are situated in a roughly linear pattern, 150-200 ft (46-61 m) apart extending from the central coast to the southwest side of the large depression. The other two are situated approximately 350 ft (107 m) apart along the inland side of the project area adjacent to The Point at Po'ipū resort. One feature from each group is dated to July 1974 (see *Figure 68*, Inscriptions 3 and 4).

There are two standardized types of formed concrete features that have nearly identical dimensions, and probably had similar functions. One type consists of standardized formed concrete blocks and the other of formed concrete pads. The first type consists of five concrete blocks that are c. 5'6" to 5' 8" square at the base tapering to 4' 8" square at the top (Features 2137-A, 2139-B, 2140, 2144-A and 2146-A). The features range from 3' 5" to 3' 8" in height and have a square hole in the upper surface that served to support a large 'telephone pole" size post (see *Figure 46*). Three of these features (2137-A, 2139-B, and 2140) probably support the three poles that were part of the LORAN antenna array seaward of the main facility (see *Figure 22*). The other two pole supports are situated at the east end of the property. One has a reinforced concrete pole remnant (2144-A; see *Figure 52*) and the hole the other one is filled with concrete (2146-A; see *Figure 57*).

The second standardized concrete feature type consists of four concrete pads that are 4' 11 ¾" square (Features 2135-A, 2139-C, 2135-A, and 2146-B; "5' Square Pads" in *Figure 68*). One of these (2135-A) is categorized as a block because it is nearly two feet thick, potentially a result of erosion exposing the lower half of the feature (see *Figure 32*). These features likely served as foundations for some type of small structure, facility, or equipment, but lack any attachment hardware. It is notable that all except one of these features is situated within approximately 50-95 ft (15-29 m) of a standardized post support feature, the only exception is the isolated post support (Site 2140) in the large depression. This apparent pairing probably indicates a functional relationship between these two standardized feature types.

There are ten pads of variable size that are categorized as indeterminate foundations (Features 2130-D, 2130-F, 2132-A, 2132-B, 2133-B, 2133-C, 2144-B, 2144-E, 2145-A, and 2145-B). The distribution of these features is shown in *Figure 68*. All appear to be paired with one other pad. Two are situated within the LORAN main facility in the inland portion of the project area. The others are situated in the eastern (2 pairs) and western (2 pairs) coastal portions of the project area. These features likely also served as foundations for some type of small structure, facility, or equipment. The pairing and overall distribution probably indicates a functional relationship between the features.

Significance Assessment

Pursuant to DLNR (1998) Chapter 275-6 (d), the initial significance assessments provided herein are not final until concurrence from the DLNR has been obtained. Sites identified during the survey are assessed for

significance based on the criteria outlined in the Rules Governing Procedures for Historic Preservation Review (DLNR 1998: Chapter 275). According to these rules, a site must possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria:

1. Criterion "a". Be associated with events that have made an important contribution to the broad patterns of our history;

2. Criterion "b". Be associated with the lives of persons important in our past;

3. Criterion "c". Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;

4. Criterion "d". Have yielded, or is likely to yield, information important for research on prehistory or history; and

5. 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 traditional 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.

The 18 sites identified within the project area are assessed as significant solely under Criterion "d". The sites have yielded information important for understanding historic land use in project area.

Recommended Treatments

The sites within the project area have been adequately documented and no further work or preservation is recommended. Although extensive subsurface testing did not identify subsurface cultural deposits or burials, it is recommended that any future development-related land disturbance be archaeologically monitored during the initial site work because significant deposits and burials were found on the adjacent property. The monitoring would be guided by a monitoring plan prepared for DLNR-SHPD review and approval.

References

Alexander, Arthur
1985 *Koloa Plantation 1835-1935.* Kauai Historical Society. Lihue.

Bennett, Wendell C.
1931 *The Archaeology of Kaua'i*, Bernice P. Bishop Museum Bulletin 80, Honolulu, HI.

Burgess, Stella
2011 Interview on 26 April 2011. Audio Recording on File at Haun & Associates.

Ching, F., S.L. Palama and C. Stauder
1974 The Archaeology of *Kona Kaua'i na ahupua'a Weliweli, Pa'a, Māhā'ulepū*: Surface Survey of the Coastal Lands, Archaeological research Center Hawai'i, Lawa'i, Kaua'i.

Ching, Harold
1985 *Hawaii's Chinese Pioneers: Notes in the Chinese Historical Society.* For Koloa's 1985 multi-Anniversary Jubilee

Cook, James
1784 *A Voyage to the Pacific Ocean: Undertaken, by the Command of His Majesty, for Making Discoveries in the Northern Hemisphere, to Determine the Position and Extent of the West Side of North America; its Distance from Asia; and the Practicability of a Northern Passage to Europe. Volume II.* Dublin.

Creed, V., G. Ida, and H. Hammatt
1995 An Archaeological Inventory Survey for Po'ipū Road Safety Improvements, Po'ipū, Kaua'i (TMK: 2-8-15, 16, 17 & 18), Cultural Surveys Hawai'i, Kailua, Hawai'i.

DLNR (Department of Land and Natural Resources)
2003 Hawaii Administrative Rules, Title 13, Department of Land and Natural Resources, State Historic Preservation Division.

Dockall, J., H. Hammatt, U. Rainalter, and S. Masciengelo
2005 Archaeological Inventory Survey of Po'ipū Beach Park, Mauka Preserve, Kōloa Ahupua'a, Kona District,

Farley, J.K.
1907 Notes on Maulili Pool, Kōloa. Thrum's Annual, Honolulu, HI.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens
1972 Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii. U.S. Department of Agriculture, Soil Conservation Service and University of Hawaii Agricultural Experiment Station. Government Printing Office, Washington D.C.

Fornander, Abraham
1918 *Fornander Collection of Hawaiian Antiquities and Folk-Lore: The Hawaiians' Account of the Formation of their Islands and Origin of Their Race, with the Traditions of Their Migrations, Etc., as Gathered from Original Sources. Memoirs of the Bernice Pauahi Bishop Museum Volume V, 1918-1919.* Bishop Museum Press. Honolulu, H.I.

Firor, J., P. Rosendahl and S. Goodfellow
1991 Archaeological Inventory Survey, Grove Farm, Kawailoa Property, Land of Mahaulepu, Koloa District, Island of Kauai. PHRI Report 597-123091 prepared for Grove Farm Properties, Inc. Lihue, HI.

Firor, J. and P. Rosendahl
1992 Additional Data Collection, Hyatt Regency Kauai, Proposed Golf Course Project Area, Land of Paa, Koloa District, Island of Kauai. PHRI Report 447 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

Fredsplace.org
nd. The Place to Meet Old Shipmates website (www.fredsplace.org)

Hammatt, H
1989a Archaeological Data Recovery Plan for Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Landmark Suites of America, Inc.

1989b A Burial Treatment Plan for the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Landmark Suites of America, Inc.

1990a Preliminary Report on Archaeological Testing for the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Sweeny Development Company, Inc.

1990b Preliminary Status Report on Further Archaeological Testing for the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Sweeny Development Company, Inc.

1992 Archaeological Reconnaissance of the Po'ipū Road and Lāwa'i Road Junction, Kōloa, Kaua'i, Cultural Surveys Hawai'i Inc., Kailua, Hawai'i.

Hammatt, H.H., J.H. Toenjes
1991 Archaeological Data Recovery and Construction Monitoring at the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kaua'i (TMK 4-2-8-20:1 & 4-2-8-21:1). Prepared for Sweeney Development Company.

Hammatt, H. , R.M. Bordner and M. J. Tomonari-Tuggle
1978 Archaeological and Biological Survey of the Proposed Kīahuna Golf Village Area, Kōloa, Kona, Kaua'i Island, Hawai'i, A.R.C.H., Lāwa'i, Kaua'i.

Hammatt, H., D. Borthwick, D. Shideler and M. Stride
1988 Archaeological Inventory Survey of the Proposed Kukuiula Bay Planned Community, Koloa, Kauai. Cultural Surveys Hawaii report prepared for R.M. Towill Corporation.

Hammatt, H., W. Folk and M. Stride
1991 Archaeological Inventory Survey of the Proposed Poipulani Golf Course and Residential Development, Koloa, Kauai. Cultural Surveys Hawaii report prepared for Poipulani Development Corporation.

Hammatt, H., G. Ida, and W. Folk
1993a Archaeological Survey of 7.6 Acres at Kōloa, Kaua'i, TMK: (4) 2-8-14:30, Cultural Surveys Hawai'i, Kailua, Hawai'i.

Hammatt, H., G. Ida, W. Folk, D. Shideler, and B. Collins
1993b Archaeological Testing and Monitoring at Poi'pu Beach Park, Koloa, Kauai. Cultural Surveys Hawaii report.

Handy, E.S.C., E.G. Handy, M.K. Pukui
1991 *Native Planters in Old Hawaii, Their Life, Lore, & Environment.* Bishop Museum Press, Honolulu, HI

Hill, R., T. Tulchin, J. Tulchin and H. Hammatt
2005 Archaeological Inventory Survey for a 8.633-acre Parcel at Koloa. Cultural Surveys Hawaii report prepared for Eric A, Knudsen Trust

Ida, G., V. Creed and H. Hammatt
1996 Archaeological Investigation for Environmental Assessment of the proposed Koloa/Poipu Bypass Road, Koloa, Weliweli, Kona, Kauai. Cultural Surveys Hawaii Report prepared for Wilson Okamoto and Associates.

Joesting Edward
1987 *Kauai: The Separate Kingdom.* University of Hawaii Press

Judd, Bernice
1935 Koloa: A Sketch of its Development. In Kaua'i Museum Material, Section II. Unpublished Manuscript.

Juvik, S.P. and J.O. Juvik (editors)
1998 *Atlas of Hawaii,* Third Edition. University of Hawaii Press. Honolulu.

Kailihiwa, S., A. Haun, and J. Henry
2011 Cultural Impact Assessment, TMK: (4) 2-8-021:041, Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i, Haun & Associates Report 811 prepared for CIRI Land Decvelopment Company.

Kamakau, S.
1992 *Ruling Chiefs of Hawaii.* [Revised] Kamehameha Schools Press, Honolulu. [1842 and 1870.]

Kikuchi, W.
1963 Archaeological Survey and Excavations on the Island of Kauai, Kona District, Hawaiian Islands. Sponsored by University of Hawaii Committee for the Preservation and Study of Hawaiian Language, Art, and Culture.

1980 Letter Report on Archaeological Reconnaissance of Keoneloa Beach Area, Koloa, Kauai. Prepared for ADM International.

1988 Archaeological Reconnaissance of a Proposed Multi-Family Rental Subdivision, Pa'anau Camp, Ahupua'a of Kōloa, Kōloa District, Kaua'i, TMK 2-6-04:46. Archaios, Lawa'i, Kaua'i, HI

Knudsen, Augustus
1913 "The Defeat of Kamehameha's Army". *Hawaiian Almanac and Annual for 1914. The Reference Book of Information and Statistics Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others* pp136-141. Thos. G. Thrum, Honolulu T.H.

Krauss, Beatrice H.
1993 *Plants in Hawaiian Culture.* University of Hawaii Press, Honolulu, HI.

Ladd, E.J.
1981 Archaeological Field Survey Report, Makahuena Point, Kauai. Prepared for the 14th Coast Guard District.

Landrum, J.
1984 Archaeological Reconnaissance of Alexander and Baldwin's Lands at Kukuiula, Koloa, Kauai. Bishop Museum, Honolulu, Hawaii.

loran-histoy.info
nd. Loran Station Kauai. http://www.loran-history.info/kauai/kauai.htm

McMahon, Nancy
1991 Locating Kāne'aukai Heiau, an Archaeological and Historical Synthesis, Weliweli, Koloa, Hawaii.

Mitchell, A., R. Chiogioji, H.H. Hammatt
2005 Cultural Impact Assessment for an Approximately 203-Acre Parcel in Kōloa Ahupua'a, Kona District, Island of Kaua'i, TMK (4) 2-18—013:001; 2-8-014:001, 002, 003, 004, and 019. Prepared for the Eric A. Knudsen Trust.

Neller, E.
1981 An Archaeological Assessment of recent Disturbances to Archaeological Sites in the Poipu Kai Subdivision, Pa'a, Kauai. Historic Sites Section, De[t. of Natural resources.

O'Hare, C., D. Shideler and H. Hammatt
2003 An Archaeological Assessment of Lands in the Sheraton Kauai Resort at Koloa Ahupua'a, Kauai Island. Cultural Surveys Hawaii Report.

Palama, Stephen L.
1973 The Archaeology of Kona, Kaua'i from the Ahupua'a of Koloa to the Ahupua'a of Weliweli: Archaeological Reconnaissance of the Proposed Cane Haul

Papakilo Database
nd. Māhele 'Āina Index – Foreign Testimony – Helu 5219.
http://papakilodatabase.com/main/imageserver.php?file=01138.pdf&path=H/A/S/H/7/1/5/1/1

Pukui, M.K., S.H. Elbert
1986 *Hawaiian Dictionary, Hawaiian-English, English-Hawaiian, Revised and Enlarged Edition.* University of Hawaii Press. Honolulu, HI

Smith, H.W.
1991 Historical Documentary Research. Archaeological Inventory Survey Grove Farm Kawailoa Property Additional Parcel, Land of Mahaulepu, Koloa District, Island of Kauai. Walker and Goodfellow 1991. Appendix B pp. B-1 to B-11.

Spanamwar.com
nd. Spanish American War Centennial War Website. http://www.spanamwar.com/

Stokes, J.F.G.
1946 "Dune Sepulture, Battle Mortality, and Kamehameha's Alleged Defeat on Kauai". *Hawaii Historical Review Annual Report 1946*. Honolulu, HI.

Thrum, Thomas G.
1906 Heiaus and Heiau Sites Throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907.* Honolulu.

Townsend, John K.
1839 *Narrative of a Journey Across the Rocky Mountains, to the Columbia River, and a Visit to the Sandwich Islands, Chili, &c. with a Scientific Appendix.* Henry Perkins, Philadelphia, PA.

Tulchin, T. and H. Hammatt
2005 Archaeological Literature Review and Field Inspection for an 8.5-acre Knudsen Trust Parcel. Cultural Surveys Hawaii report prepared for Eric A. Knudson Trust.

USCG
1946 The Coast Guard at War IV, LORAN Volume II. Prepared in the Historical Section Public Information Division U.S. Coast Guard Headquarters. Aug. 1, 1946.

uscg.mil
nd. United States Coast Guard. (www.uscg.mil)

USLHS.org
nd. The United States Lighthouse Society website (uslhs.org)

Van Ryzin, K. and H. Hammatt
2004 Archaeological Data Recovery of the Eric A. Knudson Trust Lands. Koloa, Kauai. Cultural Surveys Hawaii report prepared for Eric A. Knudson Trust.

Walker, A. and P. Rosendahl
1990 Archaeological Inventory Survey, Hyatt Regency Kauai, Proposed Golf Course Project Area, Land of Paa, Koloa District, Island of Kauai. PHRI Report 447-111591 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

Walker, A. and S. Goodfellow
1991 Archaeological Inventory Survey, Grove Farm Kawailoa Property, Additional Property, Land of Mahaulepu, Koloa District, Island of Kauai. PHRI Report 597-063092 prepared for Grove Farm Properties, Inc. Lihue, HI.

Walker, A. P. Rosendahl and S. Goodfellow
1992 Archaeological Data Recovery, Phase II, Hyatt Regency Kauai Mitigation Program, Land of Paa, Koloa District, Island of Kauai. PHRI Report 472 prepared for Grove Farm Properties, Inc. Lihue, Kauai.

Westervelt, William D.
1916 *Hawaiian Legends of Ghosts and Ghost-Gods*. ForgottenBooks.org

1917 "A Hawaiian High Chief –A-Lau-Niu-Ohua (The leaf of the fruitful coconut), who lived about 1270 (According to Fornander) or 1300 (according to Kamakau)." *The Friend,* December 1917.

Wigglesworh, K. and D. Graves
1992 Archaeological Inventory Survey, Grove Farm Quarry Relocation Project, Land of Mahaulepu, Koloa District, Island of Kauai. PHRI Report 1263 prepared for Grove Farm Properties, Inc. Lihue, HI.

Wyman, Jeffries
1868 "Observations on Crania." *Proceedings of the Boston Society of Natural History. Vol XI. 1866-1868*. Press of Abner A. Kingman, Boston, MA. pp 440-462.

Yorck, J., R. Chiogioji, and H. Hammatt
2004 An Archaeological Inventory Survey of a 9.4-Acre Parcel along Waikomo Stream, Kōloa Ahupua'a, Kona District, Kaua'i Island, (TMK: (4) 2-6-04: 19 Portion), Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Yorck, J., J. Madeus, Tulchin, T., S. Freeman, J. Dockall and H. Hammatt
2005 Archaeological Inventory Survey for Makai Portion of Parcel 19 of the Eric A. Knudson Trust Lands. Koloa, Kauai. Cultural Surveys Hawaii report prepared for Eric A. Knudson Trust.

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona, Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

December 2, 2012 Project 810

Pua Aiu, Ph.D., SHPD Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, Hawai'i 96707

Subject: Final Archaeological Inventory Survey for a 13.6-acre Project Area
Weliweli Ahupua'a, Koloa District, Island of Kauai
TMK: (4) 2-8-021:041
(A.E. Haun, D. Henry and S. Kailihiwa 2011, Report 810-042611)

Dear Dr. Aiu:

The subject final archaeological inventory survey (AIS) is enclosed. The draft AIS was revised based on Division review comments dated August 27, 2012 (LOG NO: 2011.1830; DOC NO: 1208SL18). The 12 review comments listed in the ATTACHMENT to the review letter are listed below followed by our response and associated revisions.

Project Area Description

1. **Revise (page 1) from "the project are varies" to "the project area varies".**
Response: Corrected

2. **Revise Fig 1 caption to include map date.**
Response: Revised as requested, listing map date of 1996

Previous Archaeological Research

3. **Revise Thrum (1907) to Thrum (1906).**
Response: Revised as requested

4. **Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".**
Response: Revised to read, "He also identified a series of walls designated as".

5. **Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".**
Response: Revised as requested

6. **Revise Table 1- to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.**
Response: Revised as requested. Date of Hill *et al.* changed from 1996 to 2005, which is the correct date

7. **Revise Fig 8 - to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005**
Response: Revised as requested

Findings

8. **Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19-1ast 4 paragraphs; page 24 - 3rd paragraph; page 26-1st paragraph (see also __ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.**
Response: Revised as requested

Subsurface Testing

9. **Revise (page 57) from "Five of the units were located" to "Four of the units were located".**
Response: Revised as requested

10. **Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks - i.e., layers I and II should both apply to TU-18.**
Response: Revised as requested

11. **Revise (page 61) Fig 64 stratum I label in TU-14.**
Response: Revised as requested

References Cited

12. **Revise - Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907.* Honolulu.**

Response: Firor 1992 changed to Firor & Rosendahl 1992 in Table 1, Figure 8 and references
Firor et al. 1991 added to references
Knutson 1914 changed to 1913 on page 7 – correct in references
Kamakau 1992 added to references
Thrum 1906 citation modified in references

If you have any further questions, or require any additional information, please contact me at (808) 325-2402.

Sincerely,

Alan E. Haun, Ph.D.
Principal Investigator

Encl. Report, CD, Copy of Review Letter

cc: CIRI Land Development Co.

810 Rec'd 9/1/12

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

PAUL J. CONROY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
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

HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

601 Kamokila Boulevard, Suite 555
Kapolei, HI 96806

August 27, 2012

Dr. Alan E. Haun, Principal Investigator
Haun &Associates
73-1168 Kahuna A'o Road
Kailua-Kona, Hawaii 96740

LOG NO: 2011.1830
DOC NO: 1208SL18
Archaeology

Dear Dr. Haun:

SUBJECT: **Chapter 6E-42 Historic Preservation Review -**
Archaeological Inventory Survey Report for 13.6 Acres, Makahuena Point
Weliweli Ahupua'a, Kōloa District, Island of Kaua'i
TMK: (4) 2-8-021:041

Thank you for the opportunity to review the draft report titled *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011). This document was received by our office on June 6, 2011; we apologize for the delayed review and thank you for your patience. This report presents the findings of an archeological inventory survey that was conducted on a 13.6-acre parcel and involved a 100% pedestrian surface survey. Sites were defined as clusters of features less than 15 m apart. The exception was a site designation applied to a series of widely scattered, nearly identical small concrete pads. The archaeological survey identified 18 sites comprised of a total of 128 features. All of the sites and features are identified as remnants of US federal government navigation-related infrastructure. The majority of the remains are associated with the former US Coast Guard Long Range Navigation (LORAN) station that operated at the point from 1951 to 1979. The documented features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following: ditch, road, stairs, utility box, and wall slab. Subsurface testing consisted of the excavation of 20 test units. No intact subsurface cultural deposits were identified during the testing.

The 18 sites are assessed as significant solely under Hawaii Register of Historic Places (HRHP) Criterion "d" for their information content, and are recommended as having been adequately documented. No further work or preservation is recommended. Although no subsurface cultural deposits were identified during subsurface testing, archaeological monitoring is recommended for future ground-disturbing activities because significant deposits and burials were found on the adjacent property. SHPD agrees with the proposed significance assessments and treatment recommendations.

The archaeological inventory survey report provides an excellent discussion of field methods, archival and historical background, previous archaeological investigations, and the project findings and sites. This report meets the requirements of Hawaii Administrative Rule 13-276-5 and is accepted by SHPD with the understanding that **some minor revisions are made** in the final document (see attachment). Please make these corrections and send one hardcopy of the document, clearly marked **FINAL**, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. Please contact Susan A. Lebo at (808) 692-8019 or Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Theresa K. Donham
Archaeology Branch Chief

ATTACHMENT

Comments and Questions: *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011).

Project Area Description

(1) Revise (page 1) from "the project are varies" to "the project area varies".
(2) Revise Fig 1 caption to include map date.

Previous Archaeological Research

(3) Revise Thrum (1907) to Thrum (1906).
(4) Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".
(5) Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".
(6) Revise Table 1 – to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.
(7) Revise Fig 8 – to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005.

Findings

(8) Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19- last 4 paragraphs; page 24 – 3rd pargagraph; page 26-1st paragraph (see also (__ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.

Subsurface Testing

(9) Revise (page 57) from "Five of the units were located" to "Four of the units were located".
(10) Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks – i.e., layers I and II should both apply to TU 18.
(11) Revise (page 61) Fig 64 stratum I label in TU-14.

References Cited

(12) Revise – Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907*. Honolulu.

Bernard P. Carvalho, Jr.
Mayor

Gary K. Heu
Managing Director

Michael A. Dahilig
Interim Director of Planning

Dee M. Crowell
Deputy Director of Planning

PLANNING DEPARTMENT
County of Kaua'i, State of Hawai'i
4444 Rice Street, Suite A-473, Līhu'e, Hawai'i 96766
TEL (808) 241-4050 FAX (808) 241-6699

SEP 19 2011

Galen T. Nakamura
SHIRAMIZU LOO & NAKAMURA
4357 Rice Street, Suite 201
Līhu'e, Hawai'i 96766

Subject: Tax Map Key: (4) 2-8-021:041
Po'ipū, Kaua'i

This is to acknowledge receipt of your transmittal dated May 27, 2011 requesting a determination for the property referenced above.

In considering your request, please understand that the definition of a "LOT" is being referenced pursuant to Section 9-1.5 of the Kauai County Code (1987), as amended, and it reads:

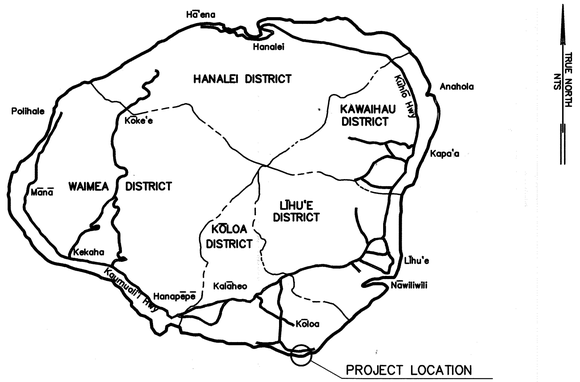
> *"LOT means a portion of land shown as a unit on an approved and recorded subdivision map."*

Based on the foregoing and information you've provided, the department recognizes the 25 parcels within the Makahuena Tract and further identified on File Plan 354 (Exhibit 2 of your transmittal) as existing lots of record. However, the department is unable to support the existence of Parcels L-1 through L-3 since there are no supporting documents that recognize the establishment of these parcels.

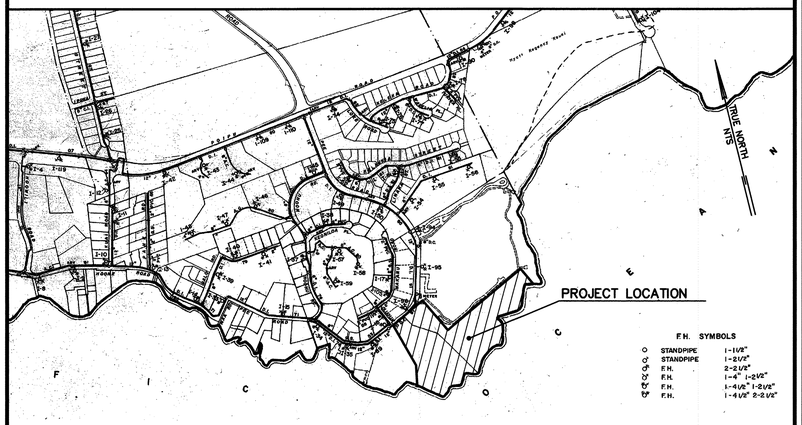
Should you have further questions regarding this matter, please contact Dale A. Cua of my staff at 808.241.4050. Aloha!

MICHAEL A. DAHILIG
Interim Director of Planning

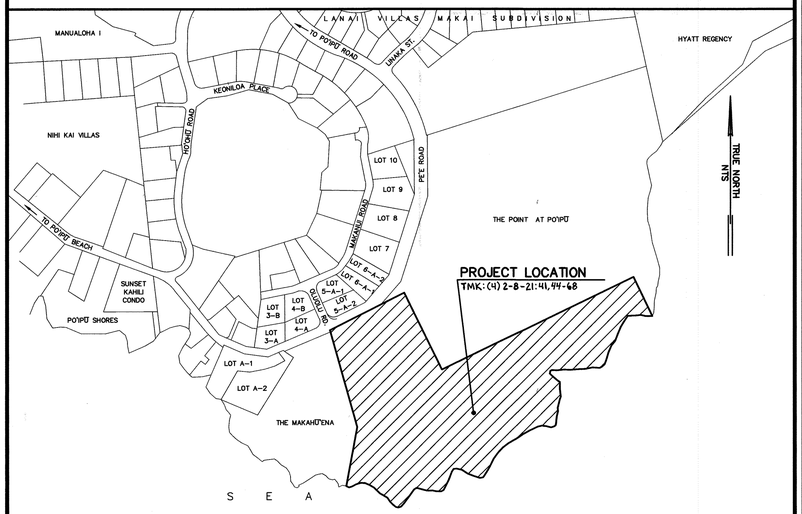
EXHIBIT M



ISLAND OF KAUA'I



VICINITY MAP



LOCATION MAP

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg

CONSTRUCTION PLANS FOR MAKAHŪ'ENA SUBDIVISION

Planning Dept. Subdivision S-2015-14

(Tentative Approval: April 14, 2015)

Weliweli, Kōloa, Kauaʻi, Hawaiʻi

TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner: CLDC Land Development Company
P.O. Box 93330
Anchorage, AK 99509

PREPARED BY:

ESAKI SURVEYING AND MAPPING, INC.
LIHU'E, KAUA'I, HAWAI'I 96766

INDEX TO DRAWINGS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
GENERAL NOTES	2 – 3
TRAFFIC CONTROL PLAN	4
EROSION CONTROL PLAN	5
GENERAL SITE PLAN	6
PLAN AND PROFILE	7 – 8
EROSION CONTROL DETAILS	9
MISCELLANEOUS DETAILS	10 – 12
WATER DETAILS	13 – 14
DRAINAGE DETAILS	15 – 16
ELECTRICAL PLAN	17
ELECTRICAL NOTES & DETAILS	18
ELECTRICAL DETAILS	19 – 21
SIGNAGE AND STRIPING SITE PLAN	22
STRIPING PLAN & ROADWAY CURVE DATA	23

APPROVED:

DIRECTOR, PLANNING DEPARTMENT COUNTY OF KAUA'I	11/4/2015 DATE
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS COUNTY OF KAUA'I	12.17.15 DATE
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION, DEPARTMENT OF HEALTH STATE OF HAWAI'I	9-14-2015 DATE
for MANAGER & CHIEF ENGINEER, DEPT. OF WATER COUNTY OF KAUA'I	10/16/15 DATE
CHIEF ENGINEER, KAUA'I ISLAND UTILITY COOP.	10/29/15 DATE
CHIEF ENGINEER, HAWAIIAN TEL COM	10/29/15 DATE
CHIEF ENGINEER, OCEANIC TIME WARNER CABLE OF HAWAI'I	10/29/15 DATE

EXHIBIT M

CONSTRUCTION PLANS FOR MAKAHŪ'ENA SUBDIVISION

NOTES FOR GENERAL CONSTRUCTION
(revised June 3, 2013)

1. All construction work is to be constructed in accordance with the publications "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" and its amendments and the "Standard Details for Public Works Construction, September 1984" as amended by the Department of Public Works, City and County of Honolulu, and the Counties of Kaua'i, Maui, and Hawai'i. The standard details are available at the County of Kaua'i clerk's office.

2. No grading between 7 PM to 7 AM on any given day or on Saturdays, Sundays and Holidays without written permission from the County Engineer and the State Department of Health.

3. Contractor to notify Public Works Department five (5) business days prior to commencing any grading work. When completed and ready for final inspection; notify Public Works Department Inspection Section.

4. Construction plans are valid for a period of one year from the date of approval. If construction does not commence within this one-year time from the date of approval, the construction plans shall be resubmitted to all reviewing and approving agencies for review, approval and recertification of the plan.

5. All grading, grubbing and stockpiling work shall be performed in accordance with County of Kaua'i ordinance no. 808.

6. After each rainfall event, the Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the County Engineer shall be payable by the Contractor.

7. During cleaning operations, the Contractor shall supply a water truck for dust control purposes until the vegetation has re-established itself. Excess water, including silt and dirt, shall not be allowed to run-off the property.

8. Benchmarks that are disturbed or destroyed shall be restored under a licensed land surveyor's direction. Copies of field notes, descriptions and new values of the new benchmark shall be sent to the department of public works survey section for review and approval prior to final acceptance of the project.

9. The Contractor shall be responsible for all overtime and/or night work payments for County's staff and inspection personnel including consultants, when the contract requires overtime or night work to be performed, or directs the contractor to work additional shifts or overtime for County's convenience.

10. Best Management Practices (BMP's) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas and the property of others.

11. Surveys shall be done under the supervision of a land surveyor licensed in the State of Hawai'i.

12. If system conditions require non-emergency night time work during the autumn seabird fall season (September 15 through December 15), use of lighting shall be restricted between 9:00 PM to 4:30 AM. If lighting of the work area is required in such situation, all lights shall be shielded (minimum light spill towards the sky) and directed downwards to the maximum extent practicable. Minimum requirements for lighting by HIOSH and OSHA shall be provided and assured by the Contractor. The Contractor shall train all employees working at night (records retained by the Contractor) on how to handle any retrieved downed birds and shall have appropriate equipment as approved by Save Our Shearwaters (SOS) on site to hold and transport any retrieved birds to a SOS facility. This requirement does not allow lighting as may be restricted by other government agencies.

13. Prior to starting any excavation activities, the Contractor shall contact the Hawai'i One Call Center at 1-866-423-7287.

HISTORIC PRESERVATION NOTES
(revised May 30, 2013)

1. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall cordon off the area and immediately notify the Planning Department at (808) 241-4050 and the State Historic Preservation Division at (808) 692-8015, which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary. In addition if human burials are found, the Contractor shall immediately notify the County of Kaua'i Police Department.

NOTES FOR CONSTRUCTION WITHIN COUNTY RIGHT-OF-WAY
(revised July 24, 2013)

1. All damaged pavement shall be restored to its original condition in accordance with County of Kaua'i, "Hawai'i Standard Specifications for Road and Bridge Construction (2005)" and its amendments and the "Standard Details for Public Works Construction, September 1984", as amended by the Department of Public Works, City and County of Honolulu, and the Counties of Kaua'i, Maui, and Hawai'i, with 2" minimum hot mixed asphalt concrete pavement (State Design Mix V) and 8" minimum base course.

2. The Contractor shall provide, install, maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of the public traffic. All such protective facilities and precautions to be taken shall conform with the rules and regulations governing the use of traffic control devices at work sites on or adjacent to public streets and highways adopted by the Highway Safety Coordinator and U.S. Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways dated 2009 and its amendments.

3. The Contractor shall, whenever necessary, properly sheet and brace all excavations to render it secure and shall remove all such sheeting and bracing before completion of the backfill for water mains. The minimum cover requirements (from top of pipe to finished grade over pipe) is three (3) feet.

4. A. A permit shall be obtained by the Contractor from the Department of Public Works, County of Kaua'i before work on a public street or highway may begin. Permit fees shall be at the Contractor's expense.

   B. Driveways shall be kept open unless owners of the abutting lots using these right-of-way are otherwise provided for satisfactorily.

   C. All work including repair of damaged pavement and shoulders shall be inspected and approved by the Department of Public Works. All unapproved work shall be considered unacceptable and shall be reworked and corrected as directed by the Department of Public Works, at the Contractor's expense.

   D. Damaged shoulders shall be restored to a condition equal to or better than existing condition.

   E. Work on a public street area may be performed only between the hours of 8:00 a.m. to 3:30 p.m. Monday through Friday, except on holidays recognized by the County of Kaua'i, unless otherwise permitted in writing by the County Engineer.

   F. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be opened to public vehicular and pedestrian traffic.

   G. No material and/or equipment shall be stockpiled or otherwise stored within County right-of-way except at locations designated in writing and approved by the County Engineer.

   H. The Contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.

   I. All existing drainage flow conditions shall be maintained.

5. The Contractor shall retain the services of a Geotechnical Engineer for quality control. Certification from the Geotechnical Engineer shall be submitted to the Department of Public Works at the completion of the construction work. The Geotechnical Engineer shall certify that the construction work meets "Standard Specifications". The Geotechnical Engineer shall also submit test results as requested by the Department of Public Works.

6. The Contractor shall hold a pre-construction meeting with the Construction Inspection and Design Sections of the Department of Public Works before commencing any work.

7. The Contractor shall exercise extreme caution to preserve benchmarks (survey monuments) whenever the center of a survey monument is less than three (3) feet from the edge of construction. The Contractor shall retain a Licensed Surveyor to reference the location of said survey monument.

8. Benchmarks that are disturbed or destroyed shall be restored under a Licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the new benchmark shall be sent to the Department of Public Works Survey Section for review and approval prior to final acceptance of the project.

9. The Contractor shall be responsible for all overtime and/or night work payments for County's staff and inspection personnel including consultants when the Contract requires overtime or night work to be performed, or directs the Contractor to work additional shifts or overtime for County's convenience.

10. If system conditions require non-emergency nighttime work during the autumn seabird fall season (September 15 through December 15), use of lighting shall be restricted to between 9:00 PM to 4:30 AM. If lighting of the work area is required in such situation, all lights shall be shielded (minimum light spill towards the sky) and directed downwards to the maximum extent practicable. Minimum requirements for lighting by HIOSH and OSHA shall be provided and assured by the Contractor. The Contractor shall train all employees working at night (records retained by the Contractor) in how to handle any retrieved downed birds and shall have appropriate equipment as approved by Save Our Shearwaters (SOS) on site to hold and transport any retrieved birds to a SOS facility. This requirement does not allow lighting as may be restricted by other government agencies.

GRADING NOTES
(revised November 6, 2014)

TEMPORARY DUST CONTROL MEASURES FOR GRADING:

1. The graded or project site that is cleared of vegetation shall be kept damp with water continuously for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened with water on a continual basis so that the site will remain moistened during the night.

2. The Contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened with water on a continual basis to prevent dust problems.

3. In applying for a grading permit, the Contractor shall submit plans, schedules and/or written measures which provides for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust and erosion problems will be minimized.

TEMPORARY EROSION CONTROL MEASURES FOR GRADING:

1. Temporary vegetative cover shall be planted within a period of 30 calendar days after the site has been graded or bared of vegetation or if the site will be suspended for more than 30 calendar days.

2. Temporary vegetative cover shall consist of 40 lbs. common rye grass seed per acre, 400 lbs. per acre 10-10-10 or equivalent fertilizer worked into the seed bed before planting. Temporary sprinkler system is to be installed concurrently with all plantings. Planting and maintenance of grass shall conform to the "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" and its amendments.

PERMANENT EROSION CONTROL MEASURES FOR GRADING:

1. The Contractor shall grass the entire project site, except paved areas with Bermuda grass sprigs. The grass shall be planted, fertilized, and maintained in accordance with the "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" and its amendments.

2. The Contractor shall grass all exposed areas that have been constructed to final grades within a period of 30 calendar days.

3. In lieu of grass sprigs (note 1), the Contractor may use hydromulch seedings and irrigation sprinkler system.

ENVIRONMENTAL CONTROL NOTES FOR GRADING

1. In accordance with Chapter 11-60.1, AIR POLLUTION CONTROL, Title 11, Hawai'i Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that effective control measures are provided to minimize or prevent any visible dust emission caused by the construction work from impacting the surrounding areas including the off-site roadways used to enter/exit the project. These measures include but are not limited to the use of water wagons, sprinkler systems, dust fences, etc.

2. In accordance with Chapter 11-55, WATER POLLUTION CONTROL and Chapter 11-54, Water Quality Standards, Title 11, Hawai'i Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that the Best Management Practice (BMP) to minimize or prevent the discharge of sediments, debris and other water pollutant into State waters are provided at all times.

3. In accordance with Chapter 11-58, SOLID WASTE MANAGEMENT CONTROL, Title 11, Hawaii Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that grub material, demolition waste and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning is prohibited.

4. Property Owner/Developer shall be responsible for obtaining and paying for all applicable permits from the Department of Health including but not limited to National Pollutant Discharge Elimination System (NPDES), Notice of Intent and General Permit for storm water, hydrostatic test and dewatering discharges prior to commencing construction. NPDES permit shall be required prior to grading or grubbing work over an area of one acre or more.

5. After each rainfall event, the Contractor shall remove all silt and debris resulting from this work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the Engineer shall be payable by the Contractor.

6. Best Management Practices (BMP's) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas and the property of others.

7. The Contractor shall obtain and comply with National Pollutant Discharge Elimination System (NPDES) permit requirements for all projects which will disturb one (1) acre or more of land. The Contractor shall not start construction until Notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawai'i and has satisfied any other permitting requirements of the NPDES permit program.

8. Noise will be generated during the grading and construction phases of this project. The applicable maximum permissible sound levels as stated in Title 11, Hawai'i Administrative Rules, Chapter 11-46, "Community Noise Control", shall not be exceeded, unless a noise permit is obtained from the Hawaii State Department of Health.

9. The property may harbor rodents which will be dispersed to the surrounding areas when the site is cleared. In accordance with Chapter 11-26, entitled VECTOR CONTROL of Title 11, HAR, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

10. A copy of the plans, construction schedule and/or written measures that is required to be submitted by the Contractor (Dust Control Measures/Plans) should also be sent to the Department Of Health for monitoring purposes.

GRADING PHASES

1. When grading work is done in phases, the Engineer must accept the completed phase prior to start of work on the next phase. Even after a completed phase has been accepted, the grassing or other means of stabilization must be maintained until project completion.

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welīweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

GENERAL NOTES

APPROVED:

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12/7/15

N/A

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

DESIGNED BY: WW	SHEET C-2
DRAWN BY: CJE	
DATE: 10/16/2015	2 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON. PLAN TND.dwg

WATER POLLUTION AND EROSION CONTROL NOTES

(revised September 10, 2015)

1. GENERAL:

A. The Contractor is reminded of the requirements of Section 209 – WATER POLLUTION AND EROSION CONTROL and Section 620 – DUST CONTROL in the "Hawai'i Standard Specifications for Road and Bridge Construction 2005," and its amendments. Section 209 describes but is not limited to: submittal requirements; scheduling of a Water Pollution and Erosion Control Conference with the County; construction requirements; method of measurement; and basis of payment. No work shall commence without a BMP plan approved by the Department of Health.

B. The Contractor shall follow the guidelines in the "Interim Best Management Practices Manual for Construction Sites for County of Kaua'i, April 2004" in developing, installing and maintaining the Best Management Practices (BMPs) for the project. The Contractor may submit alternate methods to the County for acceptance.

C. The Contractor shall keep a copy of the approved BMP Plan, NOI, etc. on the project site. The BMP Plan shall be updated to reflect any changes made during the course of construction for the duration of the project.

D. The Engineer may assess liquidated damages of up to $27,500 for non–compliance of each BMP requirement and each requirement stated in Section 209, for every day of non–compliance. There is no maximum limit on the amount assessed per day.

E. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non–compliance, or the Contractor/Owner shall reimburse the State and/or County for the full amount of the outstanding cost incurred by the State and/or County.

2. WASTE DISPOSAL:

A. Waste materials: All waste materials shall be collected and stored in a securely lidded metal dumpster that does not leak. The Dumpster shall meet all local and State Solid Waste Management Regulations. All trash and construction debris from the site shall be deposited in the Dumpster. The Dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the Office Trailer and the Contractor shall be responsible for seeing that these procedures are followed.

B. Hazardous waste: All hazardous waste materials shall be disposed of in the manner specified by local or State regulation or by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

C. Sanitary waste: All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

3. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

A. All control measures shall be inspected at least once each week and within 24 hours following any rainfall event of 0.5 inches or greater.

B. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.

C. Built up sediment shall be removed from silt fence when it has reached one–third the height of the fence.

D. Silt screen or fence shall be inspected for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground.

E. Temporary and permanent seeding and planting shall be inspected for bare spots, wash outs and healthy growth.

F. The Contractor shall submit to the County a maintenance inspection report promptly after each weekly inspection.

G. The Contractor shall select a minimum of three personnel who shall be responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

H. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

I. All slopes and exposed areas shall be grassed as final grades have been established. Grading to final grade shall be continuous, and any area in which work has been interrupted or delayed or exposed for more than 15 days shall be grassed in order to prevent dust emission, erosion and silt runoff. Areas with imported soils shall be grassed not more than 5 working days after final grades have been established.

J. Temporary erosion controls shall not be removed before permanent erosion controls are in–place and established.

4. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS:

A. The Contractor shall apply for, obtain and comply with the National Pollutant Discharge Elimination System (NPDES) requirements for Kaua'i District permit projects. This is available at the Kaua'i District Office at 3040 Umi Street, Suite 205. Due to potential costs and impacts, the Contractor needs to be aware of these requirements.

B. The Contractor shall complete and submit a Contractor's certification of NPDES compliance, including completion of the Best Management Practice (BMP) checklist and submittal of a written BMP Plan and drawings, prior to issuance of the permit to perform work upon County roadways.

C. The Contractor shall obtain and comply with National Pollutant Discharge Elimination System (NPDES) permit requirements for all projects which will disturb one (1) acre or more of land. The Contractor shall not start construction until Notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawai'i and has satisfied any other applicable requirements of the NPDES permit program.

D. The general contractor/developer/owner of the project shall be responsible for conformance with applicable provisions of the Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control."

The general contractor/developer/owner of the project shall obtain National Pollutant Discharge Elimination System (NPDES) Permit coverage(s) for the following:

1. Storm water discharges associated with construction activities that disturb one (1) acre or more, and

2. Discharges of hydrotesting effluent, dewatering effluent, and well drilling effluent to state waters.

In accordance with State law, all discharges related to project construction or operations are required to comply with State Water Quality Standards (Hawaii Administrative Rules, Chapter 11–54). Best Management Practices shall be used to minimize or prevent the discharge of sediment, debris, and other pollutants to State waters. Permit coverage is available from the Department of Health, Clean Water Branch at http://health.hawaii.gov/cwb. The owner/developer/contractor is responsible for obtaining other Federal, State, or local authorizations as required by law.

5. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

MATERIALS POLLUTION PREVENTION PLAN:

A. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory of the construction Contractor's site–specific BMP plan.

Concrete	Fertilizers
Detergents	Petroleum based products
Paints (Enamel and Latex)	Cleaning solvents
Metal Studs	Wood
Tar	Masonry Block

B. Material management practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough products as is required to do the job.

C. All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.

D. Products shall be kept in their original containers with the original manufacturer's label.

E. Substances shall not be mixed with one another unless recommended by the manufacturer.

F. A product shall be used up completely before disposing of the container.

G. Manufacturer's recommendations for proper use and disposal shall be followed.

H. The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.

HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN:

A. Products shall be kept in original containers unless they are not resealable.

B. Original labels and material safety data sheets (MSDS) shall be retained and made available to the County upon request.

C. Surplus products shall be disposed of according to manufacturer's instructions or local and State recommended regulations.

ONSITE AND OFFSITE PRODUCTS SPECIFIC PLANS:

A. The following product specific practices shall be followed onsite:

1. Petroleum based products: All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.

2. Fertilizers: Apply fertilizers used only in the minimum amounts recommended by the manufacturer. Once applied, work fertilizer into the soil to limit exposure to storm water. Storage shall be in a covered shed. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

3. Paints: Seal and store all containers when not required for use. Do not discharge excess paint to the roadway drainage system. Dispose properly according to manufacturer's instruction or state and local regulations.

4. Concrete Trucks: Wash out or discharge concrete truck drum wash water only at a designated site. Do not discharge water in the roadway drainage system or waters of the United States. Contact Drinking Water Branch, Department of Health at (808) 586–4258 to receive permission to designate a disposal site. Clean disposal site as required or as represented by the Owner's representative.

SPILL CONTROL PLAN:

A. Post a spill prevention plan to include measures to prevent and clean up each spill.

B. The Contractor shall be the spill prevention and clean–up coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area and in the office trailer onsite.

C. Clearly post manufacturer's recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of information and cleanup supplies.

D. Keep materials and equipment necessary for spill cleanup in the material storage area onsite.

E. Clean up all spills immediately after discovery.

F. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with hazardous substances.

G. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size.

WATER NOTES

(revised May 18, 2015)

1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the "Water System Standards", 2002, as adopted by the Department of Water, County of Kaua'i, including all subsequent amendments and additions.

2. The Contractor shall arrange a pre–construction conference at least ten (10) calendar days before construction and shall notify the Department of Water at least three (3) working days prior to the start of construction.

3. The Contractor shall submit the names and telephone numbers of its authorized job superintendent and at least three (3) additional persons to contact in case of an emergency during non–working hours.

4. The Contractor shall notify the Department of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or disinfection activities to insure that inspection services will be available.

5. All materials (pipe, lubricants, paints, sealants, form oil, concrete admixtures, etc.) in direct contact with the potable water shall have National Sanitation Foundation (NSF) certifications. The Contractor shall submit these certifications to the Department of Water for review and approval prior to its application.

6. The location of existing water mains and appurtenances shown on the plans are approximate only. The Contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.

7. The Contractor shall provide unobstructed access to existing hydrants, valves and water meters at all times.

8. The Contractor shall secure all excavations in accordance with OSHA regulations.

9. There shall be no physical connection between a public or private potable water system and a non–potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water supply.

10. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" as amended.

11. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards". The warning tape shall be four mil thick, non–metallic, acid and alkali resistant polyethylene and 6–inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "Safety Precaution Blue" and shall bear a continuous printed inscription "Caution Water Line Buried Below". Inscription shall be 2–inches high, black text.

12. All hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.01 of the "Water System Standards".

13. Unless otherwise directed, prior to the connection of any pipelines and/or laterals to the existing main, the pipelines/laterals installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Division 300, Sections 302.27 to 302.29 of the "Water System Standards".

Water samples shall be tested for total coliforms by a laboratory certified by the State of Hawai'i to perform coliform analysis. Presence of coliform bacteria is unacceptable.

In addition to the test for coliforms, a seperate test for heterotrophic plate count (HPC) shall be conducted. The HPC count shall be less than 300 CFU/ML.

Prior to chlorination, a water chlorination and sanitation contractor with a C–37D license shall submit a chlorination plan with water source, injection points, sampling points and procedure clearly defined for approval by the DOW.

The tested pipelines and/or laterals must be connected to the existing DOW system within 14 calendar days of pulling the first disinfection sample tested by a certified laboratory. The department of water will require the contractor to redo the cleaning, pressure testing, and/or disinfection of the pipelines and/or laterals at the contractor's expense if the connection is not completed within these 14 calendar days.

14. Polyurethane foam "pigs" shall be "pushed" through the length of the installed pipeline using pressurized water.

15. All connections shall be scheduled in coordination with the Department of Water.

a. An advance deposit is required for operating valves, flushing lines and notifying consumers affected by a water shutdown during connections. The Contractor will be charged the actual cost.

b. The Contractor shall place the deposit prior to scheduling the connection date.

c. Connections shall be scheduled on Tuesdays through Thursdays. No connections shall be scheduled on Mondays, Fridays, weekends and holidays.

d. All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.

e. Pumps used to de–water the connection area shall be operated in the presence of the Engineer prior to scheduling the connection date.

f. All connections shall be performed in the presence of the Engineer.

16. In order to prevent damage to the polyethylene encasement from excessive handling, the polywrap shall be installed around the barrel of the ductile iron pipe at its final location along the trenchline. The polyethylene encased pipe shall be lifted using a fabric type sling or a suitably padded cable or chain to prevent damage to the polyethylene.

17. The Contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.

The Contractor shall retain the services of a registered geotechnical engineer for quality control. The compaction test results shall be certified by the Geotechnical Engineer and submitted to the Department of Water, State Highways Division (for work done within State R/W) and the Department of Public Works (for work done within County R/W). The Geotechnical Engineer shall certify that the compaction results meet the requirements of the current standard specifications for road and bridge construction.

18. The Contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.

19. All fittings shall be mechanical joint (MJ) at each end unless otherwise noted. "Megalug" retainer glands shall be used with all mechanical joint fittings and valves used in connecting new water mains to existing water mains unless otherwise noted.

20. All water valves that will be abandoned in place shall be placed in the "closed" position. Remove top section of valve box and concrete settlement slab. Fill remainder of valve box with concrete. Place backfill and repair pavement section to applicable state or county standards. Backfill to finish grade in road shoulder area.

21. The Contractor shall obtain all applicable Department of Health permits prior to the start of construction. Permits include, but are not limited to, National Pollution Discharge Elimination System (NPDES) permits for storm water, hydrostatic test, dewatering, and for construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area.

The Contractor shall be responsible for the proper disposal of storm water discharges and effluent associated with construction activities, including hydrotesting and disinfection operations, to safeguard public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for storm water and construction water disposal, including all application, charges, fees, and taxes are the responsibility of the Contractor.

22. The Contractor is responsible for dewatering trench as necessary where groundwater is encountered. All associated costs for dewatering shall be borne by the Contractor.

23. The use of known sewer pump trucks are prohibited for DOW projects for any use, including but not limited to dewatering and testing of new facilities.

24. The Contractor shall verify outside diameter of all existing asbestos–cement (A.C.) waterlines to be connected. Contractor shall verify use of proper gaskets prior to connection. A.C. pipe and gasket information shall be submitted to Engineer for approval.

25. All removal, disposal and connection work that involves asbestos pipe/material shall be done in the presence of or by a licensed asbestos contractor.

The licensed asbestos contractor shall submit their plan for all associated removal, disposal and connection work for the project to DOW for review and approval prior to conducting the work.

26. All connections to existing A.C. pipe shall be at the nearest A.C. pipe joint. A.C. pipe shall be removed by entire length(s) to facilitate the connection. Cutting of A.C. pipe is prohibited.

27. The Contractor shall follow all applicable OSHA, HIOSH and federal regulations in handling and disposal of asbestos–cement pipe. Disposal of the pipe shall be at an approved asbestos material disposal site.

28. All waterworks brass fittings shall be in compliance with the amended Section 1417 of the Safe Drinking Water Act (SDWA) which takes effect on January 4, 2014. The amendment includes a change to the definition of "lead–free" by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material. All waterworks brass fittings installed for potable water service on January 4, 2014 and beyond shall conform to the amended definition of "lead–free."

As indicated in Section 211 of "Water System Standards" – Brass Products, all brass fittings shall conform to NSF Standard 61 and Section 1417 of the Safe Drinking Water Act (SDWA). In addition, all brass fittings shall conform to NSF Standard 372.

29. The 2011 Reduction of Lead in Drinking Water Act revised Section 1417 to:

1. In general. – For the purposes of this section, the term "Lead Free" means:
   a. not containing more than 0.2 percent lead when used with respect to solder and flux; and
   b. not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.
2. Calculation. – For the purposes of the Act, the weighted average lead content of the pipe, pipe fitting, plumbing fitting, or fixture is calculated by using the following statutory formula:
   - For each wetted component, the percentage of lead in the component is multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead in the component.
   - The weighted percentage of lead of each wetted component is added together, and the sum of these weighted percentages constitute the weighted average lead content of the product. The lead content of the material used to produce wetted components is used to determine compliance.
   - When the lead content of materials are provided as a range, the maximum content of the range must be used.

Equation: Total % Lead = (Pb%C1 x RWSAC1) + (Pb%C2 x RWSAC2) + (Pb%Cn x RWSACn)

Where: Pb% = Lead Content
C1, C2, Cn = Component
RWSA = Ratio of Wetted Surface Area
= Wetted Surface Area of Component / Total Wetted Surface Area of Entire Product
Total % Lead = Weighted Average Lead Content

EXEMPTIONS. – The prohibitions in act paragraphs (1) and (3) shall not apply to the following:
a) Pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non–potable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where water is not anticipated to be used for human consumption; or
b) Toilets, bidets, urinals fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger.

30. The Contractor shall provide continuous water service to existing customers at all times. If required, temporary service shall be provided by the contractor at his expense. If service interruptions are unavoidable, the Contractor shall notify all affected property owners prior to shutting off water service. The Contractor shall coordinate his work with the Department of Water so that water service interruptions are minimized.

31. Contractor shall install water facilities only after reaching final subgrade or higher. The Department of Water will not allow installation of any water facilities until the final subgrade layer at minimum has been achieved.

SPECIAL NOTES TO DEVELOPER:

(revised January 22, 2013)

Certification of Completion for these water system facilities will not be issued until:

1. All water improvements are complete and dedicated to the Department of Water.
2. As–built tracings are submitted to the Department of Water.
3. Final cost breakdown for the water improvements are submitted and approved by the Department of Water. The developer shall certify costs.
4. Roadway and pipeline easements are conveyed to the Department of Water, if applicable.
5. Payment of all applicable fees for the development have been received by the Department of Water. These fees include but is not limited to:
   a. Facilities Reserve Charge.
6. Other required conditions are completed, if applicable.
7. Prior to construction of the water facilities, the owner shall provide a Right of Entry for the Department of Water.

WATERLINE INSTALLATION NOTES:

1. The right–of–way and relevant property corners or easements at the proposed water meter location(s) shall be surveyed by a licensed surveyor prior to construction. The surveyed points shall be preserved throughout the project's construction.

2. The new service lateral piping may be tapped and installed horizontally from the existing waterline if there are no concrete encased utility ducts to clear at the property line.

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

GENERAL NOTES

APPROVED:

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12-17-15

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE 10/16/15

DESIGNED BY:	WW
DRAWN BY:	CJK
DATE:	10/16/2015

SHEET C-3
3 OF 23 SHEETS

Project No.: 14–211
Drawing No.: 14–211 CON PLAN TND.dwg

CONSTRUCTION NOTES FOR TRAFFIC CONTROL PLAN

(revised May 28, 2013)

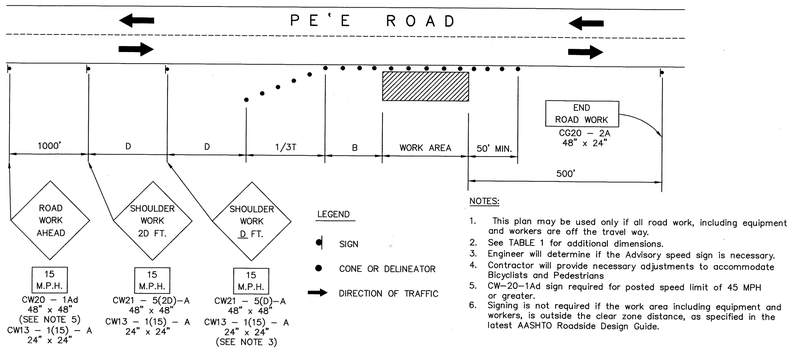
1. The permittee shall make adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the Traffic Control Plans shall be removed or covered. All signs shall be restored upon completion of the work.
5. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
6. When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the Traffic Control Plans.
7. Sign spacing (D), taper lengths (T) and spacing of cones or delineators shall be as shown in Table 1, unless otherwise noted on the Traffic Control Plans.
8. All traffic lanes shall be a minimum of 10 feet wide.
9. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
10. The backs of all signs shall be promptly removed or covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces), whenever the messages are not applicable or not in use.
11. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
12. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
13. Police Officers/Flaggers shall be present at all times.
14. Contractor to provide access and/or directional signs to reroute pedestrian traffic
15. When required by the County of Kaua'i, an advertisement shall be placed in the newspaper by the Contractor for any lane closure. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:

    A) Map of the Traffic Change Limits;
    B) Notice of starting and ending dates, times and duration;
    C) Map to show Lane Closure;
    D) Explanation of the Lane Closure, "NOTICE TO MOTORISTS & PEDESTRIANS".

    The Contractor shall be required to have any lane closure announced daily over the radio two (2) days before starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the hospitals, police, fire and ambulatory services of the lane closure.
16. All workers within the County Right of Way who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 2 or 3 requirements of "ANSI/ISEA 107–2004." "Workers" are defined as people on foot whose duties place them them within the County R/W, such as but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents (eg. EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling lane closures and installing water service connections (roadway construction).
17. The Contractor shall make every effort to minimize the use and duration of steel plates. All steel plates shall have a non–skid surfacing. The County may require the backfilling and patching of the trench due to the excessive use of steel plates.
18. The Contractor shall provide an adequate non–slip bridging material, including shoring over trenches in pavement areas. The bridging shall be able to support all types of vehicular and pedestrian traffic.
19. Where pedestrian walkways exist they shall be maintained in a safe and passable condition or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided.

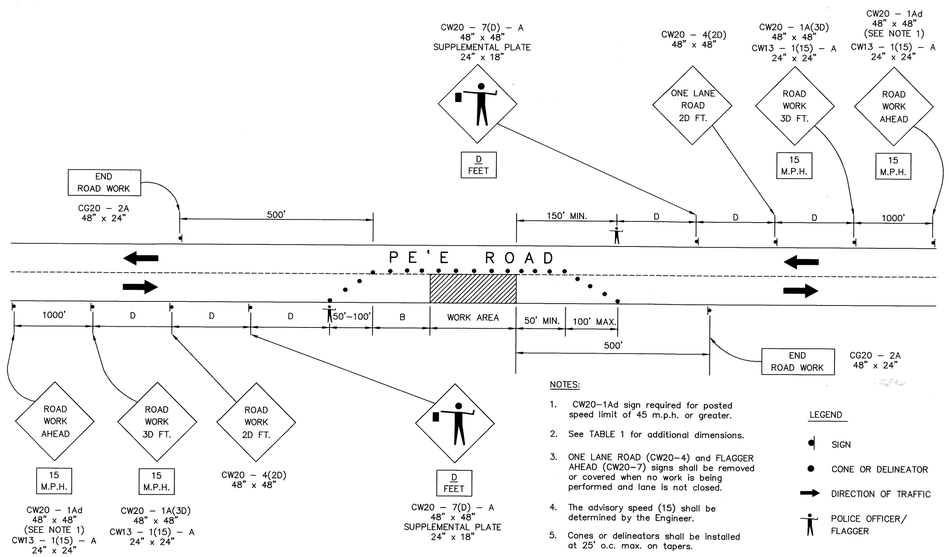
TABLE 1							
POSTED SPEED	SIGN SPACING	TAPER LENGTH (T) (FEET)		LONGITUDINAL	SPACING OF CONES OR DELINEATORS (FEET)**		
LIMIT (M.P.H.)*	(D) (FEET)	W = 12' OR LESS	W = GREATER THAN 12'	BUFFER SPACE (B) FEET	TAPER	TANGENT	WORK AREA
20	250	200	W x 17	35	20	20	10
25	250	200	W x 17	55	25	25	10
30	250	250	W x 20	85	30	30	10
35	250	250	W x 20	120	35	35	10
40	500	350	W x 30	170	40	40	10
45	500	550	W x 45	220	45	45	10
50	1000	600	W x 50	280	50	50	10
55	1000	700	W x 55	335	55	55	10

NOTES:
W = WIDTH OF LANE, SHOULDER, OR OFFSET
*USE ADVISORY SPEEDS WHEN POSTED
**NOT APPLICABLE FOR TWO-LANE HIGHWAYS



WORKING ON SHOULDER OR ROADSIDE

FIGURE 1 – TRAFFIC CONTROL PLAN



ONE–LANE, TWO–WAY TRAFFIC TAPER

FIGURE 1 – TRAFFIC CONTROL PLAN

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

TRAFFIC CONTROL PLAN

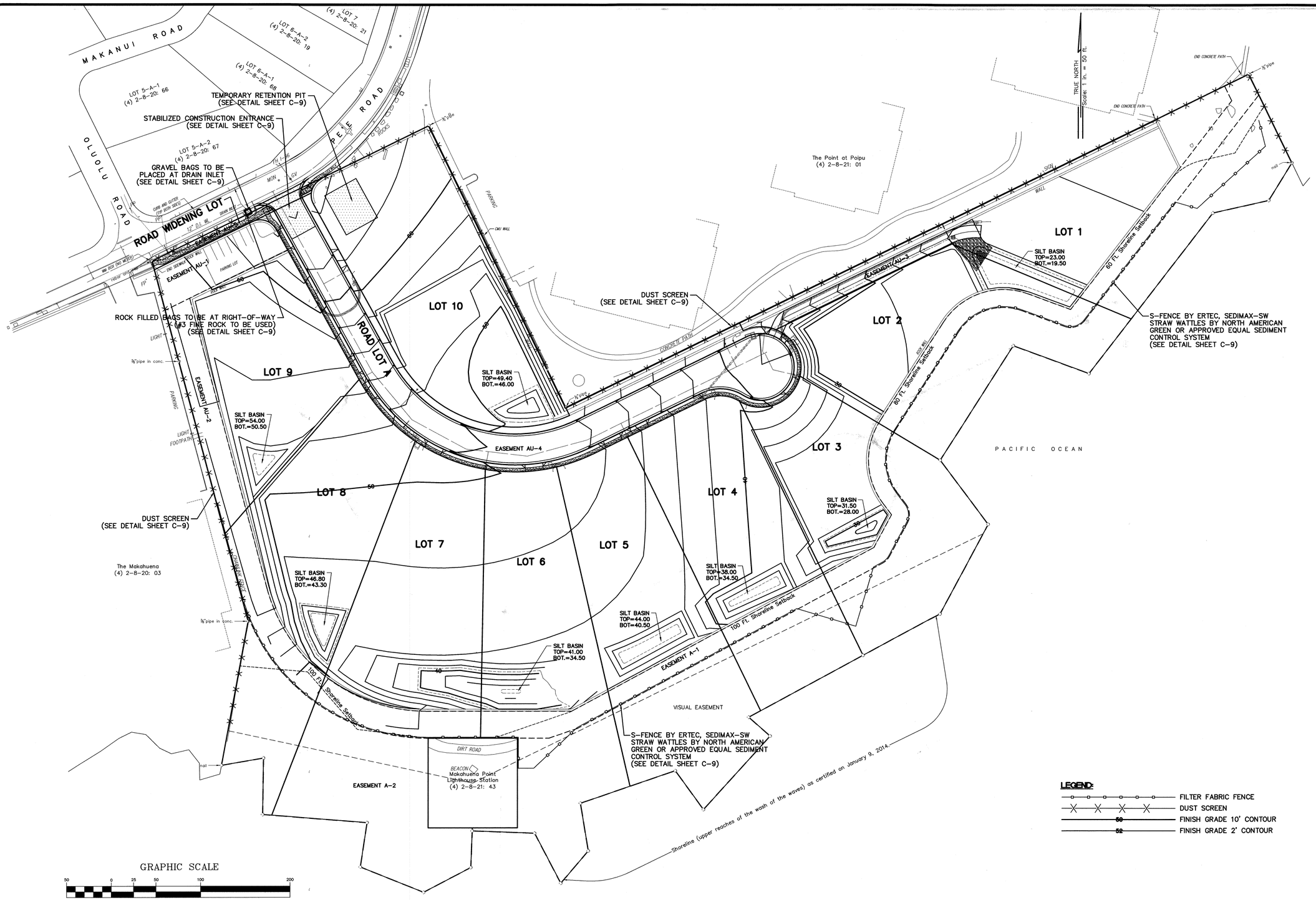
APPROVED:

12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-4
DRAWN BY: CSL	4 OF 23 SHEETS
DATE: 10/16/2015	

Project No.: 14–211
Drawing No.: 14–211 CON PLAN TND.dwg



ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHUENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

EROSION CONTROL PLAN

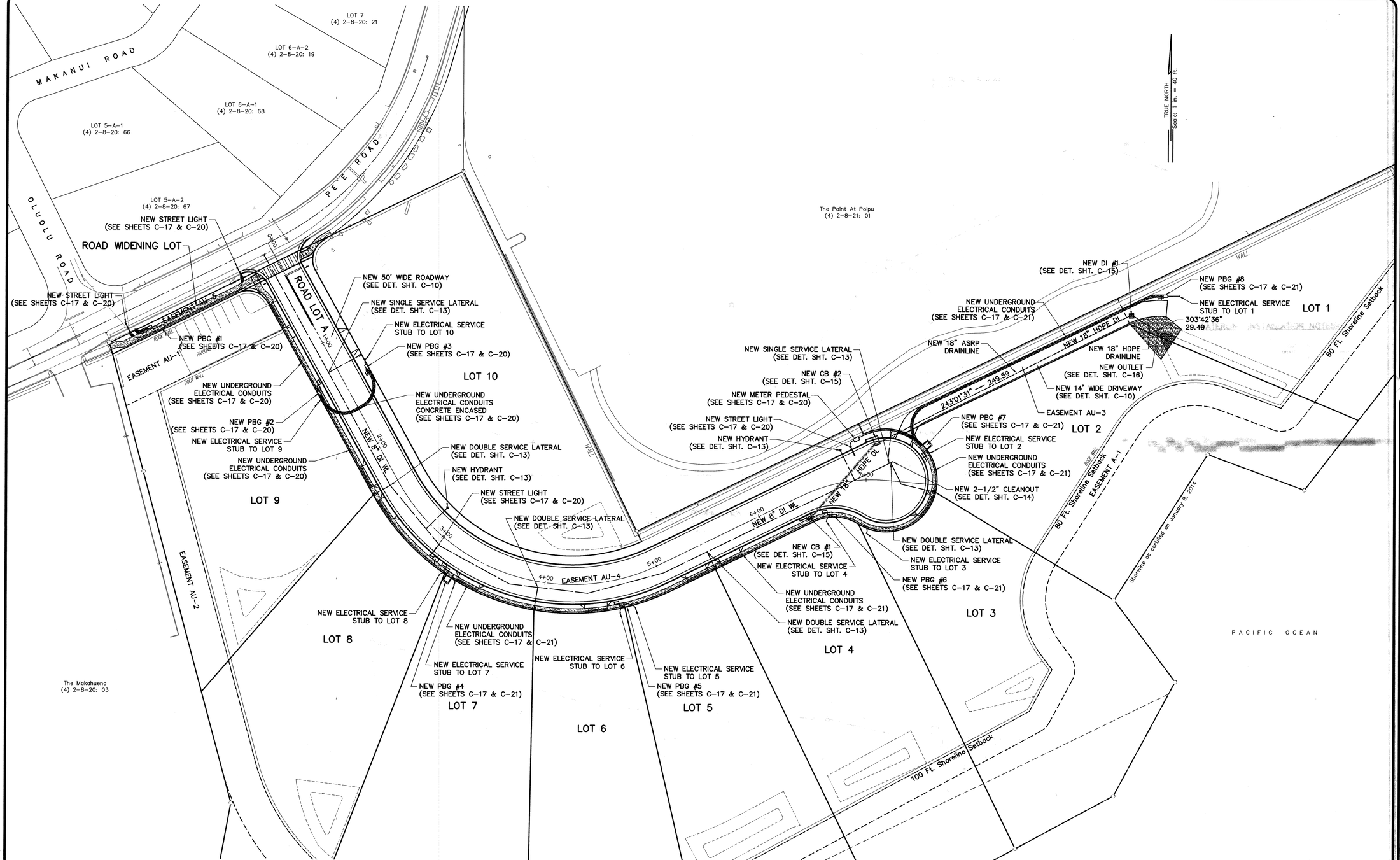
APPROVED:

12-17-15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-5
DRAWN BY: CM	
DATE: 10/16/2015	5 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS
FOR
MAKAHŪENA SUBDIVISION
Welīweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

GENERAL SITE PLAN

APPROVED:

12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

10/16/15
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-6
DRAWN BY: CSL	
DATE: 10/16/2015	6 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

STA: 0+07.25 O/S 8.00' RT.
℄ NEW ROADWAY
CONNECT TO EXIST. 12" D.I. WL
INSTALL:
1 – 12"x8" TEE, MJ
2 – 12" GATE VALVE, MJ
1 – 8" GATE VALVE, MJ
3 – 3 PC. VALVE BOX W/ COVER
2 – 12" NIPPLE (2' MIN.)
1 – 8" NIPPLE (2' MIN.)
1 – CONC. BLOCK W/STRUCTURAL STRUTS
(SEE DETAIL SHEET C–14)

LOT 5–A–1
(4) 2–8–20: 68

LOT 5–A–2
(4) 2–8–20: 67

OLULU ROAD

FH 1–96

MONO POLE W/ TV

GUARD ROCKS

CURB AND GUTTER (TYP BOTH SIDES)

12" D.I. W.L.

DRAIN INLET

5' WIDE SIDEWALK

STA: 0+00
INSTALL NEW STREET SURVEY MONUMENT
4,938.49' S
983.96' W
"PAA"
ELEV.=63.90

FOR TYPICAL ROAD SECTION SEE SHT. C–10

5' WIDE SIDEWALK

CUT & PLUG WATER METER AT MAIN

EASEMENT AU–5

EASEMENT AU–1

PBG #1

WM BOX (NO METER)

REBAR W/ CAP

ROAD WIDENING LOT

DRIVEWAY APRON

PRIVATE ROADWAY
50' WIDE

STA: 2+85.00 O/S 5.32' RT.
℄ NEW ROADWAY
INSTALL:
1 – 8"x6" TEE, MJxFE
1 – 6" GATE VALVE, FExMJ
28.50 LF 6" D.I. PIPE
1 – 3 PC. VALVE BOX W/ COVER
1 – HYDRANT ASSEMBLY
(SEE DETAIL SHT. C–13)
2 – CONC. REACTION BLOCK
1 – HYDRANT MARKER
(SEE CONNECTION DETAIL SHEET C–13)

PBG #3

SSL

24' WIDE DRIVEWAY

PBG #2

ELECTRICAL CONDUIT/WATERLINE CROSSING

STA: 2+37.44
INSTALL NEW CENTERLINE SURVEY MONUMENT
5,146.17' S
868.84' W
"PAA"
ELEV.=54.67

STA: 2+30.19 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/32 BEND MJ
1 – CONC. BLOCK

LOT 9

DRIVEWAY APRON

DRIVEWAY APRON

STA: 3+03.89 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/16 BEND MJ
1 – CONC. BLOCK

SILT BASIN
TOP = 54.00
BOT. = 50.50

4' WIDE SIDEWALK

The Makahuena
(4) 2–8–20: 03

LIGHT

¾" pipe in conc.

PARKING

LIGHT

FOOTPATH

EASEMENT AU–2

LOT 8

PBG #4

DRIVEWAY APRON

STA: 3+70.33 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/16 BEND MJ
1 – CONC. BLOCK

LOT 7

DRIVEWAY APRON

PBG #5

LOT 6

ROAD LOT A

1+00

8" DI WL
213'00"
230.15

3+00

300°07'25" — 69.07

298°22'06" — 69.07

4+00

EASEMENT AU–4

276°36'53" — 69.07

254°51'38" — 69.07

5+00

6+00

213°59' — 223.14

8" DI WL

DSL

HYD

SSL

CB #1 HYDRAULIC GRADE
LOWER ELEV. = 36.67

CB #2 HYDRAULIC GRADE
LOWER ELEV. = 33.85
UPPER ELEV. = 34.48

DI #1 HYDRAULIC GRADE
LOWER ELEV. = 21.06
UPPER ELEV. = 21.06

OUTLET HYDRAULIC GRADE
UPPER ELEV. = 21.00

The Point At Poipu
(4) 2–8–21: 01

PARKING

CMU WALL

CONCRETE PATH

STA: 6+90.00 O/S 0.34' LT.
℄ NEW ROADWAY
INSTALL:
1 – 8"x6" TEE, MJxFE
1 – 6" GATE VALVE, FExMJ
29.07 LF 6" D.I. PIPE
1 – 3 PC. VALVE BOX W/ COVER
1 – HYDRANT ASSEMBLY
(SEE DETAIL SHT. C–13)
1 – HYDRANT MARKER
2 – CONC. REACTION BLOCK
(SEE CONNECTION DETAIL SHEET C–13)

STA: 6+39.25 O/S 20.22' RT.
℄ NEW ROADWAY
INSTALL TYPE A CATCH BASIN:
TOP = 42.10
INV. = 36.43
(SEE DET. SHT. C–15)

STA: 6+41.50
INSTALL NEW CENTERLINE SURVEY MONUMENT
5,157.94' S
514.76' W
"PAA"
ELEV.=41.85

STA: 5+03.22
INSTALL NEW CENTERLINE SURVEY MONUMENT
5,218.59' S
639.02' W
"PAA"
ELEV.=48.32

STA: 4+36.77 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/16 BEND MJ
1 – CONC. BLOCK

SILT BASIN
TOP = 49.40
BOT. = 46.00

12" Pipe

LOT 10

LOT 5

STA: 5+03.22 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/32 BEND MJ
1 – CONC BLOCK

LOT 4

LOT 3

CB #1 HYDRAULIC GRADE
LOWER ELEV. = 36.67

CB #2 HYDRAULIC GRADE
LOWER ELEV. = 33.85
UPPER ELEV. = 34.48

DI #1 HYDRAULIC GRADE
LOWER ELEV. = 21.06
UPPER ELEV. = 21.06

OUTLET HYDRAULIC GRADE
UPPER ELEV. = 21.00

CB #2 TO CB #1
NORMAL DEPTH = 0.24
CRITICAL DEPTH = 0.40
DISCHARGE (cfs) = 1.17
VELOCITY (fps) = 6.32

STA: 7+17.25
INSTALL NEW STREET SURVEY MONUMENT
5,144.28' S
441.18' W
"PAA"
ELEV.=38.06

FOR TYPICAL DRIVEWAY ROAD SECTION SEE SHT. C–10)

INSTALL TYPE G2 DRAIN INLET
TOP = 23.61
INV. = 19.68
(SEE DET. SHT. C–15)

FOR TYPICAL DRIVEWAY SECTION SEE SHT. C–10

STA: 7+08.00 O/S 32.30' LT.
℄ NEW ROADWAY
INSTALL TYPE B CATCH BASIN:
TOP = 38.28
INV. = 33.50
(SEE DET. SHT. C–15)

SIGN

WALL

TRUE NORTH
Scale: 1 in. = 40 ft.

PBG #8
OUTLET TO DI #1
NORMAL DEPTH = 0.82
CRITICAL DEPTH = 0.83
DISCHARGE (cfs) = 4.70
VELOCITY (fps) = 4.73

DI #1

OUTLET

18" HDPE DL

303°42'36" — 29.45

EASEMENT AU–3

LOT 1

SILT BASIN
TOP = 23.00
BOT. = 19.50

60 Ft. Shoreline Setback

14' WIDE DRIVEWAY

DI #1 TO CB #2
NORMAL DEPTH = 0.35
CRITICAL DEPTH = 0.69
DISCHARGE (cfs) = 3.24
VELOCITY (fps) = 10.24

243°01'31" — 246.20 — 18" HDPE DL

INSTALL WARNING TAPE 1' BELOW F.G. OVER THE SSL FOR LOT 1

CB #2

PBG #7

LOT 2

STA: 7+22.00 O/S 16.85' LT.
℄ NEW ROADWAY
INSTALL:
1 – 2–1/2" CLEANOUT
1 – 8" CAP W/ 2–1/2" TAP
1 – CONC. REACTION BLOCK
(SEE DETAIL SHT. C–14)

HYD

18" HDPE DL

DI #1

86.99

1+00

CO

DSL

DRIVEWAY APRON

INSTALL WARNING TAPE 1' BELOW F.G. OVER THE DSL FOR LOTS 2 & 3

PBG #6

80 Ft. Shoreline Setback

ROCK WALL

EASEMENT A–1

Shoreline as certified on January 9, 2014

PACIFIC OCEAN

WATERLINE INSTALLATION NOTES:

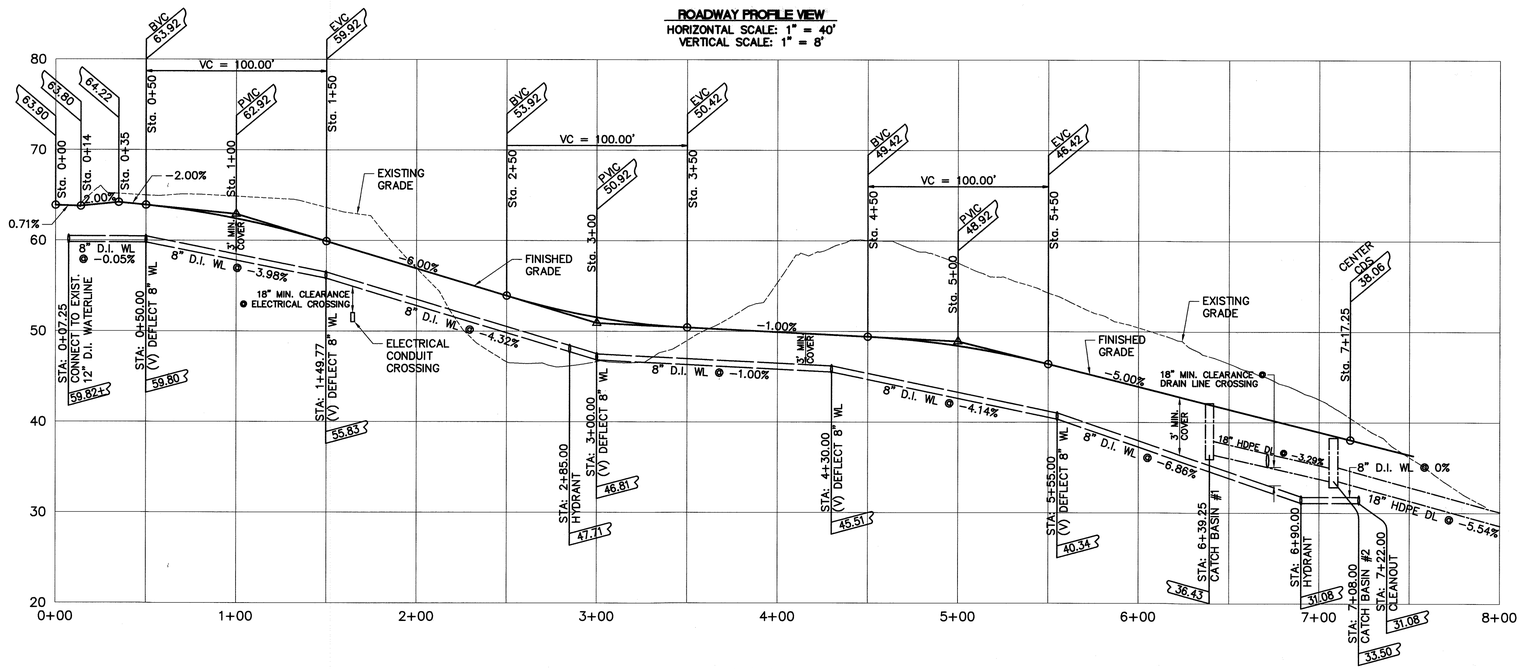
1. The right–of–way and relevant property corners or easements at the proposed water meter location(s) shall be surveyed by a licensed surveyor prior to construction. The surveyed points shall be preserved throughout the project's construction.
2. The new service lateral piping may be tapped and installed horizontally from the existing waterline if there are no concrete encased utility ducts to clear at the property line.
3. Contractor shall remove, clean, and return all angle ball valves, ball valves, and undamaged meter boxes and covers being replaced to D.O.W. baseyard in Lihu'e.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

ROADWAY PROFILE VIEW
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'



REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪTENA SUBDIVISION
Welwelo, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

PLAN AND PROFILE

APPROVED:

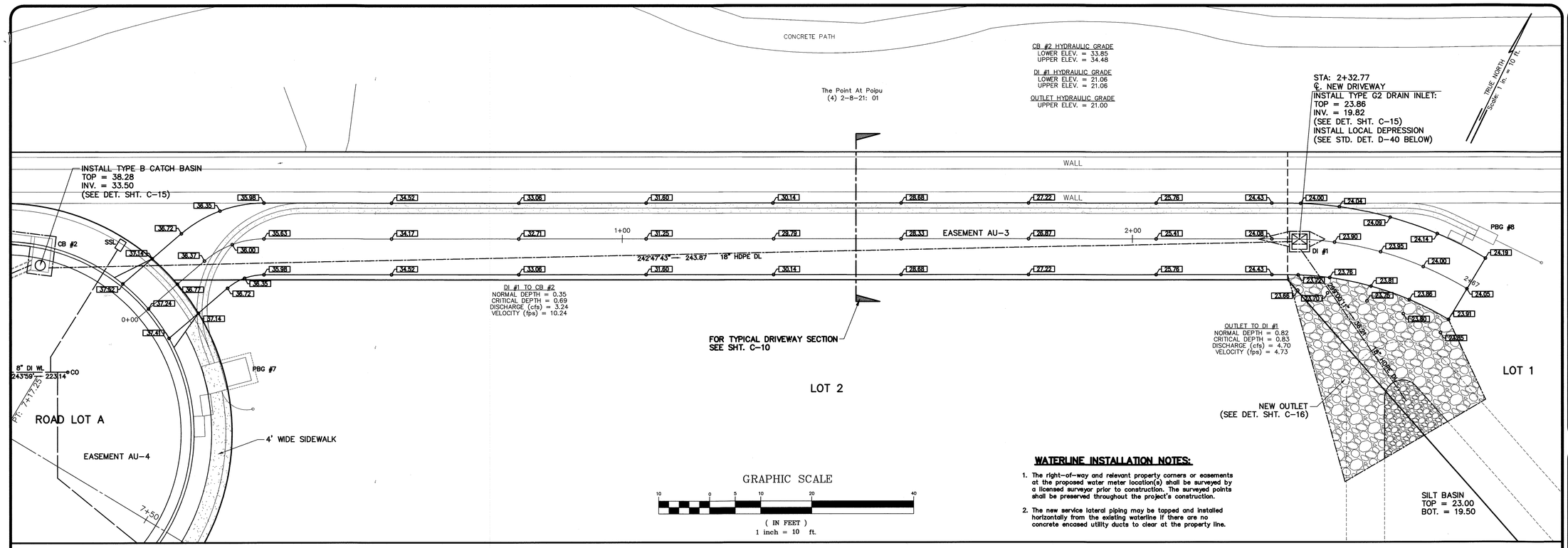
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12·17·15

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE 10/16/15

DESIGNED BY:	WW
DRAWN BY:	CW
DATE:	10/16/2015

SHEET C–7
7 OF 23 SHEETS

Project No.: 14–211
Drawing No.: 14–211 CON PLAN.dwg

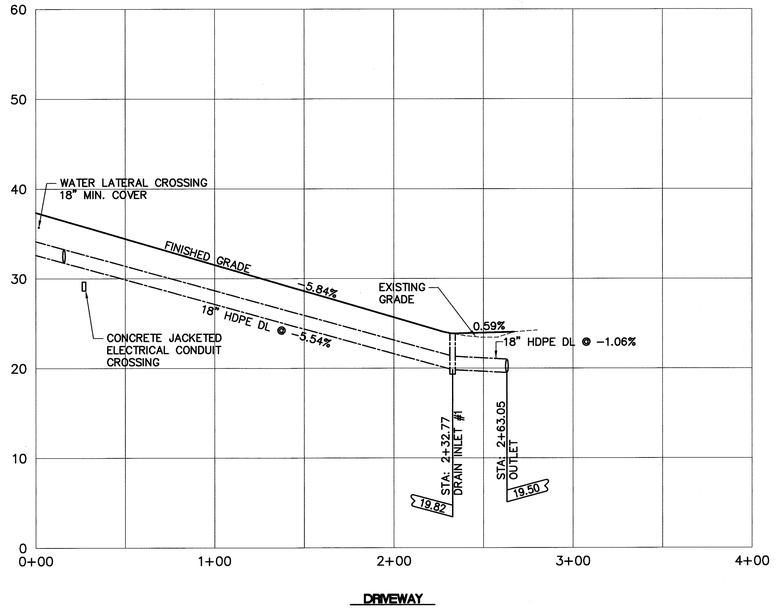


WATERLINE INSTALLATION NOTES:

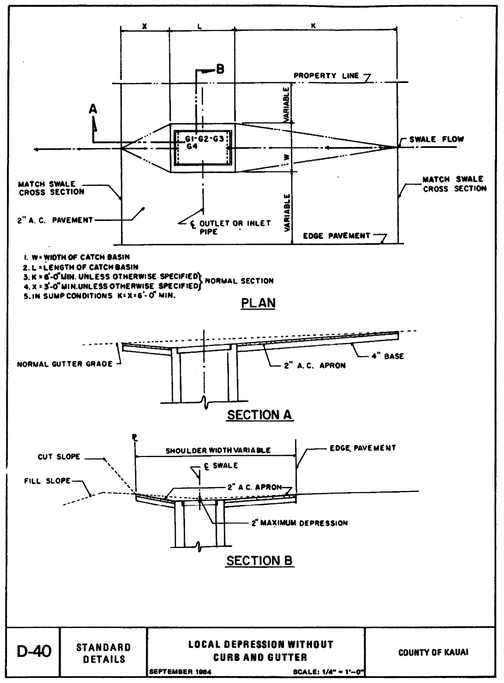
1. The right-of-way and relevant property corners or easements at the proposed water meter location(s) shall be surveyed by a licensed surveyor prior to construction. The surveyed points shall be preserved throughout the project's construction.
2. The new service lateral piping may be tapped and installed horizontally from the existing waterline if there are no concrete encased utility ducts to clear at the property line.

ROADWAY PROFILE VIEW

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'



DRIVEWAY



D-40	STANDARD DETAILS	LOCAL DEPRESSION WITHOUT CURB AND GUTTER SEPTEMBER 1984 SCALE: 1/4" = 1'-0"	COUNTY OF KAUAI

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION

Waiīwelī, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

PLAN AND PROFILE

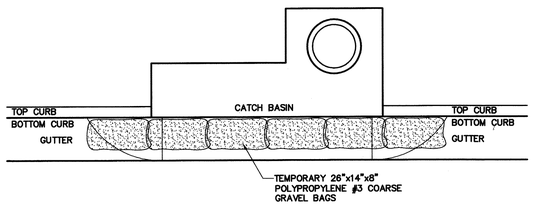
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

10/14/15
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

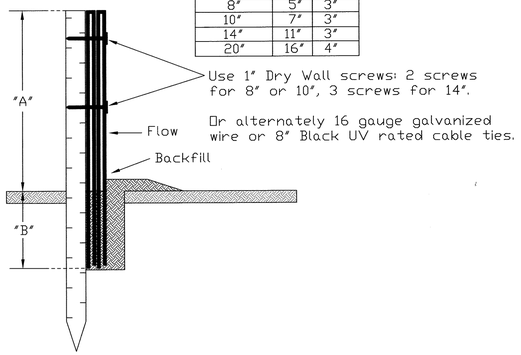
DESIGNED BY:	WW	SHEET
DRAWN BY:	CH	C-8
DATE:	10/16/2015	8 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



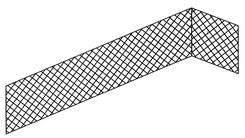
CATCH BASIN PROTECTION
NOT TO SCALE

S-Fence	"A"	"B"
8"	5"	3"
10"	7"	3"
14"	11"	3"
20"	16"	4"

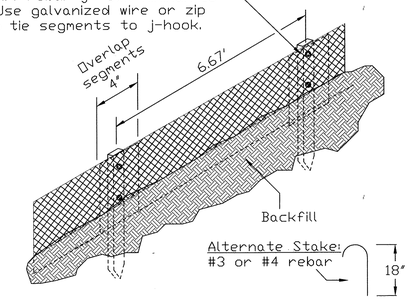


Notes:
1. Cut trench 2" to 4" wide, 3" to 4" deep.
2. Install in slot against downstream side of trench wall, backfill the trench to grade level.
3. Overlap segments by at least 3". Install stakes on downstream side of segment overlaps.
4. Use 1" Dry Wall screws: 2 or 3 places. Or alternately 16 gauge tie-wire or 8" Black UV rated staple cable ties (zip ties) to tie segments together.

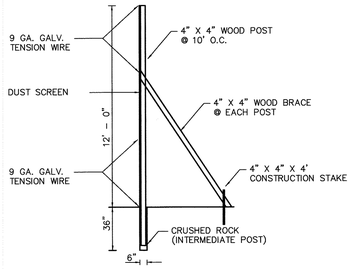
Notes:
1. Dog-leg at end-of-runs to contain sediment.
2. Install on same contour to limit scour and flow concentration. Dog-leg periodically if on down-hill run to minimize velocity scour.



Staking Methods:
1. Wooden Stake: Use 1" x 2" x 18" One at each overlap or 6.67' apart.
2. #3 or #4 rebar j-hook minimum 18" long. Use galvanized wire or zip ties to tie segments to j-hook.

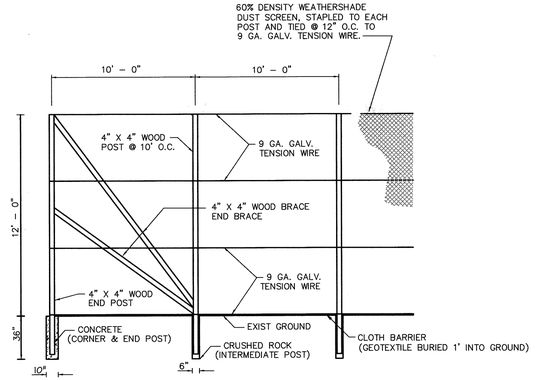


S-FENCE BY ERTEC INSTALLATION DETAILS
NOT TO SCALE



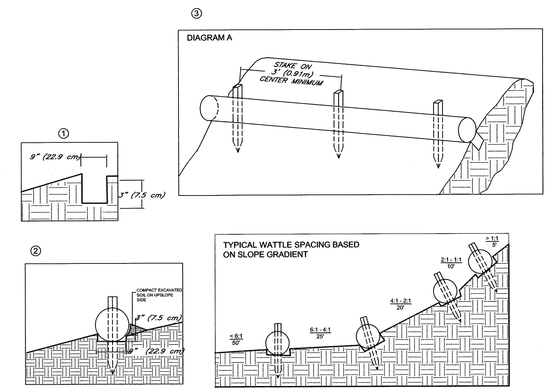
SIDE ELEVATION

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO THE START OF THE PROJECT.



FRONT ELEVATION

DUST SCREEN DETAIL
N.T.S.



1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 -1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

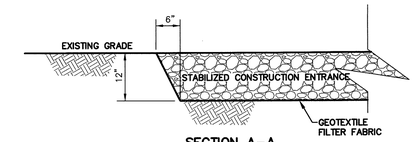
North American Green Straw Wattles are a Best Management Practice (BMP) that offers an effective and economical alternative to silt fence and straw bales for sediment control and storm water runoff.

Guidelines are provided to assist in design, installation, and structure spacing. The guidelines may require modification due to variation in soil type, rainfall intensity or duration, and amount of runoff affecting the application site.

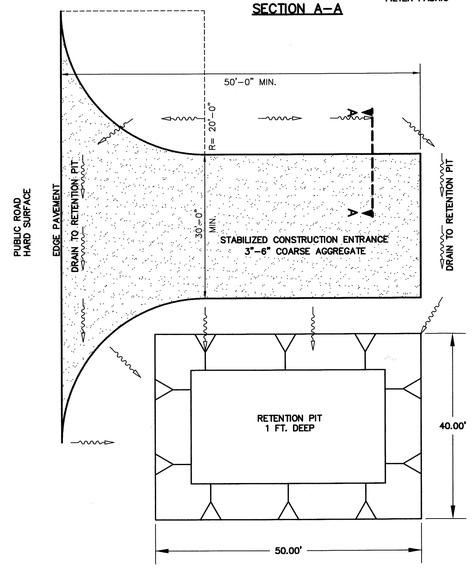
To maximize sediment containment with the Straw Wattle, place the initial structure at the top/crest of the slope if significant runoff is expected from above. If no runoff from above is expected, the initial Straw Wattle can be installed at the appropriate distance downhill from the top/crest of the slope. The final structure should be installed at or just beyond the bottom/toe of the slope. Wattles should be installed perpendicular to the primary direction of overland flow.

Straw Wattles are a temporary sediment control device and are not intended to replace rolled erosion control products (RECPs) or hydraulic erosion control products (HECPs). If vegetation is desired for permanent erosion control, North American Green recommends that RECPs or HECPs be used to provide effective immediate erosion control until vegetation is established. Straw Wattles may be used in conjunction with blankets, mats, and mulches as supplemental sediment and runoff control for these applications. Like all sediment control devices, the effectiveness of the Straw Wattle is dependent on storage capacity.

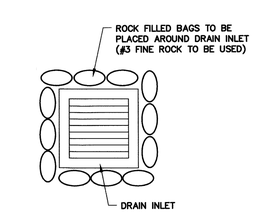
SEDIMAX-SW STRAW WATTLES BY NORTH AMERICAN GREEN INSTALLATION DETAILS
NOT TO SCALE



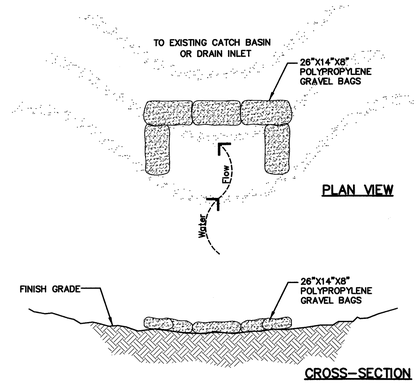
SECTION A-A



STABILIZED CONSTRUCTION ENTRANCE
NTS



DRAIN INLET PROTECTION DETAIL
NOT TO SCALE



GRAVEL BAG DETAIL
NTS

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welīwelī, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

EROSION CONTROL DETAILS

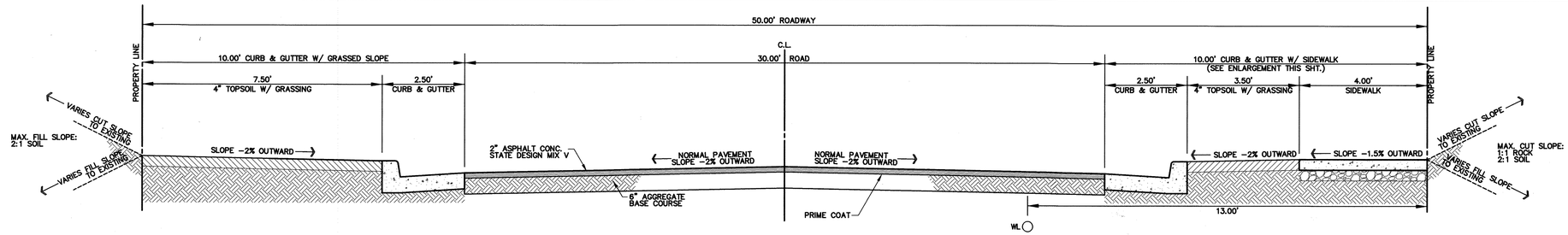
APPROVED
12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY:	WW
DRAWN BY:	CSL
DATE:	10/16/2015

SHEET C-9
9 OF 23 SHEETS

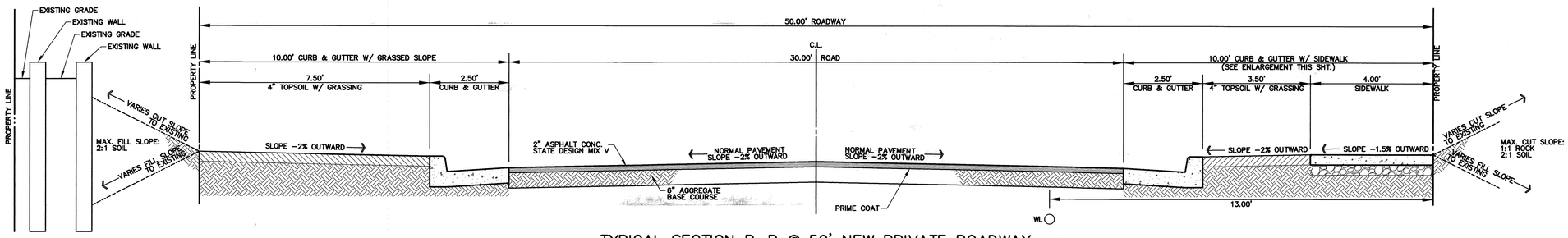
Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



TYPICAL SECTION A–A @ 50' NEW PRIVATE ROADWAY

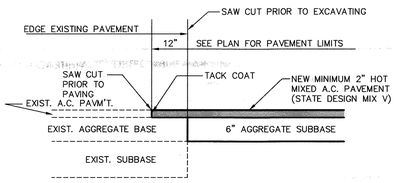
NTS

4" TOPSOIL W/ GRASSING



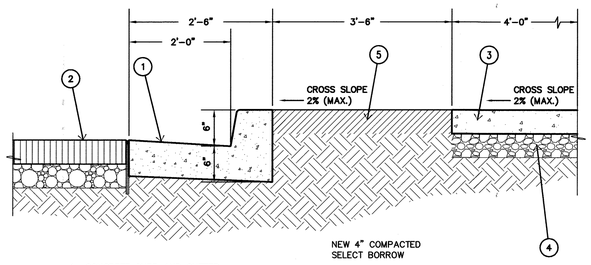
TYPICAL SECTION B–B @ 50' NEW PRIVATE ROADWAY

NTS



A.C. PAVEMENT CONNECTION DETAIL COUNTY ROAD

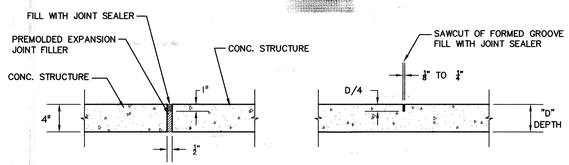
NOT TO SCALE



1. CONCRETE CURB AND GUTTER (SEE STD. DET. R-4)
2. ASPHALTIC CONCRETE PAVEMENT
3. 4" CONCRETE SIDEWALK (SEE DET. THIS SHT.)
4. 4" COMPACTED SELECT BORROW
5. GRASSED SECTION

CURB & GUTTER W/ SIDEWALK DETAIL

NTS

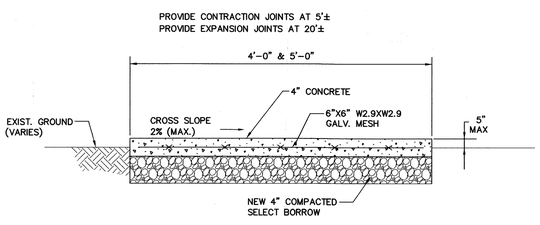


EXPANSION JOINT
INSTALL AT 20'–0" O.C.

CONTACTION JOINT
INSTALL AT 5'–0" CONC. RAMPS & WALKWAYS

EXPANSION & CONTRACTION JOINT DETAIL

NTS



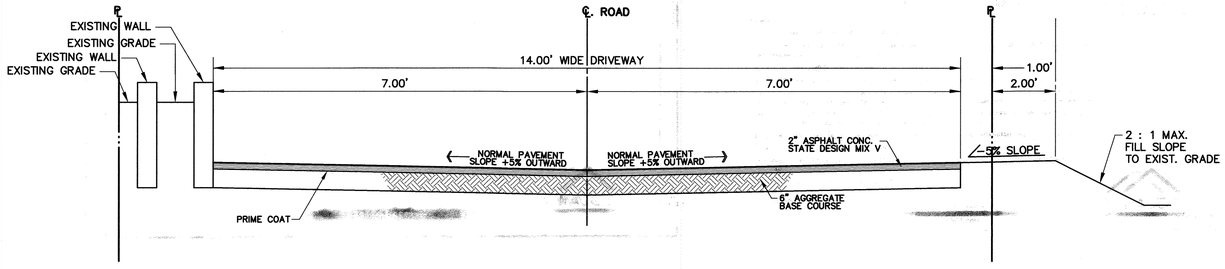
NOTES:

1. BROOM FINISH CONCRETE SURFACE PERPENDICULAR TO PATH DIRECTION.
2. INSTALL CONTRACTION JOINTS AT 5' O.C. & EXPANSION JOINTS AT 30' O.C.

(SEE DETAIL THIS SHEET)

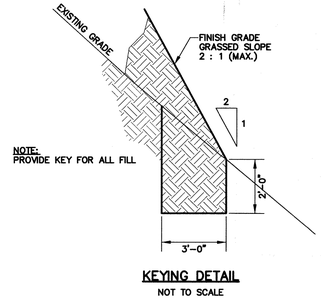
CONCRETE SIDEWALK DETAIL

NTS



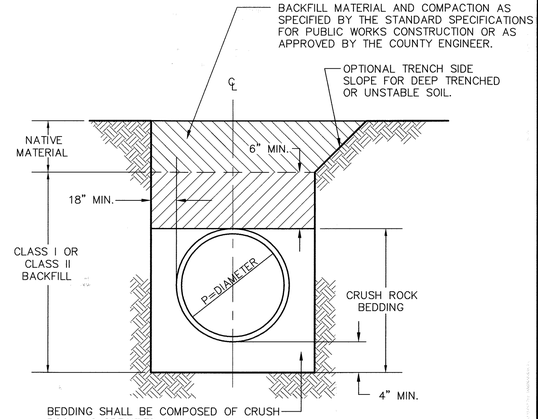
LOT 1 TYPICAL DRIVEWAY SECTION

NTS



NOTE:
PROVIDE KEY FOR ALL FILL

KEYING DETAIL
NOT TO SCALE



BEDDING SHALL BE COMPOSED OF CRUSH ROCK AS SPECIFIED BY THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OR AS APPROVED BY THE COUNTY ENGINEER.

H.D.P.E. TRENCH & BEDDING TYPICAL DETAIL
(HDPE: HIGH DENSITY POLYETHYLENE)

NOT TO SCALE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welliwell, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

MISCELLANEOUS DETAILS

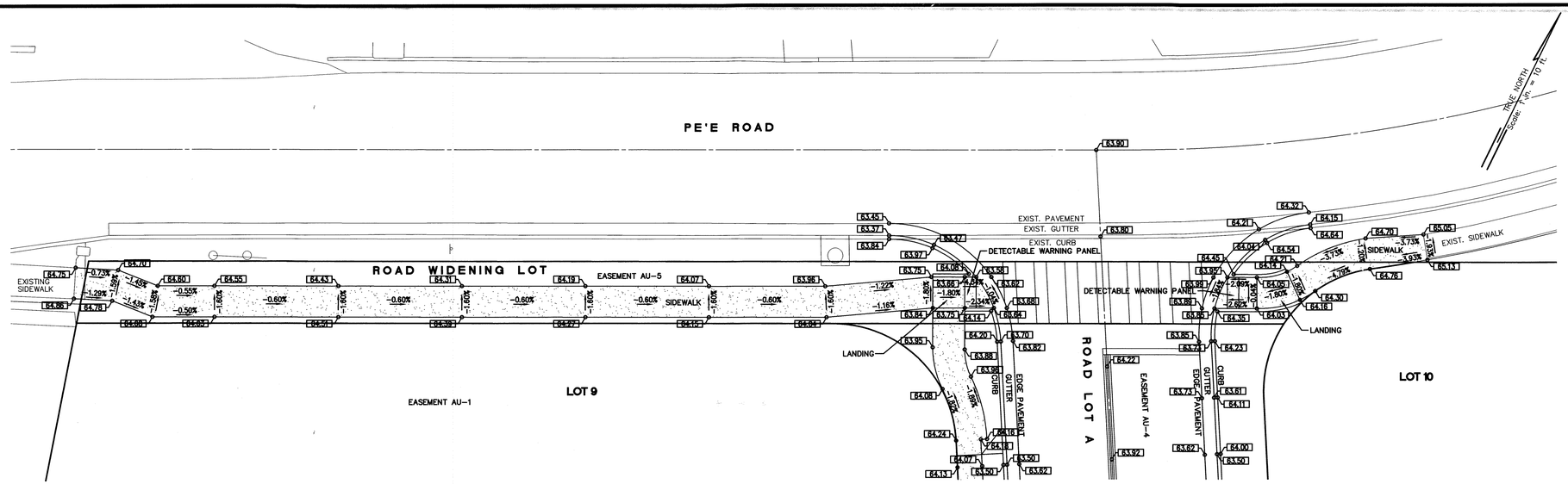
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

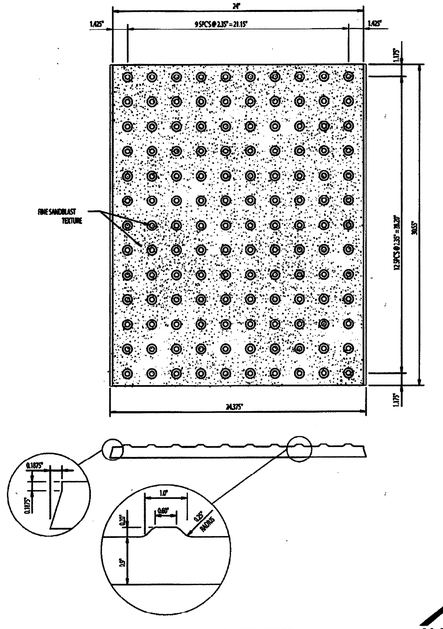
DESIGNED BY: WW	SHEET C-10
DRAWN BY: CH	
DATE: 10/16/2015	10 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



SIDEWALK AND RAMP DETAIL
SCALE: 1"=10'

MASCO CASTinTACT® 3 | CAST IN PLACE DETECTABLE WARNING PANEL 2.5' x 2'
PART# MA CT2.52

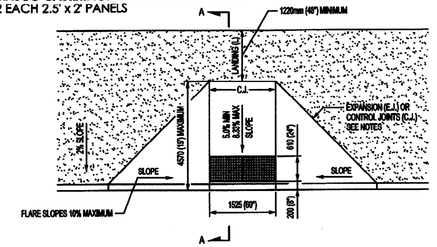


All dimensions in inches

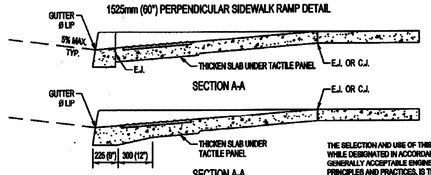
For more information please visit: CASTinTACT.com

MASCO MASONS SUPPLY

MASCO CASTinTACT® DETECTABLE WARNING
2 EACH 2.5' x 2' PANELS



1525mm (60") PERPENDICULAR SIDEWALK RAMP DETAIL



SECTION A-A
MONOLITHIC CURB & SIDEWALK

THE SELECTION AND USE OF THIS DRAWING WHILE DESIGNATED IN ACCORDANCE WITH GENERALLY ACCEPTABLE ENGINEERING PRINCIPLES AND PRACTICES, IS THE SOLE RESPONSIBILITY OF THE USER AND SHOULD NOT BE USED WITHOUT CONSULTING A REGISTERED PROFESSIONAL ENGINEER.

GENERAL NOTES

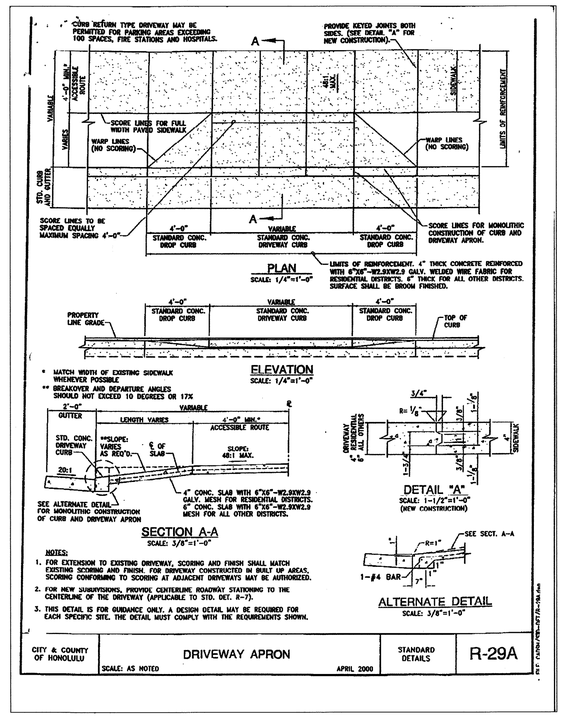
1. SIDEWALK RAMP DETAILS ARE BASED ON UNITED STATES ACCESS BOARD STANDARDS.
2. PLACE TRUNCATED DOME DETECTABLE WARNING PANELS AT THE BASE OF CURB RAMP. INSTALL ACROSS FULL WIDTH OF RAMP A MINIMUM 610mm (24") IN DEPTH AND SET BACK 200mm (8") FROM GRADE BREAK.
3. SIDEWALK CURB RAMP SLOPES SHOWN ARE RELATIVE TO THE TRUE LEVEL HORIZON (ZERO BUBBLE).
4. SIDE FLARES THAT ARE NOT PART OF THE PATH OF TRAVEL MAY BE ANY SLOPE.
5. FOR THE PURPOSES OF THIS DRAWING, A CURB RAMP IS CONSIDERED "PERPENDICULAR" IF THE ANGLE BETWEEN THE LONGITUDINAL AXIS OF THE RAMP AND A TANGENT TO THE CURB AT THE RAMP CENTER IS 75 DEGREES OR GREATER.
6. JOINTS ARE REQUIRED AT ALL SIDEWALK RAMP SLOPE BREAKS. EXPANSION JOINTS ARE RECOMMENDED BETWEEN EXISTING CONCRETE AND NEW CONCRETE WHERE APPLICABLE. (REFER TO ACI 302R)
7. SIDEWALK FLARE IS NOT NECESSARY WHERE THE RAMP IS PROTECTED FROM PEDESTRIAN CROSS TRAVEL.
8. THICKEN CONCRETE UNDER DETECTABLE WARNING PANEL.
9. IN EXTREME CLIMATES LEAVE 3/16" GAP BETWEEN SQUARE CUT PANEL JOINTS AND SEAL WITH COMPATIBLE ELASTOMERIC SEALANT.
10. ONLY USE DETAILS ALLOWED BY JURISDICTION.

E.J. = EXPANSION JOINT
C.J. = CONTROL JOINT

For more information please visit: CASTinTACT.com

MASCO MASONS SUPPLY REVISED 2/10

DETECTABLE WARNING DETAIL
NTS



ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

MISCELLANEOUS DETAILS

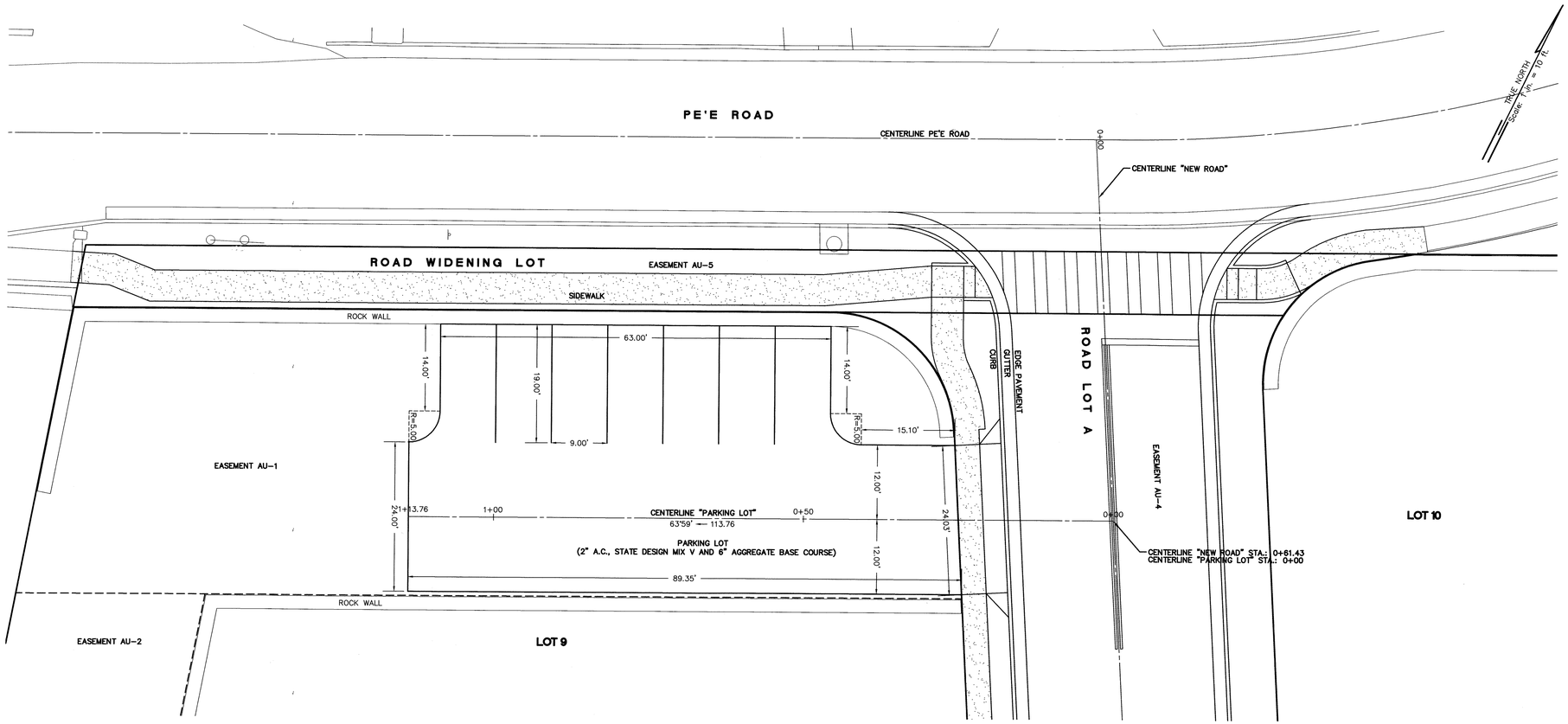
APPROVED
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12.17.15

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

DESIGNED BY:	WW
DRAWN BY:	CM
DATE:	10/16/2015

SHEET C-11
11 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



PARKING LOT DETAIL
SCALE: 1"=10'

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS
FOR
MAKAHŪENA SUBDIVISION
Waiwelli, Koloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

MISCELLANEOUS DETAILS

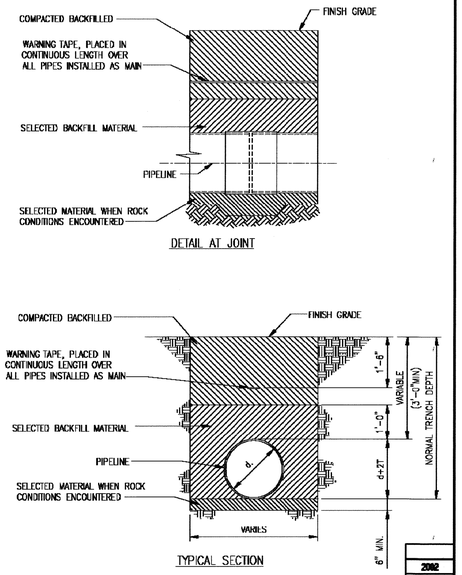
APPROVED:
12-17-15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

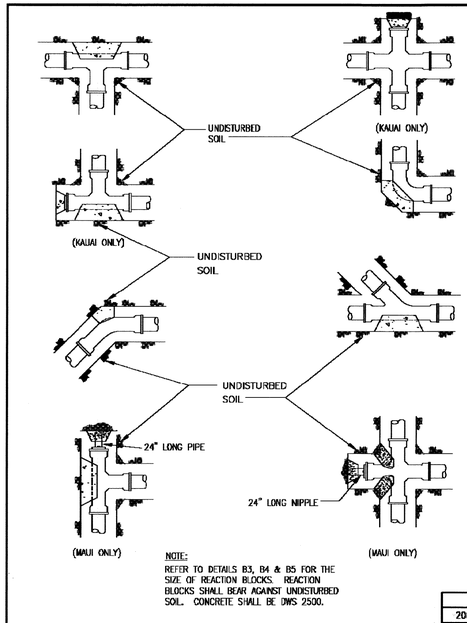
DESIGNED BY:	WW
DRAWN BY:	CSL
DATE:	10/16/2015

SHEET
C-12
12 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



KAUAI	WATERLINE TRENCH DETAILS MISCELLANEOUS DETAILS SCALE: NTS	STANDARD DETAILS	P11
		2002 REVISION	



NOTE:
REFER TO DETAILS B3, B4 & B5 FOR THE SIZE OF REACTION BLOCKS. REACTION BLOCKS SHALL BEAR AGAINST UNDISTURBED SOIL. CONCRETE SHALL BE DWS 2500.

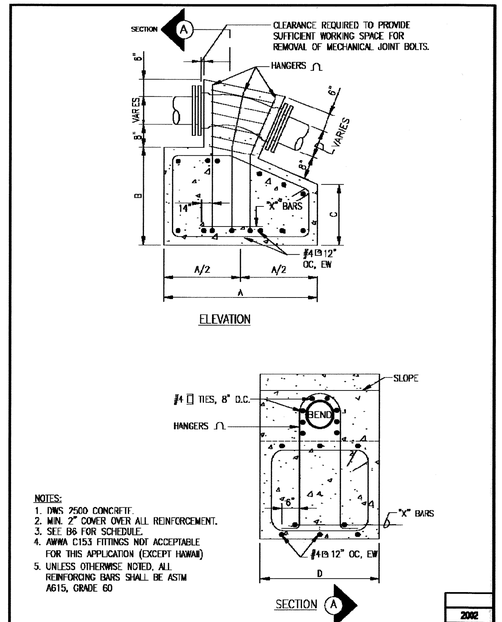
KAUAI MAUI	HORIZONTAL REACTION BLOCK FOR WATER MAINS SCALE: NTS	STANDARD DETAILS	B2
		2002 REVISION	

TOP VERTICAL THRUST BLOCK SCHEDULE

PIPE SIZE	BEND	PRESSURE 250 PSI: CONCRETE BLOCK A	B	C	D	HANGER "X" BAR	PRESSURE 150 PSI: CONCRETE BLOCK A	B	C	D	HANGER "X" BAR
4"	1/4	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/8	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/16	2'-0"	2'-0"	1'-0"	2'-0"	@24	2'-0"	2'-0"	1'-0"	2'-0"	@24
6"	1/4	4'-0"	4'-0"	1'-0"	2'-0"	@24	4'-0"	4'-0"	1'-0"	2'-0"	@24
	1/8	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/16	2'-0"	2'-0"	1'-0"	2'-0"	@24	2'-0"	2'-0"	1'-0"	2'-0"	@24
8"	1/4	4'-0"	4'-0"	1'-0"	2'-0"	@24	4'-0"	4'-0"	1'-0"	2'-0"	@24
	1/8	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/16	2'-0"	2'-0"	1'-0"	2'-0"	@24	2'-0"	2'-0"	1'-0"	2'-0"	@24
12"	1/4	5'-0"	5'-0"	1'-0"	2'-0"	@24	5'-0"	5'-0"	1'-0"	2'-0"	@24
	1/8	4'-0"	4'-0"	1'-0"	2'-0"	@24	4'-0"	4'-0"	1'-0"	2'-0"	@24
	1/16	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24

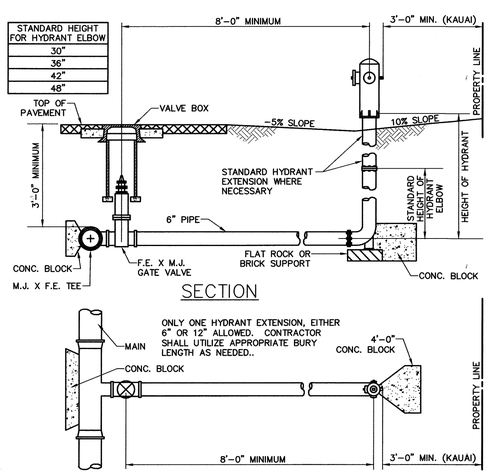
NOTE:
1. ACTUAL FIELD CONDITIONS SHALL BE VERIFIED IN THE FIELD. THE SCHEDULE DIMENSIONS AND DETAILS AS SHOWN ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR OR ENGINEER WHO PREPARED THE PLANS SHALL SUBMIT THE FINAL DESIGN AND DETAILS TO THE MANAGER FOR REVIEW AND APPROVAL AFTER FIELD VERIFICATION AND PRIOR TO INSTALLATION. FOR OAHU ONLY, THE DEPARTMENT WILL FURNISH THE FINAL DESIGN AND DETAILS FOR PROJECTS AWARDED BY THE MANAGER.
2. DIMENSIONS IN SCHEDULE REFER TO B7.
3. SCHEDULE IS NOT APPLICABLE TO BLOCKS FULLY OR PARTLY SUBMERGED IN WATER.
4. SAFETY FACTOR 1.5 BASED ON PIPE LOCATION MINIMUM 2' BELOW GROUND.

KAUAI OAHU MAUI HAWAII	TOP VERTICAL THRUST BLOCK SCHEDULE SCALE: NTS	STANDARD DETAILS	B6
		2002 REVISION	



NOTES:
1. DWS 2500 CONCRETE
2. MIN. 2" COVER OVER ALL REINFORCEMENT.
3. SEE B6 FOR SCHEDULE.
4. AWWA C153 FITTINGS NOT ACCEPTABLE FOR THIS APPLICATION (EXCEPT HAWAII)
5. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS SHALL BE ASTM A615, GRADE 60

KAUAI OAHU MAUI HAWAII	TYPICAL THRUST BLOCK AT VERTICAL BENDS SCALE: NTS	STANDARD DETAILS	B7
		2002 REVISION	



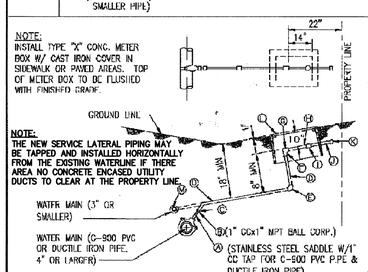
NOTES:
1. GASKETS FOR FLANGED JOINTS SHALL BE 1/8" DUCK-INSERTED RUBBER PACKING GARLOCK NO. 19.
2. BOLTS SHALL BE BREAK-OFF TYPE, 5/8" DIA. X 3" LONG MACHINE BOLTS WITH CUT THREADS, AMERICAN STANDARD COARSE HEXAGON HEADS, HOT-DIPPED GALVANIZED STEEL OR SILICON BRONZE. INSTALL BOLT WITH THREADS FACING UP.
3. NUTS SHALL BE AMERICAN STANDARD HEAVY COLD PUNCHED HEXAGON NUTS, HOT-DIPPED GALVANIZED STEEL OR SILICON BRONZE.
4. CONCRETE SHALL BE DWS 2500.
5. REFER TO PLATE FH11 FOR HYDRANT INSTALLATION WITH CURB GUARD.
6. FLANGED OUTLET FOR THE TEE IS MANDATORY.
7. TAPPING SLEEVE WITH TAPPING VALVE ASSEMBLY MAY BE USED FOR CONNECTION TO EXIST MAIN.
8. LUBRICATE HYDRANT NOZZLE THREADS WITH NON-TOXIC GREASE.
9. INSTALL HYDRANT MARKERS. (SEE PLATES FH12 AND FH13)
10. MINIMUM DIRECT DISTANCE FROM HYDRANT TO GATE VALVE SHALL BE 8'-0".
11. THE 4-1/2" NOZZLE SHOULD FACE PERPENDICULAR TO THE CURB/ROAD.

HYDRANT CONNECTION STRAIGHT RUN
SCALE: NTS

SCHEDULE OF FITTINGS

ITEM	DESCRIPTION	SINGLE SERVICE
A	STAINLESS STEEL SADDLE W/ 1" CC TAP FOR C-900 PVC PIPE & D.I. PIPE	1
B	1" CC x 1" MPT BALL CORPORATION	1
C	PACK JOINT COUPLINGS (FORD C14-44 OR APPROVED EQUAL)	1
D	1" COPPER TUBE, TYPE "K" SOFT	1
E	1" 90° COPPER ELBOW, S x S	1
F	1" COPPER MALE ADAPTER, SXT	1
G	ANGLE BALL VALVE, 1" FEMALE IPT INLET x 3/4" METER COUPLING NUT OUTLET (FORD BA13-342W OR APPROVED EQUAL)	1
H	METER SPACER, SUPPLIED BY DEPT. OF WATER & INSTALLED BY CONTRACTOR	1
I	BALL VALVE W/ HANDLE, 3/4" METER COUPLING NUT INLET x 1" FEMALE IPT OUTLET (FORD B13-342 W/ HT 34 HANDLE OR APPROVED EQUAL)	1
J	LINESETTER, 1" COPPER TUBE, TYPE "K" SOFT, 12" LONG (SEE STD. DET. L3)	1
K	1" PLASTIC THREAD PROTECTOR	1
L	TYPE "B" CONCRETE METER BOX W/ CAST IRON COVER OR ARMORCAST TYPE "B" BOX WITH ARMORCAST COVER	1
M	TEE W/ 1" BUSHING (WHEN CONNECTING TO 3" OR SMALLER MIPE)	1

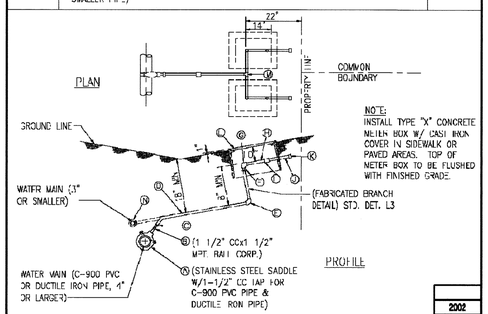
NOTE:
INSTALL TYPE "K" CONC. METER BOX W/ CAST IRON COVER IN SIDEWALK OR PAVED AREAS. TOP OF METER BOX TO BE FLUSHED WITH FINISHED GRADE.



KAUAI	SINGLE SERVICE LATERAL PLAN, PROFILE & MATERIAL LIST SCALE: NTS	STANDARD DETAILS	L1
		2002 REVISION	

SCHEDULE OF FITTINGS

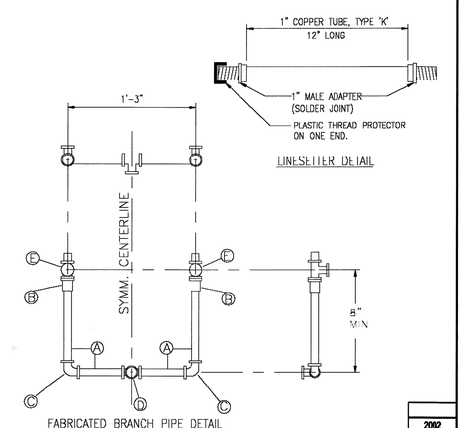
ITEM	DESCRIPTION	DOUBLE SERVICE
A	STAINLESS STEEL SADDLE W/ 1-1/2" CC TAP FOR C-900 PVC PIPE AND DUCTILE IRON PIPE	1
B	1-1/2" CC x 1-1/2" MPT BALL CORPORATION	1
C	PACK JOINT COUPLING (FORD C14-66 OR APPROVED EQUAL)	1
D	1-1/2" COPPER TUBE, TYPE "K" SOFT	2
E	1" 90° COPPER ELBOW, S x S	2
F	1" COPPER MALE ADAPTER, S x T	2
G	ANGLE BALL VALVE, 1" FEMALE IP INLET x 3/4" METER COUPLING NUT OUTLET (FORD BA13-342W OR APPROVED EQUAL)	2
H	METER SPACER, SUPPLIED BY DEPT. OF WATER & INSTALLED BY CONTRACTOR	2
I	BALL VALVE W/ HANDLE, 3/4" METER COUPLING NUT INLET x 1" FEMALE IPT OUTLET (FORD B13-342 W/ HT-34 HANDLE OR APPROVED EQUAL)	2
J	LINESETTER, 1" COPPER TUBE, TYPE "K" SOFT, 12" LONG (SEE STD. DET. L3)	2
K	1" PLASTIC THREAD PROTECTOR	2
L	TYPE "B" CONCRETE METER BOX WITH CAST IRON COVER OR ARMORCAST TYPE "B" BOX WITH ARMORCAST COVER	2
M	1" x 1" x 1-1/2" COPPER TEE, S x S x S	1
N	TEE W/ 1-1/2" BUSHING (WHEN CONNECTING TO 3" OR SMALLER MIPE)	1



KAUAI	DOUBLE SERVICE LATERAL PLAN, PROFILE & MATERIAL LIST SCALE: NTS	STANDARD DETAILS	L2
		2002 REVISION	

SCHEDULE OF COPPER FITTINGS

NO.	DESCRIPTION	SINGLE SERVICE	DOUBLE SERVICE
A	1" COPPER TUBE, TYPE "K"	1	1
B	1" COPPER MALE ADAPTER	1	2
C	1" X 90° ELBOW (CAST SOLDER)	1	2
D	1" X 1" X 1 1/2" TEE, (CAST SOLDER)		1
E	ANGLE VALVE, 1" FEMALE IPT, INLET 3/4" METER COUPLING NUT OUTLET (FORD BA13-342W OR APPROVED EQUAL)	1	2



KAUAI	FABRICATED BRANCH PIPE AND LINESETTER DETAIL SCALE: NTS SCALE: MIN	STANDARD DETAILS	L3
		2002 REVISION	

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

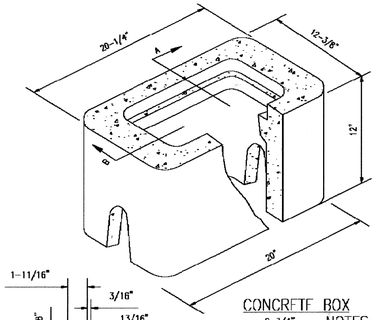
WATER DETAILS

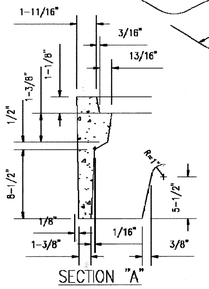
APPROVED:
N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE 10/14/15

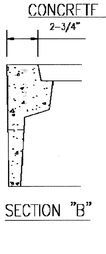
DESIGNED BY:	WW	SHEET
DRAWN BY:	CSC	C-13
DATE:	10/16/2015	13 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg





SECTION "A"



SECTION "B"

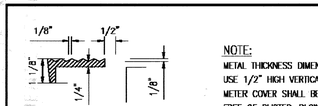
CONCRETE BOX

NOTES:

1. ACCOMMODATES 5/8" OR 3/4" METERS. (KAUAI AND HAWAII ONLY) AND 2" AND 2-1/2" PROPERTY VALVES (FOR OAHU)
2. ACCOMMODATES 2" & 2-1/2" VALVES.
3. SEE PLATE M2 FOR C.I. COVER DETAILS.
4. FOR OAHU AND HAWAII, FIBER REINFORCED CONC. IS ALLOWED.
5. INSTALL 6" WIDE X 4" THICK CONCRETE COLLAR WITH WIRE MESH IN NON-CONCRETE/SIDEWALK AREA WHERE APPLICABLE.

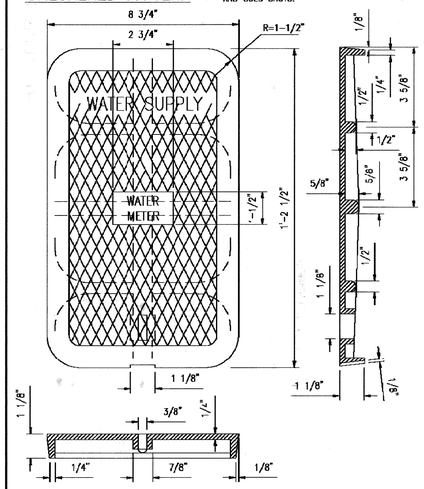
2002
REVISION

KAUAI OAHU HAWAII	METER BOX TYPE "B" SCALE: NTS	STANDARD DETAILS	M1



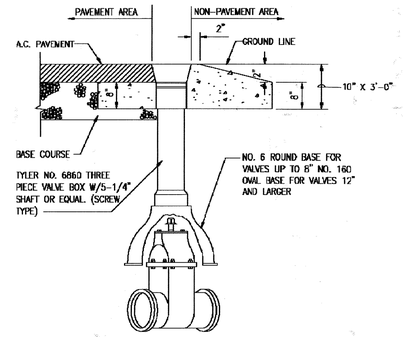
CHECKERED PATTERN

NOTE:
METAL THICKNESS DIMENSIONS ARE NET.
USE 1/2" HIGH VERTICAL LETTERS.
METER COVER SHALL BE GRAY CAST IRON, FREE OF BLISTER, BLOWHOLES, WARPAGE AND COLD SHUTS.



2001
REVISION

KAUAI OAHU HAWAII	CAST IRON COVER FOR TYPE "B" METER BOX SCALE: NTS	STANDARD DETAILS	M2



PROFILE

FOR GATE VALVE, BEVEL GEARED GATE VALVE AND BUTTERFLY VALVES



COVER

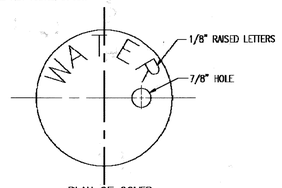
GENERAL NOTES:

1. PAVEMENT AREA: 2'-0" DIA. OR 2'-0"X 2'-0" SQUARE X 8" THICK CONCRETE SETTLEMENT SLAB.
2. NON-PAVEMENT AREA: 3'-0" DIA. OR 3'-0" X 3'-0" SQUARE X 10" THICK CONCRETE SETTLEMENT SLAB TAPERED TO 8".
3. COVER TO BE DROP LID COVER.

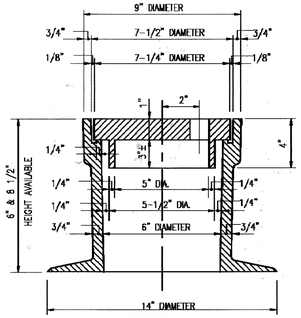
2002
REVISION

KAUAI	CAST IRON VALVE BOX DETAILS SCALE: NTS	STANDARD DETAILS	V11

NOTE:
ALL CASTINGS SHALL BE MADE ACCURATELY TO THE DIMENSIONS SHOWN. SEAT AND COVER SHALL BE MACHINED, NOT GROUND TO SECURE FLAT AND TRUE SURFACES. THE COVER SHALL NOT RATTLE IN ANY POSITION.



PLAN OF COVER

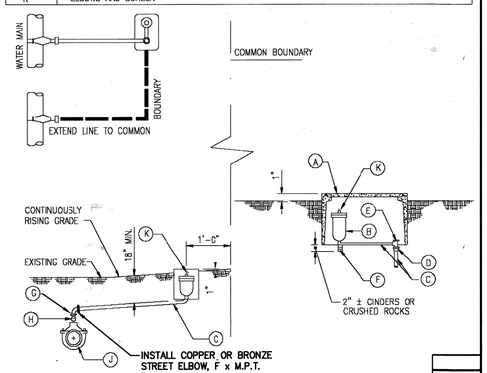


SECTION

2002
REVISION

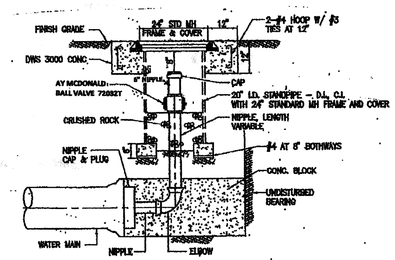
KAUAI OAHU MAUI	VALVE FRAME & COVER CAST IRON, 6" SIZE SCALE: NTS	STANDARD DETAILS	V3

ITEM	MATERIALS LIST
A	TYPE "X" METER BOX W/ CAST IRON COVER
B	1" PRESSURE AIR RELIEF VALVE **VAL-MATIC BULLETEN 15**
C	1" COPPER (TYPE "K", SOFT)
D	1" COPPER MALE ADAPTER
E	ANGLE BALL VALVE (FORD BAII-344W OR APPROVED EQUAL)
F	2" X 4" X 8" BRICK SADDLE
G	PACK JOINT COUPLING (FORD C14-44 OR APPROVED EQUAL)
H	1" CC X 1" MPT BALL CORPORATION
J	BRONZE SERVICE SADDLE W/ 1" CC TAP FOR USE ON C-900 PVC PIPE AND DUCTILE IRON PIPE OR PVC TEE W/ 1" PVC BUSING FOR USE ON 3" AND 4" PVC PIPE. SMITH-BLAIR TYPE 342 PLASTIC SERVICE SADDLE W/ 1" CC TAP FOR 3" AND 4" PVC PIPE.
K	ELBOWS AND SCREEN



2002
REVISION

KAUAI	AUTOMATIC PRESSURE RELIEF VALVE SCALE: NTS	STANDARD DETAILS	V10



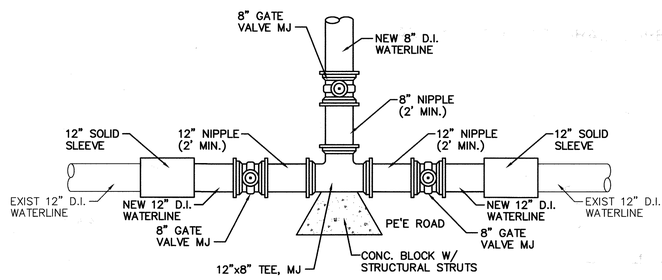
SCHEDULE OF CLEANOUT		
PIPE SIZE	CLEANOUT SIZE	TYPE OF PIPE
8" & SMALLER	2 1/2"	BRASS
12" TO 20"	4"	BRASS OR COPPER

NOTES:

1. CLEANOUT SHALL INCLUDE THE CAP, PLUG, AND APPURTENANCES AS SHOWN.
2. ALL CLEANOUTS INSTALLATION SHALL BE BRASS OR COPPER.

CLEANOUTS AND RISER
MODIFIED DWS DET. V22

NOT TO SCALE



WATERLINE CONNECTION DETAIL ⓒ
STA. 0+07.25±
SCALE: N.T.S.

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

WATER DETAILS

APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI 10/16/15 DATE

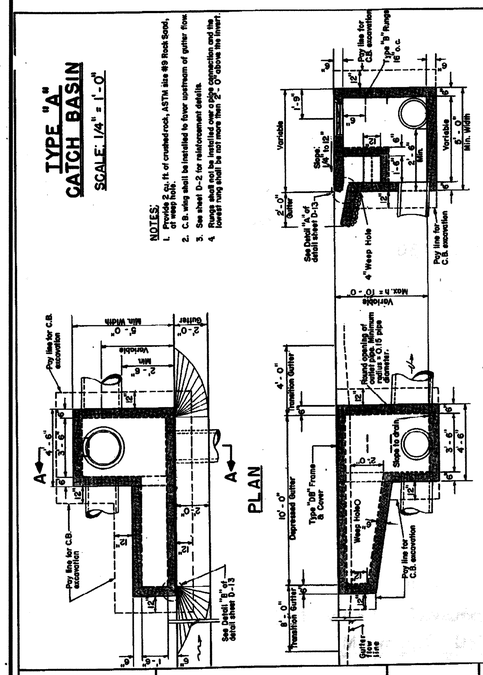
DESIGNED BY:	WW
DRAWN BY:	CH
DATE:	10/16/2015

SHEET C-14
14 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg

TYPE "A" CATCH BASIN

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "A" CATCH BASIN

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

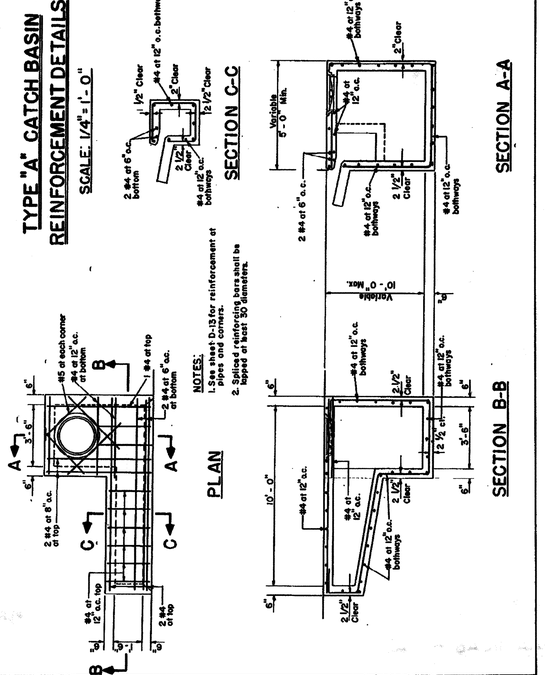
SEPTEMBER 1984

STANDARD DETAILS

D-1

TYPE "A" CATCH BASIN
REINFORCEMENT DETAILS

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "A" CATCH BASIN
REINFORCEMENT DETAILS

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

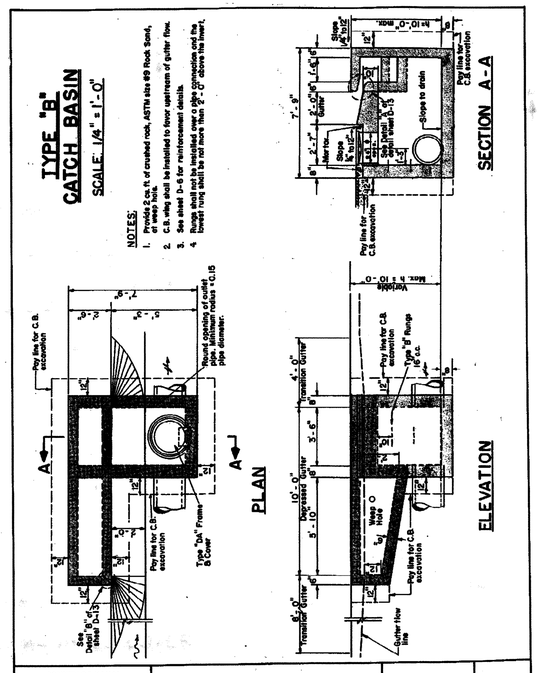
SEPTEMBER 1984

STANDARD DETAILS

D-2

TYPE "B" CATCH BASIN

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "B" CATCH BASIN

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

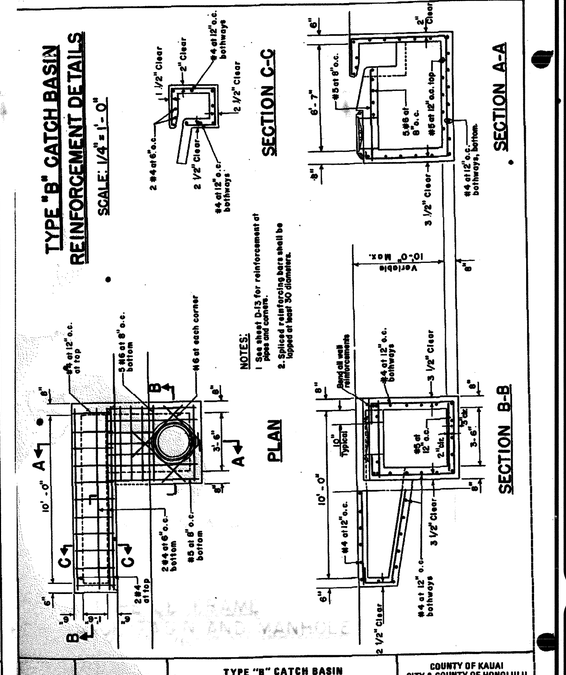
SEPTEMBER 1984

STANDARD DETAILS

D-5

TYPE "B" CATCH BASIN
REINFORCEMENT DETAILS

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "B" CATCH BASIN
REINFORCEMENT DETAILS

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

SEPTEMBER 1984

STANDARD DETAILS

D-6

ESAKI SURVEYING AND MAPPING, INC.

1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229

• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS
FOR
MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

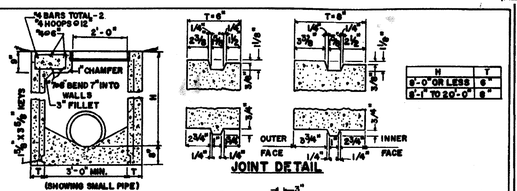
Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

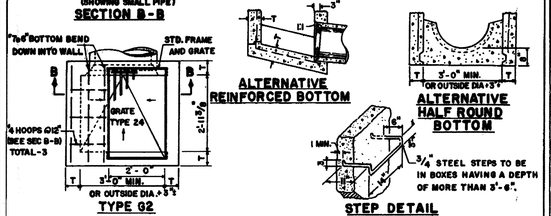
DRAINAGE
DRAINAGE DETAILS

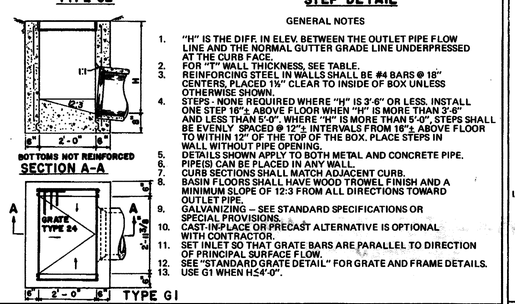
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUA'I — DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUA'I — DATE







GENERAL NOTES

1. "H" IS THE DIFF. IN ELEV. BETWEEN THE OUTLET PIPE FLOW LINE AND THE NORMAL GUTTER GRADE LINE UNDERPRESSED AT THE CURB FACE.
2. FOR "T" WALL THICKNESS, SEE TABLE.
3. REINFORCING STEEL IN WALLS SHALL BE #4 BARS @ 18" CENTERS, PLACED 1¼" CLEAR TO INSIDE OF BOX UNLESS OTHERWISE SHOWN.
4. STEPS - NONE REQUIRED WHERE "H" IS 3'-6" OR LESS. INSTALL ONE STEP 16"± ABOVE FLOOR WHEN "H" IS MORE THAN 3'-6" AND LESS THAN 5'-0". WHERE "H" IS MORE THAN 5'-0", STEPS SHALL BE EVENLY SPACED @ 12"± INTERVALS FROM 16"± ABOVE FLOOR TO WITHIN 12" OF THE TOP OF THE BOX. PLACE STEPS IN WALL WITHOUT PIPE OPENING.
5. DETAILS SHOWN APPLY TO BOTH METAL AND CONCRETE PIPE.
6. PIPE ISI CAN BE PLACED IN ANY WALL.
7. CURB SECTIONS SHALL MATCH ADJACENT CURB.
8. BASIN FLOORS SHALL HAVE WOOD TROWEL FINISH AND A MINIMUM SLOPE OF 12:3 FROM ALL DIRECTIONS TOWARD OUTLET PIPE.
9. GALVANIZING - SEE STANDARD SPECIFICATIONS OR SPECIAL PROVISIONS.
10. CAST-IN-PLACE OR PRECAST ALTERNATIVE IS OPTIONAL WITH CONTRACTOR.
11. SET INLET SO THAT GRATE BARS ARE PARALLEL TO DIRECTION OF PRINCIPAL SURFACE FLOW.
12. SEE "STANDARD GRATE DETAIL" FOR GRATE AND FRAME DETAILS.
13. USE G1 WHEN H≤4'-0".

COUNTY OF KAUAI

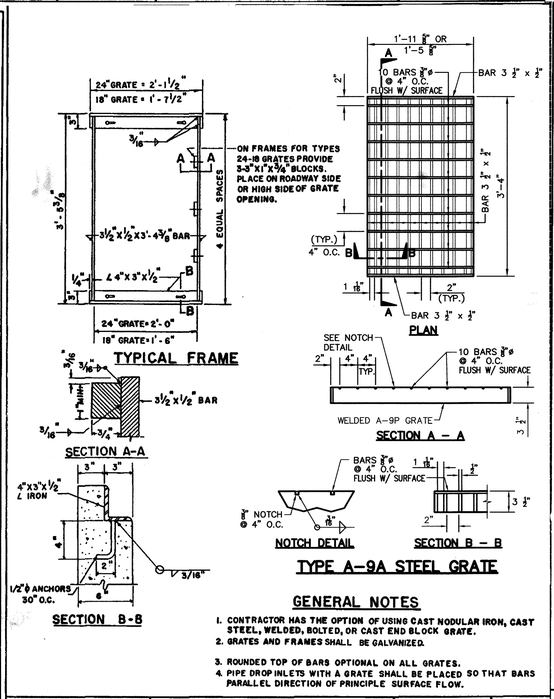
STANDARD FRAME AND GRATE

NOT TO SCALE

SEPTEMBER 1984

STANDARD DETAILS

D-39



TYPE A-9A STEEL GRATE

GENERAL NOTES

1. CONTRACTOR HAS THE OPTION OF USING CAST NODULAR IRON, CAST STEEL, WELDED, BOLTED, OR CAST END BLOCK GRATE.
2. GRATES AND FRAMES SHALL BE GALVANIZED.
3. ROUNDED TOP OF BARS OPTIONAL ON ALL GRATES.
4. PIPE DROP INLETS WITH A GRATE SHALL BE PLACED SO THAT BARS PARALLEL DIRECTION OF PRINCIPLE SURFACE FLOW.

COUNTY OF KAUAI

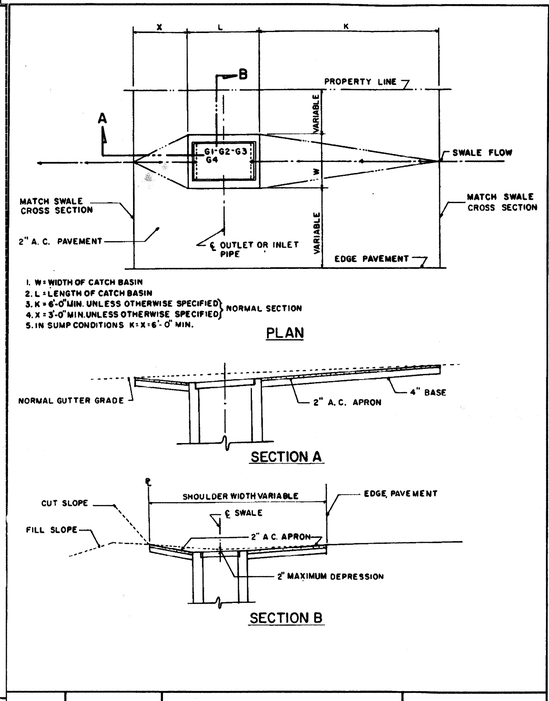
LOCAL DEPRESSION WITHOUT CURB AND GUTTER

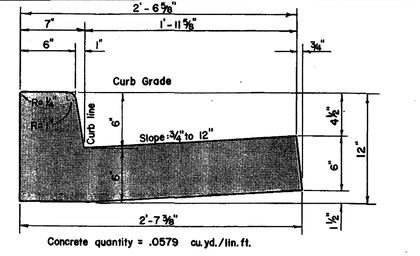
SEPTEMBER 1984

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

STANDARD DETAILS

D-40

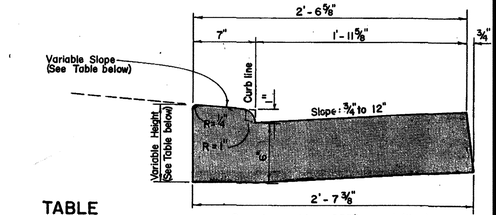




Concrete quantity = .0579 cu.yd./lin.ft.

CAST IN PLACE INTEGRAL CURB AND GUTTER

Scale: 1½" = 1'-0"



Concrete quantity = .0505 cu.yd./lin.ft.

CAST IN PLACE INTEGRAL DRIVEWAY CURB AND GUTTER

Scale: 1½" = 1'-0"

TABLE

DIST. CURB LINE TO ℄	SLOPE	HEIGHT
12'	1¼" to 12"	7 3/8"
10'	¾" to 12"	7 7/16"
8'	⅞" to 12"	7 ½"
7'	15/16" to 12"	7 9/16"
6'	1 1/16" to 12"	7 5/8"
3'	1 15/16" to 12"	8 1/8"

COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

INTEGRAL CURB AND GUTTER,
INTEGRAL DRIVEWAY CURB AND GUTTER

SEPTEMBER 1984

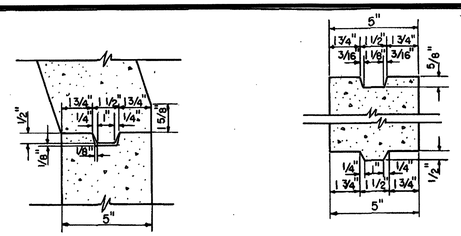
SCALE: 1-1/2" = 1'-0"

STANDARD DETAILS

R-4

DESIGNED BY:	WW	SHEET
DRAWN BY:	CH	C-15
DATE:	10/16/15	15 OF 23 SHEETS

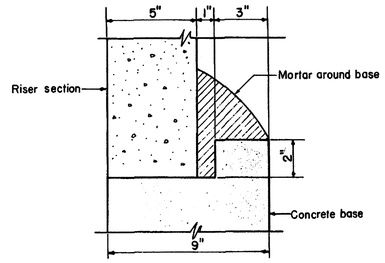
Project No.: 14-211
Drawing No.: 14-211 CON PLAN TNO.dwg



CONE SECTION

RISER SECTION

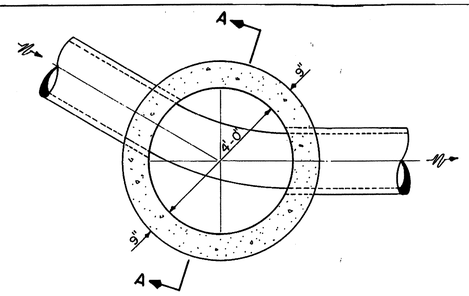
DETAIL "A"



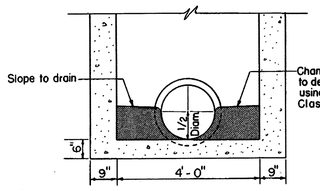
DETAIL "B"

PRE-CAST CONCRETE DRAIN MANHOLE DETAILS

COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII	PRE-CAST CONCRETE DRAIN MANHOLE DETAILS SCALE: 3" = 1'-0" SEPTEMBER 1984	STANDARD DETAILS	D-23



PLAN

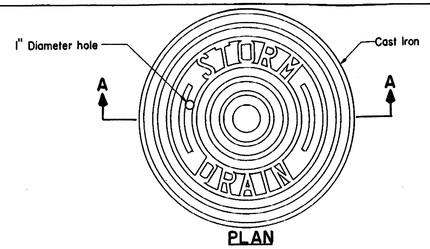


SECTION A-A

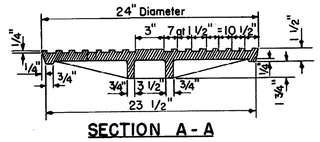
CHANNELIZING DETAILS FOR DRAIN MANHOLE

SCALE: 1/2"=1'-0"

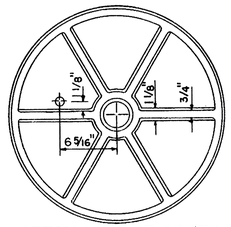
D-26	STANDARD DETAILS	CHANNELIZING DETAILS FOR DRAIN MANHOLE SEPTEMBER 1984 SCALE: 1/2" = 1'-0"	COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII



PLAN



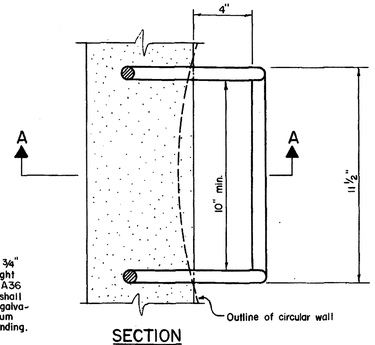
SECTION A-A



BOTTOM VIEW OF COVER

CATCH BASIN AND MANHOLE COVER

D-30	STANDARD DETAILS	CATCH BASIN AND MANHOLE COVER SEPTEMBER 1984 SCALE: 1-1/2" = 1'-0"	COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII

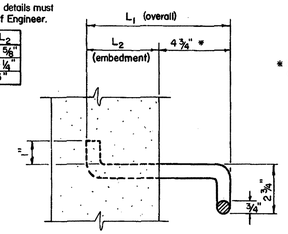


SECTION

NOTES:

1. Rungs shall be 3/4" diameter wrought iron or ASTM A36 steel rods and shall be hot-dipped galvanized or cadmium plated after bending.
2. Any deviation from these details must be approved by the Chief Engineer.

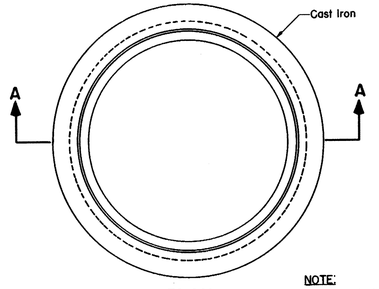
TYPE	WALLS	L_1	L_2
Type A	Brick	13 1/2"	7 5/8"
Type B	Concrete	9"	4 1/8"
Type C	Precast	7 3/8"	3"



SECTION A-A

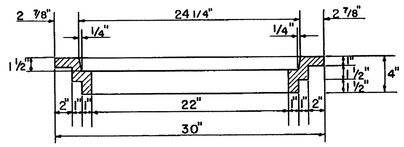
RUNGS FOR CATCH BASINS AND MANHOLES

COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII	SCALE: 3" = 1'-0" SEPTEMBER 1984	STANDARD DETAILS	D-27



PLAN

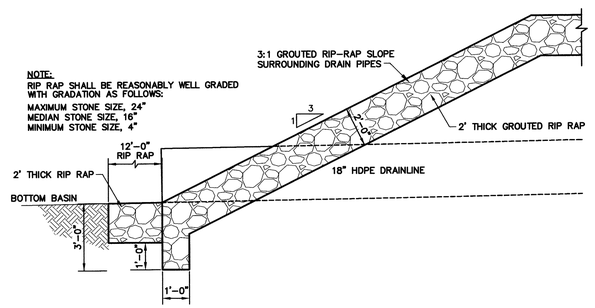
NOTE:
This frame is the same as sewer manhole frame Type 'SD'.



SECTION A-A

TYPE "DB" FRAME FOR CATCH BASIN AND MANHOLE

COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII	TYPE "DB" FRAME FOR CATCH BASIN AND MANHOLE SCALE: 1-1/2" = 1'-0" SEPTEMBER 1984	STANDARD DETAILS	D-29



OUTLET DETAIL

NTS

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

DRAINAGE DETAILS

APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUA'I — DATE

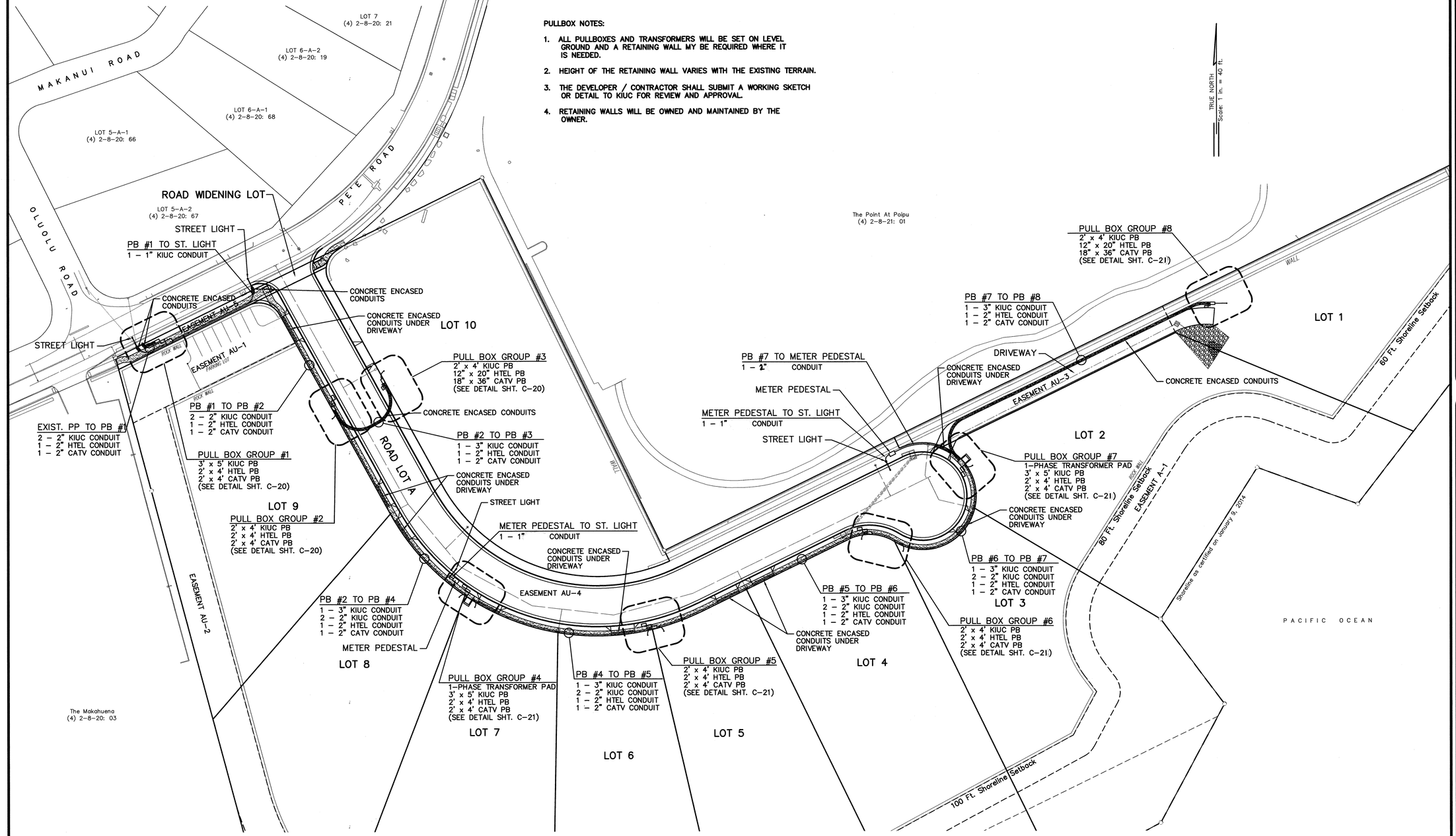
N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUA'I — DATE

DESIGNED BY:	WW	SHEET	C-16
DRAWN BY:	CSL		
DATE:	10/16/15	16 OF 23 SHEETS	

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg

PULLBOX NOTES:

1. ALL PULLBOXES AND TRANSFORMERS WILL BE SET ON LEVEL GROUND AND A RETAINING WALL MY BE REQUIRED WHERE IT IS NEEDED.
2. HEIGHT OF THE RETAINING WALL VARIES WITH THE EXISTING TERRAIN.
3. THE DEVELOPER / CONTRACTOR SHALL SUBMIT A WORKING SKETCH OR DETAIL TO KIUC FOR REVIEW AND APPROVAL.
4. RETAINING WALLS WILL BE OWNED AND MAINTAINED BY THE OWNER.



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 ft.

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
KAUAI ISLAND UTILITY COOP. DATE 10/29/15	HAWAIIAN TELCOM DATE 10/29/15	OCEANIC TIME WARNER CABLE OF HAWAII DATE 10/20/15

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHUENA SUBDIVISION
Weliweli, Koloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL PLAN

APPROVED:

12-17-15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-17
DRAWN BY: CSL	17 OF 23 SHEETS
DATE: 10/16/2015	

HAWAIIAN TELCOM NOTES
(Revised 1/19/12)

GENERAL NOTES:

1. All work on utility facilities shall be in strict accordance with specifications and requirements of Hawaiian Telcom for the facilities within their jurisdiction.
2. The Contractor shall closely coordinate all work with Hawaiian Telcom. The Contractor shall notify Hawaiian Telcom's inspector or designated representative a minimum of 3 days prior to excavation , bracing or backfilling of Hawaiian Telcom's structures or facilities. The Hawaiian Telcom inspectors are: Rick Ramones, tel. 651-2260.

CONDUIT NOTES:

1. Unless otherwise indicated, all conduits, sweeps, couplings, adapters, and bell ends shall be Schedule 40 PVC. PVC 2" and 4" DB conduits meeting GTE specification GTS-8342 may be substituted in concrete encasement application.
2. All trenches and pullboxes must be inspected by Hawaiian Telcom prior to backfilling and concrete-encasing operations.
3. All conduits shall be cleaned and be free from objectionable materials with its ends adequately covered until Hawaiian Telcom installs its cable facilities.
4. All street crossings shall be encased in a concrete jacket, which shall extend a minimum of 12 inches outside of edge of pavement.
5. Minimum clearances between electrical and telephone conduits shall be 12 inches horizontally and 6 inches vertically; however, if concrete-encased, a 3 inch clearance may be utilized in both directions.
6. Conduits for utility boxes to the individual lots shall be considered incidental to their respective main duct lines. Said conduits shall be 2" PVC unless otherwise indicated.
7. Contractor shall maintain 6" minimum separation between water pipe and top of direct buried utility ducts at intersection of water pipe and direct buried utility ducts. When utility ducts are concrete-encased at intersection of water pipe and utility ducts, a 6" minimum separation between water pipe and top of concrete-encased utility ducts shall be maintained. Stones, rocks, etc. shall not be used with backfill material, only select materials shall be used as backfill material.
8. A 4" wide warning tape orange in color with a black imprinted message "WARNING - STOP DIGGING - CALL HAWAIIAN TELCOM, COMMUNICATIONS CABLE BURIED BELOW, FAILURE TO COMPLY COULD RESULT IN LEGAL ACTION" shall be placed 12" below the surface over the duct or concrete jacket for the entire length of duct installations. See HTCO standard drawing 34028. Recommended tape is manufactured by THOR Enterprises, Inc., Sun Praire, WI 53590 (1-800-827-8467) part numbers DTOGTE-41 (1000'), and DTOGTE-46 (6000').
9. After the ducts are installed, a mandrel not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct. After which, a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left in the line. Main duct runs, except riser ducts and cross-connect pedestal ducts, should be constructed with no more than 20 foot radius curves unless indicated otherwise or approved by the Hawaiian Telcom inspector. A flexible mandrel having a diameter of 1/4" less than the inside diameter will be utilized on 2" duct runs. After which, a brush with stiff bristles shall be pulled through.
10. Install NEPTCO W1800P muletape in all new ducts after testing. The NEPTCO muletape is available in 3,000', 6,500', and 10,000' reels. The NEPTCO muletape is prelubricated and printed with sequential footage marking. Using the NEPTCO muletape, the Contractor shall measure at least one duct of a common duct run. The distance shall be marked on the record prints and submitted to the Hawaiian Telcom inspector for record keeping.

PULLBOX NOTES:

1. All type 435TB (2' X 4') & 435TB6 (2' X 6') pullboxes shall be constructed with a 12" base and a minimum of two 8" precast sections. All covers shall be of the slip not type. (Refer to HTCO standard drawings 34056 and 34078.)
2. At no time shall cement mortar, wood, or any other material be used between pre-cast sections. Leveling or raising of pullboxes shall be done at the brickwork section using cement mortar. The permanent installation of wooden wedges to level or raise the precast sections shall not be permitted.
3. All conduits shall enter boxes at 90 degree angle and flush to the wall with flared or junior end bells to prevent cable damage.
4. The 435TB pullbox base shall be placed on a minimum of 3" of #3 crushed rock backfill.
5. The Contractor shall furnish and install #4 bare copper ground wire (direct burial) from all transformer pad ground rods to the nearest Hawaiian Telcom pullbox, as specified in HTCO standard drawing 34045. Install one 5/8" X 8' ground rod in all other Hawaiian Telcom pullboxes, except in the type 436T meter boxes (12" X 20"). Ground rods are to extend 4" above the finished pullbox/handhole floor (grade) and be located 4" from the pullbox corner.
6. Extend Schedule 40 conduits 2" to 6" above finish floor in equipment room.
7. All Type I handholes, 435TB and 435TB6 boxes shall be constructed with covers of the slip not type. (Refer to HTCO standard drawing 34029.)

KIUC NOTES
(Revised 7/14/11)

UNDERGROUND CONSTRUCTION NOTES AND REQUIREMENTS:

1. These notes are not intended to be used in place of the Sevice Installation Manual, please refer to Service Installation Manual for all service issues.
2. Contractor shall contact Kaua'i Island Utility Cooperative's ("KIUC") Construction Coordinator/Inspector prior to start of work on KIUC facilities and for scheduling site inspections. [Westside: 246-2323; Eastside: 822-4995]
3. Contractor shall contact KIUC's Distribution Engineer @ 246-2373 for design approvals, standard detail drawings, and any items not addressed in these notes or drawings.
4. All contractors entering KIUC facilities must be approved by KIUC and must have proper licensing and insurance coverage. Contact KIUC Legal Coordinator @ 246-4369 for details.
5. All trenches and pullboxes must be inspected by KIUC prior to backfilling and concrete-encasing operations. For detailed trenching and backfilling requirements refer to KIUC's Service Installation Manual.
6. The Contractor shall provide a Poly-Line 200 lb. test line or equivalent as a pulling wire in all 1", 2", 3" & 4" conduits. In 5" and 6" conduits, the contractor shall install NEPTCO WP1800 muletape as a pulling line.
7. All conduits, pullboxes, handholes, & manholes shall be cleaned and free from objectionable materials. Conduit ends shall be adequately covered until the conductor is installed by the electric company. (Covers shall be Carlon Plug with Pull Tab series P258 equivalent or better)
8. For all conduit other than services, refer to conduit schedule on drawings.
9. For all services where the conductor is 3/0 or less, the distance from KIUC's handhole and Customer's meter is less than 125 feet, and not crossing any driveways or roads, the conduit shall be 2 inch Schedule 40 PVC. For services greater than 125 feet but less than 150', contact KIUC planner for field verification and underground service requirements. Any deviations will require KIUC written approval.
10. Primary and Secondary conduits for new line extensions shall be Schedule 40 PVC. (Carlon P&C Duct Type DB equivalent or better.) Under driveways and roadways, the conduits shall be encased in a minimum of 3 inch concrete jacket extending 12" outside the edge of pavement.
11. Schedule 80 PVC conduit may be substituted for the concrete encased Schedule 40 PVC for service conduit only crossing under unpaved private driveways & roadways from KIUC pole/handhole to customer's meter. If concrete driveway will be built over service conduit immediately after conduit is installed, then Schedule 40 PVC may be used provided that it meets with Rule No. 21.
12. All primary and secondary conduits which are crossing state or county roadways shall be Schedule 40 PVC encased in a minimum 3 inch concrete jacket, which shall extend a minimum of 12 inches outside of the edge of pavement.
13. Electrical supply ducts, when installed near communication cables, shall be separated from communication duct systems and buried communication cables or conductors by not less than 3 inches of concrete or 12 inches of earth when paralleling or crossing.
14. Chairs shall be installed and spaced at a maximum of 5 feet separation when concrete encasing conduits.
15. All conduits shall enter boxes at a 90 degree angle, perpendicular and flush to the wall with bell ends to prevent cable damage.
16. 90 degree conduit bends shall be factory made with a minimum radius of 3 feet in trench runs.
17. Conduit bends exceeding 90 degrees will not be accepted.
18. A 36 inch minimum horizontal clearance shall be maintained when running KIUC conduits parallel to water & sewer lines. If clearance is less than 36 inches, KIUC conduit shall be concrete encased.
19. No foreign pullboxes, handholes, manholes, concrete slabs/boxes, structures, etc. are to be installed over KIUC facilities with the exception of HTCO, CATV or waterline conduit crossings. Such crossing must be approved by KIUC's Service Assurance Department and KIUC conduit to be concrete encased. Concrete encasement must be minimum of 3 inch encasement and extend a minimum of 1 foot beyond crossing conduit or pipe.
20. Red marker tape to be placed 1 foot above electrical conduits in the trench during backfilling. (E-Z CODE WBT 6 inch wide 4 Mill polyethylene Protect-A-Line Warning Tape NA-0706 "ELECTRIC LINE" in red, equivalent or better)
21. Unless otherwise noted, the top of all conduits shall be at a depth of 24 inches.
22. All handholes, pullboxes, and manholes shall be Walker Industries type or approved equal. Contact KIUC prior to ordering underground boxes for vendor approval. Customer to submit manufacturer's shop drawings of all handholes and manholes for box sizes greater than 3'x5' for KIUC review and approval.
23. Typically, the top of all electrical utility boxes shall be 1 inch above finish grade, single phase transformer pads shall be 2 inches above finish grade and three phase transformer pads shall be 4 inches above finish grade unless otherwise noted. (Special conditions may apply to sidewalks, roadways, etc. See specific location notation.)
24. At no time shall cement mortar, wood or any other material be used between pre-cast sections of KIUC pullboxes, handholes, or manholes. The permanent installation of wooden wedges to level or raise the pre-cast sections shall not be permitted.
25. A minimum of 6 inches of #3 crushed rock backfill shall be placed loosely beneath the bottom section of handholes and pullboxes. Crushed rock or other foreign materials are not to be placed inside handholes and pullboxes.

CATV NOTES:

1. Follow all notes and specifications as Hawaiian Telcom
2. Pullbox lids shall be galvanized steel with non-slip surface and marked with: T.V. or CATV.
3. Standard pull line in all conduits shall be installed. (Pull line 200 lbs.)
4. Grounds are not required. Cable company shall install its own as they see necessary.
5. 18" X 36" pull box, refer to Hawaiian Telcom drawing #34024A (434T 18" X 36").

KIUC INSPECTORS:
- SONI TUPOU: West and South side
- BILLY WORKMAN: North and East side, 246-4343
***Linue area either one.**

WATER NOTES:

1. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION OF THE EXISTING WATER FACILITIES PRIOR TO TRENCHING. EXCAVATION AROUND EXISTING WATER FACILITIES SHALL BE DONE BY HAND.
2. MATERIAL USED FOR BACKFILLING AT THE WATER FACILITIES CROSSINGS SHALL NOT CONTAIN ANY STONES, ROCKS, OR OTHER SIMILAR MATERIAL AND SHALL NOT CONTAIN VEGETABLE MATTER OR DEBRIS OR ANY KIND. NO "ADOBE" OR SIMILAR MATERIAL SHALL BE USED.
3. PROVIDE CONCRETE ENCASEMENT FOR THE CONDUITS AT ALL WATERLINE, SERVICE LATERAL, AND HYDRANT CROSSINGS. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER AT LEAST 24-HOURS PRIOR TO SCHEDULING BACK FILLING OPERATIONS AT THE WATER FACILITIES CROSSINGS.

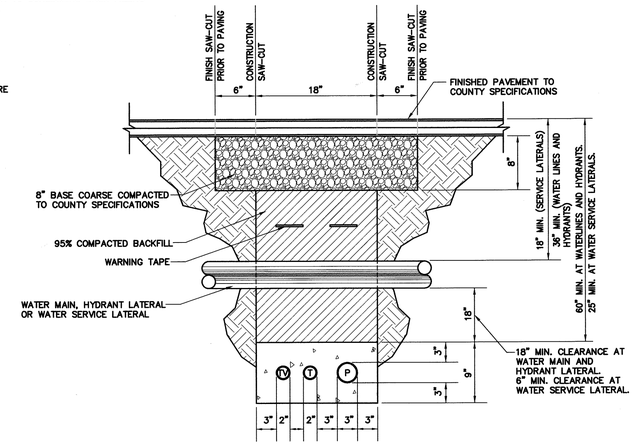
BACKFILL NOTES:

TYPE "A" BACKFILL - EARTH & GRAVEL ROCK SIZE TO BE 1" MAX. & THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION

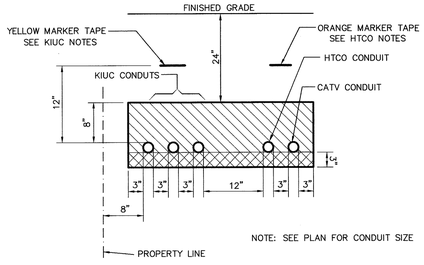
TYPE "B" BACKFILL - EARTH & GRAVEL MIXTURE MUST PASS A 1/2" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION.

NOTE: IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B" , AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL PROVIDED

CONCRETE - 3" ENCASEMENT, 3000 psi COMPRESSIVE STRENGTH AT 28 DAYS.



DETAIL AT WATER FACILITIES CROSSING
NTS



NOTE: SEE PLAN FOR CONDUIT SIZE

TYPICAL TRENCH SECTION
NTS

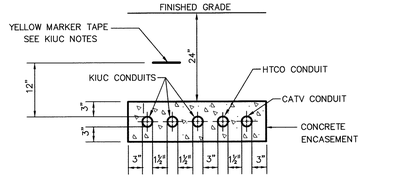
BACKFILL NOTES:

TYPE "A" BACKFILL - EARTH & GRAVEL ROCK SIZE TO BE 1" MAX. & THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION

TYPE "B" BACKFILL - EARTH & GRAVEL MIXTURE MUST PASS A 1/2" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION.

NOTE: IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B" , AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL PROVIDED

CONCRETE - 3" ENCASEMENT, 3000 psi COMPRESSIVE STRENGTH AT 28 DAYS.



NOTE: SEE PLAN FOR CONDUIT SIZE

TYP. CONC. ENCASEMENT DET.
NTS

NOTES FOR WATER FACILITIES CROSSING

1. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION OF THE EXISTING WATER FACILITIES PRIOR TO TRENCHING. EXCAVATION AROUND EXISTING WATER FACILITIES SHALL BE DONE BY HAND.
2. MATERIAL USED FOR BACKFILLING AT THE WATER FACILITIES CROSSINGS SHALL NOT CONTAIN ANY STONES, ROCKS, OR OTHER SIMILAR MATERIAL AND SHALL NOT CONTAIN VEGETABLE MATTER OR DEBRIS OR ANY KIND. NO "ADOBE" OR SIMILAR MATERIAL SHALL BE USED.
3. PROVIDE CONCRETE ENCASEMENT FOR THE CONDUITS AT ALL WATERLINE, SERVICE LATERAL, AND FIRE HYDRANT CROSSINGS. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER AT LEAST 24-HOURS PRIOR TO SCHEDULING BACKFILLING OPERATIONS AT THE WATER FACILITIES CROSSINGS.

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
10/29/15	10/29/15	10/29/15
KAUAI ISLAND UTILITY COOP. DATE	HAWAIIAN TELCOM DATE	OCEANIC TIME WARNER CABLE OF HAWAII DATE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL NOTES AND DETAILS

APPROVED:

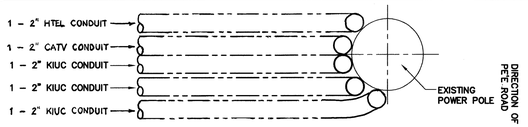
N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

for MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI 10/16/15 DATE

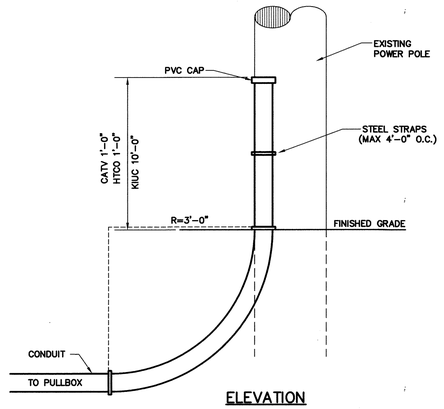
DESIGNED BY:	WW
DRAWN BY:	CSL
DATE:	10/16/2015

SHEET C-18
18 OF 23 SHEETS

Project No: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



PLAN VIEW



ELEVATION

POLE RISER DETAIL
NTS

TYPE 30-2005 KIUC 2' x 4' HANDHOLE

NOTES:

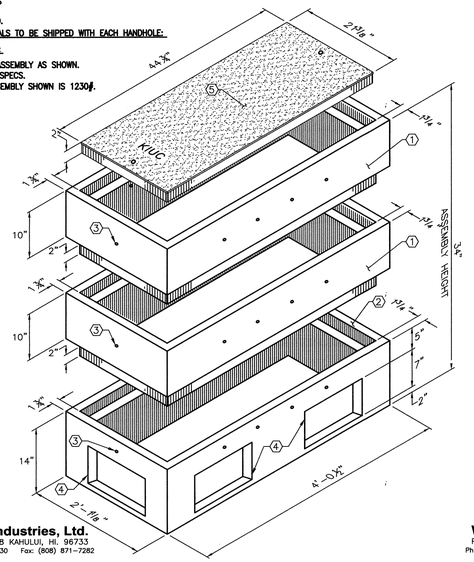
- ☐ HANDHOLE DESIGNED IN ACCORDANCE WITH KIUC STANDARDS USING 4,000 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-615 STEEL REINFORCEMENT PER CALCS.
- ☐ ALL CONCRETE AND REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-87).
- ☐ HANDHOLE TO BE PLACED ON A 6" BASE ON FIRM/COMPACTED BACKFILL OR ON UNDISTURBED SOIL.
- ☐ PRODUCT TO BE STENCILED:
  WALKER INDUSTRIES
  DATE OF POUR
  PRODUCT MARK NO.

1. TOP SECTION. WT. 400#.
2. BOTTOM SECTION W/KNOCKOUTS. WT. 430#.
3. 1/2"ø x 4" LIFTING HOLE (CONTR. TO GROUT SOLID AFTER PLACEMENT OF SECTION).
4. CONDUIT OPENING KNOCKOUT.
5. CONCRETE COVER, REFER TO HECO DWG. NO. 11312.

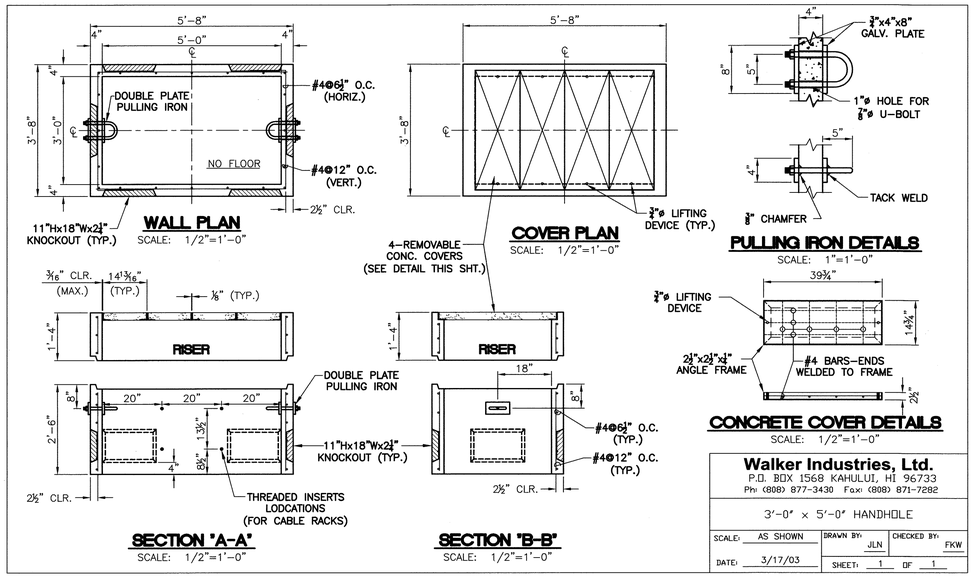
THE FOLLOWING MATERIALS TO BE SHIPPED WITH EACH HANDHOLE:

ORDERING INFORMATION:

2'x4'x34" KIUC FOR ASSEMBLY AS SHOWN.
APPROVED FOR KIUC SPECS.
TOTAL WEIGHT OF ASSEMBLY SHOWN IS 1230#.



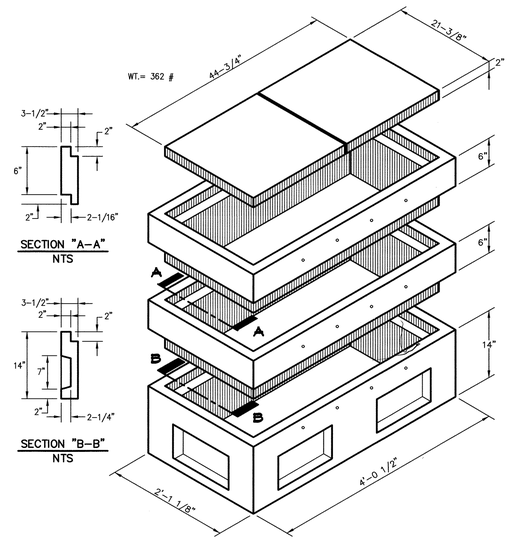
Walker Industries, Ltd.
P.O. BOX 1568 KAHULUI, HI. 96733
Ph. (808) 877-3430 Fax: (808) 871-7282



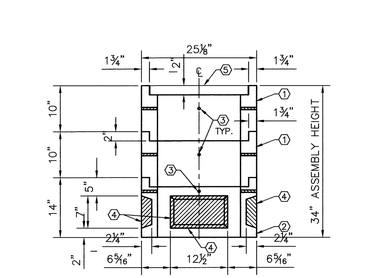
Walker Industries, Ltd.
P.O. BOX 1568 KAHULUI, HI 96733
Phn (808) 877-3430 Fax: (808) 871-7282

3'-0" x 5'-0" HANDHOLE

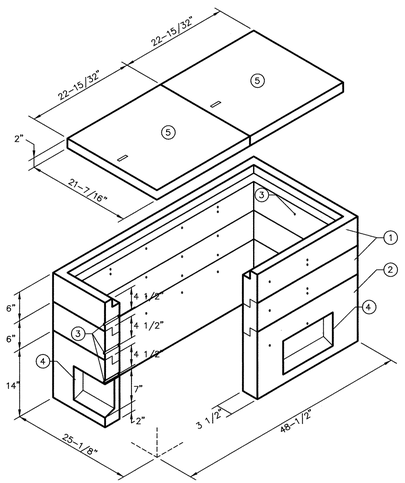
SCALE: AS SHOWN	DRAWN BY: JLN	CHECKED BY: FKW
DATE: 3/17/03	SHEET: 1 OF 1	



2' x 4' CATV PULLBOX ASSEMBLY
NTS



Walker Industries, Ltd.
P.O. BOX 1568 KAHULUI, HI. 96733
Ph. (808) 877-3430 Fax: (808) 871-7282



NOTES

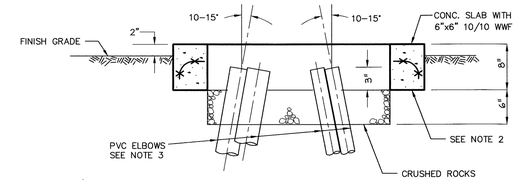
- PULLBOX DESIGNED IN ACCORDANCE WITH VERIZON STANDARDS USING 4,000 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-615 STEEL REINFORCEMENT PER CALCS.
- ALL CONCRETE AND REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-87)
- PULL BOX TO BE PLACED ON A 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
- PRODUCT TO BE STENCILED:
  WALKER INDUSTRIES
  DATE OF POUR
  PRODUCT MARK NO.

THE FOLLOWING MATERIALS TO BE SHIPPED WITH EACH HANDHOLE:
ORDERING INFORMATION:

2x4x26" VERIZON FOR ASSEMBLY AS SHOWN.
APPROVED FOR VERIZON SPECS.
TOTAL WEIGHT OF ASSEMBLY SHOWN IS 917#.

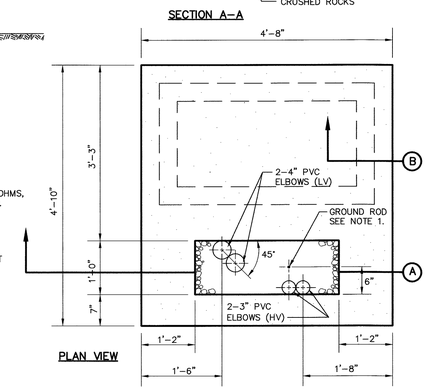
1. TOP SECTION. WT. 217#
2. BOTTOM SECTION. WT. 483#
3. 1/2"ø x 3 1/2 LIFTING HOLE (CONTR. TO GROUT SOLID AFTER PLACEMENT OF SECTION).
4. CONDUIT OPENING KNOCKOUT.
5. POLYMER COVER. REFER TO VERIZON DWG. NO. 435 TB.

2'-0" x 4'-0"x2'-2" DEEP HTCO PULLBOX
NTS



NOTES:

1. GROUND ROD, 5/8" DIA. x 8'-0", FURNISHED AND INSTALLED BY THE DEVELOPER/CONTRACTOR. IF THE RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND ROD.
2. PAD TO BE INSTALLED ON FIRM UNDISTURBED SOIL OR ON 95% COMPACTED BACKFILL.
3. PVC ELBOWS TO BE STUBBED OUT 3" ABOVE CRUSHED ROCKS AT A 10-15° ANGLE.



SINGLE PHASE TRANSFORMER PAD
NTS

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
KAUAI ISLAND UTILITY COOP. DATE 10/29/15	HAWAIIAN TELCOM DATE 10/29/15	OCEANIC TIME WARNER CABLE OF HAWAII DATE 10/29/15

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL DETAILS

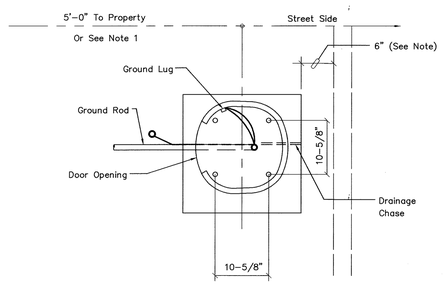
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

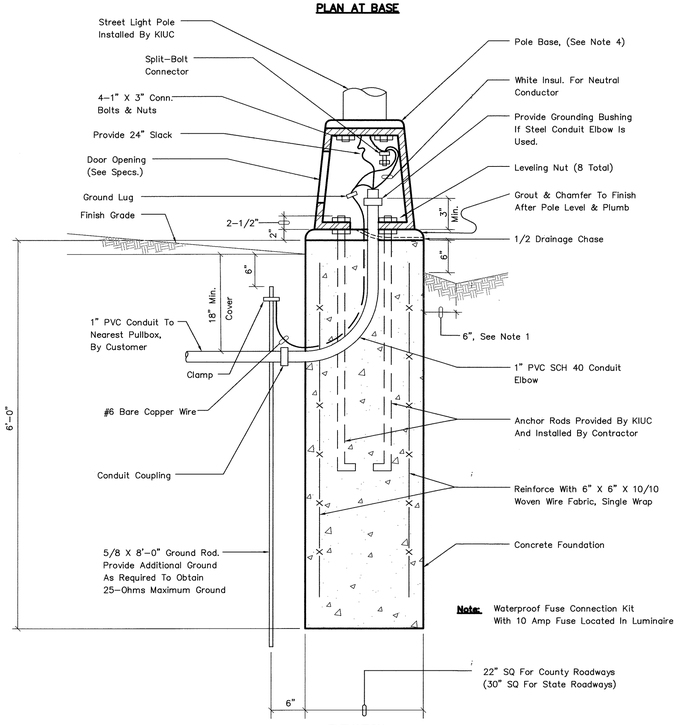
N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET
DRAWN BY: CW	C-19
DATE: 10/16/2015	19 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



PLAN AT BASE



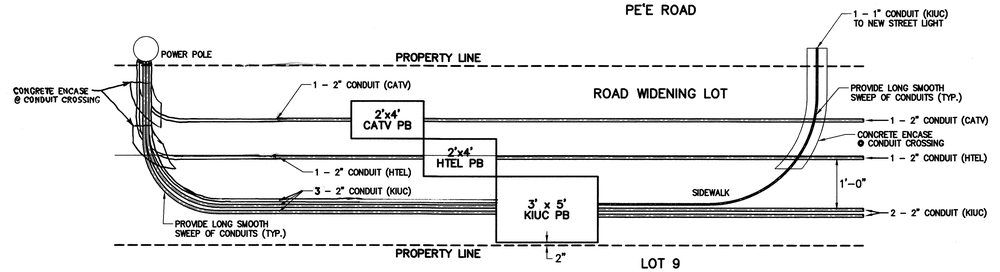
ELEVATION

NOTES:

1. Concrete Foundation To Be 6" Away From Curbing. This Applies To Streets With Curb And Gutter Construction.
2. Concrete Foundation: 3000 PSI (28-Days Compressive Strength)
3. Anchor Rods: To Be Supplied By KIUC, Unless Noted On Construction Drawings.
4. Pole Base: To Be Provided By KIUC And Installed By The Contractor.
5. Foundation: To Be Constructed By The Contractor.

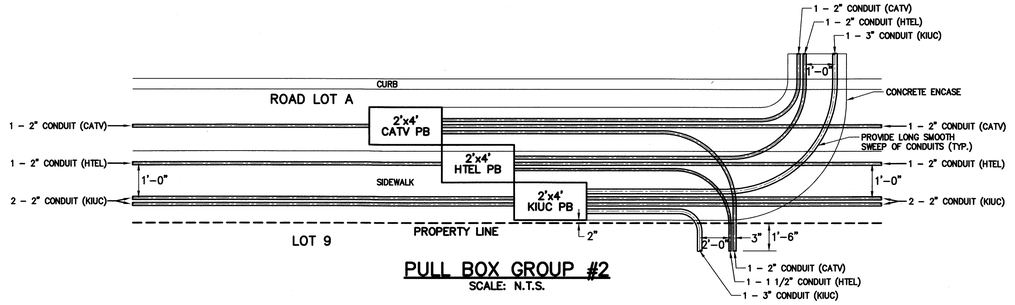
STREET LIGHT BASE DETAIL

NTS



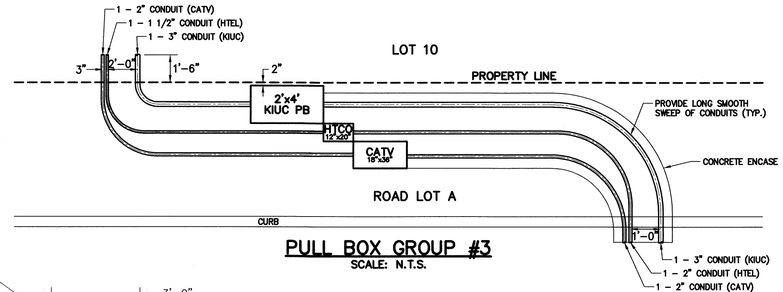
PULL BOX GROUP #1

SCALE: N.T.S.



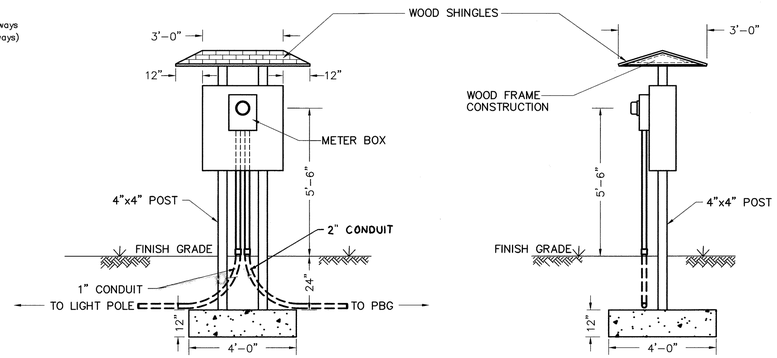
PULL BOX GROUP #2

SCALE: N.T.S.



PULL BOX GROUP #3

SCALE: N.T.S.



METER PEDESTAL DETAIL

NTS

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
10/29/15	10/29/15	10/29/15
KAUAI ISLAND UTILITY COOP. DATE	HAWAIIAN TELCOM DATE	OCEANIC TIME WARNER CABLE OF HAWAII DATE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welīweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL DETAILS

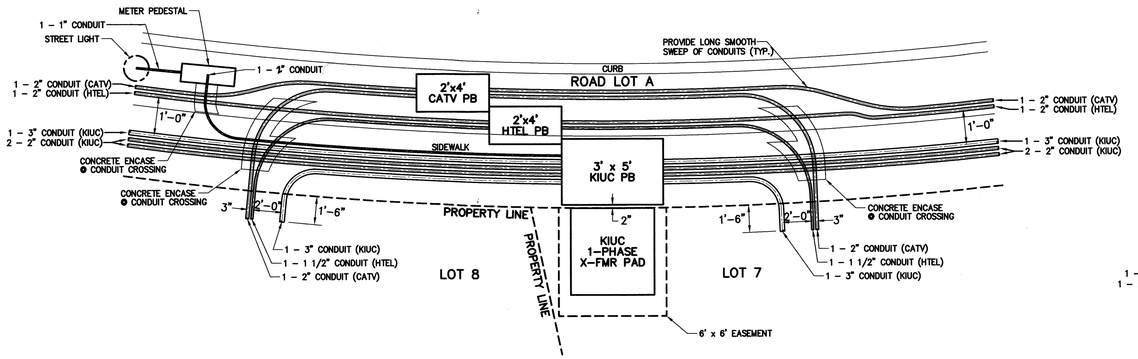
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

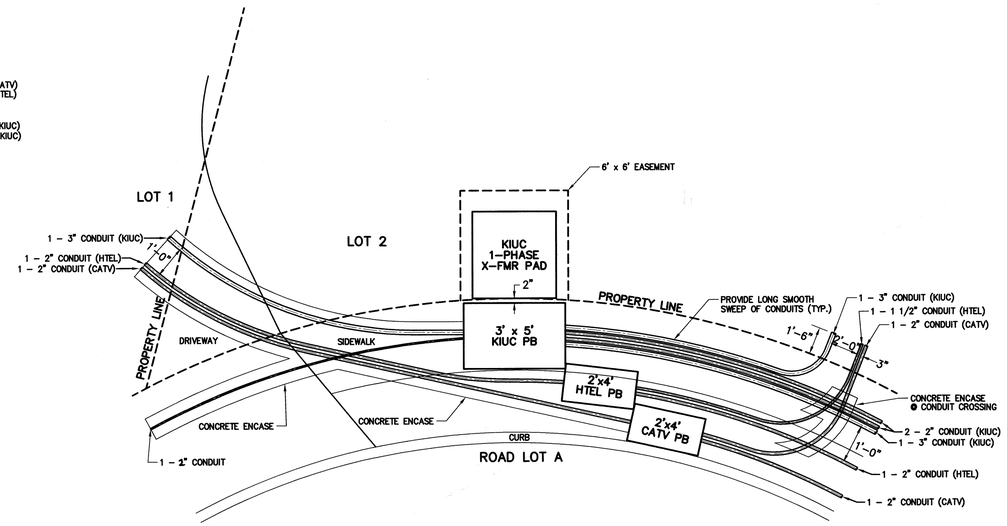
N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

		SHEET
DESIGNED BY: WW		C-20
DRAWN BY: CJL		
DATE: 10/16/2015		20 OF 23 SHEETS

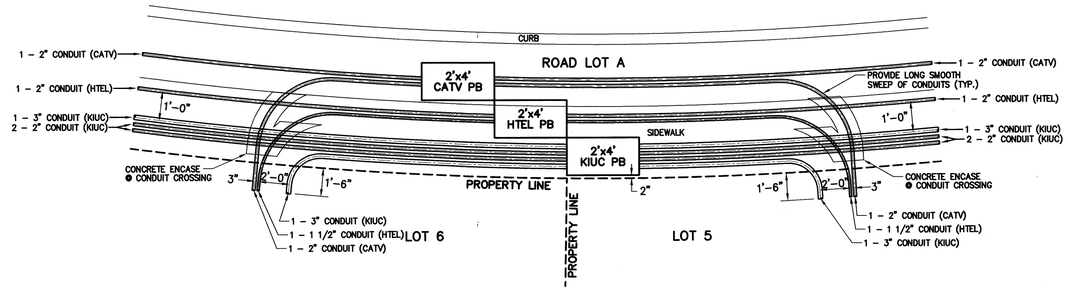
Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



PULL BOX GROUP #4
SCALE: N.T.S.



PULL BOX GROUP #7
SCALE: N.T.S.



PULL BOX GROUP #5
SCALE: N.T.S.

PULL BOX GROUP #8
SCALE: N.T.S.

PULL BOX GROUP #6
SCALE: N.T.S.

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246–2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
10/29/15	10/29/15	10/29/15
KAUAI ISLAND UTILITY COOP. DATE	HAWAIIAN TELCOM DATE	OCEANIC TIME WARNER CABLE OF HAWAII DATE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welliwell, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL DETAILS

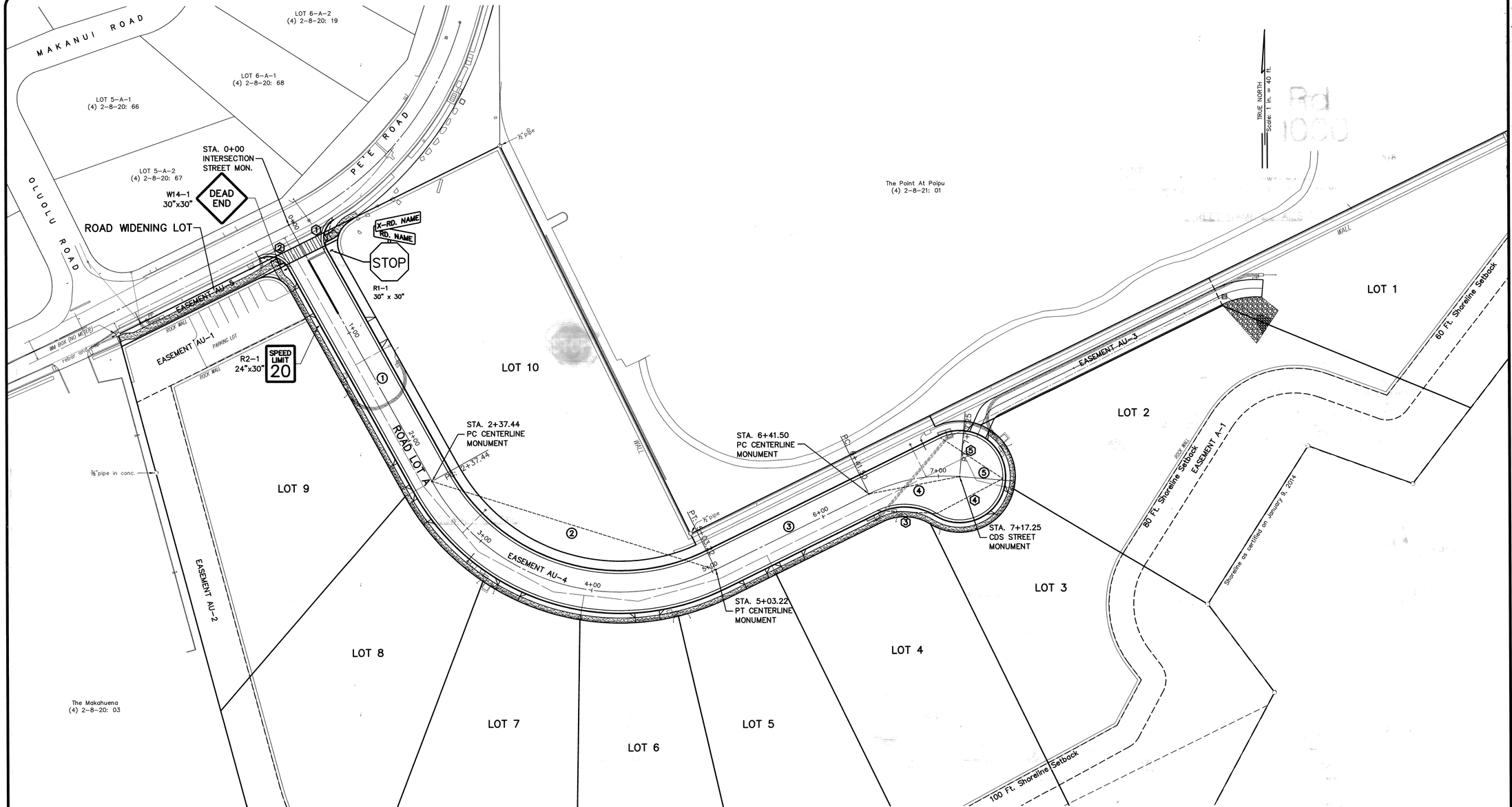
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-21
DRAWN BY: CSL	21 OF 23 SHEETS
DATE: 10/16/2015	

Project No.: 14–211
Drawing No.: 14–211 CON PLAN.dwg



AZIMUTH AND DISTANCE CENTERLINE ROAD

SYMBOL	DESCRIPTION	AZIMUTH	DISTANCE	RADIUS
①	INT. MONUMENT TO PC MONUMENT	331°00'00"	237.44	N/A
②	PC MONUMENT TO PT MONUMENT	287°29'30"	240.96	175.00
③	PT MONUMENT TO PC MONUMENT	243°59'00"	138.28	N/A
④	PC MONUMENT TO CDS MONUMENT	259°29'05"	74.83	140.00
⑤	CDS MONUMENT TO PROPERTY LINE	274°59'10"	45.00	N/A

ROADWAY CURVE DATA

①	②	③	④	⑤
Δ = 86°33'18"	Δ = 87°16'20"	Δ = 58°02'03"	Δ = 119°01'02"	Δ = 119°01'02"
Δ/2 = 43°16'39"	Δ/2 = 43°38'10"	Δ/2 = 29°01'0.5"	Δ/2 = 59°30'31"	Δ/2 = 59°30'31"
R = 20.00	R = 20.00	R = 50.00	R = 35.00	R = 35.00
T = 18.83	T = 19.07	T = 27.74	T = 59.44	T = 59.44
Lc = 30.21	Lc = 30.46	Lc = 50.64	Lc = 72.70	Lc = 72.70
C = 27.42	C = 27.60	C = 48.51	C = 60.32	C = 60.32

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS
FOR
MAKAHUENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

SIGNAGE AND STRIPING SITE PLAN

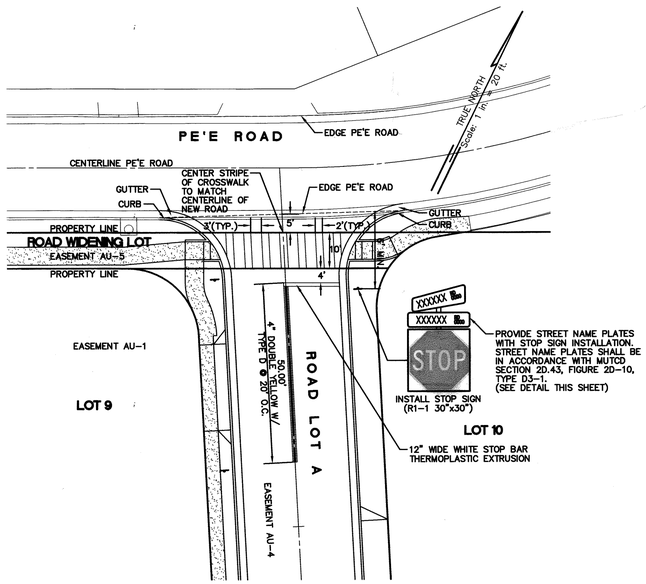
APPROVED:

12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW
DRAWN BY: CSC
DATE: 10/16/2015

SHEET
C-22
22 OF 23 SHEETS



CROSSWALK DETAIL
SCALE: 1"=20'

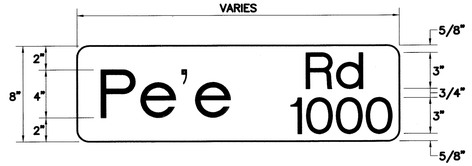
STRIPING NOTES:

1. PAVEMENT STRIPING AND SIGNAGE. AT INTERSECTIONS WITH STOP SIGNS AND STOP BARS, REFER TO STANDARD DETAILS T-9 AND T-10 FOR STRIPING DETAILS AT INTERSECTIONS AND STOP SIGN INSTALLATION. ALL ALL PAVEMENT STRIPING SHALL BE THERMOPLASTIC EXTRUSION MARKING.
2. ALL PAVEMENT STRIPING SHALL BE THERMO PLASTIC EXTRUSION MARKING. PAINTING IS NOT ACCEPTABLE.
3. THE CONTRACTOR SHALL UTILIZE GOOD WORK PRACTICES AND FOLLOW THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA), THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, STATE OF HAWAII (DOSH), THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
4. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES BEFORE ANY EXCAVATION WORK IS DONE.
5. THERMOPLASTIC EXTRUSION (NO PASSING ZONES, CHANNELIZING LINES SOLID LINES OR PAVEMENT ARROWS).
6. THERMOPLASTIC EXTRUSION (TRANSVERSE MEDIAN MARKINGS, TRANSVERSE SHOULDER MARKINGS, CHANNELIZING ISLANDS, OR EDGE STRIPING).
7. THERMOPLASTIC EXTRUSION (GUIDE LINES, STOP LINES, EXTENSION OF EDGE LINES, OR CROSSWALK MARKINGS).
8. STREET NAME PLATES SHALL NOT BE INSTALLED UNTIL ROAD NUMBERS HAVE BEEN ASSIGNED BY DPW HOUSE NUMBERING SECTION.

SIGNING NOTE:

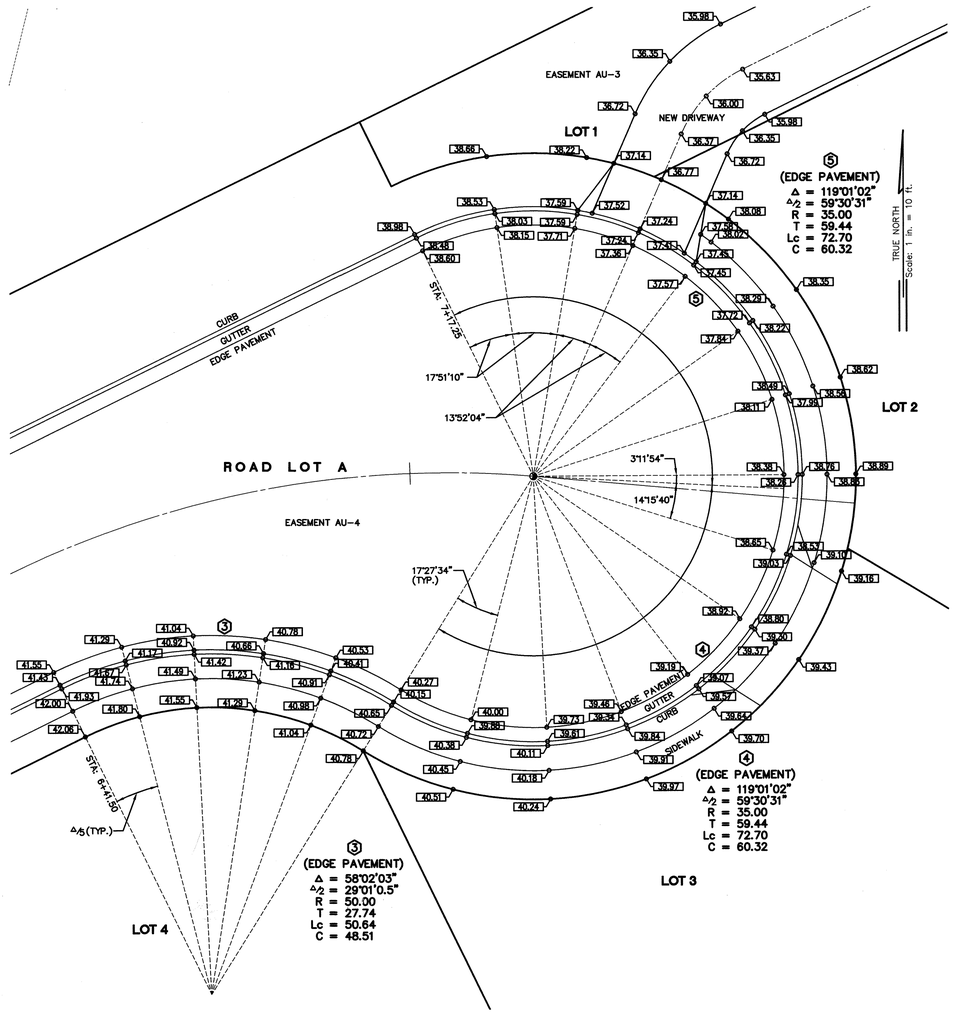
ALL POSTS FOR TRAFFIC SIGNS SHALL HAVE RM-3 FACING TRAFFIC.

SIGN PLATES:
REFER TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

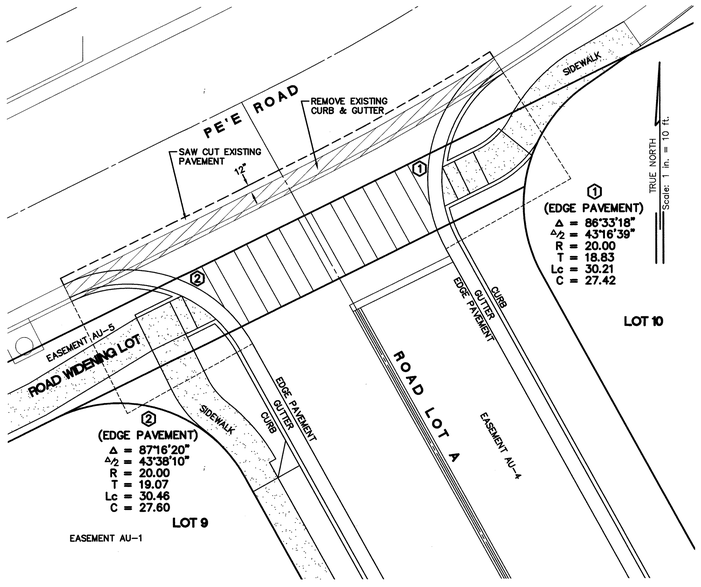


NOTES:
1. 2" LETTERS TO USED FOR ST., DR., HWY., RD...ETC.
2. STREET NUMBERS TO BE DESIGNATED BY THE DEPARTMENT OF PUBLIC WORKS.

STREET NAME DETAILS
SCALE: 1" = 6"



CUL-DE-SAC DETAIL
SCALE: 1"=10'



INTERSECTION DETAIL
SCALE: 1"=10'

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR
MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

STRIPING PLAN & ROADWAY CURVE DATA

APPROVED:
12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

DESIGNED BY: WW	SHEET C-23
DRAWN BY: CSL	23 OF 23 SHEETS
DATE: 10/16/2015	

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

EXHIBIT N

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

FOR

CIRI Land Development Company

an Alaska corporation, and a wholly owned subsidiary of
Cook Inlet Region Inc., an Alaska Native corporation

PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.
1610 HALEUKANA STREET
LIHU`E, KAUA`I, HAWAI`I 96766
(808) 246-0625

EXHIBIT N

MAKAHU`ENA POINT

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

The Makahu`ena Point property is located at the southernmost point of Kaua`i, in Weliweli, Koloa, and is comprised of 25 lots of record, tax map key (TMK) No. (4) 2-8-021: 044 – 068), one bulk lot, TMK No. (4) 2-8-021: 041, and two unnumbered road lots (the property). CIRI Land Development Company (CLDC) proposes to consolidate the existing lots of record, and re-subdivide the property into 10 single-family residential lots of approximately one acre each, which is far less dense than the currently permitted subdivision. The Makahu`ena Point subdivision is proposed to include:

- An internal road connecting to Pe`e Road, which will provide access to the lots;
- A pedestrian public access trail from Pe`e Road to the shoreline;
- A pedestrian public access trail running laterally along the entire shoreline;
- An open space area at the most makai portion of the property, adjacent to a 10,000 sq. ft. parcel owned by the USA; and
- A public parking area close to Pe`e Road.

The Department of Health (DOH) Wastewater Branch reviews all individual wastewater systems (IWS) for conformance to applicable provisions of Hawai`i Administrative Rules (HAR), Title 11, Chapter 62, entitled Wastewater Systems. The purpose of HAR 11-62 is to protect the public's health and safety by insuring that the disposal of wastewater does not contaminate water sources and attract

insects and rodents. Various requirements in Chapter 62 are used to determine: what type of IWS (if any) will be allowed, location, and the minimum design size. In addition, the Comprehensive Zoning Ordinance of the County of Kauai also addresses utility requirements. In all developments that are not accessible to public sewers, a private sewer disposal system shall be provided that meets the requirements of The County Department of Public Works and the requirements of the State Department of Health. See CZO §8-4.5(c)(3).

HAR 11-62-31.1 (1)(A) states that developments involving dwellings require at least 10,000 square feet of land area for each IWS. Each of the 10 single-family residential lots, based on the "Preliminary Site Layout & Concept Plan" (see enclosed) have an area of at least one acre. One acre is equal to 43,560 square feet, which is enough area for the design to satisfy this requirement.

The property within the County Open zoning district, and also overlaid by the Shore Constraint District. Development within the Shore Constraint District must be assessed to not cause significant harm to the (A) The water quality of the ocean, including but not limited to its clarity, temperature, color, taste and odor; (B) Fish and aquatic habitats; (C) The natural beauty of the area; (D) Navigation, safety or health; or (E) Would not substantially interfere with public use of the ocean waters or underlying lands; and (F) That other facilities are unavailable to the applicant. See CZO §8-12.5

With respect to the flood zones on the property, under the Kauai County Code, all sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems, and discharge from the systems into flood waters.

On-site waste disposal systems should be located to avoid impairment to them or contamination from them during flooding.

The property is also within the Special Management Area. Therefore, conditions may be imposed to address solid and liquid waste treatment disposition and management to minimize adverse effects upon special management area resources.

Consistent with the requirements under Article Xl, Section 1 of the Hawaii State Constitution, the County and the State have a duty to preserve and protect the State's water resources. Therefore, CLDC must comply with all regulatory requirements in developing an IWS plan for the property. I any adverse impacts are expected, CLDC will be required to implement reasonable measures to mitigate those impacts. Such measures will likely be included in any permits issued by the Department of Health for IWS's, and appropriate assessments must be made to ensure permit compliance.

On January 14, 2014, three percolation tests were conducted in different areas of the property. A map showing the approximate locations for each test is attached. While digging all of the test pits, lava bedrock was encountered 1.5 to 2 feet below existing grade. The soil was brownish granular rocky. Percolation rates varied, with test pit #1, #2, and #3 having a percolation rate of 6 minutes per inch, no percolation, and 21 minutes per inch, respectively.

The lava bedrock at shallow depth will not make seepage pits a practical option since the design would involve deep depths. Therefore, absorption beds will be designed since they can be constructed at shallower depths. Soil fill will need to be added in the area of the IWS in order to comply with HAR provisions.

HAR 11-62-34 (c)(1)(B) requires absorption bed systems to be constructed in soils with percolation rates of 60 minutes per inch or faster. The absorption bed systems are to be located on the property where there is a vertical separation of three feet or more between the bottom of the absorption bed and the lava bedrock (HAR 11-62-34 (c)(1)(C)), and 18 inches from the bottom of the absorption bed to the finished grade (HAR 11-62-34 (c)(1)(H)). Absorption beds must be constructed in stabilized fill (HAR 11-62-34 (c)(1)(D)) with a slope gradient of 8% or less (HAR 11-62-34 (c)(1)(I)). The property will be graded as shown in the "Preliminary Site Layout & Grading Plan" (enclosed), stabilized, and percolation tests will be redone to determine the required size of the absorption bed. Depending on the proposed location of the IWS, there is a possibility that slight adjustments to the finish grade will be necessary to meet separation requirements. Percolation tests will need to be conducted on all lots to assure sufficient rate and vertical separation for the absorption bed.

Each of the 10 lots will have its own IWS which will include an absorption bed and septic tank. Wastewater from the dwelling flows into the septic tank and is held there for a period of time, which allows bacteria to begin breaking down some of the solids. During this time, the oil and grease in the wastewater floats to the surface where they form a scum layer, the solids in the wastewater sink to the bottom, forming a sludge layer, and the clear water in the middle flows to the absorption bed and percolates into the ground. Biological and chemical additives are not needed to aid or accelerate decomposition. Scum and sludge must be removed periodically to keep them from entering and clogging the absorption bed.

No person may use an IWS until authorized in writing by the Director of the Department of Health. However, before the Department of Health approves the operation of an IWS, the following requirements must be satisfied:

(1) An operation and maintenance manual developed pursuant to HAR section 11-62-23.1(d)(2) as applicable shall be submitted and approved by the director; and

(2) The owner of the individual wastewater system shall certify that the individual wastewater system shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual. The certification shall include a statement that upon sale or transfer of ownership of the individual wastewater system, the sale or transfer of ownership of the individual wastewater system, the sale or transfer will include the appropriate transfer documents and provisions binding the new owner to the operation and maintenance manual. See HAR 11-62-31.1(e)

A properly maintained septic system should be inspected every year, and pumped approximately every three years, depending upon the volume of sewage entering it.

Each IWS will be designed for a five bedroom dwelling, which will have a maximum projected flow of 1,000 gallons per day (200 gallons per day per bedroom). Based on that projected flow, each system will require a 1,250 gallon septic tank (HAR 11-62-33.1 (a)(5)). The absorption bed area will be determined after the lots are graded and percolation tests are redone. Assuming the worst allowable percolation rate, the minimum design absorption area would be 1,680

square feet (see attached design calculations), which is much less than the size of the one acre lots they would be designed for.

HAR 11-62-32 states that all IWS's need to maintain minimum setback distances as indicated in Table 2 of Appendix F (enclosed). The septic tank and absorption bed will have minimum setbacks from:

- the wall line of any structure or building;
- property line;
- stream, the ocean at the vegetation line, pond, lake, or other surface water body;
- large trees;
- other IWS's;
- potable water sources serving public water systems.

The proposed use of individual wastewater systems for the 10-lot residential development is feasible for the property. The use of IWS is consistent with careful stewardship of Kauai's land and waters. The proposed use of IWS for this property will prevent any impairment to the ocean or any water underlying the property, as no waste materials will leach into the ground or ocean. Similarly, the IWS will not result in any adverse environmental effects to the public or adjacent areas. As such, there should be no discernible impact on the natural resources of the State. Strict compliance with the Department of Health regulations for the approval and certification of an IWS should be required to minimize any adverse effects on Special management Area resources.

DESIGN REQUIREMENTS:

Area Classification: Critical Wastewater Disposal Area

Lot Size: 362,332 sq,ft.

IWS Permitted: 1/10,000 sq,ft. = 36

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

FLOW:

5 Bedroom Residence
Design for 5 Bedrooms
5 Bedrooms x 200 gpd/bdrm = 1,000 gpd

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature
ESAKI SURVEYING & MAPPING, INC.
EXPIRES: APRIL 30, 2014

TANK CAPACITY:

1,250 Gallon Minimum for 5 Bedrooms
(Chapter 62-33.1, Rules Amending Title 11 Hawaii Administrative Rules)
Use 1,500 Gallon IAPMO Certified Septic Tank

PERCOLATION TEST INFORMATION:

Date of Test:	January 19, 2014
Tested By:	Wes Chibo
Percolation Rate:	60 mpi (minimum allowable rate)
Soil Description:	0-18" below grade - Brownish granular rocky, 18" below grade - Lava Bedrock
Depth of Water:	~19' above sea level

ABSORPTION FIELD REQUIREMENTS:

For 60 mpi (From Appendix F, Toble 3, Hawaii Administrative Rules, Title 11, Chapter 62)
Use 330 sq, ft./bedroom
Absorption Area Required = (5 bedrooms) x (330 sq, ft./bedroom) = 1,650 sq, ft.
Use gravelless absorption bed with eight lines and chambers
Total length required = 1,650 sq, ft. / 24 ft. = 68.75 ft.
Use 8 lines, 70.0 ft. long
Total absorption area provided = 24.0 ft. x 70.0 ft. = 1,680 sq,ft.

NOTE: Soil fill will need to be added to site.
*3' minimum vertical separation from bottom of bed to groundwater/bedrock.
*Bottom of bed must be at least 18" below finished grade.
*IWS needs to be located 50 feet away from the ocean at the vegetation line.

ESAKI SURVEYING & MAPPING, INC.
1610 Haleukana Street
Lihue, Hawaii 96766
(808) 246-0625

DESIGN CRITERIA
Tax Map Key: (4) 2-8-21: 41
Owner: CIRI Land Development Co.
Date: January 2014

Drawn By: CH | Checked By: WW | Sheet 1 Of 11

TABLE 2
April 15, 1997

Minimum Horizontal Distance From	Cesspool (ft)	Treatment Unit (ft)	Seepage Pit (ft)	Soil Absorption System (ft)
Wall line of any structure or building	5	5	5	5
Property line	9	5	9	5
Stream, the ocean at the vegetation line, pond, lake, or other surface water body	50	50	50	50
Large trees	10	5	10	10
Treatment unit	5	5	5	5
Seepage pit	18	5	12	5
Cesspool	18	5	18	5
Soil absorption system	5	5	5	5
Potable water sources serving public water systems	1000	500	1000	1000

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM

FALLING HEAD TEST PROCEDURE

1. Preparing Percolation Test Hole(s)
   1. Dig or bore a hole, four to twelve inches in diameter with vertical walls to the approximate depth of the soil absorption system (bottom of trench or bed).
   2. Scratch the side wall and bottom to remove any smeared soil and remove loose material.
   3. Place one inch of coarse sand or gravel on bottom.

B. Determine Percolation Rate
   1. Place twelve inches of water in hole and determine time to seep away. Record this time on the site evaluation form.
   2. Repeat step B.1. above. Also record this time on the site evaluation form.
   3. If the time of the second test is less than 10 minutes go to Step C, if not skip to Step D.

C. Sandy (granular) Soils
   1. Establish a fixed reference point, add water to six inches above gravel and measure water level drops every ten minutes for 1 hour.
   2. Use a shorter time interval if first six inches seeps away in ten minutes or less.
   3. Refill when necessary, do not exceed six inches of water.
   4. Record time intervals and water drops on site evaluation form.
   5. Use final water level drop interval to calculate percolation rate. (Step E)

D. Other Soils (non-granular, e.g. silt, loams & clays)
   1. Maintain at least twelve inches of water in the hole for at least four hours to presoak soil.
   2. Do not remove water remaining after four hours.
   3. Permit soil to swell at least 12 hours. (Dry clayey soils should be soaked and permitted to swell for longer periods to obtain stabilized percolation rates).
   4. After swelling, remove loose material on top of gravel.
   5. Use fixed referenced point, adjust water level to six inches above gravel and measure water level drop.
   6. If the first six inches of water seeps away in less than 30 minutes, measure water level drops every ten-minutes and run for one hour.
   7. If the first six inches of water takes longer than 20 minutes to seep away, use 30 minute time intervals for four hours or until two successive drops do not vary by more than one-sixteenth inch (stabilized rate).
   8. Refill with water only when necessary, but no adjustment during last three readings exeept to the limit of the last drop. Do no exceed six inches of water.

E. Use final drop interval to calculate percolation rate and record on site evaluation form:

$$\frac{\text{Time Interval}}{\text{Water Level Drop}} = \text{Percolation Rate}$$

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: _____ Test Performed by: _____

Owner: _____ TMK: (____) ____-____-____:____

Elevation: _____ feet
Depth to Groundwater Table: _____ feet below grade
Depth to Bedrock (if observed): _____ feet below grade
Diameter of Hole: _____ inches
Depth to Hole Bottom: _____ feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)

PERCOLATION READINGS:
Time 12 inches of water to seep away: _____ minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

____ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

____ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches

Percolation Rate (time/final water level drop): _____ minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the hottom of the soil absorption system and the groundwater table or any other limiting layer.

_____ _____
Engineer's Signature/Stamp Date

#1

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 8:45AM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 28 feet
Depth to Groundwater Table: >20 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: 18 minutes
Time 12 inches of water to seep away: 60 minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

√ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	8 3/8	10 MIN	1 13/16
10 MIN	3 5/8	10 MIN	1 13/16
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 13/16		
10 MIN	1 13/16		

Percolation Rate (time/final water level drop): 5.6 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#2

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 12:42 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 19 feet
Depth to Groundwater Table: >15 feet below grade
Depth to Bedrock (if observed): 1.5 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 1.5 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-18	BROWNISH, GRANULAR ROCKY
18	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 3/16		
10 MIN	5/8		
10 MIN	5/8		
10 MIN	0		

Percolation Rate (time/final water level drop): NONE minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#3

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 2:45 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 43 feet
Depth to Groundwater Table: 720 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3 5/8	10 MIN	1/2
10 MIN	1 3/16	10 MIN	1/2
10 MIN	1 3/16		
10 MIN	15/16		
10 MIN	11/16		
10 MIN	1/2		

Percolation Rate (time/final water level drop): 20.8 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

PERCOLATION TEST PIT LOCATIONS

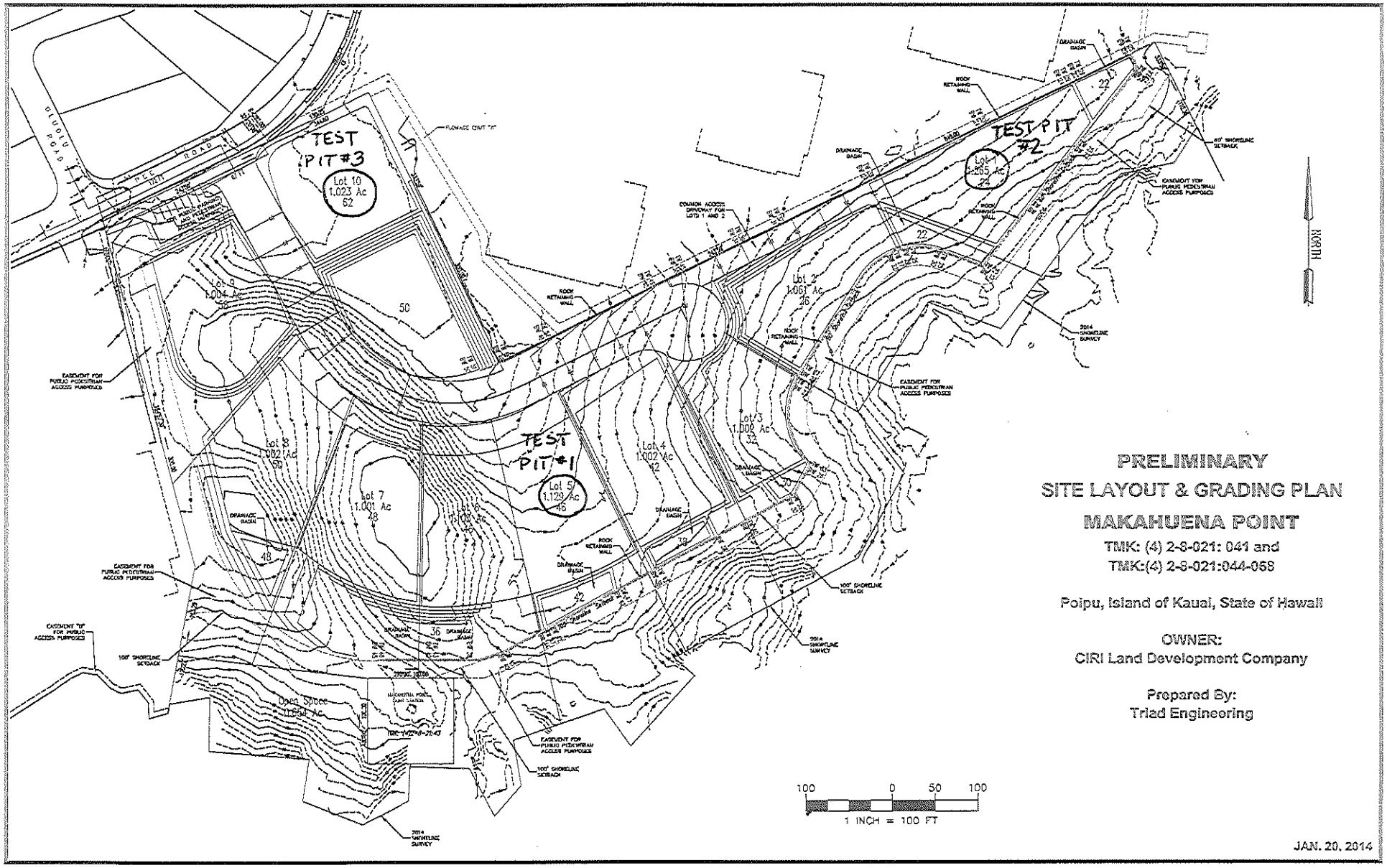


EXHIBIT O-1

B.D. NEAL & ASSOCIATES
Applied Meteorology • Air Quality • Computer Science
P.O. BOX 1808 • KAILUA-KONA, HAWAII 96745 • TELPHONE (808) 329-1627 • FAX (808) 325-6739
EMAIL: bdneal@bdneal.com

December 20, 2013

Attn: Mr. Dave Pfeifer
CIRI Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509-3330

Subject: Makahuena Point Project
Air Quality Impact Assessment

Dear Mr. Pfeifer:

In response to your request, we have examined the potential air quality impacts related to the proposed Makahuena Point Project located at Poipu, Kauai. The results of this examination along with background information related to this issue and recommended mitigation measures are summarized below.

Project Description

CIRI Land Development Company (CLDC) is proposing to consolidate and re-subdivide lots on its Makahuena Point property in the Koloa District on the island of Kauai. CLDC is an Alaska corporation, and a wholly owned subsidiary of Cook Inlet Region Inc. (CIRI). CIRI is an Alaska Native corporation and one of the 12 Alaska-based regional corporations established by the Alaska Native Claims Settlement Act of 1971. CIRI was established to benefit Alaska Natives who have ties to the Cook Inlet Region of Alaska, and is owned by more than 8,100 Alaska Native shareholders of predominately Athabascan and Southeast Indian, Inupiat, Yup'ik Eskimo, Alutiiq and Aleut descent. CLDC, as the land development and investment arm of CIRI, is dedicated to making sound, long-term real estate investments in properties that are capable of providing a sustainable return to fulfill CIRI's mission to benefit current and future Native shareholders.

The CLDC property comprises approximately 13 acres of land along the coast at Poipu with 25 lots of record (tax map key (TMK) No. (4) 2-8-021: 044 - 068), one bulk lot (TMK No. (4) 2-8-021: 041), and two unnumbered road lots. The consolidation and re-subdivision will result in 10 single-family residential lots along

with associated open space and infrastructure. Access to the new subdivision will be via Pe'e Road.

Ambient Air Quality Standards

Both federal and state standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated including: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii air quality standards are comparable to the national standards except those for nitrogen dioxide and carbon monoxide which are more stringent than the national standards.

Regional and Local Climatology

Regional and local climate together with the amount and type of human activity often dictate the air quality of a given location. The climate of the Poipu area is very much affected by its situation along the southern coast of Kauai. Table 1 shows monthly mean wind speed and direction data for Lihue Airport, which is about 10 miles to the northeast. These data can be expected to be reasonably representative of the project site. Winds are predominantly trade winds from the northeast and provide good ventilation much of the time. Monthly mean speeds are about 13 to 14 mph in summer and about 11 to 12 mph during the winter months. Daily wind speeds typically vary between about 10 and 25 miles per hour.

Temperatures in the Poipu area are generally very consistent and mild. Average daily temperatures at Lihue Airport, which are not significantly different from the Poipu area, are about 70°F to 75°F. Winter months are only a few degrees cooler than summer.

As indicated in Table 2, average annual rainfall in the Poipu area amounts to about 34 inches, which means it is a moderately dry location. This is based on more than 50 years of data collected at nearby Puuhi. Summer months are the driest with an average of about 1 to 2 inches per month, while winter months receive about 4 to 5 inches.

Existing Air Quality Conditions

Air quality in the vicinity of the project site presently is mostly affected by emissions from natural, industrial,

agricultural and/or motor vehicle sources. The only air quality monitoring data that is presently collected on Kauai by the Hawaii Department of Health is obtained at Niumalu, which is about 7 miles to the northeast of the Poipu area. The purpose of this monitoring station is primarily to monitor emissions from cruise ships visiting Nawiliwili Harbor. Monitoring equipment is installed at the station to measure fine particulate, sulfur dioxide, nitrogen dioxide and carbon monoxide. This station only began operations in April 2011, so there is only a limited record available. The data reported to date suggest that air quality standards are currently being met, although a few higher concentrations of sulfur dioxide have been measured. Air quality in the Poipu area is believed to be good at the present time.

Air Quality Impacts of Project

The primary concern for this project with respect to air quality is the short-term direct and indirect impacts that could potentially occur during project construction. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from site clearing, soil excavation, aggregate processing and vehicle movement; and (2) exhaust emissions from the operation of on-site construction equipment. Indirectly, there also could be short-term air quality impacts from the disruption of traffic on nearby roadways, from slow-moving construction equipment traveling to and from the project site, and from a temporary increase in local traffic caused by commuting construction workers.

For this project, the potential for offsite fugitive dust impacts during project construction is perhaps the most significant. This is because: 1) the project site borders existing residential units on the north and west; 2) the project site is located in a windy and relatively dry area; and 3) the project site is rocky with thin layers of fine red soil typical for much of Kauai. Although the prevailing trade winds from the northeast will tend to move any fugitive dust emissions away from areas to the north of the site, residential areas to the west (The Makahuena Condominiums) could be impacted. Areas to the north or east may also be impacted at times when the occasional winds from the south or southwest occur.

Hawaii Administrative Rules, Section 11-60.1-33 state, in part, that no person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions and that no

person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates. Failure to comply with the fugitive dust requirements may result in civil and administrative fines of up to $25,000 per day per violation. Thus, to avoid potential violations of these rules, and given the sensitive nature of the property, a comprehensive dust control plan should be prepared prior to beginning construction. For this particular project, it may be appropriate to consider going beyond the norm or the traditional dust control measures in an effort to avoid or reduce conflicts.

The usual fugitive dust control measures for construction activities include:

- Watering of land clearing and earth-moving activities
- Applying water or dust suppressants on unpaved roads and material stockpiles
- Installing dust screens or wind barriers around the site boundary
- Limiting vehicle speeds onsite
- Paving or covering ingress and egress points to the site with crushed rock or other temporary covering material
- Covering all moving, open-bodied trucks transporting dusty materials
- Keeping adjacent paved roads clean from soil tracked from the site (road cleaning and/or tire washing)
- Limiting the amount of exposed areas through planning and timing of project phases
- Mulching or chemically stabilizing inactive areas that have been worked.

Installing dust screens as suggested above, while commonly done, would likely not be overly effective in controlling dust if used as the sole means of addressing fugitive dust. In addition, some find dust screens aesthetically displeasing.

Additional dust control measures could include:

- Scheduling land clearing and earth moving activities for periods of the year that are less windy and more wet (winter months in this case)
- Avoiding any rock crushing, screening or stockpiling activities onsite

- If offsite fill material is required, wetting the material prior to trucking it to the site so that it has a high moisture content
- Paving of any permanent parking areas and/or establishment of landscaping as early in the construction schedule as possible

Although the winter months are wetter and thus more advantageous for dust control, rainfall is not so excessive so as to impede site earth work.

Even with an extensive dust control program, given the nature of the project site and the nearby residential areas, it may be inevitable that there will be some offsite impacts due to dust during periods of site clearing and earth moving activities. Therefore, it may be appropriate to consider monitoring dust at the site boundaries so as to evaluate and document the effectiveness of dust control measures.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered and emits nitrogen oxides and other air pollutants. The engines for this equipment should be kept well-tuned and not allowed to operate or idle excessively.

Slow-moving construction vehicles on roadways leading to and from the project site could obstruct the normal flow of traffic to such an extent that overall vehicular emissions are increased. This impact can be mitigated by moving heavy construction equipment during periods of low traffic volume.

In summary, even with best efforts, short-term impacts from fugitive dust during initial project construction, i.e., during subdivision improvements, may potentially occur. Because of this, it may be appropriate and advisable to go beyond the normal dust control measures in preparing the project dust control plan. It should be anticipated that fugitive dust control and mitigation during project construction will likely require extra time, effort and cost.

Please call me if you have any questions concerning the information presented herein or if you wish to discuss this matter further.

Very truly yours,

Barry D. Neal

Barry D. Neal
Certified Consulting
Meteorologist

cc: Jennifer A. Benck (Carlsmith Ball)

Table 1

MONTHLY MEAN WIND SPEED AND PREVAILING DIRECTION FOR LIHUE AIRPORT, KAUAI

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (mph)	11.3	12.0	12.8	13.7	13.4	13.6	14.1	13.4	12.1	11.9	12.7	12.2	12.8
Direction	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes: Mean wind speeds are based on 32 years of data. Mean wind direction based on 20 years of data.

Source: "Local Climatological Data, Annual Summary With Comparative Data, Lihue, Hawaii, 1999", U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service, National Climatic Center, Asheville, NC.

Table 2

MONTHLY MEAN PRECIPITATION
FOR PUUHI, KAUAI

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Total Precipitation (inches)	5.15	3.41	4.08	2.24	1.87	1.12	1.60	1.92	2.09	2.62	3.49	4.72	34.31

Notes: Based on 54 years of data from the 1990's.

Source: "Climatic Summary of the United States, Supplement for 1951 through 1960, Hawaii and Pacific", U.S. Department of Commerce, Weather Bureau, Washington, D.C., 1965.

EXHIBIT O-2

GEOLOGICAL INVESTIGATION
MAKAHUENA POINT PROPERTY, KAUAI, HAWAII

Report Prepared for CIRI Land Development Company (CLDC)

by

Charles T. Blay, Ph.D., Geologist
TEOK Investigations
Poipu, Kauai

January 22, 2014
Revised February 01, 2014
Revised February 10, 2014

INTRODUCTION

General Statement:

The Makahuena Point property, occupying approximately 13 acres of coastal land at the extreme southern tip of the island of Kauai, was examined geologically over a three-day period of time in early January 2014. Principal objectives of the investigation were to describe the site's geological features in order to evaluate its stability. The character and stability of the large heavily-vegetated depression occupying the northwestern portion of the property and that of a prominent collapsed lava tube located near the central portion of the property's coastal zone were of particular interest.

Methodology:

A base map was constructed utilizing Google Earth photographic images and a portion of the 1996 edition of the Koloa, U.S. Geological Survey, 7.5-minute quadrangle map (Figures 1 and 2). The orientation of lava rock layers and related geological features were measured, to the nearest degree of strike and dip, using a standard geological compass. The "T" shaped strike and dip symbols shown in Figure 1 indicate the trend (long "strike" line) and direction of inclination (short line at right angle to strike line); the amount of inclination is indicated in degrees, from 0 to 90. Locations were established to the nearest second of latitude and lon-

gitude utilizing a hand held GPS. Geological features, especially those associated with the collapsed lava tube, are displayed in Photos 2-6. No observations were made below sea level along the coast. Also, owing to a thick weedy vegetation cover no geological observations could be made within the large, oval-shaped depression occupying the northwestern portion of the property.

GEOLOGY

General Geological Setting:

The Makahuena Point area of Kauai is composed of basaltic, pahoehoe style lava flows of the rejuvenated stage Koloa Volcanics Formation, the island's youngest volcanic rocks (Macdonald, et al, 1960, Garcia et al, 2013, Blay & Siemers, 2013). Koloa Formation volcanic vents and associated lava flows in the general vicinity of the Makahuena Point property range from as old as 1.25 million years to as young as 150 thousand years. A series of volcanic cinder and spatter cones immediately north of the property, the Poipu Volcanic Cones, have been geologically dated to have last erupted 320 thousand years ago (Garcia et al, 2013). A considerable portion, if not all, of the lava flows within the Makahuena Point property erupted from one or more of those cones. The closest volcanic cone, Pihakekuka Crater (present location of Poipu Crater Resort; Photo 1), north of the Makahuena Point property probably contributed the bulk of the lava now covering the property.

Site Geology:

Lava flows of the Koloa Volcanics are well exposed all along the rugged coastal zone but are covered by soil layers a short distance landward (Figure 1, Photos 1 and 2). Across most of the coastal zone thick, laterally extensive lava flows, the most characteristic feature of the property, dip gently seaward, mostly at only 2 to 5 degrees (Figure 2, Photo 2). There is moderate undercutting of the flows by wave erosion along the irregular, rocky shoreline.

A large, thickly-vegetated, 200 x 500 ft, oval depression, with up to 30 feet of relief, occupies the northwestern portion of the property. A distinct, collapsed, elongated lava tube, perhaps the geologically most interesting feature within the property, is well exposed at the coast near the western boundary of the property (Figures 1-2, Photos 3-4). Both the oval depression and the coastal collapsed lava tube feature are likely the result of a large connected lava tube that collapsed completely. It is highly unlikely that the vegetated oval depression is a volcanic crater. At

the coast the collapsed lava tube is 100-120 feet wide and 20-25 feet deep. It is partly filled both with large, randomly oriented, angular blocks of lava rock, and with post-tube-collapse lava flows, both of geological origin and now stable. The area of the large oval depression is thickly vegetated, and unlike the geologically-filled coastal lava tube structure, no lava rock exposures were observed within the depression.

No open lava tubes were observed above sea level. Portions of the coarse lava block rubble were in the past partly covered with lime cement; however it does not appear that it was done to maintain stability of natural geological rubble filling the collapsed tube. Locally the oxidized and disarticulated fragments of an iron netting of some sort are present, but are of unknown origin.

At the coast and immediately landward of the coastal exposures, margins of the lava tube are well defined by a thin, 3-4 ft wide zone of vertical to overturned lava rock layers (Figures 5 and 6). At such exposures, post-tube-collapse lava rock of geological origin can also be observed partly filling the tube structure.

DISCUSSION

Broad, laterally extensive lava flows and associated lava tubes are typical products of Hawaiian style volcanic eruptions. They represent the non-explosive, effusive-style eruption of liquid lava (magma), in contrast to the explosive eruption of cinder and ash of volcanoes, such as those occurring in continental localities and along the “Ring of Fire” that rims the Pacific Ocean. Lava tubes develop in order to insulate the liquid magma as it flows down slope away from the emitting vents and cones, allowing the magma to extend great distances from its source. Some tubes are preserved as elongated open cave-like features. Others collapse and are partly to completely filled by solidified blocks of lava rock and post-collapse lava flows. They are the products of the very dynamic process of the effusive eruption of magma and its emplacement away from its vent or fissure source.

The lava tube feature present on the Makahuena Point property is an example of a dynamic tube that formed, collapsed almost entirely and then was partly to almost entirely filled with both lava block rubble and lava flows which filled the tube during, and subsequent to, its collapse. Tube formation and collapse may have occurred over and over again until the lava finally stopped flowing through the tube and into its collapsed depression. Today, the composite collapsed tube structure is represented by a subtle, mostly geologically-filled, elongated surface depression.

Importantly, it appears that the tube is completely collapsed. No open tube could be delineated, based on the surface expression of both the well-exposed coastal zone and the inland, soil and vegetation covered oval-shaped depression. At present both features, the coastal partly-filled lava tube and the vegetation-covered oval-shaped depression appear stable.

SUMMARY AND CONCLUSIONS

The Makahuena Point property, occupying approximately 13 acres of coastal land at the southern tip of Kauai, was examined geologically in early January 2014. Principal objectives of the investigation were to describe the site's geological features in order to evaluate its stability.

The property is underlain by extensive lava flows of the geological formation known as the Koloa Volcanics, which locally has been dated to have formed approximately 320 thousand years ago. Most, if not all, of the lava formed from magma flowing out of a series of volcanic vents and cones located immediately north of Makahuena Point.

A prominent, northwest-trending collapsed lava tube is present at the coast near the western boundary of the property. It is displayed as a well-exposed, largely filled, elongated depression. The margins of the 100-120 ft wide tube structure are well defined by narrow (3-4 ft) zones of vertical to overturned lava rock layers. The 20-25 ft deep collapsed tube is partly filled with coarse lava block rubble and post-collapse lava flows of geological origin. There is no evidence of the lava tube structure having acted as a vent for fluids or sediments flowing into the ocean.

Inland, to the northwest, is a large, oval-shaped depression that is obscured vegetation. The 200 ft wide, 500 ft long depression displays a relief of 20-30 feet. Lava rocks were not observed within the depression owing to its soil and plant cover. It is likely part of the same lava tube that is evident at the coast, is completely collapsed, and appears stable.

The obvious lava tube structure of the Makahuena Point property appears to have collapsed completely. At the coast it is partly filled with lava block rubble and lava flows that were emplaced as the tube was actively collapsing and after various stages of collapse. At present it is a stable, no longer collapsing, feature. No open lava tubes were observed during the geological field investigation.

Today the Makahuena Point collapsed lava tube appears stable, with little or no potential for additional collapse. However, the specific area of the collapsed tube near the coast is not recommended as a site for the emplacement of large structures. In its current state, the coastal collapsed lava tube structure is one of Kauai Island's more interesting geological features.

REFERENCES CITED

Blay, C. and Siemers, R., 2013, Kauai's Geologic History: A Simplified Overview: TEOK Investigations, Koloa, Hawaii, 161 pp.

Garcia, M.O., Swinnard, L., Weis, D., Greene, A.R., Tagami, T., Sano, H., and Gandy, C.E., 2010, Petrology, geochemistry and geochronology of Kauai lavas over 4.5 myr: Implications for the origin of rejuvenated volcanism and evolution of the Hawaiian plume: Journal of Petrology, v. 51, no. 7, p. 1507-1540.

Macdonald, G.A., Davis, D.A., and COX, D.C., 1960, Geology and ground-water resources of the island of Kauai, Hawaii: Hawaii Division of Hydrology Bulletin 13, 212 pp, color geologic map.



Figure 1. Google map image of Makahuena Point property, Kauai. Location of property boundary is approximate. Elevation contours are in feet above sea level. Note general location of collapsed lava tube well exposed at shoreline which aligns northward with a large, extensively vegetated, elongate depression.

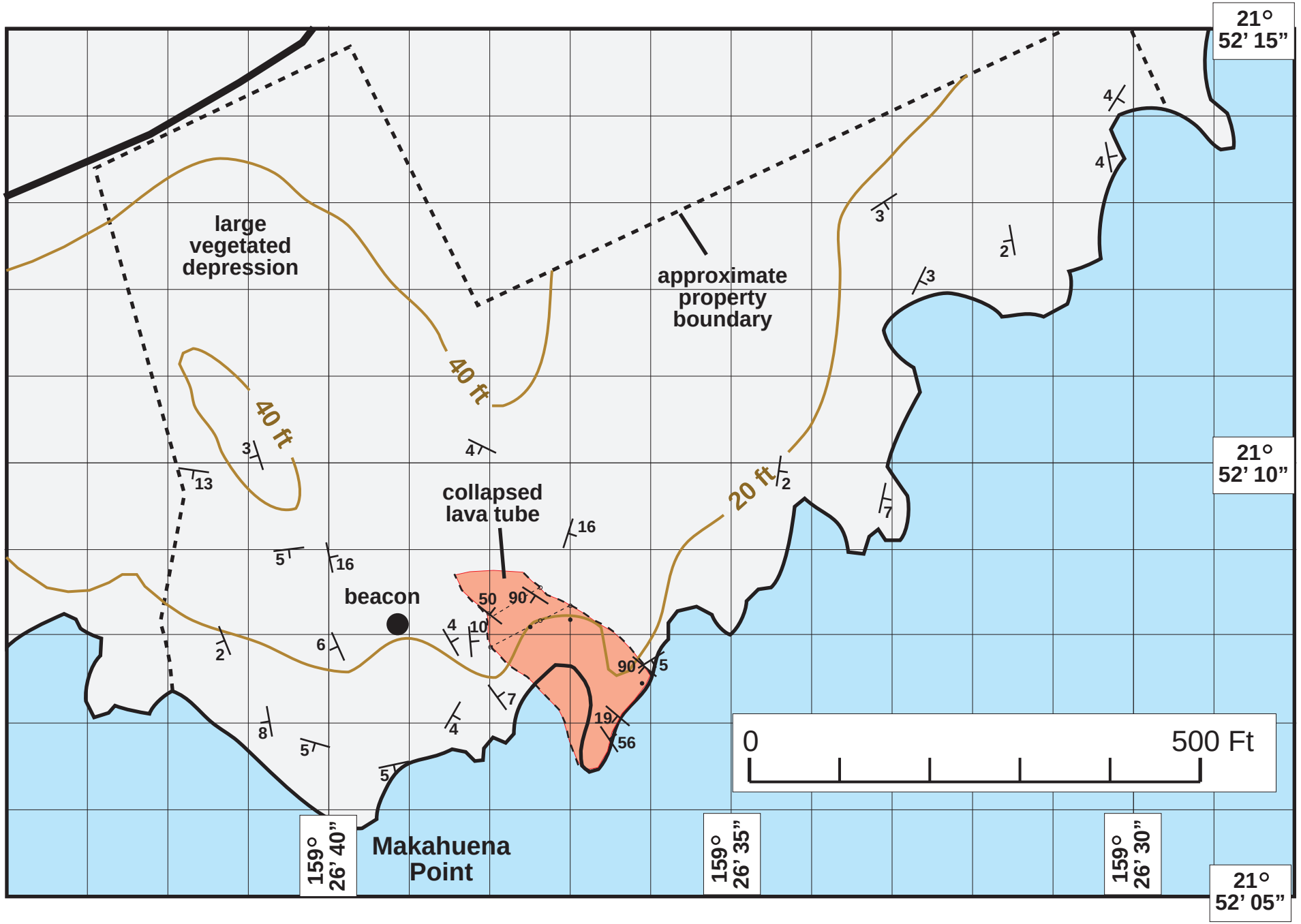


Figure 2. Locality map of Makahuena Point property, Kauai. Property boundary is approximate. Elevation contours are in feet above sea level. Note general location of collapsed lava tube well exposed at shoreline which aligns northward with a large, extensively vegetated, elongate depression. Strike and dip symbols indicate general orientation of lava flows. Grid is in degrees, minutes and seconds of latitude and longitude.



Photo 1. Google Earth image of Makahuena Point property location. Pihakekua Crater (present location of Poipu Crater Resort) most likely produced much of the lava of the Makahena Pt. area.

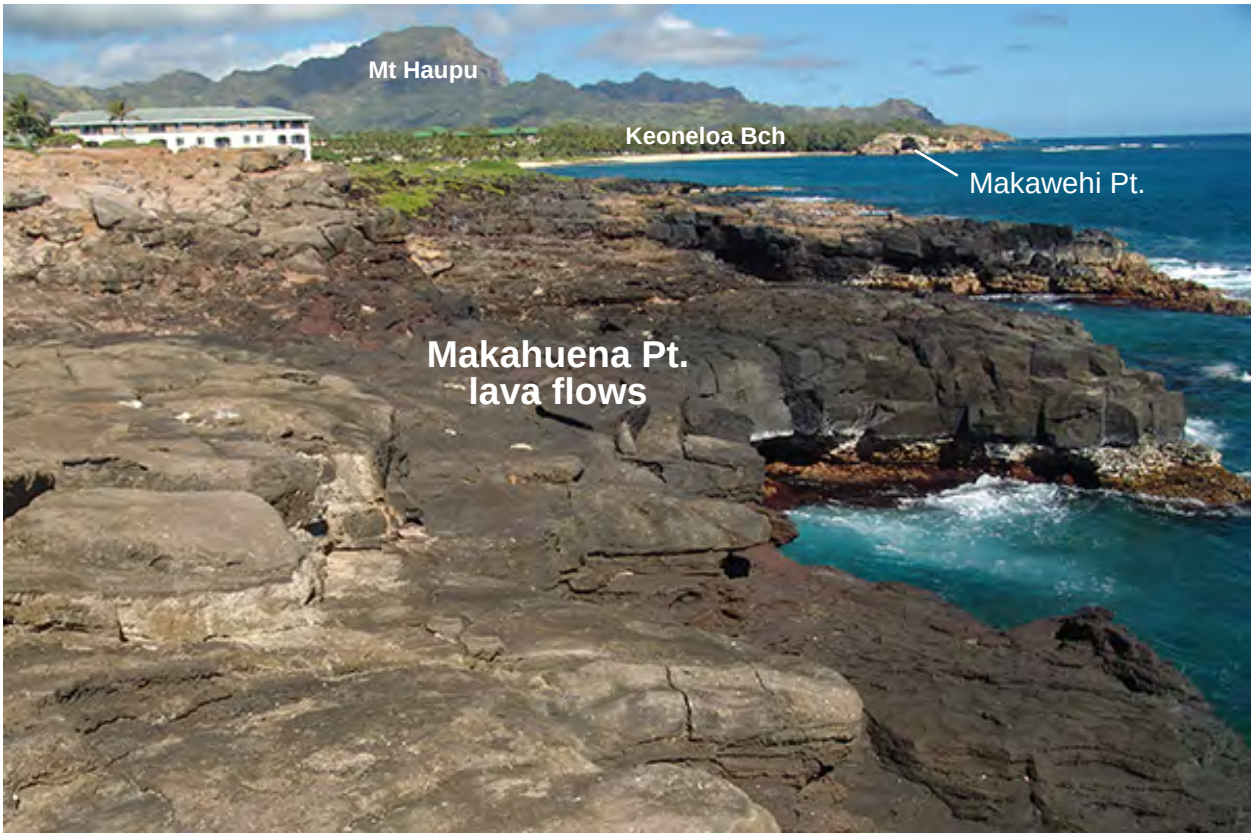


Photo 2. View east from Makahuena Point displaying the gently inclined lava flowspresent across most of the Makahuena Point property. Flows dip seaward mostly at less than 5 degrees. Keoneloa ("Shipwrecks") Beach and Makawehi Pt. is present along the distant shoreline with Haupu Mt. in the far distance.



Photo 3. Coastal view of central portion of collapsed lava tube partly filled with coarse lava block rubble and post collapse lava flows.

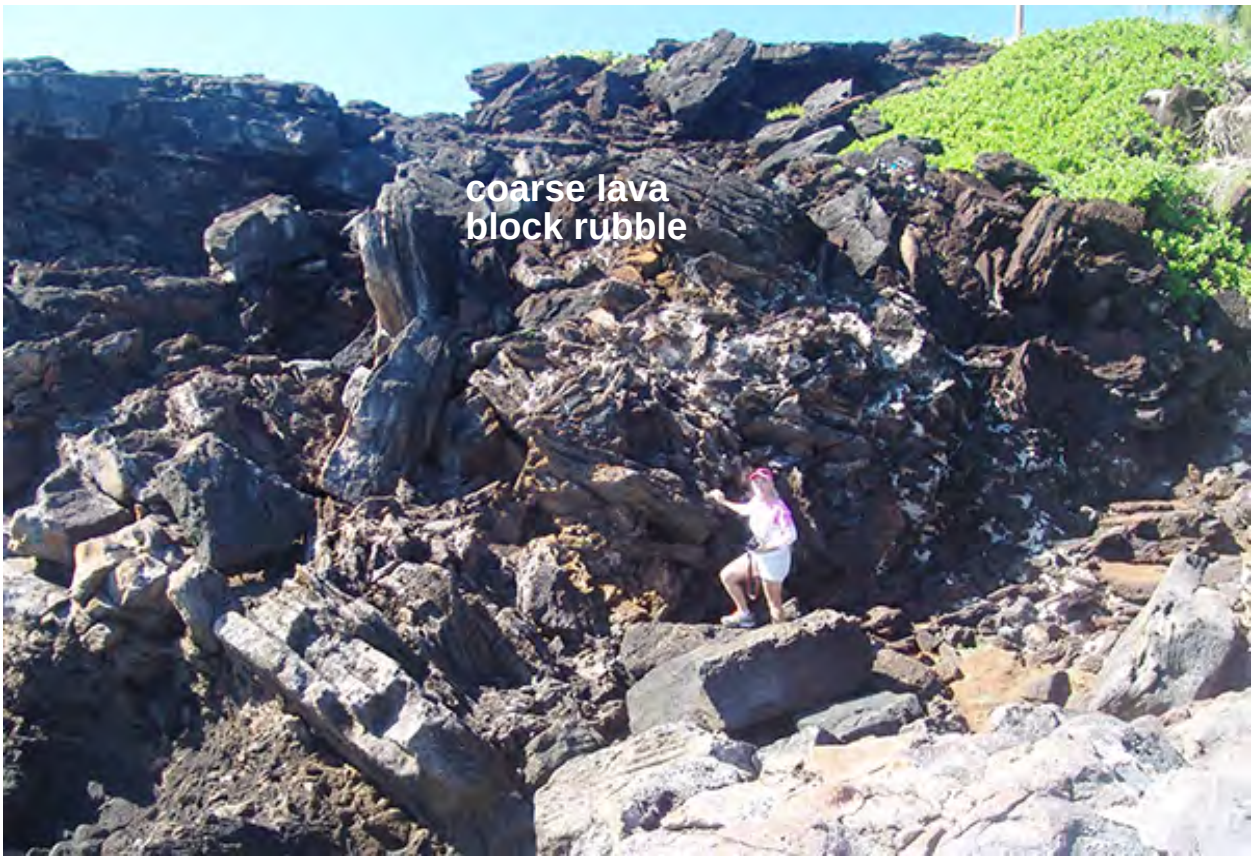


Photo 4. Chaotic lava block rubble within collapsed lava tube at coastal exposure.



Photo 5. Eastern edge of lava tube displaying roll of lava flows into collapsed tube and late stage lava flows partly filling tube after soon after collapse.

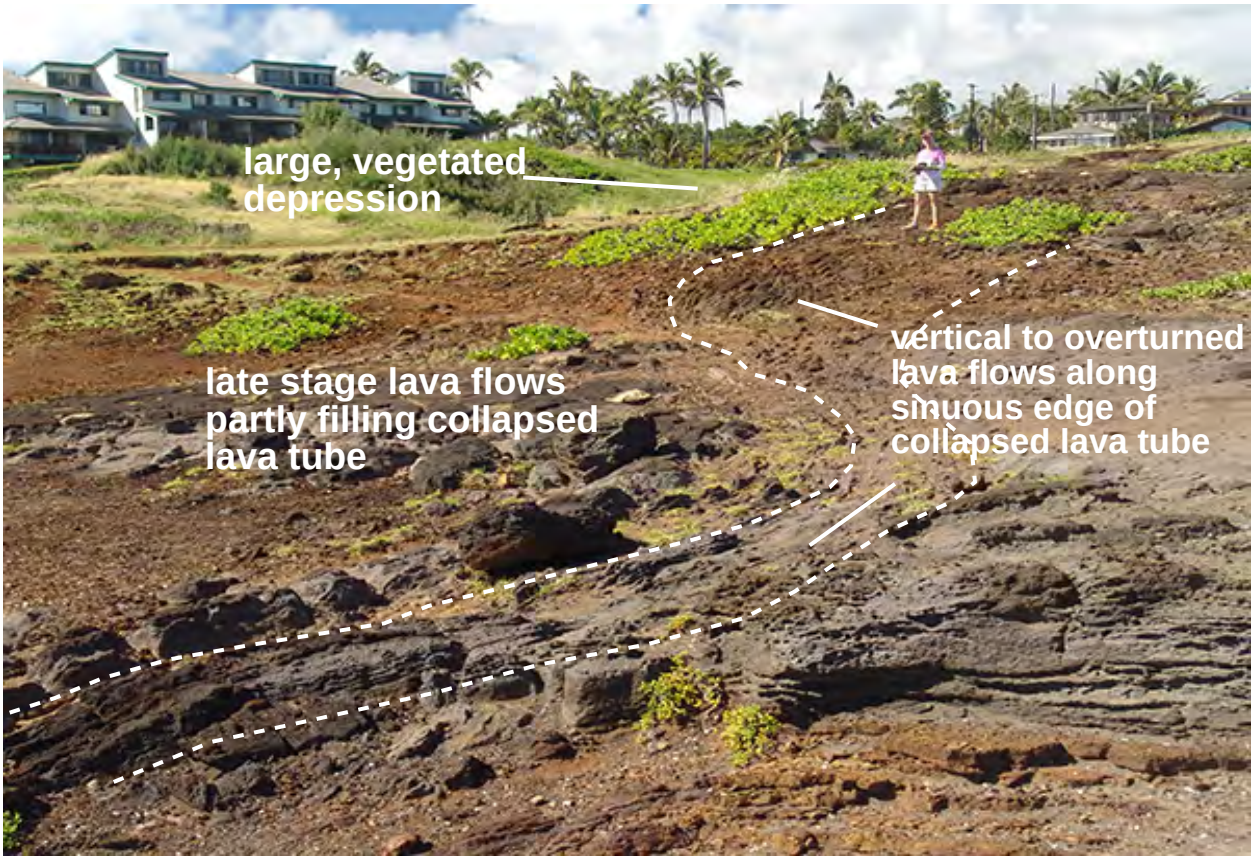


Photo 6. Sinuous edge of collapsed lava tube with vertical to overturned lava flows along margin and post collapse lava flows partly filling tube structure.

EXHIBIT O-3

AECOS No. 1269

Biological surveys for Makahū'ena Project site (TMK: 2-8-21: 041), Po'ipū, Kaua'i



Prepared For:

CIRI Land Development Co.
2525 C Street, Suite 500
Anchorage, Alaska

Prepared By:

AECOS Inc.
939 Kamehameha Highway, Suite 104
Kāne'ohe, Hawai'i

August 4, 2011

Exhibit K

EXHIBIT O-3

Biological surveys for Makahū'ena Project site (TMK: 2-8-21: 041), Po'ipū, Kaua'i[1]

August 4, 2011 *AECOS* No. 1269

Eric Guinther, Reginald David[2], Dr. Steve Montgomery[3], and Anita Manning[3]
AECOS Inc.
45-939 Kamehameha Highway, Suite 104
Kāne'ohe, Hawai`i 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: guinther@aecos.com

Introduction

The project site, owned by CIRI Land Development Company, is an approximately 13-acre (5.3-ha) coastal parcel (TMK: (4)2-8-21:041) at Makahū'ena Point, Weliweli, Po'ipū in the Kōloa District on the south side of the Island of Kaua'i (Figs. 1 and 2). A portion of the property previously was occupied by the Makahū'ena Point Lighthouse under the U.S. Coast Guard (USCG) and a few concrete structural remnants of that facility are still present. At the present time, the property is vacant land between the developments of The Point at Po'ipū (former Embassy Suites Hotel) and the Makahū'ena at Po'ipū. A modern marine navigation light (cover photo) under USCG control is located on an inholding owned by the State of Hawai'i.

The site is an L-shaped parcel (Fig. 2) that demonstrates a clear transition from wave swept cliffs, through coastal strand vegetation, into leeward (dry) scrub land. Thus, the zone closest to the shore—a wave-swept rocky substratum—supports essentially no terrestrial vegetation owing to frequent wetting by large waves and wave splash. Further inland is found a sparse, low-growing vegetation of plants tolerant of regular salt spray and minimal soil (Fig. 3). As the soil depth increases inland, plants gain density and stature, but still show the effects of strong and persistent winds. The interior leg of the parcel is

[1] This report was prepared for CIRI Land Development Co. to be used as needed to support an EA for site development ("Project"). This report will presumably become part of the public record.
[2] Rana Biological Consulting, Inc., Kailua-Kona, Hawai'i.
[3] Montane Matters, Waipahu, Hawai'i.



Figure 1. Project location on the Island of Kaua'i.

a bowl-shaped swale having steep upper margins (Fig. 4). This shape is not characteristic of an erosion swale, and the watershed is very short, lying on the seaward face of an eruption crater that presumably formed Makahū'ena Point. It has been suggested that the depression on the site represents a collapsed lava tube, although its large size casts doubt on that explanation. We suggest that the depression is a pit crater that developed on the side of Po'ipū Crater during its eruptive phase approximately 20,000 years ago (Hazlett & Hindman, 1996). Although the geology of the site represents late eruptions from the Koloa volcanic eruption series (Macdonald, Abbott, and Peterson, 1983), on the east side of the Point, perhaps just off the property, is found an excellent example of lithified sand dunes (see Fig. 9) formed when the sea level stood some 60 ft (m) lower than now (Stearns, 1966).



Figure 2. Project and survey area, Makahū'ena Point, Po'ipū. Various features from the biological surveys and described in the text are indicated.



Figure 3. Coastal portion of Project site looking west from near the eastern end of the L-shaped parcel. Tall structure on horizon near middle is Makahū'ena Point Light.



Figure 4. Inland leg of the Project parcel is a bowl-shaped swale with steep upper sides.

Methods

Biological surveys of the project site were undertaken in May-June 2011. The survey team assembled by *AECOS* Inc. included Dr. S. L Montgomery (invertebrates), Reginald David (vertebrates), and Eric Guinther (plants). Surveys were conducted independent of each other in as much as each specialty required methods standard to each discipline.

Surveys of other dryland areas have created a sizeable body of information on native invertebrates and related botanical resources found in similar areas (Bridwell, 1920; Swezey 1935). A search at the State's Office of Environmental Quality Control (2011) web site for surveys done on the subject parcel or in adjacent areas returned no reports that surveyed biota (OEQC, 2011). A search was made for independent biological studies associated with this site or with nearby sites. Searches were made in the Hawai'i State, Bishop Museum, and University of Hawai'i libraries. Online proprietary data bases such as Ingenta Connect were searched. Searches were made for publicly available articles on the internet (Google Scholar, Google Books, University of Hawaii's Scholar Space and eVols (2011). Data base searches were made in Bishop Museum's Arthropod (2002a) and Mollusk (2002b) checklists, and the University of Hawai'i, Hamilton Library's Hawai'i-Pacific Journal Index (2011). Only adventive invertebrates species were reported. Searches in the Pacific Basin Information Node specimen database which provides geographic access (2011) returned records of fossil mollusks. A search in the Hawai'i Natural Heritage Program (2011) database returned no records for this area.

Plant names used in this report generally follow Staples and Herbst (2005) and Wagner, Herbst, and Sohmers (1990, 1999). Invertebrate names follow *Freshwater & Terrestrial Mollusk Checklist* (HBS, 2002b), *Common Names of Insects & Related Organisms* (HES, 1990), and *Hawaiian Terrestrial Arthropod Checklist* (HBS, 2002a; Nishida 2002). The avian phylogenetic order and nomenclature used in this report follows *The American Ornithologists' Union Checklist of North American Birds 7th Edition* (American Ornithologists' Union 1998), and the 42nd through the 51st supplements to *Check-list of North American Birds* (American Ornithologists' Union, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011). Mammal scientific names follow *Mammals in Hawaii* (Tomich, 1986).

Botanical Survey

The botanical field survey consisted of walking a majority of the parcel on May 25, 2011. Plants were identified as they were encountered and an estimate

made of the relative abundance of each species developed as the survey progressed.

Invertebrate Survey

Field surveys for invertebrates were conducted June 2-3, 2011. Initially, a general assessment of terrain and habitats was made, followed by survey efforts at various times of day and night, vital for a thorough invertebrate survey.

Visual observation — Visual observations are a cross check that extends the reach of sampling techniques. Visual observation also included turning over rocks, examining dead wood, and other debris.

Host plant searches — Potential host plants, both native and introduced, are searched for arthropods that feed or rest on plants. For this survey, wandering transects were followed throughout the coastal and inland area with emphasis on examining native host plants.

Sweep nets — Sweeping is a common method of general collecting for most flying and perching insects. A fine mesh net is swept across plants, leaf litter, rocks, pond surfaces, etc. to collect any flying, perching, or crawling insects. Transfer from the net is either by aspiration, or by placing the net contents directly into a holding container.

Baiting — Baits are used to attract insect species to specific tastes or smells. For example, native beach crickets respond to a strong odor of decaying proteins. Baits can mimic that smell and attract those insects. Baits of old fish and odoriferous blue cheese, proven attractants, were placed at likely locations in bottle traps and checked periodically. Any insects at the bait are then observed and censused. This method is more efficient than roaming the area seeking cryptic or night active insects; baiting is a recognized method of censusing beach crickets.

Light survey — A survey of insects active at night is vital to a complete record of the fauna. Many insects are active only at night to evade birds, avoid desiccation and high temperatures, or to use night food sources, such as flowers that only open at night. A light survey employs a bright light source in front of a white cloth sheet (Fig. 5). Nocturnal insects seem to mistake the collecting light for the light of the moon, which they use to orient themselves. In attempting to navigate, disoriented insects are drawn toward the collecting light and land on the cloth in confusion. This type of collecting is most successful during the dark phase of the moon or under clouds blocking moonlight.



Figure 5. Night active invertebrates respond to a light census, being drawn to a lighted sheet as shown here.

Sampling was conducted for 6 hours on June 2 and 9 hours on June 3, 2011. The light source was a mercury vapor (MV) bulb. An additional, ultraviolet (UV) light source was used at all sites. Competing light from housing, street lights, and other artificial sources was present but not a major distraction to the census light. Locations on the site were chosen based on experience, host plant proximity, and terrain. Location choice also was influenced by a desire to shield seabirds from the light to preclude drawing any off course and towards the light. Placement locations are marked on Fig. 2.

Some invertebrate images used in this report were not taken in the course of this project. These photos, marked by © symbol, were made by Anita Manning or S. L. Montgomery and are used here because they best illustrate the discussion.

Bird Survey

Two avian count stations spaced approximately equidistant from each other were sited within the study site. Eight-minute point counts were made at each

station. Stations were each counted once. Field observations were made with the aid of Leica 10 X 42 binoculars and by listening for vocalizations. Counts were concentrated during the early morning hours, the peak of daily bird activity. Additionally, we conducted a search of the property for active Wedge-tailed Shearwater burrows, and recorded the locations of burrows with a hand-held GPS unit. Time not spent at counting stations was used to search the Project site for species and habitats not detected during count sessions.

Other Vertebrates Survey

With the exception of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), or *'ōpe'ape'a* as it is known locally, all terrestrial mammals currently found on the Island of Kaua'i are alien species, and most are ubiquitous. The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all vertebrate species observed and heard within the project area.

Survey Limitations / Conditions

Our ability to form advisory opinions is influenced in the following ways:

- **Weather**: Weather was mixed June 2-3, 2011. Rain was disruptive on June 2 and a second evening of surveying was conducted June 3 to ensure appropriate coverage. Conditions for collecting were good on June 3. Weather conditions were excellent on May 25, although onshore winds were strong.

- **Seasons**: Weather and seasonal vegetation play an especially important role in any biological survey. Host plant presence/absence, and seasonal changes, especially plant growth after heavy rains, affect the species collected. Many arthropods time their emergence and breeding to overlap or follow seasonal weather, or to coincide with growth spurts of an important food plant. Monitoring at a different time of the year might produce a different list of species. After seasonal rains, vegetation was in a good state to both identify and act as host to many invertebrates. Nevertheless, the very low number of native plants and the presence of ants—a strong alien predator on arthropods—were strong factors in limiting native invertebrates encountered; more so than the seasonal condition of vegetation.

- **Moon**: The moon was 'dark' and obscured by cloud cover on the evenings of June 2 and 3, 2011. (USNO) The nearby artificial light sources offered by street lights and buildings offered minimal competition to the arthropod census light.

- **Limited duration**: The survey provides a reasonable review of the biological resources present given the size of the property and time allotted. The area is not large, yet it is always possible that a biologist will miss one or more species if population levels are low. Surveying for a longer period of time might enlarge our lists of species. A few species reasonably expected to occur on the property were not found (see Species Not Observed on page 24).

- **Selectivity**: The plant and bird surveys attempted to chronicle all vascular plants and birds, respectively, occurring on the Project site. The invertebrate survey focused on finding terrestrial endemic and indigenous Hawaiian species. No attempt was made to completely document the common alien arthropod or all non-avian, alien vertebrate species present.

Botanical Survey Results

Vegetation

Site vegetation transitions from coastal strand through grassland into a dryland scrub across the parcel from shoreline to Pe'e Road. Fronting the Point at Po'ipū the grassland appears to be regularly mowed. Inland and both to the east and west, the land is completely developed in private homes and resort buildings and grounds. The coastal strand extends both east and west fronting the oceanfront developments, but as a narrower zone than in the Project parcel. In general, the coastal strand has a much higher proportion of native plants, approaching 100% of the vegetation cover within that part of the habitable zone closest to the ocean, whereas the interior scrub supports very little in the way of native plants.

Flora

Table 1 is a listing of the plants noted as growing on the Project parcel. The table lists plants observed in May 2011. Plants are arranged in a taxonomic order, with species listed alphabetically by family. Plant "status" follows the common name and indicates whether a species is native (endemic [**End**] or indigenous [**Ind**]), an early Polynesian introduction (before 1778; **Pol**), or non-native (either naturalized [Nat] or ornamental [Orn]). Of course native plants and naturalized non-natives are sometimes used as ornamentals. A plant species status relates to its situation generally within the Hawaiian Islands, not just the survey area.

Relative abundance values are for the property as a whole and the coding is explained in the legend at the end of the table. Notes provide additional information on each species. Note <1> indicates a plant particularly associated with the coastal strand, where its relative abundance would be higher if considered for just this area (these plants are usually absent from the interior scrub vegetation). Note <2> indicates a native or naturalized plant that appears to be part of plantings made on the property. An area on the Makahū'ena at Po'ipū development side of the Project property is being tended as an informal garden. In addition, ornamental plantings along the property line with adjacent parcels were included in the survey for completeness.

A total of 86 species of vascular plants were recorded from the Project area. The listing includes no ferns or fern allies, and one conifer (Cook pine, *Auracaria columnaris*), the remainder belonging to various taxa of flowering plants. A total of 8 species (9.3%) are considered to be indigenous (native plants also

Table 1. Flora for CIRI Land Development Company, Makahū'ena parcel, Poipu, Kauai

Species	Common name	Status	Abundance	Notes
	CONIFERS and CYCADS			
ARAUCARIACEAE				
Araucaria columnaris (G. Forst.) J.D. Hook.	Cook pine	Nat	R	<2>
	FLOWERING PLANTS			
	DICOTYLEDONE			
ACANTHACEAE				
Asystasia gangetica (L.) T. Anderson	Chinese violet	Nat	O	
Barleria repens C. Nees	pink-ruellia	Orn	U2	
AIZOACEAE				
Aptenia cordifolia (L.) N.E. Brown	hearts-and-flowers	Orn	U	
Sesuvium portulacastrum (L.) L.	*'ākulikuli*	**Ind**	C	<1>
AMARANTHACEAE				
Amaranthus lividus L.	---	Nat	R1	
Mangifera indica L.	khaki weed	Nat	O	
ANACARDIACEAE				
Schinus terebinthifolius Raddi	Christmas berry	Nat	U	
APOCYNACEAE				
Carissa macrocarpa (Ecklon) A. de Cand.	Natal-plum	Orn	R	
Plumeria rubra L.	graveyard flower	Orn	U	
Thevetia peruviana (Pers.)K. Schum.	be-still	Nat	R	
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	octopus or umbrella tree	Nat	R	
ASTERACEAE (COMPOSITAE)				
Bidens pilosa L.	Spanish needle	Nat	R1	
Emilia fosbergii Nicolson	Flora's paintbrush	Nat	U	
Gaillardia x *grandiflora* Van Houtte	*waikāhuli*	Orn	R	<2>
Hypochoreus cf. *radicata* L.	hairy cat's ear	Nat	R1	<1,3>
Pluchea indica (L.) Less.	Indian fleabane	Nat	U1	
Pluchea carolinensis (Jacq.) G. Don	sourbush	Nat	U	
Verbesina encelioides (Cav.) Benth. & Hook.	golden crown-beard	Nat	O1	
BORAGINACEAE				
Tournefortia argentea L. fill.	tree heliotrope	Nat	R	<1>
BRASSICACEAE				
Lobularia maritima Desvaux	sweet alysum	Orn	U	<2>
CACTACEAE				
Cereus hildmannianus K. Schum.	spiny tree cactus	Nat	U	
Hylocereus undatus (Haworth) Britt. & Rose	night-blooming cereus	Nat	R	<3>

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
CACTACEAE (continued)				
Opuntia ficus-indica (L.) Mill.	pānini	Nat	R1	
Selenicereus cf. *macdonaldiae* (Hooker) Britton & Rose	snake cactus	Nat	R	<3>
CAPPARACEAE				
Cleome gynandra L.	wild spider flower	Nat	R	
CASUARINACEAE				
Casuarina equisetifolia L.	ironwood	Nat	U	
CHENOPODIACEAE				
Atriplex semibaccata R. Br.	Australian saltbush	Nat	A	<1>
Chenopdium murale L.	*'aheahea*	Nat	R	
CLUSIACEAE				
Calophyllum sp.	indet. street tree	Orn	U	
CONVOLVULACEAE				
Ipomoea obscura (L.) Ker-Gawl.	---	Nat	O	
Ipomoea triloba L.	little bell	Nat	U	
Merremia aegyptia (L.) Urb.	hairy merremia	Nat	R1	
CUCURBITACEAE				
Cucumis dipsaceus Ehrenb. & Spach	teasel gourd	Nat	U1	
CRASSULACEAE				
Bryophyllum tubiflorum Harvey	chandelier plant	Nat	R3	
EUPHORBIACEAE				
Chamaesyce albomarginata (Torr. & A. Gray) Small	rattlesnake weed	Nat	R	
Chamaesyce hirta (L.) Millsp.	garden spurge	Nat	O1	
Chamaesyce hypericifolia (L.) Millsp.	graceful spurge	Nat	O	
Codiaeum variegatum (L.) Blume	croton	Orn	U	
Pedilanthus tithymaloides tithymaloides (L.) Poiteau	slipper flower	Orn	R3	<2>
Phyllanthus debilis Klein ex. Willd.	niuri	Nat	R	
Ricinus communis L.	castor beran	Nat	R	
FABACEAE				
Desmanthus pernambucanus (L.) Thellung	virgate mimosa	Nat	U	
Indigofera hendecaphylla Jacq.	prostrate indigo	Nat	R	
Macroptilium atropurpureum (DC) Urb.	---	Nat	U	
GOODINACEAE				
Scaevola taccada (J. Gaert.) Roxb.	*naupaka kahakai*	**Ind**	C	<1>
LAMIACEAE				
Ocimum basilicum L.	sweet basil	Orn	R	<2>
MALVACEAE				
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	Nat	U	

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
MALVACEAE (continued)				
Hibiscus rosa-sinensis L. cultivars	Chinese hibiscus	Orn	U	
Malvastrum coromandelianum (L.) Garcke	false mallow	Nat	C	
Sida fallax Walp.	*ilima, ilima papa*	**Ind**	C	
Sida rhombifolia L.	---	Nat	R	
MORACEAE				
Ficus microcarpa L. fil.	Chinese banyan	Nat	R	
MYRTACEAE				
Syzygium cumini (L.) Skeels.	Java plum	Nat	R	
NICTAGINACEAE				
Boerhavia acutifolia (Choisy) J.W. Moore	*alena*	**Ind**	R	<1>
Bougainvillea cult.	bougainvillea	Orn	U	
POLYGONACEAE				
Coccoloba uvifera (L.) L.	sea-grape	Orn	R	<1>
PORTULACACEAE				
Portulaca pilosa L.	---	Nat	U	<1>
PRIMULACEAE				
Anagallis arvensis L.	scarlet pimpernel	Nat	R	
SOLANACEAE				
Solanum americanum Mill.	*pōpolo*	**Ind**	O	
Solanum lycopersicum cerasiforme (Dunal) Spooner, G.J. Anderson, & R.K. Jansen	cherry tomato	Nat	U	
STERCULIACEAE				
Waltheria indica L.	*'uhaloa*	**Ind**	O	
VERBENACEAE				
Clerodendrum inerme (L.) Gaertn.	---	Orn	R3	
Lantana camara L.	lantana	Nat	C	
Stachytarpheta australis Moldenke	---	Nat	O	
Stachytarpheta jamaicensis (L.) Vahl.	Jamaica vervain	Nat	R	
Vitex rotundifolia L. fil.	*pōhinahina*	**Ind**	R	
MONOCOTYLEDONES				
AGAVACEAE				
Agave vivipara L.	---	Orn	R	<2>
Cordyline fruticosa (L.) A. Chev.	*ki*; green ti	**Pol**	R	<2>
Furcraea foetida (L.) Haw.	Mauritius hemp	Nat	R	<2>
ALOEACEAE				
Aloë vera (L.) N.L. Burm.	aloe	Orn	U1	<2>
ARECACEAE				
Cocos nucifera L.	coconut palm	**Pol**	R	

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
COMMELINACEAE				
Tradescantia spathacea Swartz	Moses-in-the-cradle	Orn	R	
LILIACEAE				
Crinum asiaticum L.	giant lily	Nat	R	
POACEAE (GRAMINEAE)				
Axonopus fisifolius (Sw.) P.Beauv.	nrw-lvd. carpetgrass	Nat	O3	
Cenchrus echinatus L.	sandbur	Nat	R	
Chloris barbata (L.) Sw.	swollen-finger grass	Nat	A	
Chloris virgata Sw.	feather fingergrass	Nat	C3	
Cynodon dactylon (L.) Pers.	Bermuda grass	Nat	A	<1>
Dactyloctenium aegyptium (L.) Willd.	beach wiregrass	Nat	R	
Digitaria insularis (L.) Mez ex Ekman	sourgrass	Nat	AA	
Eleusine indica (L.) Gaertn.	wiregrass	Nat	U	
Setaria verticillata (L.) P. Beauv.	bristly foxtail	Nat	R2	
Sporobolus virginicus (L.) Kunth	*'aki'aki*	**Ind**	A	<1>
Panicum maximum (Jacq.)	Guinea grass	Nat	AA	
STRELITZIACEAE				
Strelitzia reginae Dryander	bird-of-paradise	Orn	R	<2>

Legend to Table 1

Status = distributional status
- **End.** = endemic; native to Hawai'i and found naturally nowhere else.
- **Ind.** = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.
- Nat. = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.
- Orn. = exotic, ornamental or cultivated crop; plant not naturalized (not well-established outside of cultivation, at least at this location).
- **Pol.** = Polynesian introduction; brought to the Hawaiian Islands before 1778.

Abundance = occurrence ratings for plants on property in March 2008
- R - Rare - only one or two plants seen.
- U - Uncommon - several to a dozen plants observed.
- O - Occasional - found regularly, but not abundant anywhere.
- C - Common - considered an important part of the vegetation and observed numerous times.
- A - Abundant - found in large numbers; may be locally dominant.
- AA - Abundant - very abundant and dominant; defining vegetation type.

Numbers (as in R3) offset occurrence ratings (1 – several plants; 2 – many plants; 3 – abundant in a limited area) in cases where distribution across the survey area may be limited, but individuals seen are more than indicated by the occurrence rating alone.

Notes:
- <1> Associated with the coastal strand zone along top of cliff (Fig. 2).
- <2> Associated with landscape plantings in the area.
- <3> Plant lacking flowers or fruit; identification uncertain.

native to places outside of the Hawaiian Islands). Two additional species (2.3%) are Polynesian introductions (so-called "canoe plants"), arriving in these Islands well before 1778. The remainder (88.3%) are plants introduced to the Islands since 1778—most in the last century—and now naturalized (escaped from cultivation).

Although none of the natives growing at the Project site is considered an endemic species (defined as uniquely native to the Hawaiian Islands), the abundance of several of the indigenous species is high within the coastal strand environment (see Fig. 10). Drying winds, salt air, and shallow soil make this environment very harsh and few plants readily adapt to these conditions. All of plants found in this environment on the Project site are widespread species (in Hawai'i as well as on other tropical Pacific islands), typically dispersed by ocean currents. Nonetheless, outside of the coastal strand, it is rare to find a vegetation on lowland Kaua'i dominated by native plants.

A total of 16 species of plants (18.6%) in Table 1 are regarded as ornamentals (not naturalized in Hawai'i at this time), although many more are planted and/or cultivated on the site or immediately adjacent as ornamentals. These plants are regarded as naturalized because that is their status in the Islands. Both naturalized and native plants are planted as ornamentals in some landscaping situations.

Invertebrate Survey Results

Native terrestrial invertebrate species of note are discussed here. Also, information is provided on adventive (naturalized) species often misidentified or confused with native species. Non-native species on the Project site that constitute a danger to native species (e.g., ants) or potential hazard to humans (e.g., paper wasp) are also discussed.

The results of the survey are presented in Table 2. Although this listing shows three species as new island records[4], this is not remarkable considering the survey for available literature (see page 6) indicated no previous invertebrate surveys at this location.

Native Arthropoda ~ Araneae (spiders)

Fam. Lycosidae: *Lycosa hawaiiensis*: wolf spider

This endemic spider (Fig. 6) is known in similar environments along this coast. Wolf spiders hide by day and hunt by night in established individual territories. These quick, strong predators will feed on non-native invertebrates allowing it to adapt to a changed menu. Females provide maternal care to their young,

[4] New island record designation indicates this species has not been previously reported as present on an island.

Table 2. List of invertebrates, Makahū'ena property, Kōloa, Kaua'i, June 2011.

Taxon / Species	Common Name	Status	Frequency	Notes
MOLLUSCA				
GASTROPODA				
PULMONATA	snails and slugs			
ACHITINIDAE				
Achatina fulica	Giant African Snail	Adv	A	
SPIRAXIDAE				
Euglandina rosea	Rosy Wolf Snail	Adv	C	
ARTHROPODA				
ARACHNIDA				
ARANEAE	spiders			
HETEROPODIDAE				
Heteropoda venatoria	Cane spider	Adv	C	
ARANEIDAE				
Argiope appensa (Walckenaer 1841)	orb weaver spiders	Adv	U	
LYCOSIDAE				
Lycosa hawaiiensis Simon, 1899	wolf spider	End	U	observed only
ARTHROPODA				
INSECTA				
COLLEMBOLA	springtails			
ENTOMOBRYIDAE				
undetermined sp. 1		unknw	C	under stones
DIPTERA				
CABACIDAE				
Canaceoides hawaiiensis Wirth, 1969	beach fly	End	C	
CERATOPOGONIDAE				
Forcipomyia hardyi Wirth & Howarth, 1982		End	A	at light
CHIRONOMIDAE	bloodworm midges			
Chironomus hawaiiensis Grimshaw, 1901		End?	U	at light
HELEOMYZIDAE				
Spilochroa ornata (Johnson, 1895)		Adv	C	at light; new island record
HETEROPTERA	true bugs			
LYGAEIDAE	seed bugs			
Nysius sp.		End	U	at light

Table 2 (continued).

Taxon / Species	Common Name	Status	Frequency	Notes
HOMOPTERA	planthoppers			
CICADELLIDAE	leafhoppers			
Balclutha hospes		End	C	at light
DERBIDAE				
Cedusa sp.		Adv	U	at light; new island record
PSYLLIDAE				
Heteropsylla cubana (Cawford, 1914)		Adv	AA	on *koa haole*
HYMENOPTERA	wasps, bees, ants			
ANTHOPHORIDAE				
Ceratina sp. near *dentipes*		Adv	U	
Xylocopa sonorina F. Smith, 1874	Carpenter bee	Adv	C	
COLLETIDAE				
Hylaeus albonitens (Cockerell, 1905)		Adv	R	
FORMICIDAE	ants			
Camponotus variegatus	Carpenter ant	Adv	C	at light
Pheidole megacephala (Fabricius, 1793)	Big-headed ant	Adv	C	on soil
VESPIDAE	wasps			
Polistes exclamans Viereck, 1906	Common paper wasp	Adv	O	
LEPIDOPTERA	butterflies & moths			
CHOREUTIDAE				
Choreutis sp.	Twisted wing moth	Adv	C	at light; new island record
COSMOPTERIGIDAE				
Anatrachyntis incertulella (Walker, 1864)		Adv	O	
Ithome concolorella (Chambers, 1875)	*Kiawe* flower moth	Adv	C	
Trissodoris honorariella (Walsingham 1907)		Adv	U	
GEOMETRIDAE				
Macaria abydata Guenee, 1857		Adv	A	at light
GRACILLARIIDAE				
Caloptilia sp.		Adv	U	
NOCTUIDAE				
Achaea janata (Linnaeus), 1758	Croton caterpillar	Adv	C	
Ascalapha odorata (Linnaeus, 1758)	Black witch moth	Adv	O	at light

Table 2 (continued).

Taxon / Species	Common Name	Status	Frequency	Notes
LEPIDOPTERA (continued)				
SPHINGIDAE				
Agrius cingulata (Fabricus, 1775)	Sweet potato hornworm	Adv	U	at light
Deilephila nerii (Linnaeus), 1758	Oleander hawk moth	Adv	U	
Hippotion rosetta (Swinhoe 1892)	Boerhavia sphinx moth	Adv	U	at light
ODONATA	dragonflies; damselflies			
LIBELLULIDAE	skimmers			
Pantala flavescens (Fabricius, 1798)	Globe skimmer	Ind	U	seen in flight
ORTHOPTERA	grasshoppers, crickets			
GRYLLIDAE	crickets			
Caconemobius sandwichensis Otte,1994	Beach cricket	End	U	

Key to Table 2:

FREQUENCY = occurrence ratings:

R	Rare	seen in only one or perhaps two locations.
U	Uncommon-	seen in several locations
O	Occasional	seen with regularity
C	Common	observed numerous times
A	Abundant	found in large numbers
AA	Very abundant	abundant and dominant

STATUS:

End	endemic to Hawaiian Islands
Ind	indigenous to Hawaiian Islands
Adv	adventive
Pur	purposefully introduced
Unkw	unknown

carrying them for a few days after hatching. One individual was seen, but not captured (Manning/ Montgomery in Liittschwager & Middleton 2001).



© Figure 6. Native wolf spider

Native Arthropoda ~ Insecta

HETEROPTERA (True bugs)
Fam. Lygaeidae: *Nysius* sp.

This native seed bug, commonly found in dryland locations, uses many alien and native host plants. It is known from most islands in the Hawaiian chain. (Swezey, 1954)

ODONATA (Dragonflies and Damselflies)
Fam. Libellulidae: *Pantala flavescens*: Globe skimmer

An indigenous dragonfly (*Pantala flavescens)* (Fig. 7) was observed on the property. Among the most readily observed native insects, they are large, easily approached by people, and graceful in flight. Any small amount of fresh water will attract them and they often colonize human maintained water sources such as golf-course water hazards and stock tanks. Globe skimmers are widely distributed throughout the Hawaiian Islands from Kure to Hawai'i Island (HBS, 2002a; Nishida, 2002) and have even been found flying at sea (Howarth & Mull, 1992).



© Figure 7. Globe skimmers use a wide variety of water sources to lay eggs in.

ORTHOPTERA (Grasshoppers, Crickets)
Fam. Gryllidae: *Caconemobius sandwichensis:* Beach cricket

Caconemobius sandwichensis (Fig. 8) are specialists feeding on marine detritus in the splash zone among boulders statewide (Fig. 9; Otte, 1994). Being nocturnal, they are found by setting out traps (bottle and similar containers) with baits of rotten fish or blue cheese.





© Figure 8 (above). Native beach cricket.

Figure 9 (left). *Caconemobius* live in the splash zone of rocky beaches, emerging at night to feed on marine debris. Plants shown are two natives, *naupaka* and *'akulikuli,* prominent members of the coastal strand community.

Alien Arthropoda ~ Araneae (spiders)

Fam. Araneidae: *Argiope appensa*

A common orb weaving spider (*A. appensa*; Fig. 10) may be fearful in appearance, but is not a threat to humans. The large female is most often seen while the smaller male is less frequently noticed. The species' large and conspicuous webs often are built across footpaths because of the natural breezeway brings prey to the web. A gentle nudge with a small stick is usually sufficient to clear them from the path. This spider was seen in several locations on the property and serves as a natural pest control operator.

Fam. Heteropodidae: *Heteropoda venatoria:* Large brown spider or Cane spider

Although this fast running spider (Fig. 11) is often startling to people, they are not known to bite or harm humans. Conversely, they are helpful in controlling pests such as cockroaches. They may be encountered by work crews in piles of dry brush or under discarded wood or cardboard. They should be allowed to run away.



Figure 10. *Argiope appensa* dorsal view; larger female; smaller male upper right.



Figure 11. *Heteropoda venatoria* or Cane spider mother holding an egg pouch.

Alien Arthropoda ~ Insecta

HOMOPTERA
Fam. Psyllidae: Jumping plant louse

This alien species (Fig. 12) sucks plant juices from *koa haole.* They responded to the light survey in large numbers. Their numbers can reach levels that are annoying to hikers.



Figure 12. Jumping plant louse (*Heteropsylla cubana*)

LEPIDOPTERA (butterflies and moths)
Fam. Geometridae: *Macaria abydata*: *Koa haole* moth

This moth (Fig. 13) is common throughout the islands. It feeds on a wide variety of native and alien plants, especially legumes. The caterpillars can reach large numbers and strip plant leaves. Usually, parasites and predators are attracted to this large food source and reduce the moth population.



Figure 13. *Macaria abydata* moth and caterpillar.

Fam. Noctuidae: *Ascalapha odorata*: Black witch moth

This moth (*A. odorata*; Fig. 14) has been widely distributed in the island chain since the first sightings at Hōnaunau in 1928 (Bryan, 1929). This large moth is occasionally mistaken for a bat, especially as it is most frequently seen at dawn

or dusk. Although near homes it rests under the eaves of roofs during the day, at this location it is likely to hide under ledges, or high on tree trunks. It responded to the light survey.



© Figure 14. Black witch moths, eyes glowing in the camera flash, dine on a banana slice.

Fam. Sphingidae:

Moths of this large, easily seen group may be confused with *Manduca*, especially when the moth is resting with wings folded. *Manduca blackburnii*[5] has orange markings on the abdomen distinguishing it from other sphingids. All the caterpillars have 'horns' and form a similar brown pupa in the ground.

Agrius cingulata: Sweetpotato hornworm

This moth is widely distributed around the Hawaiian Islands. The caterpillars feed on all sweet potato, morning glory, and confamilial plants. It is the moth most easily confused with *Manduca*, the adult moth having pink markings along both sides (Fig. 15). When the moth is at rest with wings folded, these color markings are hidden.

Deilephila nerii: Oleander hawk moth

This large moth (*D. nerii*; Fig. 16), widely distributed throughout the Hawaiian chain, was found in our survey. Despite the 'oleander' name, a wide variety of

[5] *Manduca blackburnii* is a Hawaiian endemic and an ESA listed species.

plants can serve as host to the caterpillar. Common in south Asia, it first appeared in the islands at Hickam Air Force Base on O'ahu in 1974 and quickly spread out from there (Kunishi, 1976). It is distinguished by green markings on both wings and body.



©Figure 15. The Sweetpotato hornworm showing pink markings along the abdomen.



©Figure 16. An Oleander hawk moth

HYMENOPTERA (wasps, bees, ants)

Alien predatory ants are a major cause of low numbers of native arthropods. The bigheaded ant (*Pheidole megacephala*) and the carpenter ant (*Camponotus variegatus*), which prey on other insects (Zimmerman, 1948-80), are present on the property. Ants are well documented as a primary cause of low levels of native arthropods at elevations up to 2000 ft. (Perkins, 1913). Ant populations often do not overlap. Rather they have separate territories, effectively apportioning the hunting grounds between themselves, offering few, if any, ant-free zones where native arthropods can thrive.

Fam. Anthophoridae: *Xylocopa sonorina*: Sonoran carpenter bee

This large, introduced bee (Fig. 17) was seen in several areas. The name derives from their activity of chewing distinctive round, shallow tunnels for a home in soft, dry, dead wood. Males are golden and limited in number; females more numerous and black. Although relatively large, and noisy in flight, they are usually harmless. When dry wood where carpenter bees might live is disturbed, the bees will fly out to protest and may come quite close to people. They usually do not sting unless handled.



© Figure 17. Female carpenter bees are black; male bees are golden.

Species Anticipated But Not Observed

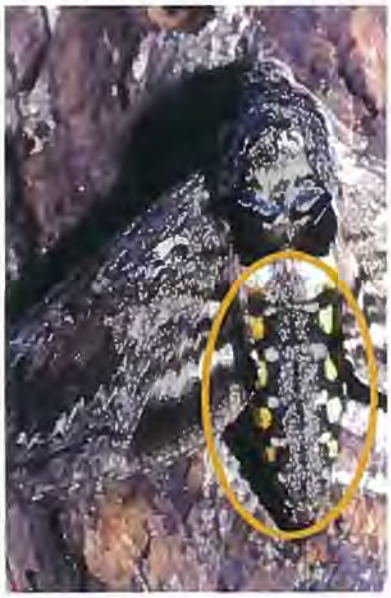
Mollusca — The Hawaiian amber snail, *Succinea* sp., is a native terrestrial mollusk approximately 6-8 mm. in length. This snail was not seen in our survey, but could reasonably be expected in the area with a longer search, having been previously recorded from Māhā'ulepū (Christensen, 1992). This group of snails may be arboreal or ground dwelling and occupies a wide range of habitats. All *Succinea* feed on decaying plant matter (Zimmerman, 2001). They often cover their shells with bits of leaf litter for camouflage (Cowie, 2006).

Insecta — Native insects that could reasonably be expected in the Project area seasonally or with a longer search, but were not seen:

- *Thyrocopa* sp., a micromoth;

- *Rhyncogonus*, a leaf weevil;
- *Cyrtopeltis kahakai*, the *Naupaka* leaf bug, is recorded in similar environments at Kapa'a (Asquith, 1993) from host plant, *naupaka kahakai* (*Scaevola sericea*), plentiful on the seaward part of the property;
- Long-legged flies, *Paraphrosylus acrosticalis* and *Hydrophorus pacificus,* are known from the shore zone statewide;
- *Hylaeus* sp., Yellow-faced bee, was found by this surveyor at a nearby coastal site in 2005 (Montgomery, 2005)

Blackburn's sphinx moth (*Manduca blackburni*; Fig. 18), an endangered species (Federal Register, 2003) which favors leeward slopes, was not found in this survey. The moth's solanaceous native host plant, *'aiea* (*Nothocestrum* sp.) and preferred alien host, tree tobacco (*Nicotiana glauca*), were not observed on the property. *Capparis sandwichiana*, a nectar plant favored by the adult moth, also was not encountered.



© Figure 18. Blackburn's sphinx moth is distinguished from other hawk moths by orange markings.

Lava Tube Habitat — Although a "collapsed lava tube" had been reported from the property, no entrances to lava tubes, a potential sensitive native invertebrate habitat, were found.

Medically Important Species on the Site

The project area includes some classic habitats for centipedes and scorpions (Fig. 19). Common paper wasps (*Polistes exclamans*) (Fig. 20) and honey bees were seen on the property. Those entering the property should be alert for species that can pose a serious risk to some individuals. Supervisors should be aware of any employee allergies. Some individuals can experience anaphylactic reactions to arthropod venom. Wasps can sting repeatedly and pose a particular hazard to children due to their smaller body weight.

Never put hands where eyes cannot see. When moving stones or removing trash, workers can greatly reduce the risk of accidental contact and bites or

stings with all species noted here by the use of gloves and wearing long sleeved shirts, long pants, and boots with socks pulled up over pant cuffs. See *What Bit Me?* (Nishida & Tenorio 1993) and *What's Bugging Me?* (Tenorio & Nishida 1995) for additional advice and cautions.



© Figure 19. Scorpions can be especially hard to detect in litter.



© Figure 20. Paper wasp.

Vertebrate Survey Results

Birds

A total of 55 individual birds representing 13 species from 11 separate families, were recorded during station counts (Table 3). Three of the species recorded: Wedge-tailed Shearwater (*Puffinius pacificus*), White-tailed Tropicbird (*Phaethon lepturus*), and Wandering Tattler (*Tringa incana*), are indigenous to the Hawaiian Islands. The two seabirds (shearwater and tropicbird) are indigenous breeding species, one of which (Wedge-tailed Shearwater) nests on the site. Wandering Tattler is an indigenous, migratory shorebird species. The remaining 10 species observed during the survey are alien (non-native species) to the Hawaiian Islands.

Table 3 - Avian Species Detected at Makahū'ena Point, June 2011

Common Name	Scientific Name	ST	RA
	PROCELLARIIFORMES		
	PROCELLARIIDAE - Shearwaters & Petrels		
Wedge-tailed Shearwater	*Puffinus pacificus*	IB	0.50
	PHAETHONIFORMES		
	PHAETHONTIDAE - Tropicbirds		
White-tailed Tropicbird	*Phaethon lepturus*	IB	0.50
	CHARADRIIFORMES		
	SCOLOPACIDAE - Sandpipers, Phalaropes & Allies		
Wandering Tattler	*Tringa incana*	IM	0.50
	COLUMBIFORMES		
	COLUMBIDAE – Pigeons & Doves		
Spotted Dove	*Streptopelia chinensis*	A	1.50
Zebra Dove	*Geopelia striata*	A	4.50
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	2.50
	STURNIDAE – Starlings		
Common Myna	*Acridotheres tristis*	A	3.00
	EMBERIZIDAE – Emberizids		
Red-crested Cardinal	*Paroaria coronata*	A	2.50
	CARDINALIDAE – Cardinals Saltators & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	1.50

Table 3 (continued).

Common Name	Scientific Name	ST	RA
	FRINGILLIDAE – Fringilline And Cardueline Finches & Allies		
	Carduelinae – Carduline Finches		
House Finch	*Carpodacus mexicanus*	A	4.00
	PASSERIDAE - Old World Sparrows		
House Sparrow	*Passer domesticus*	A	2.00
	ESTRILDIDAE – Estrildid Finches		
	Estrildinae – Estrildine Finches		
Chestnut Munia	*Lonchura atricapilla*	A	1.00
Java Sparrow	*Padda oryzivora*	A	3.50

Key to Table 3:

ST Status
RA Relative Abundance: Number of birds detected divided by the number of count stations (2)

A Alien species – Introduced to Hawai'i by humans, and have become established in the wild
IB Indigenous Resident – Native breeding species also found elsewhere naturally
IM Indigenous Migratory species – native migratory species does not breed in Hawai'i

Avian diversity and densities are in keeping with habitats present on the site, and the location along the south shore of the Island of Kaua'i. Three species—Zebra Dove (*Geopelia striata*), Java Sparrow (*Padda oryzivora*) and Common Myna (*Acridotheres tristis*)—accounted for 40% of the total number of individual birds recorded during station counts. The most commonly recorded species was Zebra Dove, which accounted for slightly more than 16% of the total number of individual birds recorded. An average of 27 birds were detected per station count—is a relatively low number—in keeping with the coastal location and limited habitats present on the site.

Seabirds — The Wedge-tailed Shearwater colony that stretches the length of the coastal strand area of the site, with at least a couple of outlying burrows further inland, represents a significant native avian resource. This colony has been expanding, albeit slowly for the past several years (David, 2011). During the course of this survey we mapped a total of 23 apparently active, or recently active, burrows (see white dots in Fig. 2; recorded positions are given in Table 4). Numerous scrapes, which appear not to be currently active, were noted but not recorded. This species is not listed under either federal or state endangered species programs; however, it is protected under the federal Migratory Bird Treaty Act (MBTA).

Table 4. Recorded coordinates of Wedge-tailed Shearwater active or recently active burrows on the Project site.

ID No.	Degrees North Latitude	Degrees West Longitude
2	21.869175	159.44464
3	21.868974	159.44434
4	21.870819	159.44163
6	21.870818	159.44163
7	21.870650	159.44185
8	21.870640	159.44206
9	21.870346	159.44221
10	21.870214	159.44237
11	21.869786	159.44276
12	21.869806	159.44276
13	21.869513	159.44314
14	21.869417	159.44298
15	21.869419	159.44296
16	21.869383	159.44296
17	21.869457	159.44284
18	21.869386	159.44317
19	21.869147	159.44353
20	21.869123	159.44354
21	21.869105	159.44354
22	21.869144	159.44364
23	21.869138	159.44371
24	21.868976	159.44435
25	21.869806	159.44400

Mammals

Two mammalian species were detected during the course of the survey. Tracks and scat of dogs (*Canis f. familiaris*) were encountered at several locations within the site. One cat (*Felis catus*) was seen prowling the shearwater colony on the northwest corner of the site.

General Discussion

Botanical Resources

For this site, maintaining a healthy mix of native plant species is particularly relevant for the coastal strand zone (Fig. 2), since this vegetation zone is presently dominated by native species. No botanical resources worthy of special protection occur landward of the strand zone.

Invertebrate Resources

Native Hawaiian plant, vertebrate, and invertebrate populations are interdependent. Certain insects are obligatorily attached to host plants, using only that plant as their food and others provide pollination for native plants. Invertebrates such as insects and snails, as well as the fruit and seeds of native plants, are the natural foods of native birds. The health of native Hawaiian ecosystems depends on habitat quality and absence or low levels of continental predators and herbivores. Sufficient food sources, host plant availability, and the absence of continental dominants comprise a classic native, healthy ecosystem. Where appropriate in the invertebrates results presentation above, host plants and introduced arthropods, birds, and mammals are noted.

Avian Resources

The findings of the avian survey are consistent with the location of the property, and the habitats present on the site. Three of the 13 avian species detected during the course of this survey, Wedge-tailed Shearwater, White-tailed Tropicbird, and Wandering Tattler are indigenous species. Wedge-tailed Shearwaters are a pelagic seabird species, which nests in Hawai'i, and in fact nests on the site. White-tailed Tropicbirds are also a pelagic indigenous breeding seabird species, though there are no resources on the site that this species utilizes. Wandering Tattlers are an indigenous migratory shorebird species that nests in the high Arctic during the late spring and summer months, returning to Hawai'i and the tropical Pacific to spend the fall and winter months each year. They usually leave Hawai'i for the trip back to the Arctic in late April or the very early part of May of each year. The single bird recorded on the site is likely one that is going to over-summer, and not make the journey north to breed.

In can be expected that at least three other migratory shorebird species, Pacific Golden-Plover (*Pluvialis fulva*), Ruddy Turnstone (*Arenaria interpres*), and Sanderling (*Calidris alba*) use resources on this site between late July and late

April each year. The remaining 10 avian species detected during this survey are all alien introductions to the Hawaiian Islands.

Two other seabird species not detected during our survey—Hawaiian Petrel (*Pterodroma sandwichensis*) and the threatened endemic sub-species of the Newell's Shearwater (*Puffinus auricularis newelli*)—have been recorded over-flying the Project area between April and the end of November each year (David, 1995; Morgan et al., 2003, 2004; David and Planning Solutions, 2008). Additionally, the Save Our Shearwaters (SOS) Program has recovered both species from the general Project area on an annual basis over the past three decades (Morgan et al., 2003, 2004; David and Planning Solutions, 2008; Save our Shearwater Program, 2010).

The petrel is listed as endangered and the shearwater as threatened under both federal (Endangered Species Act [ESA]) and State of Hawai'i endangered species statutes. The primary cause of mortality in both Hawaiian Petrels and Newell's Shearwaters is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered to be the second most significant cause of mortality of these seabirds in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way out to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, seabirds often collide with manmade structures, and if they are not killed outright, dazed or injured birds are easy targets of opportunity for feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1994; Podolsky et al., 1998; Ainley et al., 2001). There are no nesting colonies nor appropriate nesting habitat for either of these listed seabird species within the Project site.

Mammalian Resources

The findings of the mammalian survey are consistent with the location of the property and habitats currently present on the site. All three mammalian species detected during the course of this survey are alien to the Hawaiian Islands. Although no Hawaiian hoary bats were detected during the course of our survey, bats have been recorded foraging for insects within the general area on a regular basis (David, 2011). Hawaiian hoary bats are widely distributed in the lowland areas on the Island of Kaua'i, and have been documented in and around almost all areas that have some dense vegetation (Tomich, 1986; USFWS, 1998; David, 2011). There are no suitable roosting sites within the Project site for this species.

Although no rodents were detected during the course of this survey, it is likely that the four established alien Muridae found on Kaua'i—roof rat (*Rattus r. rattus*), Norway rat (*Rattus norvegicus*), European house mouse (*Mus musculus domesticus*), and possibly Polynesian rats (*Rattus exulans hawaiiensis*)—use various resources found within the project area. All of these human commensal rodents are deleterious to native ecosystems and native faunal species dependent on them.

Potential Impacts to Protected Species or Special Habitats

Critical Habitat

The subject property is not included in any federal Critical Habitat designations. Thus, development of the site will not impact Critical Habitat. No equivalent statute exists under state or county law.

Jurisdictional Waters

No federal waters or special habitats are present on the subject parcel inland from the mean high water (tide) line. The Pacific Ocean below mean higher high water (MHHW) along this shore is under federal jurisdiction as described in the Rivers and Harbors Act of 1899 and the Clean Water Act of 1972. Inland of this boundary, no streams or wetlands occur on the subject property. State of Hawai'i, Department of Land and Natural Resources (DLNR) jurisdiction extends seaward from the vegetation line (Hawaii Administrative Rules, §13-222)—a line presumably higher than the MHHW line along this wave-swept coast.

Botanical Resources

No plant species currently listed as endangered, threatened, or proposed for listing under either the federal or the State of Hawai'i's endangered species programs (DLNR, 1998; USFWS, 2005, 2010) were recorded within the Project property. Therefore, development of the site will not result in deleterious impacts to listed plant species.

Invertebrate Resources

No federal or state listed endangered or threatened land invertebrate species were noted in this survey (USFWS, 2010b).

Avian Resources

No avian species currently proposed for listing, or any that are listed under either federal or the State of Hawai'i endangered species statutes was recorded in our survey of the site (DLNR, 1998; USFWS, 2005a, 2005b, 2011). However, two listed seabirds fly over the area.

Hawaiian Petrel and Newell's Shearwater — The principal potential impact that development of this site poses to ESA-protected Hawaiian Petrel and

Newell's Shearwater is an increased threat that birds will be downed after becoming disoriented by outdoor lighting associated with either night-time construction activity or exterior lighting associated with whatever structures and appurtenances are built on the property.

Wedge-tailed Shearwater — The principal potential impacts that the development of the site poses to MBTA-protected Wedge-tailed Shearwaters are: 1) during any clearing and grubbing of the Project site where birds and burrows may be disturbed or destroyed; ad 2) an increased risk that birds will be downed after becoming disoriented by outdoor lighting associated with either night-time construction activity or exterior lighting associated with whatever structures and appurtenances that are built on the property.

Mammalian Resources

No mammalian species protected or proposed for protection under either federal or State of Hawai'i endangered species programs (DLNR, 1998; USFWS, 2005a, 2005b, 2011) were detected during the course of this survey.

Recommendations

Vegetation

- Landscape with native dryland plants for lower cost maintenance. We recommend post-construction landscaping with native dryland and coastal strand plants. Planted in a mix of ground cover, shrub, and tree heights, native plants will slow run-off and retain moisture when rain occurs. Native plants will remain green and more fire resistant throughout dry periods. Most native plantings have lower maintenance costs as well. Native species need less hedge trimming, weed-whacking, and usually grow well without fertilizers, reducing cost and the potential for non-point pollution of the ocean. Native species will provide educational, visual, and aesthetic benefits while conserving water. Native plants will create interesting areas for walking, cultural learning, nature study, and bird watching. Resources helpful in understanding Hawaiian plants in landscaping include *Native Hawaiian Plants for Landscaping, Conservation, and Reforestation* (Bornhorst & Rauch, 1994) and *Growing Native Hawaiian Plants* (Bornhorst, 2005). By prior arrangement with growers, native Hawaiian plants can be as convenient to mass plant as the introduced plants commonly used to re-vegetate after new construction.

Invertebrates

- Shield external lighting: during construction and in the finished project and roadways, it will be important to plan to shield outdoor lighting. Artificial lighting is attractive and confusing to many arthropods (see Methods: Light survey, page 6), concentrating them at night as easy prey for feeding bats or arthropod predators such as praying mantis. Insects attracted to lights at night often remain in place at dawn and are then easily seen and consumed by birds.

Birds

- Immediately prior to initiation of ground disturbance activities on the Project site, a survey for nesting Wedge-tailed Shearwaters should be conducted by a qualified biologist to record all then currently active burrows with GPS. These locations can then be plotted on construction plan documents so that the burrows can be avoided. At this site, the colony is active and expanding; as such, the current location of burrows (as in Fig. 2) is not an accurate indication of where all burrows will be next breeding

season. No construction should occur until all nesting Wedge-tailed Shearwaters have left the colony.

- If night-time work will be required in conjunction with construction activities on the property, it is recommended that construction lights be shielded to reduce the potential for interactions between nocturnally flying Wedge-tailed Shearwaters, Hawaiian Petrels, Newell's Shearwaters, and other seabirds protected under either the MBTA or ESA (or equivalent state statutes) and man-made structures (Reed et al., 1985; Telfer et al., 1987).

- Permanent exterior lights associated with any development on the property must be shielded so as to reduce the potential for interactions of nocturnally flying seabirds with man-made structures (Reed et al., 1985; Telfer et al., 1987).

- Restrict food sources: do not allow employees to feed cats or encourage cat colonies. Food meant for cats will attract rats, mice, ants and mongoose. All offer dangers to sea birds.

Mammals

- Remove trash regularly: food trash can attract mongoose, cat, and rat and mice populations, resulting in predation on birds. Population surges of such pests will make the project a poor neighbor to existing housing in the area. Provide trash cans at construction areas where food is consumed, provide can covers, and empty cans frequently. Importantly, construction supervisors need to establish with crew members a culture of using the receptacles.

- Limit animal access: do not allow employees to bring pet dogs or cats to the site. Even well behaved animals can escape a leash and fail to return on command. Dogs and cats will harass and kill ground-nesting birds.

Glossary[6]

Adventive: organisms introduced to an area but not purposefully.

Alien: not native; occurring in the locality it occupies ONLY with human assistance, accidental or purposeful. Polynesian (e.g., coconut) and post-1778 introductions (e.g., guava, goats, and sheep) are aliens.

Anaphylactic: hypersensitivity; may cause shock, respiratory distress, swelling, other problems

Arthropod: insects and related invertebrates (e.g., spiders) having an external skeleton and jointed legs.

Aeolian: wind blown, a habitat dominated by effects of wind blowing over it.

Aspiration: invertebrates are transferred from the original location (leaf, net, etc.) into a large vial. Two tubes are lodged in one stopper in the vial. Air drawn in on one tube, creates suction at the end of the second tube; the target insect is drawn into the vial by the pulling air.

Endemic: naturally occurring, without human transport, ONLY in the locality occupied. Hawaii has a high percentage of endemic plants and animals, some in very small microenvironments.

Indigenous: naturally occurring without human assistance in the locality it occupies; may also occur elsewhere, including outside the Hawaiian Islands. (e.g., *naupaka kahakai* (*Scaevola sericea*) is the same plant in Hawai'i and throughout the Pacific).

Insects: arthropods with six legs, and bodies in three sections

Invertebrates: animals without backbones (insects, spiders, snails, shrimp)

Kīpuka: an area of vegetation surrounded by younger lava flows

Larva/larval: an immature stage of development in young of many animals.

Littoral: belonging to or along the sea shore

Makai: toward the ocean

Mauka: toward the mountains

Midden: human food refuse in an archaeological setting, often in a heap or pile

6 Glossary based largely on definitions in *Biological Science: An Ecological Approach*, 7th ed., Kendall/Hunt Publishing Co., Dubuque, a high school text; on the glossary in *Manual of Flowering Plants of Hawai'i*, Vol.2, Wagner, et al., 1999, Bishop Museum Press, and other sources.

Glossary (continued).

Mollusk: invertebrates in the phylum Mollusca. Common representatives are snails, slugs, mussels, clams, oysters, squids, and octopuses.

Native: organism that originated in area where it lives without human assistance. May be indigenous or endemic.

Naturalized: an alien organism that, with time, yet without further human assisted releases or plantings, has become established in an area to which it is not native.

Nocturnal: active or most apparent at night.

Pupa: the stage between larva and adult in insects with complete metamorphosis, a non-feeding and inactive stage often inside a case

Purposefully introduced: an organism brought into an area for a specific purpose, for example, as a biological control agent.

Rare: threatened by environmental factors and in low numbers.

Senescent: Aged. Said of a plant community when most or all of the individual plants are mature and there is no regeneration or young plants in the complement.

Species: all individuals and populations of a particular type of organism, maintained by biological mechanisms that result in their breeding mostly with their kind.

Strand: Similar to littoral; describes plant community extending inland from the high tide line, typically growing on rock and sand substrata.

Vertebrates: animals with backbones (birds, mammals, reptiles)

Waxing: describes gradual increase in visible amount of the moon's disk

References

Ainley, D. G, R. Podolsky, L. Deforest, G. Spencer, and N. Nur. 2001. The Status and Population Trends of the Newell's Shearwater on Kaua'i: Insights from Modeling, *in*: Scott, J. M, S. Conant, and C. Van Riper III (editors) *Evolution, Ecology, Conservation, and Management of Hawaiian Birds: A Vanishing Avifauna.* Studies in Avian Biology No. 22: Cooper's Ornithological Society, Allen Press, Lawrence, Kansas. (Pg. 108-123).

American Ornithologist's Union. 1998. *Check-list of North American Birds.* 7th edition. AOU, Washington D.C. 829 pp.

_____. 2000. Forty-second supplement to the American Ornithologist's Union *Check-list of North American Birds. Auk*, 117: 847-858.

Asquith, A. 1993. A new species of *Cyrtopeltis* from coastal vegetation in the Hawaiian Islands (Heteroptera: Miridae: Dicyphinae). *Pac. Sci.,* 47(1): 17-20.

Banks, R. C., C. Cicero, J. L. Dunn, A. W. Kratter, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz. 2002. Forty-third supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 119: 897-906.

_____, _____, _____, _____, _____, _____, _____, and _____. 2003 Forty-fourth supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 120: 923-931.

_____, _____, _____, _____, _____, _____, _____, and _____. 2004 Forty-fifth supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 121: 985-995.

_____, _____, _____, _____, _____, _____, _____, and _____. 2005 Forty-sixth supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 122: 1031-1031.

_____, _____, _____, _____, _____, _____, _____, and _____. 2006 Forty-seventh supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 123: 926-936.

Banks, R. C., C. R. Terry Chesser, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz. 2007 Forty-eighth supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 124: 1109-1115.

_____ and K. Winker. 2008. Forty-ninth supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 125: 758-768.

Bonaccorso, F. J., C. M. Todd and, A. C. Miles. 2005. Interim Report on Research to Hawaiian Bat Research Consortium for The Hawaiian Hoary Bat, Ope'ape'a, *Lasiurus cinsereus semotus*. 1 September 2004 to 31 August 2005.

_____, _____, and _____. 2007. Interim Report on Research to Hawaiian Bat Research Consortium for The Hawaiian Hoary Bat, Ope'ape'a, *Lasiurus cinsereus semotus*. April 1, 2007.

_____, M. Corresen, and C, Pinzari 2009. Interim Report on Research to Hawaiian Bat Research Consortium for The Hawaiian Hoary Bat, Ope'ape'a, *Lasiurus cinsereus semotus*. February 4, 2009.

Bornhorst, H. L. 2005. *Growing native Hawaiian plants: a how-to guide for the gardener*. Bess Press, Honolulu, 104 pp.

_____ and F. D. Rauch. 1994. *Native Hawaiian plants for landscaping, conservation, and reforestation*. HITAHR, College of Tropical Agriculture and Human Resources, University of Hawaii, Honolulu. 17 pp.

Bridwell, J. C. 1920, "A New Lowland Plagithmysine Cerambycid from Oahu with Notes on its Habits. [Ewa Dryland Insect survey]," *Proceedings of the Hawaiian Entomological Society*, 4 (2): 314-327.

Bryan, Jr., E. H. 1929. Notes and Exhibitions, *Proceedings of the Hawaiian Entomological Society*, 7(2):237.

Chesser, R. T., R. C. Banks, F. K. Barker, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz, and K. Winker. 2009. Fiftieth supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 126: 1-10.

Chesser, R. T., R. C. Banks, F. K. Barker, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz, and K. Winker. 2010. Fifty-first supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 127: 726-744.

_____, _____, _____, _____, _____, _____, _____, _____, _____, _____, and _____. 2011. Fifty-second supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 128: 600-613.

Christensen, C. 1992. *Kauai's Native Land Shells.* Fisher Printing, Honolulu. 28 pp.

Cooper, B. A and R. H. Day. 1994. Kauai endangered seabird study. Volume 1: Interactions of Dark-rumped Petrels and Newell's Shearwaters with utility structures on Kauai, Hawaii: Final Report, TR-105847-V1, Electric Power Research Institute, Palo Alto, California.

_____. 1998. Summer Behavior and Mortality of Dark-rumped Petrels and Newell's Shearwaters at Power Lines on Kauai. Colonial Waterbirds, 21 (1): 11-19.

Cowie, R. H. 2006. Succineid project web data: *Systematics, Phylogenetics, and Biogeography*. Available on the web at URL: www.hawaii.edu/cowielab/Succineid_project/suchome; last accessed July 2011.

Daly, H. V. and K. N. Magnacca. 2003. *Insects of Hawaii.* Volume 17: *Hawaiian Hylaeus.* University of Hawaii Press, Honolulu, Hawaii. 234 pp.

David, R. E. 2010. Unpublished field notes – Kaua'i, 1980 - 2010.

_____, R. H. Day, and B. A. Cooper 2002. Results of Newell's Shearwater Surveys at the Kaluahonu, Moalepe and Anahola Memorial Colonies, Island of Kaua'i, Hawai'i, July 2002. Prep. for Planning Solutions, Inc., and Kaua'i Electric.

_____ and Planning Solutions. 2008. 2007 Save Our Shearwaters Program End of Year Report: Prep. for: Kaua'i Island Utility Cooperative & The Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife.

Department of Land and Natural Resources (DLNR). 1997. Indigenous Wildlife, Endangered and Threatened Wildlife and Plants, and Introduced Wild Birds. Department of Land and Natural Resources. State of Hawaii.

Administrative Rule §13-124-2 -§13-124-3, June 13, 1996. Exhibit 1. Feb. 1, 1997. Available on the web at URL: www.state.hi.us/dlnr/dofaw/rules/Chap124exhib.pdf.

Department of Land and Natural Resources (DLNR). 1998. Indigenous Wildlife, Endangered And Threatened Wildlife And Plants, And Introduced Wild Birds. Department of Land and Natural Resources. State of Hawaii. Administrative Rule §13-134-1 through §13-134-10, dated March 02, 1998.

Division of Forestry & Wildlife (DOFAW) 2009. Unpublished Seabird Survey Data.

Ebin, Moser + Skaggs LLP, and Rana Biological Consulting, Inc. 2010. Kaua'i Lagoons Habitat Conservation Plan. Prepared for: Kauai Lagoons, LLC & Mori Golf (Kauai), LLC.

eVols. University of Hawaii at Manoa Library. Available on the web at URL: http://evols.library.manoa.hawaii.edu/; last accessed May 2011.

Hadley, T. H. 1961. Shearwater calamity on Kauai. *'Elepaio*, 21: 60.

Hawai'i Biological Survey (HBS). 2002a update. Hawaiian Arthropod Checklist. B. P. Bishop Museum, Honolulu, Hawai'i. Available on the web at URL: http://www2.bishopmuseum.org/HBS/checklist/; Last accessed May 2011.

_____. 2002b. Hawaiian Freshwater & Terrestrial Mollusk Checklist. B. P. Bishop Museum, Honolulu, Hawai'i. Available on the web at URL: http://www2.bishopmuseum.org/HBS/checklist/; Last accessed May 2011.

Hawaii Natural Heritage Program (HNHP). Undated. *Hawaii Natural Heritage Program*, Center for Conservation Research and Training, University of Hawaii at Manoa. Data provided by Roy Kam, Database Manager, accessed May 2011.

Hawaii-Pacific Journal Index. University of Hawaii, Honolulu, Hawai'i. Accessed October 2009. Available on the web at URL: http://uhmanoa.lib.hawaii.

Hawaiian Entomological Society (HES). 1990. Common Names of Insects & Related Organisms. Committee on Common Names of Insects. 87 pp. Available on the web at URL: edu/cgi-bin/Pwebrecon.cgi; last accessed May 2011.

Hazlett, R. W., and D. W. Hyndman. 1996. *Roadside Geology of Hawaii.* Mountain Press, Missoula, Montana. 304 pp.

Howarth, F. G. and W. P. Mull. 1992. *Hawaiian Insects and Their Kin.* University of Hawai'i Press, Honolulu. 160 pp.

Ingenta Connect search service / online abstracts. Available on the web at URL: http://www.ingentaconnect.com/ ; last accessed May 2011.

Kunishi, R. 1976. "Notes and Exhibitions (Oct 1974)," *Proceedings of the Hawaiian Entomological Society*, 22(2): 175-176.

Liittschwager, D. and S. Middleton, photographers. 2001. *Remains of a Rainbow*, National Geographic / Environmental Defense Fund. Accompanying zoological captions by Manning, Montgomery, *et al.*

Montgomery, S. L. 2003. *Survey of terrestrial faunal resources on Po'ipü Beach Villas property, Po'ipü, Koloa, Kaua'i,* 21pp. Report for Po'ipü Beach Villas, LLC.

_____. 2005. *Survey of native terrestrial and stream fauna near Köloa Landing, Po'ipü, Köloa District, Island of Kaua'i,* 21pp. Report for Po'ipü Beach Villas, LLC.

Morgan, C., P. White, and R. E. David. 2003. Habitat Conservation Plan: Kaua'i Island Utility Cooperative: Working Paper No. 2 Data Analysis: Interpreting the Save Our Shearwaters Bird Recovery Database (1979-2002) for Habitat Conservation Planning. Prep. for: Kaua'i Island Utility Cooperative.

_____. 2004 Habitat Conservation Plan: Kaua'i Island Utility Cooperative: Data Report and Analysis: Save Our Shearwaters Bird Program 2003 Update. Prepared for: Kaua'i Island Utility Cooperative.

Nishida, G. M. (ed.). 2002. Hawaiian Terrestrial Arthropod Checklist. Fourth edition. *Bishop Museum Technical Report* 22: 313 pp.

_____ and J. M. Tenorio. 1993. *What Bit Me?* Univ. of Hawaii Press. 72 pp.

Office of Environmental Quality Control. Online library. Available on the web at URL: http://oeqc.doh.hawaii.gov/Shared Documents/; last accessed May 2011.

Otte, D. 1994. *The Crickets of Hawaii.* The Orthopterists' Society, Philadelphia, PA. 396 pp.

Pacific Basin Information Node (PBIN). Data base / geographic search available on the web at URL: http://pbin.nbii.gov/otherinverts/index.asp; last accessed May 2011.

Perkins, R. C. L. 1913. "Introduction. Being a review of the land-fauna of Hawaiia," and "Vertebrates." *In*: Sharp, D., ed., *Fauna Hawaiiensis. Vol. 1.* Cambridge University Press, Cambridge, and Bishop Museum Special Pub. 6.

Podolsky, R., D. G. Ainley, G. Spencer, L. de Forest, and N. Nur. 1998. Mortality of Newell's Shearwaters Caused by Collisions with Urban Structures on Kaua'i. *Colonial Waterbirds,* 21: 20-34.

Pukui , M. K., S. H. Elbert, and E. T. Mookini 1976. *Place Names of Hawaii.* University of Hawaii Press, Honolulu, Hawai'i. 289 pp.

Reed, J. R., J. L Sincock, and J. P. Hailman 1985. Light Attraction in Endangered Procellariform Birds: Reduction by Shielding Upward Radiation. Auk 102: 377-383.

Scholar Space. University of Hawaii at Manoa Library. Available on the web at URL: http://scholarspace.manoa.hawaii.edu/; last accessed May 2011.

Simons, T. R., and C. N. Hodges. 1998. Dark-rumped Petrel (*Pterodroma phaeopygia*). *In:* A. Poole and F. Gill (editors). *The Birds of North America, No. 345.* The Academy of Natural Sciences, Philadelphia, PA. and the American Ornithologists Union, Washington, D.C.

Sincock, J. L. 1981. Saving the Newell's Shearwater. Pages 76-78 in Proceedings of the Hawaii Forestry and Wildllife Conference, 2-4 October 1980. Department of Land and Natural Resources, State of Hawaii, Honolulu.

Staples, G. W. and D. R. Herbst. 2005. *A Tropical Garden Flora. Plants Cultivated in the Hawaiian Islands and other Tropical Places.* Bishop Museum, Honolulu. 908 pp.

Stearns, H. T. 1966. *Road Guide to Points of Geologic Interest in the Hawaiian Islands.* Pacific Books, Palo Alto, Ca. 66 pp.

Swezey, O. H. 1935. "Winter Revival of Insect Life in the Arid Region at Koko Head, O'ahu," *Proceedings of the Hawaiian Entomological Society*, 9: 95-96.

_____. 1954. *Forest Entomology in Hawai'i.* Special Publication 44, Bishop Museum Press, Honolulu, 266 pp.

Telfer, T. C. 1979. Successful Newell's Shearwater Salvage on Kauai. *'Elepaio,* 39:71

_____, J. L. Sincock, G. V. Byrd, and J. R. Reed. 1987. Attraction of Hawaiian seabirds to lights: Conservation efforts and effects of moon phase. *Wildlife Society Bull.*, 15: 406-413.

Tenorio, J. M. and G. M. Nishida. 1995. *What's Bugging Me?* University of Hawaii Press, Honolulu, HI, 184 pp.

Tomich, P. Q. 1986. *Mammals in Hawaii.* Bishop Museum Press. Honolulu, Hawaii. 37 pp.

U.S. Fish & Wildlife Service (USFWS). 1983. Hawaiian Dark-Rumped Petrel & Newell's Manx Shearwater Recovery Plan. USFWS, Portland, Oregon. February 1983.

_____. 1998. Recovery Plan for the Hawaiian Hoary Bat. U.S. Fish & Wildlife Service, Portland, Oregon.

_____. 2000. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for Newcomb's Snail from the Hawaiian Islands. 50 CFR Part 17. *Federal Register*, Vol. 65(No. 17): 4162-4169.

_____. 2003. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Blackburn's Sphinx Moth. *Federal Register*, 68(111; Tuesday, June 10, 2003): 34710-34766.

_____. 2005a. Endangered and Threatened Wildlife and Plants. 50 CFR 17:11 and 17:12 (Tuesday, November 1, 2005).

_____. 2005b. 50 CFR 17. Endangered and Threatened Wildlife and Plants. Review of Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petition; Annual Description of Progress on Listing Actions. *Federal Register*, 70 (No. 90; Wednesday, May 11, 2005): 24870-24934.

U.S. Fish & Wildlife Service (USFWS). 2010a. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Review of Native Species that are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule. *Federal Register*, Vol. 75(No. 217; Nov. 10): 69221-69294.

_____. 2010b. USFWS Threatened and Endangered Species System (TESS), available on the web at URL: http://ecos.fws.gov/tess_public/StartTESS.do.

_____. 2010c. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Listing the Flying Earwig Hawaiian Damselfly and Pacific Hawaiian Damselfly As Endangered Throughout Their Ranges. Final rule. *Federal Register*, 75(No. 121; June 24): 35990-36012.

U.S. Naval Observatory (USNO), Astronomical Applications Department. *Sun and Moon Data for One Day*. Available on the web at URL: http://aa.usno.navy.mil/.

Wagner, W. L., D. R Herbst, and S. H. Sohmer. 1990. *Manual of the Flowering Plants of Hawai'i*. University of Hawaii Press, Honolulu, Hawaii. 2 vols. 1854 pp.

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

Zimmerman, E. C. 1948-80. *Insects of Hawaii*. University of Hawaii Press, Honolulu.

_____. 2001. *Insects of Hawaii. Volume 1: Introduction*. University of Hawaii Press, Honolulu. xx + 206 pp.

EXHIBIT O-4



1. Ala Kinoiki (foreground) and Po'ipū Road (cross street) are the closest County highways from the Property. This photograph was taken from the east side of Ala Kinoiki. See location of photo indicated on the map below.



2. From the Ala Kinoiki/Po'ipū Road intersection the Property is not visible and thus the build out of either the 10 lot subdivision or the 25+ legal lots of record will have no impact on public views from the closest coastal County highways. This photograph was taken from the west side of Ala Kinoiki. See location of photo indicated on the map below.



3. Kaumualiʻi Highway (Route 50), the State highway nearest to the coast in this area of Kaua'i and closest to the Property, is approximately 4.8 miles from the Property. Because of this distance, the Property cannot be seen Kaumualiʻi Highway. Thus the Makahūʻena Point subdivision will not interfere with or detract from the line-of-sight toward the ocean from the State highway nearest the coast.

FIGURE 1
Public View Analysis

Makahūʻena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

EXHIBIT O-4





Current Conditions: Pe'e Road is the County road directly in front of the Property. Currently from Pe'e Road the only view of the ocean across the Property from is from the access driveway. Tall vegetation blocks ocean views from other locations along Pe'e Road. This photograph was taken near the east side of the Property; see key map on the right.





With the 25+ lot Subdivision: From this perspective build out of the 25+ legal lots of record would create a dense line of homes along Pe'e Road and the internal access road, blocking all ocean views.





With the 10-lot Subdivision: With only two homes directly fronting Pe'e Road, the 10-lot subdivision would provide for more opportunities for ocean views between the homes.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 2
Public View Analysis

Makahū'ena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: From this perspective along Pe'e Road tall vegetation blocks ocean views. This photograph was taken near the west side of the Property; see key map on the right.





With the 25+ lot Subdivision: From this perspective build out of the 25+ legal lots of record would create a dense line of homes along Pe'e Road and block all ocean views.





With the 10-lot Subdivision: With large, one-acre lots, and only two homes directly fronting Pe'e Road, the 10-lot subdivision would provide for more opportunities for ocean views between the homes.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 3
Public View Analysis

Makahū'ena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: The paved public shoreline access path in front of The Point at Poʻipū condominium and timeshare complex ends at the west Property boundary; see key map on the right. A survey stake marks the property line. The end of the paved path can be seen at the bottom left.





With the 25+ lot Subdivision: Build out of the 25+ legal lots of record would allow for up to three rows of homes between The Point at Poʻipū condominium and timeshare complex and the ocean; however from this perspective the homes would not detract from the line-of-sight toward the ocean, as the primary ocean view is to the south.





With the 10-lot Subdivision: The 10 lot subdivision, with large, one acre lots, would provide for one row of homes between The Point at Poʻipū condominium and timeshare complex and the ocean, with generous spacing between homes. From this perspective the homes would not detract from the line-of-sight toward the ocean, as the primary ocean view is to the south.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 4
Public View Analysis

Makahūʻena Point
CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: : This photograph was taken further to the east than the photograph in Figure 4; see kep map on the right. The paved public shoreline access path in front of The Point at Poʻipū condominium and timeshare complex can be seen in the foreground. The paved path ends at the west Property boundary.





With the 25+ lot Subdivision: Build out of the 25+ legal lots of record would not be very perceptible from this vantage point as Building 6 of The Point at Poʻipū condominium and timeshare complex would block most of the homes and the primary ocean view is to the south.





With the 10-lot Subdivision: Similarly, the 10 lot subdivision would not be very perceptible from this vantage point as Building 6 of The Point at Poʻipū condominium and timeshare complex would block most of the homes and the primary ocean view is to the south.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 5
Public View Analysis

Makahūʻena Point
CIRI Land Development Company
Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: This photograph was taken from the public access beach park on the eastern side of the Grand Hyatt Resort and Keoneloa (Shipwreck) Beach; see key map on the right. The Makahū'ena Point Property this the prominent point in the center of the photograph. The Point at Po'ipū condominium and timeshare complex can be seen in the center of the photograph and to the right.





With the 25+ lot Subdivision: The build out of the 25+ legal lots of record on the Property would result in a greater cluster of homes on the Makahū'ena Point Property, but would not be out of context with the large buildings of Point at Po'ipū condominium and timeshare complex and would not block the line-of-sight toward the ocean from this perspective.





With the 10-lot Subdivision: With the 10 lot subdivision, homes on the Property would not block the line-of-sight toward the ocean from this perspective and would be less dense with more open space compared to the build out of the 25+ legal lots of record on the Property.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 6
Public View Analysis

Makahū'ena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

EXHIBIT O-5

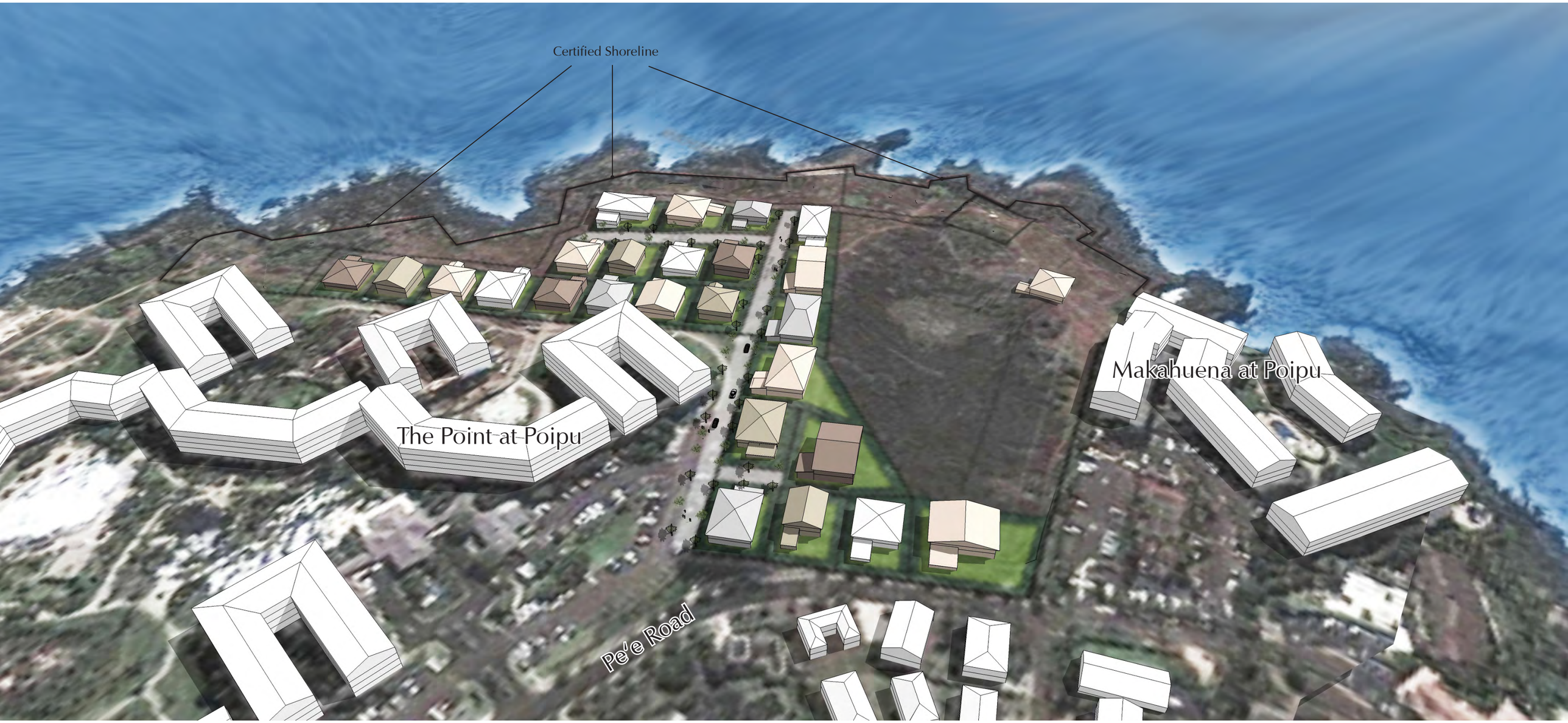


Figure 1
Visual Analysis 25+ lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

EXHIBIT O-5

PBR HAWAII & ASSOCIATES, INC.



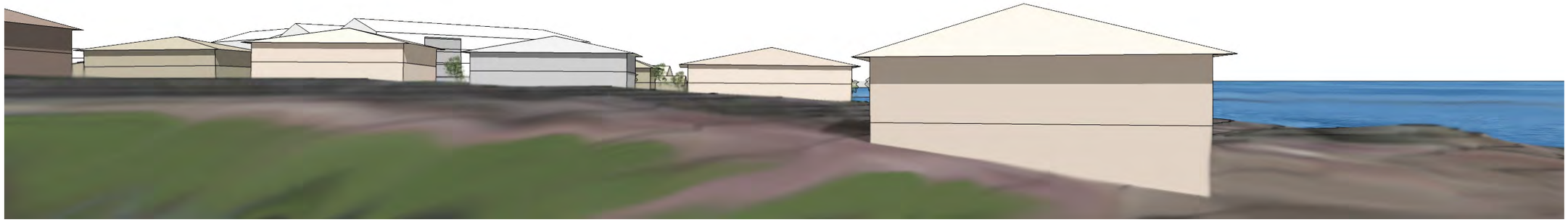
Figure 2
Visual Analysis 25+ lot Subdivision

Makahū'ena Point

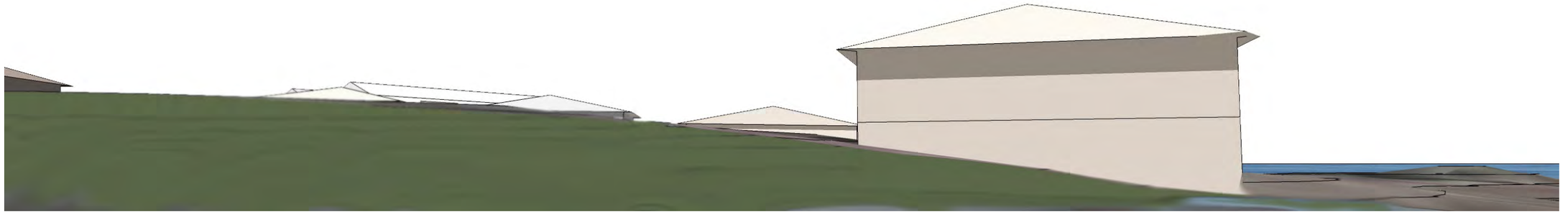
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.



2nd Floor



1st Floor



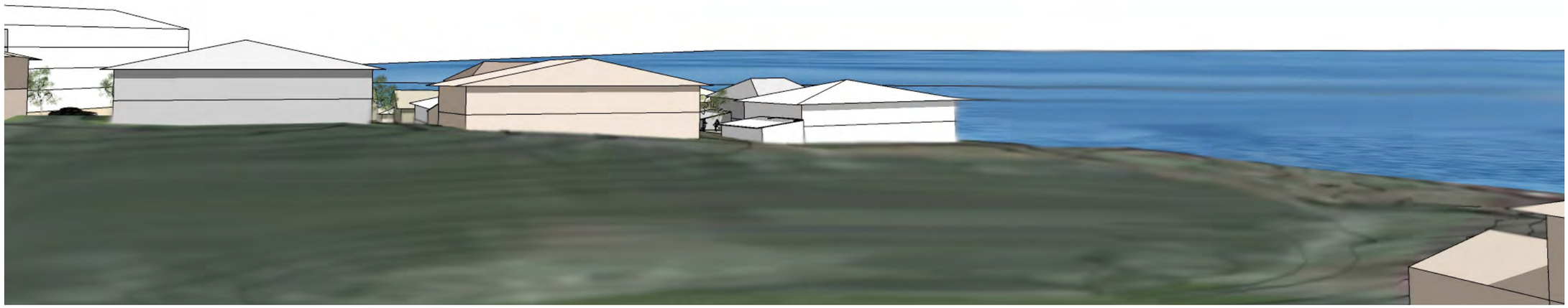
House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 3
Visual Analysis 25+ lot Subdivision
Makahū‘ena Point

CIRI Land Development Company

Island of Kaua‘i

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor



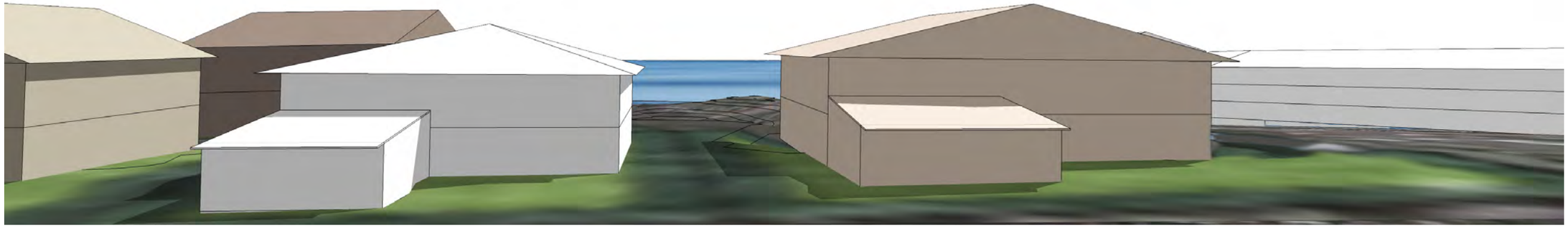
House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 4
Visual Analysis 25+ lot Subdivision

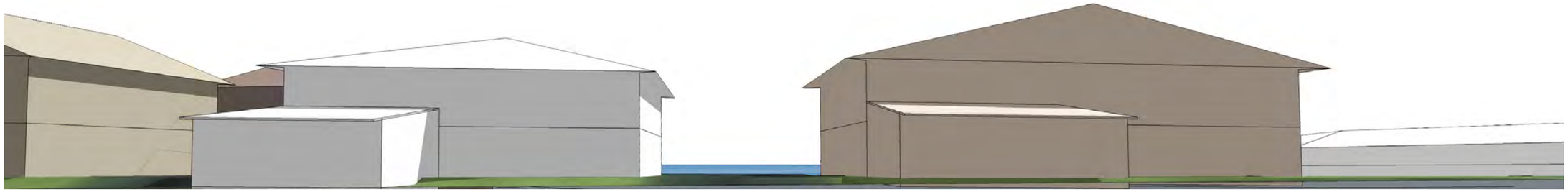
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



2nd Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 5
Visual Analysis 25+ lot Subdivision

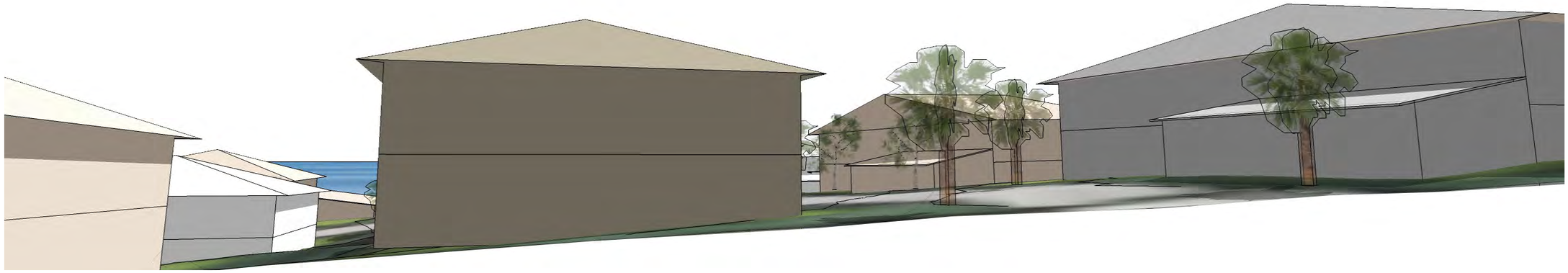
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor



Figure 6
Visual Analysis 25+ lot Subdivision
Makahū‘ena Point

CIRI Land Development Company — Island of Kaua‘i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

PBR HAWAII & ASSOCIATES, INC.

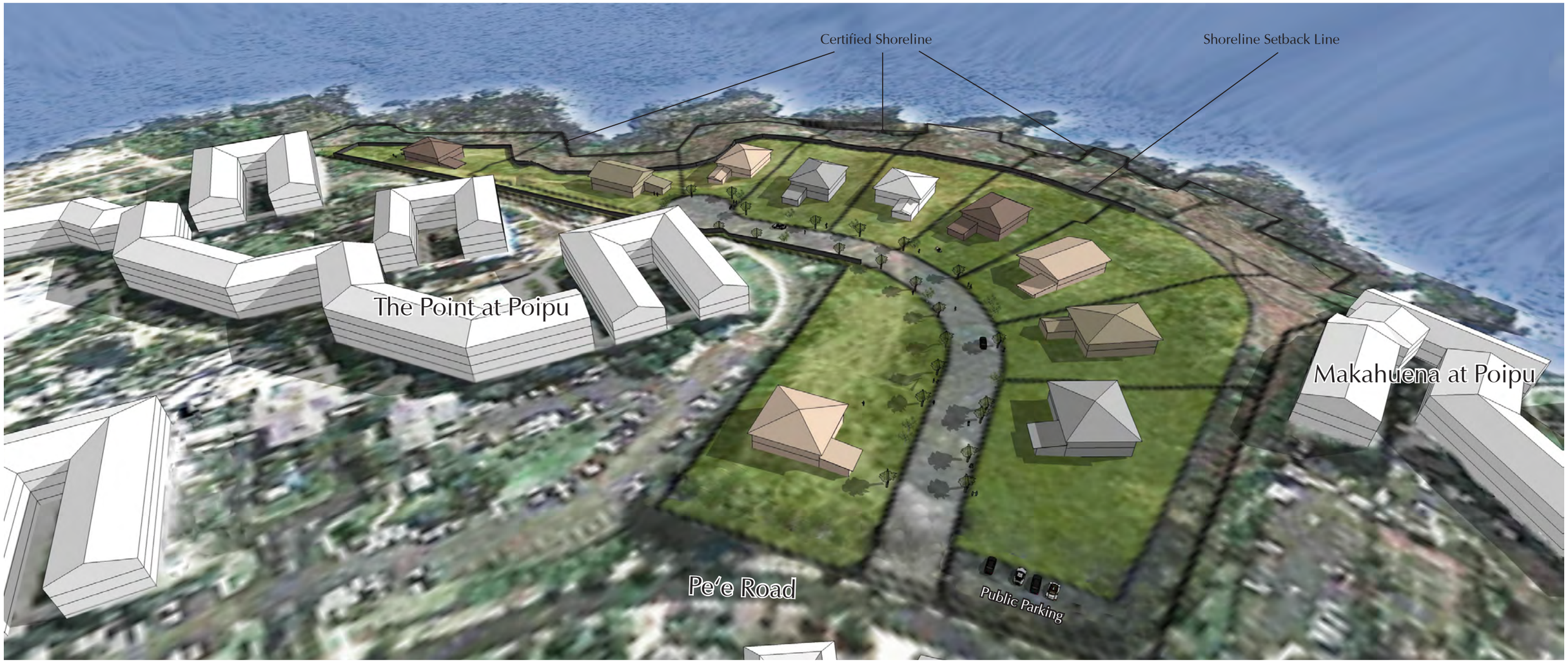


Figure 1
Visual Analysis 10 lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

PBR HAWAII & ASSOCIATES, INC.



Figure 2
Visual Analysis 10 lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.



Figure 3
Visual Analysis 10 lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

PBR HAWAII & ASSOCIATES, INC.



2nd Floor



1st Floor

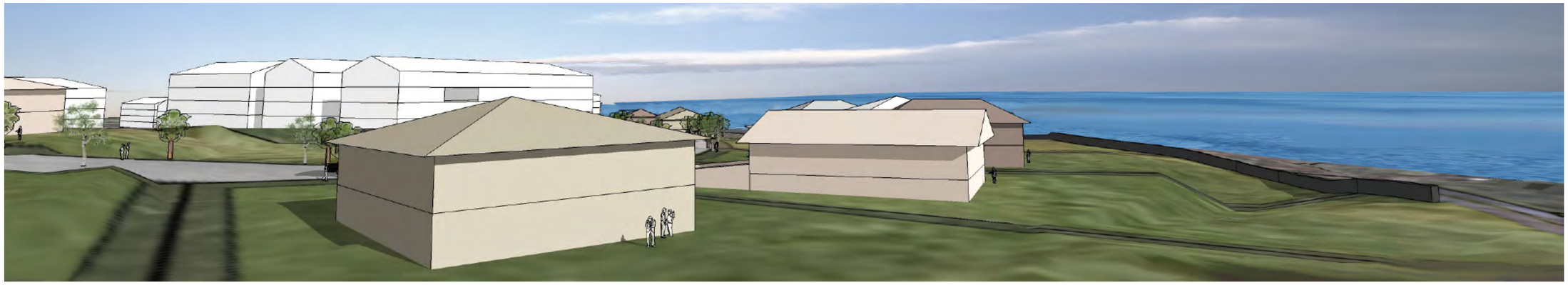


House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

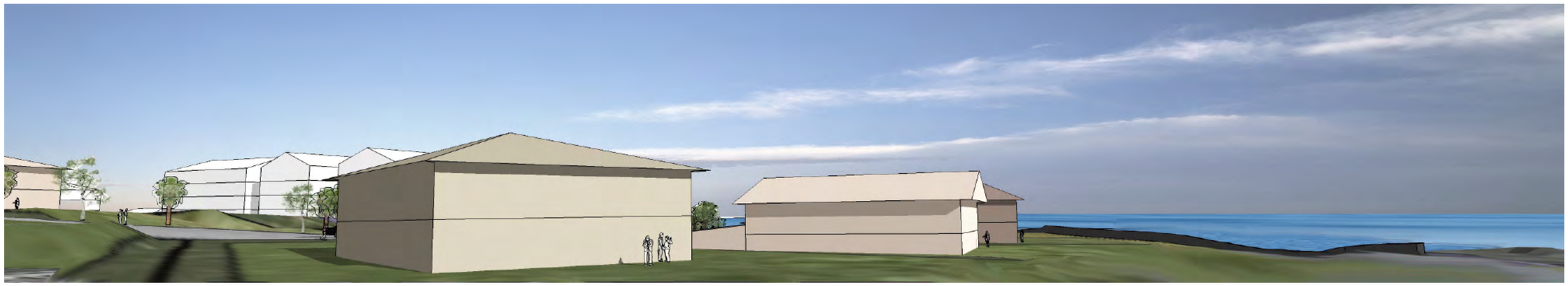
Figure 4
Visual Analysis 10 lot Subdivision
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 5
Visual Analysis 10 lot Subdivision
Makahū‘ena Point

CIRI Land Development Company

Island of Kaua‘i

PBR HAWAII & ASSOCIATES, INC.



2nd Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

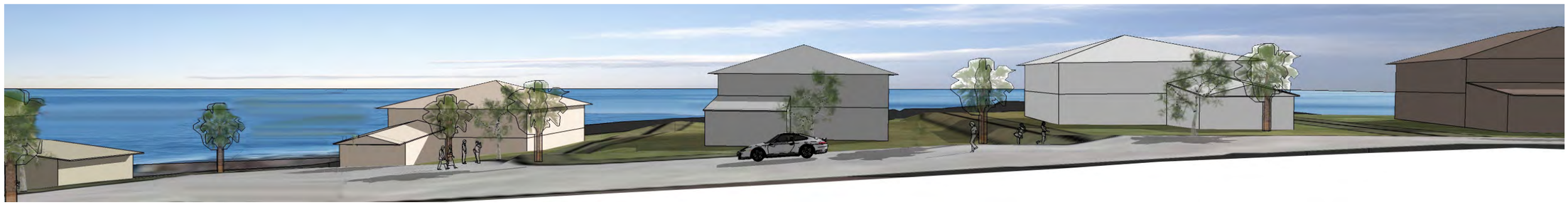
Figure 6
Visual Analysis 10 lot Subdivision
Makahū‘ena Point

CIRI Land Development Company — Island of Kaua‘i

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor

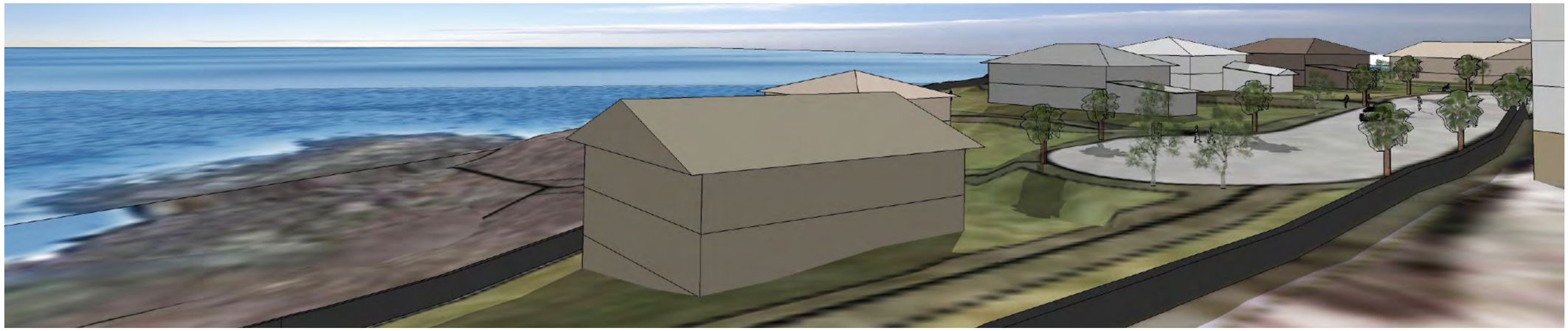


House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 7
Visual Analysis 10 lot Subdivision
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



4th Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

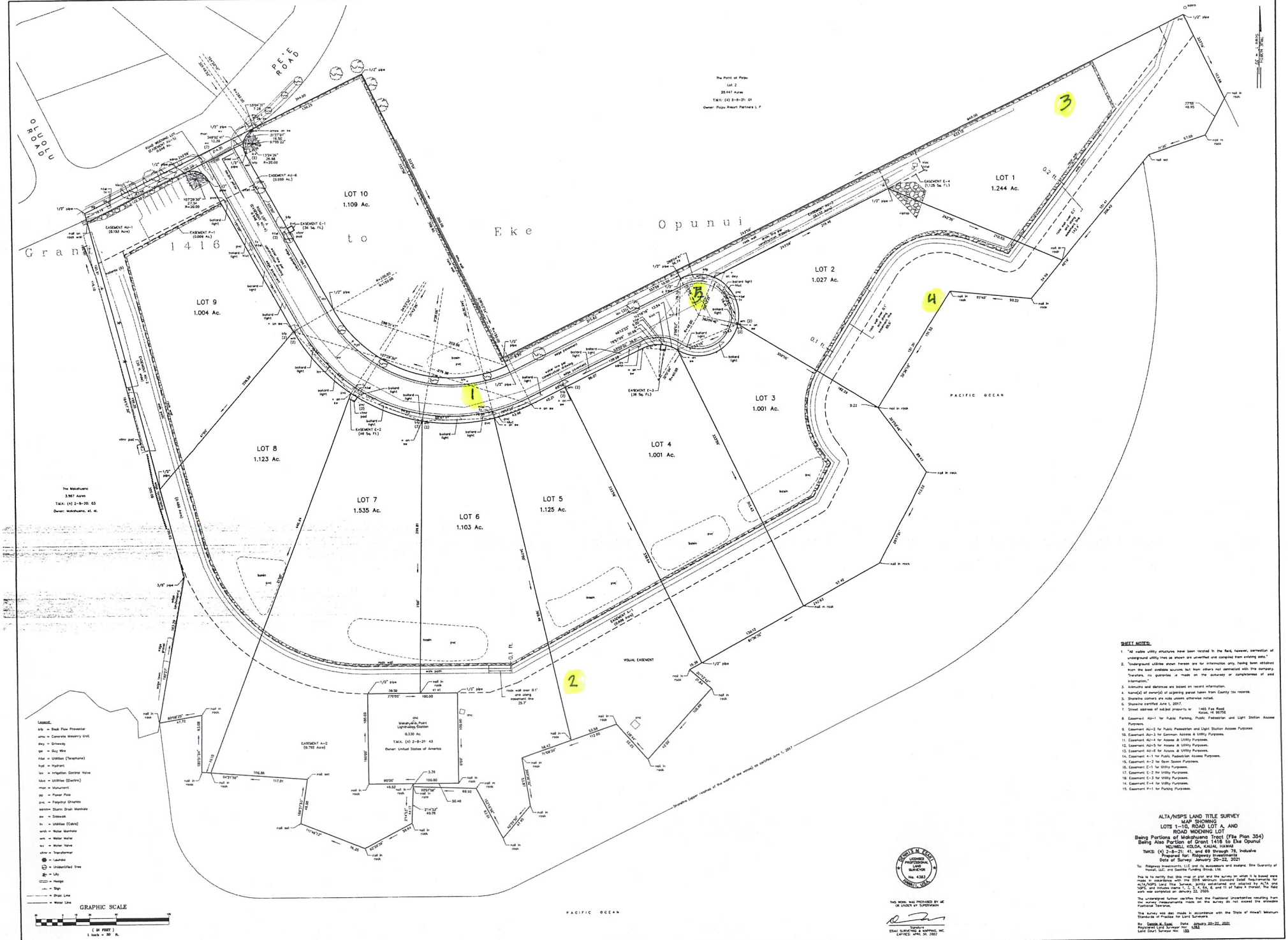
Figure 8
Visual Analysis 10 lot Subdivision

Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.

EXHIBIT O-6



SHEET NOTES:

1. "All visible utility structures have been located in the field, however, connection of underground utility lines as shown are unverified and compiled from existing data."
2. "Underground utilities shown hereon are for information only, having been obtained from the best available sources but from others not connected with the company. Therefore, no guarantee is made on the accuracy or completeness of said information."
3. Azimuths and distances are based on record information.
4. Name(s) of owner(s) of adjoining parcel taken from County tax records.
5. Shoreline corners are nails unless otherwise noted.
6. Shoreline certified June 1, 2017.
7. Street address of subject property is: 1465 Pee Road Koloa, HI 96756
8. Easement AU-1 for Public Parking, Public Pedestrian and Light Station Access Purposes.
9. Easement AU-2 for Public Pedestrian and Light Station Access Purposes.
10. Easement AU-3 for Common Access & Utility Purposes.
11. Easement AU-4 for Access & Utility Purposes.
12. Easement AU-5 for Access & Utility Purposes.
13. Easement AU-6 for Access & Utility Purposes.
14. Easement A-1 for Public Pedestrian Access Purposes.
15. Easement A-2 for Open Space Purposes.
16. Easement E-1 for Utility Purposes.
17. Easement E-2 for Utility Purposes.
18. Easement E-3 for Utility Purposes.
14. Easement E-4 for Utility Purposes.
15. Easement P-1 for Parking Purposes.

ALTA/NSPS LAND TITLE SURVEY
MAP SHOWING
LOTS 1-10, ROAD LOT A, AND ROAD WIDENING LOT
Being Portions of Makahuena Tract (File Plan 354)
Being Also Portion of Grant 1416 to Eke Opunui
WELIWELI, KOLOA, KAUAI, HAWAII
TMKS: (4) 2-8-21: 41, and 69 through 78, Inclusive
Prepared for: Ridgeway Investments
Date of Survey: January 20-22, 2021

To: Ridgeway Investments, LLC and its successors and assigns; Site Guaranty of Hawaii, LLC; and Seattle Funding Group, Ltd.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 6A, 6, and 11 of Table A thereof. The field work was completed on January 22, 2020.

The undersigned further certifies that the Positional Uncertainties resulting from the survey measurements made on the survey do not exceed the allowable Positional Tolerance.

The survey was also made in accordance with the State of Hawaii Minimum Standards of Practice for Land Surveyors.

By: Daniele M. Esaki Date: January 20-22, 2021
Registered Land Surveyor No. 4383
Land Court Surveyor No. 155

DANIELE M. ESAKI
LICENSED PROFESSIONAL LAND SURVEYOR
No. 4383
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

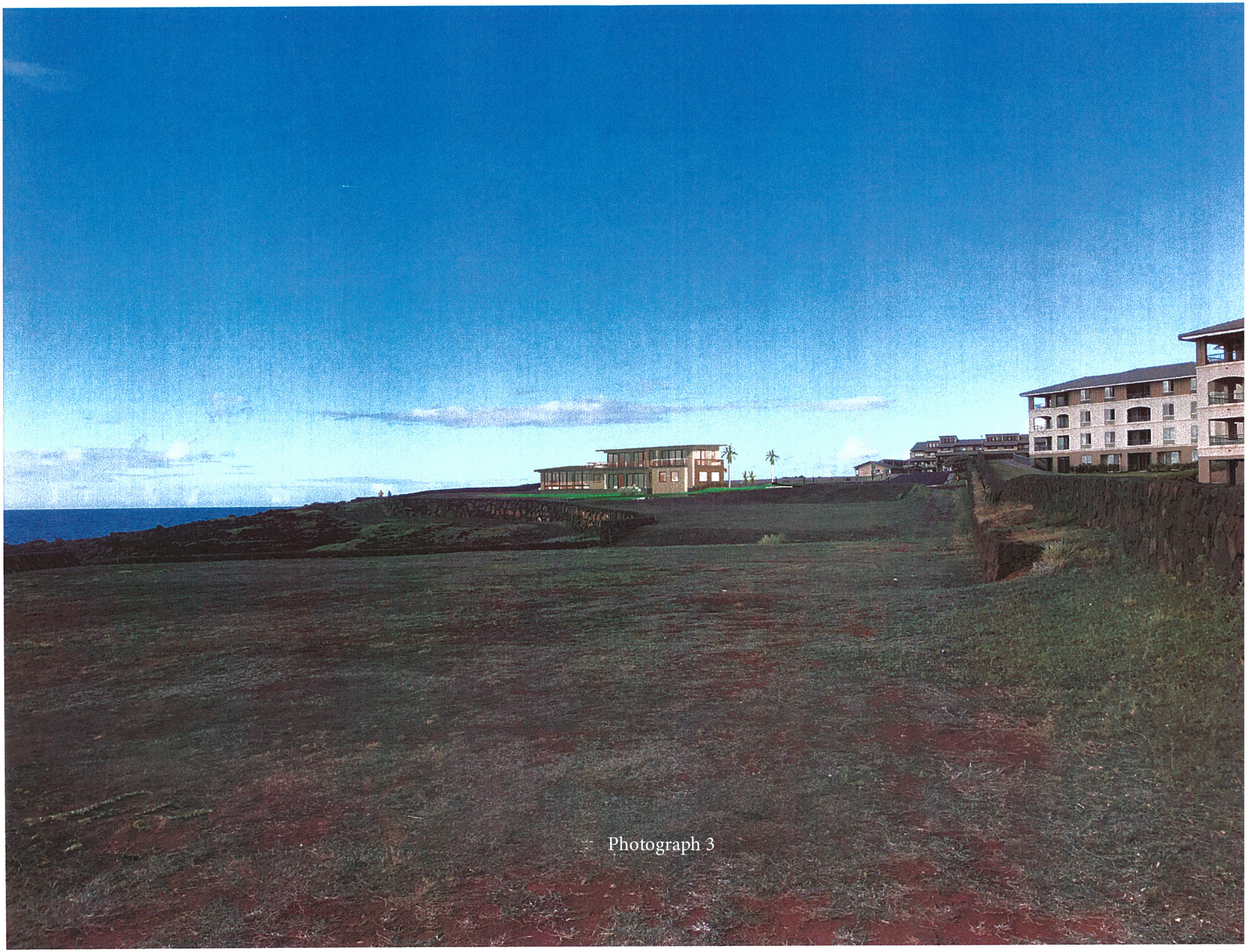
Signature
ESAKI SURVEYING & MAPPING, INC.
EXPIRES: APRIL 30, 2022

ESAKI SURVEYING & MAPPING, INC.

1610 Makahuena Street
Lihue, Kauai, Hawaii 96766



Photograph 1



Photograph 3

Photo Report



Photograph 5

EXHIBIT P

PRELIMINARY ENGINEERING REPORT

FOR

MAKAHUENA POINT

TMK: (4) 2-8-021:041; (4) 2-8-021: 044-067

Located in
Poipu, Island of Kauai, State of Hawaii

OWNER:

CIRI LAND DEVELOPMENT COMPANY
2525 C Street, Suite 500
Anchorage, Alaska 99503

Prepared By:

David A Grenier, P.E.
Hawaii. License No. 6353-C
Triad Engineering
1300 E. 68th Ave., Suite 210
Anchorage, Alaska 99518

April 7, 2014

EXHIBIT P

TABLE OF CONTENTS

1.0 INTRODUCTION

2.0 PROJECT LOCATION

3.0 TOPOGRAPHY and CURRENT DRAINAGE PATTERNS

4.0 FLOOD ZONES

5.0 SOIL CONDITIONS

6.0 OCEAN CONDITIONS

7.0 EXISTING INFRASTRUCTURE

- **7.1 EXISTING ACCESS**
- **7.2 AVAILABLE WASTEWATER FACILITIES**
- **7.3 EXISTING WATER FACILITIES**
- **7.4 AVAILABLE ELECTRIC, TELEPHONE AND TELECOMMUNICATION**

8.0 FLOOD ZONES & CONSTRAINT DISTRICTS

9.0 ANTICIATED INFRASTRUCTURE IMPROVEMENTS

- **9.1 SITE GRADING**
- **9.2 DRAINAGE PLAN**
- **9.3 STORMWATER MANAGEMENT & QUALITY**
- **9.4 EROSION CONTROL PLAN**
- **9.5 ROADWAYS**
- **9.6 WASTEWATER**
- **9.7 WATER**
- **9.8 ELECTRIC, TELEPHONE AND TELECOMMUNICATION**
- **9.9 SOLID WASTE DISPOSAL**

10.0 CONCLUSION

EXHIBITS

EXHIBIT A: Tax Map
EXHIBIT B: Preliminary Site Layout & Grading Plan
EXHIBIT C: FIRM Panel 352 of 356
EXHIBIT D: USDA Natural Resources Conservation Service Soils Map
EXHIBIT E: Department of Water Letter dated October 30, 2012
EXHIBIT F: Individual Wastewater System (IWS) Report

PRELIMINARY ENGINEERING REPORT
FOR
MAKAHUENA POINT
TMK: (4) 2-8-021:041; (4) 2-8-021: 044-067

1.0 INTRODUCTION

Landowner CIRI Land Development Company (CLDC) proposes to consolidate the existing 25+ lots of record[1] located on its 13.078 acre property (the Property) at Makahuena Point, near Poipu, and re-subdivide the Property into 10 single-family residential lots (approximately one acre each); see Exhibit A, TMK map and Exhibit B, Preliminary Site Layout & Grading Plan.

The purpose of this report is to provide information relating to the existing infrastructure in the vicinity of the Makahuena Point Property and outline additional infrastructure required to serve the new subdivision. This report will also assist in identifying site conditions and design elements that require careful consideration of Kauai's land and waters.

The existing lots were created in 1932 under a subdivision known as the Makahuena Tract (File Plan 354), which established 63 lots and associated road lots on the Property as well as on the adjacent property currently occupied by the project known as The Point at Poipu. The Point at Poipu property was consolidated and re-subdivided in the 1990s.

2.0 PROJECT LOCATION

The Property is located at the southern tip of the Island of Kauai, identified by the County as TMK 2-8-021:041 and TMKs (4) 2-8-021: 044-067; see the attached Exhibit A. The 13.078 acre Property fronts the Pacific Ocean and is located south of Pee Road with The Point at Poipu development to the northeast and The Makahuena at Poipu development to the west.

3.0 TOPOGRAPHY and CURRENT DRAINAGE PATTERNS

The general slope of the Property is from the north to a southeasterly direction toward the ocean with the exception of an existing large, oval-shaped depression located within the westerly portion of the Property. No runoff from the Property drains onto the east or west adjacent properties or onto the Pee Road right of way. The elevations on the Property range from sea level up to the 64 foot contour at Pee Road with an existing slopes ranging from the certified shoreline in the 4% to 9% with an overall average slope of the Property at 5.8 percent.

A catch basin inlet exists along the south side of Pee Road located approximately in the middle of the Property‟s road frontage. It appears that no runoff from Pee Road drains onto the Property. Minor runoff from The Point at Poipu development appears to enter the Property in the vicinity of proposed Lots 1 and 2.

[1] 25 lots of record TMK (4) 2-8-021: 044 – 068; one bulk lot TMK (4) 2-8-021: 041, and two unnumbered road lots.

4.0 FLOOD ZONES

No defined stream channels, notable drainage paths or signs of erosion exist within the Property boundary or along the shoreline which consists of rock outcrops. The Property flood zone designations are X, VE and AE flood zones with base flood elevations as identified and depicted on the FEMA Kauai County, Hawaii Flood Insurance Rate Map (FIRM) Panel 352 of 356; see attached Exhibit C.

Note that the location of the base flood elevation lines as depicted on the FIRM Panel differ somewhat from the existing and current ground elevation contour lines shown on the Preliminary Site layout and Grading Plan. This difference is due to the actual site survey performed that produced a contour map which is more precise than the methods used by FEMA. Also note that all of the proposed house pads are located above the VE Base Flood Elevations when compared to the actual surveyed ground contours.

5.0 SOIL CONDITIONS

The USDA Natural Resources Conservation Service identifies two different soil groups within the Property. The majority of the Property is classified as Koloa stony silty clay with a hydrologic soil group rating of C which is characterized as soils having a slow infiltration rate. The remainder of the site along the shore line is classified as rock outcrop; see attached Exhibit D

6.0 OCEAN CONDITIONS

The State of Hawaii classifies a small portion the waters off the Property‟s coastline west of Makahuena Point as Class AA, which is the most protective classification of marine waters, and requires that the waters remain in their natural pristine state as nearly as possible. See HAR §11-54-3(c) (Dec. 2013). The remaining waters fronting the Property from Makahuena Point to the east are classified as Class A waters. The objective of Class A waters is that their use for recreational purposes and aesthetic enjoyment be protected. See HAR §11-54-3. "Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters."

7.0 EXISTING INFRASTRUCTURE

7.1 EXISTING ACCESS

The Property has approximately 215 linear feet (lf) of frontage along Pee Road, which is a County dedicated and maintained road. Existing road improvements include asphalt concrete (AC) pavement with barrier curb and gutter. No sidewalk exists along the Pee Road frontage; however, a detached sidewalk does exist both east and west of the property along the southerly side of Pee Road. An existing driveway apron is located approximately 75 feet (ft) west of the easterly property line. Note that the driveway actually crosses The Pointe at Poipu property and will need to be abandoned and a new driveway apron will be established roughly 100 ft to the west of the current driveway location.

A dirt road exists along the westerly Property boundary which accesses a 10,000 square-foot parcel (TMK No. (4) 2-8-021:043) located in the south-western portion of the Property and is owned by the United States. The 10,000 sq. ft. parcel houses a navigational aid known as the Makahuena Light; see Exhibit A which shows the parcel labeled as "Makahuena Lighthouse."

7.2 AVAILABLE WASTEWATER FACILITIES

Currently, there are no County owned or maintained wastewater facilities available to serve the Property. The developments to the east and west have on site treatment facilities which are privately owned and maintained.

7.3 EXISTING WATER FACILITIES

There is an existing County owned and maintained 12-inch ductile iron waterline within Pe„e Road fronting the Property

7.4 AVAILABLE ELECTRIC, TELEPHONE AND TELECOMMUNICATION

Underground electrical, telephone and telecommunication facilities currently exist at the northeast corner of the Property along the southern edge of the Pee Road right of way.

8.0 FLOOD ZONES & CONSTRAINT DISTRICTS

The Property is within the Shore Constraint District and the Tsunami Constraint District. The purpose of the Shore District is to regulate development or alterations to shore and water areas which have unique physical and ecological conditions in order to protect and maintain physical, biologic and scenic resources of particular value to the public. The purpose of the Tsunami District is to minimize the threat to public health and safety as well as damage to property due to extraordinary wave action. CZO §8-12.8. Within the Tsunami District, single family dwellings are permitted, but are subject to additional construction and development standards as provided in Chapter 15, Article 1 of the Kauai County Code.

Most of the Property is in flood zone X. Therefore construction shall meeting the requirements of KCC §15-1.5(a) or 15-1.5(b), whichever is determined to be appropriate by the County Engineer. KCC §15-1.5(d). The State Commission on Water Resource Management shall be notified prior to any alteration or relocation of a watercourse. However, the CLDC Project does not entail any movement, relocation of alteration of a watercourse, so this provision is not applicable.

Other portions of the Property are in the AE and VE zones. Therefore, the construction and development standards under KCC §15-1.5 for residential structures apply. The maximum height of residential structures in the flood fringe area is the greater of 30 feet from the ground, or the base flood elevation plus 15 feet, unless otherwise permitted by the Planning Commission. KCC §15-1.5(a)(E).

Within zones AE and VE all water and sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems, and discharge from the systems into flood waters. On-site waste disposal systems should be located to avoid impairment to them or contamination from them during flooding. KCC §§15-1.5(a)(4); 15-1.5(c)(6).

Within the AE zone, no new construction shall be permitted unless it is demonstrated that the cumulative effect of the development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community. KCC §15-1.5(a)(6).

Within the VE zone, fill is prohibited for structural support and all new construction should be elevated so that the bottom of the lowest horizontal structural member of the lowest floor, excluding pilings and columns, is elevated to or above the base flood elevation. KCC §15-1.5(c). The maximum height of residential structures within the coastal high hazard area is the greater of 30 feet from the ground, or the base flood elevation plus 15 feet, unless otherwise permitted by the Planning Commission. KCC §15-1.5(c)(4).

Building plans for new construction must be certified by a registered professional structural engineer or architect that the new construction is designed and methods of construction to be used are in accordance with the accepted standards of practice for meeting the requirements of the County's flood ordinance. KCC §15-1.5(c)(7).

In addition, for areas of special flood hazard (i.e., lands within the floodplain subject to 1% or greater chance of flooding in any given year), are subject to additional development standards to minimize flood damage. All finally approved subdivision plans within these areas must provide base flood elevations within the lots, and if fill is used to elevate the site of any lot above the base flood elevation, the final ground elevations of the pads shall be certified by a registered professional civil engineer or surveyor. KCC §15-1.6.

9.0 ANTICIATED INFRASTRUCTURE IMPROVEMENTS

9.1 SITE GRADING

To construct the internal road, utilities, and house pads as shown on Exhibit B, mass grading of approximately 70 to 80% of the Property will occur. Prior to beginning the mass grading operations, the temporary erosion control measures and Best Management Practices (BMPs) will be installed as outlined in the County approved Erosion Control Plan. After the BMPs are in place, clearing and grubbing of the site will occur followed by excavation and placing of the material in accordance with the approved grading plan. All embankment material will be non-organic and compacted to 95% as directed by the project soils engineer. Dust control is a key element of the Erosion Control Plan and will be monitored on a continuous basis during the site grading operation.

The proposed house pad elevations range from an elevation of 24 feet on Lot 1, to an elevation of 62 feet on Lot 10. The proposed grading plan anticipates approximately 25,000 cubic yards (cy) of cut and fill, a balanced situation requiring no fill will be brought from offsite onto the Property. No material is anticipated to leave the site and

only classified material for road and utility construction is expected to be imported.

Grading operations will be scheduled to occur outside of the Wedge-tailed Shearwater nesting period (approximately April through October). In addition to not beginning construction within this time frame, a site inspection will be conducted to insure the site is clear of nesting birds.

9.2 DRAINAGE PLAN

Along with grading of each building pad, drainage basins will be constructed on each of the lots. These basins will be sized to contain the increase in storm water due to the home construction and the increase in impervious surfaces to ensure that surface runoff does not enter the ocean. Note that, pursuant to the limitations in the Open District, coverage on the lots with constructed buildings will be limited to no more than 10% of the total site.

The shoreline survey performed in August of 2013 was certified by the State Department of Land and Natural Resources in January 2014. Prior to beginning site grading operations, a rock retaining wall will be constructed along the makai side of Lots 1 through 8 to be located at (or slightly mauka of) the shoreline setback line, as determined by the County of Kauai. This wall will serve as a retaining structure for construction of the building pads as well as a physical barrier to prevent surface drainage on the lots from reaching the ocean. The wall, which will also be an aesthetic feature, is anticipated to range in height from 3 ft to a maximum of 10 ft. The front of the wall will be constructed with a 1:12 back pitch using face stones 18" or less in size and set using recessed mortar joints. This same style of wall will also be constructed along the north Property boundary adjacent to Lot 1 and The Point at Poipu property to act as a physical barrier as well as a retaining structure.

9.3 STORMWATER MANAGEMENT & QUALITY

The drainage systems within the proposed subdivision will be based on and follow the requirements of the County of Kauai Storm Water Runoff System Manual, which mandates that any development greater than two acres in size shall maintain the peak storm runoff to pre-development conditions.

Drainage sumps, 8 ft deep by 8 ft diameter, will be installed to control the runoff generated from the road tract and public parking spaces. Individual drainage basins, capable of handling the increase in runoff due to the addition of impervious surfaces, will be constructed on each of the lots. The rock retaining walls, as discussed above in 9.2, Drainage Plan, will be designed to prevent surface drainage from reaching the ocean. The subdivision‟s Conditions, Covenants, and Restrictions (CC&R‟s) will require that these drainage sumps and drainage basins be maintained by the subdivision‟s Homeowners Association. The CC&R‟s will also address the issue of each lot being responsible to maintain the required capacity of each drainage basin. Sizing of the basins will meet or exceed the requirements of the Kauai County Storm Water Runoff criteria with the goal of keeping surface runoff from reaching the ocean.

The total amount of impervious surface is estimated to be 0.6 acre for the road and public parking area and approximately 1.0 acre for the home improvements and driveways. Under the existing pre-development conditions, the storm drainage flow rate for the 10 year, 1 hour storm event is estimated to be 11 cubic feet per second. The estimated post development flow rate for the same storm event is estimated to be 19.5 cubic feet per second, an increase of 8.5 cfs over existing conditions. The proposed drainage facilities, consisting of drainage sumps and drainage basins, will be sized to handle the estimated 19.5 cubic feet per second (cfs) of surface runoff for the 10 year, 1 hour storm event; not simply the increase in runoff from the existing conditions. The size of each lot"s drainage basin is anticipated to be in the 4,500 cubic foot range.

In addition to the proposed improvements being sized to handle the quantity of runoff anticipated during a 10 year, 1 hour storm event, the grassed and landscaped drainage basins will provide water quality control. These proposed features will function as infiltration basins which provide the means to remove sediment and contaminants.

In summary, drainage improvements provided as part of the subdivision will improve drainage conditions over existing conditions as all drainage from the Property (pre-development and post development) is proposed to be retained on the Property during the 10 year storm event. These proposed improvements also address water quality criteria. This exceeds the requirements of the County of Kauai Storm Water Runoff System Manual, which mandates that any development greater than two acres shall maintain the peak storm runoff to pre-development conditions.

9.4 EROSION CONTROL PLAN

Temporary erosion control measures will be incorporated during construction to minimize soil loss and erosion hazards. Best Management Practices will include such measures as installation of silt fences, waddles, straw bales, a stabilized construction entry, watering for dust control as well as other measures as outlined in the approved Erosion Control Plan.

Construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control. Before issuance of a grading permit by the County of Kauai, an Erosion Control Plan and Best Management Practices (BMPs) required for the National Pollutant Discharge Elimination System (NPDES) permit will be prepared describing the implementation of appropriate erosion control measures. The NPDES permit will allow CLDC to perform erosion control measures to ensure that no discharge to the ocean occurs. The NPDES general permit covers discharges composed entirely of storm water runoff associated with construction activities, including clearing, grading, excavation and construction support activities that result in the disturbances of one acre or more of total land area. See HAR chapter 11-55. In accordance with the Department of Health regulations, as well as the requirements of the standard permit conditions, CLDC shall design, install and maintain erosion and sediment controls that minimize (i.e., reduce and/or eliminate to the extent achievable) the discharge of pollutants from earth-disturbing activities. HAR chapter 11-55. All storm water controls must be installed prior to earth-disturbance, and pollution prevention procedures must be identified and followed.

In accordance with HAR chapter 11-55, the Property will be subject to Best Management Practices to minimize the discharge of pollutants via storm water discharges. Examples include open, vegetated swales and natural or constructed depressions; structures for storm water retention, detention, velocity dissipation devices and other appropriate measures.

9.5 ROADWAYS

The proposed roadway access to the lots will be privately maintained and located within a 50 ft wide road tract. Improvements will consist of 24 ft asphalt strip pavement with grassed shoulders. No pedestrian walkway within the road tract is anticipated.

A public parking area along the north Property line of Lot 9 is proposed for public use to access the shoreline. Pedestrian access would be along the westerly Property boundary within a dedicated public access easement; see the attached Exhibit B. The proposed development will not substantially interfere with the public's use of the ocean

9.6 WASTEWATER

As stated above under 7.2, there are no County owned or maintained wastewater facilities available to provide service to this property. Two options are available to provide wastewater service to the subdivision.

The first consists of installing individual wastewater systems (IWSs) on each lot, which is addressed in a report prepared by Esaki Surveying & Mapping, Inc (see the attached Exhibit F). As detailed in the report, each IWS will be designed to meet the wastewater flow requirements of the State of Hawaii Department of Health (DOH) for a five bedroom dwelling, which would have a maximum projected flow of 1,000 gallons per day (gpd) based on 200 gallons per day per bedroom. This will result in a greater wastewater capacity for the entire property (10,000 gpd) than the total anticipated wastewater flow of approximately 3,200 gpd based on the County of Kauai Department of Public Works criteria. Using the DOH higher flow rate insures that an adequate safety factor is used in designing and sizing of the IWSs.

The second option to provide wastewater service to the project involves connecting to the adjacent property‟s on-site treatment facility. This option would require installation of a sanitary sewer main line to service each lot along with a privately owned and maintained lift station that would pump effluent to the existing neighboring wastewater treatment facility. Initial conversations with the owners and operators of “The Makahuena” development indicate that there is adequate capacity to handle the increase in flow anticipated from this the subdivision. However, there is no agreement at this time between The Makahuena condominium and CLDC for such shared use.

9.7 WATER

As stated above under 7.3, a County owned and maintained 12” ductile iron waterline is available to serve the subdivision. It is anticipated that water for the project will be

supplied by the County Department of Water. The total amount of anticipated domestic water usage by the proposed 10 lots is estimated to be approximately 5,000 gallons per day. Irrigation water usage for the project would be in addition to the domestic usage. An eight inch waterline is proposed to be connected to the waterline within Pe,,e Road and then extend within the subdivision internal roadway to provide water connections to each of the house lots. The waterline will provide water service for both domestic and irrigation use as well as for fire protection.

By letter dated October 2012, the DOW confirmed that there is adequate source, storage, and transmission to serve 25 residential lots at the Property. (see the attached Exhibit E). In the letter DOW stated that "Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities at that time. At the present time, these facilities are adequate along Pee Road." DOW also stated that their letter does not represent a commitment or approval by the DOW of proposed or future water meter requests and/or subdivision building permit applications.

CLDC will submit a written request for water service for the proposed 10 lots after obtaining the SMA and Class III Zoning Permits. The request will include detailed water demand (both domestic and irrigation) calculations, along with other information required by DOW.

9.8 ELECTRIC, TELEPHONE AND TELECOMMUNICATION

Electric, telephone, and telecommunication lines are proposed to be installed underground extending from the existing facilities along the Pee Road right of way to each lot along the proposed internal subdivision road lot. The anticipated increase in usage from the proposed 10 lots would be minimal.

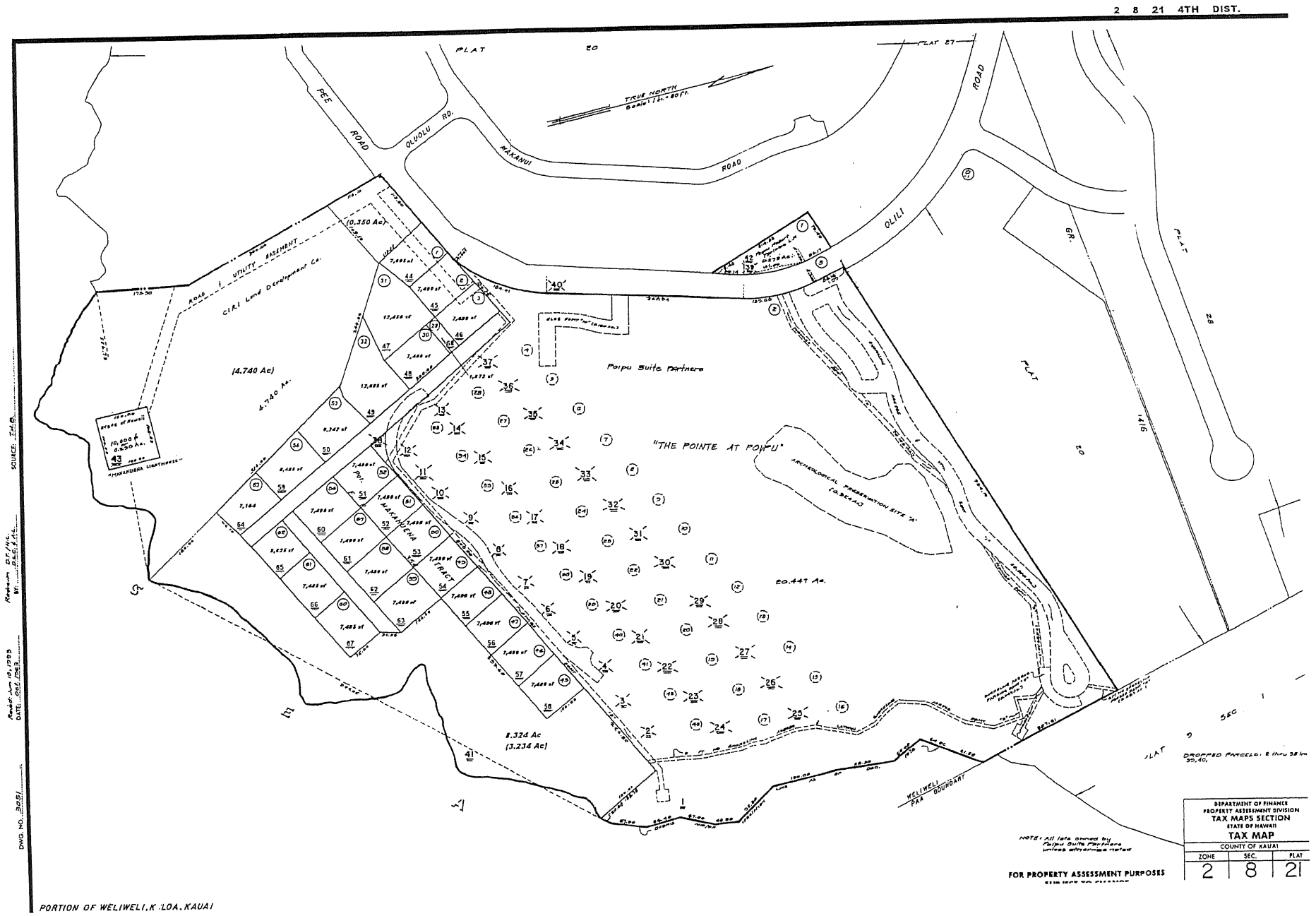
9.9 SOLID WASTE DISPOSAL

Solid waste pickup will be provided by a local private collection company for each individual lot. No community dumpster or centralized collection location will be provided.

10. CONCLUSION

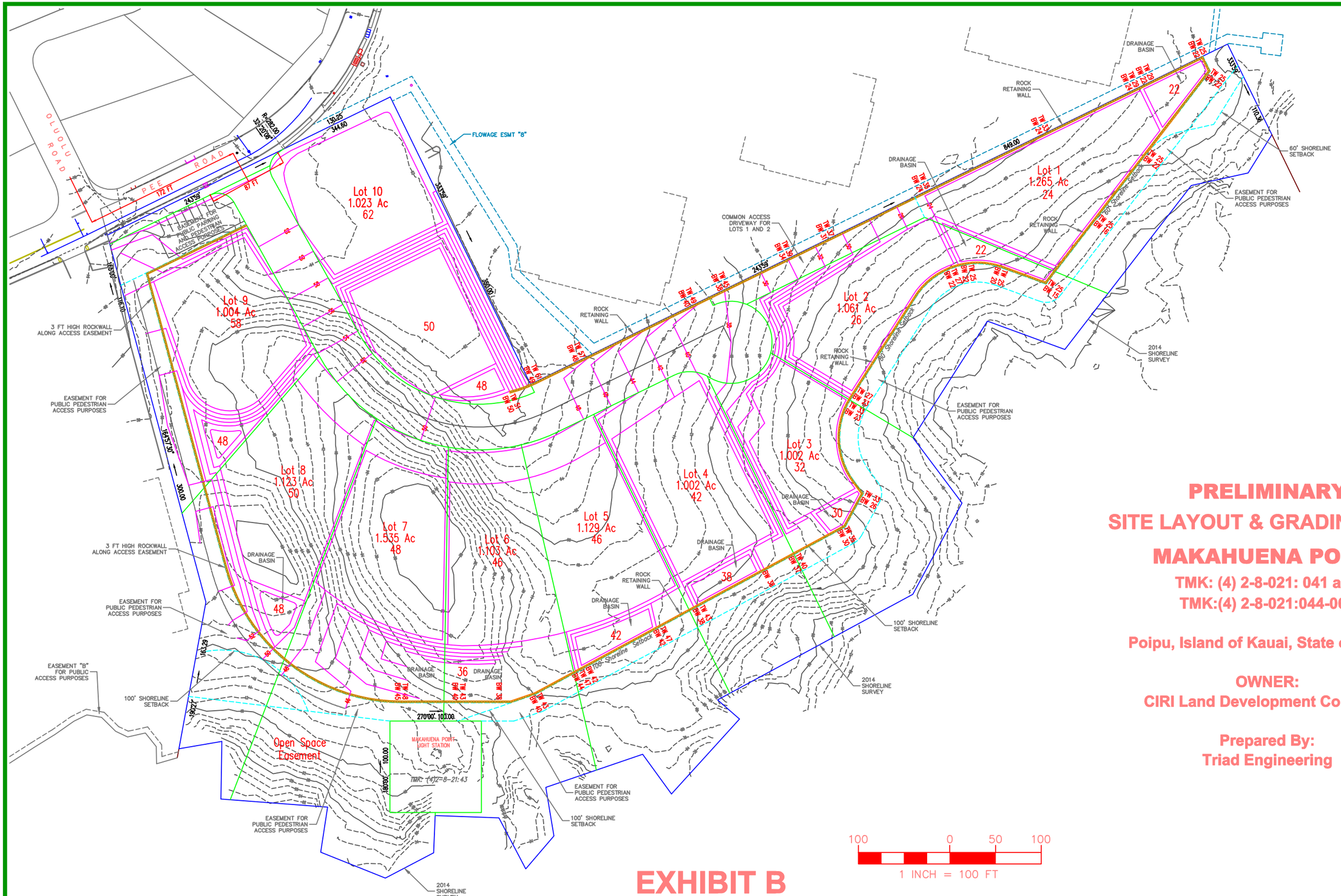
The proposed improvements for the Makahuena Point project will be designed in accordance with the applicable rules of the County of Kauai and the State of Hawaii and will minimize any adverse environmental or ecological effects to the maximum extent practicable. Public health, safety and welfare are of primary concern to CLDC during this initial planning process and will continue to be the guiding focus as the project develops.

The project design concept provisions outlined above will minimize potential adverse effects upon the site and the surrounding special management area resources. Although development of the project will entail alterations to existing land forms and vegetation, the anticipated design features and construction methods will cause minimum adverse effect to water resources and current land uses.



PORTION OF WELIWELI, K. LOA, KAUAI

EXHIBIT A



PRELIMINARY
SITE LAYOUT & GRADING PLAN
MAKAHUENA POINT

TMK: (4) 2-8-021: 041 and
TMK:(4) 2-8-021:044-068

Poipu, Island of Kauai, State of Hawaii

OWNER:
CIRI Land Development Company

Prepared By:
Triad Engineering

100 0 50 100
1 INCH = 100 FT

EXHIBIT B

MAR. 25, 2014

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' Local Tidal Datum. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 4. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the Local Tidal Datum. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from mosaicked 2-foot ground resolution satellite imagery that meets 1:12,000 scale horizontal accuracy standards provided by Digital Globe and the United States Department of Agriculture Natural Resources Conservation Service. This information was collected between July 2002 and January 2004.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

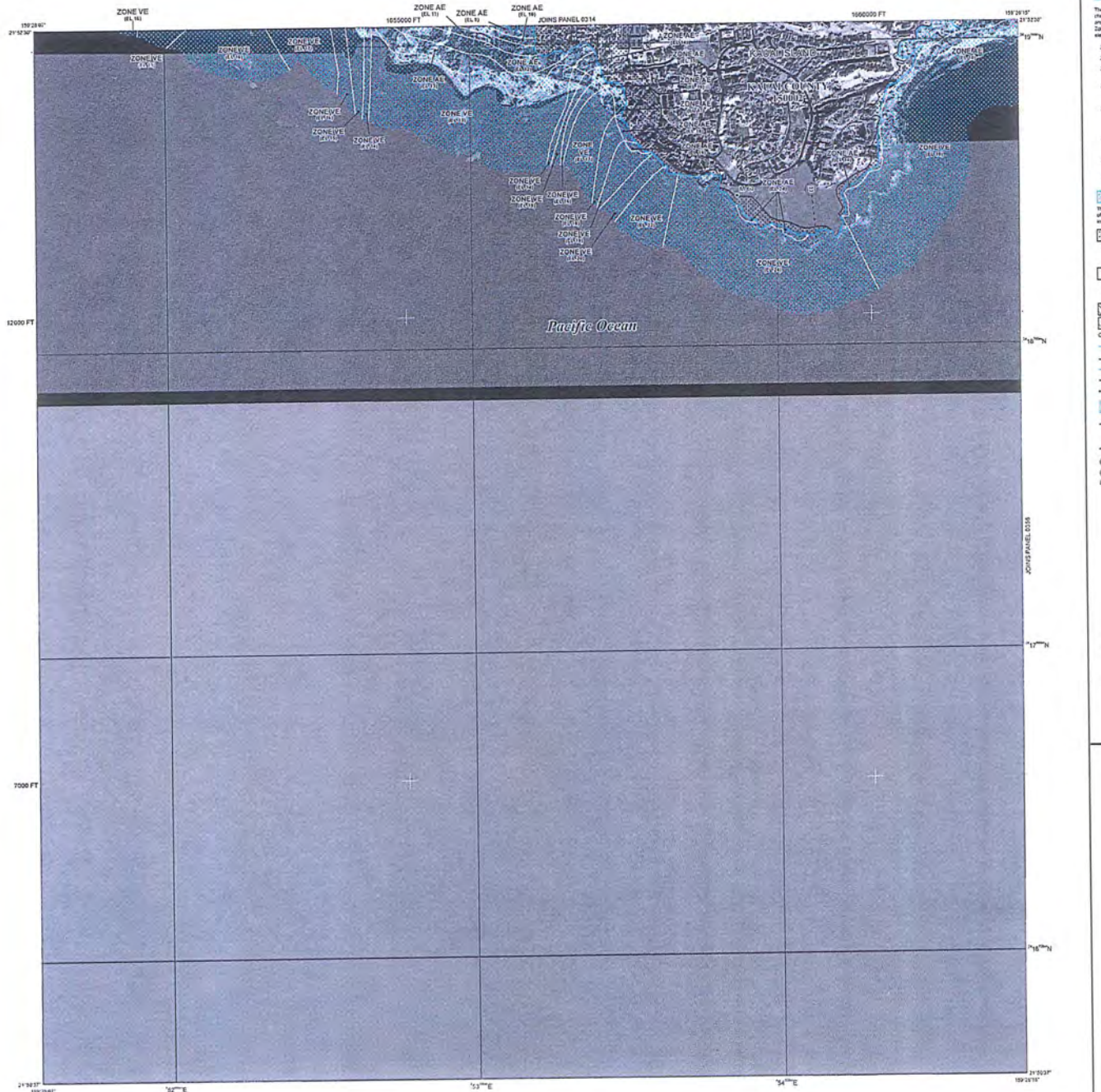
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the **separately printed Map Index** for an overview map showing the layout of map panels for the jurisdiction.

Contact the **FEMA Map Information eXchange** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Information eXchange may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov/business/nfip.

EXHIBIT C



Search

Properties and Qualities Ratings

Open All | Close All

Soil Chemical Properties

Soil Erosion Factors

Soil Physical Properties

- Available Water Capacity
- Available Water Storage
- Available Water Supply, 0 to 100 cm
- Available Water Supply, 0 to 150 cm
- Available Water Supply, 0 to 25 cm
- Available Water Supply, 0 to 50 cm
- Bulk Density, 15 Bar
- Bulk Density, One-Tenth Bar
- Bulk Density, One-Third Bar
- Linear Extensibility
- Liquid Limit
- Organic Matter
- Percent Clay
- Percent Sand
- Percent Silt
- Plasticity Index
- Saturated Hydraulic Conductivity (Ksat)
- Saturated Hydraulic Conductivity (Ksat), Standard Classes
- Surface Texture
- Water Content, 15 Bar
- Water Content, One-Third Bar

Soil Qualities and Features

- AASHTO Group Classification (Surface)
- Depth to a Selected Soil Restrictive Layer
- Depth to Any Soil Restrictive Layer
- Drainage Class
- Frost Action
- Frost-Free Days
- Hydrologic Soil Group

View Description | View Rating

View Options

Map ☑
Table ☑
Description of Rating ☑
Rating Options ☑
Detailed Description ☐

Advanced Options

Aggregation Method: Dominant Condition
Component Percent Cutoff:
Tie-break Rule: Lower / Higher

View Description | View Rating

- Map Unit Name
- Parent Material Name
- Representative Slope
- Unified Soil Classification (Surface)
- Water Features

Map — Hydrologic Soil Group

Scale: [not to scale]



⚠ *Warning: Soil Ratings Map may not be valid at this scale.*

Tables — Hydrologic Soil Group — Summary By Map Unit

Summary by Map Unit — Island of Kauai, Hawaii (HI960)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KvD	Koloa stony silty clay, 15 to 25 percent slopes	C	17.2	49.3%
rRO	Rock outcrop	D	4.1	11.9%
Subtotals for Soil Survey Area			**21.3**	**61.2%**
Totals for Area of Interest			**34.8**	**100.0%**

Description — Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options — Hydrologic Soil Group

Aggregation Method: Dominant Condition
Component Percent Cutoff: *None Specified*
Tie-break Rule: Higher

EXHIBIT D:

EXHIBIT E

Department of Water
County of Kaua'i

Water has no substitute.....Conserve it

October 30, 2012

Mr. Galen Nakamura
Shiramizu Loo & Nakamura
4357 Rice Street, Suite 201
Lihue, HI 96766

Dear Mr. Nakamura:

Subject: Water Service Inquiry: Proposed 26 Single Family Dwellings on 26 Lots (Vacant Lots, No Existing Water Meters), TMK: 2-8-21:021, 2-8-21:044-067, Pee Road, Poipu, Kauai

This is in regard to your letter dated October 15, 2012. The following Department of Water (DOW) response is for informational purposes only and describes the present water system status. It is subject to change without further notice. It does not represent a commitment or approval by the Department of the proposed or future water meter requests and/or subdivision and building permit applications. The inquirer is responsible to request information on water system status in the future.

Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, these facilities are adequate along Pee Road,

Prior to the DOW recommending water meter service or building permit approval, the applicant maybe required to:

1. Submit a formal request for water service for our review and approval.
2. Prepare and receive DOW's approval of construction drawings for the necessary water system facilities and construct said facilities. These facilities shall include but are not be limited to:
   a) The domestic service connection(s).
   b) The fire service connection(s), if applicable.
   c) The interior plumbing plans with the appropriate backflow prevention device, if applicable.
3. Pay the applicable charges in effect at the time of payment to the Department. At the present time, these charges shall include but are not be limited to the Facilities Reserve Charge (FRC) which is based on $4,600 per 5/8-inch water meter/dwelling or the FRC based on the approved water meter size; whichever amount is greater.

4. Receive a "Certification of Completion" for the construction of the necessary water system facilities from the DOW.

If you have any questions concerning the construction drawings, please contact Mr. Keith Aoki at (808) 245-5411. If you have any questions concerning the Certificate of Completion, please contact Mr. Dustin Moises at (808) 245-5459. For other questions, please contact Mr. Edward Doi at (808) 245-5417.

Sincerely,

Gregg Fujikawa
Chief of Water Resources and Planning Division

ED:loo
T-14333 Poipu, Nakamura

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

FOR

CIRI Land Development Company

an Alaska corporation, and a wholly owned subsidiary of
Cook Inlet Region Inc., an Alaska Native corporation

PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.
1610 HALEUKANA STREET
LIHU`E, KAUA`I, HAWAI`I 96766
(808) 246-0625

EXHIBIT F

MAKAHU`ENA POINT

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

The Makahu`ena Point property is located at the southernmost point of Kaua`i, in Weliweli, Koloa, and is comprised of 25 lots of record, tax map key (TMK) No. (4) 2-8-021: 044 – 068), one bulk lot, TMK No. (4) 2-8-021: 041, and two unnumbered road lots (the property). CIRI Land Development Company (CLDC) proposes to consolidate the existing lots of record, and re-subdivide the property into 10 single-family residential lots of approximately one acre each, which is far less dense than the currently permitted subdivision. The Makahu`ena Point subdivision is proposed to include:

- An internal road connecting to Pe`e Road, which will provide access to the lots;
- A pedestrian public access trail from Pe`e Road to the shoreline;
- A pedestrian public access trail running laterally along the entire shoreline;
- An open space area at the most makai portion of the property, adjacent to a 10,000 sq. ft. parcel owned by the USA; and
- A public parking area close to Pe`e Road.

The Department of Health (DOH) Wastewater Branch reviews all individual wastewater systems (IWS) for conformance to applicable provisions of Hawai`i Administrative Rules (HAR), Title 11, Chapter 62, entitled Wastewater Systems. The purpose of HAR 11-62 is to protect the public's health and safety by insuring that the disposal of wastewater does not contaminate water sources and attract

insects and rodents. Various requirements in Chapter 62 are used to determine: what type of IWS (if any) will be allowed, location, and the minimum design size. In addition, the Comprehensive Zoning Ordinance of the County of Kauai also addresses utility requirements. In all developments that are not accessible to public sewers, a private sewer disposal system shall be provided that meets the requirements of The County Department of Public Works and the requirements of the State Department of Health. See CZO §8-4.5(c)(3).

HAR 11-62-31.1 (1)(A) states that developments involving dwellings require at least 10,000 square feet of land area for each IWS. Each of the 10 single-family residential lots, based on the "Preliminary Site Layout & Concept Plan" (see enclosed) have an area of at least one acre. One acre is equal to 43,560 square feet, which is enough area for the design to satisfy this requirement.

The property within the County Open zoning district, and also overlaid by the Shore Constraint District. Development within the Shore Constraint District must be assessed to not cause significant harm to the (A) The water quality of the ocean, including but not limited to its clarity, temperature, color, taste and odor; (B) Fish and aquatic habitats; (C) The natural beauty of the area; (D) Navigation, safety or health; or (E) Would not substantially interfere with public use of the ocean waters or underlying lands; and (F) That other facilities are unavailable to the applicant. See CZO §8-12.5

With respect to the flood zones on the property, under the Kauai County Code, all sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems, and discharge from the systems into flood waters.

On-site waste disposal systems should be located to avoid impairment to them or contamination from them during flooding.

The property is also within the Special Management Area. Therefore, conditions may be imposed to address solid and liquid waste treatment disposition and management to minimize adverse effects upon special management area resources.

Consistent with the requirements under Article Xl, Section 1 of the Hawaii State Constitution, the County and the State have a duty to preserve and protect the State's water resources. Therefore, CLDC must comply with all regulatory requirements in developing an IWS plan for the property. I any adverse impacts are expected, CLDC will be required to implement reasonable measures to mitigate those impacts. Such measures will likely be included in any permits issued by the Department of Health for IWS's, and appropriate assessments must be made to ensure permit compliance.

On January 14, 2014, three percolation tests were conducted in different areas of the property. A map showing the approximate locations for each test is attached. While digging all of the test pits, lava bedrock was encountered 1.5 to 2 feet below existing grade. The soil was brownish granular rocky. Percolation rates varied, with test pit #1, #2, and #3 having a percolation rate of 6 minutes per inch, no percolation, and 21 minutes per inch, respectively.

The lava bedrock at shallow depth will not make seepage pits a practical option since the design would involve deep depths. Therefore, absorption beds will be designed since they can be constructed at shallower depths. Soil fill will need to be added in the area of the IWS in order to comply with HAR provisions.

HAR 11-62-34 (c)(1)(B) requires absorption bed systems to be constructed in soils with percolation rates of 60 minutes per inch or faster. The absorption bed systems are to be located on the property where there is a vertical separation of three feet or more between the bottom of the absorption bed and the lava bedrock (HAR 11-62-34 (c)(1)(C)), and 18 inches from the bottom of the absorption bed to the finished grade (HAR 11-62-34 (c)(1)(H)). Absorption beds must be constructed in stabilized fill (HAR 11-62-34 (c)(1)(D)) with a slope gradient of 8% or less (HAR 11-62-34 (c)(1)(I)). The property will be graded as shown in the "Preliminary Site Layout & Grading Plan" (enclosed), stabilized, and percolation tests will be redone to determine the required size of the absorption bed. Depending on the proposed location of the IWS, there is a possibility that slight adjustments to the finish grade will be necessary to meet separation requirements. Percolation tests will need to be conducted on all lots to assure sufficient rate and vertical separation for the absorption bed.

Each of the 10 lots will have its own IWS which will include an absorption bed and septic tank. Wastewater from the dwelling flows into the septic tank and is held there for a period of time, which allows bacteria to begin breaking down some of the solids. During this time, the oil and grease in the wastewater floats to the surface where they form a scum layer, the solids in the wastewater sink to the bottom, forming a sludge layer, and the clear water in the middle flows to the absorption bed and percolates into the ground. Biological and chemical additives are not needed to aid or accelerate decomposition. Scum and sludge must be removed periodically to keep them from entering and clogging the absorption bed.

No person may use an IWS until authorized in writing by the Director of the Department of Health. However, before the Department of Health approves the operation of an IWS, the following requirements must be satisfied:

(1) An operation and maintenance manual developed pursuant to HAR section 11-62-23.1(d)(2) as applicable shall be submitted and approved by the director; and

(2) The owner of the individual wastewater system shall certify that the individual wastewater system shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual. The certification shall include a statement that upon sale or transfer of ownership of the individual wastewater system, the sale or transfer of ownership of the individual wastewater system, the sale or transfer will include the appropriate transfer documents and provisions binding the new owner to the operation and maintenance manual. See HAR 11-62-31.1(e)

A properly maintained septic system should be inspected every year, and pumped approximately every three years, depending upon the volume of sewage entering it.

Each IWS will be designed for a five bedroom dwelling, which will have a maximum projected flow of 1,000 gallons per day (200 gallons per day per bedroom). Based on that projected flow, each system will require a 1,250 gallon septic tank (HAR 11-62-33.1 (a)(5)). The absorption bed area will be determined after the lots are graded and percolation tests are redone. Assuming the worst allowable percolation rate, the minimum design absorption area would be 1,680

square feet (see attached design calculations), which is much less than the size of the one acre lots they would be designed for.

HAR 11-62-32 states that all IWS's need to maintain minimum setback distances as indicated in Table 2 of Appendix F (enclosed). The septic tank and absorption bed will have minimum setbacks from:

- the wall line of any structure or building;
- property line;
- stream, the ocean at the vegetation line, pond, lake, or other surface water body;
- large trees;
- other IWS's;
- potable water sources serving public water systems.

The proposed use of individual wastewater systems for the 10-lot residential development is feasible for the property. The use of IWS is consistent with careful stewardship of Kauai's land and waters. The proposed use of IWS for this property will prevent any impairment to the ocean or any water underlying the property, as no waste materials will leach into the ground or ocean. Similarly, the IWS will not result in any adverse environmental effects to the public or adjacent areas. As such, there should be no discernible impact on the natural resources of the State. Strict compliance with the Department of Health regulations for the approval and certification of an IWS should be required to minimize any adverse effects on Special management Area resources.

DESIGN REQUIREMENTS:

Area Classification: Critical Wastewater Disposal Area

Lot Size: 362,332 sq,ft.

IWS Permitted: 1/10,000 sq,ft. = 36

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

FLOW:

5 Bedroom Residence
Design for 5 Bedrooms
5 Bedrooms x 200 gpd/bdrm = 1,000 gpd

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature
ESAKI SURVEYING & MAPPING, INC.
EXPIRES: APRIL 30, 2014

TANK CAPACITY:

1,250 Gallon Minimum for 5 Bedrooms
(Chapter 62-33.1, Rules Amending Title 11 Hawaii Administrative Rules)
Use 1,500 Gallon IAPMO Certified Septic Tank

PERCOLATION TEST INFORMATION:

Date of Test:	January 19, 2014
Tested By:	Wes Chibo
Percolation Rate:	60 mpi (minimum allowable rate)
Soil Description:	0-18" below grade - Brownish granular rocky, 18" below grade - Lava Bedrock
Depth of Water:	~19' above sea level

ABSORPTION FIELD REQUIREMENTS:

For 60 mpi (From Appendix F, Toble 3, Hawaii Administrative Rules, Title 11, Chapter 62)
Use 330 sq, ft./bedroom
Absorption Area Required = (5 bedrooms) x (330 sq, ft./bedroom) = 1,650 sq, ft.
Use gravelless absorption bed with eight lines and chambers
Total length required = 1,650 sq, ft. / 24 ft. = 68.75 ft.
Use 8 lines, 70.0 ft. long
Total absorption area provided = 24.0 ft. x 70.0 ft. = 1,680 sq,ft.

NOTE: Soil fill will need to be added to site.
*3' minimum vertical separation from bottom of bed to groundwater/bedrock.
*Bottom of bed must be at least 18" below finished grade.
*IWS needs to be located 50 feet away from the ocean at the vegetation line.

ESAKI SURVEYING & MAPPING, INC.
1610 Haleukana Street
Lihue, Hawaii 96766
(808) 246-0625

DESIGN CRITERIA
Tax Map Key: (4) 2-8-21: 41
Owner: CIRI Land Development Co.
Date: January 2014

Drawn By: CH | Checked By: WW | Sheet 1 Of 11

TABLE 2
April 15, 1997

Minimum Horizontal Distance From	Cesspool (ft)	Treatment Unit (ft)	Seepage Pit (ft)	Soil Absorption System (ft)
Wall line of any structure or building	5	5	5	5
Property line	9	5	9	5
Stream, the ocean at the vegetation line, pond, lake, or other surface water body	50	50	50	50
Large trees	10	5	10	10
Treatment unit	5	5	5	5
Seepage pit	18	5	12	5
Cesspool	18	5	18	5
Soil absorption system	5	5	5	5
Potable water sources serving public water systems	1000	500	1000	1000

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM

FALLING HEAD TEST PROCEDURE

1. Preparing Percolation Test Hole(s)
   1. Dig or bore a hole, four to twelve inches in diameter with vertical walls to the approximate depth of the soil absorption system (bottom of trench or bed).
   2. Scratch the side wall and bottom to remove any smeared soil and remove loose material.
   3. Place one inch of coarse sand or gravel on bottom.

B. Determine Percolation Rate
   1. Place twelve inches of water in hole and determine time to seep away. Record this time on the site evaluation form.
   2. Repeat step B.1. above. Also record this time on the site evaluation form.
   3. If the time of the second test is less than 10 minutes go to Step C, if not skip to Step D.

C. Sandy (granular) Soils
   1. Establish a fixed reference point, add water to six inches above gravel and measure water level drops every ten minutes for 1 hour.
   2. Use a shorter time interval if first six inches seeps away in ten minutes or less.
   3. Refill when necessary, do not exceed six inches of water.
   4. Record time intervals and water drops on site evaluation form.
   5. Use final water level drop interval to calculate percolation rate. (Step E)

D. Other Soils (non-granular, e.g. silt, loams & clays)
   1. Maintain at least twelve inches of water in the hole for at least four hours to presoak soil.
   2. Do not remove water remaining after four hours.
   3. Permit soil to swell at least 12 hours. (Dry clayey soils should be soaked and permitted to swell for longer periods to obtain stabilized percolation rates).
   4. After swelling, remove loose material on top of gravel.
   5. Use fixed referenced point, adjust water level to six inches above gravel and measure water level drop.
   6. If the first six inches of water seeps away in less than 30 minutes, measure water level drops every ten-minutes and run for one hour.
   7. If the first six inches of water takes longer than 20 minutes to seep away, use 30 minute time intervals for four hours or until two successive drops do not vary by more than one-sixteenth inch (stabilized rate).
   8. Refill with water only when necessary, but no adjustment during last three readings exeept to the limit of the last drop. Do no exceed six inches of water.

E. Use final drop interval to calculate percolation rate and record on site evaluation form:

$$\frac{\text{Time Interval}}{\text{Water Level Drop}} = \text{Percolation Rate}$$

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: _____ Test Performed by: _____

Owner: _____ TMK: (____) ____-____-____:____

Elevation: _____ feet
Depth to Groundwater Table: _____ feet below grade
Depth to Bedrock (if observed): _____ feet below grade
Diameter of Hole: _____ inches
Depth to Hole Bottom: _____ feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)

PERCOLATION READINGS:
Time 12 inches of water to seep away: _____ minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

____ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

____ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches

Percolation Rate (time/final water level drop): _____ minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the hottom of the soil absorption system and the groundwater table or any other limiting layer.

_____ _____
Engineer's Signature/Stamp Date

#1

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 8:45AM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 28 feet
Depth to Groundwater Table: >20 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: 18 minutes
Time 12 inches of water to seep away: 60 minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

√ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	8 3/8	10 MIN	1 13/16
10 MIN	3 5/8	10 MIN	1 13/16
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 13/16		
10 MIN	1 13/16		

Percolation Rate (time/final water level drop): 5.6 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#2

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 12:42 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 19 feet
Depth to Groundwater Table: >15 feet below grade
Depth to Bedrock (if observed): 1.5 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 1.5 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-18	BROWNISH, GRANULAR ROCKY
18	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 3/16		
10 MIN	5/8		
10 MIN	5/8		
10 MIN	0		

Percolation Rate (time/final water level drop): NONE minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#3

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 2:45 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 43 feet
Depth to Groundwater Table: 720 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3 5/8	10 MIN	1/2
10 MIN	1 3/16	10 MIN	1/2
10 MIN	1 3/16		
10 MIN	15/16		
10 MIN	11/16		
10 MIN	1/2		

Percolation Rate (time/final water level drop): 20.8 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

PERCOLATION TEST PIT LOCATIONS

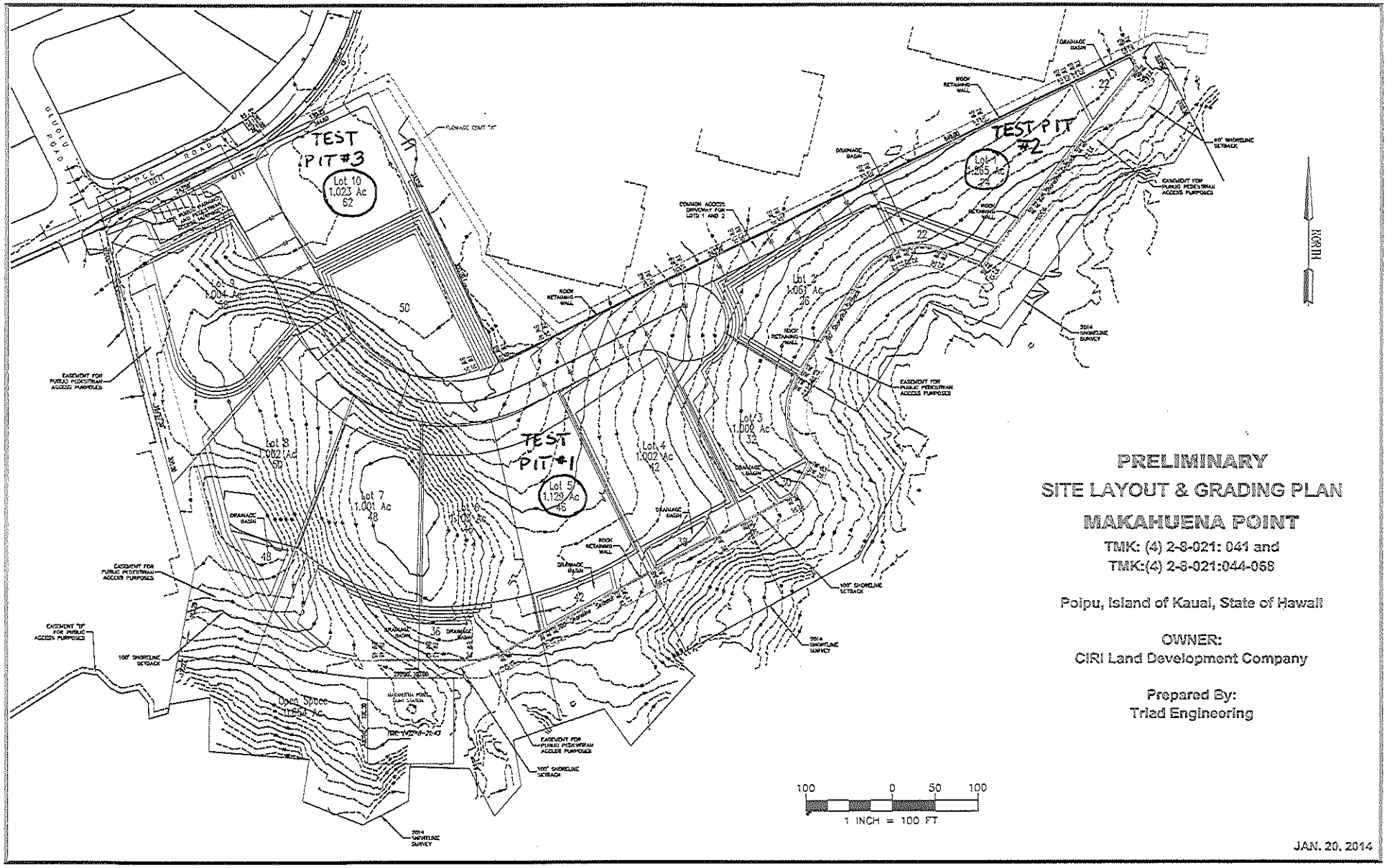


EXHIBIT Q

SERVICES CONTRACT

THIS SERVICES CONTRACT ("Contract"), effective 6 day of June, 2020 ("Effective Date") by and between **CIRI Land Development Company**, with principal offices at 725 E Fireweed Lane, Suite 800, Anchorage, Alaska 99503 ("Owner") and **Kani Wildlife Control, LLC**, with principal offices at PO Box 1206, Kekaha, Hawaii, 96752 ("Contractor") is for the purpose of engaging Contractor to perform, or cause to be performed services, for the benefit of Owner's property, for the compensation herein provided all upon the terms and conditions set forth below.

ARTICLE 1
Work / Compensation / Payment

1.1 Contractor shall perform predator cat control as set forth above and as further described below (the Work) at Owner's property known as Makahū'ena Estates located off Pe'e Road on Kauai (the Property).

- Contractor shall monitor the Property monthly to actively trap and conventional control with removal of feral cats

Such Work shall be performed in a good workmanlike manner and will be completed in accordance with the specifications outlined above.

1.2 Contractor agrees to perform the Work for Sixty-five Dollars an hour ($65/hr.) (the Contract Price), not to exceed One Thousand Dollars ($1,000) in a 30-day period without prior approval. Contractor shall submit monthly requests for payment to Owner. All requests for payment shall contain an itemized list detailing the Work done, including times and dates with specific reference to the Property. Owner shall review the invoices and pay Contractor within 30 days of receipt and approval of an invoice.

ARTICLE 2
Independent Contractor Status

2.1 Contractor is an independent contractor. Contractor shall not be deemed to be the agent, employee, partner, joint venturer or any other legal or business relationship of Owner for any purpose. Contractor shall be solely responsible for and shall maintain adequate records while performing Work hereunder and shall be solely responsible for and shall file or make, on a timely basis, all tax returns and payments required to be filed with or made to any federal, state, or local authority, including all self-employment taxes or returns, with respect to Contractor's Work hereunder. Contractor shall not enter in any agreement (written or otherwise) with a third party on behalf of Owner or otherwise purport to bind Owner.

2.2 Contractor shall provide competent supervision for performance of the Work and shall be responsible for all acts of employees or subcontractors of the Contractor and shall allow only qualified persons to perform the Work.

ARTICLE 3
Representations

3.1 In order to induce Owner to enter into this Contract, Contractor represents as follows:

3.1.1 Contractor has full experience and proper qualifications to perform the Work. Contractor is the holder of all governmental consents, licenses, permits or other authorizations required to permit Contractor operate or conduct its business now and as contemplated by the Contract.

3.1.2 None of the execution and delivery of this Contract, the performance of the Work herein contemplated or compliance with the terms and provisions in this Contract shall conflict with or result in a breach of, or require any consent under any agreement or instrument to which Contractor is a party or by which it is bound or to which it is subject, or constitute a default under any such agreement or instrument.

3.1.3 The scope of work described herein is sufficient to describe the requirements for the Work. Contractor has given Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered, if any, in the scope of work.

ARTICLE 4
Insurance and Indemnity

4.1 Contractor shall maintain, and require its subcontractors, if any, to maintain at all times while obligated to perform hereunder a: (1) Commercial General Liability policy of combined single limit insurance coverage with bodily injury, (including death of any person), in the amount of $1,000,000 per occurrence and/or $2,000,000 aggregate and if Contractor has employees, (2) Contractor shall provide statutory Workers Compensation coverage for Contractor's employees and Employers Liability Coverage, with minimum limits of $500,000 Bodily Injury/Each Accident, $500,000 Bodily Injury by Disease/Policy Limit and $500,000 Bodily Injury by Disease/Each Employee. If Contractor is required to drive in the performance of the Work and/or drives on the Property, Contractor shall maintain in addition to the above requirements Business Automobile/Motor Vehicle Liability coverage with limits of liability not less than $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles. If Contractor is required to perform remediation of hazardous materials including but not limited to asbestos containing materials, lead, contaminated soil, or if its operations create an exposure to hazardous materials, Contractor must in addition to the above requirements, carry a Contractors Pollution Liability policy with limits not less than $1,000,000 per occurrence and not less than $2,000,000 aggregate for Bodily Injury, Personal Injury, and Property Damage. Each Owner and Manager, their agents, assigns, parents, subsidiaries, subcontractors, and employees shall be named as an additional insured on each required policy except Workers Compensation. Contractor's

insurance shall be primary and non-contributory. Contractor waives any rights of subrogation against Owner and Contractor's policies of insurance shall acknowledge or permit such waiver. A certificate of insurance evidencing such requirements shall be furnished by the Contractor prior to the commencement of any Work. No required coverage shall be suspended, voided, canceled, reduced in coverage or endorsed to lower limits except after 30 days prior written notice is given to Owner.

4.2 Contractor hereby agrees to indemnify and hold Owner and the Property free of and harmless from, and shall defend against, any and all actions, liabilities, claims and expenses (including attorney's fees) arising from any acts or omissions of Contractor and / or its employees and agents related to this contract for services, and / or arising from any services or material provided to the Property by Contractor and / or its agents and employees.

ARTICLE 5
Standard of Care

5.1 Contractor's Work shall be performed in a competent, diligent manner, and to the satisfaction of Owner using the professional skill and judgment ordinarily exercised by similarly situated professionals in Contractor's industry performing like work in like circumstances and in compliance with the requirements of this Contract and shall comply with all laws, ordinances and enforceable directions of governmental agencies having regulatory authority over the Property and the Work ("Standard of Care").

5.2 Contractor shall use due diligence in performing under this Contract so as to protect the Property (and all improvements therein), adjoining property and all persons and property at or near the performance area of Contractor. Contractor shall promptly, and at its expense, repair, replace or otherwise restore property and improvements damaged by its employees, equipment, subcontractors, suppliers and the like.

5.3 If any Work performed by Contractor is incomplete, defective, or fails to meet the requirements of this Contract, Contractor shall promptly undertake such steps as are necessary to complete or remedy the Work.

ARTICLE 6
Default

6.1 Each of the following shall constitute a "default" by Contractor hereunder:

6.1.1 Failure of Contractor to (a) make prompt payment for labor and materials required for performance hereunder, (b) supply enough workmen or equipment to timely perform hereunder, or (c) comply with this Contract generally or any law, ordinance or the like applicable to this Contract or the work hereunder.

6.1.2 Any (a) attachment, execution or other judicial levy upon the assets of Contractor, (b) assignment of the benefits of this Contract for the direct or indirect benefit of creditors of Contractor, (c) any agreement whereby Contractor loses control of its business to a committee of its creditors, (d) judicial appointment of a receiver, trustee, or similar officer to take possession of he business or assets of Contractor, or (e) filing of any petition by or against Contractor under any chapter of the Federal Bankruptcy laws or the commencement of a case or proceeding under such laws.

6.2 If any default occurs, and without prejudice to any other remedy, Owner may terminate Contractor's performance hereunder upon 24 hours prior written notice. Thereupon, Owner may take such action deemed necessary to effect completion of the Contract Work.

ARTICLE 7
Term

7.1 The term of this Contract shall commence upon the Effective Date and continue on a month-to-month basis. Either the Owner or the Contractor may cancel this Contract with thirty (30) days written notice. This Contract shall be deemed cancelled upon receipt of notice of the sale of the Property.

ARTICLE 8
Liens

8.1 Should the performance of the Work or services, or any portion thereof, convey Mechanic's lien rights to the Contractor or any subcontractor, Contractor shall provide lien waivers from itself and any Subcontractors prior to payment by Owner. If any shall file liens against the work, Contractor shall promptly obtain and file a release of any such lien.

ARTICLE 9
General Provisions

9.1 Contractor agrees that it will not directly or indirectly, interfere with other contractors and/or labor engaged by Owner in the maintenance and/or operation of the Property.

9.2 All permits required by governing agencies and all sales and similar taxes shall be secured and paid for by the Contractor, the cost of which is included in the total Contract Price.

9.3 Contractor warrants that its employees and the employees of its subcontractors, if any, providing services under this Contract are authorized by federal law to work in the United States and that such employment strictly complies with the requirements of 8 CFR Part 274(a). Breach of this warranty shall constitute a material breach of this Contract.

9.4 Contractor's Taxpayer Identification Number (TIN) is 81-422-4050

9.5 If at any time any controversy should arise between Owner and Contractor regarding anything pertaining to this Contract and which the parties hereto do not promptly adjust and determine, then the written orders from Owner to Contractor shall be followed.

9.6 The waiver by Owner of any requirement of this Contract shall not be deemed a waiver of any subsequent failure to perform, or construed as precluding Owner from insisting on strict adherence to the terms of this Contract in the future. The remedies and rights of Owner, in the event of any default hereof by Contractor, are cumulative.

9.7 Notices, demands and requests required or desired to be given hereunder shall be in writing and delivered either personally or by deposit into the U.S. Mail, postage prepaid, certified or registered mail, return receipt requested, or by recognized overnight air courier addressed to the party at its address at the beginning hereof.

9.8. Contractor shall not assign this Contract, or any rights, benefits, or monies due or to become due to Contractor hereunder. Nothing herein shall preclude or prohibit Owner from assigning or transferring the whole or any part of this Contract.

9.9 This Contract shall be construed and enforced in accordance with the laws of the State of Hawaii. Venue of any action under this Contract shall be exclusively in Hawaii State Court. In the event of litigation involving a dispute arising out of this Contract, the prevailing party shall be entitled to receive actual reasonable attorneys' fees and costs, pursuant to applicable court rule, incurred in connection therewith.

9.10 This Contract supersedes all prior negotiations, proposals and understandings, if any, of the parties hereto, and constitutes the entire understanding of the parties with reference to the work to be performed under this Contract. This Contract shall not be modified except by a writing signed by all of the parties.

9.11 This Contract and all of the representations, warranties and conditions herein contained shall be binding upon and inure to the benefit of the heirs, executors, administrators, legal representatives, assigns or other successors in interest (to the extent permitted hereunder) of each of the parties hereto.

IN WITNESS WHEREOF, this Contract has been executed as of the date set forth above.

OWNER:
CIRI Land Development Company

DocuSigned by:
Chad Nugent
AD73777A0C144F2...

Name: Chad Nugent
Title: President

CONTRACTOR:
Kani Wildlife Control, LLC

Name: Janoah Young
Title: Accounts manager/Owner

EXHIBIT Q-1

Kani Wildlife Control, LLC
PO BOX 1206
Kekaha, HI 96752
(808)754-3960
kaniwildlifecontrol@outlook.com

KANI WILDLIFE CONTROL

CUSTOMER: David Weekes

LOCATION: 1645 Pe'e Rd

CITY & ZIP: Koloa, HI 96756

PHONE: 801-634-9075

Animal(s) To Control: Feral Cats

This animal control contract made this day of_____ , between Kani Wildlife Control, LLC and the above listed customer who declares himself/herself to be the resident/owner/manager (hereafter Customer) of the property listed above and desires control of said animal causing transient or domiciled damage at the building and/or premises stated herein. The above person agrees that they are authorized to request wildlife control services for the property listed above.

Kani Wildlife Control will continue to trap and/or exercise appropriate control methods until the live animal source of the problem is solved/maintained or until contract terms has ended. Kani Wildlife Control reserves the right to modify the contract if circumstances such as too many non-target catches, or poor occupant cooperation occurs. Before such action occurs, Kani Wildlife Control will notify customer in advance. Trapping for animals causing transient damage, such as rooting, wallowing, and/or trampling will be conducted for the duration of time specified by the customer. Depending on the circumstances, Kani Wildlife Control reserves the right to discontinue trapping, or return at a later date.

Refundable Security Deposit: The customer is responsible for the security of the traps and/or cameras. The deposit per trap/camera is: **$500.00/trap - $500/camera.** Customers will only be requested to put the money up front if Kani Wildlife Control believes the situation to be of high risk. If traps and/ or cameras are stolen or damaged, excluding damages sustained by targeted animals, the above figure(s) will be required to be paid by the customer.

RATES

Delivery and Setup Fee Per Trap:$0_____Number of Traps: 2-4 based on populations

- Daily Trap Fee Per Trap: $0_____
- Number of Days: ON-Going Maintenance
- Monthly Trap Fee with Property Scout: $1950_____
- Number of Months: Continuous- until either party provides written notice of cancellation.
- Camera: $100.00

Hourly Service Rate: $NA (For Conventional Control, a state issued permit may be required)

Customer understands that he/she is responsible to provide Kani Wildlife Control access to the listed property. Customer is also responsible to remove items from the access area(s) that may be damaged or soiled from Kani Wildlife Control work. State law requires that all traps be accessible by Kani Wildlife Control on a regular/daily basis. Failure to assist Kani Wildlife Control in this regard may result in additional charges to cover fines.

Janoah Young
KWC WCO Signature

David Weekes
Customer Signature

EXHIBIT Q-1

Kani Wildlife Control, LLC
PO BOX 1206
Kekaha, HI 96752
(808)754-3960
kaniwildlifecontrol@outlook.com

Kani Wildlife Control Mutual Obligations and Disclaimers:

I. CUSTOMER OBLIGATIONS:

(CUSTOMER Initial _____)

A. ACCESS & CHECKING TRAPS: The customer shall permit Kani Wildlife Control, its agents and employees free entrance and exit to the customer premises with necessary materials and equipment at reasonable times for the performance of the services to be rendered under this agreement. Customer understands that State law requires all traps to be checked by Kani Wildlife Control on a daily basis. Failure to permit access to Kani Wildlife Control may result in fines, UNLESS SPECIFIC ALTERNATIVE ARRANGEMENTS HAVE BEEN MADE. The customer is also responsible to remove / protect items that may be damaged or soiled by Kani Wildlife Control work. Kani Wildlife Control is not responsible for items not removed from the working area and access points. Animals urinate and defecate at various times and may do so when being removed from a building. Further, the customer shall vacate the premises for periods required and as directed by Kani Wildlife Control, if necessary.

B. INFORMATION: Customer is obligated to provide Kani Wildlife Control with information regarding observed animal movements or actions in a timely manner. The customer understands that she/ he is the eyes and ears of Kani Wildlife Control. Failure to notify Kani Wildlife Control may result in greater damage to the property.

2. Kani Wildlife Control OBLIGATIONS:

A. WORKMANSHIP: Kani Wildlife Control, its employees and agents will render their service in a good workmanlike manner according to the customary and approved methods and procedures prevailing in the business of animal damage control. Kani Wildlife Control agrees to exercise the greatest care in trapping said animal(s) in order to avoid damage to the customer property. However, the customer is still responsible to remove items that may be damaged in accordance with section B. Under CUSTOMER OBLIGATIONS.

B. ANIMAL DISPOSITION: Said animal(s) shall be handled in accordance to customer preference as long as it abides with state law. If an animal is released on customer property, Kani Wildlife Control can offer no guarantee that said animal will not damage property and / or re-enter property.

C. EQUIPMENT: Customer understands that Kani Wildlife Control will remove traps/camera(s), add trap/camera(s), change traps/camera(s) or any combination of the above in accordance to the situation. Kani Wildlife Control will not always designate these changes on the contract. However, the customer will still be responsible for trap and camera security as well as associated fees.

3. DISCLAIMERS:

The process(es) used to eradicating, evicting and controlling animal(s) subjects involves equipment that may be hazardous to human beings and animals. Therefore, Kani Wildlife Control disclaims any responsibility for any injuries or damage that may occur to any person(s) or animal(s) as a result of said trap(s) and / or equipment being used.

Further, the trap(s) themselves and any animal caught in said trap(s) may be hazardous to any person(s) or animal(s) who may get too close to said trap(s) or captured animal(s). Therefore, the customer understands and agrees that Kani Wildlife Control will not be responsible for any injuries resulting from any person(s) or animal(s) coming too close to said trap(s), whether said trap(s), is empty or whether there is any animal(s) trapped therein.

The target animal(s) may cause damage to the premises or cause injury to person(s), animal(s) or property prior to being captured, when captured or being released on the customer property. It is possible that trapped animal(s) may escape from said trap(s). Any animal(s) caught in said trap(s) may damage or contaminate the area around and underneath said trap(s). It is also possible that the animal may escape while being removed from the premises by Kani Wildlife Control. Therefore, the customer understands and agrees that Kani Wildlife Control will not be responsible for any injuries to person(s) or animal(s) or any damage to property caused by said animal(s) while on the residents premises.

As there may be more than one animal and / or causes regarding the Owner's complaints, Kani Wildlife Control does not guarantee that all animals and / or animal carcasses have been found and / or removed or that the cause of owner's complaints has been rectified.

Kani Wildlife Control, LLC
PO BOX 1206
Kekaha, HI 96752
(808)754-3960
kaniwildlifecontrol@outlook.com

KANI WILDLIFE
CONTROL

As Kani Wildlife Control is in the business of handling animal problems, the customer understands and agrees that Kani Wildlife Control is not responsible for disclosing any damage that may have been caused by any animal, nor is Kani Wildlife Control liable for any damage caused by any animal, person or nature.

EXHIBIT R

Association of Owners of Makahuena Estates

RIGHT OF ENTRY PERMIT

Effective 9/1/2021 through 8/31/2022

Permission is hereby granted to State of Hawaii, DLNR, Division of Forestry and Wildlife and its successors, consultants, assignees, licensees and agents ("Permittee"), whose address is 3060 Eiwa Street, Room 306, Lihue, Hawaii 96766, by the Association of Owners of Makahuena Estates ("Permittor" or "Association"), 3214 N. University Ave #104 Provo, UT 84604, to enter the following described Association Property:

Approximately 13 acres of real property generally located at on Pe'e Road, between the Makahuena at Poipu and The Point at Poipu condominiums as shown on Exhibit A ("the Permit Area), also known as and being Lots 1 - 10 of the Makahuena Estates Subdivision.

1. SCOPE

a. This Permit is issued for the purpose of allowing Permittee's agents to enter the Property to monitor wildlife, retrieve any carcasses and documenting the same by taking photographs and global positioning system ("GPS") points. This Permit is subject to the following terms and conditions:

1) This Permit and any rights hereunder are not assigned or transferred by Permittee and any attempt to do so shall be void and not merely voidable.

2) Permittee shall be responsible for obtaining legal access across other private or public lands. Permittee understands and agrees that the issuance of this Permit does not, in any way, establish any right of precedent whatsoever to the lands described herein or to any improvements on those lands. This Permit does not authorize use of any land outside the Permit Area.

3) Prior to accessing the Permit Area via Maka Rd., Permittee shall contact the Association's designated representative at least 24 hours in advance to ensure that Permittee can access the site safely and without disturbing any construction activities. Provided that in the event a downed wedge-tailed shearwater is observed on Property, Permittee shall notify Permittor of the need to enter the Property and thereafter may immediately enter the Property in order to retrieve said bird(s).

2. TERMS

a. This Permit shall be, and remain, in force from **9/1/21 - 8/31/22** unless sooner terminated or revoked as described in this Permit, provided, however, that no termination, revocation or expiration of this Permit shall affect the liability assumed or any indemnity given by Permittee with respect to acts which shall have been done or have happened before the date of the termination or expiration of this Permit.

b. The Permit is revocable for cause for violation of a Permit provision. A revocation for cause is effective immediately. The Permit is also revocable without cause. A revocation without cause is effective immediately.

3. STANDARD OF OPERATIONS

a. Permittee shall observe all federal, state and local laws and regulations applicable to the Permit Area and shall obtain, prior to commencing operations, all permits, licenses and government approvals necessary for activities under this Permit. Permittee's failure to obtain such authorizations or approvals or comply with the terms and conditions of such authorizations or approvals shall be considered a breach of the terms and conditions of the Permit and may be cause for Permit suspension or termination, at the Association's option.

b. Permittee shall conduct all activities in such a manner as to ensure the least practical temporary and permanent harm to the Permit Area and in a manner that will avoid degradation of air, land and water quality. Permittee shall keep the Permit Area in a neat, orderly, safe and sanitary condition. Permittee shall not operate any equipment on the Permit Area.

c. Any structure, property or land harmed or damaged by Permittee during permitted activities on the Permit Area shall be reconstructed, repaired, rehabilitated and restored by Permittee as may be required by state and federal resource agencies or the Association, as soon as practical, so that the condition thereof, at the sole discretion of the Association, is at least equal to the condition thereof immediately prior to such damage or destruction. Permittee shall immediately cease and/or eliminate any condition existing or occurring as a result of Permit activities, which may cause harm or damage to any person, structure, property, land, waterway or wildlife.

d. Burial of trash or waste is prohibited. All refuse and non-combustible material shall be removed from the Permit Area. All waste generated during the operations shall be removed from the Association's lands or otherwise disposed of in a manner acceptable to the Association. "Waste" means all discarded non-hazardous matter, including but not limited to, human waste, trash, garbage and refuse.

e. Upon completion of all activities, the Association's property will be returned to its natural environment and repairing any damage caused by the Permittee and its users.

4. INSURANCE

a. Permittee shall, at its sole expense, secure and maintain in force, throughout the term of this Permit, such insurance and such limits necessary and customary for the work to be performed by Permittee under this Permit. Permittee shall provide evidence of such insurance coverage upon request of the association.

5. LIABILITY AND INDEMNIFICATION

a. Permittee shall have the duty to defend and indemnify the Association and hold it harmless against any and all liability for any and all claims (including but not limited to claims in tort, negligence, or pursuant to statute), liens, demands, suits, damages, costs, losses and expenses (including costs and attorney's fees), and for any and all injury to or death of persons and damage to or loss of property, resulting from, arising out of, or in any way connected with, the use or occupation of the Permit Area by the Permittee, its agents, employees, contractors and assignees, the exercise of the privileges granted Permittee by this Permit, or the failure of Permittee, its agents, employees, contractors and assignees to perform fully any and all of the terms and conditions associated with the Permit.

b. Permittee shall be liable to the Association for any liabilities, damages, injuries or expenses incurred by the Association in any way arising from or connected with any activity, including restoration of the Permit Area, under this Permit, whenever such damage, cost or expenses results from any breach of the terms or stipulations associated with the Permit, or from any wrongful or negligent act of Permittee, its agents, employees, contractors or assignees.

6. COMMUNICATIONS BETWEEN PERMITTEE AND THE ASSOCIATION

Unless otherwise indicated, all notifications to be made shall be delivered to:

David Weekes
Association of Owners of
Makahuena Estates
3214 N. University Ave #104
Provo, UT 84604
Phone: (801) 634-9075

IN WITNESS WHEREOF, the parties hereto have executed these presents as of the 3 day of September, 2021.

PERMITTOR:

ASSOCIATION OF OWNERS OF MAKAHUENA ESTATES

By: Tanner Weekes

Its: Vice President

LESSEE:

DLNR, DIVISION OF FORESTRY AND WILDLIFE

By:

Its:

IN WITNESS WHEREOF, the parties hereto have executed these presents as of the ____day of _____, 2021.

PERMITTOR:

ASSOCIATION OF OWNERS OF
MAKAHUENA ESTATES

By:

Its:

LESSEE:

DLNR, DIVISION OF FORESTRY AND
WILDLIFE

Thomas Kaiakapu

By:

Its: Kauai Wildlife Manager

EXHIBIT "A"

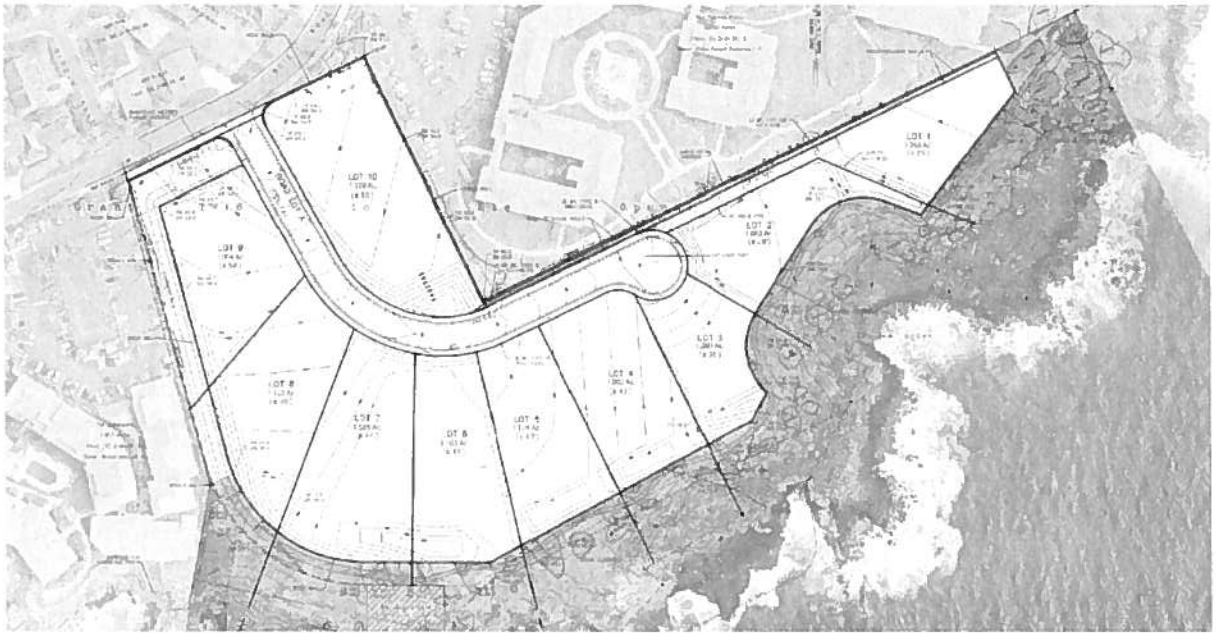


EXHIBIT S

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.
808.523.2557

JLIM@CARLSMITH.COM

OUR REFERENCE NO.:
064510-00001

May 9, 2016

VIA U.S. MAIL AND EMAIL MDAHILIG@KAUAI.GOV

Michael A. Dahilig
Director
County of Kauai Planning Department
Pi`ikoi Building
4444 Rice Street, Suite 473
Līhu'e, HI 96766

Re: Status Of Certain Conditions Under Class III Zoning Permit Z-III-2015-1 Special Management Area Use Permit SMA(U)-2015-1, TMK Nos. (4) 2-8-021:041, 044-068, & Two Unnumbered Road Lots, Poipu, Kauai

Dear Director Dahilig:

This firm represents CIRI Land Development Company ("**CLDC**") an Alaska corporation. On August 26, 2014, the Kauai Planning Commission approved the above-referenced Class III Zoning Permit and Special Management Area Use Permit (collectively, the "**Permits**"), to allow CLDC to develop the subject property. CLDC sought the Permits in order to consolidate the pre-existing 28+ lots into a 10-lot residential subdivision to be known as Makahuena Point, which will also include one roadway lot, a public parking area, a mauka/makai pedestrian access easement, an open space easement area, and a lateral pedestrian access easement parallel to the makai boundary of the property.

This letter is to update you on CLDC's discussions with the Department of Land and Natural Resources Division of Forestry and Wildlife ("**DOFAW**") regarding compliance with Condition 5(b) and (f) of the Permits. You may recall, the Planning Commission imposed Condition 5(b) and (f) in response to a letter from DOFAW that was submitted to the Planning Commission at the hearing on August 26, 2014.

In that letter DOFAW acknowledged that the Wedge-Tailed Shearwater ("**WTS**") is not listed as an endangered or threatened species under the federal Endangered Species Act or under Chapter 195D, Hawaii Revised Statutes. Nevertheless, DOFAW requested that the Commission impose certain conditions on the Permits to minimize impacts to nesting WTS and protect their

EXHIBIT S

nesting habitats.

A. **Report on Condition 5(b).**

Permit Condition 5(b) provides:

> 5. To protect faunal species, the following shall be required:
>
> b. The rock wall along Lots 1-7 on the mauka side shall be adjusted so that the seabirds can walk up the slope on the top of the wall. Coastal vegetation such as naupaka shall be encouraged along the makai side of the rock wall.

Regarding Condition 5(b), DOFAW's concern was avoiding a situation where the rock wall that will be constructed by CLDC throughout the property, adjacent to the proposed public access easement, created an environment that could entrap the WTS on the mauka/residential side of the rock wall. DOFAW thought that sloping the top of the rock wall could make it easier for the WTS to reach the top of the wall and return to the sea.

CLDC's biologist, Reginald David, met with DOFAW representatives Thomas Kaiakapu, DOFAW Kauai Wildlife Manager, and Brooke McFarland, DOFAW biologist, in November to discuss appropriate means of addressing DOFAW's concerns and Condition 5(b) of the Permits. In lieu of sloping the rock wall, which could create a potentially dangerous condition for humans, Mr. David discussed having the rock wall constructed with pipes set close to the ground, so that WTS will easily be able to pass through the rock wall. A sketch of the proposal that was shared with DOFAW is enclosed here. The pipes that will be installed within the rock wall will provide safe passage for WTS, in the unlikely event that any WTS nest on the mauka side of the wall, and have difficulty leaving the property. In addition, CLDC will install native vegetation makai of the rock wall, in the proposed Open Space Easement area.

B. **Report on Condition 5(f).**

Permit Condition 5(f) provides:

> 5. To protect faunal species, the following shall be required:
>
> f. The Applicant shall work with DLNR-DOFAW toward restoration of coastal habitat in the Open Space Easement area in the makai western portion of the property. This includes the cost of removal of invasive non-native vegetation and the planting of appropriate seabird-friendly vegetation within the Open Space Easement in the makai western corner of the property.

With respect to Condition 5(f), Messrs David and Kaiakapu and Ms. McFarland discussed areas where CLDC intends to plant naupaka or similar native vegetation in order to establish a welcoming environment for nesting WTS. DOFAW expressed a desire for CLDC to

undertake the restoration of coastal habitat in the Open Space Easement area, and to do so without DOFAW participation. CLDC will pursue that goal.

DOFAW reviewed the enclosed sketch, showing the areas where CLDC intends to plant new naupaka, and expressed support for these plans. However, DOFAW indicated that the patch of naupaka proposed makai of the USA parcel may not be practical. CLDC's biologist, Mr. David, concurs with that opinion. Therefore, CLDC does not intend to install that particular area of naupaka. In addition, the existing areas of naupaka makai of the rock wall will generally be retained, with some allowances for the construction of the rock wall.

C. **Additional Protective Measures.**

In addition, and per your suggestion, CLDC confirms its intention to alert DOFAW on the timing of the initial construction of subdivision improvements at the property. As you may recall, your office signed off on the Makahuena Subdivision Construction Plans in January of this year. However, due to the relatively short window for certain aspects of the construction due to the bird nesting season (non-nesting season being January through March), CLDC was forced to delay the start of construction (i.e., installation of dust fences, construction staging areas, and similar activities) until the fall of 2016. Significant earth disturbance is planned for January 2017, which is after the WTS nesting season.

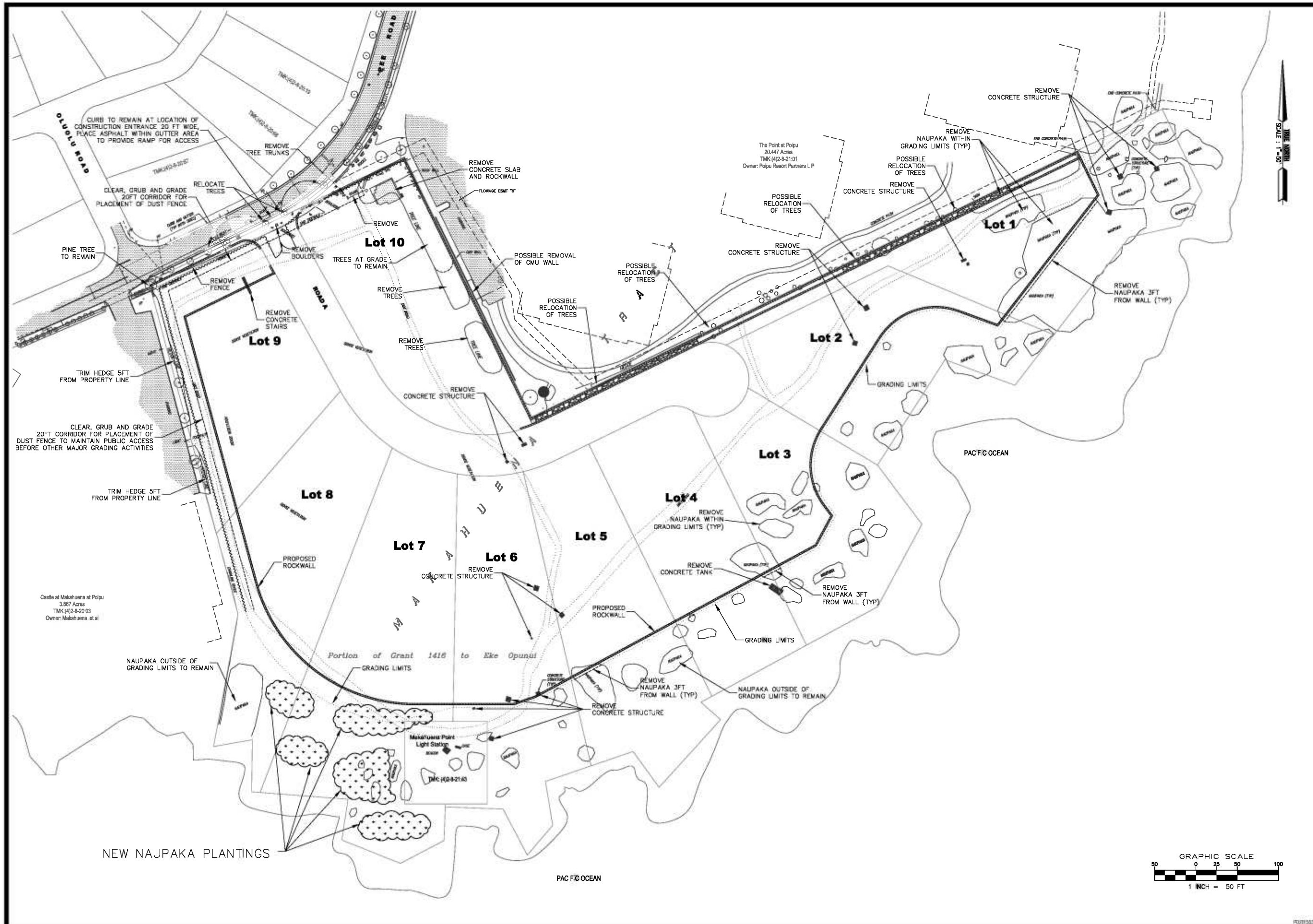
As such, CLDC intends to have Mr. David survey the property prior to CLDC's initial construction/mobilization activities, so that any active nests can be noted and avoided during construction. Per Ms. McFarland's request, CLDC, through Mr. David, will keep DOFAW apprised of the start of the initial construction/mobilization work.

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

Very truly yours,

Jennifer A. Lim

JAB1
Enclosure(s)
cc: CIRI Land Development Company
Thomas Kaiakapu, DLNR-DOFAW
Reginald David, Rana Biological Consulting, Inc.



TRIAD ENGINEERING
73-4840 KANALANI ST, PMB 430
KAILUA KONA, HAWAII 96740-2622
(808) 325-1744 TE@TRIADHAWAII.COM

Makahuena Point Subdivision
Street & Waterline Plans

DEMOLITION & NAUPAKA
PRESERVATION/REPLANTING PLAN

REVISIONS | APPROVED

LLL	LVL	DAG
FILE: MAKAHUENA-POINT.DWG DEMO-PLAN		
(4) 2-8-021:041	10-15-2015	
JOB NO: H15-003	SCALE: HORIZ: 1" = 50' VERT: NA	

1 of 1

STRUCTURAL NOTES:

1) ALL CONSTRUCTION SHALL CONFORM TO THE 2006 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) INCLUDING LOCAL JURISDICTION AMENDMENTS.

2) NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

3) VERIFY ALL DIMENSIONS WITH CIVIL PLANS PRIOR TO START OF CONSTRUCTION – RESOLVE ANY DISCREPANCY WITH ENGINEER. DO NOT SCALE DRAWINGS.

4) THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO, BRACING, SHORING, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SITE SAFETY, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO.

5) THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.

6) ROCK WALLS SHALL BEAR ON FIRM, UNDISTRURBED NATIVE SOIL. ALL SOIL BELOW ROCK WALL SHALL BE COMPACTED TO 95% MINIMUM IN ACCORDANCE TO ASTM D698. ROCK WALL DESIGN BASED ON SOILS REPORT 15-5793 BY HIRATA & ASSOCIATES, INC. DATED MAY 1, 2015. DESIGN SOIL PRESSURE = 3,000 PSF AT 12" BELOW LOWEST ADJACENT FINISHED GRADE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE SOIL BEARING PRESSURE AND TO DETERMINE WHETHER UNSUITABLE SOIL CONDITIONS (I.E. EXPANSIVE OR COLLAPSIBLE SOILS, LOOSE FILL, ETC.) EXIST.

7) DESIGN LOADS:

ROCK BOULDERS = 155 PCF MINIMUM

WIND:

WIND SPEED = 130 MPH (3 SEC GUST), I=0.77
EXPOSURE "D"

8) MATERIALS OF CONSTRUCTION:

MORTAR – ASTM C270, TYPE S, 1800 PSI AT 28 DAYS
GROUT – ASTM C476, 2000 PSI AT 28 DAYS

ROCK RETAINING WALL NOTES:

1) THE BASE ROCK SHALL BE EMBEDDED 12" INTO THE SOIL. PLACEMENT OF BASE ROCKS AT GRADE FOLLOWED BY SUBSEQUENT BACKFILLING OF THE "TOE AREA" SHALL NOT BE PERMITTED. THE BASE SHALL BE SLOPED FRONT TO BACK AT – 4.0%. THE LONGITUDINAL SLOPE OF THE BASE OF THE WALL HALL NOT HAVE A SLOPE GREATER THAN 1 VERTICAL TO 10 HORIZONTAL ALONG THE WALL LENGTH, OTHERWISE, A STEPPED BASE SHALL BE REQUIRED.

2) ROCKS SIZED AS "TWO MAN" (APPROXIMATELY 200–700 POUNDS AND 18–28 INCH NOMINAL DIAMETER) OR GREATER SHALL BE TIGHTLY FITTED AND INTERLOCK WITH NEIGHBORING ROCKS. SMALLER ROCK MAY BE INTERMITTENTLY USED FOR "STRUCTURAL CHINKING" WHICH ALLOWS LARGE ROCKS TO REST IN A STABLE MOVEMENT FREE POSITION. VOID SPACES BETWEEN LARGER ROCK SHALL BE TIGHTLY FILLED OR "AESTHETICALLY CHINKED" SUCH THAT LARGE GAPS BETWEEN ROCKS IN THE EXPOSED FACE ARE REASONABLY WELL FILLED. THERE SHALL BE NO LOOSE ROCK OR SCREE PRESENT AT ANY POINT IN THE EXPOSED FACE OR TOP OF THE WALL.

3) NO ROCK LARGER THAN THE NOMINAL "TWO MAN" SIZE (APPROXIMATELY 200–700 POUNDS AND 18–28 INCH NOMINAL DIAMETER) SHALL BE PERMITTED TO BE EXPOSED IN THE FRONT FACE OR TOP ROCK LAYER. TIGHTLY FITTED SMALLER ROCK USED FOR THE PURPOSE OF FILLING VOIDS OR "CHINKING" SHALL NOT BE SUBJECT TO THIS LIMITATION.

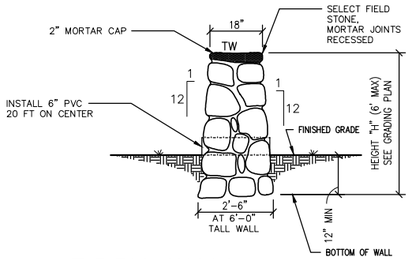
4) ALL ROCK SHALL BE SOUND, ANGULAR LEDGE ROCK THAT IS RESISTANT TO WEATHERING. THE LONGEST DIMENSION OF ANY INDIVIDUAL ROCK SHALL NOT EXCEED THREE TIMES ITS SHORTEST DIMENSION.

5) ALL ROCKS DELIVERED TO OR FOUND ON SITE AND INCORPORATED IN THE PROJECT SHALL MEET THE FOLLOWING MINIMUM SPECIFICATIONS:
   A) ABSORPTION – ASTM C–127 OR AASHTO T–85 NOT MORE THAN 2% FOR IGNEOUS AND METAMORPHIC ROCK TYPES AND 3% FOR SEDIMENTARY ROCK TYPES.
   B) ACCELERATED EXPANSION – (15 DAYS, CRD–C–148 *1, *2) NOT MORE THAN 15% BREAKDOWN.
   C) SOUNDNESS (MSSO4 AT 5 CYCLES – ASTM C–88 OR CRD–C–137) NOT GREATER THAN 5% LOSS.
   D) UNCONFINED COMPRESSIVE STRENGTH – ASTM D–2938 INTACT STRENGTH OF 6,000 PSI OR GREATER.
   E) BULK SPECIFIC GRAVITY (155 PCF – ASTM C–127 OR AASHTO T–85) GREATER THAN 2.48.

   *1. IN ACCORDANCE WITH THE CORPS OF ENGINEERS TESTING PROCEDURE CRD–C–148, "METHOD OF TESTING STONE FOR EXPANSIVE BREAKDOWN ON SOAKING IN ETHYLENE GLYCOL.

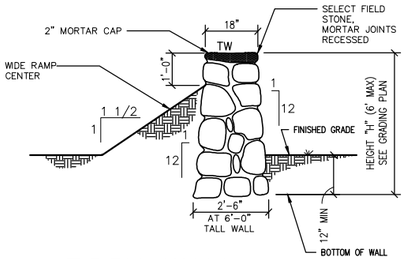
   *2. ACCELERATED EXPANSION TESTS SHOULD ALSO INCLUDE ANALYSIS OF THE FRACTURES AND VEINS FOUND IN THE ROCK.

6) THE DENSITY OF THE ROCKS SHALL BE EQUAL TO OR GREATER THAN ONE HUNDRED FIFTY–FIVE (155) PCF.



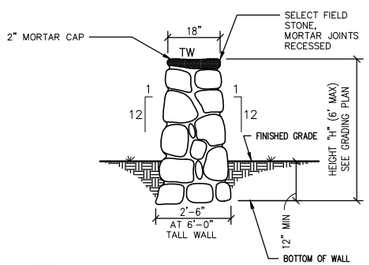
2 ROCK WALL– SCREEN WALL – TYPE B

SCALE: NTS



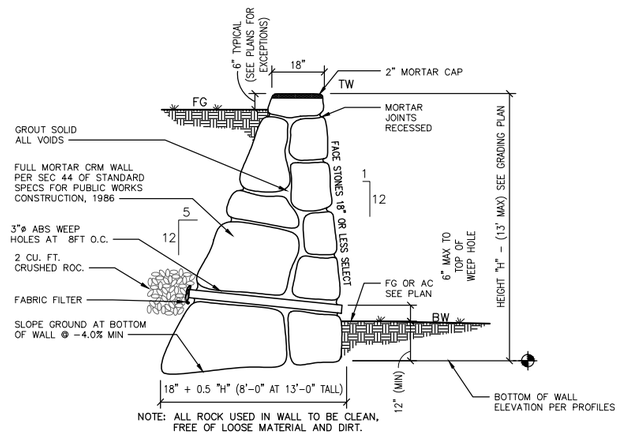
2 ROCK WALL– SCREEN WALL – TYPE B1

SCALE: NTS



1 ROCK WALL– SCREEN WALL – TYPE A & E

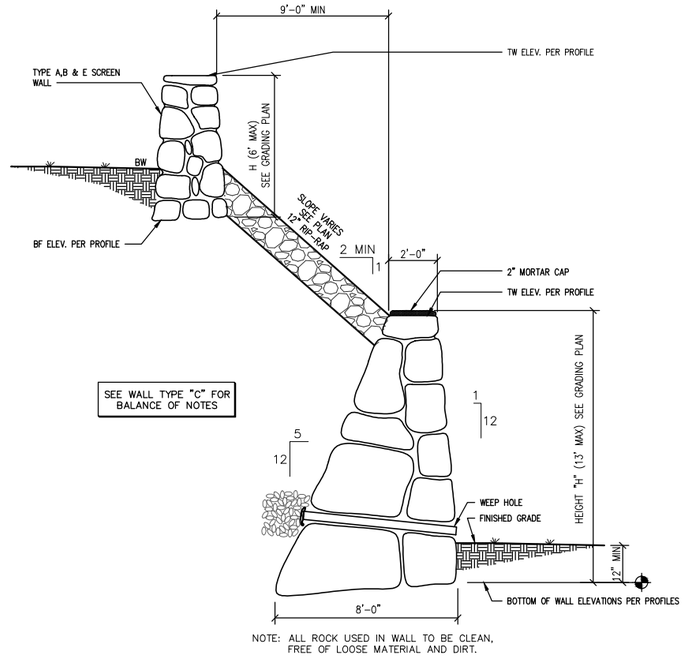
SCALE: NTS



NOTE: ALL ROCK USED IN WALL TO BE CLEAN, FREE OF LOOSE MATERIAL AND DIRT.

3 ROCK WALL RETAINING WALL–TYPE C

SCALE: NTS



NOTE: ALL ROCK USED IN WALL TO BE CLEAN, FREE OF LOOSE MATERIAL AND DIRT.

4 ROCK WALL – TERRACED RETAINING WALL – TYPE D

SCALE: NTS

THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION, AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION (AS DEFINED UNDER SECTION 16-62-2 OF CHAPTER 62)

LIC. EXP.

Engineer

TRAD ENGINEERING
73-4840 KANALANI ST, PMB 430
KAILUA KONA, HAWAII 96740-8822
(808) 325-1744 TEDTRUDHAM@GMAIL.COM

Makahuena Point Subdivision

RETAINING WALL DETAILS

APPROVED

REVISIONS

DESIGNED AW | DRAWN AV | CHECKED JEG

FILE: \MAKAHUENA WALL PLANS.DWG :RETAINING WALL PLAN

TMK: (4) 2-8-021:041

DATE: 8-19-2016

SCALE: HORIZ: NA VERT: NA

JOB NO: H15-003

SHEET S-4 -- OF -- SHEETS

EXHIBIT T

Cultural Impact Assessment

at Makahūʻena Point, *Weliweli Ahupuaʻa, Kona, Kauaʻi*

Prepared by McMahon Consulting
3-2600 Kaumualii Hwy., Suite 1300 –PMB 306
Lihue, *Kauaʻi*, HI 96766

January 2014



Figure 1: ***Moi Hole at Makahūʻena Point***

EXHIBIT T

Table of Contents

Project Summary 1
Environmental Setting 2
Geology 2
Soils 3
Previous Archaeological Investigations 3
Traditional Background 7
Kaua'i 7
Weliweli and Makahū'ena Point 9
Land Commission Awards 10
Place Names 10
Mythology and Mo'olelo 11
Informants 12
Traditional Uses 13
Recommendations 13
Bibliography 15

List of Figures

Figure 1: *Moi Hole at Makahū'ena Point* ..... cover
Figure 2: 1921 Aerial Photograph of *Kōloa*.. 3
Figure 3: Previous archaeological work in Kona District. 7

List of Tables

TABLE 1: PREVIOUS INVESTIGATIONS NEAR/AT MAKAHŪ'ENA POINT 4
TABLE 2: (*HAUN ET. AL 2011*) *MAKAHŪ'ENA* INVESTIGATIONS 6

Project Summary

McMahon Consulting conducted a cultural assessment for an approximately 13.078 acre land area, formerly designated as TMK: (4) 2-8-021: 041, and a 10,000 square foot parcel designated as TMK (4) 2-8-021: 043, located at *Makahūʻena* Point, *Weliweli ahupuaʻa* within the Traditional District of *Kona*, island of *Kauaʻi*. The larger parcel contains 28 subdivided lots that were created in the 1930's. The property is owned by CIRI Land Development Company ("CLDC"), an Alaska corporation, and wholly owned subsidiary of Cook Inlet Region Inc. (“CIRI”), which is an Alaska Native corporation and one of the 12 Alaska-based regional corporations established by the Alaska Native Claims Settlement Act of 1971. CIRI was established to benefit Alaska Natives who have ties to the Cook Inlet Region of Alaska; the company is owned by more than 8,100 Alaska Native shareholders of predominately Athabascan and Southeast Indian, Inupiat, Yup'ik Eskimo, Alutiiq and Aleut descent. The 10,000 sq. ft. parcel is owned by the United States. CLDC acquired the property from the United States in 1996. CLDC now proposes to develop the property for residential lots and related uses. Although the CLDC property contains over 25 legally recognized subdivided lots, CLDC's proposed *Makahūʻena* project anticipates a less dense development of approximately 10 residential lots and related uses.

The Constitution of the State of Hawaii states the duty of the State and its agencies is to preserve, protect and prevent interference with the traditional and customary practices of native Hawaiians. Article XII, Section 7 of the Constitution requires the State to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. " Furthermore, Act 50, passed by the Hawaii State Legislature in 2000, requires environmental impact statements to "identify the address effects on Hawaii's culture, and traditional and customary rights."

The purpose of a cultural impact assessment is to identify the possibility of on-going cultural activities and resources within a project area or its vicinity, and assess the potential impacts that a proposed development may have on those resources. This cultural assessment has been prepared to fulfill the requirements of a cultural impact assessment, as outlined by the Office of Environmental Quality Control guidelines under Chapter 343 Hawaiʻi Revised Statutes, and as required under Article XII, Section 7 of the Hawaii State Constitution. This assessment is a compilation of information from pertinent literature and records, mythological and legendary sources, previous archaeological investigations, a history of the *Kōloa* area, modern land use, and interviews conducted with cultural practitioners and elders.

There is a paucity of data regarding pre-Contact settlement and historic land tenure for the parcel, and limited mythological and legendary references. The parcel had been owned by the Federal Government, specifically the U.S. Coast Guard, who utilized it starting in 1908 for a now decommissioned light house, and later a Long Range Navigation (LORAN) station. The only structures present on the parcel are the remnants of support structures for the manning and

upkeep of the lighthouse and a former LORAN station. Hale Opio used the property until 1982. Excavations by Haun *et al.* (2011) revealed no subsurface cultural deposits. Test trenching revealed soil that is shallow, with poorly drained clay-loam over saprolitic bedrock.

One Land Commission Award (LCA) was granted in *Weliweli* in the *ʻili* of Haoana in Punipu, and another that borders *Weliweli* to Ka'ana'ana within the ʻ*ilis* of *Halehinahina* and *Lapapohaku.* The rest of the *ahupuaʻa* was reserved as government land. Previous cultural investigations reveal that the area has been utilized, and still is, for fishing practices.

Environmental Setting

Geology

Makahūʻena Point is the terminus of a series of small eruptions along the *Poipu* Fault that that produced four craters extending across the *Kōloa* plain approximately 2.3 to 1.0 mya, producing 40 vents, spatter and cinder cones, and a tuff cone. *Kōloa* lavas cover about half of the surface of the eastern part of the island to the floor of the *Lihue* Basin. The last crater produced the lava flow that is *Makahūʻena* Point. Ranging southwest *mauka* to *makai* the first crater has been turned into the *Puuhi* Reservoir, likely during the tenure of the *Kōloa* Sugar plantation. The second *Puʻu* lies on the slopes of the reservoir and is shown on the USGS *Kōloa* Quad topographic map as a cinder pit named *Puʻu Hunihuni.* The third crater is named *Puʻu Wanawana*, situated on the *Kōloa* Plain above the present *Weliweli* Road *makai* of the parcel. The fourth crater is named *Puʻu Pihakekua* also called *Poipu* crater, which lies in the northwest corner of *Makahūʻena* Point. It is likely that this eruption caused the formation of the point. Finally, a shallow unnamed collapsed crater is present on the parcel. The rugged coastline of the promontory of *Makahūʻena* separates the sandy beaches of *Poipu* on the west and *Keoneloa* Bay on the east.

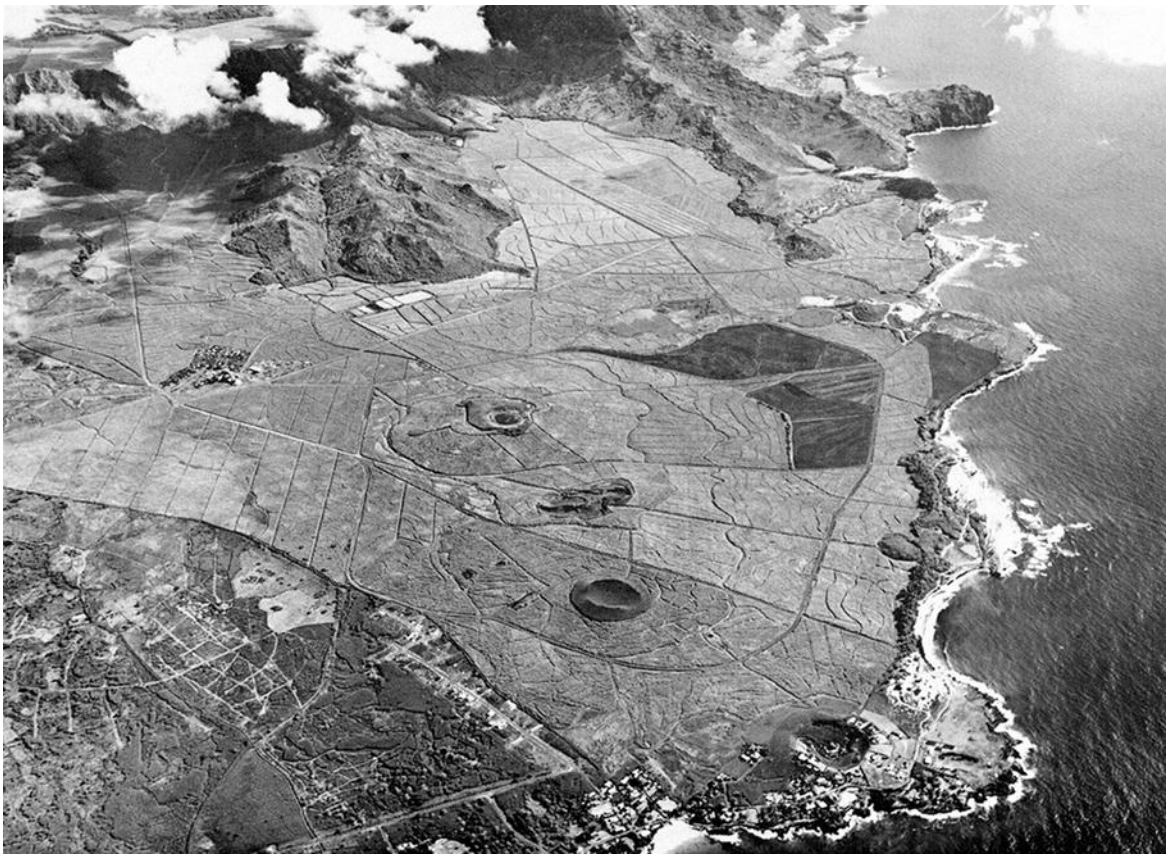


Figure 2: 1921 Aerial Photograph of *Kōloa*. *Note Makahūʻena Point at bottom right.*

Soils

The soils of *Makahūʻena* consist of *Kōloa* Stony silt clay on a 15-25% slope at the *mauka* side of the parcel with the *makai* portion classified as Rock Land. The area is classified as a moderate to severe erosion hazard, with maximum soil depths of 20 inches over a *pahoʻehoʻe* flow. The coastal portions of the parcel are classified as Rock land, which is defined by Foote et al. as, "areas where exposed bedrock covers more than 90 percent of surface (1972:119).

Previous Archaeological Investigations

There have been numerous archaeological investigations in the vicinity of *Makahūʻena*, with many sites being re-recorded and assigned different site numbers. Thrum recorded *heiau* sites on *Kauaʻi* (Thrum 1906) and Bennett recorded sand dune burials at adjacent *Keoneloa* beach (Site 82), and petroglyphs (Site 84) (Bennett 1931). These surveys were conducted prior to the developments at *Poipu*, *Keoneloa* beach and former *Kōloa* Plantation lands for residential, hotels and condominium lots.

There were three investigations at *Makahūʻena* Point. One consisted of a survey by Ladd under the auspices of the U. S. Coast Guard 14th District to record impacts to the historic lighthouse located at the point (Ladd 1981). In 1983 a reconnaissance survey of the coastal lands of the

Kona district was conducted within the *ahupua'a* of *Weliweli* and *Mahaulepu.* Three boundary walls were recorded in *Weliweli.* The first (site 3195) is interpreted as a boundary wall dividing a "housing tract from the cane lands." The second (site 3196) is interpreted as a boundary wall separating Grove Farm land from private landowners. The third (site 3198) is a wall located "in the vicinity of "*Pu'u Pihakekua* crater" adjacent to the project area (Ching et al. 1983).

The State Historic Preservation *Kaua`i* archaeologist synthesized available archaeological and historic literature related to the location of *Kane'aukai Heiau* in an attempt to pinpoint the location of this *heiau* said to be located at *Makahū'ena* Point. This *heiau* had been written about as early as 1885 (Lahainaluna School 1885) but no locational data was provided, and later archaeological investigations attempting to pinpoint the location resulted in the assignation of different site numbers; Site 83 (Bennett 1931), (Kikuchi 1963), and SIHP# 3089 (Hammatt 1989a, 1990a, 1990b, 1990c) and 477 (McMahon 1991). None of these later investigations provided data to conclusively locate this *heiau,* and the synthesis concluded that *Weliweli Heiau, Kauakaha'i* fishing alter and *Hali'i* fishing alter are all applied to *Kane'aukai Heiau* in various location. McMahon determined that the existence of the *heiau* was only preserved through oral histories *(*McMahon 1991) [Table 1].

TABLE 1
PREVIOUS INVESTIGATIONS NEAR/AT *MAKAHŪ'ENA* POINT

Investigation	Site #	Investigation	Results
Lahainaluna Schools	None	Oral history identifies *Kane'aukai Heiau*	No locational data provided
Ching, Palama, Stauder	3195 3196 3197 3198	*The Archaeology of Kona, Kaua'i Na Ahupua'a Weliweli, Pa'a, Mahaulepu Surface Survey of Coastal Lands*	Three *mauka* sites and one site located near *Pu'u Pihakekua* at *Makahū'ena* Point
Kikuchi 1963	Site 97	*Archaeological Survey and Excavations on the Island of Kauai, Kona District, Hawaiian Islands.*	Inland of *Makahū'ena* Point
Ladd 1980	None	*Archaeological Field Survey Report, Makahū'ena Point, Kaua'i.*	No NRHP significance
Hammatt 1989a	Site 82	*Archaeological Data Recovery Plan for Keoneloa Bay Villas, Weliweli and Pa'a.*	Identified a rock alignment as possible *Kane'aukai Heiau*
Hammatt 1990a	Site 82	*Preliminary Report on Archaeological Testing for the Proposed Keoneloa Bay Villas. [TMK: (4) 2-8-20: 21].*	Noted "large rectangular boulder alignments on the east and north side, but other two sides not identified"
Hammatt 1990b	Site 82	*Preliminary Status Report on Archaeological Testing for the Proposed Keoneloa Bay Villas*	SPD requires further investigation

Investigation	Site #	Investigation	Results
		[TMK: (4) 2-8-20: 21].	
1990c	Site 3089	*Update on our Research on Kane'aukai Heiau, Keoneloa Bay, Weliweli.*	Survey of *Keoneloa* Bay Villas project complete. SHPD requests further documentation
1991		*Testing of Possible Heiau, Keoneloa, Weliweli, Kōloa, Kaua'i* [TMK: (4) 2-8-20:21]	No definitive determination of *heiau*
Haun et al. 2011	Site 2130-2147	*Archaeological Inventory Survey, TMK: (4) 2-8-021:041, Makahū'ena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i*	Survey of the project area, found 18 sites, all historic and related to Coast Guard occupation
McMahon 1991	Site 477	*Locating Kane'aukai Heiau: An Archaeological and historical Synthesis, Weliweli, Kōloa, Kaua'i.*	Synthesis of all data determines that *heiau* only survive in the oral histories

In 2011, an Archaeological Inventory Survey (AIS) of *Makahū'ena* Point recorded historic remnants and debris of the former historic lighthouse (constructed in 1906) support buildings and infrastructure, and from the LORAN station that operated between 1952 and 1979. The survey identified 18 sites with 128 features consisting of concrete pads, concrete blocks, metal artifact scatters, posts, terraces, slabs, paths walls, a ditch, road, stairs, a utility box and a walled slab. Twenty subsurface trenches recorded 20th century historic materials, but no pre-Contact sites or deposits (Haun *et al.* 2011) [Table 2].

TABLE 2
(*HAUN ET. AL 2011*)
MAKAHŪ'ENA INVESTIGATIONS

Table 2. Summary of Sites

SIHP Site No.	Formal Type	Function	No. of Features	Formal Type													Function										Easting	Northing	Temp. Site No.
				Pad	Block	Artifact scatter	Post	Terrace	Slab	Path	Wall	Ditch	Road	Stairs	Box	Walled slab	Utility	Foundation	Marker	Transportation	Boundary	Disposal	Recreation	Soil Retention	Water diversion	Indeterminate			
2130	Complex	Foundation, Transportation, Utility, Boundary, Marker, Water diversion, Indeterminate	15	5					2	2	1	1	1	1	1	1	3	2	1	4	1		1		1	2	454100	2418585	1-5, 13-17
2131	Complex	Foundation, Indeterminate	6	1	1	1		3										5								1	454032	2418457	6, 7, 8
2132	Complex	Foundation	2	1			1											2									454037	2418430	30, 31
2133	Complex	Foundation	3	3														3									454077	2418403	9
2134	Concrete post	Foundation	1				1											1									454101	2418413	11
2135	Complex	Foundation, Marker, Indeterminate	4	2	1	1												1	2							1	454102	2418371	10, 18a, 18b
2136	Complex	Foundation	2	1		1											1					1					454148	2418382	19, 20
2137	Complex	Foundation	2	1	1													1	1								454124	2418397	18c, 18d
2138	Artifact scatter	Foundation	1			1												1									454194	2418396	21
2139	Complex	Foundation, Utility	4	1	1		2										1	3									454147	2418439	18e-18h
2140	Concrete block	Foundation	1		1													1									454056	2418498	12
2141	Concrete pad	Foundation	1	1														1									454153	2418485	27
2142	Concrete pad	Foundation	1	1														1									454195	2418486	26
2143	Complex	Foundation, Utility, Soil retention	3	1					1		1						1	1						1			454232	2418431	22, 25
2144	Complex	Foundation, Marker	5	4	1													4	1								454262	2418541	24
2145	Complex	Foundation	2	2														2									454299	2418559	28
2146	Complex	Foundation	2	1	1													2									454354	2418585	23
2147	Complex	Utility	73	73													73										454151	2418389	10.01-0.7, 18.01-09, 19.02-60
Total			128	98	7	4	4	3	3	2	2	1	1	1	1	1	79	31	5	4	1	1	1	1	1	4			

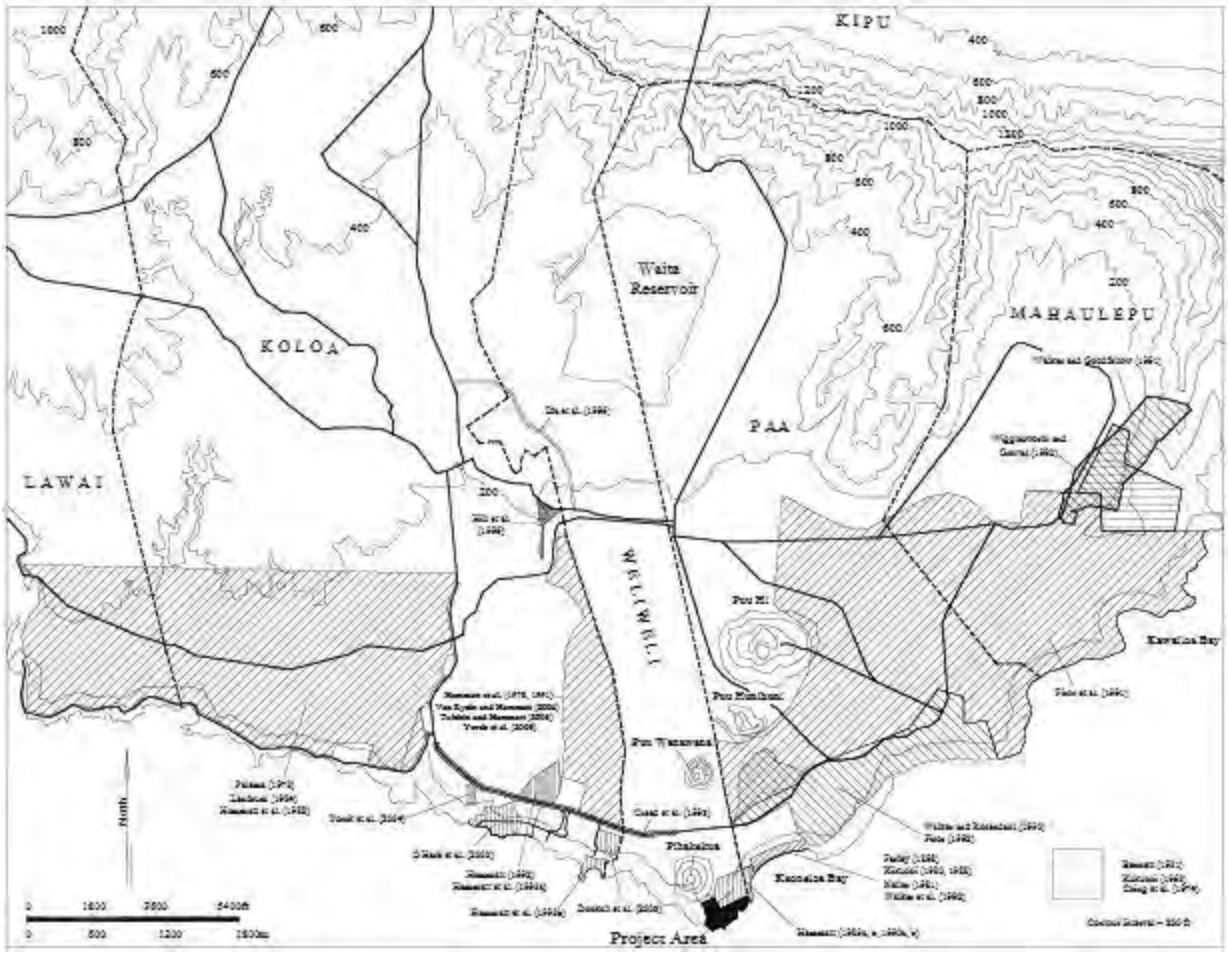


Figure 3: Previous archaeological work in Kona District.

Traditional Background

Kaua'i

Kaua'i is the oldest of the eight major islands of the *Hawaii*an chain. Radio carbon dates from *Pa'a* suggest the island was settled by Polynesians from the Marquesas Islands, and later, Tahiti as early as 200 A.D (Walker and Rosendahl 1990). A rock shelter excavated in the 1950's at *Ha'ele'ele* in *Kōloa* produced evidence of occupation starting in the 11th century A.D. (Kirch 1985). An old rock altar atop *Wai'ale'ale* attests to the deep spirituality of the first Hawaiians. Their sacred places once lined the Wailua River, considered to be one of the most sacred areas in all the Hawaiian Islands.

Before European contact [sic 1796], *Kaua'i*'s geographic location meant relative isolation from the other islands, an advantage resulting in never being defeated by, or ruled by a chief of another island (Bennett 1931). According to sources (*Kamakau* 1961; Fornander 1969; Dukas 2004) during *Kalaunuiohua's* War, also called *Kawelewelei* War (ca. 1480 – 1500) *Kalaunuiohua* (*Hawai'ii*) fought against the chiefs of Maui, Moloka`i, and West O'ahu, eventually being defeated at *Kōloa* by *Kukona*, chief of *Kaua'i*.

Kauaʻi was discovered on January 20, 1778, when the two British ships under Captain James Cook, the Resolution and Discovery, sailed into *Waimea* Bay documenting villages all along the southern shoreline passing *Makaʻhuena* Point. Christian missionaries arrived on *Kauaʻi* shortly thereafter, establishing a church in *Hanalei* on the north shore called *Waioli Huila*. The little green church still stands. The missionaries would later establish churches in *Waimea* and *Kōloa.*

In 1810 the island was ceded to *Kamehameha* I to prevent an invasion and to maintain its political independence until the death of *Kaumualiʻi* in 1824. In April of 1796, *Kamehameha I* attempted an abortive invasion of *Kauaʻi*, but suffers a major disaster in the *Kauaʻi* channel. Locals reported that the warriors of *Kamehameha I* was able to land two war canoes but were defeated on the beach at Keoneloa Bay, and the rest driven off. Most believe the battle actual took place at Mahaulepu. A second attempt resulted in *Kamehameha* and his invading army being caught in a storm in the Kauaʻi Channel and aborting the invasion.

Near the bank of the *Waimea* River are the remains of Fort Elizabeth. It was constructed in 1816 by the Russians during their attempt to established forts on *Kauaʻi* and *Oʻahu*. The Russians occupied this fort for only a short time, and later in the historic period by Hawaiians, who renamed the fort *Ka Ula Pa*. The great battle took place there for *Kauaʻi* with descendants of *Kaumualiʻi,* George *Humehume,* his son and the *Oʻahu* warriors sent there to protect the interests of the *Oʻahu* chiefs.

"The natives of all the islands seem very generally to prefer the hot and barren side to the cooler and more verdant situations further up the valley" (Jarvis 1844:121), Many villages were located near the ocean and the numerous fresh water streams where wet taro cultivation was practiced. Archaeological investigations have confirmed this settlement pattern on *Kauaʻi* recording numerous archaeological features (583 sites, including 175 enclosures and 108 house platforms) integrated with an extensive agricultural field complex that was drawing water from *Waikomo* Stream in *Kōloa* (Sinoto 1975; Hammatt *et. al.* 1978). This agricultural field system, now labeled the *Kōloa* Field System, was probably developed between 1200-1400 AD and maintained historically up to the 1840s when *Kauaʻi* is known to have produced large quantities of sweet potatoes for the booming California market" (Kirch 1985: 104). The *Kōloa* Field System formerly extended from *Lawaʻi* to *Weliweli* and served as the main food source for the people of the *Kōloa* district (Hammatt *et al.* 1991; Mitchell *et al.* 2005). The *Kōloa* Field System is atypical for Hawaiʻi because it is an irrigated system that is not topographically restricted to the confines of a valley. It spreads out over the broad plain of Kona District which is broken up by ridges formed by lava channels (*ibid.*). The irrigation ditches (`auwai) that watered the fields were constructed along the crests of the ridges, extending from *Waikomo* Stream for distances of nearly 2,400 m (*ibid.*).

Paʻa has been referred to as "very dry but breadfruit, yams and bananas were planted in the gulches" (Handy and Handy 1972:153). Handy further states that the early Hawaiians in the *Kōloa* area "had many taro plantations but the sweet potatoes must have had a large place in the subsistence economy of the people" (1940:153). A local informant told Handy that she

remembered stone walls that enclosed sweet potato growing areas. *Weliweli* was also a rather dry *ahupua'a* and archaeological evidence shows that Hawaiians extended the waters of *Waikomo* Stream into this land with the *Kōloa* Field System. Much of the archaeological remnants found are from the recent historical cattle ranching activities of the Knudsen family in *Weliweli* (Hammatt *et al*. 1991). Many believe that major water sources for *Weliweli* were diverted by late historic sugar cane cultivation.

In 1848, a division of land between the crown, government, lesser chiefs (*Konohiki*) and native tenants of the land was formalized under the *Mahele*. The *Mahele* converted land held in tenure to fee-simple, allowing Native Hawaiians to own lands they lived and worked on. In *Pa'a* Natives Hawaiians applied for and received lands. The documented claims confirmed that primary residences were located along the coast, with people cultivating both wet and dry land taro, sweet potatoes and constructing salt pans and fishponds. Other plots of land inland where used for the cultivation of sweet potato, wet-land taro and orange and banana trees.

With the arrival of foreigners, the southeast coast of *Kaua'i* began to change. By 1836, agriculturalists were experimenting with crops such as tapioca, mulberry for silkworms, and coffee. In 1835 Ladd & Co began a twelve acre sugar plantation. By 1850 the plantation, known as the *Kōloa* Plantation, had grown to 450 acres, yielding a crop of approximately two tons. A new mill was constructed in 1854 and then rebuilt in 1913, however, sugar cane cultivation was not initiated on a large scale until the 1880s and 1890s. An 1891 map by M.D. Monserrat shows that the project area was not in cane cultivation. The McBryde Sugar Company took over operations in the late 1890s. In the 1890s, Benjamin F. Dillingham incorporated "three estates, namely *Kōloa* Agricultural Co. (No connection with *Kōloa* Sugar Co.); *Ele'ele* Plantation, and *Wahiawa* Ranch" (Cond`e 1985). Theo. H. Davies was the acting agent until 1909 when Alexander and Baldwin took over agency control. By 1935 the plantation owned 2776.67 acres and leased 1180 acres.

Weliweli and *Makahū'ena* Point

Weliweli is now a dry *ahupua'a*. Any water that had been available to the *makai* portions of the *ahupua'a* was redirected away by the *Kōloa* Plantation as flumes and ditches were constructed to water sugar cane fields. Handy *et.al.* describes the *ahupua'a:*

> "*Weliweli* is about like *Pa'a* (very dry, bananas, yams were planted in the gulches). Both of these narrow land sections lie on a slight seaward promontory, *Makahū'ena* Point. W.C. Bennett (1931: 118) found some irrigation ditches and terraces, indicating that there used to be wet taro grown in an area which is not dry. Desiccation may have been partly caused by clearing the woodland when the first sugar plantation on *Kaua'i* was established" (Handy *et al.*1991: 427-428)

Land Commission Awards

The 2011 archaeological survey noted a single Land Commission Award (LCA) for *Weliweli*, however, there may be more than one (Ching 1983). The first is in the *ʻili* of *Kahoana* to *Punipu* (LCA 5219):

> *Pohina*, sworn, says, I know the land of [the] Clmt. It is in the *ahupuaʻa* of *Weliweli*, and the *ʻili* of *Kahoana lua*. It consists of several dry *loʻi*, a *kula* and house lot. [Hala] is planted in some places (*Papakilo* Database).

Ching lists another LCA that has a boundary to *Weliweli*. This LCA is to *Kaʼanaʼana* (LCA 3584):

> Located in *Kōloa* Hikina, consisting of four places….No. 4 the entire ʻ*ili o Kiki-a-ola.* No. 4 is bounded*: mauka* by *ʻili O Halehinahina* and *ʻili Lapapohakui*; *Puna* (east) by the *ahupuaʻa* of *Weliweli*; *makai* by *ʻili O Kapahaʼalaea; Hanapepe* (west) by *ʻili O Kapalakea. Foreign Testimony, v. 13:3, February 16, 1850; 3 acres, 2 roods, 27 rods.*

Place Names

The literal translation of *Makahūʻena* is "*eyes overflowing heat*" while *Poipu* is designated a land division and also translates as*" completely overcast or crashing (as in waves)* (Pukui *et. al.* 1974). Though *puʻu* are known to be sacred places, there are no place names associated with the *puʻu* that extend down through *Kōloa* to *Makahūʻena*. It is postulated here that these may refer to the most *makai* crater, *Puʻu Pihakekua*, which is now known as *Poipu* crater. Also, the name *Poipu* may relate to the crashing of the surf against the cliffs of *Makahūʻena.*

Makahūʻena also translates as "*the eyes of the spirit*", a reference to night marchers passing through *Weliweli* to make their leap into *Pō* (the nether world) at *Makahūʻena* Point (Kalihiwa et al. 2011). The *Kōloa* District, known in traditional times as the *Kona* District, is adjoined by the *ahupuaʻa* of *Kōloa* and *Paʻa*. The word *weliweli* is a reduplication of *weli* that means "violent, dreadful, horrible, fearful, ferocious; revered; respectful, as of the chief; [or] full of fear" depending upon the context (Pukui and Elbert 1986:384).

Mythology and Mo'olelo

There are few legends or chants associated with *Makahū'ena* Point, and very little for *Weliweli ahupua'a*. One story concerns the gourd of *La'amaomao*, in which the winds of Hawaii were stored. This gourd belonged to *Paka'a*, a servant and advisor to *Keawenuiaui* the ruling chief of *Hawai`i*. *La'amaomao*, *Paka'a*'s mother, has the ability to control the winds (Fornander 1918: 72). *Paka'a*'s son, *Kuapaka'a*, calls all the winds to all the islands to discredit the advisors who replaced *Paka'a* as advisor to the king. During *Kuapaka'a's* chant he names the wind that blows through *Weliweli* as *Kuiamanini* (Fornander 1918: 96)

One legend recites the search by *Pele* for a home, but is continually driven off by *Wakea*, the ancestor of the people. *Pele* has been searching throughout the islands, and now has landed on *Kaua'i* (Wichman 2001):

Pele's canoe with red sails
Reached Kaua'i just at dawn.
The sound of digging on the cliffs
Woke Wakea from his sleep.
Wakea asked:
Who is digging there at Ke'e?
I, Pele, came the answer.
I am digging a pit to find fire.
A fire pit on Kaua'i, a home for Pele?
Not so, said Wakea
Each time you dig a hole
The waters of Ka-wa-kiki
Will drown your fire.
Kaua'i is no place for you
Move on!

A story relates the involvement with the warrior *Lima-loa* with the demi-god *Kamapua'a* in the last battle in the long running war between the districts of *Puna* and *Kona*. In the tale, the war between *Kona* and *Puna* has been ongoing for three generations as the result of the refusal of marriage by the lovely grand-daughter of *Mo'ikeha*, the heir to *Puna*, to *Keli'ikoa*, prince of *Kona*. *Kamapua'a*, in the guise of a man, boasts at the ease with which *Kukona*'s warriors will defeat *Mo`ikeha*. *Kukona,* the chief of *Kona,* has fought on the side of *Puna* with his warrior *Lima-loa*, and does not believe it will be so easy. *Kamapua'a* takes to the battlefield with *Lima-loa* and *Kukona* and defeats all who challenge him. *Kamapua'a* is finally challenged by *Makali'i,* chief of *Kona*, and chants an insult:

"The sea is destroying the sands of Kahalahaa,
The sea of Hanalei is roaring
The sea of Ha'ena is shallow
While the sea of Ka-lalau breaks over the land.
The spray of the sea flies up,

And my wind and cloud forms appears,
O Makali‘i-nui-ku-a-ka-wai-ea,
Small clouds, large clouds,
Tall clouds, and short clouds
And the large cloud standing close to heaven,
That heaven is furious because of you
O Makali‘i-nui-ku-a-ka-wai-ea
Your land is not mine,
The whole of Kaua‘i has become mine.”

Makali‘i realizes that this is *Kamapua‘a*, and chants many chants in hopes that *Kamapua‘a* will spare his life. *Kamapua‘a* does spare his life, commanding him give up his kingdom to *Kukona* and live apart from everyone in the mountain of *Ha‘upu*. Satisfied at ending the wars, *Kamapua‘a* sails to Tahiti (Wichman 2001).

The name Kane‘aukai is associated with the boundary between the *ahupua‘a* of *Weliweli* and *Pa‘a*. A deity of fisherman, he taught those who wished to fish at the point the proper chants to attract fish. Fish caught off the *Makahū‘ena* Point by local fisherman today include*: awa* (milkfish)*, ‘ō‘io* (bonefish) *he‘e* (octopus*), ula* (spiny lobster) *akule* (big-eye scad), and *moi* (thread fish). The cover photo shows on of the *moi* fishing locations. They also gathered *hā‘ue‘uke´ (sea urchin)* and ‘*opihi* (limpet) from the rocks. Salt pans were constructed to collect salt in the sections of the point that contain shallow soil (Kalihiwa *et al.* 2011). Unfortunately, no salt pans were located during the archaeological inventory by Haun *et al*. (2011).

Informants

During the previous work for this project (Kalihiwa et al 2011 in Haun et al. 2011) there was an extensive attempt to contact individuals and organizations that they had contacted for this project. In addition to letters, emails, and telephone calls, a public notice was placed in *Ka Wai Ola* and in *The Garden Island* newspaper (*The Garden Island* –Wednesday (4/27/11), Friday (4/29/11), and Sunday (5/1/11) and *Ka Wai Ola* – May 2011). Only a few informants came forward with information on traditional uses during these studies.

Some of the same informants were contacted for this study, are considered cultural practitioners and elders of the community were also contact by Haun and Kalihiwa. The following individuals were: Ruper Rowe, Stella Burgess, Kepa Maly and Kauai Historical Society archivist, Malina Pereza. Attempts were made to contact others but they were unavailable at the time of this study.

Traditional Uses

According to informants, *Makahūʻena* also means the "eyes of the spirits". *Makahūʻena* Point may have been named so from the *leina*, or jumping off point to *Pō* (nether world), present at this locality. The night marchers are known to come through *Kōloa* down to *Makahūʻena*. The night marchers are wandering spirits that have not continued on to *Pō* because they either have unfinished business, or are lost (Kalihiwa et al 2011).

Fisherman currently frequent this area to fish for *moi* (thread fish, *Polydactilis sexfilis*) and *ʻōʻio* (bonefish, *Albula vulpes*). The western part of the shore at *Makahūʻena* is known for having an abundance of *moi* (*ibid.*).

According to informants there were small salt beds on the property. Salt is not collected off of the rocks on Kauaʻi, but collected from beds called *puʻuwai* dug in shallow clay soils. The water is added to the bed to evaporate, and the red-stained salt of Kauaʻi is collected. This process was given to the people of Kauaʻi by the goddess *Hina* (*ibid*.). There is no evidence of this traditional activity today.

Recommendations

The objective of this assessment is to identify any culturally significant resources or traditional cultural practices that occurred within the project area and its vicinity. Local fishermen continue to gather and catch a variety of fish and marine invertebrate species for subsistence along the shoreline and rocky edges at *Makahūʻena*. Future development of the property has the potential to adversely affect the exercise of these traditional practices for subsistence related marine exploitation. This adverse effect can be mitigated by including explicit plans to ensure, and potentially enhance access and parking to the shoreline.

In addition, during the design and layout of the adjacent development project of the Point at *Poipu*, the building layouts were designed around the four directions winds and around the burial preserve (author's personal knowledge). The chant of the winds of *Weliweli* which are well documented in early accounts and referenced in current studies (Fornander 1918; Kalihiwa *et al* in Haun *et al.* 2011) are still remembered as significant in the eyes of present day cultural practitioners and *kupuna*. This should be considered while designing the layout in order to enhance and take advantage of the winds, as well as let the spirits pass through as they do at the Point at *Poipu*.

There also is a *leina* or leaping off place to *Pō* at *Makahūʻena* Point. Because it is believed that the night marchers continue to pass through this location on their way to *Pō*, open access needs to be maintained.

Although no burials have been identified on the property during the archaeological inventory survey (Haun *et al.* 2011) numerous burials have been identified in sand deposits at and adjacent to *Keoneloa* Bay to the north and east. Haun's (2011) work recommends that

archaeological monitoring be conducted under an approved archaeological monitoring plan. The State Historic Preservation Division agreed with the findings of the report and the recommendations (Letter: 8/27/2012 LOGNO.: 2011.1830/DOCNO.: 1208SL18). It is recommended that the recommendations be followed through to protect any *iwi kapuna* (ancestral remains) that may be inadvertently discovered. If human remains are encountered during future development-related activities, the remains will be treated following the procedures outlined in Hawai`i Revised Statutes (HRS) Chapter 6E-43. Work in the area of the discovery will be halted, the remains stabilized if necessary and DLNR-SHPD will be consulted for guidance.

Bibliography

Anonymous

1885 Lahainaluna Schools, HEN 43, #17. Manuscript, B. P. Bishop Museum Library. Honolulu

Bennett, Wendell C.

1931 *The Archaeology of Kauai*. Bernice P. Bishop Museum Bulletin 80. Honolulu, HI

Ching, K. W. Francis, Stephen L. Palama, and Catherine Stauder

1983 *The Archeology of Kona, Kauaʻi, Na Ahupuaʻa Weliweli, Paʻa, Maha'ulepu, Surface Survey of Coastal Lands*. *Hawaiian* Archaeological Journal 74-1, Archeological Research Center *Hawai`i*. Prepared Fort Leadership Homes of Hawaiʻi, Inc.

Ching, Francis K. W.

1983 *Final Report Archaeological Reconnaissance Kukuiula-Kualu, Kōloa/Lawai, Kauai.* Prepared for the Royal Order of *Kamehameha* I, Chapter 3 –Kaumualii and for Alexander & Baldwin, Inc.

Conde, J.C.

1978 *Narrow Gauge In A Kingdom, The Hawaiian Railroad Company, 1878-1897.* Railhead Publications, 1985

Dukas, Neil Bernard

2004 *A Military History of Sovereign Hawaii*. Mutual Publishing, Honolulu.

Firor, J. and P. Rosendahl

1992 *Additional Data Collection, Hyatt Regency Kauaʻi Proposed Golf Course Project Area, Land of Paʻa, Kōloa District, Island of Kauaʻi.* PHRI Report 447 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens

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

Fornander, Abraham

1918 *Fornander Collection of Hawaiian Antiquities and Folk-Lore: The Hawaiians' Account of the Formation of their Islands and Origin of Their Race, with the Traditions of Their Migrations, Etc., as Gathered from Original Sources.*

Memoirs of the Bernice *Pauahi* Bishop Museum, Volume V. 1918-1919. Bishop Museum Press, Honolulu, HI

Hammatt, Hallett

1989a *Archaeological Data Recovery Plan for Keoneloa Bay Villas, Weliweli and Pa'a.* Cultural Surveys *Hawai`i*. Prepared for Sweeny Development Company.

1990a *Preliminary Report on Archaeological Testing for the Proposed Keoneloa Bay Villas. [TMK: (4) 2-8-20: 21].* Cultural Surveys, *Hawai`i*. Prepared for Land Mark Suites of America.

1990b *Preliminary Status Report on Archaeological Testing for the Proposed Keoneloa Bay Villas [TMK: (4) 2-8-20: 21].* Prepared for Sweeny Development Company.

1990c *Update on our Research on Kane'aukai Heiau, Keoneloa Bay, Weliweli.* Prepared for Sweeny Development Company

1991 *Testing of Possible Heiau, Keoneloa, Weliweli, Kōloa, Kauai* [TMK: (4) 2-8-20:21]. Letter report, Cultural Surveys *Hawai'i*, January 16, 1991.

Hammatt, H., R. M. Bordner and M. J. Tomonari-Tuggle

1978 *Archaeological and Biological Survey of the Proposed Kiahuna Golf Village Area, Kōloa, Kona, Kaua'i Island, Hawaii.* A.R.C.H., Lawai, *Kaua`i*

Hammatt, H., W. Folk and M. Stride

1991 Archaeological Inventory Survey of the Proposed Poipulani Golf Course and Residential Development, *Kōloa*, Kauai. Cultural Surveys Hawaii report prepared for Poipulani Development Corporation.

Handy, E. S. C., E. G. Handy, M. K. Pukui

1991 *Native Planters of Old Hawaii, Their Life, Lore & Environment.* Bishop Museum Press. Honolulu, HI

1940 *The Hawaiian Planter, vol. 1."* BPBM Bull. 161

Haun, Alan E., Dave Henry, and Solomon H. Kailihiwai III

2011 *Archaeological Inventory Survey [TMK: (4) 2-8-021: 041], Makahū'ena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua`i (Final).* Haun and Associates, Kailua-*Kona*, *Hawai`i*. For CIRI Land Development Company, 2525 C Street, Suite 500, Anchorage, Alaska, 99503.

Jarves, James Jackson

1844 *History of the Hawaiian or Sandwich Islands*, Edward Moxon, Dover Street, London.

Kailihiwa, S., A. Hann, and J. Henry
2011 Cultural Impact Assessment, TMK: (4) 2-8-021:041, Makahūʻena Point, Weliweli Ahupuaʻa, *Kōloa* District, Island of Kauai, Haun & Associates Report 811 prepared for CIR1 Land Development Company.

Kamakau, S.
1992 *Ruling Chiefs of Hawaii.* [Revised] *Kamehameha* Schools Press. Honolulu. [1842 and 1870]

Kikuchi, William
1963 *Archaeological Survey and Excavations on the Island of Kauai, Kona District, Hawaiian Islands.* Sponsored by the University of *Hawaiʻi* Committee for the Preservation and Study of *Hawaiian* Language, Art, and Culture

Kirch, Patrick V.
1985 *Feathered Gods and Fishhooks, and Introduction to Hawaiian Archaeology and Prehistory.* University of *Hawaiʻi* Press. Honolulu

Ladd, Edward J.
1981 *Archaeological Field Survey Report, Makahūʻena Point, Kauai.* Prepared for the 14th Coast Guard District

McGerty, Leanne and Robert Spear
2001 *Cultural Impact Assessment (CIA) for a Proposed Well Site at Mahaulepu, Kōloa, Kauaʻi, Hawai`i [TMK: (4) 2-9-03].* Scientific Consultants Services, Inc., Honolulu, Hawai`i. For Ron Terry, Geometrician.

McMahon, Nancy
1991 *Locating Kaneʻaukai Heiau: An Archaeological and Historical Synthesis, Weliweli, Kōloa, Kauaʻi.* State Historic Preservation Division, Department of Land and Natural Resources, January 2, 1991.

Mitchell, A., R. Chiogioji, H.H. Hammatt
2005 Cultural Impact Assessment for an Approximately 203-Acre Parcel in Kōloa Ahupuaʻa, Kona District, Island of Kauaʻi, TMK (4) 2-18—013:001; 2-8-014:001, 002, 003, 004, and 019. Prepared for the Eric A. Knudsen Trust.

Papakilo Database
nd. Mahele ʻAina Index –Foreign Testimony –Helu 5219
http://papakilodatabase.com/main/imageserver.phpo?file=01138.pdf&path=H/H/A/S/H/7/1/5/1/12/

Pukui, Mary Kawena, Samuel H. Elbert, and Ester T. Mookini
1974 *Place Names of Hawaii*, University of *Hawai`i* Press, Honolulu.

Sinoto, A.
1975 *Archaeological Reconnaissance Survey of Knudsen Trust Lands at Kōloa, Poipu, Kaua'i*. Typescript in Library, BPBM

Smith, H. W.
1991 *Historical Documentary Research. Archaeological Inventory Survey, Grove Farm, Kawailoa Property Additional Parcel, Land of Mahaulepu, Kōloa District, Island of Kaua'i.* Walker and Goodfellow 1991. Appendix B pp. B-1 to B-11

Thrum, Thomas G.
1906 *Heiaus and Heiau Sites Throughout the Hawaiian Islands*. *Hawaiian* Almanac and Annual for 1906. Honolulu.

2001 *Pele Ma, Legends of Pele from Kaua'i.* Bamboo Press, Honolulu.

Walker, A. and P. Rosendahl
1990 Archaeological Inventory Survey, Hyatt Regency Kauai, Proposed Golf Course Project Area, Land of Pa'a, *Kōloa* District, Island of Kauai. PHRI Report 447-111591 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

DEPARTMENT OF PLANNING
KA'ĀINA HULL, DIRECTOR
JODI A. HIGUCHI SAYEGUSA, DEPUTY DIRECTOR

DEREK S.K. KAWAKAMI, MAYOR
MICHAEL A. DAHILIG, MANAGING DIRECTOR

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of a Special Management Area Use Permit for the construction of a single-family residence (SFR).
Permit Application Nos.	Special Management Area Use Permit SMA(U)-2022-4 Class III Zoning Permit Z-III-2022-1 (For PC information & concurrence)
Name of Applicant(s)	MAKAHUEANA – PREFERED A, LLC. et. al.

II. PERMIT INFORMATION

PERMITS REQUIRED	
☐ **Use Permit**	
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☒ **Zoning Permit Class** ☐ IV ☒ III	A Class III Zoning Permit is a procedural requirement since the proposed development is situated within the Shore Constraint District (S-SH), pursuant to Section 8-12.5(d) of the Kaua'i County Code (1987), as amended.
☒ **Special Management Area Permit** ☒ Use ☐ Minor	Pursuant to Section 205A of the Hawaii Revised Statutes (HRS) and the Special Management Area Rules and Regulations of the County of Kaua'i, a SMA Use Permit is required as defined in Section 7.3(C) of the SMA Rules and Regulations where the Director finds that the proposal (1) is a "Development" as defined in Section 1.4F; and (2) is in excess of $500,000.
AMENDMENTS	
☐ **Zoning Amendment**	
☐ **General Plan Amendment**	

F.2.e.1.

APR 12 2022

☐ State Land Use District Amendment	

Date of Receipt of Completed Application: February 10, 2022
Date of Director's Report: March 23, 2022
Date of Public Hearing: April 12, 2022
Deadline Date for PC to Take Action (60TH Day): June 11, 2022

III. PROJECT DATA

PROJECT INFORMATION			
Parcel Location:	The project site is located on the makai side of Pe'e Road in Po'ipū, at the terminus of a cul-de-sac situated approximately 600 feet south of its intersection with Pe'e Road, within the Makahū'ena Estates Subdivision.		
Tax Map Key(s):	(4) 2-8-021:070	**Area:**	43,604 square feet

ZONING & DEVELOPMENT STANDARDS	
Zoning:	Open (O)
State Land Use District:	Urban
General Plan Designation:	Resort
Height Limit:	Thirty (30) feet
Max. Land Coverage:	Not to exceed 10% of the parcel or lot area OR 4,360 SF
Parking Requirement:	2 min. parking spaces required per dwelling unit
Front Setback:	10'-0"
Rear Setback:	Five (5) feet or ½ the wall plate height, whichever is greater
Side Setback:	Five (5) feet or ½ the wall plate height, whichever is greater
Community Plan Area:	South Kauai Community Plan
Community Plan Land Use Designation:	N/A
Deviations or Variances Requested:	N/A

IV. LEGAL REQUIREMENTS

Section 8.0, 9.0, and 10.0 of the Special Management Area Rules and Regulations:	This report is being transmitted to the Applicant and Planning Commission in order to satisfy the requirements of Sections 8.0, 9.0 and 10.0 of the Special Management Area Rules and Regulations. The application was received on February 10, 2022 and the Applicant, through its authorized agent, was notified accordingly of the Planning Department's intent to commence permit processing.
Public Hearing Date:	APRIL 12, 2022

V. PROJECT DESCRIPTION AND USE

As represented, the Applicant is proposing to construct a two-story single-family residence featuring 4 bedrooms with 4.5 bathrooms and containing a total living area of approximately 3,570 square feet (SF). In addition, the Applicant is proposing a 2-car garage, guesthouse, pool, and lanai area. The project will be developed within the Open (O) zoning district and the areas are broken down as follows, as represented:

FLOOR AREA	
Main Level	2,620 square feet (SF)
Upper Level	1,705 SF
Covered Lanais	604 SF
Upper Level Lanais	170 SF
Pool	486 SF
Garage	850 SF
Guesthouse	506 SF

The subject parcel is identified as Lot 3 of the "Makahū'ena Estates Subdivision" and contains approximately 1.001 acres or 43,604 SF. As mentioned in the application, the subject parcel was a part of a 10-lot subdivision that was created through Subdivision Application No. S-2015-14 and Special Management Area Use Permit SMA(U)-2015-1. There are no existing improvements within the subject parcel. Plans and elevations of the proposed development are illustrated through Exhibits 'H', 'I' and 'O-6' of the Application.

VI. APPLICANT'S REASONS/JUSTIFICATION

(See application)

VII. ADDITIONAL FINDINGS

1. The State Land Use District (SLUD) designation for this parcel "Urban" which allows for urban growth in a specified area.

2. The subject property is within and adjacent to properties that are located within the Visitor Designation Area (VDA) and the General Plan designation is "RESORT". According to the General Plan, this Resort area consistently posts the highest occupancy rate among island resort areas.

3. The General Plan designation (GP) is "Resort". According to the GP, areas designated as Resort are generally within the Visitor Destination Area (VDA) and have the infrastructure to support these type of developments. In certain areas of the island, there is growing public concern for the infrastructure serving these areas that include utilization of roadways, wastewater systems, and parks.

4. The project is immediately adjacent to high-density development to the west & east, and single-family residences to the north. The proposed development abuts a resort facility (The Point at Po'ipū) along its eastern boundary and a condominium (Makahū'ena at Po'ipū) project along its western boundary.

5. The subject parcel is considered a shoreline property and would be subject to the County's shoreline setback requirements contained in Chapter 8, Article 27 of the Kaua'i County Code (1987). At the time the SMA Use Permit was considered for the subdivision, a **one hundred (100) feet** shoreline setback line was established for Lot 3.

6. As previously noted by the County Department of Public Works (DPW) during the SMA Use Permit application for the subdivision, a portion of the subject property is located in Special Flood Hazard Area (SFHA) Zones 'VE' and 'AE'. Zone VE areas are Coastal High Hazard Areas (Tsunami), whereas Zone AE areas are those area that have one-percent (1%) chance of being inundated by a 100-year flood. However, most of the property is located in Non-SFHA Zone 'X' which is an area determined to be outside the 0.2% annual chance 500-year floodplain. The parcel is also within the tsunami evacuation zone.

7. <u>Special Management Area (SMA)</u>
   In addressing the issues of the Special Management Area and its objectives and policies, the following aspects will be considered and evaluated:

   a. Recreational Resources
   b. Cultural/ Historic Resources
   c. Scenic resources

d. Coastal Hazard
e. Coastal Ecosystem

Furthermore, the proposal does not:

- Involve dredging, filling or otherwise altering any bay, salt marsh, river mouth, slough or lagoon;
- Reduce the size of any beach or other area usable for public recreation;
- Reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers, and streams within the SMA; and
- Adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries, potential or existing agriculture uses of land.

8. The subject property is within the Shore Constraint District (S-SH) and a small portion is within the Tsunami Constraint District (S-TS). Pursuant to Section 8-12.5(c) of the KCC, before a permit can be granted (in this case, an SMA Use Permit & Class III Zoning Permit), it must be determined that the proposed development will not cause significant harm to:

   - the water quality of the ocean, including but not limited to its clarity, temperature, color, taste and odor;
   - fish and aquatic habitats
   - the natural beauty of the area
   - navigation, safety or health, or
   - would not substantially interfere with public use of the ocean waters or underlying lands; and
   - that other facilities are unavailable to the Applicant.

9. CZO Development Standards
   The proposed development is subjected to standards prescribed in Sections 8-4.3, 8-4.5 and 8-9.2:

   a. **Setback Requirements:** Front property line setbacks are ten feet (10'-0") with a side and rear property line setback of five feet (5'-0") or half the distance of the plate height whichever is greater. As proposed, the structure complies with the setback requirements specified by the CZO.

b. **Land/Lot Coverage:** The subject property is within the County Open zoning district. Thus, the allowable land coverage should not exceed more than 10% of the parcel or lot area, as prescribed in Section 8-9.2(a) of the CZO.

Per Section 8-1.5 of the CZO, "Land Coverage" is defined as "*a man-made structure, improvement or covering that prevents normal precipitation from directly reaching the surface of the land underlying the structure, improvement or covering. Structures, improvements and covering include roofs, surfaces that are paved with asphalt, stone, or the like such as roads, streets, sidewalks, driveways, parking lots, tennis courts, patios, and lands so used that the soil will be compacted so as to prevent substantial infiltration, such as parking of cars and heavy and repeated pedestrian traffic.*"

c. **Building Height:** The South Kauai Community Plan allows dwellings and other structures to be no more than thirty (30) feet to the highest point of the roof measured at each point along the building from the finished grade at the main entry, and no more than two (2) stories above and one (1) story below from the finished grade at the main entry, over twenty (20) feet measured from the finished grade at the main entry to the highest exterior wall plate line.

VIII. AGENCY COMMENTS

Comments from applicable government agencies are being sought and are expected at time of the public hearing scheduled on April 12, 2022. The agency comments have been received are attached in Exhibit 'A'.

IX. PRELIMINARY EVALUATION

In evaluating the Applicant's proposal to allow residential development on the subject parcel, the following are being considered and responses are taken from the Application (beginning from Page 11).

1. General Plan
   The proposed development satisfies the following policies of the General Plan, as taken from Section 1.3 and 1.4:

   A. 1.3, entitled "VISIONS AND GOALS"

      1) **Goal #1 "Sustainable Island"** – The Makahū'ena Estates Subdivision was carefully planned and developed to be consistent with the vision, goals, and policies of the General Plan. The overall density of the subdivision was reduced from at least 25 dwelling units to ten, only nine of which are

within the VDA. A public parking area and an open space and public access easement were dedicated to the County to protect the natural coastal systems that support life, air, water, soil, and living organisms on the makai portion of Lot 3. The development of the proposed single family dwelling unit on Lot 3 will not negatively affect the sustainability of the island. Rather, the subdivision is the direct result of well-reasoned actions starting in 2014 that ensure this area remains sustainable and meets the needs of current and future generations without depleting important resources.

2) **Goal #2 "Unique and Beautiful Place"** –The proposed development ensure the care and protection of the treasured resources, traditions, and qualities of the natural, built, and human environment of Makahū'ena Point. The proposed development maintains the perpetual protection of the natural coastal ecosystem on the makai portion of Lot 3 and will not infringe upon the rights of the community to engage in their cultural traditions and practices and provides opportunities for recreation and meditative contemplation along the coastline. Further, the development is consistent with the tenets of the Public Trust Doctrine as provided in Article 11, Section 1 of the Hawaii State Constitution to, "conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air minerals and energy sources", and "promotes the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State."

3) **Goal #3 "A Healthy and Resilient People"** – The development of a single-family dwelling unit on Lot 3 of Makahū'ena Estates is consistent with these principles and will not interfere with the community's use of the coastal access area. This specific development is part of a larger well planned and sustainable subdivision project that increased the resilience and vitality of the community and promoted better health outcomes through improved coastal access opportunities related to the natural, built, and social environment.

4) **Goal #4 "An Equitable Place, with Opportunity for All"** – Short term and long-term job opportunities will result from the construction and continued maintenance of this specific development as is typical with high-end residential vacation rental properties. This subdivision was specifically designed and permitted to ensure equitable opportunities for recreation and shared spaces for all of Kaua'i, not just the landowners in the neighborhood. Anyone on Kaua'i can park in the public parking lot at Makahū'ena Estates Subdivision and access the entire coastline all the way to Māhā'ulepū Māhā'ulepū. The coastal access area allows for fishing off of

the makai portion of Lot 3 in perpetuity and such opportunities benefit, not burden, disadvantaged groups on Kaua'i. Applicant embraces this kuleana and has designed the proposed development to complement the environment and character of this area.

B. Section 1.4, entitled "POLICIES TO GUIDE GROWTH"

1) **Policy #1 "Manage Growth to Preserve Rural Character"**– The project is consistent with the policy since it is contained within an existing neighborhood that has been planned for residential development and within the Po'ipū growth boundaries.

2) **Policy #3 "Recognize the Identity of Kauai's Individual Towns and Distracts"**– The proposed residence would be constructed within the development boundaries established previously through SMA Use Permit for the entire subdivision where it delineates and preserves the open space along the coastline.

3) **Policy #8 "Protect Kauai's Scenic Beauty"** – The proposed SFR would be consistent in preserving the natural views of Makahū'ena Point. The proposed development involves relatively low massing and it's situated in such a way that protects and preserves both mauka and makai views along the coastline. Since the overall density of the subdivision was reduced from a total of 25 to 10 lots, the views in this area have been protected and further assisted by the open space access easement along the makai portion of Lot 3 as well as shoreline abutting parcels. In further assuring compatibility with the surrounding area, the proposed SFR has been designed to complement the rugged coastal cliff area of Makahū'ena Point and incorporates dark earth tones and design features that blend in with the natural environment.

4) **Policy #9 "Uphold Kaua'i as a Unique Visitor Destination"** – The subdivision was specifically designed to ensure that the nine lots within the VDA do not negatively affect the community character of Po'ipū . Further, the location of the SFR within the pre-approved building envelope will limit the physical footprint of transient accommodation uses and ensure that such uses do not encroach upon the dedicated open space coastal access easement area.

5) **Policy #14 "Prepare for Climate Change"** – The project should not contribute to or exacerbate concerns regarding rising sea levels along Makahū'ena Point. By restricting the development of Lot 3 to the mauka

side of the existing rock wall along the coastline and in compliance with the shoreline setback that was established by the previous SMA Use Permit for the subdivision, the proposed SFR should not be affected by any coastal hazards.

6) **Policy #15 "Respect Native Hawaiian Rights and Wahi Pana"** – As represented, a cultural impact assessment (CIA) was prepared during the Makahū'ena Estates subdivision permitting process. Although the CIA did not identify any traditional and customary practices occurring in the area that is now Lot 3, the CIA stated that fisherman continue to gather and catch a variety of fish for subsistence purposes and harvest various marine invertebrates along the shoreline and rocky edges of Makahū'ena point. In response, the developer has dedicated areas for public parking lot and coastal open space access easements to the County to ensure these traditional and customary practices may continue in perpetuity.

2. Native Hawaiian Traditional and Cultural Rights

The original parcel was initially subdivided in 1932 under a subdivision known as the "Makahū'ena Tract" (File Plan 354) that established 63 lots and associated roadway lots (within this subdivision as well as the adjacent parcel presently referred to as The Point at Po'ipū property). The residential lots that are now encumbered by the Point at Po'ipū property were consolidated and re-subdivided in the 1990s and thus leaving the 25 pre-existing lots. They were subsequently consolidated in 2015 and resubdivided into a total of 10 lots.

As noted, a Cultural Impact Assessment Report (CIA) was prepared and submitted during the SMA Use Permit for the subdivision in 2015. The CIA did not identify any traditional and customary practices occurring within the area, however it did mention that fisherman continue to utilize the coastline to gather and catch a variety of fish for subsistence purposes, and harvest various marine invertebrates along the shoreline and rocky edges of Makahū'ena Point.

Based on the information contained in the CIA where known cultural practitioners and kumu of various Hawaiian arts were consulted, and evaluating historical information that was available to the department, the department finds that the proposed Project involving the construction of the residential building on the subject parcel should have no impact on any known Hawaiian traditional or customary practices for the following reasons:

a. There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.

b. There are no special gathering practices taking place within any portion of the Project Site.

c. The Project will not detrimentally inhibit access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.

d. There are known religious practices taking place within the project site.

e. There are no known pre-contact cultural or historic sites or resources located within the project site.

f. There are no known burials within the petition area.

The CIA recognizes that all traditional and customary practices, and all valued cultural, and natural resources in the area involve subsistence fishing and gathering within the open space access easement makai of the subdivision's rock wall. In addressing this subject further, it is noted that the developer dedicated areas for a public access and parking (easements to the County) in order to ensure traditional and customary practices may continue in perpetuity. The public parking area is situated along the northern section of the subdivision, along Pee Road and encumbers Lot 9, and the coastal access easement to the shoreline is along the western boundaries of Lots 8 & 9 of the subdivision.

3. SMA Rules and Regulations

The COK SMA Rules and Regulations contain objectives, policies and guidelines designed to protect coastal resources. Within the SMA, special consideration is given to recreational opportunities, cultural and historic resources, scenic qualities and open space, coastal ecosystems, and coastal hazards. In evaluating the proposed development relative to the goals and objectives of the SMA Rules and Regulations, the following aspects are taken into consideration:

a. Public Access and Coastal Recreation – The project will not negatively impact on any public recreational opportunities located near the project area. As previously noted, the developer has provided public parking and access to the shoreline.

b. Cultural/ Historical Resources – Currently, there are no know historic, cultural, or archeological resources on site. As noted in the FINAL Archaeological Inventory Survey (AIS) dated November 2012, the subject property has been disturbed by previous activities and most of the

identified features are remnants of the U.S. Coast Guard LORAN Station (LORSTA Kaua'i) that was in operation between 1951 and 1979. However, should any historical artifacts, shell or charcoal deposits, burials and stone pavings are discovered during construction within the petitioned area, the petitioner shall stop work in the immediate area and contact the State Department of Land & Natural Resources (DLNR), Historic Preservation Division (SHPD) to mitigate the situation.

c. Scenic and Open Space Resources – The project site is surrounded by developed lands and this parcel does offer views to the ocean as observed along Pe'e Road. A detailed visual analysis of the proposed development is illustrated in Exhibits O-4, O-5, and O-6 of the Application. In order to further ensure that the project is compatible with its surroundings and to minimize the visual impact of future structures, the external color should be of a moderate to dark earth-tone colors, and the Applicant should provide substantial landscaping. The proposed color scheme and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application or during the subdivision process.

d. Coastal Hazards – The subject property is located within a flood zone and all new development will be required to conform to the requirements noted in the County's Flood Ordinance, as administered by the County Department of Public Works (DPW). Therefore, the risk of potential damage due to coastal hazards will be minimized.

e. Coastal Ecosystems – The Application indicates that there are no known rare, threatened or endangered plant or critical habitats are located within the project site. However along the shoreline, the wedge-tailed Shearwater colony has been expanding very slowly over the past several years and it stretches along the coast for 3-4 miles between the resorts at Po'ipū and Makahū'ena.

The subject property has been extensively disturbed by previous activities, and the site is surrounded by developed lands. The construction of the proposed residence should be required to conform to the requirements of the Department of Public Works regarding grading, drainage, and runoff concerns from the proposed development, as well as the Department of Health regarding the proposed IWS and fugitive dust, drainage, noise, and solid waste, if/when applicable.

It is further noted that the developer has worked closely with the State DLNR, Division of Forestry and Wildlife (DOFAW), Kauai Branch in

establishing mitigation measures to minimize the potential impacts of the development to the bird's nesting/burrow areas.

4. CZO Development Standards
   As proposed, the project complies with the building height, setback, and off-street parking requirements for development within the Open (O) zoning district, as specified in Sections 8-4.3 & 8-4.5 the Comprehensive Zoning Ordinance (CZO).

   In reviewing the land coverage calculations provided in the Application, it is noted that the total land coverage of the proposed development is approximately 4,315 SF or 9.8% of the parcel area. It unclear as to whether all of the improvements that are considered land coverage, as defined in Section 8-1.5 of the CZO, have been included in the calculations (i.e. hardscape that includes but not limited to sidewalks). In order to ensure that the development remains under 10% land coverage for the subject parcel as specified in Section 8-9.2(a) of the CZO, the Applicant should work closely with the Planning Department prior to building permit application.

Finally, it is uncertain as to whether the Applicant has made provisions for night illumination with the project, based on the preliminary plans that have been submitted. If so, night illumination should be designed to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds. Night lighting should be shielded from above and directed downwards and shall be approved by the U.S. Dept. of the Interior Fish and Wildlife Service. If external lighting is to be used in connection with the proposed project, all external lighting should be only of the following type: *downward-facing shielded lights*. Spotlights aimed upward or spotlighting of structures is prohibited.

X. PRELIMINARY CONCLUSION

Based on the foregoing, it is concluded that through proper mitigative measures, the proposed development can be considered and it should not have any significant adverse impacts to the environment nor the surrounding neighborhood. It is further concluded that the proposed development complies with the policies and guidelines of the Special Management Area Rules and Regulations in that:

1. The development will not have any substantial adverse environmental or ecological effect.

2. The development is consistent with the objectives/goals/policies of the County General Plan, the Comprehensive Zoning Ordinance, and other applicable ordinances.

Furthermore, the proposal DOES NOT:

a. involve dredging, filling, or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;
b. reduce the size of any beach or other area usable for public recreation;
c. reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers or streams within the special management area; and
d. adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries or existing agricultural uses of land.

Through proper mitigation measures, the proposed development would be in compliance with the criteria outlined for the granting of a Special Management Area Use Permit. The Applicant should institute the "Best Management Practices" to ensure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those in the surrounding area of the proposal.

Additionally, the Applicant should implement to the extent possible sustainable building techniques and operational methods for the project.

XI. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion, it is hereby recommended that the proposed development involving the construction of a single-family residence and associated site improvements through Special Management Area Use Permit SMA(U)-2022-4 and Class III Zoning Permit Z-III-2022-1 be **APPROVED** subject to the following conditions:

1. The proposed improvements shall be constructed as represented. Any changes to said development shall be reviewed by the Planning Director to determine whether Planning Commission review and approval is warranted.

2. Prior to building permit application, the Applicant shall work closely with the Planning Department to ensure that the proposed development remains under the 10% land coverage requirement for the parcel, as specified in Section 8-9.2(a) of the CZO.

3. To ensure that the project is compatible with its surroundings and to minimize the visual impact of the structure, the external color of the proposed residence shall be of a moderate to dark earth-tone color. The proposed color scheme and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application.

4. The Applicant shall submit for review and approval by the Planning Department, a landscape plan composed of native species, or species common to the area, to help to screen the proposed structures, and integrate the site with its surroundings.

5. If external lighting is to be used in connection with the proposed project, all external lighting shall only of the following type: *downward-facing shielded lights*. Spotlights aimed upward or spotlighting of structures is prohibited.

6. Unless otherwise stated in the permit, once permit is issued, the Applicant must make substantial progress, as determined by the Director, regarding the development or activity within two (2) years, or the permit shall be deemed to have lapsed and be no longer in effect.

7. The Applicant shall develop and utilize Best Management Practices (BMPs) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

8. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050 to determine mitigation measures.

9. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, State Historic Preservation Division-DLNR, and the County Departments of Public Works, Fire, Transportation, and Water.

10. To the extent possible within the confines of union requirements and applicable legal prohibitions against discrimination in employment, the Applicant shall seek to hire Kauai contractors as long as they are qualified and reasonably competitive with other contractors and shall seek to employ residents of Kauai in temporary construction and permanent resort-related jobs. It is recognized that the Applicant may have to employ non-Kauai residents for particular skilled jobs

where no qualified Kauai residents possesses such skills. For the purposes of this condition, the Commission shall relieve the Applicant of this requirement if the Applicant is subjected to anti-competitive restraints on trade or other monopolistic practices.

11. The Applicant is advised that prior to construction and/or use, additional government agency conditions may be imposed. It shall be the Applicant's responsibility to resolve those conditions with the respective agency(ies).

12. The Planning Commission reserves the right to revise, add, or delete conditions of approval in order to address or mitigate unforeseen impacts the project may, create, or to revoke the permits through the proper procedures should conditions of approval not be complied with or be violated.

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for APRIL 12, 2022 whereby the entire record should be considered prior to decision-making. The entire record should include but not be limited to:

a. Pending government agency comments;
b. Testimony from the general public and interested others; and
c. The Applicant's response to staff's report and recommendation as provided herein.

By _____
DALE A. CUA
Planner

Approved & Recommended to Commission:

By _____
KA'ĀINA S. HULL
Director of Planning

Date: 3/30/2022

EXHIBIT “A”

(Agency Comments)

For reference

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Dale) February 14, 2022

SUBJECT: Class III Zoning Permit Z-III-2022-1, Special Management Are Use Permit SMA(U)-2022-4, Dwelling, Single Family Detached
Tax Map Key: (4) 2-8-021:070, Makahuena - Preferred A Llc, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

No comments or concerns from Fire

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

RECEIVED

FEB 15 2022

County of Kauai
Transportation Agency

County of Kaua'i
PLANNING DEPT

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

22 MAR -5 A1:37

FROM: Kaaina S. Hull, Director (Dale) February 14, 2022

RECEIVED

SUBJECT: Class III Zoning Permit Z-III-2022-1, Special Management Are Use Permit SMA(U)-2022-4, Dwelling, Single Family Detached
Tax Map Key: (4) 2-8-021:070, Makahuena - Preferred A Llc, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

GTA HAS NO FURTHER COMMENT ON THIS PROJECT.

THANKS!

3.2.2022

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

DEPARTMENT OF PLANNING

STANDARD ZONING PERMIT APPLICATION

One (1) original; If providing plans, five (5) sets, including original, required.
Fees vary based on permits required and range from $30 to over $1000.
Proof of 100% fee ownership rights or authorized agent must be attached.

DEPARTMENT USE ONLY				
Zoning				Intake By:
Use				
Variance				Intake Date:
SMA				
PDU				Acceptance Date/By:
TOTAL FEE:				
Additional Fees:				
Receipt Number				
Building Permit No.				
Associated Permits (e.g. SSD)				

Check One: [X] Paper Plans [ ] Electronic Plans

This application shall be filled out by all seeking Zoning, Use, Variance, SMA Use or PDU permits pursuant to the Kauai County Code, Hawai'i Revised Statutes Chapter 205A and all relevant rules and regulations of the Planning Commission and Department. Supplemental information may be attached to form. SMA applications may also require additional SMA assessment forms.

Permitting fees may be made via cash or check. All checks shall be made out to: **"Director of Finance"**

Complete Information Below			
Tax Map Key Number	(4)2-8-021-070	Condominium Number	n/a
Applicant Name(s)	Makahuena-Preferred A LLC et al.		
Property Address	n/a		
Mailing Address	P.O. Box 1205 Lihue, HI 96766		
Parcel Area	1.001 acres	Contact Phone	(808) 521-9297
Zoning Designation	Open	Contact Email (if applicable)	mtrask@cades.com

Applicant Declarations (incorrect responses may slow your permit review)

Please place an "X" under Yes or No under the following:

		YES	NO	Staff Verification
1	Is this property located in the Special Management Area (SMA)?	x		
2	Is this property part of a Condominium Property Regime (CPR)?		x	
3	Is this property within 500 feet of the shoreline?	x		
4	Is this property within the Agriculture Zoning District?		x	
5	Is there a structure on the property that is 50 years old or older?		x	
6	Do you have an Additional Dwelling Unit Certificate?		x	
7	Is this a permit for an after-the-fact construction or activity?		x	
8	I hold at least a 100% property interest in the property.		x	
9	Are you an agent for the property owner?	x		
10	Has a similar application been previously denied?		x	
11	Is this an application for an agriculture structure under 200 square feet		x	
12	Are there known burials on the site?		x	
13	Are you using water not provided by a domestic water system?		x	
14	Does existing grade under building footprint change by 2' or more in any direction?		x	
15	The proposed residential unit is a Multi-Family Dwelling Unit?		x	
16	Is this a conversion of a legally existing single-family dwelling unit into a multi-family two dwelling unit?		x	
17	Is this structure a guest house?		x	
18	Does guest house contain a kitchen?		x	

1. What is the proposed construction and/or intended use of the structure or parcel (may attach additional info)? Two-story Single-Family Dwelling Unit, pool, driveway, walkways, lanai, landscaping and associated improvements.
2. If this is not the first dwelling unit on the subject property identified on this application, please state how many dwelling units presently exist: n/a

Submittal Checklist

Please **INITIAL** under "Yes" or not applicable "N/A" regarding each of the statements:

		YES	NA	Staff Verification
1	All plot plans I have submitted are drawn to scale.	x		
2	I have ensured all TMK numbers are visible on all plan sheets.	x		
3	Any plans I have submitted clearly show all structures and setback dimensions.	X		
4	My plans provide lot coverage calculations	x		
5	I have ensured kitchens are marked with the 8' radii required by the Planning Department's Administrative Rules.	X		
6	Because this application involves a CPR, the plot plan shows all existing structures.		X	
7	Building plate does not exceed 20 feet from the finished grade at entry.	X		

Acknowledgements - Please **INITIAL** next to each of the statements:

I UNDERSTAND:	Initial Here
Additional fees and/or the submittal of other application forms may be necessary to complete this application for acceptance and processing.	MT
Tender of fees by the County does not imply acceptance of this application.	MT
Errors in self-declaration or missing or incomplete information will delay acceptance and processing of your application.	MT
Any purposeful misrepresentations in this application may result in delay, denial, permit revocation, violations, fines and even criminal prosecution.	MT

The owner and/or authorized representative is hereby made aware that the construction, work, use or activity approved in this permit shall be subject to inspection by Planning Department personnel. The applicant is advised that inspection may occur prior to or during construction and use to ascertain the activity is conducted in compliance with the law. Further, I am a duly authorized agent or have 100% ownership rights.

OWNER/AGENT SIGNATURE: _____ DATE: February 10, 2022

FOR PLANNING DEPARTMENT USE ONLY (THIS CONSTITUTES PERMIT IF FILLED OUT BY DEPT.):

APPROVED ☐ DENIED ☐ BY: _____ DATE: _____

DIRECTOR'S CONDITIONS OF APPROVAL (staff to **initial** next to applicable conditions):

This permit shall expire if no building is issued within one (1) year after the approval date and/or if construction does not start within one (1) year of building permit issuance.	
Director's standard conditions for non-residential agricultural structures (attach)	
Should any archaeological or historic resources be discovered during ground disturbing/construction work, all work in the area of the find shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division and the Planning Department to determine mitigation measures.	
Additional Conditions (State):	

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

I. Part A

APPLICANT INFORMATION			
Applicant:	Makahuena - Preferred A LLC et al.		
Address:	c/o Cades Schutte P.O. Box 1205, Lihue, HI 96766	Phone:	(808) 521-9297

Applicant's Status: (Check one)	
☐ Owner of the Property	(Holder of at least 75% of the equitable and legal title)
☐ Lessee of the Property	Lessee must have an **unexpired and recorded** lease of five (5) years or more from the date of filing of this application. If not, Owner(s) must provide a Letter of Authorization.
☑ Authorized Agent	Attach Letter of Authorization

Contact Person:	Mauna Kea Trask	Address:	P.O. Box 1205, Lihue, HI 96766
Phone:	(808) 521-9297		
Email:	mtrask@cades.com		

PROJECT INFORMATION (attach additional sheets if necessary)			
Site Address:	N/A	Tax Map Key:	(4) 2-8-21-70
		Lot Area:	1.001 acres
State Land Use District:	Urban	County Zoning:	Open
General Plan Designation:	Resort		
Nature of Development:	~~Two-story Single-Family Dwelling Unit, pool, driveway, walkways, lanais, landscaping and associated improvements.~~		

* **NOTE**: An Environmental Assessment in accordance with HRS Chapter 343 is required for actions requiring a Shoreline Setback Variance (SSV). Please contact the Planning Department for further information.

Valuation of Development: Over $500,000.00
(Estimate Attached)

Date of Application: February 10, 2022

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

II. Part B

The petitioner shall be responsible for filing the following required information with the department before an application is considered complete:

1. A **written** description of the proposed project, location and a statement of reasons/justification for project.
2. If property abuts a shoreline, a certified shoreline survey conducted by a registered land surveyor within 6 months of an application shall be submitted, when required by the Planning Agency.
3. A plot plan of the property, drawn to scale, with all proposed and existing structures and other pertinent information. Also, preliminary building sketch plans are to be submitted.
4. Any other plans or information requirements by the Director.

   Note: An Environmental Assessment or Environmental Impact Statement that has been declared adequate under the National Environmental Policy Act (NEPA) or under Chapter 343, HRS, may constitute a valid filing under this section.
5. Project Assessment:

   a. Description of the area and environment involved including flora and fauna, and other features;

   See attached.

   b. Description of the existing land uses of the project site and surrounding areas;

   See attached.

   c. Description of how the proposed project will affect the area involved and surrounding areas. Specifically the assessment should evaluate if the proposal:

	YES	NO
i. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources, including but not limited to, historic sites, Special Treatment Districts as established by the County of Kauai Comprehensive Zoning ordinance, view planes or scenic corridors as outlined in the Community Development Plans, and recreation areas and resources;	☐	☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

ii. Curtails the range of beneficial uses of the environment; YES ☐ NO ☑

Discussion:

See attached.

iii. Conflicts with the County's or the State's long-term environmental policies or goals; YES ☐ NO ☑

Discussion:

See attached.

iv. Curtails the range of beneficial uses of the environment; YES ☐ NO ☑

Discussion:

See attached.

v. Substantially affects the economics or social welfare and activities or the community, County or State; YES ☐ NO ☑

Discussion:

See attached.

vi. In itself has no significant adverse effect but cumulatively has considerable effect upon the environment or involves a commitment for larger actions; YES ☐ NO ☑

Discussion:

See attached.

vii. Substantially affect a rare threatened, or endangered species of animal or plant, or its habitat; YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

viii. Detrimentally affects air or water quality or ambient noise levels; or — YES ☐ NO ☑

Discussion:

See attached.

ix. Affects an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water or coastal water; — YES ☐ NO ☑

Discussion:

See attached.

x. May have a major effect on the quality of the environment or affect the economic or social welfare of the area; and — YES ☐ NO ☑

Discussion:

See attached.

xi. Would possibly be contrary to the policies and guidelines of the Rules and Regulations, the County's General Plan, Development Plans, and Zoning and Subdivision Ordinances. — YES ☐ NO ☑

Discussion:

See attached.

d. Evaluation of the proposed development relative to the objective and policies as contained in Chapter 205A, HRS; and Section 3.0 of the Special Management Area (SMA) Rules and Regulations: (complete following questionnaire)

RECREATIONAL RESOURCES:	Objective Provide coastal recreation opportunities accessible to the public.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

		YES	NO
1.	Will the proposed development adversely affect coastal resources uniquely suited for recreational activities that cannot be provided in other areas?	☐	☑

Discussion:

See attached.

		YES	NO
2.	Will the project require replacement of coastal resources having significant recreational value, including but not limited to surfing sites, sandy beaches and fishing areas, when such resources will be unavoidably damaged by the proposed development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable?	☐	☑

Discussion:

See attached.

		YES	NO
3.	Is the project site near a State or County Park?	☐	☑

Discussion:

See attached.

		YES	NO
4.	Will the proposed development affect an existing public access to or along the shoreline?	☐	☑

Discussion:

See attached.

		YES	NO
5.	Will the proposed development provide public access to and/or along the shoreline?	☐	☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

		YES	NO
6.	Will the proposed development encourage expanded recreational use of County, State, or federally owned or controlled shoreline lands and waters having recreational value?	☐	☑

Discussion:

See attached.

		YES	NO
7.	Will the development generate point or non-point sources of pollution that will affect recreation value of coastal area?	☐	☑

Discussion:

See attached.

HISTORICAL RESOURCES:	Objective Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the Special Management Area that are significant in Hawaiian and American history and culture.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

		YES	NO
1.	Is the project site within a Federal, State and/or County designated historical/cultural district?	☐	☑

Discussion:

See attached.

		YES	NO
2.	Is the project site listed on or nominated to the Hawaii or National Register of Historic Places?	☐	☑

Discussion:

See attached.

		YES	NO
3.	Does the project site include land(s) which have not been previously surveyed by an archaeologist?	☐	☑

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

Discussion:

See attached.

4. If an archeological survey has been conducted for the project site, has the survey been submitted to the State Historic Preservation Office for review and recommendations? YES ☑ NO ☐

Discussion:

See attached.

5. Has any site survey revealed any information on historic or archaeological resources? (Please provide a copy or reference of survey) YES ☑ NO ☐

Discussion:

See attached.

6. Is the project site within or near a Hawaiian fishpond? YES ☐ NO ☑

Discussion:

See attached.

7. Is the project located within or near a historic settlement area? (Cemeteries, burials, heiaus, etc.) YES ☐ NO ☑

Discussion:

See attached.

SCENIC & OPEN SPACE RESOURCES:	Objective Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

1. Does the project site abut or affect a valued scenic resources or landmark within the SMA? YES ☐ NO ☑

Discussion:

See attached.

2. Does the proposed development affect existing shoreline open space and scenic resources? YES ☐ NO ☑

Discussion:

See attached.

3. Does the proposed development involve alteration to natural landforms and existing public views to and along the shoreline? YES ☐ NO ☑

Discussion:

See attached.

4. Is the project compatible with the visual environment? YES ☑ NO ☐

Discussion:

See attached.

5. Does the proposed action involve the construction of structures visible between the nearest coastal roadway and the shoreline? YES ☑ NO ☐

Discussion:

See attached.

6. Is the project site within the Shoreline Setback Area (20 or 40 feet inland from the shoreline)? YES ☐ NO ☑

Discussion:

See attached.

COUNTY OF KAUA'I
DEPARTMENT OF PLANNING

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

COASTAL ECOSYSTEMS:	Objective Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

1. Is the project site a habitat for endangered species of flora and fauna? YES ☐ NO ☑

Discussion:

See attached.

2. Will the proposed development adversely affect valuable coastal ecosystems of significant biological or economic importance? YES ☐ NO ☑

Discussion:

See attached.

3. Will the proposed involve disruption or degradation of coastal water ecosystems through stream diversions, channelization, and similar land and water uses? YES ☐ NO ☑

Discussion:

See attached.

4. Will the proposed development include the construction of special waste treatment facilities, such as injection wells, discharge pipes, septic tank systems or cesspools? YES ☑ NO ☐

Discussion:

See attached.

5. Is there a wetland on the project site? YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

6. Is the project site situated in or abutting a Natural Area Reserve or Wildlife Refuge or Sanctuary? YES ☐ NO ☑

Discussion:

However, there are nesting sites for wedge-tailed shear waters nearby. See attached.

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

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

1. Does the project involve a harbor or port? YES ☐ NO ☑

Discussion:

See attached.

2. Is the proposed development related to or near to an existing major hotel, multi-family, or condominium project? YES ☑ NO ☐

Discussion:

The proposed development is bordered by the "Point at Poipu" hotel to the east, and the "Makahuena at Poipu" and the "Poipu Palms" developments to the west.

3. Does the project site include agricultural lands designated for such use? YES ☐ NO ☑

Discussion:

See attached.

4. Does the proposed development relate to commercial fishing or seafood production? YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

5. Does the proposed development relate to commercial fishing or seafood production? YES ☐ NO ☑

Discussion:

See attached.

COASTAL HAZARDS:	Objective Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence.

Check either "Yes" or "No" for each of the following questions. If your answer below is "**Yes**" or "**No**" it is necessary to elaborate by providing comments in the "Discussion" section below the question.

1. Is the project site within a potential tsunami inundated area as depicted on the National Flood Insurance Rate maps (FIRM)? YES ☐ NO ☑

Discussion:

See attached.

2. Is the project site within a potential flood inundation area according to a FIRM? YES ☐ NO ☑

Discussion:

See attached.

3. Does the project comply with the requirements of the Federal Flood Insurance Program? YES ☑ NO ☐

Discussion:

See attached.

4. Has the project site or nearby shoreline areas experienced shoreline erosion? YES ☐ NO ☑

Discussion:

See attached.

SPECIAL MANAGEMENT AREA (SMA) PERMIT ASSESSMENT

5. Have any seawalls/revetments/etc. been constructed or exist in the immediate vicinity? YES ☐ NO ☑

Discussion:

See attached.

PROJECT ASSESSMENT:	

e. Evaluation of the impacts which cannot be avoided and mitigating measures proposed to minimize that impact:

Discussion:

See attached.

f. Evaluation of the proposed development relative to Section 4.0 of the SMA Rules and Regulations in accordance with the following aspects:

i. Substantial adverse environmental or ecological effects;

Discussion:

See attached.

ii. Consistency or compliance of the proposed development relative to the goals and objectives of Chapter 205A, HRS; and Section 3.0 of the SMA Rules and Regulations; and

Discussion:

See attached.

iii. Consistency or compliance of the proposed development relative to the County General Plan, Development Plan, and Zoning Ordinances.

Discussion:

See attached.

Mauna Kea Trask, Authorized Agent — 2-10-2022

[name], [title] — Date

CADES SCHUTTE
A Limited Liability Law Partnership

MAUNA KEA TRASK 8418
P.O. Box 1205
Lihu'e, HI 96766
Telephone: (808) 521-9297
Facsimile: (808) 540-5015
Email: mtrask@cades.com

Attorneys for Applicants
MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA - DW, LLC.

BEFORE THE PLANNING COMMISSION

OF THE

COUNTY OF KAUA'I

In the Matter of the Application Of MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA-DW, LLC, for a Special Management Area Use Permit, for Real Property Situated at Weliweli, Koloa, Kaua'i, Hawai'i, Described as Lot 3 of Makahuena Estates Subdivision, Identified by Kaua'i Tax Map Key No. (4) 2-8-021:070.	SPECIAL MANAGEMENT AREA USE PERMIT SMA(U)-_____ Class III Zoning Permit Z-III-_____ **APPLICATION FOR SPECIAL MANAGEMENT AREA USE PERMIT AND CLASS III ZONING PERMIT; EXHIBIT LIST; EXHIBITS "A" - "T"**

TABLE OF CONTENTS

Page

SECTION 1. APPLICANTS/SUBJECT PROPERTY OWNERS. 1
1.1 Applicants 1
1.2 Property 1
1.3 Ownership 1
SECTION 2. LOCATION & LAND USE DESIGNATIONS OF THE PROPERTY 1
2.1 Location 1
2.2 Land Use Designations 2
a. SLUC 2
b. Kaua'i General Plan 2
c. CZO 2
d. Development Plan Area 2
e. Special Management Area 2
f. Constraint District 2
g. Heritage Resources 2
h. Flood Zone 2
i. Shoreline Setback 3
j. Violations 3
k. Visitor Destination Area 3
l. Soils 3
2.3 Prior Land Use Permits 4
a. SMA (U) 2015-1 4
b. Z-III-2015-1 4
c. S-2015-14 4
SECTION 3. PAST, EXISTING AND PROPOSED USES OF THE PROPERTY. 4
3.1 Past Uses 4
3.2 Existing Uses 5
3.3 Proposed Uses 5
SECTION 4. SUBJECT PROPERTY AND SURROUNDING LANDS 6
4.1 Location 6
4.2 Surrounding Uses 6

TABLE OF CONTENTS
(continued)

Page

SECTION 5. PERMITS REQUESTED AND REQUIRED 7
5.1 Class III Zoning Permit 7
5.2 SMA Use Permit 7
SECTION 6. IMPACTS OF DEVELOPMENT 7
6.1 Botanical Resources 7
6.2 Historical Resources 7
6.3 Air Quality/Noise 8
6.4 Flooding and Drainage 9
6.5 Utilities 9
a. Potable Water 9
b. Electric/Communications 9
6.6 Wastewater Treatment and Disposal 9
6.7 Solid waste Disposal 10
6.8 Governmental Services 10
a. Fire & Police Services 10
b. Schools 10
6.9 Economics 10
a. Jobs 10
b. Housing 10
c. Property Values 10
6.10 Population 11
6.11 Traffic Circulation 11
6.12 Heritage Resources 11
SECTION 7. SLUC CONSIDERATIONS 11
7.1 SLUC Urban District 11
SECTION 8. GENERAL PLAN CONSIDERATIONS 11
8.1 Kauai General Plan Visions and Goals 11
a. Goal # 1: A Sustainable Island 11
b. Goal # 2: A Unique and Beautiful Place 12
c. Goal # 3: A Healthy and Resilient People 12

TABLE OF CONTENTS
(continued)

Page

d. Goal # 4: An Equitable Place, with Opportunity for All 13
8.2 Kauai General Plan Policies to Guide Growth 13
a. Policy # 1: Manage Growth to Preserve Rural Character 14
b. Policy # 3: Recognize the Identity of Kauai's Individual Towns and Districts 14
c. Policy # 4: Design Healthy and Complete Neighborhoods 14
d. Policy # 7: Build a Balanced Multimodal Transportation System 15
e. Policy # 8: Protecting Kauai's Scenic Beauty 15
f. Policy # 9: Uphold Kaua'i as a Unique Visitor Destination Area 15
g. Policy # 14: Prepare for Climate Change 16
h. Policy # 15: Respect Native Hawaiian Rights and Wahi Pana 16
i. Policy # 16: Protect Access to Kauai's Treasured Places 16
8.3 Kauai General Plan Resort Use Designation 16
8.4 Project Compliance with Kauai General Plan Standards 17
SECTION 9. CZO OPEN DISTRICT CONSIDERATIONS. 17
9.1 CZO Open District 17
9.2 Development's Compliance with CZO Open District Standards 17
9.3 Shore Constraint District Considerations 18
SECTION 10. SOUTH KAUAI COMMUNITY PLAN CONSIDERATIONS. 19
10.1 Community Plan Goals and Objectives 19
10.2 Compliance with Development Plan Standards 19
SECTION 11. SMA CONSIDERATIONS. 19
11.1 Recreational Resources 19
11.2 Historic Resources 19
11.3 Scenic and Open Space Resources 20
11.4 Coastal Ecosystems 21
a. In consultation with DLNR/DOFAW, CLDC engaged a landscaping firm and established a new shrub land of native naupaka (Scaevola taccada) on the makai western corner of the subdivision creating more nesting habitat for wedge-tailed shearwaters 22

TABLE OF CONTENTS
(continued)

Page

b. At DOFAW's request, the CLDC hired a pest control firm to conduct trapping for feral cats 22

c. Finally, in order to avoid a potentially dangerous condition for humans, the makai rock wall along the public access way was approved as constructed with ground-level tubes that allow shearwaters to pass through 23

11.5 Economic Uses 23

11.6 Coastal Hazards 23

11.7 Managing Development/Public Participation 24

11.8 Beach Protection/Marine Resources 24

11.9 Value of Development 24

11.10 Compatibility with Surrounding Uses 24

11.11 Significant Adverse Effect to the SMA 25

11.12 Compliance with SMA Guidelines 25

a. Adequate access, via existing public access easements, is provided to nearby beaches, recreation areas, and natural reserves 25

b. Adequate and properly located public recreation areas and wildlife preserves have been reserved 25

c. Provisions have been made for solid and liquid waste treatment, disposition, and management that will minimize adverse effects on SMA resources 25

d. Because the Property is prepared for development, alterations to existing landforms and vegetation will be very minimal, and construction will cause negligible adverse effects to water resources and scenic and recreational amenities 25

e. The development is consistent with the objectives and policies of HRS Ch. 205A and the County SMA Rules 26

f. The development is consistent with the County general plan and zoning ordinances 26

g. No dredging, filing or other altering of any coastal resources will occur whatsoever 26

h. The development will not reduce the size of the coastal access easement area, nor will the development impose any restrictions upon public access to tidal and submerged lands, beaches, or other coastal resources 26

TABLE OF CONTENTS
(continued)

Page

i. The development will not substantially interfere with or detract from the line of sight toward the sea or from existing public views to and along the shoreline 26

j. The development will not significantly adversely affect water quality, or existing and potential fisheries, wildlife habitats, or estuarine sanctuaries 26

SECTION 12. HRS CH 343 ENVIRONMENTAL IMPACT STATEMENT CONSIDERATIONS. 26

12.1 HRS Chapter 343 26

SECTION 13. IMPACTS TO NATIVE HAWAIIAN TRADITIONAL AND CUSTOMARY PRACTICES 27

13.1 Existence of Traditional and Customary Practices 27

SECTION 14. CONCLUSION 29

APPLICATION

Comes now, MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA-DW, LLC, by and through their undersigned attorneys, and hereby submits the following Application to construct a single-family residential dwelling unit ("**SFR**") and associated improvements as described herein.

SECTION 1. APPLICANTS/SUBJECT PROPERTY OWNERS.

1.1 Applicants. The Applicants are , MAKAHUENA - PREFERRED A, LLC; MAKAHUENA - CAPITAL A, LLC; MAKAHUENA - PREFERRED B, LLC; MAKAHUENA - CAPITAL B, LLC; MAKAHUENA - TW, LLC; and MAKAHUENA-DW, LLC ("**Applicants**"). Applicants have authorized Mauna Kea Trask of Cades Schutte LLP to file this Application. *See,* Exhibit "A".

1.2 Property. This Application concerns that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kaua'i, State of Hawai'i, being Lot 3 of the Makahuena Estates subdivision, and further identified as Kaua'i Tax Map Key No. (4) 2-8-021-070 (the "**Property**" or "**Lot 3**"). A legal description of the Property is contained in the Deed attached hereto as Exhibit "B".

1.3 Ownership. Applicants are the owners of the Property as shown in Exhibit "B".

SECTION 2. LOCATION & LAND USE DESIGNATIONS OF THE PROPERTY.

2.1 Location. The Property is located in Weliweli, Koloa, Kaua'i, Hawai'i, and is shown on the map attached hereto as Exhibit "C-1".

2.2 Land Use Designations. The State Land Use Commission ("**SLUC**"), Kaua'i General Plan ("**General Plan**"), County of Kaua'i Comprehensive Zoning Ordinance ("**CZO**"), and other relevant land use designations for the Property are described as follows:

a. SLUC. The Property is located in the SLUC Urban District. *See*, Exhibit "C-2".

b. Kaua'i General Plan. The Property is located in the Kauai General Plan Resort Use Designation. *See,* Exhibit "C-3".

c. CZO. The Property is within the County of Kauai Open (O) zoning District. *See,* Exhibit "C-4".

d. Development Plan Area. The Property is located within the South Kauai Planning District. *See,* Exhibit "C-5".

e. Special Management Area. The Property is located within the County's Special Management Area ("**SMA**"). *See,* Exhibit "C-6".

f. Constraint District. The Property is located within the Shore Constraint District (S-SH). *See,* Exhibit "C-7".

g. Heritage Resources. As shown in General Plan (2018) Figure 5-11, South Kaua'i Heritage Resource Map, the Property does not contain any important natural, scenic, or historical features. *See,* Exhibit "C-8".

h. Flood Zone. Initially, FEMA FIRM Panel map 1500020352F, panel; effective date November 26, 2010, included a majority of the Property, including the project site, within the Special Flood Hazard Area (SFHA) Zone VE (EL 10), with small mauka portions of the Property within SFHAS Zone AE (EL 10) and Non-Special Flood Hazard Zone XS. *See*, Exhibit "C-9". However, Letters of Map Revision - Coastal High Hazard Area Determination Document (Removal) 16-09-0378A, dated November 12, 2015; 16-09-0391A, dated November 12, 2015;

and 19-09-1672A, dated June 26, 2019, removed the entire buildable area of Lot 3 from the SFHA Zones VE and AE and placed them within the Non-Special Flood Hazard Area Zone X. *Id.*

i. Shoreline Setback. The Property is a shoreline parcel, and the State previously certified the shoreline in 2014. *See,* Exhibit "C-10". The coastline consists of steep rocky cliff faces and the Property itself is between 41 ft. and 49ft. above sea level. *See,* Exhibit "C-10". The project site is approximately 36 ft. above sea level and will be well mauka of the certified shoreline. *Id*. Further, according to the Kauai Coastal Erosion study, the coastline fronting the Property is unchanging. *Id.*

Although there are no parcels of real property between the Property and the shoreline, there are dedicated coastal access and view easements fronting the Property that create a substantial buffer between the shoreline and the Property, and the proposed development will not impact public beach access. *See,* Exhibit "C-11". Thus, the proposed development will not affect beach processes, impact public beach access, or be affected by or contribute to coastal erosion or hazards.

j. Violations. There are no known land use and zoning violations on the Property.

k. Visitor Destination Area. Pursuant to Ord. PM-2017-410, the Property is within the Visitor Destination Area ("**VDA**"). *See,* Exhibit "C-12".

l. Soils. According to the National Resources Conservation Service ("NRCS") Web Soil Survey, the Property consists of Koloa stony silty clay (KvD) with 15 to 25 percent slopes, and Rock outcrop (rRO). *See,* Exhibit "C-13". However, due to the completion of the subdivision improvements the project site itself has been graded and the development will be built on an existing flat building pad.

2.3 Prior Land Use Permits. The Property is subject to the following land use permits and conditions:

a. SMA (U) 2015-1. On August 26, 2014, the County of Kaua'i Planning Commission approved SMA Use Permit SMA (U) 2015-1, allowing the consolidation and re-subdivision of the larger Makahuena Estates property from a 25-lot subdivision to a 10-lot subdivision subject to 14 conditions. *See,* Exhibit "D".

b. Z-III-2015-1. On August 29, 2014, the County of Kauai Planning Department approved Class III Zoning Permit Z-III-2015-1, allowing the consolidation and re-subdivision of the larger Makahuena Estates property from a 25-lot subdivision to a 10-lot subdivision subject to 14 conditions. *See,* Exhibit "E". The terms and conditions of the Class III zoning permit were the same as SMA (U) 2015-1 discussed above.

c. S-2015-14. On April 14, 2015, the County of Kauai Planning Commission tentatively approved S-2015-14, allowing the consolidation and re-subdivision of the larger Makahuena Estates property from a 25-lot subdivision to a 10-lot subdivision subject to 6 conditions. *See,* Exhibit "F". The County Department of Public Works conducted a final inspection of the subdivision on August 8, 2017, and found construction to be complete and acceptable. *See,* Exhibit "G".

SECTION 3. PAST, EXISTING AND PROPOSED USES OF THE PROPERTY.

3.1 Past Uses. The prior landowner, CIRI Land development Company ("**CLDC**"), acquired the entire area now comprising Makahuena Estates subdivision, approximately 13.1 acres, from the United States federal government on or about March 22, 1996. At the time of CLDC's acquisition, the area consisted of 26 separate lots, which, since 1951, had been used by the Coast Guard as a LORAN-A receiver which used radio waves and provided ships with the ability to triangulate their locations hundreds of miles from a transmitting station. At that time

there were five to six buildings in use, along with a 280-foot-high antenna located makai of the structures. The use of the station, known as LORSTA Kauai, ceased in 1979, following which Hale ʻOpio, Inc., a private nonprofit organization that provided youth-oriented social services, used the properties until Hurricane Iwa devastated Kauai in 1982.

From 2014 to 2015 CLDC sought and received permission from the County to consolidate and re-subdivide the properties from 26 lots to a ten-lot subdivision. After approval was obtained from the County, CLDC proceeded to develop the subdivision and associated infrastructure as approved. On December 4, 2017, the County Department of Public Works sent a memorandum to Planning Director Michael A. Dahilig certifying the completion of the subdivision. *See*, Exhibit "G". Final Subdivision map approval was obtained from the Planning Commission on March 27, 2018. *See*, Exhibit "G-1"

3.2 Existing Uses. The Property is currently "fully-developed" as allowed under SMA (U)2015-1, Z-III-2015-1 and S-2015-14, meaning that it has been graded, grassed and all subdivision infrastructure has been installed. However, no structure has been developed on the Property and to that extent the Property is "vacant".

3.3 Proposed Uses. Applicants are proposing to develop a two-story SFR, pool, and associated driveway, walkways, and lanais. *See,* Exhibit "H". Applicants will also landscape the Property. *See,* Exhibit "I"

Pursuant to CZO § 8-9.2(a)(1), the amount of land coverage created, including pavement, shall not exceed ten percent (10%) of the lot or parcel area. The total square footage of the Property as reflected on the final approved subdivision map is 1.001 acres or 43,603 sq. ft. *See,* Exhibit "G-1". The land coverage of the proposed development is as follows:

Structure	Size	Percentage of Square footage
Two-Story House	2,375 sq. ft.	5.4%
Covered Lanais	604 sq. ft.	1.4%
Pool	486 sq. ft.	1.1%
Garage	850 sq. ft.	1.9%
Total	4,315 sq. ft.	9.8%

See, Exhibit "H", at SP01.

Applicants note that the driveway is composed of gravel that will not prevent normal precipitation from directly reaching the surface of the underlying land and will not be compacted so as to prevent substantial infiltration. Thus, the gravel driveway does not count towards lot coverage pursuant to CZO § 8-1.5. Additionally, Applicant has removed a previously planned pond feature so as to stay within the 10% lot coverage threshold.

SECTION 4. SUBJECT PROPERTY AND SURROUNDING LANDS.

4.1 Location. The Property is located in Weliweli, Koloa, Kaua'i at Makahuena Point near the intersection of Pe'e Road and Maka Place. The Property is about one-half mile to the east of Po'ipū Beach Park and one-half mile to the west of Shipwrecks Beach Park.

4.2 Surrounding Uses. To the west of the Property is the Makahuena at Po'ipū , a 79-unit condominium development (zoned R-20), to the east is the Point at Po'ipū , a 219-unit hotel development, (zoned RR-10), and mauka of the Property are residential houses (zoned R-4). All surrounding properties are within the VDA. Makai of the project site is a rock wall built pursuant to SMA (U) 2015-1, Z-III-2015-1 and S-2015-14 that delineates the mauka boundary of the County's public access easements which are located on the makai portion of the Makahuena Estates subdivision lots.

SECTION 5. PERMITS REQUESTED AND REQUIRED.

5.1 Class III Zoning Permit. Because the Property is within the County Open (O) zoning district and Shore Constraint district (S-SH), the proposed development must obtain a Class III zoning permit from the County of Kauai Planning Department. *See*, CZO §§ 8-9.4(b), 8-8.4(c) and 8-12.5(d) (2).

5.2 SMA Use Permit. Applicant is proposing to develop a two-story SFR, a pool, and associated landscaping and improvements. Although this is the first house on the lot and the proposed development is less than 7,500 sq. ft., Act 16 L 2020 amended Hawaii Revised Statutes ("**HRS**") §205A-22 to exclude the first house exemption from the definition of "Development" within the SMA if the lot is a shoreline parcel. Therefore, the proposed development constitutes "Development" as defined by HRS §205A-22. The total value of the development is estimated to be $2,301,480.00. *See,* Exhibit "J". As such, Applicants are requesting the Planning Commission issue a SMA Use Permit as provided in Section 7.3.C(1)&(2) of the SMA Rules.

SECTION 6. IMPACTS OF DEVELOPMENT.

6.1 Botanical Resources. The Property is located within a fully developed and prepared subdivision, and currently consist of a vacant lot containing a grass lawn. *See,* Exhibit "K". There are no known botanical resources located on the Property and the proposed development will not have any impact on Botanical Resources. .

6.2 Historical Resources. Prior to the County's approval of the subdivision development, CLDC contracted with Haun & Associates to conduct an Archaeological Inventory Survey ("**AIS**") of TMK No. (4) 2-8-021:041, which at the time included the Property. *See,* Exhibit "L". The objective of the AIS was to satisfy historic preservation regulatory review requirements of the Department of Land and Natural Resources - Historic Preservation Division

("**DLNR-SHPD**"), as contained within Hawaii Administrative Rules ("**HAR**"), Title 13, Subtitle 13, State Historic Preservation Rules. *Id.* at ii.

The AIS identified 18 sites with 128 features, consisting of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following: ditch, road, stairs, utility box and walled slab. *Id.* Subsurface testing was undertaken during the project, consisting of the excavation of twenty test units, and no intact sub surface cultural deposits or burials were encountered during the subsurface testing. *Id.* According to the AIS, all of the documented remains were the remnants of U.S. federal government navigation-related infrastructure in operation for over 100 years. *Id.*

The 18 sites were assessed as significant solely for their information content. *Id.* The sites were adequately documented, and no further work or preservation was recommended by Haun & Associates to DLNR-SHPD. *Id.* DLNR-SHPD concurred with Haun & Associates' recommendation subject to certain corrections which were subsequently made. *See,* Exhibit "L", letter from DLNR-SHPD, dated August 27, 2012, and letter from Haun & Assoc., dated December 2, 2012.

Because the subdivision was subsequently developed after the acceptance of the AIS, no historical resources are expected to be encountered during the proposed development and no historical resources will be affected.

6.3 Air Quality/Noise. The development will have little or no impact on the air quality and ambient noise levels in the area. Air quality and ambient noise levels may be affected at a very minimal level during the actual construction activities. All vehicles or equipment used by Applicants for the construction will be properly muffled, housed and

maintained to reduce any noise impacts or emission impacts. The Environmental Protection Agency ("**EPA**") and State of Hawaii air quality standards will not be exceeded.

6.4 Flooding and Drainage. The proposed development is within the Non-Special Flood Hazard Area Zone X. *See,* Exhibit "C-9". The development will meet all of the requirements of the Flood Plain Management Ordinance of the County of Kauai, as contained in Chapter 15, Article 1, of the Kauai County Code, 1987. All drainage resulting from construction activities and from the increase in land coverage will be retained on site in the existing drainage basin that was constructed by CLDC pursuant to its permits to develop the existing subdivision. No additional drainage is anticipated to significantly or negatively impact the surrounding properties or coastal area.

6.5 Utilities. In 2015 all necessary state and county agencies approved the construction plans for the Makahuena estates Subdivision. *See,* Exhibit "M". These plans included the construction of all utilities. On December 4, 2017, the County of Kauai Department of Public Works certified that the Makahuena Estates subdivision was completed and acceptable. *See,* Exhibit "G".

a. Potable Water. The Property currently obtains water service from the County of Kauai Department of Water.

b. Electric/Communications. The Property obtains electric service from Kauai Island Utility Cooperative ("**KIUC**"), and communication services from Hawaiian Telcom, Inc. Existing electric and communications are presently adequate to provide the demand for such services that will be generated by the proposed development.

6.6 Wastewater Treatment and Disposal. Applicants will install a private individual wastewater system (septic tank(s) and leach field(s)) as consistent with the Individual Waste

System (IWS) Report prepared for CLDC by Esaki Surveying & Mapping, Inc. that was prepared for the County and State's review and approval during the subdivision entitlement process. *See,* Exhibit "N".

6.7 Solid waste Disposal. Solid waste collection will be provided by private means. Solid waste will be taken to the County's refuse transfer stations or disposal in the County's landfill as appropriate.

6.8 Governmental Services. Applicants anticipate the development will have the following impacts on governmental services:

a. Fire & Police Services. Fire and Police services are located in Koloa within two to three miles of the Property respectively. The development will not significantly increase the need for existing Fire and Police services.

b. Schools. The closest schools are Koloa Elementary School located in Koloa, and Chiefess Kamakahelei Middle School and Kaua'i High School, both located in Lihue. The development will not generate any significant additional enrollment.

6.9 Economics. Applicants anticipate the development will have the following economic impacts:

a. Jobs. The development will result in the creation of temporary construction jobs during the construction of the project. Thereafter, Applicants anticipate an ongoing need for housekeeping and landscaping and maintenance jobs to maintain the Property.

b. Housing. The Project will not result in the need for additional housing.

c. Property Values. Because fair market value of real property is based on the value of the land and any physical improvements, the development will increase the value and the real property taxes of the Property thus increasing revenues to the County of Kaua'i.

6.10 Population. The development will not result in a measurable increase in population.

6.11 Traffic Circulation. The Property is primarily served by Maka Place, which Applicants understand is a private road built to county standards but not accepted by the County Council. The nearest public road is Pe'e Road, which is about 500 ft. from the Property. The development of the Property will not measurably affect or increase traffic on Pe'e Road.

6.12 Heritage Resources. As stated above in section 2.2.g, according to the General Plan, Figure 5-11 South Kaua'i Heritage Resource Map, the Property does not contain any important natural, scenic, or historical features. *See,* Exhibit "C-8".

SECTION 7. SLUC CONSIDERATIONS.

7.1 SLUC Urban District. The Property is located within the SLUC Urban District. Residential uses are permitted within the SLUC Urban District.

SECTION 8. GENERAL PLAN CONSIDERATIONS.

8.1 Kauai General Plan Visions and Goals. An evaluation of the Kauai General Plan ("**General Plan**") section 1.3 shows that the proposed development is consistent with the Visions and Goals of the General Plan.

a. Goal # 1: A Sustainable Island. The Makahuena Estates subdivision was carefully planned and developed in order to fulfill the requirements of Goal # 1 of the General Plan, and the proposed development of Lot 3 is consistent therewith. The subdivision density was reduced from at least 25 dwelling units to ten, only nine of which are within the VDA. A public parking area and an open space and public access easement were dedicated to the County to protect the natural coastal systems that support life, air, water, soil, and living organisms on the makai portion of Lot 3. *See*, General Plan at 33. The development of the proposed single family dwelling unit on Lot 3 will not negatively affect the sustainability of the island. Rather,

the subdivision is the direct result of well-reasoned actions starting in 2014 that ensure this area remains sustainable and meets the needs of current and future generations without depleting important resources. *Id.*

b. Goal # 2: A Unique and Beautiful Place. Applicant's proposed Development is consistent with Goal # 2 of the General Plan and ensures the care and protection of the treasured resources, traditions, and qualities of the natural, built, and human environment of Makahuena point. *Id.* at 34. Applicant's proposed Development maintains the perpetual protection of the natural coastal ecosystem on the makai portion of Lot 3. *Id*. The Development will not infringe upon the rights of the community to engage in their cultural traditions and practices and provides opportunities for recreation and meditative contemplation along this beautiful coastline. *Id.* The Development is consistent with the tenets of the Public Trust Doctrine as provided in Article 11, Section 1 of the Hawaii State Constitution to, "conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air minerals and energy sources", and "promotes the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State." *Id*. at 34.

c. Goal # 3: A Healthy and Resilient People. General Plan Goal # 3 recognizes that health is influenced by the built environment, including the ability to walk or bicycle to key destinations, and to access the recreational areas that support active lifestyles. *Id*. at 35. The development of a single-family dwelling unit on Lot 3 of Makahuena Estates is consistent with these principles and will not interfere with the community's use of the coastal access area. This specific development is part of a larger well planned and sustainable subdivision project that increased the resilience and vitality of the community and promoted better health outcomes

through improved coastal access opportunities related to the natural, built, and social environment. *Id*. at 35.

d. Goal # 4: An Equitable Place, with Opportunity for All. Goal # 4 of the General Plan aims to foster diverse and equitable communities with vibrant economies, access to jobs and housing, and a high quality of life. *Id*. at 36. Short term and long-term job opportunities will result from the construction and continued maintenance of this specific development as is typical with high-end residential vacation rental properties. However, Goal # 4 is not simply about economic opportunity. Goal # 4 recognizes that reversing Kaua'i's trending inequity means ensuring Kaua'i residents, regardless of factors such as geographic location, age, race, gender, and economic status, have access to, *inter alia*, opportunities for recreation and enjoyment of shared spaces; and making sure that planning and land development decisions do not unfairly burden disadvantaged groups. *Id* at 36. This subdivision was specifically designed and permitted to ensure equitable opportunities for recreation and shared spaces for all of Kaua'i, not just the landowners in the neighborhood. Anyone on Kaua'i can park in the public parking lot at Makahuena Estates subdivision and access the entire coastline all the way to Mahaulepu. The coastal access area allows for fishing off of the makai portion of Lot 3 in perpetuity and such opportunities benefit, not burden, disadvantaged groups on Kaua'i. Applicant embraces this kuleana and has designed the proposed development to complement the environment and character of this special place.

8.2 Kauai General Plan Policies to Guide Growth. The General Plan contains nineteen (19) polices to guide growth that articulate the County's path forward toward meeting the community's vision and goals of sustainability, unique character, resilience, and equity. An

evaluation of Kaua'i General Plan Section 1.4 shows the proposed development is consistent with the following Policies to Guide Growth.

a. Policy # 1: Manage Growth to Preserve Rural Character. The proposed development is consistent with Policy # 1 because it is contained within an existing neighborhood that has been planned for residential subdivision development since the early 20th century. This ensures that Kauai's rural character is preserved as the proposed development is within the Po'ipū growth boundary and is compact and walkable. General Plan at 38.

b. Policy # 3: Recognize the Identity of Kauai's Individual Towns and Districts. The proposed SFR on Lot 3 in consistent with Po'ipū 's distinct character. The SFR will be constructed within the pre-approved building envelope mauka of the rock wall that delineates and preserves the open space coastal access easement. The SFR is low massing and designed to blend into and compliment the rocky-shoreline cliffs. The development will not interfere with Po'ipū 's many costal access opportunities which provide lateral access along the coast from Mahaulepu to Lawai.

c. Policy # 4: Design Healthy and Complete Neighborhoods. General Plan Policy # 4 seeks to guide growth in a way that combats the recent trend of health problems in Hawaii, attributed in part to increasing levels of sedentary lifestyles. The SFR on Lot 3 will not interfere with the coastal open spaces access easement that was dedicated to the County to specifically allow for safe and convenient walking activities makai of the subdivision and provide residents an opportunity to increase physical activity on a daily basis, thereby reducing health risks. The SFR on Lot 3 is part of a low-density, compact and walkable neighborhood that maintains coastal access opportunities consistent with Policy # 4.

d. Policy # 7: Build a Balanced Multimodal Transportation System. Makahuena Estates subdivision was specifically designed and constructed to be consistent with Policy # 7. By reducing the previously permitted subdivision density of at least 25 residential units and voluntarily providing for a public parking area and an open space public access easement, the subdivision is consistent with the County's Multimodal Land Transportation Plan (2013) and provides the community with pedestrian access opportunities along the entire coastline of the south shore. The proposed SFR on Lot 3 will not interfere with these opportunities and is consistent with Policy # 7.

e. Policy # 8: Protecting Kauai's Scenic Beauty. The proposed SFR is consistent with preserving the natural views of Makahuena point. The proposed development is low massing and will be entirely located within the pre-approved building envelope of Lot 3 which was specifically designed to protect and preserve both mauka and makai views along the coastline. The views in this area are not only protected by the reduced subdivision density but also by the open space access easement on the makai portion of Lot 3. And unlike the two neighboring developments to the east and west of Makahuena Estates subdivision, the proposed SFR is specifically designed to complement the rugged coastal cliff area of Makahuena point and incorporates dark earth tones and design features that blend in with the natural environment.

f. Policy # 9: Uphold Kaua'i as a Unique Visitor Destination Area. The proposed SFR is consistent with Policy # 9's purpose of focusing and limiting growth to pre-existing Visitor Destination Areas and reducing visitor impacts on infrastructure. The Makahuena Estates subdivision was specifically designed to ensure that the nine lots within the VDA do not negatively affect the community character of Poʻipū . Further, the location of the SFR within the pre-approved building envelope will limit the physical footprint of transient accommodation uses

and ensure that such uses do not encroach upon the dedicated open space coastal access easement area.

g. Policy # 14: Prepare for Climate Change. The proposed SFR is consistent with Policy # 14 and will not contribute to or exacerbate concerns regarding rising sea levels along Makahuena point. By restricting the development of Lot 3 to the pre-approved building envelope, the proposed SFR will not be affected by any coastal hazards. Further, the makai rock wall fronting Lot 3 is a physical delineation of the shoreline setback line and ensures that no development will occur within or affect the shoreline area along Makahuena point.

h. Policy # 15: Respect Native Hawaiian Rights and Wahi Pana. A cultural impact assessment ("**CIA**") was prepared during the Makahuena Estates subdivision permitting process. See, Exhibit "T". Although the CIA did not identify any traditional and customary practices occurring in the area that is now Lot 3, the CIA stated that fisherman continue to gather and catch a variety of fish for subsistence purposes, including moi, 'o'io and also harvest various marine invertebrates along the shoreline and rocky edges of Makahuena point. Exhibit "T" at 13. In response, the developer dedicated both the public parking lot and coastal open space access easements to the County to ensure these traditional and customary practices may continue in perpetuity.

i. Policy # 16: Protect Access to Kauai's Treasured Places. The proposed SFR is consistent with Policy # 16 by ensuring the continued protection of access to and customary use of the shoreline area, trails, and places along the coast of Makahuena point for religious and cultural observances, fishing, gathering, and recreational activities, such as hiking.

8.3 Kauai General Plan Resort Use Designation. The Property is located in the Kaua'i General Plan Resort Use Designation. *See,* Exhibit "C-3". The Property is also within the

VDA. *See,* Exhibit "C-12". Actions for the Resort Use Designation are found in the Chapter 3, Sector VI. of the General Plan. The General Plan contemplates, in relevant part, strengthening existing town centers and mixed-use environments, revitalizing existing visitor destination areas, and protecting agricultural lands for agricultural production and food self-sufficiency. Because the Property is in the existing VDA and will not take existing agricultural land out of food production, the development complies with the tenets of the General Plan concerning the Resort Use Designation.

8.4 Project Compliance with Kauai General Plan Standards. The proposed Development is a residential use within a completed subdivision development. Therefore, the development itself will have no significant impact on the surrounding environment. The development is consistent with neighboring residential and resort and transient accommodation uses and will not have a significant adverse effect to the surrounding neighborhood. As such, the development complies with the General Plan's policy for the Resort Use Designation and is consistent with the County's "use it or lose it" policy concerning resort development.

SECTION 9. CZO OPEN DISTRICT CONSIDERATIONS.

9.1 CZO Open District. The Open District is established and regulated to create and maintain an adequate and functional amount of predominantly open land to provide for the recreational and aesthetic needs of the community or to provide for the effective functioning of land, air, water, plant and animal systems or communities. CZO § 8-9.1.

9.2 Development's Compliance with CZO Open District Standards. Single-family detached dwelling units and accessory structures are permitted uses within the Open (O) zoning district pursuant to CZO § 8-2.4(s) (1) & (9). The development will not exceed the 10% land coverage limitation contained in CZO § 8-9.2(a) (1). The development itself will have no significant impact on the surrounding environment and is compatible with existing residential

and resort uses in the immediate area surrounding the Property. Further, the coastal portion of the Property, makai of the rock-wall, is encumbered by a coastal access easement held by the County of Kaua'i that provides coastal access to recreational users and fishermen in the area. Therefore, the proposed Development complies with CZO § 8-9.1 and allows for the development of the SFR while providing for the recreational and aesthetic needs of the community and the effective functioning of land, air, water, plant and animal systems or communities.

9.3 Shore Constraint District Considerations. The purpose of the Shore Constraint District is to regulate development or alterations to shore and water areas which have unique physical and ecological conditions in order to protect and maintain physical, biologic and scenic resources of particular value to the public. During the entitlements of the Makahuena Estates subdivision, CLDC prepared and submitted numerous reports that addressed the impact that a 10-lot subdivision would have on the Shore Constraint District. These reports included: Air Quality Assessment (Exhibit "O-1"); Geological Investigation (Exhibit "O-2"); Biological Survey ("O-3"); Visual Analysis of Public Views (Exhibit "O-4"); and Visual Analysis of Private Views (Exhibit "O-5"). All of these studies were accepted and approved thus allowing CLDC to proceed with development of the subdivision improvements.

Because there has been no change in the condition of the subdivision properties in general, or to Lot 3 specifically since the completion of the subdivision improvements, Applicants submit that the existing studies establish that the proposed development will not cause significant harm to: (A) the water quality of the ocean, including, but not limited to, its clarity, temperature, color, taste and odor; (B) fish and aquatic habitats; (C) the natural beauty of the area; (D) navigation, safety or health; or (E) would not substantially interfere with public use

of the ocean waters or underlying lands; and (F) that other facilities are unavailable to the applicant.

SECTION 10. SOUTH KAUAI COMMUNITY PLAN CONSIDERATIONS.

10.1 Community Plan Goals and Objectives. The goals and objectives of the South Kauai Community Plan, as adopted by Ordinance No. 990, include in relevant part, that Kōloa will be a thriving commercial and residential community that maintains its rural feel and historic "old town" charm by preserving, enhancing, and protecting its vast cultural treasures; and that Po'ipū will be a world-class, sustainable resort destination, serving residents and visitors alike, developed responsibly, with clean, healthy beaches and ocean environments, welcoming parks, and preserved heritage resources, all well-connected and accessible to everyone.

10.2 Compliance with Development Plan Standards. The development is consistent with the goals and objectives contained in the South Kauai Community Plan. The design, layout and outside appearance of the development will utilize architectural design elements that will be compatible with the natural beauty of the area. The development will cover less than 10% of the lot, and the dedicated public access easement and view easement makai of the rock-wall ensures that coastal access and open space along the coastline will be maintained in perpetuity.

SECTION 11. SMA CONSIDERATIONS.

11.1 Recreational Resources. An open space public access easement encumbers the portion of the Property makai of the rock-wall. The development will not affect or hinder the continued use of the public access easement in any way. Therefore, the development will not have any significant adverse effect on any public recreational opportunities located on the Property, and the development will not affect any existing public beach or coastal access rights.

11.2 Historic Resources. As stated above in section 6.2, prior to the County's approval of the subdivision development, CLDC (the previous landowner) contracted with Haun &

Associates to conduct an Archaeological Inventory Survey ("**AIS**") of TMK No. (4) 2-8-021:041, which at the time included the Property. *See,* Exhibit "L". The AIS identified 18 sites with 128 features, all of which were the remnants of U.S. federal government navigation-related infrastructure in operation on the larger subdivision Property for over 100 years. *Id.* A comparison of AIS Figure 11 (Site Location Map) and Figure 68 (Distribution of associated Features within Project Area) with the Demolition & Naupaka Preservation/Replanting Plan (Exhibit "S" at 4) indicates that none of the documented historic sites or features were located within Lot 3. It appears that Site 2142 was located within the neighboring Lot 4, and Site 2143 (including features A-C) was located makai of the rock wall near the boundary of Lots 3 and 4.

Site 2142 was recognized as a small roughly oval-shaped concrete pad that was created by pouring concrete into a hole dug into the ground and probably served to anchor wiring. Exhibit "L" at 45 and 49. Site 2143 was recognized as a complex of three features comprised of a concrete slab (Feature A), a stone retaining wall (Feature B), and a concrete pad (Feature C). Exhibit "L" at 49.

DLNR-SHPD concurred with Haun & Associates' recommendation that no further work or preservation was necessary of any of the sites or features discussed in the AIS. *See,* Exhibit "L", letter from DLNR-SHPD dated August 27, 2012, and letter from Haun & Assoc. dated December 2, 2012. The subdivision was subsequently developed after the acceptance of the AIS, and currently there are no historic sites or features located on the Property. Thus, the proposed development will not have any significant adverse effect to any Historic Resources.

11.3 Scenic and Open Space Resources.

When the County granted CLDC's request to consolidate and re-subdivide the larger subdivision property from 25 lots to 10 lots, the County found that the 10-lot subdivision would

not block the line-of-sight towards the ocean from public view planes as the 10-lot subdivision would be less dense and contain more open space compared to a 25-lot subdivision. *See,* Exhibits "O-4" and "O-5".

The proposed development will not have a significant and adverse impact on the scenic and open space resources in the area and will blend into the existing neighborhood motif and the natural environment. See, Exhibit "O-6"[1]. Any visual impacts to the coastline will be sufficiently mitigated as the development itself has been designed to blend in with the rugged coastline by using dark earth tones and modern design elements, including Tahitian Brown roofing materials, black fiberglass windows, stained accent cedar siding, stained cedar siding, stained board formed concrete, and Polynesian landscaping motifs. *See,* Exhibits "H", "I" and "O-6".

11.4 Coastal Ecosystems.

The Property is a shoreline parcel and abuts the ocean and the proposed development of Lot 3 will not significantly and adversely affect the coastal ecosystem. Prior to entitlement of the subdivision, CLDC commissioned a Preliminary Engineering Report which addressed the mitigation of any significant adverse effects that the subdivision would have on the coastal ecosystem. *See,* Exhibit "P". The Preliminary Engineering Report addressed site grading, drainage plans, storm water management and water quality, erosion control plans, roadways, wastewater, the flood zone and the constraint district. *Id.* The recommendations in the Preliminary Engineering Report were included in the approved construction plans of the subdivision (Exhibit "M") which were constructed as approved and certified by the Department

[1] Exhibit "O-6" contains a copy of a survey of the Makahuena Estates subdivision and five (5) pictures. The survey itself indicates where pictures 1-5 were taken, and pictures 1-5 contain a computer image of the potential visual impact of the proposed development. Lot 3 is not visible from Pe'e Road because of the neighboring development The Point at Poʻipū.

of Public Works (Exhibit “”G”). Because all subdivision infrastructure has been constructed and approved, including the necessary drainage basin, the development will not have any significant adverse effect on the coastal ecosystem, and the development will be constructed and maintained so that any erosion or increased run off will stay within the pre-existing drainage allowances and maintained on site in the existing drainage basin.

During the subdivision entitlement process three indigenous Hawaiian bird species were recorded during the Biological Survey of the site: Wedge-tailed Shearwater, White-tailed Tropicbird, and Wandering Tattler. Exhibit “O-3” at 28. Of these three species, only the Wedge-tailed Shearwater was noted to nest along the coast. *Id*. This species is not listed under either federal or state endangered species programs; however, it is protected under the federal Migratory Bird Treaty Act. Id. at 29. The Biological Survey noted that the subject property is not included in any federal Critical Habitat designations, and the development of the site would not impact Critical Habitat. *Id*. at 34. Nonetheless, the County imposed various permit conditions to mitigate any development impacts to the Wedge-tailed shearwaters located in the area. Exhibit “D” at 2-3. Based upon representations of Jan Tenbruggencate, CLDC and Applicant’s consultant, and an analysis of the public record, Applicant understands that all of these requirements were complied with. For example:

a. In consultation with DLNR/DOFAW, CLDC engaged a landscaping firm and established a new shrub land of native naupaka (Scaevola taccada) on the makai western corner of the subdivision creating more nesting habitat for wedge-tailed shearwaters.

b. At DOFAW’s request, the CLDC hired a pest control firm to conduct trapping for feral cats. Exhibit “Q”. The Applicant has continued that contract and animal control specialists

are on the property daily. Exhibit "Q-1". Applicant issued a Right-of-Entry permit to DLNR/DOFAW to allow the State to monitor wedge-tailed shearwaters in the area. Exhibit "R".

c. Finally, in order to avoid a potentially dangerous condition for humans, the makai rock wall along the public access way was approved as constructed with ground-level tubes that allow shearwaters to pass through. Exhibits "S" and "G". However, according to Mr. Tenbruggencate, there is no evidence the birds actually do cross it on foot, as shearwaters that have been seen inside the wall are adults fully capable of flight.

Applicant intends to comply with all existing permitting requirements, including those relating to construction times and any prohibitions against external upward facing and unshielded lighting. Nonetheless, Applicant is aware that predation of Wedge-tailed shearwaters continues along the makai portion of the subdivision largely due to the feeding of feral cats at neighboring properties and in some part unleashed domestic dogs that walk within the open space coastal access easement with their owners. Applicant is working cooperatively with DLNR/DOFAW and the community to find collaborative solutions to further protect the coastal bird population.

11.5 Economic Uses. The Property will be developed for residential purposes and will be allowed to be used as a transient vacation rental as it is within the VDA. The proposed development will create short term economic benefits associated with the construction of the improvements and will create more long-lasting employment opportunities associated with the management and upkeep of a vacation rental property, if the development is used for such purposes. Therefore, the proposed development will not have any significant adverse effect on the economy.

11.6 Coastal Hazards. The Property is a shoreline parcel but its' makai boundary consists of rock cliff face and the Property itself is approximately 36 ft. above sea level. *See*,

Exhibit "C-10". According to the Kauai shoreline change website, developed in partnership with the National Ocean and Atmospheric Administration ("**NOAA**") and the University of Hawaii School of Ocean and Earth Science and Technology, the coastline of the Property is not experiencing any coastal erosion. *Id.* The Property is within the Non-Special Flood Hazard Zone X and all drainage will be maintained on site via an existing drainage basin. As such, no significant risks of coastal hazards are likely.

11.7 Managing Development/Public Participation. The development is consistent with the SMA objectives and policies concerning Managing Development and Public Participation in that the SMA Use Permit process will provide the public with an opportunity to review the proposed development and communicate and participate in the management of coastal resources and hazards.

11.8 Beach Protection/Marine Resources. The development will not have any significant adverse effect on any coastal beach processes because there are no beaches in the vicinity, instead there is a steep, rugged and rocky cliff faced shoreline. Likewise, the development will not significantly adversely affect any open space areas along the shoreline due to the existing county coastal access and view easements encumbering the Property makai of the rock-wall. There are no existing fishponds, seawalls, or revetments in the vicinity of the Property and as such the development will not have any significant adverse effect to Beach Protection or Marine Resources.

11.9 Value of Development. The value of the development is estimated at $2,301,480.00 as shown in the construction estimate attached as Exhibit "J".

11.10 Compatibility with Surrounding Uses. The Property is surrounded by properties located in the SLUC Urban District, County Resort District, and County Residential District and

is the VDA. Uses on the surrounding properties include residential, resort and vacation rental activities. The Property is similar in topography, character and nature with adjacent properties and the development is consistent with surrounding land uses.

11.11 Significant Adverse Effect to the SMA. The development will not have any significant adverse environmental or ecological effect to the SMA, including but not limited to the potential cumulative impact of individual developments, each of which taken by itself might not have a significant adverse effect, and the elimination of planning options. The development is and will be compatible with existing uses in areas surrounding the Property. Further, the design, siting, and landscaping of the development will ensure that any adverse effects of the development are minimized to the extent practical consistent with the special controls on development within the SMA and the State policy to preserve and protect the natural resources of the coastal zone of Hawai'i.

11.12 Compliance with SMA Guidelines. The development is consistent with the SMA Guidelines contained in HRS § 205A-26 and Section 4.0 of the Special Management Area Rules and Regulations of the County of Kaua'i State of Hawai'i ("**SMA Rules**") as follows:

a. Adequate access, via existing public access easements, is provided to nearby beaches, recreation areas, and natural reserves.

b. Adequate and properly located public recreation areas and wildlife preserves have been reserved.

c. Provisions have been made for solid and liquid waste treatment, disposition, and management that will minimize adverse effects on SMA resources.

d. Because the Property is prepared for development, alterations to existing landforms and vegetation will be very minimal, and construction will cause negligible adverse

effects to water resources and scenic and recreational amenities. Further, danger of floods, wind damage, storm surge, landslides, erosion, siltation, or failure in the event of earthquake is not expected.

e. The development is consistent with the objectives and policies of HRS Ch. 205A and the County SMA Rules.

f. The development is consistent with the County general plan and zoning ordinances.

g. No dredging, filing or other altering of any coastal resources will occur whatsoever.

h. The development will not reduce the size of the coastal access easement area, nor will the development impose any restrictions upon public access to tidal and submerged lands, beaches, or other coastal resources.

i. The development will not substantially interfere with or detract from the line of sight toward the sea or from existing public views to and along the shoreline.

j. The development will not significantly adversely affect water quality, or existing and potential fisheries, wildlife habitats, or estuarine sanctuaries.

SECTION 12. HRS CH 343 ENVIRONMENTAL IMPACT STATEMENT CONSIDERATIONS.

12.1 HRS Chapter 343. HRS Ch. 343 requires the preparation of an Environmental Assessment and/or an Environmental Impact Statement for certain activities specified in HRS § 343-5. The development does not constitute an action for which an Environmental Assessment and/or an Environmental Impact Statement must be prepared pursuant to HRS § 343-5.

SECTION 13. IMPACTS TO NATIVE HAWAIIAN TRADITIONAL AND CUSTOMARY PRACTICES.

13.1 Existence of Traditional and Customary Practices. Under Article XII, Section 7 of the Hawaii State Constitution, the State of Hawai'i:

> *[R]eaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.*

For the purpose of practicing [Native Hawaiian] traditional and customary rights, practitioners may gather anywhere that those rights have been traditionally and customarily exercised in that manner – on land that is less than "fully developed." David M. Forman and Susan K. Serrano, Ho'ohana Aku, a Ho'ola Aku: A Legal Primer for Traditional and Customary Rights in Hawaii, December 2012; citing, *Public Access Shoreline Hawaii ("PASH") v. Hawaii County Planning Commission*, 79 Haw. 425, 903 P.2d 1246. If property is deemed "fully developed," i.e., lands zoned and used for residential purposes with existing dwellings, improvements, and infrastructure, it is always "inconsistent" to permit the practice of traditional and customary native Hawaiian rights on such property. *State v. Hanapi*, 89 Haw. 177, 970 P.2d 485.

As part of the subdivision entitlement process, CLDC commissioned the preparation of a Cultural Impact Assessment ("**CIA**") by McMahon Consulting. *See,* Exhibit "T". The CIA analyzed previous archaeological studies, the historical record and detailed consultation with native Hawaiian practitioners and informants in an effort to identify any ongoing practice of traditional and cultural activities and the presence of any valued cultural, historical or natural resources within the subdivision or its vicinity. The CIA further assessed the potential impacts that the proposed development may have on those resources.

In analyzing whether any valued cultural, historical, or natural resources were present within the applicable area, the CIA found a paucity of data in the written record regarding the presence of pre-contact settlement and historic land tenure for the Property and limited mythological and legendary references.

However, in speaking with native Hawaiian practitioners and informants it was determined that the coastline fronting the subdivision has been use for traditional and cultural subsistence fishing practices from pre-historic times to today. Fish caught off of the rock cliffs at Makahuena include: awa (milkfish), ‘o’io (bone fish), he’e (octopus), ula (spiny lobster), akule (big-eye scad), and moi (thread fish). Ha’uke’uke (sea urchin) and ‘opihi (limpet) are also gathered from the rocky cliffs along the coastline. According to cultural informants, at one point in time there were small salt beds in the area, but no salt pans were located during an archaeological inventory by Haun et al in 2011. Exhibit “T” at 12. No further cultural, historical, or natural resources were identified in the area.

All traditional and customary practices and all valued cultural, and natural resources in the area involve subsistence fishing and gathering within the open space access easement makai of the subdivision’s rock wall. As this area is protected and preserved in perpetuity, the development of Lot 3 will not affect or impair these continued practices whatsoever.

No traditional and customary practices were identified on the Property in the area mauka of the rock wall. The construction plans for the subdivision improvements were approved by all governmental regulatory agencies in 2015. A final inspection of the subdivision improvements was conducted on August 8, 2017, and the County Engineer certified that the construction was complete and acceptable on December 4, 2017. As such, the Property is deemed fully developed. *State v. Hanapi*, 89 Haw. 177, 970 P.2d 485. Given the tenets of the law regarding

practice of Native Hawaiian customary and traditional rights on "fully developed" lands, the development will not affect any Native Hawaiian customary and traditional rights protected under Article XII, Section 7 of the Hawai'i State Constitution.

SECTION 14. CONCLUSION.

Applicant respectfully requests the Planning Department and the Planning Commission:

1. Find that the development will not have any substantial environmental or ecological effect, except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interest.

2. Find that the development is consistent with the objectives, policies, and guidelines set forth in HRS Ch. 205A and Sections 3.0 and 4.0 of the SMA Rules.

3. Find that the development is consistent with permitted uses in the SLUC Urban District, the Kauai General Plan, the South Kauai Community Plan, and the CZO.

4. Approve the issuance of a SMA Use Permit and a Class III Zoning Permit for the development on the Property as described herein, subject to such reasonable conditions as the Planning Department and Planning Commission shall impose.

DATED: Lihue, Kauai, Hawaii, February 10, 2022.

CADES SCHUTTE LLP



MAUNA KEA TRASK

Attorneys for Applicants
MAKAHUENA - PREFERRED A, LLC;
MAKAHUENA - CAPITAL A, LLC;
MAKAHUENA - PREFERRED B, LLC;
MAKAHUENA - CAPITAL B, LLC;
MAKAHUENA - TW, LLC; and
MAKAHUENA - DW, LLC

EXHIBIT LIST

Exhibit	Exhibit Description
A	Applicant Authorization
B	Deed
C-1	Lot 3 Tax Map
C-2	Lot 3 State Land Use District Map
C-3	Kauai County General Plan Land Use Designation Map
C-4	Zoning Map ZM-PO 300
C-5	South Kauai Community Plan Land Use Map
C-6	Lot 3 Special Management Area Map
C-7	County Constraint District Map
C-8	Kauai County General Plan South Kauai Heritage Resource Map
C-9	Lot 3 Flood Hazard Assessment Report
C-10	Shoreline Certification and Topography map
C-11	Grant of Pedestrian Access and Parking Easements
C-12	Ordinance No. PM-2017-410
C-13	Natural Resource Conservation Services (NRCS) Lot 3 Soil Survey Map
D	SMA (U) 2015-1
E	Z-III-2015-1
F	S-2015-14
G	Certification of Completion Makahuena Point Subdivision
G-1	Final Approved Subdivision Map S-2015-14
H	Lot 3 House Plans

I	Lot 3 Landscape Plans
J	Lot 3 Construction Estimate
K	Lot 3 Photo Exhibit
L	Archaeological Inventory Survey
M	Approved Construction Plans for Makahuena Subdivision
N	Individual Wastewater System (IWS) Report - Makahuena Subdivision
O-1	Air Quality Assessment
O-2	Geological Investigation
O-3	Biological Survey
O-4	Visual Analysis Public Views
O-5	Visual Analysis Private Views
O-6	View Impact of Lot 3 development
P	Preliminary Engineering Report
Q	Previous Kani Wildlife Contract
Q-1	Existing Kani Wildlife Contract
R	Right-of-Entry with DLNR/DOFAW
S	May 9, 2016 Status Report to Planning Department
T	Cultural Impact Assessment

EXHIBIT A

October __, 2021

TO WHOM IT MAY CONCERN:

Cades Schutte LLLP is authorized on behalf of: (i) (a) MAKAHUENA – PREFERRED A, LLC, a Hawaii limited liability company; and (b) MAKAHUENA – CAPITAL A, LLC, a Hawaii limited liability company, both of whose mailing address is 3214 N. University Ave., #104, Provo, Utah 84604; and (ii) (a) MAKAHUENA – PREFERRED B, LLC, a Hawaii limited liability company, (b) MAKAHUENA – CAPITAL B, LLC, a Hawaii limited liability company, (c) MAKAHUENA – TW, LLC, a Hawaii limited liability company, and (d) MAKAHUENA – DW, LLC, a Hawaii limited liability company; collectively the owners of the property located at Pe'e Rd. and Maka Rd., Koloa, HI 96756, identified as TMK No. (4) 2-8-021:070), in submitting any and all permit assessments, determination requests, and/or permit applications to the various departments and agencies of the State of Hawaii and the County of Kaua`i relative to the above referenced property.

MAKAHUENA – PREFERRED A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – PREFERRED B, LLC,
a Hawaii limited liability company

By: _____

EXHIBIT A

Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL B, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – TW, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – DW, LLC,
a Hawaii limited liability company

By: _____
David Weekes
Its Manager

EXHIBIT B

4117

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
February 05, 2021 8:01 AM
Doc No(s) A – 77060485

/s/ LESLIE T. KOBATA
REGISTRAR

1 1/4 ICL
B – 33661468

Conveyance Tax: $150,887.70

LAND COURT | REGULAR SYSTEM

Return By Mail [X] Pick-Up [ ] To:

RS - 1

TG: 202037204-S
TGE: 20158934
m. dela Sierra

TOTAL NUMBER OF PAGES: 22

TITLE OF DOCUMENT:

WARRANTY DEED

PARTIES TO DOCUMENT:

GRANTOR: **CIRI LAND DEVELOPMENT COMPANY**, an Alaska corporation, whose mailing address is 725 E. Fireweed Lane, Suite 800, Anchorage, Alaska 99503

GRANTEE: (i) (a) **MAKAHUENA – PREFERRED A, LLC**, a Hawaii limited liability company; and (b) **MAKAHUENA – CAPITAL A, LLC**, a Hawaii limited liability company, both of whose mailing address is 3214 N. University Ave., #104, Provo, Utah 84604; and (ii) (a) **MAKAHUENA – PREFERRED B, LLC**, a Hawaii limited liability company, (b) **MAKAHUENA – CAPITAL B, LLC**, a Hawaii limited liability company, (c) **MAKAHUENA – TW, LLC**, a Hawaii limited liability company, and (d) **MAKAHUENA – DW, LLC**, a Hawaii limited liability company, all of whose mailing address is 111 E. Broadway, Suite 1100, Salt Lake City, Utah 84111

TAX MAP KEYS (4) 2-8-021:041 and 069 to 079, inclusive

EXHIBIT B

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS:

That **CIRI LAND DEVELOPMENT COMPANY**, an Alaska corporation, whose mailing address is 725 E. Fireweed Lane, Suite 800, Anchorage, Alaska 99503, hereinafter called the "**Grantor**", for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable consideration to the Grantor paid by (i) (a) **MAKAHUENA – PREFERRED A, LLC**, a Hawaii limited liability company ("**Preferred A**"); and (b) **MAKAHUENA – CAPITAL A, LLC**, a Hawaii limited liability company ("**Capital A**"), both of whose mailing address is 3214 N. University Ave., #104, Provo, Utah 84604; and (ii) (a) **MAKAHUENA – PREFERRED B, LLC**, a Hawaii limited liability company ("**Preferred B**"), (b) **MAKAHUENA – CAPITAL B, LLC**, a Hawaii limited liability company ("**Capital B**"), (c) **MAKAHUENA – TW, LLC**, a Hawaii limited liability company ("**TW**"), and (d) **MAKAHUENA – DW, LLC**, a Hawaii limited liability company ("**DW**"), all of whose mailing address is 111 E. Broadway, Suite 1100, Salt Lake City, Utah 84111 (Preferred A, Capital A, Preferred B, Capital B, TW, and DW are hereinafter collectively called the "**Grantee**"), the receipt whereof is hereby acknowledged, does hereby grant, bargain, sell and convey unto the Grantee all of that certain real property designated on the tax maps of the Fourth Taxation Division, State of Hawaii, as Tax Map Key (4) 2-8-21: 41 and 69 to 79, inclusive, more particularly described in Exhibit "A" attached hereto and made a part hereof (the "**Property**"), subject to the encumbrances noted therein.

AND the reversions, remainders, rents, issues and profits thereof and all of the estate, right, title and interest of the Grantor, both at law and in equity, therein and thereto.

TOGETHER WITH ALL and singular the buildings, improvements, rights, tenements, hereditaments, easements, privileges and appurtenances thereunto belonging or appertaining or held and enjoyed in connection therewith.

TO HAVE AND TO HOLD the same unto the Grantee, as **Tenants in Common**, in fee simple, forever, according to the following percentages: (i) as to Preferred A, an undivided 3.96500% interest in the Property; (ii) as to Capital A, an undivided 32.14700% interest in the Property; (iii) as to Preferred B, an undivided 4.3969% interest in the Property; (iv) as to Capital B, an undivided 40.6192% interest in the Property; (v) as to TW, an undivided 17.0762% interest in the Property; and (vi) as to DW, an undivided 1.79570% interest in the Property.

AND THE SAID GRANTOR does hereby covenant with the Grantee that the Grantor is lawfully seised in fee simple of said granted premises and that the said premises are free

and clear of all encumbrances except as aforesaid, and except for assessments for real property taxes not yet required by law to be paid. And the said Grantor further covenants and agrees that the Grantor has good right to sell and convey the said premises in the manner aforesaid; that the Grantor will WARRANT AND DEFEND the same unto the Grantee against the lawful claims and demands of all persons, except as aforesaid.

AND the Grantor, in consideration of the premises, does hereby grant, sell, transfer and deliver unto the Grantee the items of real and personal property more fully described in said Exhibit A attached hereto and made a part hereof, in their existing "AS IS" condition, WITHOUT WARRANTY OR REPRESENTATIONS, EXPRESSED OR IMPLIED.

Grantee hereby understands and agrees that said real and personal property is being conveyed to Grantee "AS IS", "WHERE IS" and "WITH ALL FAULTS", in its present state and condition. Grantor makes no other representations or warranties, express or implied, with respect to the use, condition, fitness for any particular purpose, merchantability or any other aspect of said real and personal property, and it is expressly understood and agreed that any and all liability for any and all such representations or warranties is expressly disclaimed

This instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties hereto, notwithstanding all of the parties are not signatory to the original or the same counterparts. For all purposes, including without limitation, recordation, filing and delivery of this instrument, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

IT IS AGREED that the terms "Grantor" and "Grantee", as and when used hereinabove or hereinbelow shall mean and include the masculine or feminine, the singular or plural number, individuals, associations, trustees, corporations or partnerships, and their and each of their respective successors in interest, heirs, executors, personal representatives, administrators and permitted assigns, according to the context thereof, and that if these presents shall be signed by two or more grantors, or by two or more grantees, all covenants of such parties shall be and for all purposes deemed to be their joint and several covenants.

[remainder of page left intentionally blank]

IN WITNESS WHEREOF, the Grantor and Grantee have executed these presents on this 25 day of January, 2021.

Grantor:

CIRI LAND DEVELOPMENT COMPANY,
an Alaska corporation

By: _____
Name: Chad Nugent
Its: President

Grantor's signature page to Warranty Deed

Grantee:

MAKAHUENA – PREFERRED A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL A, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – PREFERRED B, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – CAPITAL B, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – TW, LLC,
a Hawaii limited liability company

By: _____
Tanner Weekes
Its Manager

MAKAHUENA – DW, LLC,
a Hawaii limited liability company

By: _____
David Weekes
Its Manager

Grantee's signature page to Warranty Deed (continued)

STATE OF ALASKA)
) SS:
THIRD JUDICIAL DISTRICT)

This is to certify that on this 25 day of January, 2021, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn as such, appeared CHAD NUGENT, in his capacity as President, of CIRI Land Development Company, known to me to be the individual who executed the foregoing instrument and he acknowledged to me that he signed the same freely and voluntarily for the uses and purposes therein set forth.

WITNESS MY HAND and official seal.

Carolyn B. Bickley
Name:

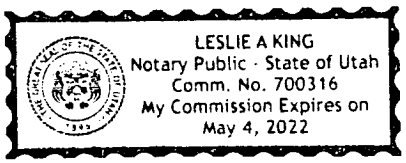
Notary Public for the State of Alaska

My commission expires: 06·25·2022

STATE OF ALASKA
NOTARY PUBLIC
Carolyn B. Bickley
My Commission Expires:

STATE OF UT)
) ss.
COUNTY OF Utah)

On this 25th day of January, 2021, before me appeared TANNER WEEKES, to me personally known, who being duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



(Notary Stamp or Seal)

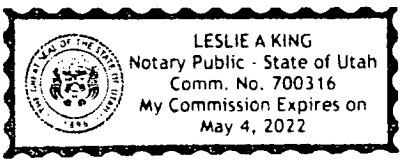
Name: Leslie A King

Notary Public, State of UT

My commission expires: May 4, 2022

STATE OF UT)
) ss.
COUNTY OF Utah)

On this 25th day of January 2021, before me appeared DAVID WEEKES, to me personally known, who being duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Name: Leslie A King

Notary Public, State of Utah

My commission expires: May 4, 2022

(Notary Stamp or Seal)

EXHIBIT A

TMK: (4) 2-8-021-041

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 1, and thus bounded and described:

Beginning at the northeast corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,817.12 feet south and 103.71 feet east, thence running by azimuths measured clockwise from true South:

1.	333°	59'		103.58	feet along the remainder of Grant 1416 (Lot 2) to the shoreline;
2.	27°	55'		45.95	feet along the shoreline;
3.	71°	35'		67.05	feet along the shoreline;
4.	40°	19'		151.41	feet along the shoreline;
5.	112°	35'		210.03	feet along the remainder of Grant 1416 (Lot 2);
6.	63°	59'		218.46	feet along the remainder of Grant 1416 (Lot 2);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 45.00 feet, the chord azimuth and distance being:				
7.	88°	04'	41"	36.74	feet;
8.	153°	59'		10.00	feet along the remainder of Grant 1416 (Road Lot A);
9.	243°	59'		633.18	feet along the remainder of Grant 1416 (Lot 2) to the point of beginning and containing an area of 1.244 acres, more or less.

Tax Key: (4) 2-8-021-069

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 2, and thus bounded and described:

Beginning at the southwest corner of this parcel of land, on the east end of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,154.49 feet south and 397.35 feet west, thence running by azimuths measured clockwise from true South:

Along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 45.00 feet, the chord azimuth and distance being:

1.	152°	38'	34"	58.41	feet;
2.	243°	59'		218.46	feet along the remainder of Grant 1416 (Lot 1);
3.	292°	35'		210.03	feet along the remainder of Grant 1416 (Lot 1) to the shoreline;
4.	40°	19'		54.99	feet along the shoreline;
5.	95°	40'		90.22	feet along the shoreline;
6.	32°	36'	10"	151.30	feet along the shoreline;
7.	120°	50'		182.29	feet along the remainder of Grant 1416 (Lot 3) to the point of beginning and containing an area of 1.027 acres, more or less.

Tax Key: (4) 2-8-021-070

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 3, bearing Tax Key designation (4) 2-8-021-070, and containing an area of 1.001 acres, more or less.

Tax Key: (4) 2-8-021-071

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 4, and thus bounded and described:

Beginning at the northwest corner of this parcel of land, on the south side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,222.54 feet south and 590.12 feet west, thence running by azimuths measured clockwise from true South:

1.	243°	59'		96.07	feet along the remainder of Grant 1416 (Road Lot A);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the right with a radius of 40.00 feet, the chord azimuth and distance being:				
2.	273°	00'	02"	38.81	feet;
3.	333°	58'		315.43	feet along the remainder of Grant 1416 (Lot 3) to the shoreline;

4.	61°	36'	32"	130.12	feet along the shoreline;
5.	153°	59'		339.64	feet along the remainder of Grant 1416 (Lot 5) to the point of beginning and containing an area of 1.001 acres, more or less.

Tax Key: (4) 2-8-021-072

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 5, and thus bounded and described:

Beginning at the northeast corner of this parcel of land, on the south side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,222.54 feet south and 590.12 feet west, thence running by azimuths measured clockwise from true South:

1.	333°	59'		339.64	feet along the remainder of Grant 1416 (Lot 4) to the shoreline;
2.	61°	36'	32"	15.39	feet along the shoreline;
3.	311°	12'	42"	31.84	feet along the shoreline;
4.	42°	29'		105.60	feet along the shoreline;
5.	138°	44'		52.25	feet along the shoreline;
6.	71°	09'	20"	53.58	feet along the shoreline;
7.	167°	00'		365.46	feet along the remainder of Grant 1416 (Lot 6);
					Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:
8.	250°	17'	33"	43.96	feet;
9.	243°	59'		42.21	feet along the remainder of Grant 1416 (Road Lot A) to the point of beginning and containing an area of 1.125 acres, more or less.

Tax Key: (4) 2-8-021-073

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 6, and thus bounded and described: Beginning at the northwest corner of this parcel of land, on the south side of Road Lot A, the

coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,258.50 feet south and 749.26 feet west, thence running by azimuths measured clockwise from true South:

Along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:

1.	268°	07'	07"	79.86	feet;
2.	347°	00'		365.46	feet along the remainder of Grant 1416 (Lot 5) to the shoreline;
3.	71°	09'	20"	58.42	feet along the shoreline;
4.	350°	35'	32"	53.87	feet along the shoreline;
5.	40°	29'	50"	47.40	feet along the shoreline;
6.	152°	15'	56"	63.01	feet along the shoreline;
7.	92°	07'	59"	69.92	feet along the shoreline;
8.	182°	14'	53"	3.39	feet along the remainder of Grant 1416 (Lot 7);
9.	270°	00'		50.48	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
10.	180°	00'		100.00	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
11.	90°	00'		41.41	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
12.	181°	00'		299.81	feet along the remainder of Grant 1416 (Lot 7) to the point of beginning and containing an area of 1.103 acres, more or less.

Tax Key: (4) 2-8-021-074

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 7, and thus bounded and described:

Beginning at the northeast corner of this parcel of land, on the south side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,258.50 feet south and 749.26 feet west, thence running by azimuths measured clockwise from true South:

1.	1°	00'		299.81	feet along the remainder of Grant 1416 (Lot 6);

2.	90°	00'		58.59	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
3.	0°	00'		100.00	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
4.	270°	00'		49.52	feet along the remainder of Grant 1416 (Makahuena Point Lighthouse Station);
5.	2°	14'	55"	44.17	feet along the remainder of Grant 1416 (Lot 6) to and along the shoreline;
6.	62°	20'	39"	59.64	feet along the shoreline;
7.	111°	46'	13"	76.25	feet along the shoreline;
8.	188°	37'	53"	49.98	feet along the shoreline;
9.	94°	21'	59"	106.86	feet along the shoreline;
10.	201°	00'		446.94	feet along the remainder of Grant 1416 (Lot 8);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:				
11.	291°	51'		84.63	feet to the point of beginning and containing an area of 1.535 acres, more or less.

Tax Key: (4) 2-8-021-075

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 8, and thus bounded and described:

Beginning at the north corner of this parcel of land, on the west side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,158.50 feet south and 890.71 feet west, thence running by azimuths measured clockwise from true South:

Along the remainder of Grant 1416 (Road Lot A), on a curve to the left with a radius of 200.00 feet, the chord azimuth and distance being:

1.	317°	31'	56"	93.16	feet;
2.	21°	00'		446.94	feet along the remainder of Grant 1416 (Lot 7) to the shoreline;
3.	94°	21'	59"	10.15	feet along the shoreline;

4.	180°	51'	04"	63.08	feet along the shoreline;
5.	80°	08'	25"	47.72	feet along the shoreline;
6.	190°	27'		163.29	feet along the remainder of Grant 1416 (Parcel 3);
7.	164°	57'	30"	100.65	feet along the remainder of Grant 1416 (Parcel 3);
8.	221°	00'		228.59	feet along the remainder of Grant 1416 (Lot 9) to the point of beginning and containing an area of 1.123 acres, more or less.

Tax Key: (4) 2-8-021-076

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 9, and thus bounded and described:

Beginning at the southeast corner of this parcel of land, on the west side of Road Lot A, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,158.50 feet south and 890.71 feet west, thence running by azimuths measured clockwise from true South:

1.	41°	00'		228.59	feet along the remainder of Grant 1416 (Lot 8);
2.	164°	57'	30"	199.35	feet along the remainder of Grant 1416 (Parcel 3);
3.	165°	00'		105.91	feet along the remainder of Grant 1416 (Parcel 3);
4.	243°	59'		122.30	feet along the remainder of Grant 1416 (Road Widening Lot);
					Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
5.	287°	29'	30"	27.54	feet;
6.	331°	00'		191.71	feet along the remainder of Grant 1416 (Road Lot A) to the point of beginning and containing an area of 1.004 acres, more or less.

Tax Key: (4)) 2-8-021-77

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being LOT 10, as shown on survey map prepared by Dennis M. Esaki, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, Final Map

S-2015-14, approved by the Planning Commission of the County of Kauai, on March 27, 2018, bearing Tax Key designation (4) 2-8-021-077, and containing an area of 1.109 acres, more or less:

Beginning at the northwest corner of this parcel of land, on the south side of Pee Road, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,932.12 feet South and 929.83 feet West, thence running by azimuths measured clockwise from true South:

1.	243°	59'		130.25	feet along the remainder of Grant 1416 (Lot 2);
2.	333°	59'		359.00	feet along the remainder of Grant 1416 (Lot 2 and Road Lot A);
	Thence along the remainder of Grant 1416 (Road Lot A), on a curve to the right with a radius of 150.00 feet, the chord azimuth and distance being:				
3.	108°	31'	47"	202.56	feet;
4.	151°	00'		196.11	feet along the remainder of Grant 1416 (Road Lot A);
	Thence along the remainder of Grant 1416 (Road Lot A and Road widening Lot), on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:				
5.	193°	24'	26"	26.98	feet;
	Thence along the remainder of Grant 1416 (Road Widening Lot), on a curve to the left with a radius of 282.00 feet, the chord azimuth and distance being:				
6.	235°	04'	31"	7.28	feet to the point of beginning and containing an area of 1.109 acres, more or less.

Tax Key: (4)) 2-8-021-78

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being ROAD LOT A, as shown on survey map prepared by Dennis M. Esaki, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, Final Map S-2015-14, approved by the Planning Commission of the County of Kauai, on March 27, 2018, and thus bounded and described:

Beginning at the northwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,982.34 feet south and 1,009.92 feet west, thence running by azimuths measured clockwise from true South:

1.	243°	59'		72.90	feet along the remainder of Grant 1416 (Road widening Lot);
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:				
2.	349°	02'	41"	12.39	feet;
3.	331°	00'		196.11	feet along the remainder of Grant 1416 (Lot 10);
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the left with a radius of 150.00 feet, the chord azimuth and distance being:				
4.	288°	31'	47"	202.56	feet;
5.	153°	59'		9.90	feet along the remainder of Grant 1416 (Lot 10);
6.	243°	59'		215.82	feet along the remainder of Grant 1416 (Lot 2);
7.	333°	59'		10.00	feet along the remainder of Grant 1416 (Lot 1);
	Thence along the remainder of Grant 1416 (Lots 1, 2, and 3), on a curve to the right with a radius of 45.00 feet, the chord azimuth and distance being:				
8.	3°	00'	02"	78.70	feet;
	Thence along the remainder of Grant 1416 (Lot 4), on a curve to the left with a radius of 40.00 feet, the chord azimuth and distance being:				
9.	93°	00'	02"	38.81	feet;
10.	63°	59'		138.28	feet along the remainder of Grant 1416 (Lots 4 and 5);
	Thence along the remainder of Grant 1416 (Lots 5, 6, 7, and 8), on a curve to the right with a radius of 200.00 feet, the chord azimuth and distance being:				
11.	107°	29'	30"	275.38	feet;
12.	151°	00'		191.71	feet along the remainder of Grant 1416 (Lot 9),
	Thence on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:				
13.	107°	29'	30"	27.54	feet to the point of beginning and containing an area of 0.946 acre, more or less.

Tax Key: (4) 2-8-021-79

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant Number 1416 to Eke Opunui) situate, lying and being at Weliweli, Koloa, Island and County of Kauai, State of Hawaii, being ROAD WIDENING LOT, as shown on survey map prepared by Dennis M. Esaki, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, Final Map S-2015-14, approved by the Planning Commission of the County of Kauai, on March 27, 2018, and thus bounded and described:

Beginning at the northwest corner of this parcel of land, on the south side of Pee Road, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,026.14 feet south and 1,122.46 feet west, thence running by azimuths measured clockwise from true South:

1.	243°	59'		214.35	feet along the south side of Pee Road;
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the right with a radius of 282.00 feet, the chord azimuth and distance being:				
2.	55°	04'	31"	7.28	feet;
	Thence along the remainder of Grant 1416 (Lot 10), on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:				
3.	31°	27'	07"	16.50	feet;
4.	63°	59'		195.20	feet along the remainder of Grant 1416 (Road Lot A and Lot 9);
5.	165°	00'		10.19	feet along the remainder of Grant 1416 (Parcel 3) and along the south side of Pee Road to the point of beginning and containing an area of 0.046 acre, more or less.

BEING THE PREMISES ACQUIRED BY QUITCLAIM DEED

GRANTOR: UNITED STATES OF AMERICA, acting by and through the Administrator of General Services, under and pursuant to the powers and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377) as amended, and regulations and orders promulgated thereunder

GRANTEE: CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation

DATED: March 22, 1996
RECORDED: Document No. 96-068054

-AS TO LOTS 1 AND 3 THROUGH 10, INCLUSIVE:-

Together with an easement over and across Easements "AU-4" and "AU-5" for access and utility purposes, as set forth by instrument dated December 24, 2018, recorded as Document No. A-69320634.

-AS TO LOT 2:-

Together with an easement over and across Easements "AU-3", "AU-4", and "AU-5" for access and utility purposes, as set forth by instrument dated December 24, 2018, recorded as Document No. A-69320634.

-AS TO ROAD LOT A:-

Together with an easement over and across Easement "AU-5" for access and utility purposes, as set forth by instrument dated December 24, 2018, recorded as Document No. A-69320634.

SUBJECT, HOWEVER, to the following:

1. Mineral and water rights of any nature.

2. -AS TO LOTS 1 THROUGH 8, INCLUSIVE:-

   Location of the seaward boundary in accordance with the laws of the State of Hawaii and shoreline setback line in accordance with County regulation and/or ordinance.

3. The terms, provisions and easements contained in the following:

   INSTRUMENT: QUITCLAIM DEED

   DATED: March 22, 1996
   RECORDED: Document No. 96-068054

   Said Deed was amended by instrument dated November 14, 2016, recorded as Document No. A-61620060; re: to relocate the road and utility easement.

   The foregoing includes, but is not limited to, matters relating to reservation of a road and utility easement and a visual easement to provide an unobstructed view from the sea to the aid-to-navigation on the lands described therein.

4. -AS TO LOTS 1 THROUGH 9, INCLUSIVE, ROAD LOT A AND ROAD WIDENING LOT:-

   GRANT

   TO: COUNTY OF KAUAI

DATED: March 24, 2017
RECORDED: Document No. A-63020561
GRANTING: non-exclusive easements over and across Easement "AU-1", "AU-2", "AU-5", "AU-6", and "A-1", being more particularly described therein

5. The terms and provisions contained in the following:

INSTRUMENT: MEMORANDUM OF DEED RESTRICTION (RESTRICTED DENSITY FOR CONSOLIDATION OF LOTS 1 THROUGH 3, 45 THROUGH 54, 56 THROUGH 63, PARCELS L-1, L-2 AND L-3, LAAUKAHI ROAD LOT AND EHUKAI ROAD LOT AND SUBDIVISION OF SAID CONSOLIDATION INTO LOTS 1 THROUGH 10, ROAD LOT 2 AND ROAD WIDENING LOT CANCELLATION OF ROAD AND UTILITY EASEMENT, AND DESIGNATION OF EASEMENTS A-1 THROUGH A-5 AT WELIWELI, KOLOA, KAUAI, HAWAII

DATED: July 10, 2017
RECORDED: Document No. A-64070799

6. CONVEYANCE OF WATER FACILITY dated September 29, 2017, recorded as Document No. A-64920742.

7. -AS TO ROAD LOT A AND ROAD WIDENING LOT:-

GRANT

TO: BOARD OF WATER SUPPLY, COUNTY OF KAUAI

DATED: September 29, 2017
RECORDED: Document No. A-64920743
GRANTING: an easement over and across Easements "AU-4" and "AU-5" for water pipeline purposes, being more particularly described therein

8. -AS TO LOT 1, ROAD LOT A, AND ROAD WIDENING LOT:-

GRANT

TO: OCEANIC TIME WARNER CABLE LLC, a Delaware limited liability company

DATED: December 21, 2017
RECORDED: Document No. A-65910545
GRANTING: a right and non-exclusive easement over and across Easements "AU-3", "AU-4", "AU-5" and "E-4" for utility purposes, being more particularly described therein

9. Designation of the following easements, as shown on map prepared by Dennis M. Esaki, Land Surveyor, with Esaki Surveying & Mapping, Inc., dated February 23, 2018, and approved by the Planning Commission of the County Of Kauai on March 27, 2018, S-2015-14 and recorded as Document No. A-66800977:

(a) "AU-1" for public parking, public pedestrian and light station access purposes, as to Lot 9;

(b) "AU-2" for public pedestrian and light station access purposes, as to Lots 7, 8 and 9;

(c) "AU-3" for common access and utility purposes, as to Lot 1;

(d) "AU-4" for access and utility purposes, as to Road Lot A;

(e) "AU-5" for access and utility purposes, as to Road Widening Lot;

(f) "AU-6" for access and utility purposes, as to Road Lot A;

(g) "A-1" for public pedestrian access purposes, as to Lot 1 through 6, inclusive;

(h) "A-2" for open space purposes, as to Lot 7 and 8;

(i) "E-1" for utility purposes, as to Lot 10;

(j) "E-2" for utility purposes, as to Lot 7;

(k) "E-3" for utility purposes, as to Lot 4;

(l) "E-4" for utility purposes, as to Lot 1; and

(m)"P-1" for parking purposes, as to Lot 9.

10. The terms and provisions contained in the following:

INSTRUMENT: DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS FOR MAKAHU'ENA ESTATES

DATED: December 24, 2018
RECORDED: Document No. A-69320634

The foregoing includes, but is not limited to, matters relating to no further subdivision and easements over and across the Common Areas.

11. -AS TO LOTS 1, 4, 7, 10, ROAD LOT A AND ROAD WIDENING LOT:-

GRANT

TO: KAUAI ISLAND UTILITY COOPERATIVE and HAWAIIAN TELCOM, INC.

DATED: May 31, 2017
RECORDED: Document No. A-70310791

GRANTING: a right and easement over and across Easements "AU-5", "AU-4", "AU-3", "E-1", "E-2", "E-3" and "E-4" for utility purposes, being more particularly described therein

12. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other matters which a correct survey or archaeological study would disclose.

EXHIBIT C-1

County of Kaua'i
State of Hawai'i



Overview



Legend

Parcels

Roads

Parcel ID	280210700000	**Situs/Physical Address**	PEE RD	**Total Market Value**	$1,450,400	**Last 2 Sales**		
				Total Assessed Value	$1,450,400	**Date**	**Price**	**Reason**
Acreage	1.001	**Mailing Address**	MAKAHUENA-PREFERRED A LLC	**Total Exemptions**	$0	n/a	0	n/a
Class	RESIDENTIAL		111 E BROADWAY STE 100	**Total Net Taxable Value**	$1,450,400	n/a	0	n/a
			SALT LAKE CITY UT 84111					

Brief Tax Description LOT 3 POR GR 1416 FP 354 MAKAHUENA TRACT 1.001 AC DES
(Note: Not to be used on legal documents)

The Geographic Information Systems (GIS) maps and data are made available solely for informational purposes. The GIS data is not the official representation of any of the information included, and do not replace a site survey or legal document descriptions. The County of Kauai (County) makes or extends no claims, representations or warranties of any kind, either express or implied, inluding, without limitation, the implied warranties of merchantability and fitness for a particular purpose, as to the quality, content, accuracy, currency, or completeness of the information, text, maps, graphics, links and other items contained in any of the GIS data. In no event shall the County become liable for any errors or omissions in the GIS, and will not under any circumstances be liable for any direct, indirect, special, incidental, consequential, or other loss, injury or damage caused by its use or otherwise arising in connection with its use, even if specifically advised of the possibility of such loss, injury or damage. The data and or functionality on this site may change periodically and without notice. In using the GIS data, users agree to indemnify, defend, and hold harmless the County for any and all liability of any nature arising out of or resulting from the lack of accuracy or correctness of the data, or the use of the data.

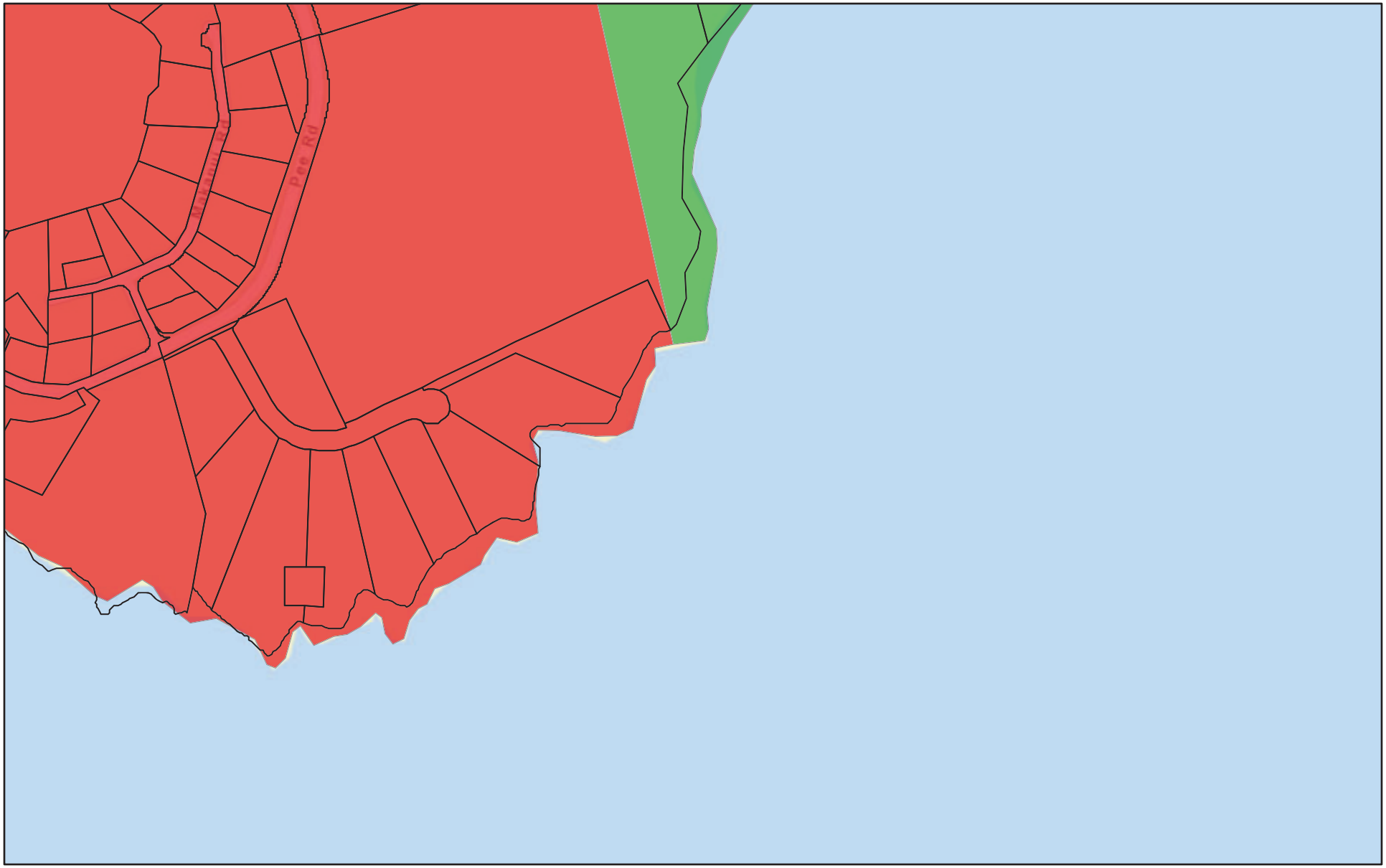
Date created: 9/29/2021
Last Data Uploaded: 9/29/2021 7:08:13 AM

Developed by Schneider GEOSPATIAL

EXHIBIT C-1

EXHIBIT C-2

Hawaii SLUD Locator



September 14, 2020

TMK Parcels

State Land Use Districts

Urban

Conservation

1:4,514

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

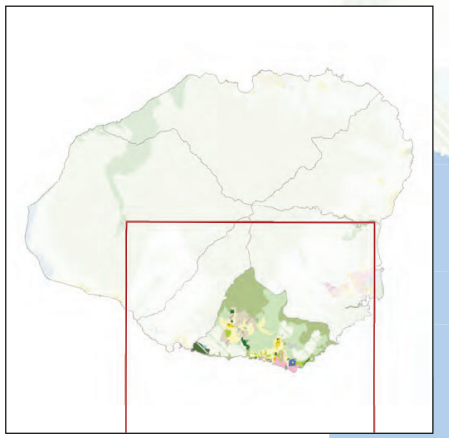
EXHIBIT C-2

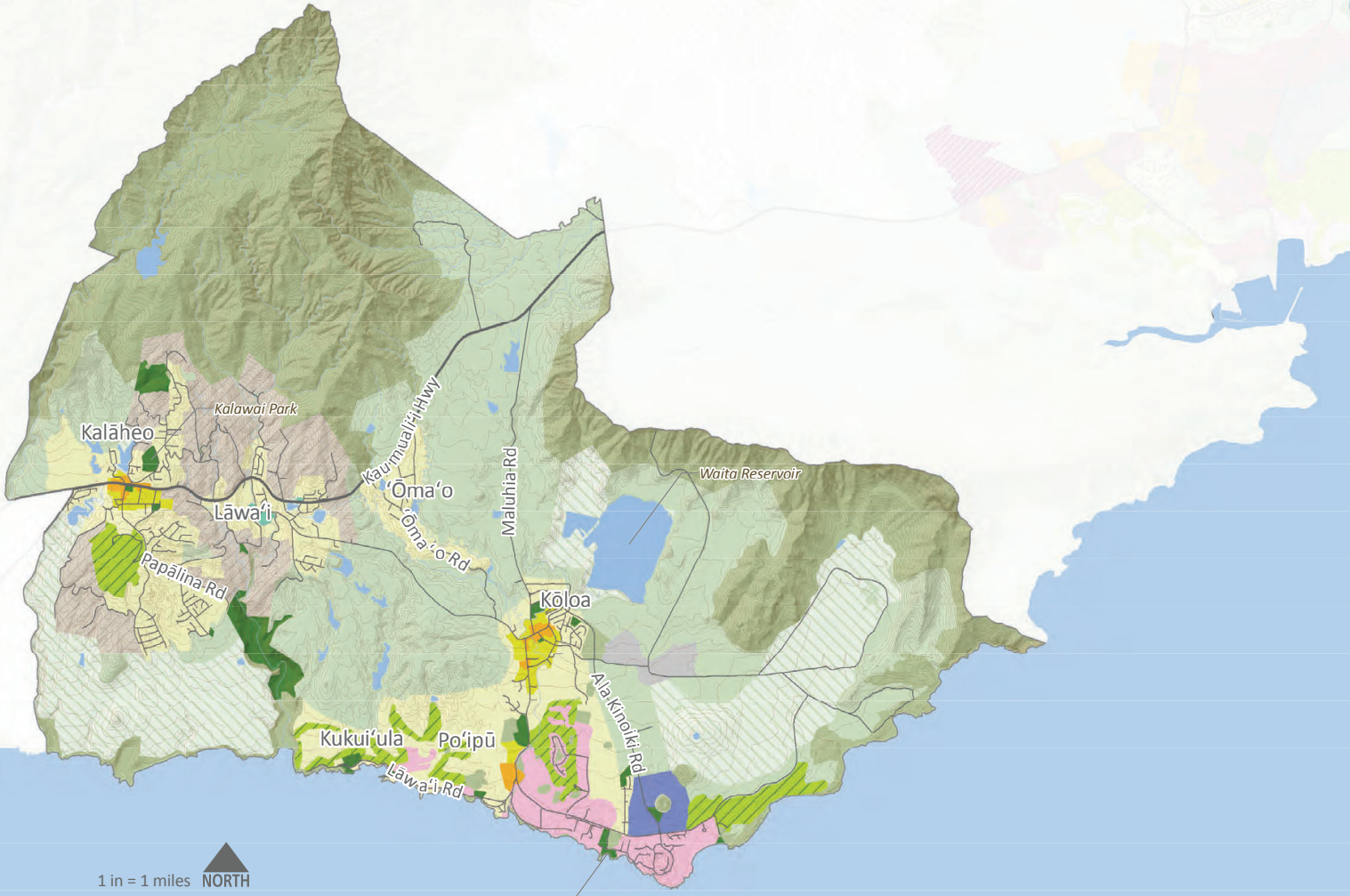
EXHIBIT C-3

ONLINE VERSION

Figure 5-4 South Kaua'i Land Use Map

- Planning District Boundary
- Major Roads
- Roads
- Streams
- Reservoirs
- Natural
- Agriculture
- Agriculture (IAL)
- Parks and Recreation
- Golf Course
- Homestead
- Residential Community
- Neighborhood Center
- Neighborhood General
- Large Town
- Small Town
- Resort
- Industrial
- Transportation
- Provisional Agriculture





ONLINE VERSION

EXHIBIT C-3

EXHIBIT C-4


R-4
R-10
R-6
ST-P
R-4
R-6
R-4
R-10
R-20
C-N
R-10
POIPU
ROAD
R-20
RR-20
R-20
ST-P ST-C
RR-20
R-4
R-10
RR-10
R-4
R-10
R-10
R-4
RR-10
R-20
ST-P
R-20
P A C I F I C
LEGEND
TIME SHARE BOUNDARY
SCALE IN FEET
0 200 400 600 800 1000
ZM-PO 300
POIPU
PLANNING DEPARTMENT
COUNTY OF KAUAI
LIHUE, KAUAI, HAWAII
DECEMBER, 1959
LATEST REVISION
THE PREPARATION OF THIS MAP WAS FINANCED IN PART THROUGH AN URBAN PLANNING GRANT FROM THE HOUSING AND HOME FINANCE AGENCY, UNDER THE PROVISIONS OF SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.
LEGEND
ZONING DISTRICTS
RESIDENTIAL DISTRICT
RESORT DISTRICT
COMMERCIAL DISTRICT
NEIGHBORHOOD
GENERAL
INDUSTRIAL DISTRICT
LIMITED
GENERAL
AGRICULTURE DISTRICT
OPEN DISTRICT
SPECIAL TREATMENT DISTRICT
PUBLIC
CULTURAL/ HISTORIC
SCENIC/ ECOLOGICAL
SPECIAL PLANNING AREA
PROJECT DISTRICT
STATE LAND USE DISTRICTS
URBAN DISTRICT
RURAL DISTRICT
AGRICULTURE DISTRICT
CONSERVATION DISTRICT
ADOPTED BY COUNTY OF KAUAI
Adopted 3-25-72, by PLANNING COMMISSION
Chairman, Planning Commission
Approved 3-31-72, by EXECUTIVE BRANCH
Mayor
Adopted 4-18-72, by COUNTY COUNCIL (Bill No 164)
Chairman, Council
Enacted as Ordinance No. 164 (Effective Date 9-1-72)
ADOPTED BY COUNTY OF KAUAI
KOLOA-POIPU-KALAHEO DEVELOPMENT PLAN
Adopted 11-25-81, by PLANNING COMMISSION
Chairman, Planning Commission
Approved 2-22-83, by EXECUTIVE BRANCH
Mayor
Adopted 3-17-83, by COUNTY COUNCIL
Chairman, Council

EXHIBIT C-4

EXHIBIT C-5

Figure 4-1: Land Use Map

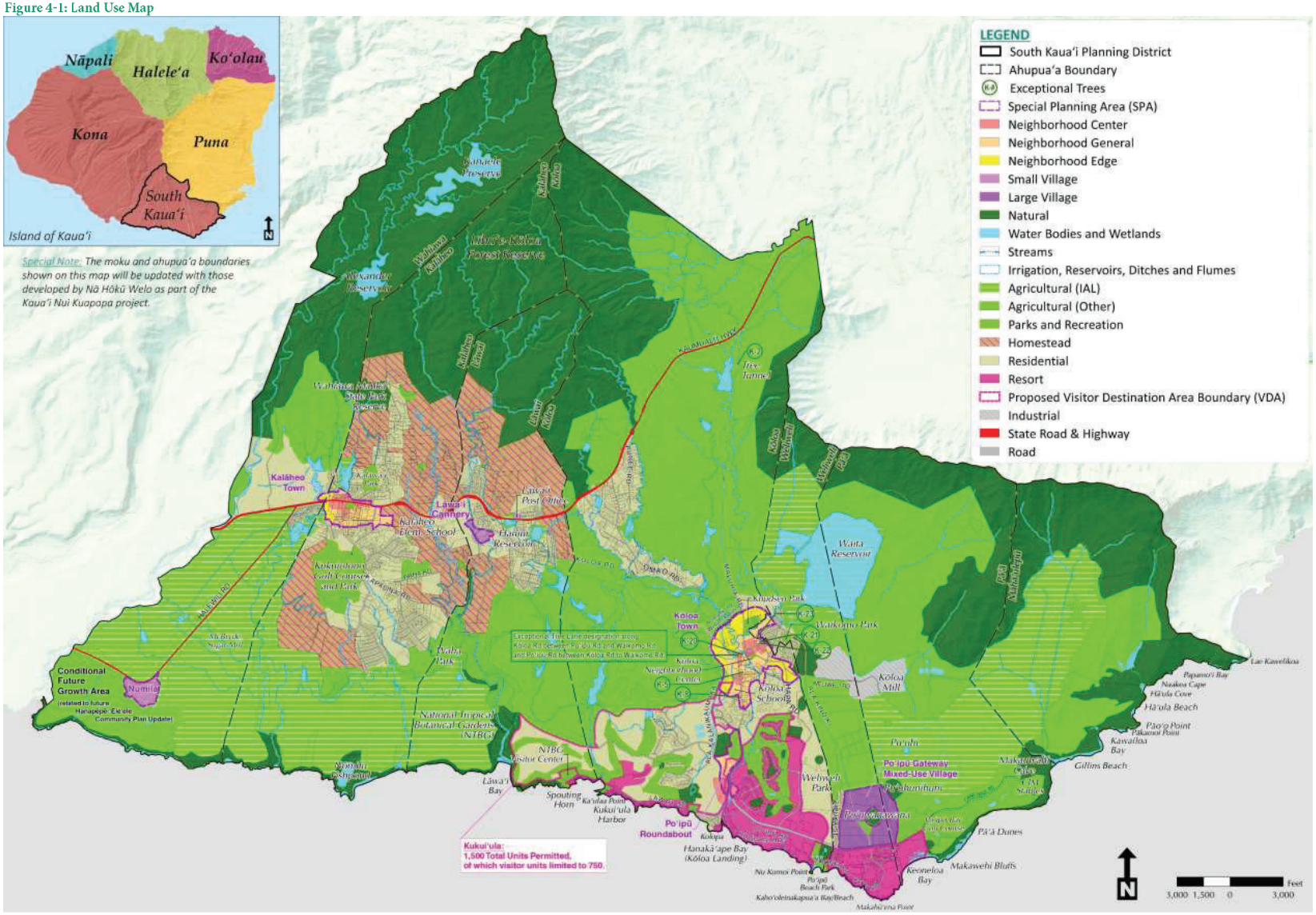


EXHIBIT C-5

EXHIBIT C-6

Hawaii SMA Locator



September 14, 2020

TMK - Neighbor Islands

Special Management Area (SMA)

EXHIBIT C-6

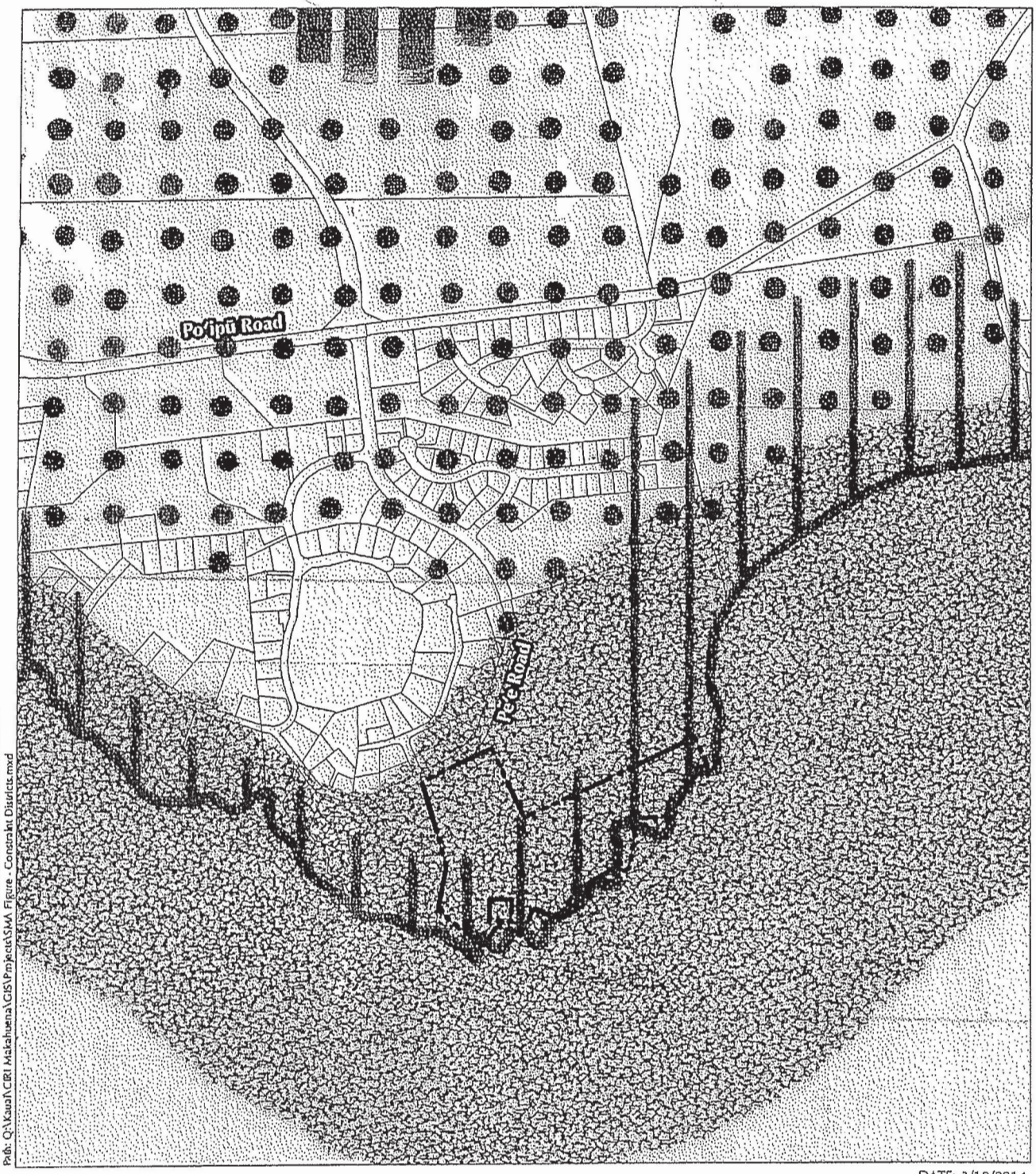
1:4,514

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

EXHIBIT C-7



PDF: Q:\Kauai\CIRI Makahuena\PDF\2013-06 SMA Exhibit\Makahuena Constraint Districts
Path: Q:\Kauai\CIRI Makahuena\GIS\Projects\SMA Figure - Constraint Districts.mxd

DATE: 3/19/2014

LEGEND

Property Boundary

Tax Map Key (TMK) 2012

County Constraint Districts

Flood S-FL

Soils S-SO

Slope S-SL

Shore S-SH

Constraint Districts

Makahū'ena Point

CIRI Land Development Company

Island of Kaua'i

North

Linear Scale (feet)

0 200 400 800

PBR HAWAII & ASSOCIATES, INC.

Source: State Land Use Commission (2010)

Disclaimer: This Graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

EXHIBIT C-7

EXHIBIT C-8

ONLINE VERSION



Figure 5-11 South Kaua'i Heritage Resource Map

Registered Historic Sites
- State
- National
- State & National
- Cultural Features
- Priority Public Access Points
- Fish Ponds
- Streams & Waterbodies
- Major Roads
- Roads

- Kōloa Scenic Byway
- Trails
- Planning District Boundary
- Ahupua'a Boundaries
- Wetlands
- Coral Reefs
- Regulated Fishing Areas
- State & County Parks
- Preserves

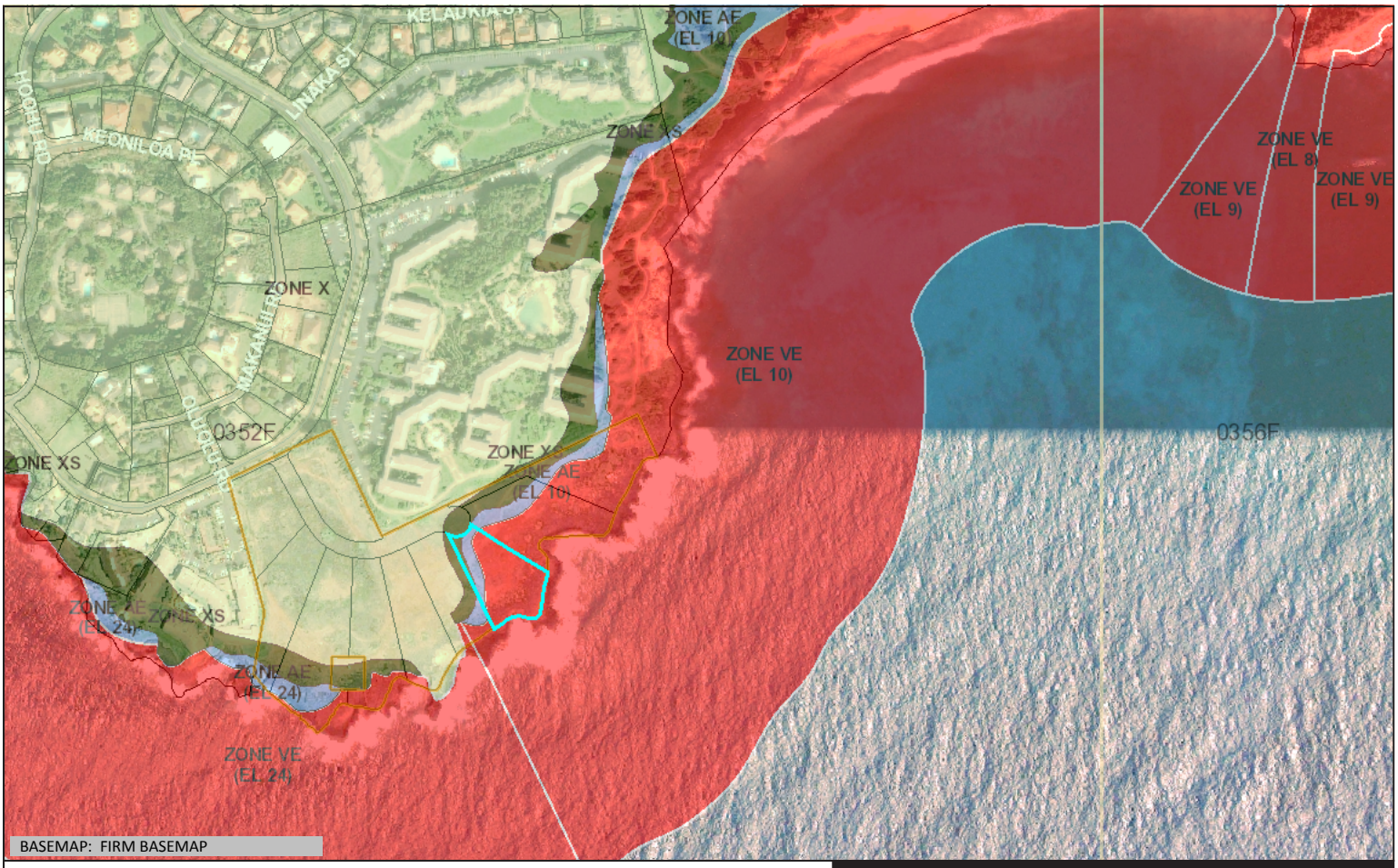
- Reservoirs
- Traditional Cultivation Areas
- Sand Dunes
- Open Space Acquisition Priorities
- Critical Habitat

Threatened & Endangered Species
- High Density
- Very High Density

EXHIBIT C-8

ONLINE VERSION

EXHIBIT C-9



Flood Hazard Assessment Report

www.hawaiinfip.org

Property Information

COUNTY:	KAUAI
TMK NO:	(4) 2-8-021:070
WATERSHED:	MAHAULEPU
PARCEL ADDRESS:	ADDRESS NOT DETERMINED KOLOA, HI 96756

Notes:

Flood Hazard Information

FIRM INDEX DATE:	FEBRUARY 26, 2021
LETTER OF MAP CHANGE(S):	16-09-0378A, 16-09-0391A, 19-09-1672A
FEMA FIRM PANEL:	1500020352F
PANEL EFFECTIVE DATE:	NOVEMBER 26, 2010

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/

0 400 800 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.

EXHIBIT C-9

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	Lots 45 through 47, 58 through 61 and a portion of Parcel L-3, Makahuena Tract, as described in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.870, -159.443 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
L-3	--	Makahuena Tract	--	Portion of Property	X (shaded)	10.0 to 24.0 feet	--	10.0 to 24.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
ZONE V
PORTIONS REMAIN IN THE SFHA

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in a Coastal High Hazard Area or the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the Coastal High Hazard Area and the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

Parcel L-3

BEGINNING at a ½" pipe located at the northeast corner of Lot L-3, a parcel of land being a portion of Grant 1416 to Eke Opunui, Makahuena Tract at Weliweli, Koloa, Island of Kauai, State of Hawaii, Tax Map Key: (4) 2-8-021: 041, having a latitude of 21.870954 and a longitude of -159.441649, and running in bearings measured clockwise from the point of beginning as shown on the attached Exhibit A; thence S26°01'00'E, 110.36 feet; thence S31°46'09"W, 49.24 feet; thence, S77°27'05"W, 63.70 feet; thence, S37°39'37"W, 38.00 feet; thence, S65°05'45"W, 39.07 feet; thence, S37°39'37"W, 30.00 feet; thence, S09°53'44"E, 24.39 feet; thence, S37°39'37"W, 107.44 feet; thence, N69°52'26"W, 90.18 feet; thence, S32°36'10"W, 72.35 feet; thence, S87°31'11"W. 12.22 feet; thence, S32°36'10"W, 15.83 feet; thence, S02°20'20"E, 17.46 feet; thence, S32°36'10"W, 42.00 feet; thence, S36°56'14"E, 89.47 feet; thence, S28°17'21"W, 113.52 feet; thence, S61°36'32"W, 166.40 feet; thence, S72°15'15"W, 42.12 feet; thence, S34°24'32"W, 17.02 feet; thence, S61°36'32W, 20.00 feet; thence, S48°47'18"E, 31.84 feet; thence, S42°14'17"W, 110.80 feet; thence, N31°01'00"W, 167.34 feet; thence, N64°12'18"E, 62.11 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 75.00 feet; thence, N18°59'00"E, 35.36 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 244.80 feet to the POINT OF BEGINNING

ZONE V (This Additional Consideration applies to the preceding 1 Property.)

A portion of this property, but not the subject of the Determination/Comment Document, is located within a Coastal High Hazard Area (Zone V, VE or V1-30). Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. No construction using fill for structural support or that may increase flood damage to other property may take place in these areas.

PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.)

Portions of this property, but not the subject of the Determination/Comment document, may remain in the Special Flood Hazard Area. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	Lots 45 through 47, 58 through 61 and a portion of Parcel L-3, Makahuena Tract, as described in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.870, -159.443 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
45	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	18.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION
DETERMINATION TABLE (CONTINUED)

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in a Coastal High Hazard Area or the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the Coastal High Hazard Area and the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

Parcel L-3

BEGINNING at a ½" pipe located at the northeast corner of Lot L-3, a parcel of land being a portion of Grant 1416 to Eke Opunui, Makahuena Tract at Weliweli, Koloa, Island of Kauai, State of Hawaii, Tax Map Key: (4) 2-8-021: 041, having a latitude of 21.870954 and a longitude of -159.441649, and running in bearings measured clockwise from the point of beginning as shown on the attached Exhibit A; thence S26°01'00'E, 110.36 feet; thence S31°46'09"W, 49.24 feet; thence, S77°27'05"W, 63.70 feet; thence, S37°39'37"W, 38.00 feet; thence, S65°05'45"W, 39.07 feet; thence, S37°39'37"W, 30.00 feet; thence, S09°53'44"E, 24.39 feet; thence, S37°39'37"W, 107.44 feet; thence, N69°52'26"W, 90.18 feet; thence, S32°36'10"W, 72.35 feet; thence, S87°31'11"W. 12.22 feet; thence, S32°36'10"W, 15.83 feet; thence, S02°20'20"E, 17.46 feet; thence, S32°36'10"W, 42.00 feet; thence, S36°56'14"E, 89.47 feet; thence, S28°17'21"W, 113.52 feet; thence, S61°36'32"W, 166.40 feet; thence, S72°15'15"W, 42.12 feet; thence, S34°24'32"W, 17.02 feet; thence, S61°36'32W, 20.00 feet; thence, S48°47'18"E, 31.84 feet; thence, S42°14'17"W, 110.80 feet; thence, N31°01'00"W, 167.34 feet; thence, N64°12'18"E, 62.11 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 75.00 feet; thence, N18°59'00"E, 35.36 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 299.60 feet; thence, N26°01'00"W, 100.00 feet; thence, N63°59'00"E, 244.80 feet to the POINT OF BEGINNING

DETERMINATION TABLE (CONTINUED)

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	**OUTCOME** WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
46	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	20.0 feet
47	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	20.5 feet
58	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	26.5 feet
59	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	20.5 feet

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	**OUTCOME** WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
60	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	23.0 feet
61	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	33.0 feet

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	Lots 48, 49 and 50, Makahuena Tract, as described in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii
	COMMUNITY NO.: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.870, -159.443 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
48	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	23.0 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

DETERMINATION TABLE (CONTINUED)

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration



INSET
SEE INSET
SEE INSET
SEE INSET
CIRI Land Development Co.
Poipu Suite Partners
"THE POINTE AT POIPU"
LAUKAHI RD
EHUKAI RD
MAKAHUENA TRACT
OLUOLU RD.
MAKAHUI ROAD
OLILI
TRUE NORTH
NORTH
NTS
WELIWELI PAA BOUNDARY
PORTION OF MAKAHUENA TRACT (FILE PLAN 354), WELIWELI, KOLOA, KAUAI
Owners, lessees, & vendees name recorded on this tax map print may not be current. Please refer to computer and history sheets for current owners.

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

DETERMINATION TABLE (CONTINUED)

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	**OUTCOME** WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
49	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	26.5 feet
50	--	Makahuena Tract	--	Property	X (shaded)	10.0 feet	--	33.0 feet

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	KAUAI COUNTY, HAWAII (Unincorporated Areas)	A portion of Makahuena Tract described as Ehukai Road, in the Quitclaim Deed recorded as Document No. 96-068054, in the Office of the Bureau of Conveyances, Kauai County, Hawaii
	COMMUNITY NO: 150002	
AFFECTED MAP PANEL	NUMBER: 1500020352F	
	DATE: 11/26/2010	
FLOODING SOURCE: PACIFIC OCEAN		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.869624; -159.443202 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
Ehukai Road	--	Makahuena Tract	--	Property	X (shaded)	--	--	--

Special Flood Hazard Area (SFHA) – The **SFHA** is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below)

ZONE V

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we determined that the structure(s) on the property is/are not located in a Coastal High Hazard Area or the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the Coastal High Hazard Area and the SFHA located on the effective NFIP map; therefore, the federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION – COASTAL HIGH HAZARD AREA DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

ZONE V (This Additional Consideration applies to the preceding property(ies))

A portion of this property, but not the subject of the Determination/Comment Document, is located within a Coastal High Hazard Area (Zone V, VE or V1-30). Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. No construction using fill for structural support or that may increase flood damage to other property may take place in these areas.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

EXHIBIT C-10

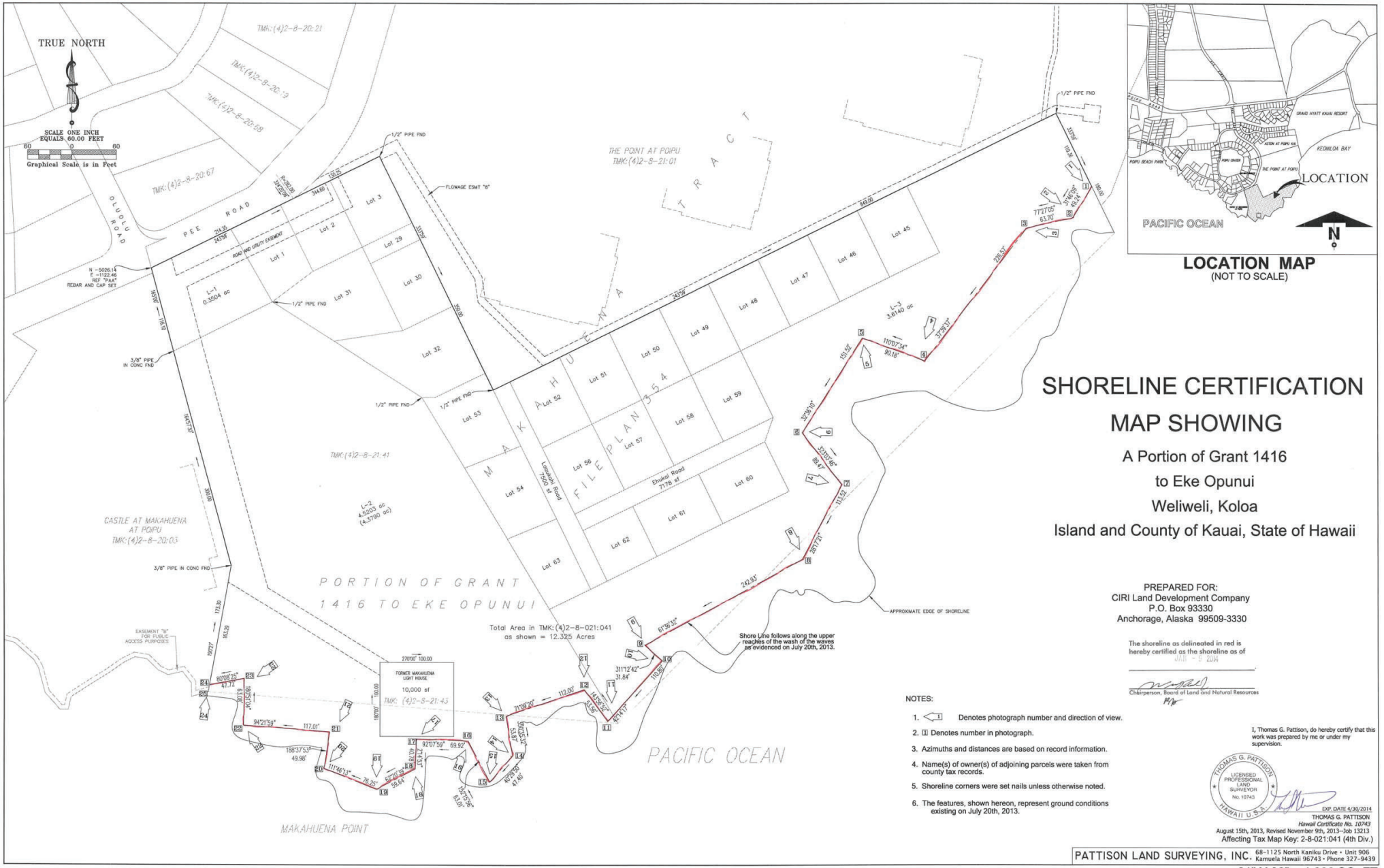
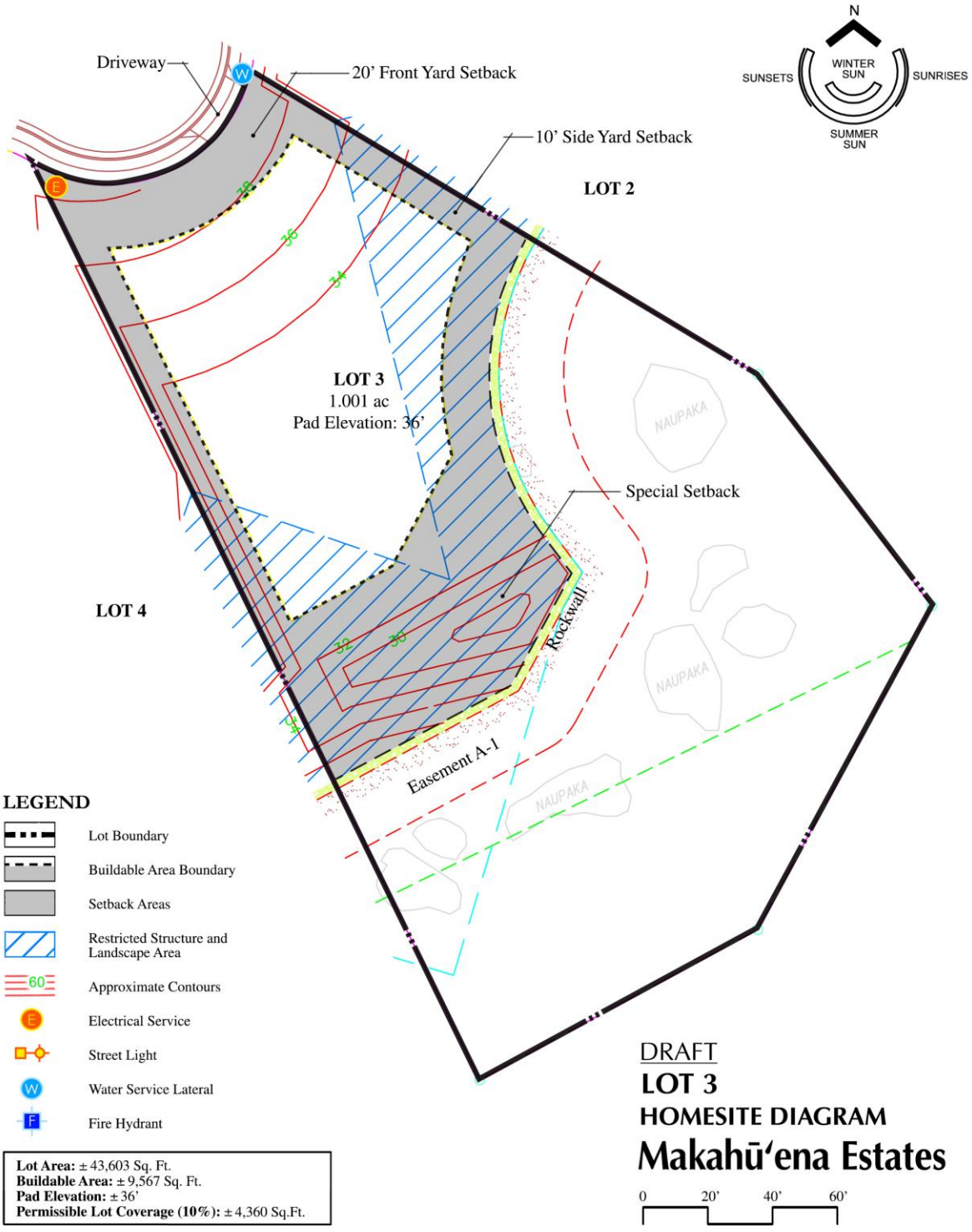

TRUE NORTH
SCALE ONE INCH EQUALS 60.00 FEET
Graphical Scale is in Feet
LOCATION MAP
(NOT TO SCALE)
LOCATION
PACIFIC OCEAN
KEONILOA BAY
SHORELINE CERTIFICATION
MAP SHOWING
A Portion of Grant 1416
to Eke Opunui
Weliweli, Koloa
Island and County of Kauai, State of Hawaii
PREPARED FOR:
CIRI Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509-3330
The shoreline as delineated in red is hereby certified as the shoreline as of
Chairperson, Board of Land and Natural Resources
NOTES:
1. Denotes photograph number and direction of view.
2. Denotes number in photograph.
3. Azimuths and distances are based on record information.
4. Name(s) of owner(s) of adjoining parcels were taken from county tax records.
5. Shoreline corners were set nails unless otherwise noted.
6. The features, shown hereon, represent ground conditions existing on July 20th, 2013.
I, Thomas G. Pattison, do hereby certify that this work was prepared by me or under my supervision.
THOMAS G. PATTISON
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10743
HAWAII U.S.A.
EXP. DATE 4/30/2014
THOMAS G. PATTISON
Hawaii Certificate No. 10743
August 15th, 2013, Revised November 9th, 2013–Job 13213
Affecting Tax Map Key: 2-8-021:041 (4th Div.)
PATTISON LAND SURVEYING, INC. 68-1125 North Kaniku Drive • Unit 906 Kamuela Hawaii 96743 • Phone 327-9439
21" X 32" = 4.666 SQ. FT.
PORTION OF GRANT
1416 TO EKE OPUNUI
MAKAHUENA TRACT
FILE PLAN 354
PACIFIC OCEAN
MAKAHUENA POINT
Total Area in TMK: (4)2-8-021:041
as shown = 12.325 Acres
Shore Line follows along the upper reaches of the wash of the waves as evidenced on July 20th, 2013.
APPROXIMATE EDGE OF SHORELINE
CASTLE AT MAKAHUENA AT POIPU
TMK: (4)2-8-20:03
THE POINT AT POIPU
TMK: (4)2-8-21:01
TMK: (4)2-8-21:41
TMK: (4)2-8-20:21
TMK: (4)2-8-20:19
TMK: (4)2-8-20:58
TMK: (4)2-8-20:67
PEE ROAD
OLUOLU ROAD
FLOWAGE ESMT "8"
1/2" PIPE FND
3/8" PIPE IN CONC FND
EASEMENT "B" FOR PUBLIC ACCESS PURPOSES
FORMER MAKAHUENA LIGHT HOUSE
10,000 sf
TMK: (4)2-8-21:43
Lot 1
Lot 2
Lot 3
Lot 29
Lot 30
Lot 31
Lot 32
Lot 45
Lot 46
Lot 47
Lot 48
Lot 49
Lot 50
Lot 51
Lot 52
Lot 53
Lot 54
Lot 56
Lot 57
Lot 58
Lot 59
Lot 60
Lot 61
Lot 62
Lot 63
Lasukahi Road 7500 sf
Ehukai Road 7178 sf
L-1 0.3504 ac
L-2 4.5203 ac (4.3790 ac)
L-3 3.6140 ac

EXHIBIT C-10



The Developer makes no representations regarding the need for, or the extent of any required finish grading, fill and/or drainage improvements in connection with construction on a Lot. The locations of any features, walls, trees, grades, setbacks, easements areas, zoning lines, buildable area, pad elevation and utilities depicted on this diagram are only approximations and are not intended to be and do not constitute any representations or warranty by the Developer or their agents. Purchasers are required to verify same prior to commencement of construction. The Developer and their agents make no representations, assurances or warranty and shall have no liability with respect to the accuracy of information or other items referred to on this diagram.

Kaua'i shoreline change



July 12, 2021

Kaua'i transects historical shoreline change rates (ft/yr)

> 3.3

< -3.3

Kaua'i low water marks (LWM)

03/04/1988

1927

12/09/2014

10/21/2007

04/12/1975

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Resource Mapping Hawaii, Maxar

EXHIBIT C-11

NCG

C

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
April 03, 2017 8:02 AM
Doc No(s) A – 63020561

/s/ LESLIE T. KOBATA
REGISTRAR

1 1/1 JMV
B – 32971490

LAND COURT REGULAR SYSTEM

Return By Mail [X] Pick-Up [ ] To:

CARLSMITH BALL LLP

OFFICE OF THE COUNTY CLERK
COUNCIL SERVICES DIVISION
4396 RICE STREET SUITE 209
LĪHU'E HI 96766

Telephone: (808) 523-2537

TITLE OF DOCUMENT:

GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS

PARTIES TO DOCUMENT:

GRANTOR: CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation
725 E. Fireweed Lane, Suite 800, Anchorage, AK 99503

GRANTEE: COUNTY OF KAUA'I, a political subdivision of the State of Hawai'i
4444 Rice Street, Suite 220
Līhu'e, Kaua'i, Hawai'i 96766

TAX MAP KEY (4) 2-8-021: 41, 044 - 068 TOTAL NUMBER OF PAGES: 25

C 2017-50

EXHIBIT C-11

LAND COURT | REGULAR SYSTEM

Return By Mail [X] Pick-Up [ ] To:

CARLSMITH BALL LLP
1001 Bishop Street
Honolulu, Hawaii 96813

Attention: Jennifer A. Lim
Telephone: (808) 523-2557

TITLE OF DOCUMENT:

GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS

PARTIES TO DOCUMENT:

GRANTOR: CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation
725 E. Fireweed Lane, Suite 800, Anchorage, AK 99503

GRANTEE: COUNTY OF KAUA'I, a political subdivision of the State of Hawai'i
4444 Rice Street, Suite 220
Līhu'e, Kaua'i, Hawai'i 96766

TAX MAP KEY (4) 2-8-021: 041, 044 - 065 (por.) TOTAL NUMBER OF PAGES: __

4820-9849-3218.7.064510-00001

GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS

This Grant of Pedestrian Access and Parking Easements ("**Grant**") is made this 24th day of March, 2017 by and between CIRI LAND DEVELOPMENT COMPANY, an Alaska corporation whose mailing address is 725 E. Fireweed Lane, Suite 800, Anchorage, AK 99503, hereinafter called the "**Grantor**", and the COUNTY OF KAUA'I, a political subdivision of the State of Hawai'i, whose mailing address is 4444 Rice Street, Suite 220, Līhu'e, Kaua'i, 96766, hereinafter called the "**Grantee.**"

RECITALS

I. WHEREAS, Grantor is the owner of certain land located at Weliweli, Koloa, Island and County of Kaua'i, State of Hawai'i described as Kaua'i Tax Map Key Nos. (4) 2-8-021: 041, 044 - 068. The said property is hereinafter referred to as the "**Grantor's Property**" and;

II. WHEREAS, Grantor wishes to convey to the Grantee certain non-exclusive easements across portions of Grantor's Property identified as: (i) Easement AU-1, as more fully described on **Exhibit A** attached hereto and incorporated herein by reference, Easement AU-5 as more fully described on **Exhibit B** attached hereto and incorporated herein by reference, and Easement AU-6 as more fully described on **Exhibit C** attached hereto and incorporated herein by reference, and identified as being for short-term public parking, public pedestrian, and Light Station access purposes (collectively the "**Parking Easement**"); (ii) Easement AU-2, as more fully described on **Exhibit D** attached hereto and incorporated herein by reference, and identified as being for public pedestrian and Light Station access purposes ("**Shoreline Access Easement**"); and (iii) Easement A-1, as more fully described on **Exhibit E** attached hereto and incorporated herein by reference, and identified as being for public pedestrian access purposes ("**Lateral Access Easement**") (collectively the "**Access Easements**" and the portions of Grantor's Property that are subject to the Access Easements shall be hereinafter referred to as the "**Easement Areas**"), all as depicted on **Exhibit F** attached hereto and incorporated herein by reference (Map Dated October 3, 2016); and

III. WHEREAS, pursuant to the provisions of Hawai'i Revised Statutes ("**HRS**") Section 46-6.5 relating to Public Access, the County of Kaua'i has adopted Kauai County Code Section 9-2.9 relating to Public Accessways for Any Subdivision, which provides for implementation of public access over private property in appropriate locations to the coastal shorelines and mountain areas as applicable, by requiring dedication of land for such public access by right-of-way or easement for pedestrian travel as a condition precedent to final subdivision approval, in cases where public access is not already provided; and

IV. WHEREAS, in order to assure that public access is provided within Grantor's Property to and along designated public access areas, the Grantor agrees to grant and Grantee agrees to accept a perpetual, non-exclusive public pedestrian access easement and vehicular parking easement solely for recreational purposes, as that term is defined under HRS § 520-2.

C 2017-50

GRANT OF EASEMENT

In consideration of the foregoing Recitals and in further consideration of the sum of TEN AND NO/100 Dollars ($10.00) and other good and valuable consideration to it paid by the Grantee and subject to all of the terms, conditions and limitations contained herein, the Grantor does hereby declare, grant and convey unto Grantee the Access Easements.

TO HAVE AND TO HOLD the same unto the Grantee and the Grantee's permitted successors and assigns for the purposes stated herein, forever; subject, however, to all encumbrances of record and all of the terms, conditions and limitations stated herein.

EXCEPTING AND RESERVING HOWEVER, from this Grant the right of the Grantor to make use of the land within the Easement Areas in any manner which is not inconsistent with the rights of the Grantee hereunder, and the right to grant other easements within the Easement Areas for such purposes as are not inconsistent with and shall not unreasonable interfere with the rights of the Grantee hereunder.

In consideration of the rights hereby granted and the acceptance thereof and the obligations hereby assumed, the parties mutually covenant and agree as follows:

1. Intent. Grantor is providing the Access Easements to Grantee and the general public solely for recreational purposes, as that term is understood under Chapter 520, HRS. Grantor's intention is to create theParking Easement to be used for short-term vehicular parking purposes by Grantee and the public solely to facilitate recreational access for Grantee and the general public to the open space area at the shoreline of Grantor's Property, and not parking for any other purposes. Grantor's intention is to create the Shoreline Access Easement to be used by Grantee and the public for pedestrian access purposes to the open space area at the shoreline of Grantor's Property. It is Grantor's intention to create the Lateral Access Easement to be used by Grantee and the public for pedestrian access lateral to the shoreline. Motorized vehicles, bicycles, horses, and other means of transportation shall not be permitted within the Shoreline Access Easement or the Lateral Access Easement.

2. Condition of Easement Area. Grantor has not made and does not make any representation or warranty with respect to the condition of the Easement Areas and the Access Easements, and Grantee hereby accepts the Easement Areas and the Access Easements in their "as is" condition. Grantee acknowledges that portions of the Easement Areas are located in rough, rocky and uneven terrain that may not be safe or practical for use by every member of the general public and Grantee has agreed to enter into this Grant of Easement with full knowledge of the physical and inherent conditions of the Easement Area, after having had full opportunity to inspect the Easement Areas.

3. Grantor's Improvements Within Easement Areas. Grantor reserves the right, but shall have no duty, to construct, install, maintain, reconstruct, replace and repair any and all improvements, including but not limited to, parking facilities, pathways, pedestrian walkways, emergency vehicle access, utilities, drainage facilities, walls, fences, trees, plants and other vegetation, within the Easement Areas ("**Grantor's Improvements**"), provided such improvements do not unreasonably interfere with Grantee's rights hereunder. Unless otherwise

C 2017-50

conveyed or dedicated, any such Grantor Improvements shall be and remain the property of the Grantor.

4. Use. Grantee's rights, and the rights of the general public, under this Grant of Easement shall be strictly limited to those necessary to allow Grantee to utilize the Easement Areas for the purposes intended and described herein, and in a manner consistent with the ten (10) lot single-family residential development at Grantor's Property, and subject to further agreement between Grantor and the County. Grantee shall have no right to utilize the Easement Areas for purposes unrelated to the exercise of Grantee's rights hereunder. The Easement Areas as described hereinabove may be used by any members of the general public having the right to use such Easement Areas for "recreational purposes" within the meaning of the Hawai'i Recreational Use Statute, HRS Chapter 520. The purpose of Chapter 520, HRS, is to encourage owners of land to make land and water areas available to the public for recreational purposes by limiting their liability toward persons entering thereon for such purposes. Grantor is providing the Access Easements granted herein consistent with the purposes under Chapter 520, HRS, of making land and water areas available to the public for recreational purposes, and Grantor and Grantee understand and agree that Grantor shall have no duty of care to keep the Access Easements safe for entry or use by others for recreational purposes, or to give any warning of a dangerous condition, use, structure, or activity on such premises to persons entering for such purposes, or to persons entering for a purpose in response to a recreational user who requires assistance, either direct or indirect, including but not limited to rescue, medical care, or other form of assistance.

a. Prohibited Activities Within Easement Area. Grantee and the members of the general public shall not use the Easement Areas for any purpose not expressly permitted herein. Without limiting the foregoing, the following activities are expressly prohibited within the Easement Areas:

(a) removing, injuring, or killing any form of plant or animal life, except for the taking of aquatic life or wildlife, in accordance with the State of Hawaii fishing and hunting laws or as authorized maintenance activities;

(b) releasing any animals or plants except for re-vegetation efforts approved by the Planning Director;

(c) the possession of alcohol, narcotics or non-prescribed drugs, firearms, explosives or other weapons, including fireworks and firecrackers;

(d) dogs, cats or other animals, unless on a leash at all times;

(e) the operation of motorcycles, motorized vehicles, including motorized bicycles and scooters, except wheelchairs and other devises for persons with disability, or as otherwise necessary for construction of improvements expressly permitted by this Grant of Easement, approved in writing by the Grantor, or for maintenance or improvement purposes,

(f) leaving vehicles unattended; motorized vehicles may access only the Parking Easement for short-term parking in connection with the recreational uses permitted herein, any vehicle left unattended for longer than twenty-four hours shall be considered abandoned, and any

abandoned vehicle may be impounded or towed away by the Grantor or the County, at the expense of the vehicle owner;

(g) vehicle maintenance or washing;

(h) camping, sleeping, residing, or overnight parking;

(i) disorderly conduct, including but not limited to, fighting, violent or tumultuous behavior, gambling, making unreasonable noise (taking into account the residential setting), or offensive, abusive or threatening behavior;

(j) setting fires, including fires for cooking;

(k) draining, dumping, or leaving any litter, waste, debris, trash, animal waste, or human waste;

(l) commercial activities, including soliciting, canvassing, begging or peddling of any kind, including, but not limited to, displaying merchandise, demanding or requesting gifts, money or services, or dispensing information;

(m) leaving or abandoning equipment, or any other items, including but not limited to refrigerators, stoves, household garbage, trash, or other forms of waste or debris;

(n) removing, damaging, or disturbing any notice, signage, markers or structures;

(o) destroying, disturbing, or mutilating any geological or natural feature, or digging or removing sand, earth, gravel, mineral, rock fossil, coral or any other substance, or intentionally or wantonly destroying, injuring, defacing, removing, disturbing or possessing any historic or prehistoric sites, objects, ruins, or remains, geologic or built feature, including buildings, walls, signs, equipment, monuments, markers or other structures;

(p) trespassing upon adjacent private properties;

(q) using the Access Easements for other than parking (as to the Parking Easement), or activities other than transit to or from a permitted recreational activity;

(r) using devices that amplify sounds, such as radios, portable stereos, megaphones, etc., unless the sound is audible only in the immediate vicinity of the user; and

(s) disorderly conduct, as defined in HRS Section 711-1101.

5. Exercise of Rights. Each party shall exercise its rights hereunder in such manner as to occasion as little interference as reasonably necessary with the authorized use of the Easement Areas by the other party.

6. Maintenance. Grantee shall have no responsibility or duty to maintain or repair any of the Grantor Improvements.

7. Condemnation. If at any time the Easement Areas, or any part thereof, shall be condemned or taken for any public project by any governmental authority, Grantee shall have the right to claim or recover from the condemning authority, but not from Grantor, such compensation as is payable for the Access Easement, the Easement Areas and the rights granted herein, and Grantor shall have no obligation to provide Grantee any alternative easements to replace those so condemned.

8. Grantee's Indemnification. Grantee and Grantee's agents, servants, employees, invitees and guests, including all members of the general public, shall use the Access Easements and the Easement Areas at their sole risk. Grantee shall indemnify, defend and hold harmless Grantor and Grantor's successors and assigns, against any and all claims and demands for any liability, costs, expenses, attorneys' fees, loss, damage or injury to persons or property, including the claims of its agents, servants, employees, invitees and guests (including but not limited to the general public) that shall or may arise by reason of the use of the Access Easements or the Easement Areas by Grantee and Grantee's agents, servants, employees, invitees and guests (including but not limited to the general public), except to the extent such claims or demands arise solely by reason of Grantor's willful or malicious failure to guard or warn against a dangerous condition, use, or structure which Grantor knowingly creates or perpetuates or by reason of Grantor's willful or malicious failure to guard or warn against a dangerous activity which Grantor knowingly pursues or perpetuates.

9. Hawai'i Revised Statutes Chapters 520; Kauai County Code Section 9-2.9. The parties intend for this Grant of Easement to promote the purposes of HRS Chapter 520 by making land and water areas available to the public for recreational purposes, and as a result that Grantor shall enjoy the limitations in liability and all other benefits and rights set forth in Chapter 520, HRS, including without limitation the protections afforded in Section 520-4(a) and (b), relating to the limited liability of landowners who directly or indirectly invite or permit without charge any person to access their property for recreational purposes. Similarly, the parties intend for this Grant of Easement to promote the purposes of public access, and therefore acknowledge the Grantee's obligation to indemnify Grantor from injury to members of the public who are injured within the Easement Areas.

10. Covenants To Run With The Land. The rights and obligations set forth herein shall be covenants running with Grantor's Property in favor of Grantee, and shall be binding upon, and inure to the benefit of, Grantor and Grantee and their respective permitted successors and assigns.

11. No Liens. Grantee shall take no action nor refrain from taking any action, nor shall Grantee allow or authorize its agents, employees or contractors to take any action or refrain from taking any action, by or as a result of which the Easement Areas, Grantor's Property or any portion thereof shall be made subject to any mechanics' or materialmen's lien or any other attachment, execution or judgment lien, or any other charge or encumbrance whatsoever. Should any such lien, charge or encumbrance or notice thereof be recorded, filed or attached to Grantor's Property (including but not limited to the Easement Areas), Grantee shall immediately pay off the same and cause the same to be satisfied and discharged of record, all at the sole

expense of Grantee. The recordation, filing or attachment of any such lien shall constitute a default by Grantee under this Grant of Easement.

12. Relocation of Easement Area. Grantor reserves the right to relocate, at its sole cost and expense, the Easement Areas or any portion thereof, provided that any relocated Easement Areas shall fulfill the intent of the parties set forth herein; and the County of Kauai Planning Department shall expeditiously approve the relocation and the subsequent redesignation of the Easement Areas.

13. Assignment. This Grant of Easement may be assigned by Grantee to any duly constituted legal successor of Grantee without first obtaining the consent of Grantor. Any other proposed assignment of this Grant of Easement or the rights and obligations contained herein and on the part of Grantee to be observed or performed may not be made without Grantor's prior written consent, which consent may be granted or withheld in Grantor's sole discretion. Grantor may assign its rights and responsibilities under this Grant to a homeowners or similar association in which all owners of lots, units or other interests in the Grantor's Property shall be members.

14. Default. In the event there is a default by Grantee with respect to any of the provisions of this Grant of Easement or Grantee's obligations under it, Grantor shall give Grantee written notice of such default. After receipt of such written notice, Grantee shall have thirty (30) days in which to cure any default, failing which, without prejudice to any other right or remedy hereunder or at law or in equity, Grantor shall have the right to immediately terminate this Grant of Easement and Grantee's rights hereunder, and to record in the Bureau of Conveyances of the State of Hawai'i a "Notice of Cancellation of Easement" which shall be effective to terminate this Grant of Easement and cancel the Access Easements granted hereby. In lieu of or in addition to the "Notice of Cancellation of Easement" referred to above, the parties agree to cooperate in the drafting, execution and recording of a written cancellation of this Grant of Easement. In no event shall Grantor's termination of this Grant of Easement due to Grantee's default be deemed a violation of Grantor's obligations under HRS § 46-6.5, HRS Chapter 205A, Kauai County Code Chapter 9 (Subdivision - Public Accessways), or any other law, rule, or land use permit applicable to the Grantor's Property.

15. Recordation. This Grant of Easement shall be recorded against the land of the Easement Areas at the State of Hawaii Bureau of Conveyances. The Grantor and Grantee agree the recordation of this Grant of Easement at the Bureau of Conveyances shall constitute full and final compliance with all public access requirements for the development of Grantor's Property pursuant to Hawai'i Revised Statutes Section 46-6.5, Hawai'i Revised Statutes Chapter 205A, and Kauai County Code Chapter 9 (Subdivision - Public Accessways).

16. Service of Notice. Any written notice or request required or authorized to be served hereunder shall be deemed delivered and received either upon the actual personal receipt thereof by the receiving party or within three (3) business days after the notice has been posted with the U.S. Mail, return receipt requested, addressed to the receiving party at its address as stated herein, or at such other address as the receiving party may have previously designated to the sending party in writing.

C 2017-50

17. Severability. If any term or provision of this Grant of Easement is determined by a court or competent jurisdiction to be illegal, invalid or unenforceable for any reason whatsoever, such illegality, invalidity or unenforceability shall not affect the legality, validity or enforceability of the remainder of this Grant of Easement.

18. Headings For Reference Only. The headings of the sections and subsections herein are inserted only for convenience and reference and shall in no way define, limit or describe the scope or intent of any provision of this Grant of Easement.

19. Counterparts. This Grant of Easement may be executed simultaneously in two or more counterparts, each of which shall be deemed on original, but all of which together shall constitute one and the same instrument. Signature pages from separate signed copies may be attached to a single copy for purposes of recording.

20. Interpretation. The Grant of Easement shall be interpreted in accordance with the laws of the State of Hawai'i and no preference in interpretation shall be given to either party, each party hereby acknowledging that it has been represented by legal counsel in the negotiation, drafting and execution of this Grant of Easement.

21. Dedication. In the event the Easement Areas, or any portion thereof, are dedicated to and accepted by any governmental authority in fee simple, this Grant shall automatically terminate as to the area so dedicated, and Grantee shall, at Grantor's request, at any time after said dedication, execute such documents as Grantor reasonably requests for the purpose of terminating this Grant.

[Signatures appear on next page]

C 2017-50

IN WITNESS WHEREOF, the parties have executed this Grant Of Pedestrian Access and Parking Easements this 24th day of March, 2017.

GRANTOR:

CIRI LAND DEVELOPMENT COMPANY, a Alaska corporation

By _____
Name: CHAD NUGENT
Its: VICE PRESIDENT

GRANTEE:

COUNTY OF KAUA'I

By _____
Name:
Its:

By _____
Name: Ken M. Shimonishi
Its: Director of Finance

By _____
Name: JADE K. FOUNTAIN-TANIGAWA
Its: County Clerk

C 2017-50

APPROVED:

Director, Department of Planning
County of Kaua'i

County Chief Engineer, Department of Public Works
County of Kaua'i

APPROVED AS TO FORM AND LEGALITY:

County Attorney
County of Kaua'i

C 2017-90

STATE OF ALASKA)
) SS:
THIRD JUDICIAL DISTRICT)

On this Nov. 21, 2016, before me personally appeared Chad Nugent, to me personally known/proved to me on the basis of satisfactory evidence, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

AMANDA MATSON
NOTARY PUBLIC
STATE OF ALASKA

Name: Amanda Matson

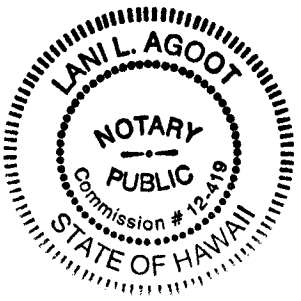
Notary Public, State of Alaska

My commission expires: July 6, 2019

C 2017-50

STATE OF HAWAII)
) SS.
COUNTY OF KAUAI)

On this 11th day of January, 2017, before me appeared Bernard P. Carvalho, Jr., to me personally known, who, being by me duly sworn or affirmed, did say that he is the Mayor of the COUNTY OF KAUAI, a political subdivision of the State of Hawaii, that the seal affixed to the foregoing instrument is the seal of said COUNTY OF KAUAI, that such person executed the foregoing GRANT OF PEDESTRIAN ACCESS ANDPARKING EASEMENTS dated undated at time of notary, which document consists of 23 pages, as the free act and deed of such person and, if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



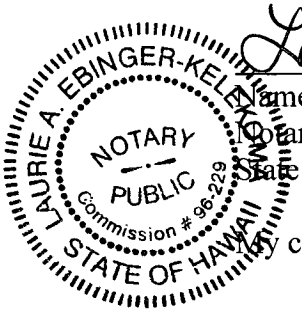
Lani L Agoot
Name of Notary: Lani L Agoot
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: 12.23.20

C 2017-50

STATE OF HAWAII)
) SS.
COUNTY OF KAUAI)

On this 13th day of January, 2017, before me appeared Ken M. Shimonishi, to me personally known, who, being by me duly sworn or affirmed, did say that he is the Director of Finance of the COUNTY OF KAUAI, a political subdivision of the State of Hawaii, that the seal affixed to the foregoing instrument is the seal of said COUNTY OF KAUAI, that such person executed the foregoing GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS dated undated at time of notarization, which document consists of 23 pages, as the free act and deed of such person and, if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Name of Notary: Laurie A. Ebinger-Kelekoma
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: April 10, 2019

C 2017-50

STATE OF HAWAII)
) SS.
COUNTY OF KAUAI)

On this 24th day of March, 2017, before me appeared Jade K. Fountain-Tanigawa, to me personally known, who, being by me duly sworn, did say that she is the County Clerk of the COUNTY OF KAUAI, a political subdivision of the State of Hawaii, that the seal affixed to the foregoing instrument is the seal of said COUNTY OF KAUAI, that such person executed the foregoing GRANT OF PEDESTRIAN ACCESS AND PARKING EASEMENTS dated March 24, 2017, which document consists of 24 pages, as the free act and deed of such person and, if applicable, in the capacity shown, having been duly authorized to execute such instrument in such capacity.

SCOTT K. SATO NOTARY PUBLIC Comm. No. 06-737 STATE OF HAWAII

Name of Notary: SCOTT K. SATO
Notary Public, Fifth Judicial Circuit,
State of Hawaii.

My commission expires: NOVEMBER 19, 2018

SCOTT K. SATO NOTARY PUBLIC Comm. No. 06-737 STATE OF HAWAII

NOTARY PUBLIC CERTIFICATION
Scott K. Sato State of Hawai'i Fifth Judicial Circuit
Commission No. 06-737 Exp: November 19, 2018
No. of Pages: 24 Date of Doc.: mar 24, 2017
Doc. Description: Grant of Pedestrian Access and Parking Easement
Notary Signature: [signature] Date: 05/24/17

c 2017-50

EASEMENT AU-1

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1
Being also Portion of Lot 1 (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the southwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,081.24 feet South and 1,107.69 feet West, thence running by azimuths measured clockwise from true South:

1.	165° 00'	46.86	feet along Parcel 3;
2.	243° 59'	122.30	feet along the remainder of Parcel L-1;
			thence along the remainder of Parcel L-1 and Lot 1, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
3.	287° 29' 30"	27.54	feet;
4.	331° 00'	27.07	feet along the remainder of Lot 1;
5.	63° 59'	152.64	feet along the remainder of Lot 1 and Parcel L-1 to the point of beginning and containing an area of 0.153 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
November 2015

EXHIBIT "A"

C 2017-50

EASEMENT AU-5

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1
Being also Portion of Lot 1 and Lot 2 (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the southwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,026.14 feet South and 1,122.46 feet West, thence running by azimuths measured clockwise from true South:

1.	243° 59'	214.35	feet along the south side of Pee Road;
			thence along the remainder of Lot 2, on a curve to the right with a radius of 282.00 feet, the chord azimuth and distance being:
2.	55° 04' 31"	7.28	feet;
			thence along the remainder of Lot 1 and Lot 2, on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:
3.	31° 27' 07"	16.50	feet;
4.	63° 59'	195.20	feet along the remainder of Lot 1 and Parcel L-1;
5.	165° 00'	10.19	feet along the remainder of Grant 1416 to Eke Oponui to the point of beginning and containing an area of 0.046 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
November 2015

EXHIBIT "B"

L 2017-50

EASEMENT AU-6

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1
Being also Portion of Lot 1 (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the northwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,982.34 feet South and 1,009.92 feet West, thence running by azimuths measured clockwise from true South:

1.	243° 59'	72.90	feet along the remainder of Parcel L-1 and Lot 1;
			thence along the remainder of Lot 1, on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:
2.	349° 02' 41"	12.39	feet;
3.	331° 00'	34.08	feet along the remainder of Lot 1;
4.	63° 59'	50.07	feet along the remainder of Lot 1;
5.	151° 00'	27.07	feet along the remainder of Lot 1;
			thence along the remainder of Lot 1 and Parcel L-1, on a curve to the left with a radius of 20.00 feet, the chord azimuth and distance being:
13.	107° 29' 30"	27.54	feet to the point of beginning and containing an area of 0.055 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2015

EXHIBIT "C"

C 2017-50

EASEMENT AU-2

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcel L-1 and Parcel L-2
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the northwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 5,081.24 feet South and 1,107.69 feet West, thence running by azimuths measured clockwise from true South:

1.	243° 59'	30.56	feet along the remainder of Parcel L-1;
2.	345° 00'	64.88	feet along the remainder of Parcel L-1 and Parcel L-2;
3.	344° 57' 30"	270.03	feet along the remainder of Parcel L-2;
			thence along the remainder of Parcel L-2, on a curve to the left with a radius of 185.00 feet, the chord azimuth and distance being:
4.	307° 28' 45"	225.13	feet;
5.	270° 00'	60.73	feet along the remainder of Parcel L-2;
6.	1° 00'	30.00	feet along the remainder of Parcel L-2;
7.	90° 00'	60.21	feet along Parcel 43 and the remainder of Parcel L-2;
			thence along the remainder of Parcel L-2, on a curve to the right with a radius of 215.00 feet, the chord azimuth and distance being:
8.	127° 28' 45"	261.64	feet;
9.	164° 57' 30"	270.04	feet along Parcel 3;

EXHIBIT "D"

C 2017-50

10. 165° 00' 59.05 feet along Parcel 3 to the point of beginning and containing an area of 0.450 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
November 2015

C 2017-50

EASEMENT A-1

LAND SITUATED AT WELIWELI, KOLOA, KAUAI, HAWAII

Being Portion of Parcels L-2 and L-3
Being also Portion of Lots 46, 47, 59, (File Plan 354)
Being also Portion of Grant 1416 to Eke Oponui

Beginning at the northeast corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation "PAA" being 4,817.12 feet South and 103.71 feet East, thence running by azimuths measured clockwise from true South:

1.	333° 59'	25.89	feet along Lot 2;
2.	37° 39' 37"	317.99	feet along the remainder of Parcel L-3;
			thence along the remainder of Parcel L-3, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
3.	73° 53'35.5"	23.64	feet;
4.	110° 07' 34"	50.64	feet along the remainder of Parcel L-3;
			thence along the remainder of Parcel L-3, on a curve to the left with a radius of 60.00 feet, the chord azimuth and distance being:
5.	71° 21' 52"	75.13	feet;
6.	32° 36' 10"	131.04	feet along the remainder of Parcel L-3 and Lot 59 (File Plan 354);
			thence along the remainder of Lots 59 and 60 (File Plan 354) and the remainder of Ehukai Road, on a curve to the left with a radius of 60.00 feet, the chord azimuth and distance being:
7.	357° 49' 58"	68.43	feet;
8.	323° 03' 46"	16.25	feet along the remainder of Lot 60 (File Plan 354);

EXHIBIT "E"

c 2017-50

		thence along the remainder of Lot 60 (File Plan 354), on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
9. 355° 40'33.5"	21.56	feet;
10. 28° 17' 21"	41.64	feet along the remainder of Lot 60 (File Plan 354) and the remainder of Parcel L-3;
		thence along the remainder of Parcel L-3, on a curve to the right with a radius of 20.00 feet, the chord azimuth and distance being:
11. 44° 56'56.5"	11.47	feet;
12. 61° 36' 32"	387.22	feet along the remainder of Parcels L-2 and L-3;
13. 71° 09' 20"	33.58	feet along the remainder of Parcel L-2;
14. 90° 00'	76.94	feet along the remainder of Parcel L-2 and Makahuena Point Lighthouse Station;
15. 181° 00'	30.00	feet along the remainder of Parcel L-2;
16. 270° 00'	101.57	feet along the remainder of Parcel L-2;
17. 241° 36' 32"	383.94	feet along the remainder of Parcels L-2 and L-3, and Lots 60 through 62, inclusive (File Plan 354);
18. 208° 17' 21"	41.64	feet along the remainder of Lot 60 (File Plan 354);
19. 143° 03' 46"	16.25	feet along the remainder of Lot 60 (File Plan 354);

		thence along the remainder of Lots 59 and 60 (File Plan 354) and the remainder of Ehukai Road, on a curve to the right with a radius of 80.00 feet, the chord azimuth and distance being:
20. 177° 49' 58"	91.25	feet;
21. 212° 36' 10"	131.04	feet along the remainder of Lots 47 and 59 (File Plan 354) and the remainder of Parcel L-3;
		thence along the remainder of Lots 46 and 47 (File Plan 354) and the remainder of Parcel L-3, on a curve to the right with a radius of 80.00 feet, the chord azimuth and distance being:
20. 251° 21' 52"	100.17	feet;
21. 290° 07' 34"	50.64	feet along the remainder of Parcel L-3;
22. 217° 39' 37"	294.41	feet along the remainder of Parcel L-3;
23. 153° 59'	18.42	feet along the remainder of Parcel L-3;
24. 243° 59'	30.00	feet along Lot 2 to the point of beginning and containing an area of 0.608 Acre.



DESCRIPTION PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.

Dennis M. Esaki
Licensed Professional Land Surveyor
Certificate Number 4383

Lihue, Hawaii
December 2015

C 2017-50

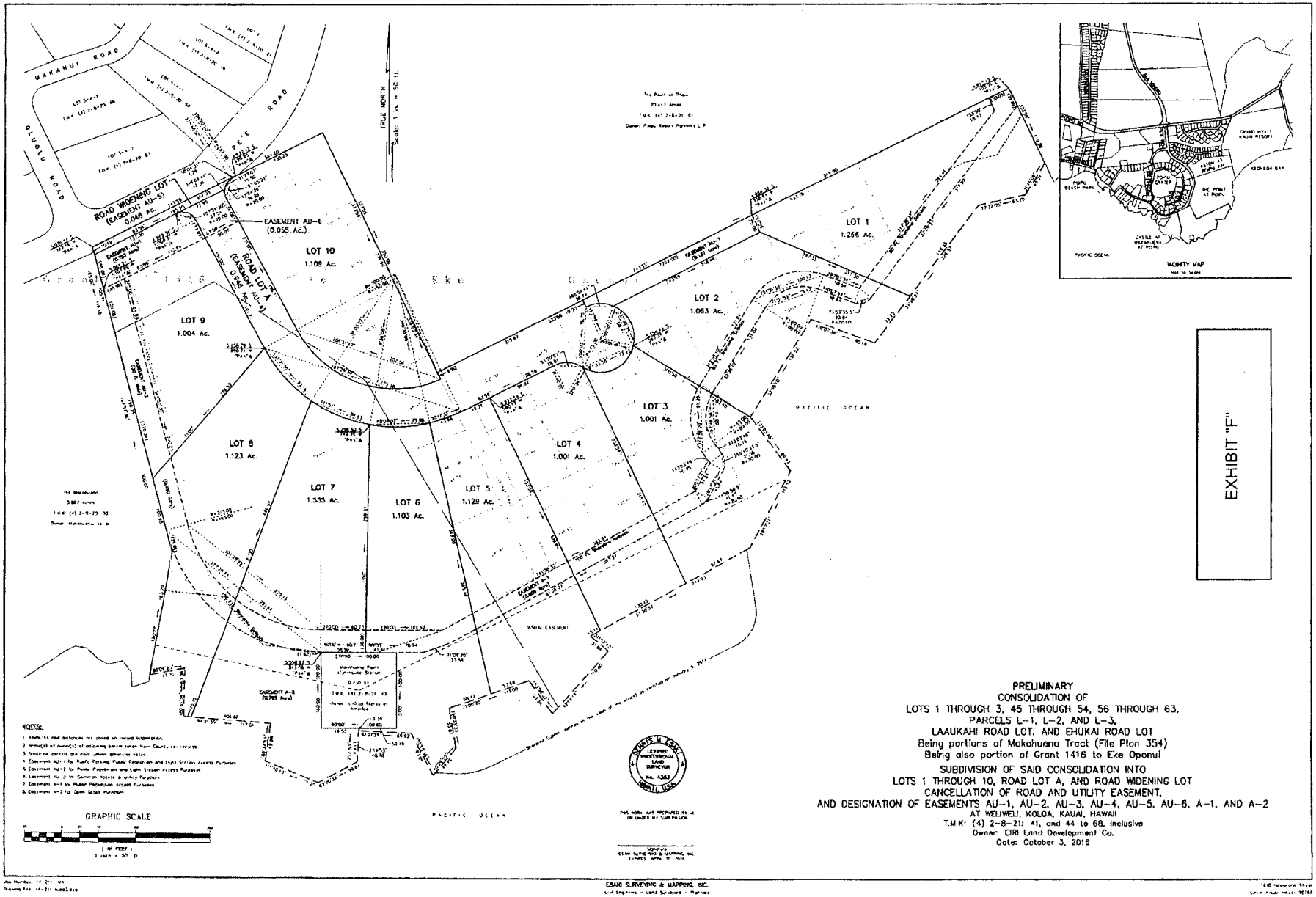


EXHIBIT "F"

PRELIMINARY
CONSOLIDATION OF
LOTS 1 THROUGH 3, 45 THROUGH 54, 56 THROUGH 63,
PARCELS L-1, L-2, AND L-3,
LAAUKAHI ROAD LOT, AND EHUKAI ROAD LOT
Being portions of Makahuena Tract (File Plan 354)
Being also portion of Grant 1416 to Eke Oponui
SUBDIVISION OF SAID CONSOLIDATION INTO
LOTS 1 THROUGH 10, ROAD LOT A, AND ROAD WIDENING LOT
CANCELLATION OF ROAD AND UTILITY EASEMENT,
AND DESIGNATION OF EASEMENTS AU-1, AU-2, AU-3, AU-4, AU-5, AU-6, A-1, AND A-2
AT WELIWELI, KOLOA, KAUAI, HAWAII
T.M.K: (4) 2-8-21: 41, and 44 to 68, Inclusive
Owner: CIRI Land Development Co.
Date: October 3, 2016

ESAKI SURVEYING & MAPPING, INC.

(2017-60)

EXHIBIT C-12

ORDINANCE NO. PM-2017-410 BILL NO. 2647, Draft 1

A BILL FOR AN ORDINANCE AMENDING CHAPTER 8, KAUA'I COUNTY CODE 1987, AS AMENDED, RELATING TO ZONING MAP ZM-PO 300

(CIRI Land Development Company, Applicant) (ZA-2017-2)

BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KAUA'I, STATE OF HAWAI'I:

SECTION 1. The Visitor Destination Area map established in Chapter 8, Article 17, Kaua'i County 1987, as amended, is hereby amended to include the properties shown on Zoning Map ZM-PO 300 (Po'ipū), which is attached hereto and incorporated herein, and identified by Tax Map Key Nos. (4) 2-8-21:041 and 2-8-21:044-068, subject to the following conditions:

a. The issuance of final approval of Subdivision S-2015-14 for a ten-lot subdivision;

b. The exclusion of one (1) lot from the Visitor Destination Area designation as shown on the zoning map attached to the ordinance that amends the zoning district boundary of the subject property;

c. The restriction on each of the ten (10) lots included in Subdivision S-2015-14 to one dwelling per lot. The Applicant shall be required to enter into a Workforce Housing Agreement with the Kaua'i County Housing Agency agreeing to execute a Deed Restriction that will create a restrictive covenant which will run with the land in perpetuity, unless modified per the terms found in the Deed Restriction;

d. Within sixty (60) days of the adoption of this ordinance, a deed restriction that prohibits owners, their heirs, successors, and assigns from causing the development of more than ten (10) dwelling units on the entirety of the subject property must be recorded with the Bureau of Conveyances of the State of Hawai'i.

e. Within sixty (60) days of the adoption of the subject ordinance, this ordinance authorizing the zoning amendment to designate nine (9) of the lots in Subdivision S-2015-14 to the Visitor Destination Area must be recorded with the Bureau of Conveyances of the State of Hawai'i.

SECTION 2. The Director of Planning is directed to note the boundary change on official Zoning Map ZM-PO 300 on file with the Department of Planning. All applicable provisions of the Comprehensive Zoning Ordinance shall apply to the area demarcated by the new boundary.

EXHIBIT C-12

SECTION 3. Severability. The invalidity of any word, section, clause, paragraph, sentence, part or portion of this ordinance shall not affect the validity of any other part of this ordinance that can be given effect without such invalid part or parts.

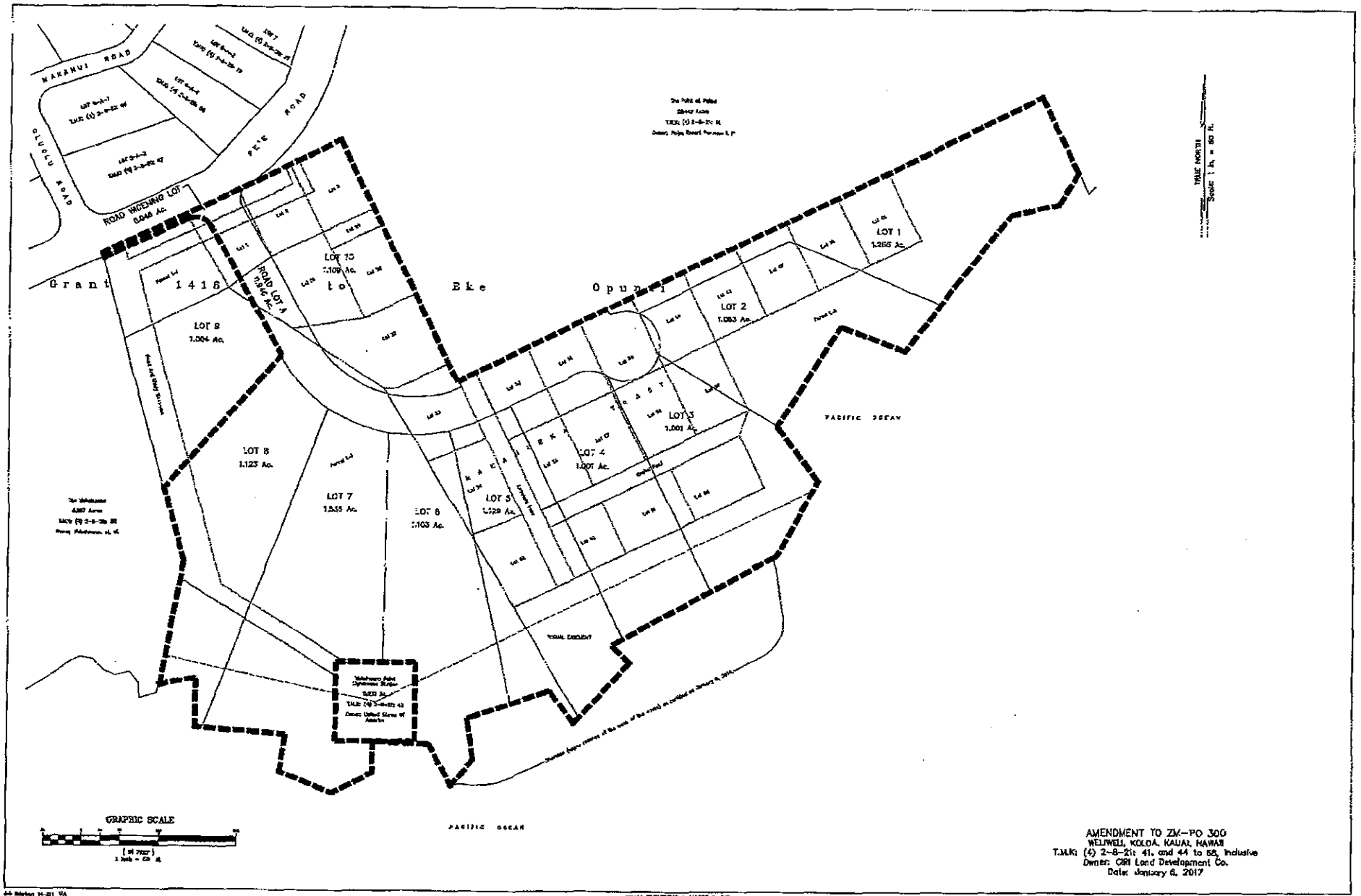
SECTION 4. This ordinance shall take effect upon its approval.

Introduced by: /s/ MASON K. CHOCK
(By Request)

DATE OF INTRODUCTION:

April 12, 2017

Līhu'e, Kaua'i, Hawai'i
V:\BILLS\2016-2018 TERM\Bill No. 2647 D1 AMK_dmc.doc



AMENDMENT TO ZM-PD 300
WELIWELI, KOLOA, KAUAI, HAWAII
T.M.K: (4) 2-8-21: 41, and 44 to 58, inclusive
Owner: CRI Land Development Co.
Date: January 6, 2017

CERTIFICATE OF THE COUNTY CLERK

I hereby certify that heretofore attached is a true and correct copy of Bill No. 2647, Draft 1, which was adopted on second and final reading by the Council of the County of Kaua'i at its meeting held on May 31, 2017 by the following vote:

FOR ADOPTION:	Brun, Chock, Kaneshiro, Kawakami, Rapozo	TOTAL – 5*,
AGAINST ADOPTION:	Yukimura	TOTAL – 1,
EXCUSED & NOT VOTING:	Kagawa	TOTAL – 1,
RECUSED & NOT VOTING:	None	TOTAL – 0.

*Pursuant to Rule No. 5(b) of the Rules of the Council of the County of Kaua'i, Councilmember Chock was noted as silent, but shall be recorded as an affirmative vote for the motion.

Līhu'e, Hawai'i
May 31, 2017

Jade K. Fountain-Tanigawa
County Clerk, County of Kaua'i

ATTEST:

Mel Rapozo
Chairman & Presiding Officer

DATE OF TRANSMITTAL TO MAYOR:

June 1, 2017

Approved this 7th day of

June, 2017.

Bernard P. Carvalho, Jr.,
Mayor
County of Kaua'i

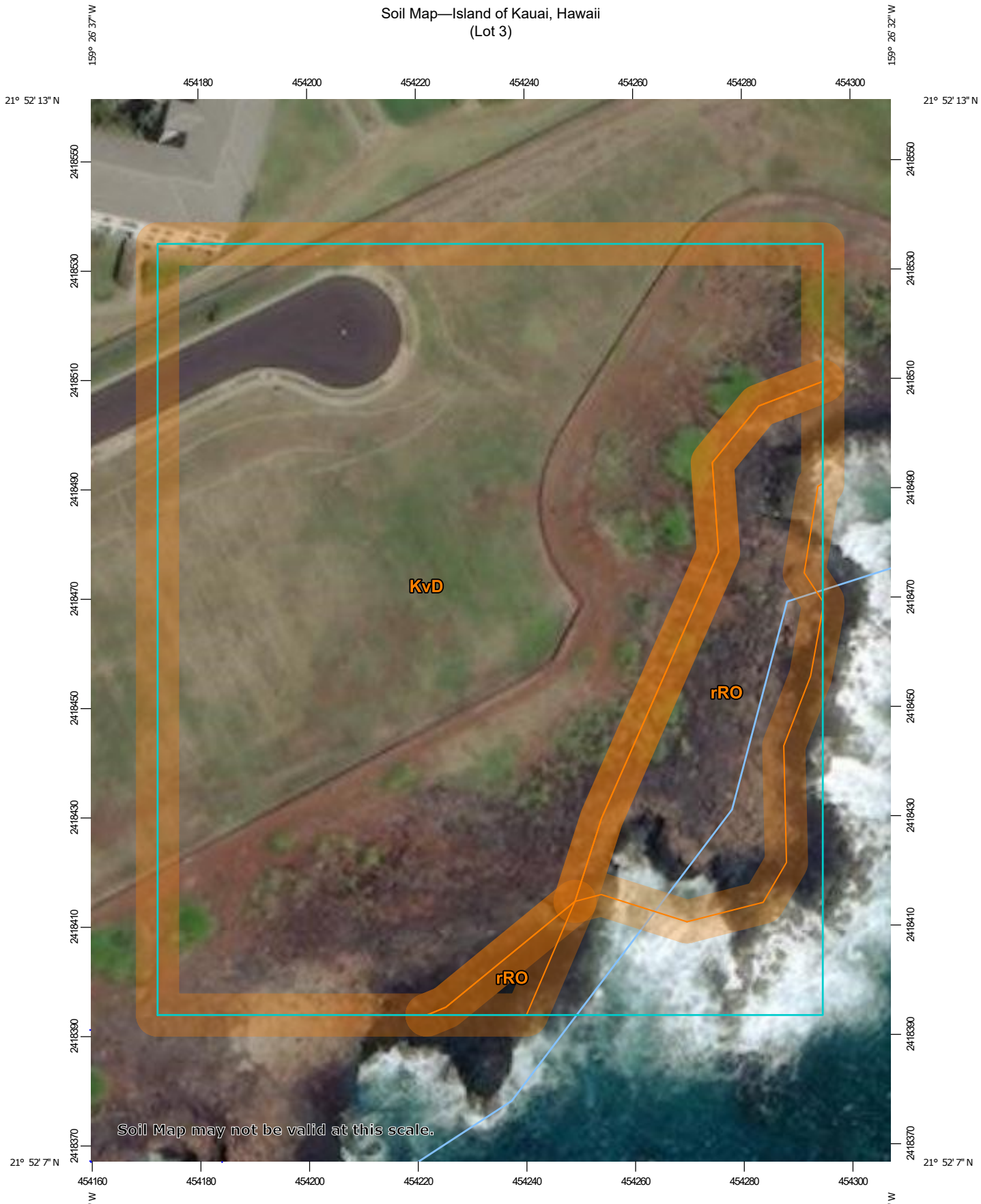
RECEIVED

'17 JUN -8 A9:22

OFFICE OF
THE COUNTY CLERK
COUNTY OF KAUA'I

EXHIBIT C-13

Soil Map—Island of Kauai, Hawaii
(Lot 3)



Map Scale: 1:950 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 4N WGS84

EXHIBIT C-13

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Kauai, Hawaii
Survey Area Data: Version 15, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 29, 2017—Oct 11, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KvD	Koloa stony silty clay, 15 to 25 percent slopes	3.3	77.7%
rRO	Rock outcrop	0.6	14.6%
Totals for Area of Interest		**4.3**	**100.0%**

EXHIBIT D

Jan Kimura
Chair

Angela Anderson
Vice-Chair

Hartwell Blake
Wayne Katayama
John Isobe
Sean Mahoney
Amy Mendonca
Members

PLANNING COMMISSION
County of Kaua'i, State of Hawai'i
4444 Rice Street
Kapule Building, Suite A-473
Līhu'e, Hawai'i 96766-1326
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig
Clerk of the Commission

AUG 29 2014

Jennifer A. Benck, Esq.
CARLSMITH BALL LLP.
ASB Tower, Suite 2200
1001 Bishop Street
Honolulu, Hawai'i 96813

Subject: Special Management Area Use Permit SMA(U)-2015-1
Tax Map Key: (4) 2-8-021:041, 044-068
Po'ipū, Kaua'i
CIRI LAND DEVELOPMENT COMPANY (CLDC), Applicant

Dear Ms. Benck,

This letter memorializes the action taken by the Kaua'i Planning Commission effective **AUGUST 26, 2014** concerning approval of the above subject permit, as amended. The approval by the Planning Commission, per your consent, is subject to the following conditions:

1. The proposed subdivision shall be constructed as represented. Any changes to said structures and/or facilities shall be reviewed by the Planning Department to determine whether Planning Commission review and approval is warranted.

2. Subdivision of the subject property shall conform to the procedural requirements of Chapter 9 of the Kaua'i County Code Subdivision Ordinance.

3. The Applicant is advised that the approval of this SMA permit does not constitute approval of the proposed lot configurations and sizes as they appear on the subdivision layout submitted with the application. Technical requirements will be further reviewed through the subdivision application process.

EXHIBIT D

4. The establishment of a public footpath or constructed path to allow pedestrian access along the makai side of the wall shall be explored at subdivision. As represented on the preliminary subdivision map, the public access, parking, and open space easements shall be identified on the final subdivision map and incorporated into the deed descriptions of the affected lots. Additionally, the Applicant will be responsible for the preparation of the necessary documents and it shall be ready for execution upon final subdivision approval and recordation of the final subdivision map.

5. To protect faunal species, the following shall be required:

    a. Lot 1 shall be developed to avoid disturbing existing Wedge-Tailed Shearwater nesting sites.

    b. The rock wall along Lots 1-7 on the mauka side shall be adjusted so that the seabirds can walk up the slope on the top of the wall. Coastal vegetation such as naupaka shall be encouraged along the makai side of the rock wall.

    c. The Applicant shall allow DLNR access to the property to conduct predator management pursuant to a revocable right of entry.

    d. No night time construction using bright artificial lights shall be permitted in the area. Although shearwaters are not present from January to March, bright lights along coastal areas are known to have a negative impact on the Green Sea Turtle (*Chelonia mydas*) through disorientation

    e. The construction of the subdivision infrastructure shall be accomplished during the non-nesting season from January to March. The placement of all construction material, equipment and machinery is restricted to the residential side of the wall.

    f. The Applicant shall work with DLNR-DOFAW toward restoration of coastal habitat in the Open Space Easement area in the makai western portion of the property. This includes the cost of removal of invasive non-native vegetation and the planting of appropriate seabird-friendly vegetation within the Open Space Easement in the makai western corner of the property.

    g. Furthermore, in order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, if external lighting is to be used in connection with the proposed development, all external lighting shall be only of the following type: *downward facing*

shielded lights. Spotlights aimed upward or spotlighting of structures shall be prohibited.

6. In order to further ensure that the project is compatible with its surroundings and to minimize the visual impact of future residential development, the external color shall be of a moderate to dark earth-tone colors, the structures shall be "low-massing", and the Applicant should provide substantial landscaping. The proposed color scheme, design guidelines and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application or during the subdivision process. Additionally, this provision shall be incorporated into the design covenants of the proposed development.

7. The subject property is located within the Special Management Area (SMA) and any new "Development," as defined in Section 1.4 of the SMA Rules and Regulations of the County of Kaua'i, may require an SMA Permit. If so, the Applicant will be subject to all applicable requirements/conditions of the SMA Permit.

8. The Applicant shall substantially commence construction of the project development within one (1) year from the date of final subdivision approval of the subject permits and shall complete construction of the development within two (2) years from the commencement of construction activities. The Planning Department shall be notified in writing the official date of construction.

9. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, and the County Departments of Public Works & Water.

10. The Applicant shall develop and utilize Best Management Practices (BMP's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

11. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources – Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050.

12. The Applicant is advised that additional government agency conditions may be imposed. It shall be the applicant's responsibility to resolve those conditions with

the respective agency(ies).

13. The Planning Commission reserves the authority to impose additional conditions, modify or delete conditions stated herein, or resolve the permits through proper procedures should the applicant fail to comply with the conditions of approval.

14. Pursuant to Section 8-9.2(a) of the Kaua'i County Code (1987) as amended, the amount of land coverage created on Lots 1 through 10, including buildings and pavement, shall not exceed ten per cent (10%) of the lot area. It is noted that the land coverage on these lots shall exclude areas that are designated for any public improvements (i.e. public access, public parking, open space). As represented on the preliminary subdivision map, the following represents the lot coverage calculations:

Subdivision Lot No.	Proposed Area (acres)	Permissible Lot Coverage (Square Feet)
1	1.265	5,510 SF
2	1.061	4,622 SF
3	1.002	4,365 SF
4	1.002	4,365 SF
5	1.129	4,918 SF
6	1.103	4,805 SF
7	1.535	6,686 SF
8	1.123	4,892 SF
9	1.004	4,373 SF
10	1.023	4,456 SF

The foregoing represents the areas represented in the preliminary subdivision map. If any of the lot areas are revised during the subdivision process, the permissible lot coverage remains at 10% of the lot area and it shall exclude areas designated for public improvements.

Sincerely Yours,

MICHAEL A. DAHILIG
Clerk, Kaua'i Planning Commission

cc: COK – Public Works, Fire, Water, Finance-Real Property Division, Housing
State – Health, DLNR Historic Preservation Division

EXHIBIT E

Bernard P. Carvalho, Jr.
Mayor

Nadine K. Nakamura
Managing Director

Michael A. Dahilig
Director of Planning

Dee M. Crowell
Deputy Director of Planning

PLANNING DEPARTMENT
County of Kaua'i, State of Hawai'i
4444 Rice Street, Suite A-473, Līhu'e, Hawai'i 96766
TEL (808) 241-4050 FAX (808) 241-6699

AUG 29 2014

Jennifer A. Benck, Esq.
CARLSMITH BALL LLP.
ASB Tower, Suite 2200
1001 Bishop Street
Honolulu, Hawai'i 96813

Subject: CLASS III ZONING PERMIT Z-III-2015-1
Applicant – CIRI LAND DEVELOPMENT COMPANY (CLDC)
Project: 10-lot Subdivision
Tax Map Key: (4) 2-8-021:041, 044-068
Po'ipū, Kaua'i

This letter hereby advises you that the subject Class III Zoning Permit for a proposed 10-lot subdivision development on a parcel situated in Po'ipū, is APPROVED and subject to the following conditions:

1. The proposed subdivision shall be constructed as represented. Any changes to said structures and/or facilities shall be reviewed by the Planning Department to determine whether Planning Commission review and approval is warranted.

2. Subdivision of the subject property shall conform to the procedural requirements of Chapter 9 of the Kaua'i County Code Subdivision Ordinance.

3. The Applicant is advised that the approval of this SMA permit does not constitute approval of the proposed lot configurations and sizes as they appear on the subdivision layout submitted with the application. Technical requirements will be further reviewed through the subdivision application process.

4. The establishment of a public footpath or constructed path to allow pedestrian access along the makai side of the wall shall be explored at subdivision. As represented on the preliminary subdivision map, the public access, parking, and open space easements shall be identified on the final subdivision map and incorporated into the deed descriptions of the affected lots. Additionally, the Applicant will be

EXHIBIT E

responsible for the preparation of the necessary documents and it shall be ready for execution upon final subdivision approval and recordation of the final subdivision map.

5. To protect faunal species, the following shall be required:

   a. Lot 1 shall be developed to avoid disturbing existing Wedge-Tailed Shearwater nesting sites.

   b. The rock wall along Lots 1-7 on the mauka side shall be adjusted so that the seabirds can walk up the slope on the top of the wall. Coastal vegetation such as naupaka shall be encouraged along the makai side of the rock wall.

   c. The Applicant shall allow DLNR access to the property to conduct predator management pursuant to a revocable right of entry.

   d. No night time construction using bright artificial lights shall be permitted in the area. Although shearwaters are not present from January to March, bright lights along coastal areas are known to have a negative impact on the Green Sea Turtle (*Chelonia mydas*) through disorientation

   e. The construction of the subdivision infrastructure shall be accomplished during the non-nesting season from January to March. The placement of all construction material, equipment and machinery is restricted to the residential side of the wall.

   f. The Applicant shall work with DLNR-DOFAW toward restoration of coastal habitat in the Open Space Easement area in the makai western portion of the property. This includes the cost of removal of invasive non-native vegetation and the planting of appropriate seabird-friendly vegetation within the Open Space Easement in the makai western corner of the property.

   g. Furthermore, in order to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds, if external lighting is to be used in connection with the proposed development, all external lighting shall be only of the following type: *downward facing shielded lights*. Spotlights aimed upward or spotlighting of structures shall be prohibited.

6. In order to further ensure that the project is compatible with its surroundings and to minimize the visual impact of future residential development, the external color shall be of a moderate to dark earth-tone colors, the structures shall be "low-massing", and the Applicant should provide substantial landscaping. The

proposed color scheme, design guidelines and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application or during the subdivision process. Additionally, this provision shall be incorporated into the design covenants of the proposed development.

7. The subject property is located within the Special Management Area (SMA) and any new "Development," as defined in Section 1.4 of the SMA Rules and Regulations of the County of Kaua'i, may require an SMA Permit. If so, the Applicant will be subject to all applicable requirements/conditions of the SMA Permit.

8. The Applicant shall substantially commence construction of the project development within one (1) year from the date of final subdivision approval of the subject permits and shall complete construction of the development within two (2) years from the commencement of construction activities. The Planning Department shall be notified in writing the official date of construction.

9. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, and the County Departments of Public Works & Water.

10. The Applicant shall develop and utilize Best Management Practices (BMP's) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

11. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources – Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050.

12. The Applicant is advised that additional government agency conditions may be imposed. It shall be the applicant's responsibility to resolve those conditions with the respective agency(ies).

13. The Planning Commission reserves the authority to impose additional conditions, modify or delete conditions stated herein, or resolve the permits through proper procedures should the applicant fail to comply with the conditions of approval.

14. Pursuant to Section 8-9.2(a) of the Kaua'i County Code (1987) as amended, the amount of land coverage created on Lots 1 through 10, including buildings and pavement, shall not exceed ten per cent (10%) of the lot area. It is noted that the

land coverage on these lots shall exclude areas that are designated for any public improvements (i.e. public access, public parking, open space). As represented on the preliminary subdivision map, the following represents the lot coverage calculations:

Subdivision Lot No.	Proposed Area (acres)	Permissible Lot Coverage (Square Feet)
1	1.265	5,510 SF
2	1.061	4,622 SF
3	1.002	4,365 SF
4	1.002	4,365 SF
5	1.129	4,918 SF
6	1.103	4,805 SF
7	1.535	6,686 SF
8	1.123	4,892 SF
9	1.004	4,373 SF
10	1.023	4,456 SF

The foregoing represents the areas represented in the preliminary subdivision map. If any of the lot areas are revised during the subdivision process, the permissible lot coverage remains at 10% of the lot area and it shall exclude areas designated for public improvements.

MICHAEL A. DAHILIG
Director of Planning

xc: COK – Public Works, Fire, Water, Finance-Real Property Division
State – Health Dept.

EXHIBIT F

(7) 14.211

Angela Anderson
Chair

Sean Mahoney
Vice-Chair

Louis Abrams
Wayne Katayama
Kimo Keawe
Amy Mendonca
Members

PLANNING COMMISSION
County of Kaua'i, State of Hawai'i
4444 Rice Street
Kapule Building, Suite A-473
Līhu'e, Hawai'i 96766-1326
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig
Clerk of the Commission

received
4/27/15

APR 23 2015

Mr. Dennis M. Esaki
ESAKI SURVEYING & MAPPING, INC.
1610 Haleukana Street
Līhu'e, Hawai'i 96766

Subject: Consolidation of Lots 1 through 3, 45 through 54, 56 through 63, Parcels L-1, L-2 & L-3, Laaukahi Road Lot and Ehukai Road Lot and subdivision of said consolidation into Lots 1 through 10, Road Lot A, and road widening lot cancellation of road and utility easement, and designation of Easements A-1 through A-5 at Weliweli, Kōloa Kaua'i, Hawai'i. **(S-2015-14, CIRI Land Development Company)**

Dear Mr. Esaki,

This letter memorializes the action taken by the Kaua'i Planning Commission effective APRIL 14, 2015 concerning **TENTATIVE APPROVAL** of the above subject application. Final subdivision map approval, per your consent, is subject to the following conditions:

1. Requirements of the Planning Department:

   a. An updated preliminary title report for the existing lot shall be submitted to the Planning Department for review.

   b. All existing and proposed easements shall be identified in the deed descriptions of affected lots and shown on the final subdivision map. Draft copies of the deed descriptions shall be submitted to the Planning Department for review and approval.

   c. Pursuant to section 9-3.8(b) of the Subdivision Ordinance, Kaua'i County Code (1987), the Applicant shall submit to the Planning Department an electronic record (digitized format) of the final subdivision map(s) on disk for record keeping purposes prior to final subdivision approval.

EXHIBIT F

d. An Environmental Impact Assessment Fee of Three Thousand Dollars ($3,000.00) shall be paid to the County of Kaua'i.

e. The Applicant shall pay a Park Dedication fee pursuant to Section 9-2.8 of the Kaua'i County Code Subdivision Ordinance. An appraisal report and price list shall be provided to the Planning Department to forward to the Real Properties Division to help calculate the fee amount.

f. The Applicant shall prepare and obtain construction plan approvals for necessary road, water, drainage, electrical and telephone utilities and facilities, and either construct the same or post a surety bond for completion.

g. Relative to the requirements/standards set forth in the Kaua'i County Code, 1987 as amended, Chapter 9, Sec. 9-2.9, the subdivider shall resolve with the Planning Department the requirement for public access ways. If a public access way is required, the Applicant shall propose an access plan identifying the access location(s) for the review and approval of the Planning and Public Works Departments. Pursuant to the Interpretative Administrative Rules and Regulations of the Kauai Planning Commission Rule 9-2.9, the Planning Department shall refer the proposed public access way to the Public Access, Open Space, and Natural Resources Preservation Fund Commission for input concerning the location of the public access way. Furthermore, proper documents shall be prepared and ready for execution prior to final subdivision approval. The Planning Department reserves the right to impose additional conditions relating to this matter while in the process of resolving this condition.

h. The Applicant shall obtain a Shoreline Certification within six (6) months prior to date of final subdivision map approval and the certified shoreline shall be shown on the final subdivision map.

i. Prior to final subdivision map approval, the Applicant shall comply with the applicable requirements of Special Management Area Use Permit SMA(U)-2015-1 & Class III Zoning Permit Z-III-2015-1. Specifically, the following conditions shall apply:

Conditions of SMA(U)-2015-1

- 4. (establishment of public footpath for pedestrian access)
- 5. (protection of faunal species)
- 6. (mitigation of visual impact)

j. Relative to Condition No. 14 of SMA(U)-2015-1, the following represents the permissible lot coverage calculations based on the lot area as shown on the preliminary subdivision map:

Subdivision Lot No.	Proposed Area (acres)	Permissible Lot Coverage (Square Feet)
1	1.266	5,515 SF
2	1.063	4,630 SF
3	1.001	4,360 SF
4	1.002	4,365 SF
5	1.129	4,918 SF
6	1.103	4,805 SF
7	1.535	6,686 SF
8	1.123	4,892 SF
9	1.004	4,373 SF
10	1.109	4,831 SF

k. The subdivider is made cognizant that the subject property is located within the Special Management Area (SMA). Additional lots within the SMA or any new "Development," as defined in Section 1.4 of the SMA Rules and Regulations of the County of Kaua'i, may require an SMA Permit and if so, the applicant is subject to all applicable requirements/conditions of the SMA Permit.

2. Requirements of the Department of Public Works (DPW):

a. Based on panel no. 325F of the Federal Insurance Rate Maps (FIRM) dated November 26, 2010, the subject property is susceptible to flooding. The FEMA flood zoning, panel no., and the date of the FIRM shall be shown on the final map as well as the base flood elevations. The nearest FEMA RM (reference markers) with its elevation and description needs to be provided on the final map. The applicant and future owners shall be advised that construction of new structures in flood prone areas presents flood risks and associated flood problems.

b. Impermeable surfaces such as roads, driveways and new buildings will increase the storm water runoff. A drainage study needs to be prepared to address the increase in storm runoff and propose mitigating drainage measures to keep flow rates and drainage patterns to pre-existing conditions.

c. No access provision needs to be provided along Pe'e Road for Lots 9 and 10.

d. A grading permit will be required for this project. The property size is more than 10 acres. The maximum area that may be opened for grading, or grubbing at any one time is ten (10 acres). Grading/grubbing shall be accomplished in increments not more than 10 acres.

3. Requirements of the Department of Water (DOW):

   a. The subdivider shall pay the Department of Water, a Facilities Reserve Charge of $46,000 (10 lots at $4,600 per lot). The subdivider shall pay any rate increase and/or applicable charges in effect at the time of receipt.

   b. The subdivider shall prepare and receive Department of Water's approval of construction drawings for necessary water system facilities and either construct said facilities or post a performance bond for construction. These facilities shall also include:

      1) The distribution waterlines.
      2) The domestic service connection.
      3) The fire service connection.
      4) The interior plumbing with the appropriate backflow prevention device, if applicable.

   c. If a bond is filed, to secure final subdivision approval, the subdivider shall clearly letter the following on the approved construction plans, final subdivision map, and deeds:

      "Domestic water service will not be available until the required construction improvements for this subdivision are completed and accepted by the Department of Water, County of Kaua`i."

      The subdivider shall record this deed restriction with the Bureau of Conveyances within ninety (90) days of final subdivision approval by the Planning Department.

   d. Submit a formal request for water service for our review and approval. Include detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments may change depending on the approved water demand calculations.

   e. Receive a "Certification of Completion" for the construction of the necessary water system facilities from DOW.

4. Requirements of the State Department of Health (DOH):

   a. The use of individual wastewater systems is allowed for single family residences. The type and number of individual wastewater systems to be used on each lot will be determined by the wastewater rules in effect at the time of building permit application.

   b. Noise will be generated during the clearing and construction phases of this project. The applicable maximum permissible sound levels as stated in Chapter 11-46, entitled

"Community Noise Control", Title 11, HAR, shall not be exceeded unless a noise permit is obtained from the Department of Health.

c. The property may harbor rodents which will be dispersed to the surrounding areas when site-clearing activities occur and are completed. In accordance with Chapter 11-26, entitled "Vector Control", Title 11, HAR, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

d. Temporary fugitive dust emissions could be emitted when development begins. At that time, in accordance with Chapter 11-60.1, entitled "Air Pollution Control", Title 11, HAR, effective air pollution control measures shall be provided to minimize or prevent any fugitive dust emissions caused by the construction work from impacting the surrounding areas. This includes the off-site roadways used to enter/exit the project. The control measures include but are not limited to the use of water wagons, sprinkler systems, dust fences, etc.

e. In accordance with Chapter 11-58.1, entitled "Solid Waste Management Control", Title 11, HAR, the disposal of the grubbed material and construction waste that will be generated when the subdivided lots are further developed shall be at a solid waste disposal facility that is in compliance with the State Department of Health. The open burning of any of these wastes on or off site is prohibited.

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

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

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

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

g. Please call the Army Corps of Engineers at (808) 438-9258 to see if this project requires a Department of the Army (DA) permit. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.

h. You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or

Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

1) Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

2) Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the start of the construction activities.**

3) Treated effluent from leaking underground storage tank remedial activities.

4) Once through cooling water less than one (1) million gallons per day.

5) Hydro-testing water.

6) Construction dewatering effluent.

7) Treated effluent from petroleum bulk stations and terminals.

8) Treated effluent from well drilling activities.

9) Treated effluent from recycled water distribution systems.

10) Storm water from a small municipal separate storm sewer system.

11) Circulation water from decorative ponds or tanks.

i. You must submit a separate NOI form for each type of discharge at least 30 days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 before to the start of construction activities.

j. For types of wastewater not listed in Item 3 above or wastewater discharging into Class 1 or Class AA waters, you must obtain an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 days before the commencement of the discharge.

k. You must also submit a copy of the NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.

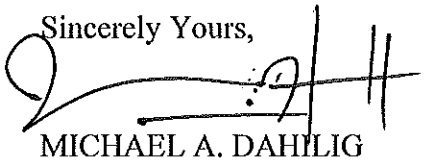
l. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with the water quality requirements contained in HAR, Chapter 11-54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

5. Requirements of the State Historic Preservation Department (SHPD):

   a. As recommended by the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DLNR), in the event that historic resources, including human skeletal remains are identified during routine construction activities, all work needs to cease in the immediate vicinity of the find, and the finds need to be protected from additional disturbance, and the State Historic Preservation Division, Kaua'i section, needs to be contacted immediately at (808)692-8015.

6. The applicant is advised that prior to and/or during construction and use additional conditions may be imposed by government agencies. Should this occur, the applicant shall resolve these conditions with the respective agency(ies).

Sincerely Yours,



MICHAEL A. DAHILIG
Clerk, Kaua'i Planning Commission

xc: COK Public Works Dept.
COK Water Dept.
COK Real Property – Assessment Div.
State Dept. of Health
State Historic Preservation Dept.

14-211

Sean Mahoney
Chair

Louis Abrams
Vice-Chair

Roy Ho
Wayne Katayama
Kimo M. Keawe
Glenda Nogami-Streufert
Members

PLANNING COMMISSION
County of Kaua'i, State of Hawai'i
4444 Rice Street
Kapule Building, Suite A-473
Līhu'e, Hawai'i 96766-1326
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig
Clerk of the Commission

7/18/16

JUL 13 2016

Mr. Dennis Esaki
ESAKI SURVEYING & MAPPING INC
1610 Haleukana St,
Lihue, HI 96766.

Subject: Consolidation of Lots 1 through 3, 45 through 54, 56 through 63, Parcels L-1, L-2 & L-3, Laaukahi Road Lot and Ehukai Road Lot and subdivision of said consolidation into Lots 1 through 10, Road Lot A, and road widening lot cancellation of road and utility easement, and designation of Easements A-1 through A-5 at Weliweli, Kōloa Kaua'i, Hawai'i. **(S-2015-14, CIRI Land Development Company)**

2016

This letter memorializes the action taken by the Kaua'i Planning Commission effective June 14, 2014 granting your request for an extension until **December 31, 2017** to file the final subdivision maps involving the development referenced above.

Please be advised that if further subdivision extension requests are sought, an *updated status report* on the subdivision that includes a detailed time chronology on the progress of the tentative approval requirements shall be submitted to the Planning Department no later than sixty days (60) from the expiration date of the extension.

MICHAEL A. DAHILIG
Clerk, Kaua'i Planning Commission

xc: COK Public Works Dept.
COK Water Dept.
COK Real Property – Assessment Div.
State Dept. of Health

EXHIBIT G

MEMORANDUM

TO: Michael A. Dahilig, Planning Director

FROM: Michael Moule, P.E., Chief of Engineering

VIA: Lyle Tabata, Acting County Engineer

SUBJECT: Certification of Completion of Makahuena Point Subdivision

DATE: December 4, 2017

A final inspection conducted on August 8, 2017 found construction to be complete and acceptable for the subject subdivision. Grassing establishment has been approved and the grading permit closed. All infrastructure within this subdivision is private. The County of Kaua'i did not inspect all details of the installation of the infrastructure, such as monitoring concrete pours and checking placement and grades of the infrastructure.

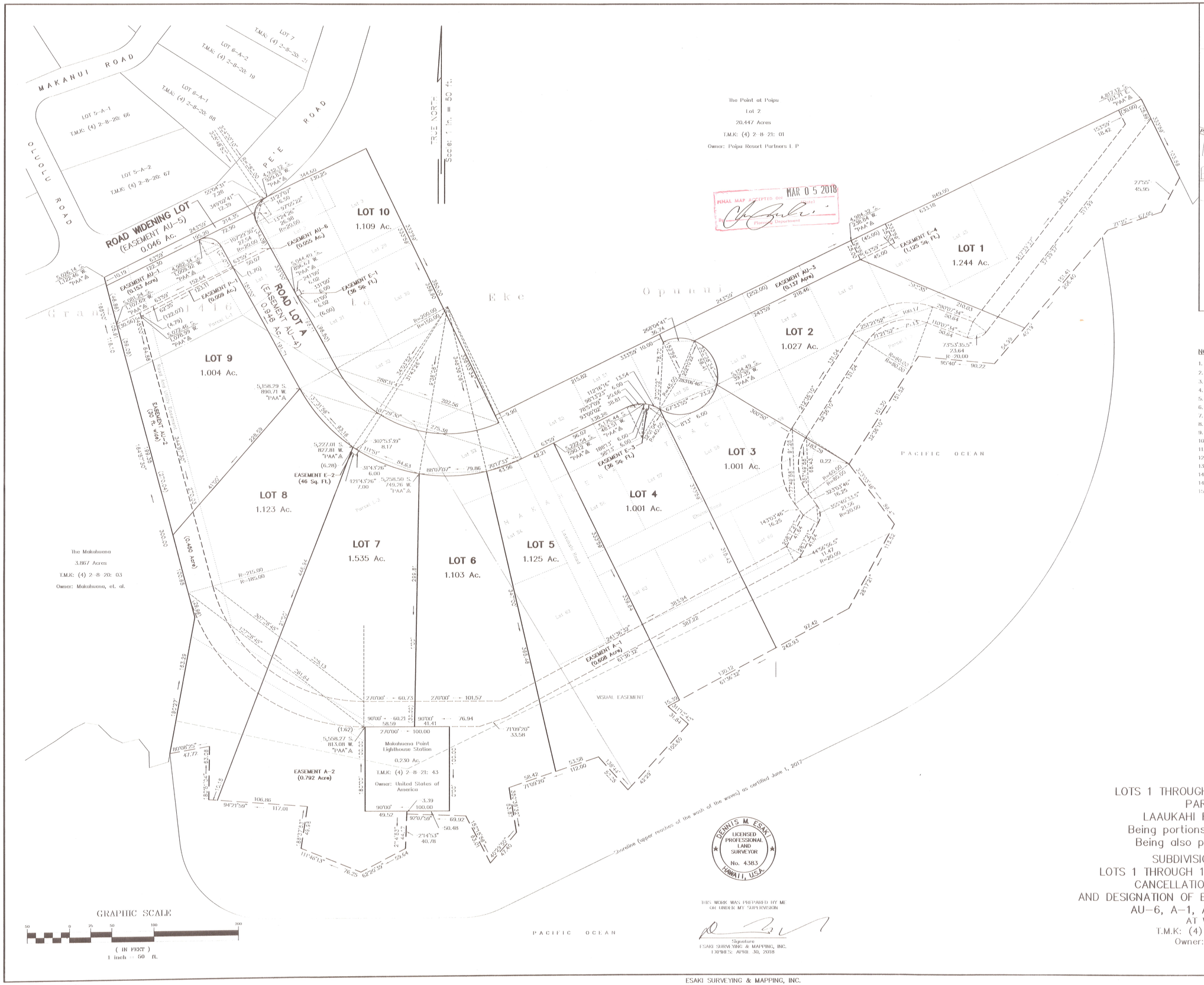
Should you have any questions, please contact Devin Quinn at (808) 241-4995 or Donald Fujimoto at (808) 241-4882.

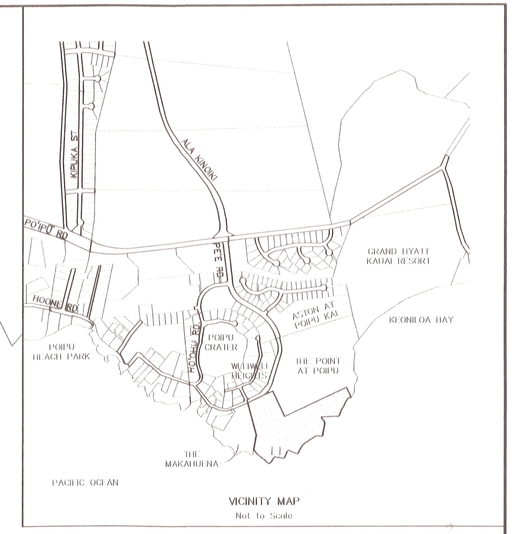
DQ

cc: Construction Inspection
Road Maintenance
Public Works Fiscal

EXHIBIT G

EXHIBIT G-1





VICINITY MAP
Not to Scale

NOTES:

1. Azimuths and distances are based on record information.
2. Name(s) of owner(s) of adjoining parcel taken from County tax records.
3. Shoreline corners are nails unless otherwise noted.
4. Easement AU-1 for Public Parking, Public Pedestrian and Light Station Access Purposes.
5. Easement AU-2 for Public Pedestrian and Light Station Access Purposes.
6. Easement AU-3 for Common Access & Utility Purposes.
7. Easement AU-4 for Access & Utility Purposes.
8. Easement AU-5 for Access & Utility Purposes.
9. Easement AU-6 for Access & Utility Purposes.
10. Easement A-1 for Public Pedestrian Access Purposes.
11. Easement A-2 for Open Space Purposes.
12. Easement E-1 for Utility Purposes.
13. Easement E-2 for Utility Purposes.
14. Easement E-3 for Utility Purposes.
14. Easement E-4 for Utility Purposes.
15. Easement P-1 for Parking Purposes.

This map was approved by the Planning Commission of the County of Kauai, at their Meeting on MAR 2 7 2018
Approved by RH
Chairman, Planning Commission
County of Kauai

S-2015-14
CONSOLIDATION OF
LOTS 1 THROUGH 3, 45 THROUGH 54, 56 THROUGH 63,
PARCELS L-1, L-2, AND L-3,
LAAUKAHI ROAD LOT, AND EHUKAI ROAD LOT
Being portions of Makahuena Tract (File Plan 354)
Being also portion of Grant 1416 to Eke Oponui

SUBDIVISION OF SAID CONSOLIDATION INTO
LOTS 1 THROUGH 10, ROAD LOT A, AND ROAD WIDENING LOT
CANCELLATION OF ROAD AND UTILITY EASEMENT,
AND DESIGNATION OF EASEMENTS AU-1, AU-2, AU-3, AU-4, AU-5,
AU-6, A-1, A-2, E-1, E-2, E-3, E-4, AND P-1
AT WELIWELI, KOLOA, KAUAI, HAWAII
T.M.K: (4) 2-8-21: 41, and 44 to 68, inclusive
Owner: CIRI Land Development Company
Date: February 23, 2018

Job Number: 14-211 MA/JH
Drawing File: 14-211 subd tentative.dwg

ESAKI SURVEYING & MAPPING, INC.
Civil Engineers -- Land Surveyors -- Planners

1610 Haleukana Street
Lihue, Kauai, Hawaii 96766

EXHIBIT H



1 SITE PLAN
1" = 10'-0"

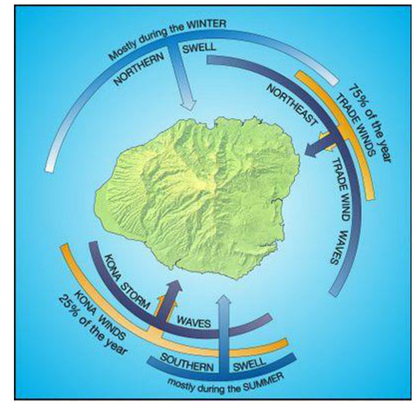
COVERAGE:

HOUSE	2375 SF	5.4%
COVERED LANAIS	604 SF	1.4%
POOL	486 SF	1.1%
GARAGE	850 SF	1.9%
COVERAGE	4315 SF	9.8%
SITE AREA:	43603 SF	

NOTE: DRIVEWAY IS GRAVEL. CONCRETE APPROACH IS NOT ON PROPERTY

AREA CALCULATIONS:

MAIN LEVEL	2375 SF	
MAIN COVERED LANAIS	604 SF	
UPPER LEVEL	1705 SF	(55%)
UPPER COVERED LANAIS	170 SF	(5%)
TOTAL COVERED	4958 SF	
GARAGE	850 SF	
OPEN LANAIS	2472 SF	
POOL	486 SF	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number 00
Date 7-16-2021

SITE PLAN

SP01

Scale 1" = 10'-0"

2/1/2022 4:06:20 PM

36'
35'
34'
POOL AND AC
AC WH
1
A6
2
A6
BUNK ROOM
15'-10" x 12'-6"
DN
DN
BAHA
POOL
30' X 11'
POOL FENCE
SPA
POOL GATE
STAIR T YARD
POOL GATE
COVERED LANAI
23'-0" X 23'-0"
BBQ
LANDSCAPE
37' - 6"
FRONT YARD SB
LANDSCAPE
38' - 0"
ENTRY
GARAGE
33'-0" X 27'-0"
UP
UP
DECK
37' - 11"
GREAT ROOM
21'-0" X 24'-6"
DINING
11'-0" X 24'-6"
2 1/2"
R 8' - 0"
R 8' - 0"
KITCHEN
10'-0" X 24'-6"
Range
Refrigerator
Freezer
Refrigerator
PANTRY
LAUND
7'-6" X 16'-0"
Dryer
Washer
MASTER 2
17'-4" X 12'-6"
38' - 0"
SIDEYARD SB
NORTH
1
MAIN LEVEL
1/4" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone: 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

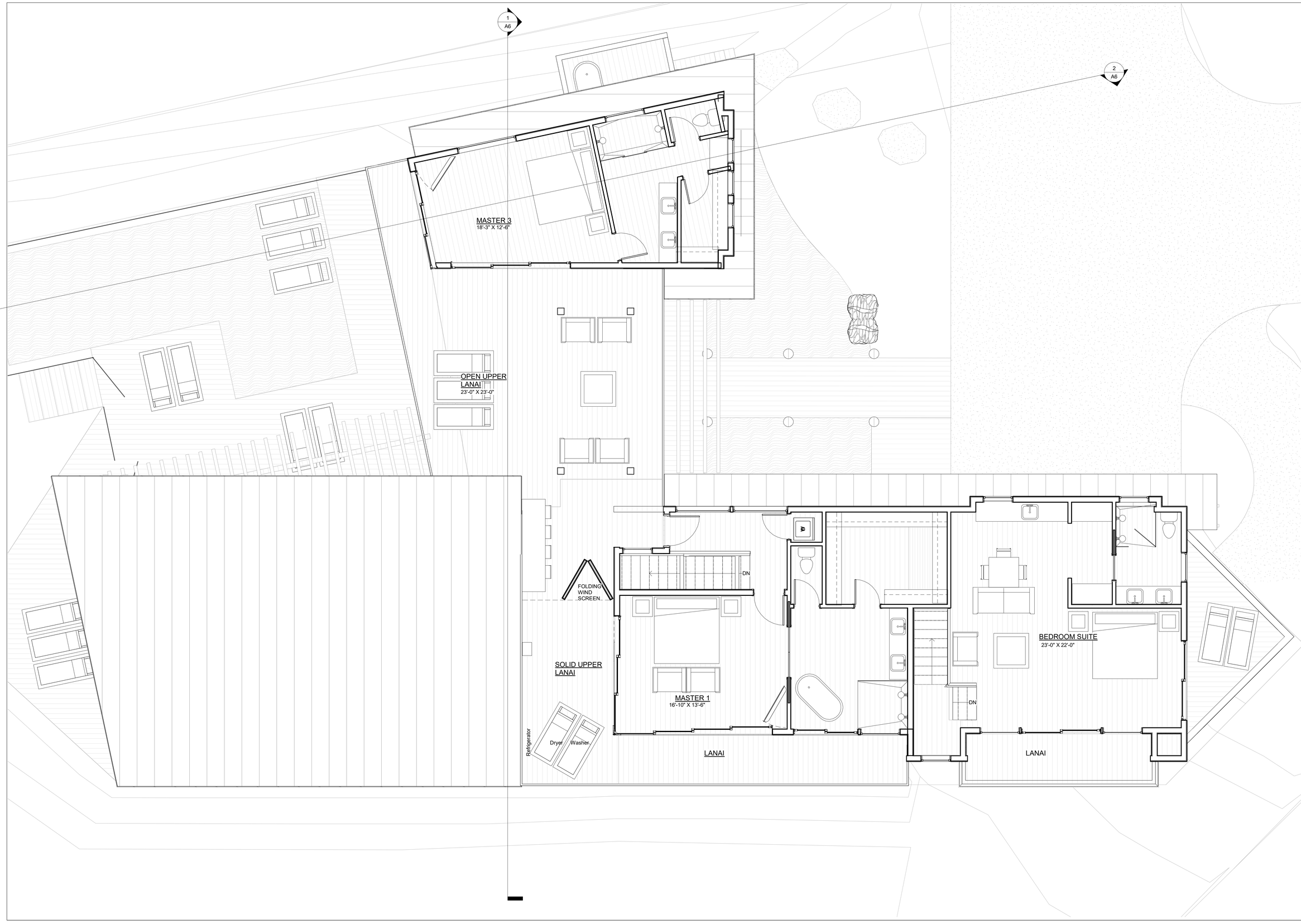
Project number 00
Date 7-16-2021

MAIN LEVEL

A1

Scale 1/4" = 1'-0"

8/5/2021 7:59:31 AM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA

MY LICENSE EXPIRES
APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number	00
Date	7-16-2021

UPPER
LEVEL

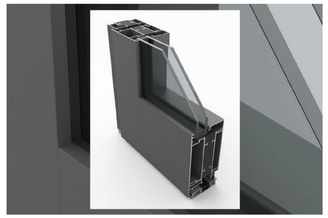
A2

Scale 1/4" = 1'-0"

8/5/2021 7:59:50 AM



ETCHED GLASS AND ALUM. GARAGE DOOR



ALUMINUM SLIDING DOORS



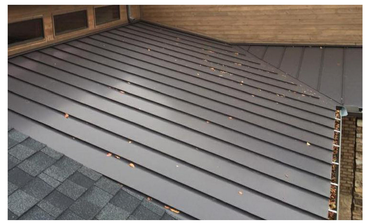
STAINED CEDAR SIDING



STAINED ACCENT CEDAR SIDING



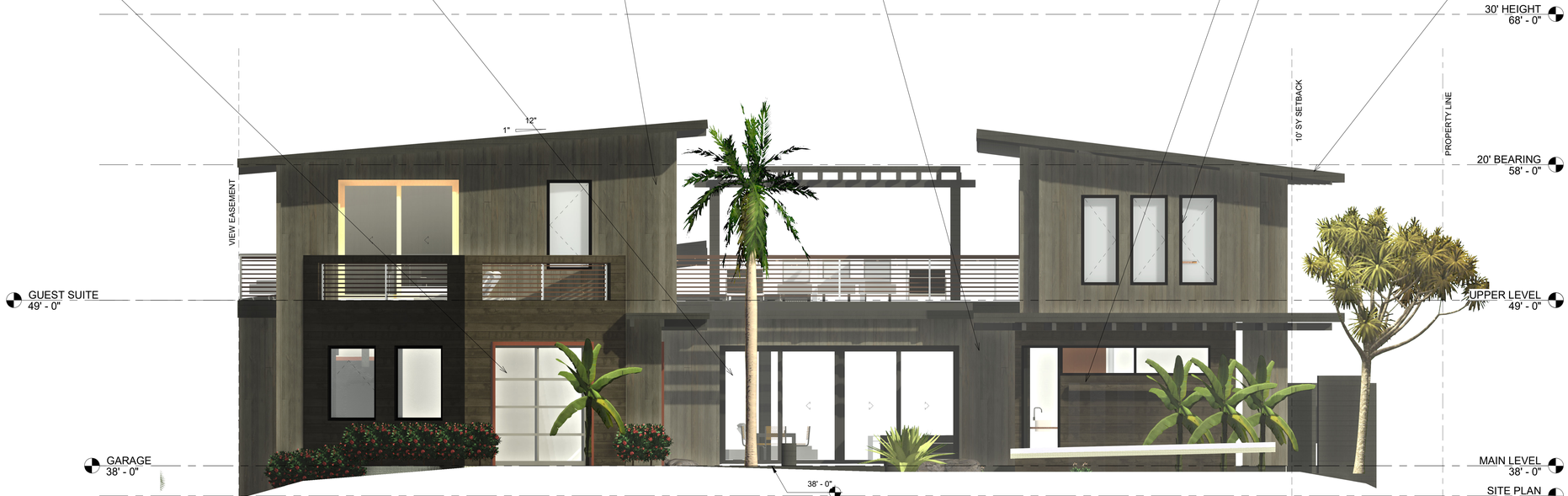
STAINED BOARD FORMED CONCRETE



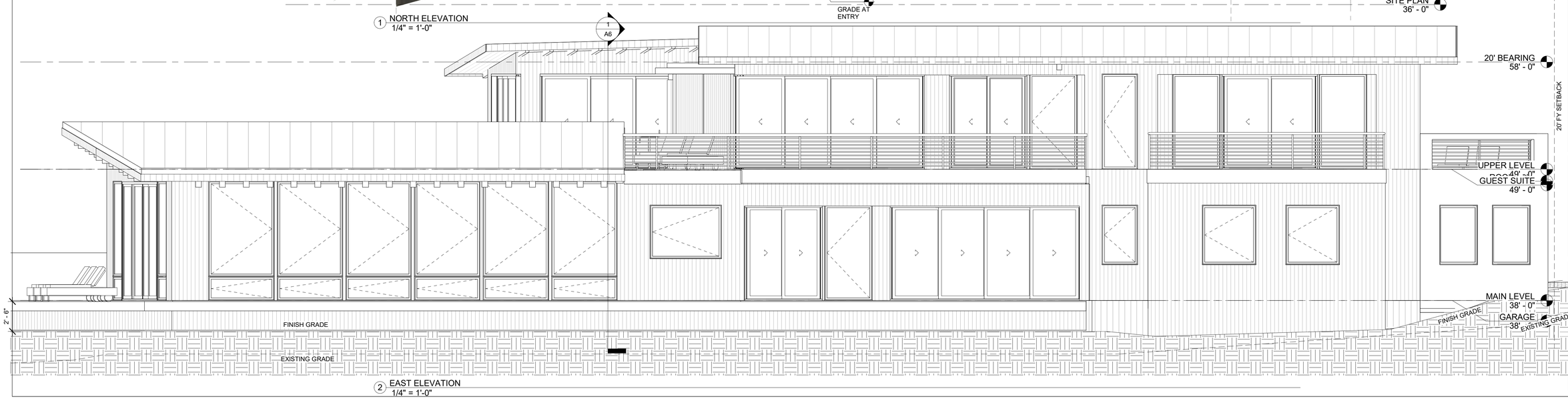
TAHITIAN BROWN
STANDING SEAM



MILGARD FIBERGLASS BLACK



1 NORTH ELEVATION
1/4" = 1'-0"



2 EAST ELEVATION
1/4" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

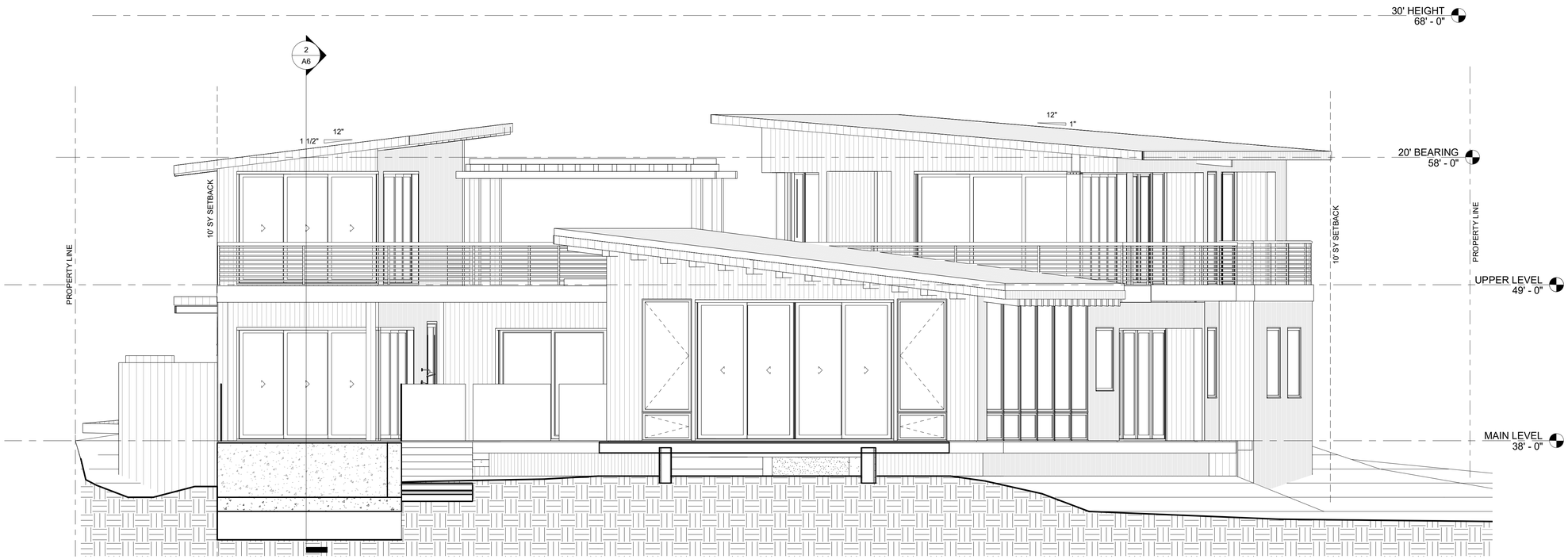
Project number	00
Date	7-16-2021

EXTERIOR ELEVATIONS

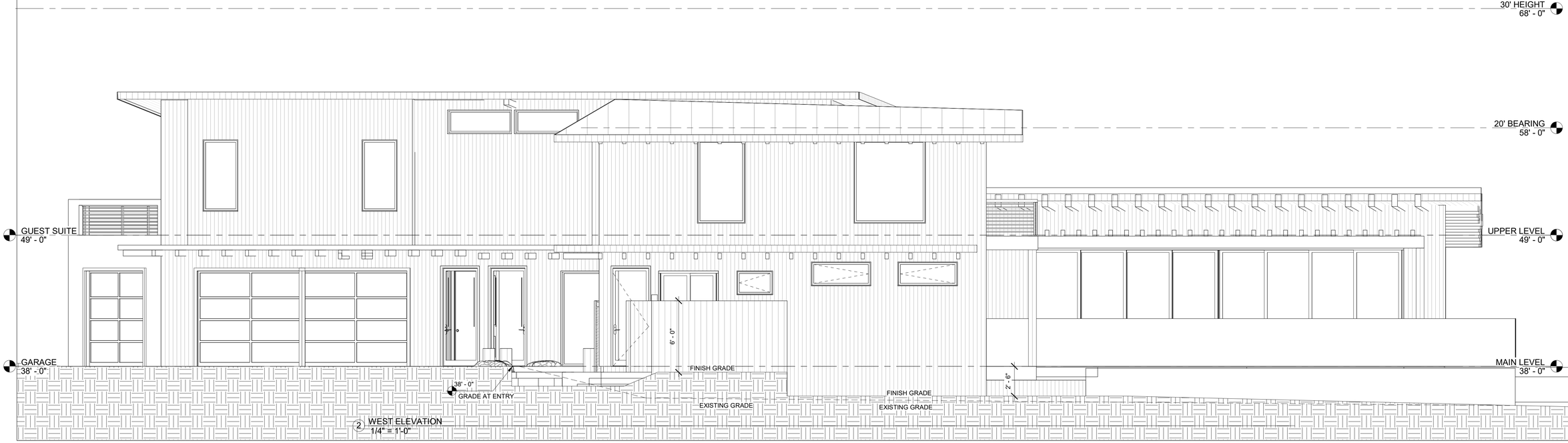
A3

Scale 1/4" = 1'-0"

8/5/2021 8:00:15 AM



1 SOUTH ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVIOR AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII - USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number	00
Date	7-16-2021

EXTERIOR ELEVATIONS

A4

Scale 1/4" = 1'-0"

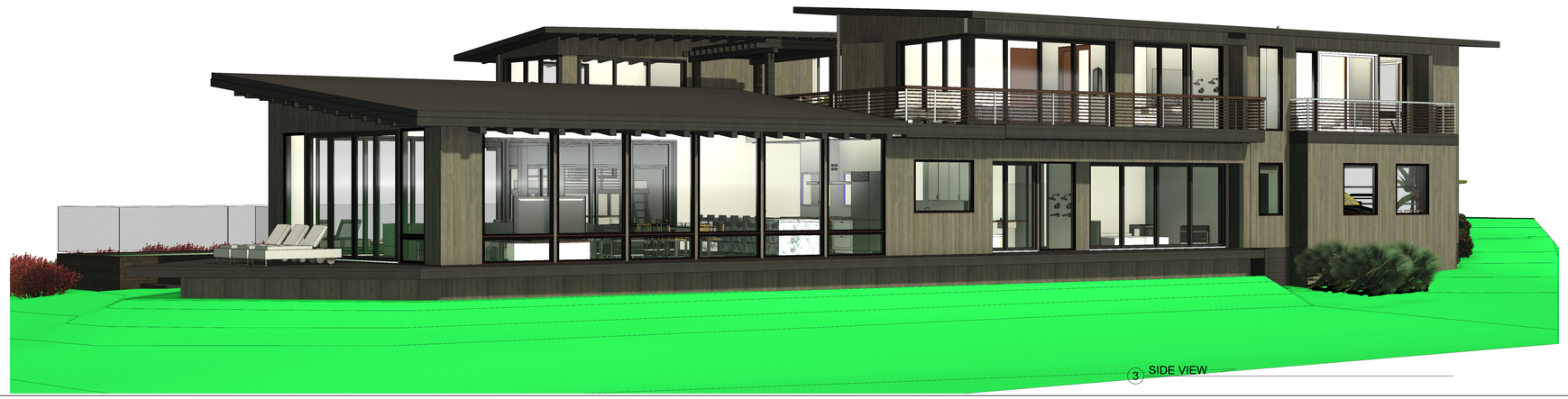
8/5/2021 8:00:27 AM



1 GARAGE VIEW



2 POOL VIEW



3 SIDE VIEW

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA

MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone. 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070

Koloa Kauai HI

No.	Description	Date

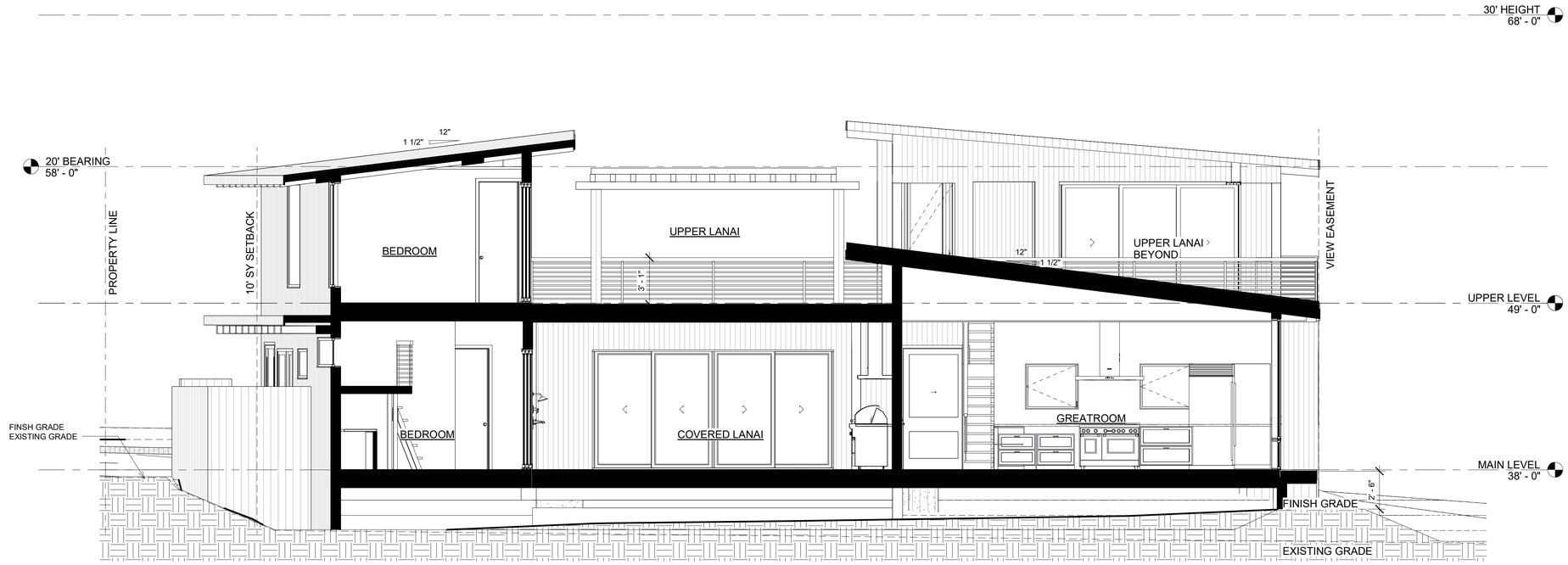
Project number 00
Date 7-16-2021

EXTERIOR VIEWS

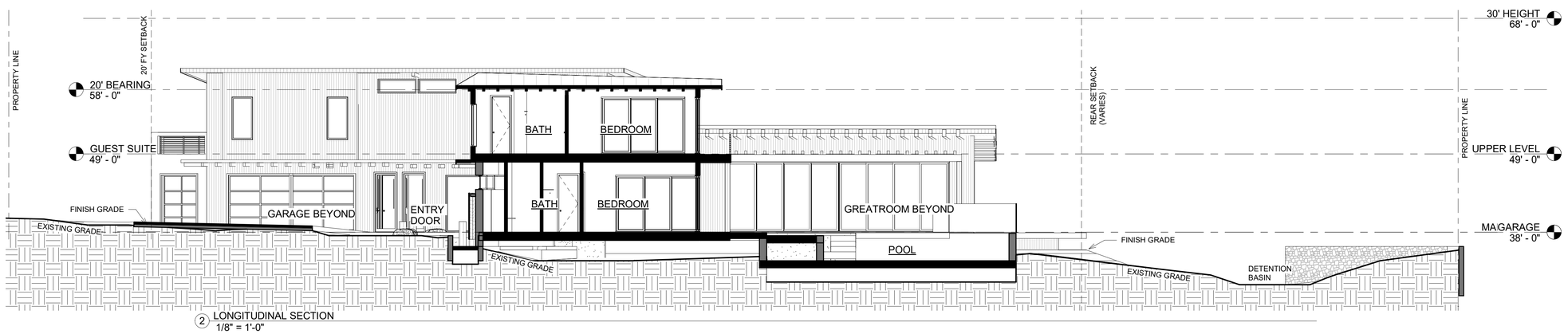
A5

Scale

8/5/2021 8:01:19 AM



1 CROSS SECTION
1/4" = 1'-0"



2 LONGITUDINAL SECTION
1/8" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
KEVIN D. HORN
LICENSED PROFESSIONAL ARCHITECT
No. 10362
HAWAII, USA
MY LICENSE EXPIRES APRIL 30, 2020

Gulfstream Financial LLC
3214 N. University Ave
#117 Provo UT 84604

HORN PARTNERS
ARCHITECTURE
hornandpartners.com
po box 0386
Bountiful, UT 84011
phone: 801.232.9333

MAKAHUENA LOT 3
TMK (4) 2-8-021-070
Koloa Kauai HI

No.	Description	Date

Project number	00
Date	7-16-2021

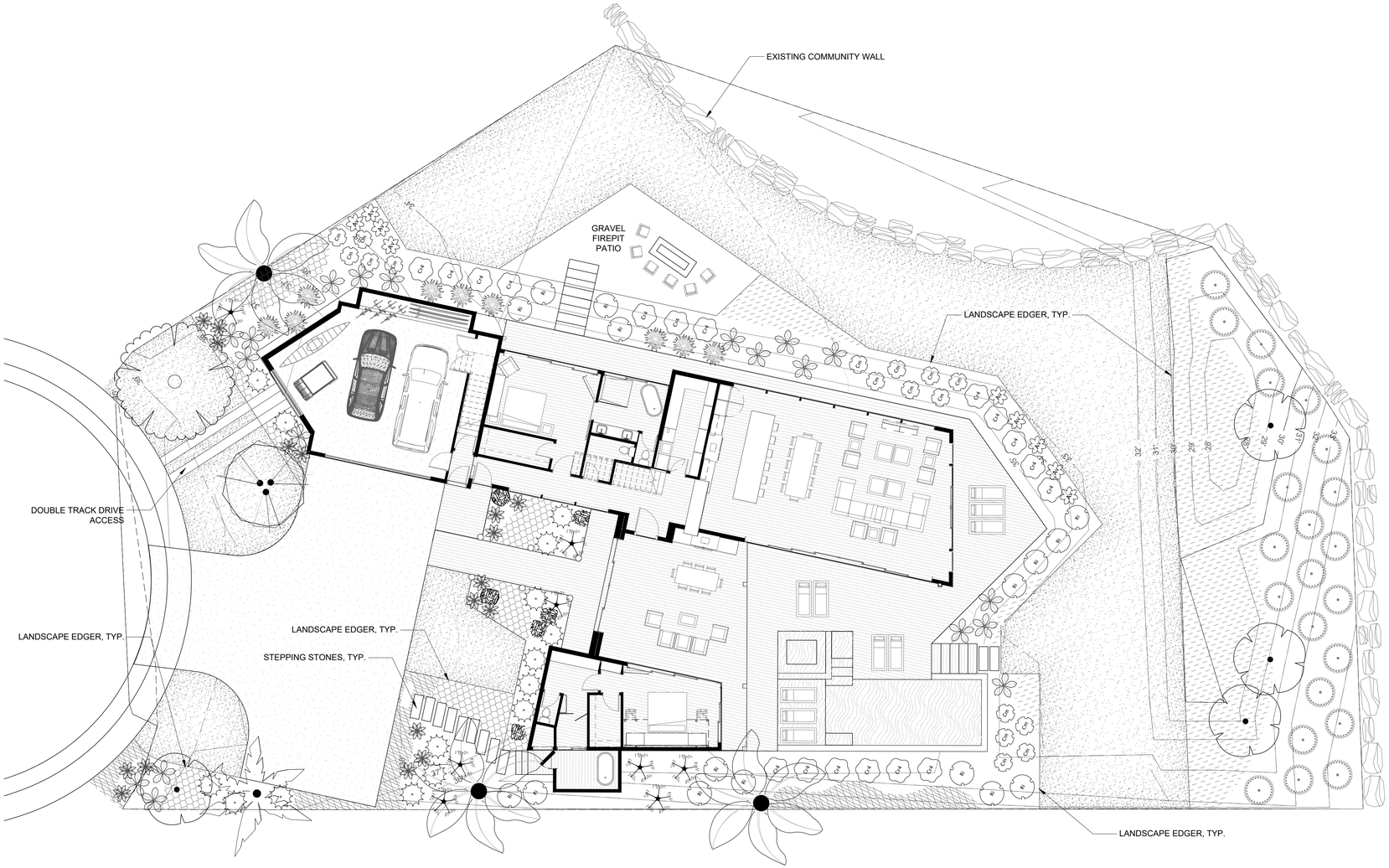
SECTIONS

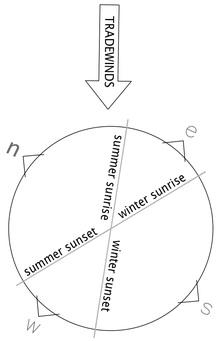
A6

Scale As indicated

8/5/2021 8:01:30 AM

EXHIBIT I





PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME
	CLUSIA ROSEA / AUTOGRAPH TREE
	PLUMERIA OBTUSA `SINGAPORE` / SINGAPORE PLUMERIA MATURE SIZE H:15` X W:15'
	VITEX TRIFOLIA / ARABIAN LILAC

PALM TREES	BOTANICAL / COMMON NAME
	COCOS NUCIFERA / COCONUT PALM MATURE SIZE H:50` X W:25`
	PHOENIX ROEBELENII / PYGMY DATE PALM
	SABAL PALMETTO / CABBAGE PALMETTO

SHRUBS	BOTANICAL / COMMON NAME
	AECHMEA BLANCHETIANA / ORANGE BROMELIAD
Av	ALOE VERA / MEDICINAL ALOE
Cm	CARISSA MACROCARPA 'PROSTRATA' / PROSTRATE NATAL PLUM
Cr4	CHRYSOBALANUS ICACO 'RED TIP' / RED TIP COCOPLUM
	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY
	DRACAENA REFLEXA 'SONG OF JAMAICA' / SONG OF JAMAICA
	GARDENIA TAITENSIS 'DOUBLE' / DOUBLE TAHITIAN GARDENIA
Ri	RHAPHIOLEPIS INDICA / INDIAN HAWTHORN
	SCAEVOLA FRUTESCENS / BEACH NAUPAKA

GROUND COVERS	BOTANICAL / COMMON NAME
	BACOPA MONNIERI / HERB OF GRACE
	MICROSORUM SCOLOPENDRIA / WART FERN
	WEDELIA TRILOBATA / CREEPING WEDELIA
	ZOYSIA JAPONICA `EL TORO` / KOREAN GRASS

LANDSCAPE DESIGN NOTE:
THIS LANDSCAPE WAS DESIGNED BY OR UNDER THE DIRECTION OF

CORY SHUPE

A LICENSED LANDSCAPE ARCHITECT IN THE STATE OF UTAH

THE STAMP IS UNDER

KEVIN D. HORN

A LICENSED ARCHITECT IN THE STATE OF HAWAII

Scale: 1" = 10'-0"

0 5 10 20 30

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT
....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	yy/mm/dd	DESCRIPTION

Stamp

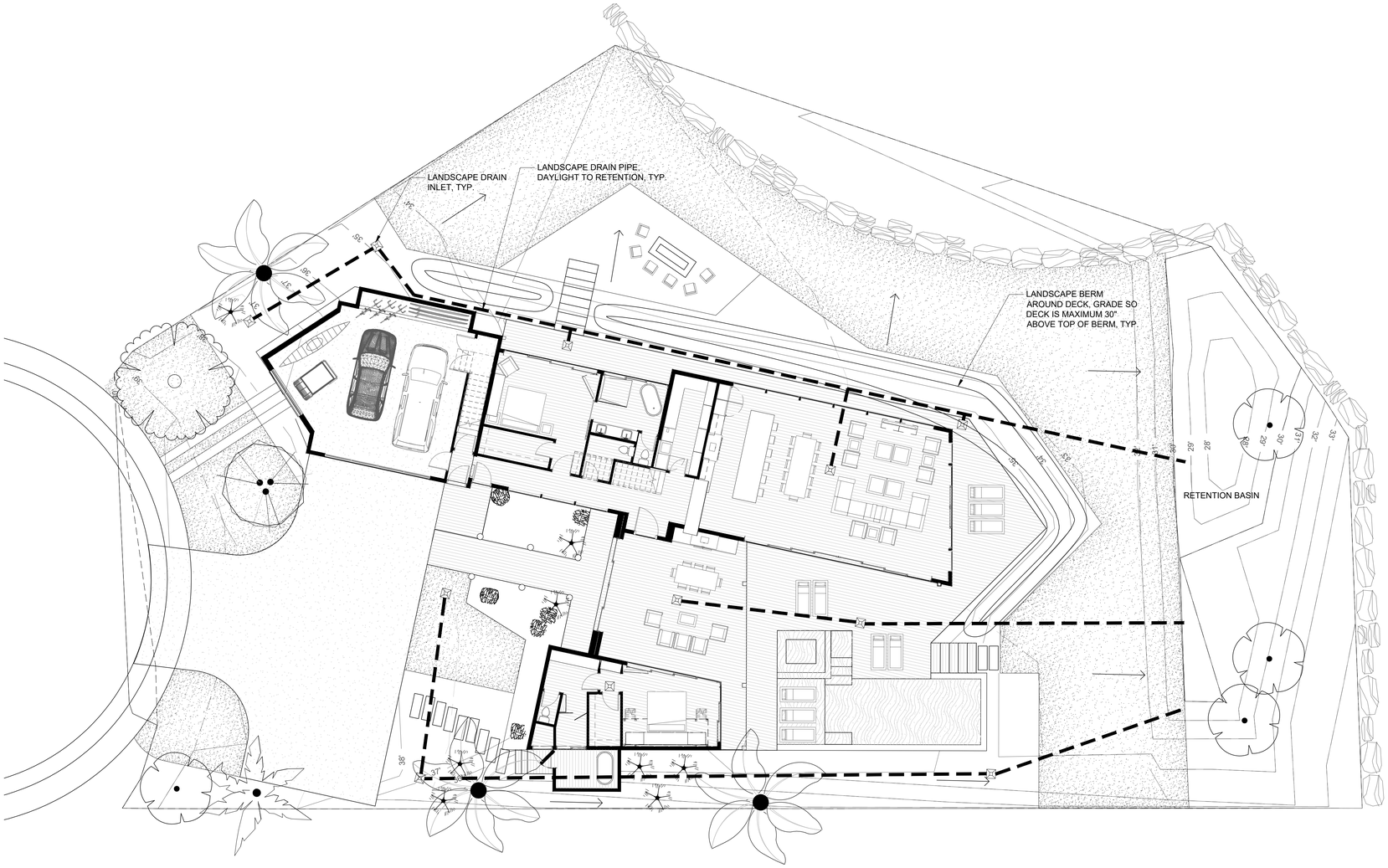
Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

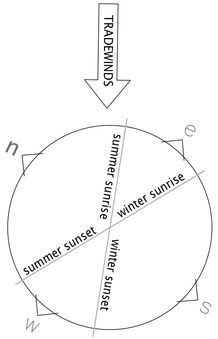
Drawing Title

OVERALL LANDSCAPE PLAN

Drawing number

LP101





LANDSCAPE DESIGN NOTE:
THIS LANDSCAPE WAS DESIGNED BY OR UNDER THE DIRECTION OF

CORY SHUPE

A LICENSED LANDSCAPE ARCHITECT IN THE STATE OF UTAH

THE STAMP IS UNDER

KEVIN D. HORN

A LICENSED ARCHITECT IN THE STATE OF HAWAII

Scale: 1" = 10'-0"

0 5 10 20 30

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT
....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	(yr/mm/dd)	DESCRIPTION

Stamp

Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

LANDSCAPE GRADING PLAN

Drawing number

LP201

PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	CLUSIA ROSEA / AUTOGRAPH TREE	25 GAL.	8-12` HT	1
	PLUMERIA OBTUSA `SINGAPORE` / SINGAPORE PLUMERIA MATURE SIZE H:15` X W:15'	25 GAL.	6-8` HT	1
	VITEX TRIFOLIA / ARABIAN LILAC	25 GAL.	8-12` HT	4

PALM TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	COCOS NUCIFERA / COCONUT PALM MATURE SIZE H:50` X W:25`	50 GAL.	20-25` HT	3
	PHOENIX ROEBELENII / PYGMY DATE PALM	10 GAL.	6` HT MIN.	8
	SABAL PALMETTO / CABBAGE PALMETTO	25 GAL.	12-15` HT	1

SHRUBS	BOTANICAL / COMMON NAME	CONT	
	AECHMEA BLANCHETIANA / ORANGE BROMELIAD	5 GAL	17
AV	ALOE VERA / MEDICINAL ALOE	5 GAL	9
Cm	CARISSA MACROCARPA 'PROSTRATA' / PROSTRATE NATAL PLUM	5 GAL	17
Cr4	CHRYSOBALANUS ICACO 'RED TIP' / RED TIP COCOPLUM	5 GAL	18
	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY	5 GAL	19
	DRACAENA REFLEXA 'SONG OF JAMAICA' / SONG OF JAMAICA	5 GAL	9
+	GARDENIA TAITENSIS 'DOUBLE' / DOUBLE TAHITIAN GARDENIA	5 GAL	15
RI	RHAPHIOLEPIS INDICA / INDIAN HAWTHORN	5 GAL	16
+	SCAEVOLA FRUTESCENS / BEACH NAUPAKA	5 GAL	22

GROUND COVERS	BOTANICAL / COMMON NAME	CONT	SPACING	
	BACOPA MONNIERI / HERB OF GRACE	1 GAL		269 SF
	MICROSORUM SCOLOPENDRIA / WART FERN	1 GAL	24" o.c.	96
	WEDELIA TRILOBATA / CREEPING WEDELIA	1 GAL	24" o.c.	323
	ZOYSIA JAPONICA `EL TORO` / KOREAN GRASS	SOD		5,285 SF

LANDSCAPE NOTES:

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST CITY AND STATE STANDARDS AND GUIDELINES AND SHALL ADHERE TO THE MAKAHU'ENA ESTATES DESIGN GUIDELINES.

2. ALL PLANT MATERIAL SHALL BE GROWN IN CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THIS WORK AND SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 UNLESS OTHERWISE NOTED. PROVIDE TREES OF NORMAL GROWTH AND UNIFORM HEIGHTS, ACCORDING TO SPECIES, WITH STRAIGHT TRUNKS AND WELL DEVELOPED LEADERS, LATERALS, AND ROOTS.

3. EXISTING UTILITIES, EASEMENTS, AND STRUCTURES SHOWN ON THE DRAWINGS ARE IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE, TYPE, AND STRUCTURES TO BE ENCOUNTERED ON THE PROJECT PRIOR TO ANY EXCAVATION AND CONSTRUCTION IN THE VICINITY OF THE EXISTING UTILITIES AND STRUCTURES.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL REQUIRED PERMITS, LICENSES, AND APPROVALS REQUIRED TO LEGALLY AND RESPONSIBLY COMPLETE THE WORK.

5. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL, DISPOSAL, OR RELOCATION OF ALL OBSTRUCTIONS AND DEBRIS WITHIN THE DELINEATED CONSTRUCTION AREA PRIOR TO STARTING NEW CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY DEBRIS RESULTING FROM NEW CONSTRUCTION.

6. DAMAGE TO ANY EXISTING IMPROVEMENTS OR TO ANY PORTION OF THE PROJECT'S SURROUNDING AREA DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

7. ALL COMPACTED AREAS DEVELOPED THROUGH CONSTRUCTION WITHIN PROPOSED LANDSCAPE AREAS SHALL BE SCARIFIED AND LOOSENED TO A DEPTH OF 12" PRIOR TO LANDSCAPE AND IRRIGATION WORK BEGINNING.

8. NO PLANT SPECIES SUBSTITUTIONS WILL BE MADE WITHOUT APPROVAL OF OWNER.

9. ALL PLANT LAYOUT SHALL BE VERIFIED AND APPROVED IN FIELD BY OWNER PRIOR TO PLANTING. FAILURE TO RECEIVE APPROVAL MAY RESULT IN RE-WORK BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

10. ALL AREAS WITHIN AND AFFECTED BY THIS PROJECT SHALL HAVE POSITIVE DRAINAGE. POSITIVE DRAINAGE SHALL BE PROVIDED TO DIRECT STORMWATER AWAY FROM ALL STRUCTURES.

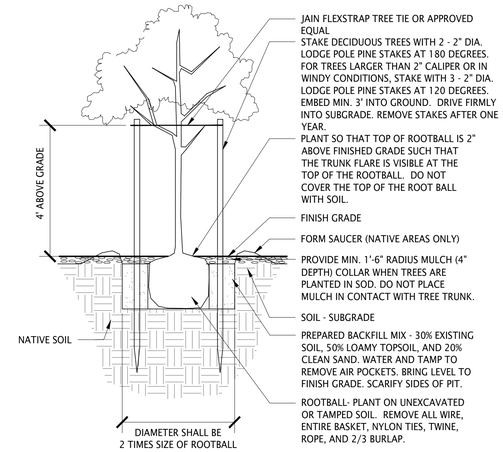
11. ALL CLARIFICATIONS OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SITE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO BEGINNING OF WORK.

12. ALL PLANT MATERIAL SHALL BE IRRIGATED WITH A FULLY AUTOMATED IRRIGATION SYSTEM (SEE IRRIGATION PLAN).

13. ALL PLANTING BEDS SHALL RECEIVE 2" TOP DRESSING OF GRAVEL MULCH AS APPROVED BY OWNER. TREES WITHIN LAWN AREAS SHALL RECEIVE A MIN. 5' DIA. ORGANIC MULCH RING.

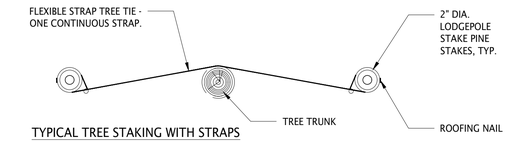
14. ALL LAWN AREAS SHALL RECEIVE A MIN. 4" DEPTH OF TOPSOIL. ALL PLANTING BEDS SHALL RECEIVE A MIN. 6" DEPTH OF TOPSOIL. CONTRACTOR MAY USE AVAILABLE EXISTING TOPSOIL ON SITE IF SUITABLE. IF NOT SUITABLE OR SUFFICIENT TO PROVIDE THE NECESSARY QUANTITY, THE CONTRACTOR SHALL IMPORT ADDITIONAL TOPSOIL.

15. LANDSCAPE EDGER: BENDA BOARD (BROWN COLOR) INSTALLED PER MANUFACTURER RECOMMENDATIONS.

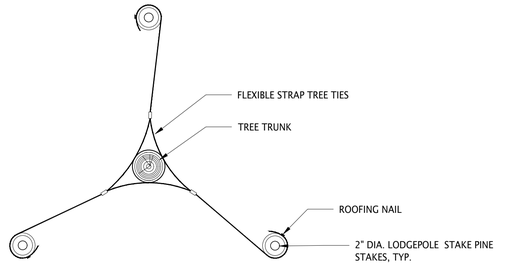


1 TREE PLANTING

NOT TO SCALE



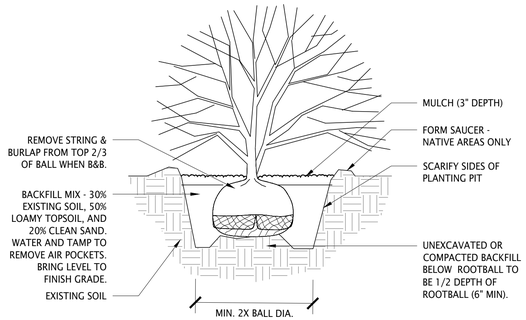
TYPICAL TREE STAKING WITH STRAPS



TREES IN WINDY CONDITIONS OR LARGER THAN 2" CAL.

2 TREE STAKING - FLEX STRAPS

NOT TO SCALE



NOTE:
PLANT SO THAT TOP OF ROOT BALL IS 2" ABOVE FINISHED GRADE

3 SHRUB DETAIL

NOT TO SCALE

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	symmetry	DESCRIPTION

Stamp

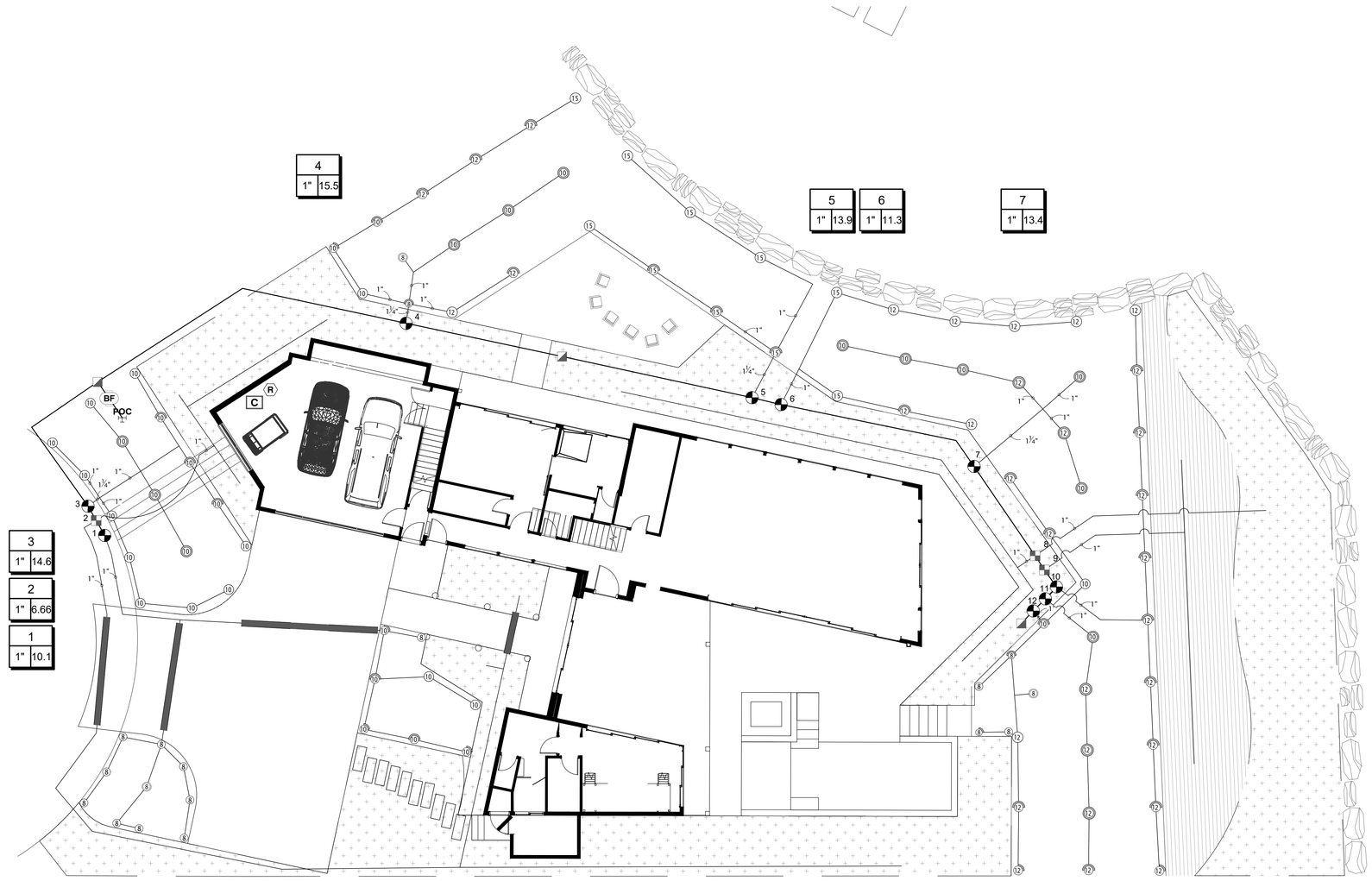
Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

LANDSCAPE DETAILS

Drawing number

LP501



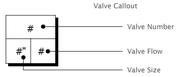
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
8 Q, 8 T, 8 H, 8 F	RAIN BIRD 1804-U-SAM-PRS U8 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
10 Q, 10 T, 10 H, 10 F	RAIN BIRD 1804-U-SAM-PRS U10 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
12 Q, 12 T, 12 H, 12 TT, 12 TQ, 12 F	RAIN BIRD 1804-U-SAM-PRS U12 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
13 Q, 13 T, 13 H, 13 TT, 13 TQ, 13 F	RAIN BIRD 1804-U-SAM-PRS U15 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30
8 08HE-VAN, 10 10HE-VAN, 12 12HE-VAN, 15 15HE-VAN	RAIN BIRD 1804-U-SAM-PRS ADJ TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING.	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD XCZ-100-PRB-COM WIDE FLOW DRIP CONTROL KIT FOR COMMERCIAL APPLICATIONS. 1" BALL VALVE WITH 1" PESB VALVE AND 1" PRESSURE REGULATING 40PSI QUICK-CHECK BASKET FILTER. 0.3GPM TO 20GPM.
	AREA TO RECEIVE DRIP EMITTERS RAIN BIRD XB-PC SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS. FLOW RATES OF 0.5GPH=BLUE, 1.0GPH=BLACK, AND 2.0GPH=RED. COMES WITH A SELF-PIERCING BARB INLET X BARB OUTLET. Emitter Notes: 1.0 GPH emitters (1 assigned to each 1 Gal plant) 2.0 GPH emitters (2 assigned to each 5 Gal plant) 2.0 GPH emitters (4 assigned to each B&B, 2" Cal plant) 2.0 GPH emitters (4 assigned to each B&B, 6` HT MIN. plant)
	AREA TO RECEIVE DRIPLINE NETAFIM TLCV-04-18 TECHLINE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE. 0.4 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.
	RAIN BIRD 33-DRC 3/4" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, THERMOPLASTIC RUBBER COVER, DOUBLE TRACK KEY LUG, AND 2-PIECE BODY.
BF	BACKFLOW PREVENTER - ZURN 375XLVSR 1" INSTALL IN INSULATED VIT STRONGBOX ALUMINUM ENCLOSURE - SIZE TOFIT
C	RAIN BIRD ESP4ME3 WITH (3) ESP-SM3 13 STATION, HYBRID MODULAR OUTDOOR CONTROLLER. FOR RESIDENTIAL OR LIGHT COMMERCIAL USE. LNK WIFI MODULE AND FLOW SENSOR READY.
R	RAIN BIRD WR2-RFC WIRELESS RAIN AND FREEZE SENSOR COMBO, INCLUDES 1 RECEIVER AND 1 RAIN/FREEZE SENSOR TRANSMITTER.
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40
	PIPE SLEEVE: PVC SCHEDULE 40 SIZE: TWICE (2X) DIAMETER OF PIPE WITHIN, MIN. 4". LIMIT ONE PIPE PER SLEEVE

Valve Callout



Scale: 1" = 10'-0"

0 5 10 20 30

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	yy/mm/dd	DESCRIPTION

Stamp

Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

OVERALL IRRIGATION PLAN

Drawing number

LI101

IRRIGATION NOTES

1. THIS DRAWING IS DIAGRAMMATIC AND IS INTENDED TO CONVEY THE GENERAL LAYOUT OF IRRIGATION SYSTEM COMPONENTS. ALL IRRIGATION EQUIPMENT SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE. LOCATE MAINLINE AND VALVES NEAR WALKS WHERE FEASIBLE.

2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE AT THE SITE PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES BETWEEN THE WATER PRESSURE SHOWN ON THE DRAWINGS AND ACTUAL PRESSURE READINGS AT THE POINT OF CONNECTION TO THE LANDSCAPE ARCHITECT. WATER PRESSURE AT THE POINT OF CONNECTION IS EXPECTED TO BE A MINIMUM OF **50-55** PSI. IN THE EVENT THAT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL STRUCTURES, SITE IMPROVEMENTS, WALKS, UTILITIES, AND GRADE CHANGES. COORDINATE LAYOUT OF THE IRRIGATION SYSTEM WITH OTHER TRADES SO THAT CONSTRUCTION CAN CONTINUE IN A NORMAL SEQUENCE OF EVENTS. ADJUSTMENTS MAY BE NECESSARY TO MAINTAIN FULL COVERAGE DEPENDING ON ACTUAL SITE CONDITIONS. ANY SIGNIFICANT CHANGES WILL REQUIRE WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO PLACEMENT. ALL MODIFICATIONS SHALL BE RECORDED ON 'AS-BUILT' DRAWINGS.

4. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM WHEN IT IS APPARENT IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADING DIFFERENCES MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

5. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT SITE CONDITIONS AND EXISTING IRRIGATION SYSTEM (IF ANY). IN THE EVENT THAT THE CONTRACTOR DAMAGES, DISPLACES OR OTHERWISE CAUSES OTHER TRADES WORK TO BE REINSTALLED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION AT HIS OWN EXPENSE.

6. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM PERFORMANCE. INSTALL HEADS WITH THE APPROPRIATE ARC AND RADIUS FOR THE AREA TO BE COVERED. ADJUST NOZZLES TO ELIMINATE OVERSPRAY ONTO WALKS, BUILDINGS, ETC.

7. IRRIGATION CONTROLLER SHALL BE GROUNDED PER ESTABLISHED ASIC GUIDELINES. MOUNT CONTROLLER BEHIND REAR WALL ENCLOSURE.

8. IRRIGATION CONTROL WIRES SHALL BE COLOR CODED WIRE FOR DIRECT BURIAL. COMMON, HOT, & SPARE WIRES SHALL BE 14 AWG (WHITE, RED & YELLOW RESPECTIVELY). FOR CONTROL WIRE RUNS EXCEEDING 3000 FEET OR COMMON WIRE RUNS EXCEEDING 1500 FEET, USE 12 AWG WIRE. CONTRACTOR SHALL RUN 1 DEDICATED SPARE WIRE 'HOMERUN' FROM CONTROLLER TO TERMINUS OF EACH WIRE LEG. ALL WIRE SPLICES TO BE LOCATED IN VALVE BOX. ALL WIRE CONNECTIONS SHALL BE 3M DBRY.

9. ALL MAINLINES, LATERAL LINES, AND CONTROL WIRES UNDER PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES.

10. ALL MAINLINE AND LATERAL LINE PIPE SHALL BE SCHEDULE 40 PVC. ALL LATERAL LINE FITTINGS SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED. ALL MAINLINE FITTINGS SHALL BE SCHEDULE 80 PVC.

11. CONTRACTOR SHALL USE WELD-ON P-70 PRIMER AND 711 LOW VOC CEMENT FOR ALL SOLVENT WELDED JOINTS.

12. ALL LINES SHALL SLOPE TO DRAIN. ADD MANUAL DRAINS AT ALL MAINLINE LOW POINTS AS NECESSARY FOR COMPLETE DRAINAGE OF THE ENTIRE SYSTEM. INDICATE ALL DRAIN LOCATIONS ON 'AS-BUILT' DRAWINGS.

13. ALL VALVE BOXES AND LIDS TO MATCH COLOR OF SURROUNDING AREA. VALVE BOXES AND LIDS IN LAWN AREAS ARE TO BE STANDARD GREEN. ALIGN VALVE BOXES PARALLEL WITH EDGE OF PAVEMENT/PLANTING BEDS. WHERE FEASIBLE, LOCATE THE EDGE OF VALVE BOX 12"-18" FROM EDGE OF PAVEMENT. ALL VALVE BOXES TO BE LOCATED WITHIN 3 FEET OF THE BUILDING.

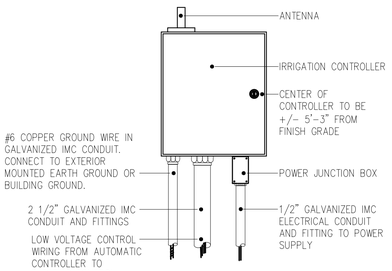
14. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE. HEADS SHALL BE LOCATED 6" AWAY FROM AND 1/4" BELOW ADJACENT CURBS, WALLS, AND WALKS. ALL HEADS LOCATED ADJACENT TO MOWSTRIPS SHALL BE LOCATED 1" AWAY AND 1/4" BELOW.

15. DRIP DISTRIBUTION TUBING TO BE BURIED BELOW MULCH AND STAKED AT MIN. 6' O.C. DRIP FITTINGS SHALL BE BARBED INSERT TYPE FITTINGS, COMPRESSION TYPE FITTINGS WILL NOT BE ACCEPTED. EMITTERS SHALL BE LOCATED ON UPHILL SIDE OF PLANTS. INSTALL DRIP FLUSH VALVE AT LOW POINT OF EACH DRIP ZONE AND AT THE END DRIP LINES.

16. GUARANTEE: ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF ACCEPTANCE AGAINST ALL DEFECTS IN MATERIAL, EQUIPMENT, AND WORKMANSHIP. GUARANTEE SHALL COVER REPAIR OF DAMAGE TO ANY PART OF THE PREMISES RESULTING FROM LEAKS OR OTHER DEFECTS IN MATERIAL, EQUIPMENT, OR WORKMANSHIP TO THE SATISFACTION OF THE OWNER. REPAIRS, IF REQUIRED, SHALL BE DONE PROMPTLY AND AT NO ADDITIONAL COST TO THE OWNER.

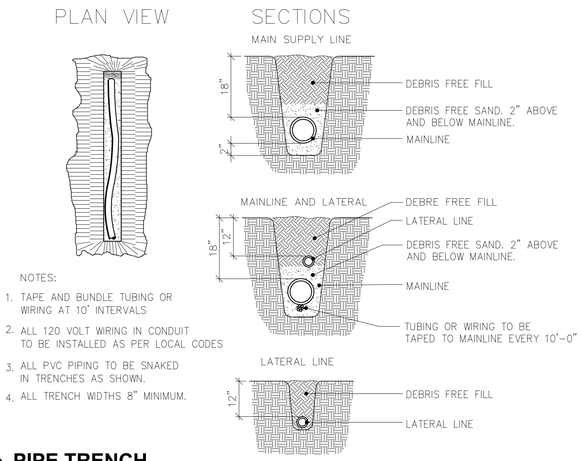
17. SEE DETAILS FOR ADDITIONAL INFORMATION. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

18. CONTRACTOR IS REMINDED THAT THE 10 FT WIDE STREET PARKWAY FRONTING THEIR LOT MUST BE INCLUDED IN THAT SPECIFIC LOTS PRIVATE IRRIGATION SYSTEM AND MUST BE IRRIGATED AND MAINTAINED AS PART OF THE LOT LANDSCAPING. THEREFORE, THE ASSOCIATION'S EXISTING NON-POTABLE WATER MAIN WILL SIMPLY BECOME A "PASS THROUGH" SYSTEM SERVING TO IRRIGATE OTHER AREAS ON EITHER SIDE OF THE LOT.



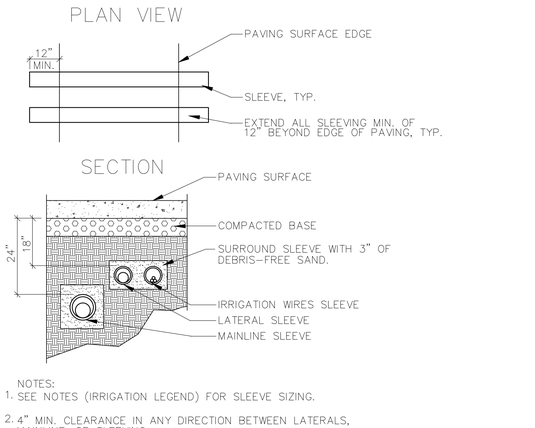
1 IRRIGATION CONTROLLER - WALL MOUNT

SCALE: NOT TO SCALE



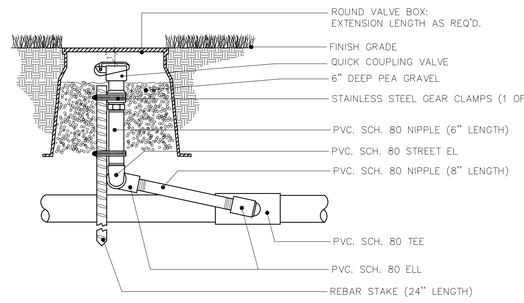
2 PIPE TRENCH

SCALE: NOT TO SCALE



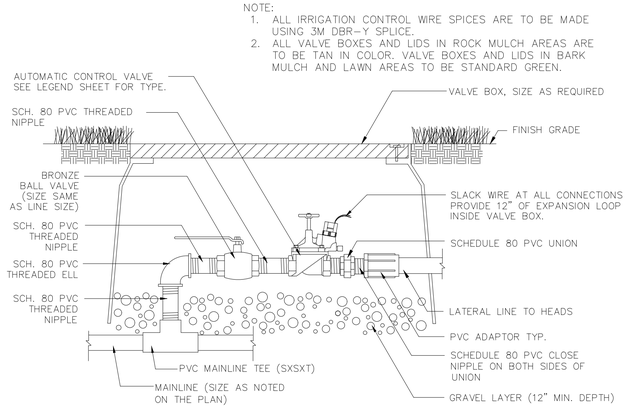
3 PIPE SLEEVE

SCALE: NOT TO SCALE



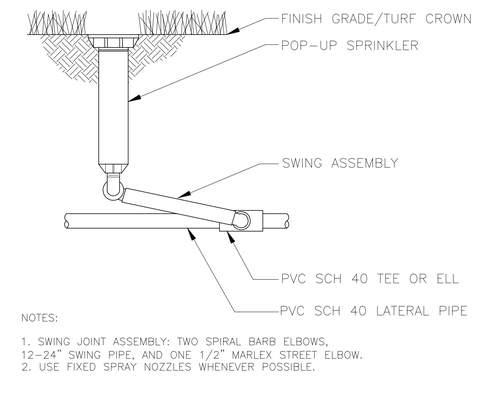
4 QUICK COUPLER

SCALE: NOT TO SCALE



5 IRRIGATION CONTROL VALVE

SCALE: NOT TO SCALE



6 POP-UP SPRAY/ROTARY

SCALE: NOT TO SCALE

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

(4) 2-8-021:070

MAKAHUENA
LOT 3 TMK No.
KOLOA KAUAI, HI

REVISIONS

NO.	symmetry	DESCRIPTION

Stamp

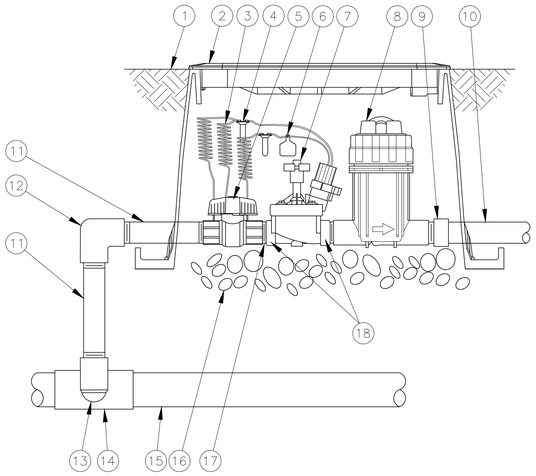
Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

IRRIGATION DETAILS

Drawing number

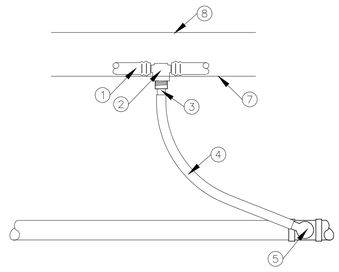
LI501



1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB–STD
3. 30–INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1 INCH BALL VALVE (INCLUDED IN XCZ–PRB–100 KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUDED IN XCZ–100–PRB–COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB–QKCHK–100 (INCLUDED IN XCZ–100–PRB–COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2–INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3–INCH MINIMUM DEPTH OF 3/4–INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ KIT)
18. ACTION MANIFOLD FITTINGS, (2 EA.) BUTTRESS NIPPLE 18011–X SPIGOT/SLIP ADAPTOR 18012–X

1 DRIP CONTROL ZONE KIT

SCALE: NOT TO SCALE

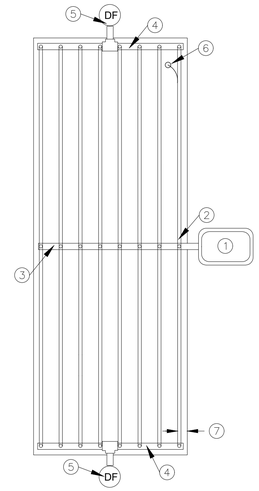


1. DRIP TUBING
2. 3/4" COMBINATION TEE
3. 3/4" MPT ADAPTER
4. FLEXIBLE POLY TUBING
5. PVC TEE OR ELBOW WITH 3/4" MPT ELBOW
6. PVC LATERAL LINE
7. FINISH GRADE
8. TOP OF MULCH

NOTE:
1. INSTALL A MINIMUM OF ONE PVC TO DRIP TUBING CONNECTION FOR EVERY 5 GPM OF FLOW.
2. CONSULT MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM RUN LENGTH.

2 PVC TO DRIP TUBING CONNECTION

SCALE: NOT TO SCALE

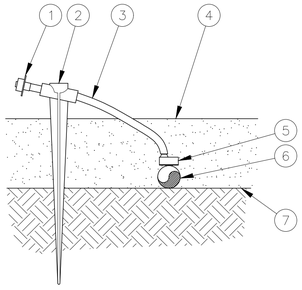


1. IRRIGATION CONTROL VALVE
2. PVC TO DRIP TUBING CONNECTION (SEE DETAIL)
3. PVC SUPPLY HEADER
4. PVC EXHAUST HEADER (DRIP TUBING MAY BE USED IN PLACE OF PVC FOR SUB HEADERS PER MANUFACTURER'S DESIGN GUIDELINES)
5. DRIP FLUSH VALVE (SEE DETAIL)
6. INDICATOR EMITTER – (1) 1 GPH EMITTER INTO IN–LINE DRIP TUBING
7. MAINTAIN 4" GAP BETWEEN DRIP TUBING AND PERIMETER OF IRRIGATED AREA

NOTE:
1. INSTALL A MINIMUM OF ONE PVC TO DRIP TUBING CONNECTION FOR EVERY 5 GPM OF FLOW.
2. CONSULT MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM RUN LENGTH.

3 CENTER FEED INLINE DRIP

SCALE: NOT TO SCALE

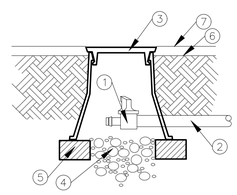


1. DIFFUSER BUG CAP: RAIN BIRD DBC–025
2. UNIVERSAL ¼" TUBING STAKE: RAIN BIRD TS–025
3. ¼" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)
4. TOP OF MULCH
5. SINGLE–OUTLET BARB INLET X BARB OUTLET EMITTER: RAIN BIRD XERI–BUG EMITTER
6. ½" POLYETHYLENE TUBING: RAIN BIRD XT–700 XERI–TUBE
7. FINISH GRADE

NOTES:
1. USE RAIN BIRD XERIMAN TOOL XM–TOOL TO INSERT EMITTER DIRECTLY INTO ½" POLYETHYLENE TUBING.

4 DRIP EMITTER

SCALE: NOT TO SCALE



1. DRIP FLUSH VALVE
2. DRIP TUBING
3. 10" ROUND VALVE BOX
4. GRAVEL SUMP – ONE CUBIC FOOT
5. BRICK SUPPORTS (2)
6. FINISH GRADE
7. TOP OF MULCH

NOTE:
1. INSTALL DRIP FLUSH VALVE(S) AT LOW POINT OF EACH DRIP ZONE AND AT END OF LINES.
2. ALL VALVE BOXES AND LIDS IN ROCK MULCH AREAS ARE TO BE TAN IN COLOR. VALVE BOXES AND LIDS IN BARK MULCH AND LAWN AREAS TO BE STANDARD GREEN.

5 DRIP FLUSH VALVE

SCALE: NOT TO SCALE

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.913.7994

CLIENT

....

MAKAHUENA
LOT 3 TMK No. (4) 2-8-021:070
KOLOA KAUAI, HI

REVISIONS

NO.	symmetry	DESCRIPTION

Stamp

Designed By:	RD
Drawn By:	BP
Date:	01.25.2022
Checked By:	CS
Project No:	21-172

Drawing Title

LANDSCAPE DETAILS

Drawing number

LI501

EXHIBIT J

Lot 3
1645 Pee rd
Koloa, HI 96756

Main Residence
Living Space 2375 SF/ Garage 850 SF/ Covered Lanais 604 SF/ Pool 486 SF

TOTAL: $ 2,301,480.00

Item	Description	Total
Soft Costs		$ 172,850.00
Plans and Engineering		$ 45,300.00
Permits and Fees		$ 16,600.00
Overhead	Office work and management.	$ 81,900.00
Other Soft Costs	Insurance, financing, etc.	$ 29,050.00
Hard Costs		$ 2,128,630.00
GRADING & BACKFILL	Post & Beam	$ 54,000.00
SEPTIC & PERCULATION		$ 49,800.00
CONCRETE WORK	Foundation, retaining walls, flatwork	$ 127,000.00
FRAMING MAT'LS		$ 225,600.00
FRAMING LABOR		$ 179,800.00
PLUMBING		$ 87,150.00
PLUMBING FIXTURES	Sinks, faucets, toilets, tubs	$ 24,900.00
ELECTRICAL	Includes Low Voltage	$ 91,300.00
ELECTRICAL FIXTURES	Can lights, pendants, sconces	$ 24,900.00
HVAC		$ 58,100.00
ROOFING	Standing seam and membrane	$ 91,600.00
SIDING MAT'LS	Vertical Lap siding	$ 51,500.00
EXTERIOR DOORS	Bi-folds, multi-slides, and hinged doors	$ 113,200.00
INTERIOR DOORS	Stain grade	$ 22,300.00
WINDOWS		$ 69,500.00
GARAGE DOORS		$ 11,500.00
INSULATION & DRYWALL	Smooth finish	$ 59,500.00
RAILING		$ 40,500.00
FLOORING	Hardwood and Tile	$ 62,000.00
FINISH CARPENTRY		$ 125,010.00
CABINETS	Kitchen, laundry, bathrooms	$ 65,800.00
COUNTERTOPS	Quartz	$ 35,200.00
PAINT		$ 73,500.00
GLASS & HARDWARE	Shower Enclosures, mirrors, etc.	$ 25,500.00
WINDOW COVERINGS		$ 16,550.00
GUTTERS		$ 18,500.00
APPLIANCES	Stainless Steel	$ 49,000.00

EXHIBIT J

LANDSCAPE		$ 93,000.00
POOL	Infinity Edge and spa	$ 125,000.00
FENCE & STONEWORK		$ 16,600.00
DUMPSTER		$ 6,640.00
CONSTRUCTION TOILET		$ 2,490.00
SITE CLEANUP		$ 4,150.00
UTILITIES		$ 3,320.00
MISC SHIPPING		$ 20,900.00
MAT'L STORAGE		$ 3,320.00
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -

EXHIBIT K



EXHIBIT K



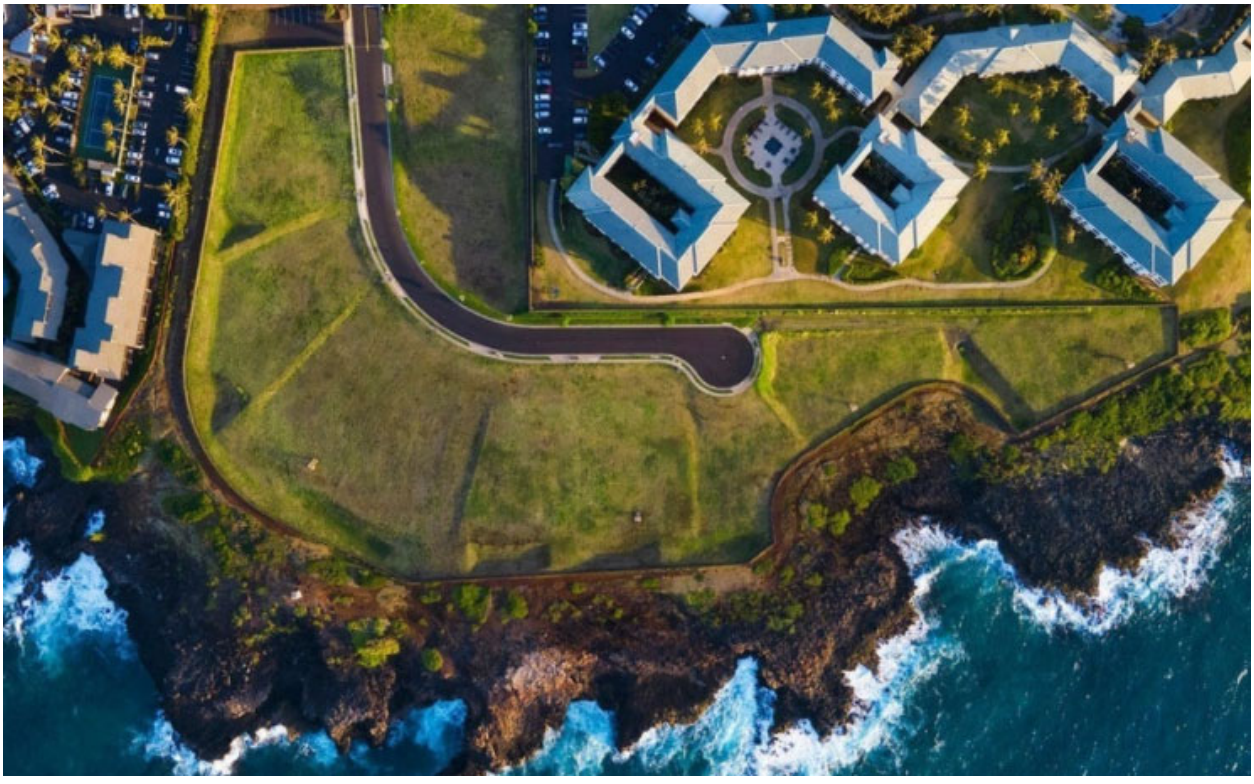


EXHIBIT L

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona, Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

December 2, 2012 Project 810

Pua Aiu, Ph.D., SHPD Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, Hawai'i 96707

Subject: Final Archaeological Inventory Survey for a 13.6-acre Project Area
Weliweli Ahupua'a, Koloa District, Island of Kauai
TMK: (4) 2-8-021:041
(A.E. Haun, D. Henry and S. Kailihiwa 2011, Report 810-042611)

Dear Dr. Aiu:

The subject final archaeological inventory survey (AIS) is enclosed. The draft AIS was revised based on Division review comments dated August 27, 2012 (LOG NO: 2011.1830; DOC NO: 1208SL18). The 12 review comments listed in the ATTACHMENT to the review letter are listed below followed by our response and associated revisions.

Project Area Description

1. **Revise (page 1) from "the project are varies" to "the project area varies".**
Response: Corrected

2. **Revise Fig 1 caption to include map date.**
Response: Revised as requested, listing map date of 1996

Previous Archaeological Research

3. **Revise Thrum (1907) to Thrum (1906).**
Response: Revised as requested

4. **Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".**
Response: Revised to read, "He also identified a series of walls designated as".

5. **Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".**
Response: Revised as requested

6. **Revise Table 1- to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.**
Response: Revised as requested. Date of Hill *et al.* changed from 1996 to 2005, which is the correct date

7. **Revise Fig 8 - to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005**
Response: Revised as requested

EXHIBIT L

Findings

8. **Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19-1ast 4 paragraphs; page 24 - 3rd paragraph; page 26-1st paragraph (see also __ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.**
Response: Revised as requested

Subsurface Testing

9. **Revise (page 57) from "Five of the units were located" to "Four of the units were located".**
Response: Revised as requested

10. **Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks - i.e., layers I and II should both apply to TU-18.**
Response: Revised as requested

11. **Revise (page 61) Fig 64 stratum I label in TU-14.**
Response: Revised as requested

References Cited

12. **Revise - Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907.* Honolulu.**

Response: Firor 1992 changed to Firor & Rosendahl 1992 in Table 1, Figure 8 and references
Firor et al. 1991 added to references
Knutson 1914 changed to 1913 on page 7 – correct in references
Kamakau 1992 added to references
Thrum 1906 citation modified in references

If you have any further questions, or require any additional information, please contact me at (808) 325-2402.

Sincerely,

Alan E. Haun, Ph.D.
Principal Investigator

Encl. Report, CD, Copy of Review Letter

cc: CIRI Land Development Co.

810 Rec'd 9/1/12

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

PAUL J. CONROY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
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

HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

601 Kamokila Boulevard, Suite 555
Kapolei, HI 96806

August 27, 2012

Dr. Alan E. Haun, Principal Investigator
Haun &Associates
73-1168 Kahuna A'o Road
Kailua-Kona, Hawaii 96740

LOG NO: 2011.1830
DOC NO: 1208SL18
Archaeology

Dear Dr. Haun:

SUBJECT: **Chapter 6E-42 Historic Preservation Review -**
Archaeological Inventory Survey Report for 13.6 Acres, Makahuena Point
Weliweli Ahupua'a, Kōloa District, Island of Kaua'i
TMK: (4) 2-8-021:041

Thank you for the opportunity to review the draft report titled *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011). This document was received by our office on June 6, 2011; we apologize for the delayed review and thank you for your patience. This report presents the findings of an archeological inventory survey that was conducted on a 13.6-acre parcel and involved a 100% pedestrian surface survey. Sites were defined as clusters of features less than 15 m apart. The exception was a site designation applied to a series of widely scattered, nearly identical small concrete pads. The archaeological survey identified 18 sites comprised of a total of 128 features. All of the sites and features are identified as remnants of US federal government navigation-related infrastructure. The majority of the remains are associated with the former US Coast Guard Long Range Navigation (LORAN) station that operated at the point from 1951 to 1979. The documented features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following: ditch, road, stairs, utility box, and wall slab. Subsurface testing consisted of the excavation of 20 test units. No intact subsurface cultural deposits were identified during the testing.

The 18 sites are assessed as significant solely under Hawaii Register of Historic Places (HRHP) Criterion "d" for their information content, and are recommended as having been adequately documented. No further work or preservation is recommended. Although no subsurface cultural deposits were identified during subsurface testing, archaeological monitoring is recommended for future ground-disturbing activities because significant deposits and burials were found on the adjacent property. SHPD agrees with the proposed significance assessments and treatment recommendations.

The archaeological inventory survey report provides an excellent discussion of field methods, archival and historical background, previous archaeological investigations, and the project findings and sites. This report meets the requirements of Hawaii Administrative Rule 13-276-5 and is accepted by SHPD with the understanding that **some minor revisions are made** in the final document (see attachment). Please make these corrections and send one hardcopy of the document, clearly marked **FINAL**, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. Please contact Susan A. Lebo at (808) 692-8019 or Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Theresa K. Donham
Archaeology Branch Chief

ATTACHMENT

Comments and Questions: *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011).

Project Area Description

(1) Revise (page 1) from "the project are varies" to "the project area varies".
(2) Revise Fig 1 caption to include map date.

Previous Archaeological Research

(3) Revise Thrum (1907) to Thrum (1906).
(4) Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".
(5) Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".
(6) Revise Table 1 – to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.
(7) Revise Fig 8 – to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005.

Findings

(8) Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19- last 4 paragraphs; page 24 – 3rd pargagraph; page 26-1st paragraph (see also (__ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.

Subsurface Testing

(9) Revise (page 57) from "Five of the units were located" to "Four of the units were located".
(10) Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks – i.e., layers I and II should both apply to TU 18.
(11) Revise (page 61) Fig 64 stratum I label in TU-14.

References Cited

(12) Revise – Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907*. Honolulu.

Report 810-111312

FINAL

ARCHAEOLOGICAL INVENTORY SURVEY

TMK: (4) 2-8-021:041

MAKAHUENA POINT, WELIWELI AHUPUA'A

KŌLOA DISTRICT, ISLAND OF KAUA'I

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

FINAL

ARCHAEOLOGICAL INVENTORY SURVEY

TMK: (4) 2-8-021:041

MAKAHUENA POINT, WELIWELI AHUPUA'A

KŌLOA DISTRICT, ISLAND OF KAUA'I

By:

Alan E. Haun, Ph.D.

Dave Henry, B.S.

and

Solomon H. Kailihiwa, III, B.A.

Prepared for:

CIRI Land Development Company
2525 C Street, Suite 500
Anchorage, Alaska 99503

June 2011
(Revised November 2012)

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

SUMMARY

At the request of CIRI Land Development Company, Haun & Associates conducted an archaeological inventory survey of the 13.6-acre TMK: (4) 2-8-021:041 located in Weliweli Ahupua'a, Kōloa District, Island of Kaua'i. The objective of the survey was to satisfy historic preservation regulatory review requirements of the Department of Land and Natural Resources-Historic Preservation Division (DLNR-SHPD), as contained within Hawaii Administrative Rules, Title 13, DLNR, Subtitle 13, State Historic Preservation Rules.

The archaeological survey identified 18 sites with 128 features. The 128 features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following; ditch, road, stairs, utility box and walled slab. Feature function includes utility (n=79), foundation (31), marker (5), transportation (4), boundary (1), disposal (1), recreation (1), soil retention (1), water diversion (1) and indeterminate (4). Subsurface testing was undertaken during the project, consisting of the excavation of twenty test units. No intact subsurface cultural deposits were encountered during the subsurface testing.

All of the documented remains are the remnants of U.S. federal government navigation-related infrastructure in operation for over 100 years. A navigation aid was established at Makahuena Point in 1908 and continues to function today. The majority of the remains are associated with the former U.S. Coast Guard Long Range Navigation (LORAN) station that was in operation from 1951 until 1979.

The 18 sites present within the parcel are assessed as significant solely for their information content. These sites have been adequately documented and no further work or preservation is recommended. Although extensive subsurface testing did not identify subsurface cultural deposits or burials, it is recommended that any future development-related land disturbance be archaeologically monitored during the initial site work because significant deposits and burials were found on the adjacent property. The monitoring would be guided by a monitoring plan prepared for DLNR-SHPD review and approval.

CONTENTS

Introduction....1

Scope of Work....1

Project Area Description....1

Field Methods....4

Archaeological and Historical Background....6

Historical Documentary Research....6

Previous Archaeological Work....13

Project Expectations....18

Findings....19

Site Descriptions....19

Subsurface Testing....57

Conclusion....64

Discussion....64

Significance Assessments....68

Recommended Treatments....69

References....70

ILLUSTRATIONS

Figure 1. Portion of 1996 USGS Koloa Quadrangle showing Project Area....2

Figure 2. Tax Map Key 2-8-21 showing Project Area....3

Figure 3. Project Area Overview....5

Figure 4. Project Area Overview....5

Figure 5. 1935 Map of Kōloa Plantation....10

Figure 6. 1961 Photograph of LORAN Station Facility....12

Figure 7. 1966 Photograph of LORAN Station Staff and Adjacent Property....12

Figure 8. Previous Archaeological Work....14

Figure 9. The Basic Schematic of the Kōloa Field System....16

Figure 10. Raised *'auwai* in the Kōloa Field System....16

Figure 11. Site Location Map....20

Figure 12. Plan Map of Site 2130 Complex....22

Figure 13. Plan Map of Site 2130, Features A-F....23

Figure 14. Site 2130, Feature G Staircase....24

Figure 15. Site 2130, Feature H Road and Feature I Ditch....25

Figure 16. Site 2130, Feature J Path....25

ILLUSTRATIONS (cont.)

Figure 17. Site 2130, Feature K Wall....26
Figure 18. Site 2130, Feature L Path....27
Figure 19. Site 2130, Feature M Concrete Pad with Vertical Poles....27
Figure 20. Site 2130, Feature N Concrete Box....28
Figure 21. Site 2130, Feature O Walled Concrete Slab....28
Figure 22. 1961 Photograph of LORAN Station Showing Identified Features....30
Figure 23. Site 2131, Feature A Concrete and Stone Block....31
Figure 24. Site 2131, Feature B Concrete Blocks....32
Figure 25. Site 2131, Feature C Terrace....32
Figure 26. Site 2131, Feature D Terrace....33
Figure 27. Site 2131, Feature E Concrete Pad and Feature F Artifact Scatter....33
Figure 28. Site 2132, Feature B Concrete and Stone Block....35
Figure 29. Site 2133, Feature A and B Concrete Pads....35
Figure 30. Site 2133, Feature C Concrete Pad....36
Figure 31. Site 2134 Concrete Post....36
Figure 32. Site 2135, Feature A Concrete Block....38
Figure 33. Site 2135, Feature B Concrete Pad with Inscription....38
Figure 34. Site 2135, Feature C Artifact Scatter....39
Figure 35. Site 2135, Feature D Concrete Pad with Inscription....39
Figure 36. Site 2136, Feature A Concrete Pad....40
Figure 37. Site 2136, Feature B Artifact Scatter....40
Figure 38. Site 2136, Feature B Engine....41
Figure 39. Site 2137, Feature A Concrete Block....41
Figure 40. Site 2137, Feature B Concrete Pad with Inscription....43
Figure 41. Site 2138 Jumbled Concrete Blocks....43
Figure 42. Site 2139, Feature A Concrete Post....44
Figure 43. Site 2139, Feature B Concrete Block....44
Figure 44. Site 2139, Feature C Concrete Pad....46
Figure 45. Site 2139, Feature D Concrete and Metal Post....46
Figure 46. Site 2140 Concrete Block....47
Figure 47. Site 2141 Concrete Pad....47
Figure 48. Site 2142 Concrete Pad....48
Figure 49. Site 2143, Feature A Concrete Slab....48
Figure 50. Site 2143, Feature B Retaining Wall....50

ILLUSTRATIONS (cont.)

Figure 51. Site 2143, Feature C Concrete Pad.....50
Figure 52. Site 2144, Feature A Concrete Block.....51
Figure 53. Site 2144, Feature B Concrete Pad.....51
Figure 54. Site 2144, Features C, D and E Concrete Pads.....52
Figure 55. Site 2144, Feature D Concrete Pad with Inscription.....52
Figure 56. Site 2145, Feature A and B Concrete Pads.....54
Figure 57. Site 2146, Feature A Concrete Block.....54
Figure 58. Site 2146, Feature B Concrete Pad.....55
Figure 59. Site 2147 Concrete Pads.....55
Figure 60. Concrete Pad at Site 2147.....56
Figure 61. Concrete Pad at Site 2147.....56
Figure 62. West Face Profiles of TUs 1-5.....59
Figure 63. West Face Profiles of TUs 6-10.....60
Figure 64. West Face Profiles of TUs 11-15.....61
Figure 65. West Face Profiles of TUs 16-20.....62
Figure 66. Post-excavation of TU-3.....63
Figure 67. Post-excavation of TU-6.....63
Figure 68. Distribution of Associates Features within Project Area.....67

TABLES

Table 1. Summary of Previous Archaeological Research.....15
Table 2. Summary of Identified Sites.....21
Table 3. Summary of Test Unit Stratigraphy.....58
Table 4. Summary of Concrete Objects.....65

INTRODUCTION

At the request of CIRI Land Development Company, Haun & Associates has prepared an archaeological inventory survey of the 13.6-acre TMK: (4) 2-8-021:041 located in Weliweli Ahupua'a, Kōloa District, Island of Kaua'i (*Figures 1* and *2*). The objective of the survey was to satisfy historic preservation regulatory review requirements of the Department of Land and Natural Resources-Historic Preservation Division (DLNR-SHPD), as contained within Hawaii Administrative Rules, Title 13, DLNR, Subtitle 13, State Historic Preservation Rules (2003).

The survey fieldwork was conducted April 3-7, 2011 by Project Supervisors Solomon and Juliana Kailihiwa, B.A., under the direction of Dr. Alan Haun. The fieldwork required 160 person hours to complete. Described in this final report are the project scope of work, field methods, background information, survey findings, and significance assessments of the sites with recommended further treatments.

Scope of Work

Based on DLNR-SHPD rules for inventory surveys, the following specific tasks were determined to constitute an appropriate scope of work for the project:

1. Conduct background review and research of existing archaeological and historical documentary literature relating to the project area and its immediate vicinity--including examination of Land Commission Awards, *ahupua'a* records, historic maps, archival materials, archaeological reports, and other historical sources;

2. Conduct a high intensity, 100% pedestrian survey coverage of the project area;

3. Conduct detailed recording of all potentially significant sites including scale plan drawings, written descriptions, and photographs, as appropriate;

4. Conduct subsurface testing (manual excavation) at selected sites as necessary to determine site function and elsewhere to test for buried cultural deposits;

5. Analyze background research and field data; and

6. Prepare and submit Final Report.

Project Area Description

The project area is an irregularly-shaped 13.6-acre parcel located in coastal Weliweli Ahupua'a at Makahuena Point. It is bordered by the coastline along the south and by resort developments to the west (Makahuena at Po'ipū) and northeast (The Point at Po'ipū). Pe'e Road parallels the north project boundary in the western portion. The project area varies in elevation from c. 10 to 45 ft above sea level. Rainfall in the project area vicinity ranges from 30 to 40 inches per year (Juvik and Juvik 1998:56).

There is a large oval-shaped depression present in the western portion of the project area. This depression is 138.0 m long (north-northwest by south-southeast), 82.0 m wide and c. 10.0 m depth below the surrounding ground surface. This depression occupies c. 1.99-acres or 14.6% of the total project area. This depression appears to represent a collapsed volcanic crater. A modern navigational aid consisting of an automated light is located in the southwestern coastal portion of the project area within a separate tax map key parcel (2-8-021:43 – see *Figure 2*).



Figure 1. Portion of 1996 USGS Koloa Quadrangle showing Project Area

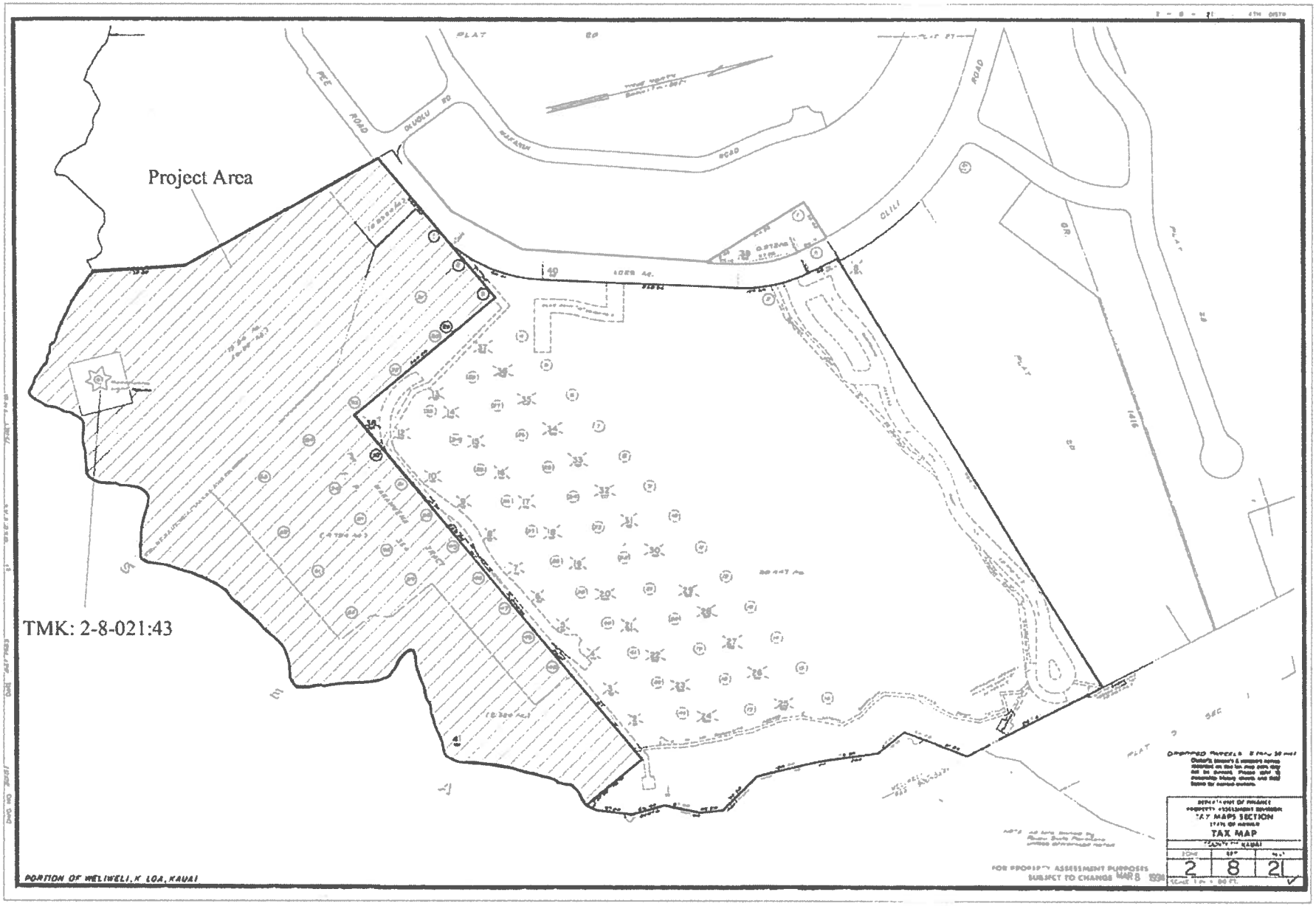


Figure 2. Tax Map Key 2-8-21 showing Project Area

The vegetation within the depression portion of the project area is comprised of *koa haole* (*Leucaena glauca*), bougainvillea (*Boerhavia spectabilis* Willd.), *panini* cactus (*Opuntia ficus-indica*), plumera (*Plumeria acuminata* Ait.), lantana (*Lantana camara* L.) and grasses and vines. There is a line of ironwood trees (*Casuarine equisetifolia* L.) present along the northern project boundary paralleling Pe'e Road. The vegetation throughout the remainder of the parcel primarily consists of beach *naupaka* (*naupaka-kahakai – Scaevola sericea* Vahl).

The soil through the inland portion of the parcel is comprised of Koloa stony silty clay on 15-25% slopes. This soil has a medium runoff potential and a moderate to severe erosion hazard. It developed in material weathered from basic igneous rock with multiple layers of silty clay to depths of 20 inches over pahoehoe bedrock (Foote et al. 1972:74). It is classified as suitable for irrigated sugarcane, pasture, woodland and wildlife habitat. The coastal portions of the parcel are classified as Rock land, which is defined by Foote et al. as, "areas where exposed bedrock covers more than 90 percent of surface (1972:119). Project area overviews are presented in *Figures 3* and *4*.

Field Methods

The project area was subjected to a 100% surface examination with surveyors spaced at 10 meter intervals. Ground surface visibility was fair within the more vegetated depression portion of the project area, although was excellent throughout the remainder of the parcel.

The identified sites and features were subjected to varying levels of documentation. The length, width, height and orientation of the majority of the concrete features within the parcel were obtained using hand tapes and compasses. The large complex in the northwestern portion of the project area was subjected to detailed recording consisting of the completion of a scaled plan map and standardized site/feature forms. All sites and features were photographed.

The location of the sites and features within the project area were plotted on a scaled project area map with the aid of hand-held Garmin Global Positioning System (GPS) Model 60 devices using the NAD 83 datum. The accuracy of these GPS devices for a single point is +/- 3-5 m. This accuracy is increased to less than c. 2-3 meters by taking multiple points including property corners and overlying the plotted points on a scaled map using AutoCAD software.

The sites, as defined for this study, consist of features situated less than 15 m apart. Features located more than 15 m apart were assigned separate site designations. The only exception to the 15 m distance threshold was a site designation applied to a series of widely scattered, nearly identical small concrete pads that were poured directly onto the exposed, coastal bedrock surface.

Subsurface testing consisted of the excavation of twenty 0.5 m by 0.5 m test units in the inland portions of the project area, inland of coastal lava areas. The units were excavated in arbitrary levels within stratigraphic layers and were terminated on bedrock or within an overlying, culturally sterile saprolitic clay deposit. Standardized excavation records were prepared after the completion of each stratigraphic layer. The soil removed during excavation was screened through ¼ "mesh. Portable remains collected were placed in paper bags labeled with the appropriate provenience information. Following the excavation, a section drawing depicting the stratigraphy was prepared and post-excavation photographs were taken. Cultural remains recovered during testing were transported to Haun & Associates' office for analysis.



Figure 3. Project Area Overview, view to southeast



Figure 4. Project Area Overview, view to northeast

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Historical Documentary Research

Weliweli Ahupua'a is situated in Kōloa District on Kaua'i's southern coast. It is bordered by Kōloa Ahupua'a to the east and Pā'ā Ahupua'a to the west. The word *weliweli* is a reduplication of *weli* that means "violent, dreadful, horrible, fearful, ferocious; revered; respectful, as of the chief; [or] full of fear" depending upon the context (Pukui and Elbert 1986:384). Relatively little legendary and historical information about Weliweli Ahupua'a is available.

One specific mention of Weliweli concerns the legendary gourd of La'amaomao, a calabash that the winds of Hawai'i were stored in. This calabash belonged to Paka'a, a servant of Keawenuiaumi, the son of 'Umi and a ruling chief of Hawai'i Island. The gourd was named after Paka'a's mother, La'amaomao, who had the ability to control the winds because the winds listened to her (Fornander 1918:72). Kuapaka'a, son of Paka'a, called to all of the winds from all of the islands when he first meets his father's master, Keawenuiaumi, to discredit the advisers that have replaced Paka'a at the king's side. In his chant to the winds, Kuapaka'a named the wind that blows through Weliweli, *Kuiamanini* (Fornander 1918:96).

Additional information relating to Weliweli is derived from the history of Kōloa District, formerly known as Kona District, and the adjoining *ahupua'a* of Kōloa and Pā'ā. Kōloa is the closest part of Kaua'i to O'ahu and was a desirable canoe landing to mount an invasion of Kaua'i. Westervelt (1917) records the story of a late 13th Century Hawai'i Island chief (*ali'i*) named Kalauniuohua, who sought to unite all of the islands under his rule. Before undertaking his conquest of the islands, he attempted to sacrifice a prophetess by the name of Waahia (*ibid.*). Waahia came to the chief and told him how to kill her so that her sacrifice would insure success in his campaign.

> You may try everywhere to kill me and I shall not die. There is only one place. This is the temple of Keeku. Burn that temple in the fire then I shall die. When you burn that place you stay quietly in your house from morning till night. Do not go outside. If you hear the outcry of the people seeing strange signs in the sky, do not go out to see. Do not open the doors of your house. If you do these things you shall not live. Wait patiently in your house until night comes, then open the door. If you obey perfectly you shall have all the islands even to Kauai. If not, the gods shall leave you. The name of my god is Kane-opepe-nui-o-Alakai [The great bundled-up man of Alakai]. He is willing that I should die (Westervelt 1917).

Kalauniuohua followed Waahia's instructions and stayed inside his house after she was thrown into the temple of Keeku and burned. The people that witnessed Waahia's death saw various signs rise up out of her funeral pyre: two roosters fighting, a pig, scintillating thunder clouds that changed color and finally two large black clouds that turned into giant *alae* birds [*Gallinula chloropus sandvicensis*] fighting each other. The chief wanted to see what has happening outside of his house. Lightning was striking wherever the birds' feet touched the ground and the people were shouting loudly at this spectacle. It was near sundown when Kalauniuohua could no longer help himself and made a hole in the wall of his house with his right hand. The birds flew away as the chief heard a voice say to him, "You have kept from sunrise to near sundown. Then you lost the time until night. You shall win for a time and then lose" (Westervelt 1917).

Kalauniuohua went on to conquer Maui, Molokai, and O'ahu. He took the rulers of these islands as prisoners and took them with him to conquer Kaua'i. They landed at Kōloa and were defeated by the Kaua'i ruler, Kukona in the battle named Ka-wele-wele or "the battle after refusing to fulfill the command of the gods" (*ibid.*). Kukona freed the chiefs from Maui, Molokai and O'ahu, and took Kalauniuohua as a prisoner. Kalauniuohua was eventually freed. Kukona gifted the islands of Hawai'i, Maui, Molokai, and O'ahu to the chief of Maui and kept the other three rulers on Kaua'i, where, Westervelt says, "they were

lost or mixed with the people, their followers from the other islands changing even the language of old Kauai so that it became more like the speech of the other islands" (*ibid.*).

According to a story told to Augustus Knudsen (1913) by a man named Puako, Kamehameha I was also defeated at the same site as Kalauniuohua by the forces of Kaumuali'i. Knudsen recounts that in 1893 he met with two or three of men from Kaua'i that were alive during this battle between Kamehameha's forces and the people of Kaua'i.

> But in 1893 I had two or three of the old men gathered around telling stories of ancient Hawaii, and again they told me the story so that I got it direct from the lips of men who, while not participating in the battle, had participated in the excitement of the day and the thousands giving offerings in the temples when next day the victory was celebrated (Knudsen 1913:137).

Puako describes that upon hearing of Kamehameha's conquest of O'ahu the people of Kaua'i were worried about an impending attack from Kamehameha. Warriors were posted to keep watch for Kamehameha's invasion force which they expected to land "on the Kona coast, where there was smooth sea for the landing and where, in case of defeat, the canoes putting to sea would not have to battle with wind and wave" (*ibid.*:137-138). Kamehameha's invasion force was observed in the early hours of the morning before dawn and the word was spread around the Island of Kaua'i. The warriors of Kaua'i were then assembled to meet Kamehameha's forces before the sun came up.

> But in the gloom of the darkness before dawn, the chiefs, gathered at Koloa, decided that they had a sufficient force, for the warriors of Weliweli had reconnoitered and again reported that there were probably not more than six thousand warriors on the beach. And so the march was started and before dawn the attack made on the resting warriors, who had dragged the their canoes above the reach of the high surf (*ibid:* 138).

The forces of Kaua'i enveloped the invading force and handily routed the forces of Kamehameha. Puako even states that the forces of Kaua'i came very close to capturing Kamehameha's feathered image of his war god, which Puako named as Kalaipāhoa. "Kalaipahoa, the war god that carried the standards of Kamehameha triumphantly through the battles of his conquest of the whole archipelago, was for the first time in danger. To lose that was to lose the kingdom; and probably the dynast was then in peril" (ibid: 139). Kamehameha's casualties for this battle included one half of his canoe fleet either destroyed or captured, 4000 men dead on the field and 543 men taken as prisoners of war (*ibid.*:139, 140).

Stokes (1946) questions the veracity Puako's story recorded by Knudsen. He asserts that Kaumuali'i would not have been in charge of Kaua'i when Kamehameha's aborted attempt on the island occurred. According to Joesting (1987) Keawe and Kaumuali'i were battling over control for the island at the time of Kamehameha's first attempt to land on Kaua'i.

> Strife-torn Kauai could have offered little resistance to the invasion armada of Kamehameha. Keawe had declared to Captain Bishop that he would join the forces of Kamehameha if he had not defeated Kaumualii by the time the invasion came, and in April 1796 the two were still battling for control of Kauai. If it had not been for the winds and currents of the wild Kaieie Waho Channel, Kauai would certainly have fallen to the forces of Kamehameha (Joesting 1987:59-60).

The second point that Stokes makes is that Puako incorrectly names Kamehameha's war god as Kālaipāhoa (Stokes 1946). Kamehameha's war god was an *akua hulu* (feathered god) named Kukailimoku that was bequeathed to him by his uncle, Kalaniopu'u, the *mo'i* (ruling chief) of Hawai'i Island, on Kalaniopu'u's death bed. Kālaipāhoa was Kamehameha's poison god cut from a *kālaipāhoa* tree (*Alphitonia ponderosa*) on Molokai (Westervelt 1916:74). Kālaipāhoa was a carved wooden image that "had an elliptical cavity in its back, extending from neck to buttocks, to hold poison" (Krauss 1993:114).

Stokes also argues that Puako was most likely relating the story of Kalauniuohua's defeat rather than Kamehameha's defeat (Stokes 1946:43). Stokes adds:

> Nevertheless the improbability or impossibility of the affair is clearly shown by the journal entries of foreigners recorded at Kauai immediately before and after the time of the alleged event. Information gathered by reliable authorities more than a century ago proves that the raconteur was ignorant of the name of the chief, and of the current history and native customs of the time in which he claimed to have lived, and implies that then he was not even born" (Stokes1946:45).

According to the dates and ages given by Knudsen for his informant, Puako, he would have been well over 100 years of age. Kamehameha's first attempt at invading Kaua'i took place in the spring of 1796. Puako claimed to have been 12 years of age at that time when he witnessed the events described. Knudsen recorded the story told to him by Puako in 1893, which means that Puako had to be the unlikely age of 109 when he told Knudsen his story. According to Kamakau (1992), Kamehameha's invading forces never reached Kaua'i, thwarted by rough seas in the channel between the island and 'Oahu that swamped many canoes forcing them to retreat.

In the summer of 1867, Sanford B. Dole wrote a letter to Jeffries Wyman, Hersey Professor of Anatomy at Harvard College detailing the large number human remains that could be found at Keoneloa (Wyman 1868). Dole mentions that the remains could be the result of a large battle that took place at this location and describes events similar to that of Puako's story. He has no specifics such as where the invading army was from or who was its leader because the people from the area did not know. Dole also states that due to the large number of infant burials associated with the area that these remains could be from a plague that swept through the islands after initial contact.

> *Dear Sir*:
>
> On the Southern shore of the Island of Kauai, for about four miles, there is a series of low, volcanic hills facing the sea, with precipices varying in height from twenty to sixty feet. Between these hills are several low sand beaches, from which the sand is ever carried inland by the trades. The windward slopes of these hills are covered with white sand of varying depth.
>
> Over this whole extent of sand beaches and hills, human bones are thickly scattered, and here it was that I collected the skulls. Ten years ago they were much more numerous than now. The wind is constantly uncovering the skeletons, and, when exposed, they are quickly destroyed by the weather and the feet of cattle. At the time I speak of, it was easy to find perfect skeletons in the exact position in which they were buried. This is now impossible, and even perfect crania are becoming more scarce with every year. In olden times the natives often made use of the soft sand-banks for sepulture, but the immense number that was buried here forbids the idea that it was any common burying place. The present generations of natives know nothing definite on the subject. One of their traditions, as near as I can remember, is, that a fight between two large fleets of canoes took place off the coast, and that the defeated party was driven ashore at this place, and many of them killed. A second tradition is this; a tribe passing along the coast in canoes, and having landed in a secluded little cove which is now pointed out, to bathe and refresh themselves, a rival tribe charged down from the hills around and cut off almost the whole party.
>
> Those who have studied the subject, I think, give to the great pestilence, *Mai Ahulau*, which raged through the islands soon after their discovery, the credit of peopling this and other similar graveyards. Infant skulls are sometimes found, and also skulls that appear as if they had been pierced by spears, or fractured with clubs. The skulls which I collected for you were some of them above, and some below, the surface of the sand.
>
> Yours Truly,
> S.B. Dole. (*ibid*: 447, 450)

Wyman analyzed the crania that he received from Dole. He concluded that there was no evidence of death from violent trauma and that some of the crania showed signs of periosteal inflammation giving credence to the cause of death being from disease.

> The collection is the more valuable, from the fact that the crania were all obtained from the same place, and from an island not commonly mentioned in the catalogues. Dr. J. Barnard Davis, in his Thesaurus Craniorum, out of one hundred and thirty-nine Kanaka skulls, does not mention one from Kauai. They are nearly all adult, No. 13 being the only one belonging to a child. As far as they go, they do not afford evidence of having been killed in battle, as they bear no marks of injuries inflicted by weapons. A few show signs of disease, as if they had been the seat of periosteal inflammation (*ibid*: 450).

The first historical documentation of the Island of Kaua'i was by Captain James Cook during his voyage to the Pacific Ocean to determine the practicability of a northern passage between Europe and Asia (Cook 1784). Cook anchored and went ashore at the southern end of Kaua'i and describes his admiration for the fields of taro, sweet potato, sugar and banana. Cook also notes that while there is an abundance of food being grown, the area is capable of sustaining a much larger population.

> What we saw of their agriculture, furnished sufficient proofs that they are not novices in that art. The vale ground has already been mentioned as one continued plantation of *taro*, and a few other things, which have all the appearance of being well attended to. The potatoe fields, and spots of sugar-cane, or plantains, on the higher grounds, are planted with the same regularity; and always in some determinate figure; generally as a square or oblong; but neither these nor the others, are inclosed with any kind of fence, unless we reckon the ditches in the low grounds such; which, it is more probable, are intended to convey water to the *taro*. The great quantity and goodness of these articles may also, perhaps, be as much attributed to skillful culture, as to natural fertility of soil, which seems better adapted to them than to bread-fruit and cocoa-nut trees; the few of which we saw of those latter not being in a thriving state, which will sufficiently account for the preference given to the culture of the other article, though more labour be required to produce them. But notwithstanding this skill in agriculture, the general appearance of the island shewed [showed], that it was capable of much more extensive improvement, and of maintaining, at least, three times the number of inhabitants that are at present upon it; for the far greater part of it, that now lies quite waste, seemed to be as good a soil as those parts of it that are in cultivation. We must therefore conclude, that these people, from some cause, which we were not long enough amongst them to be able to trace, do not increase in that proportion, which it would make necessary to avail themselves of the extent of their island, toward raising a greater quantity of its vegetable productions for their subsistence (Cook 1784:244-245).

In 1839, John K. Townsend visited the Kōloa region of Kaua'i. He describes it as being well maintained agriculturally much like the Island of O'ahu, which he visited before Kaua'i.

> This part of the island of Kauai exhibits no particularly interesting features: from the beach to the mission station there is a good road made by the natives over a gentle ascent of about two miles, on each side of which taro patches, yam, and maize fields abound. Back from the ocean at right angles with it, are seen several ranges of long, high hills, with narrow valleys between; the hills are covered with low trees of *Tu-tui* and *Pandanus*, and the valleys with dense bushes, tall ferns, and broad leaved bananas (Townsend 1839:206).

Organized sugar plantations began in the 1830s in the Kōloa District when local Chinese built a mill in Māhā'ulepū to grind sugar grown in the area. This operation went out of business once Ladd & Co. began operations a few years later in 1835 (Yorck *et al.* 2005:10). Kōloa became a center of commerce, initially provisioning whaling ships and later, the California gold rush in the 1850s. In 1857, sweet potato

production reached 10,000 barrels annually at Koloa. The crop furnished nearly all the potatoes sent to California from Hawaii (Judd 1935:326).

Ladd & Co. negotiated a lease with Kamehameha III and Kaikioewa, governor of Kaua'i, for almost 1,000 acres at Kōloa in 1835. The lease was a 50 year lease at $300 a month (Ching 1985). After 10 years Dr. Robert W. Wood became the sole owner of Ladd & Co. and renamed it Koloa Plantation (*ibid.*; *Figure 5*). In 1855 Royal Patent1754 was issued to Dr. Wood giving him clear title to the entirety of Pā'ā Ahupua'a, which he bought from Pi'ikoi, who was awarded the majority of the Pā'ā as LCA 10605, and upland portions of Weliweli Ahupua'a (Alexander 1985:54).

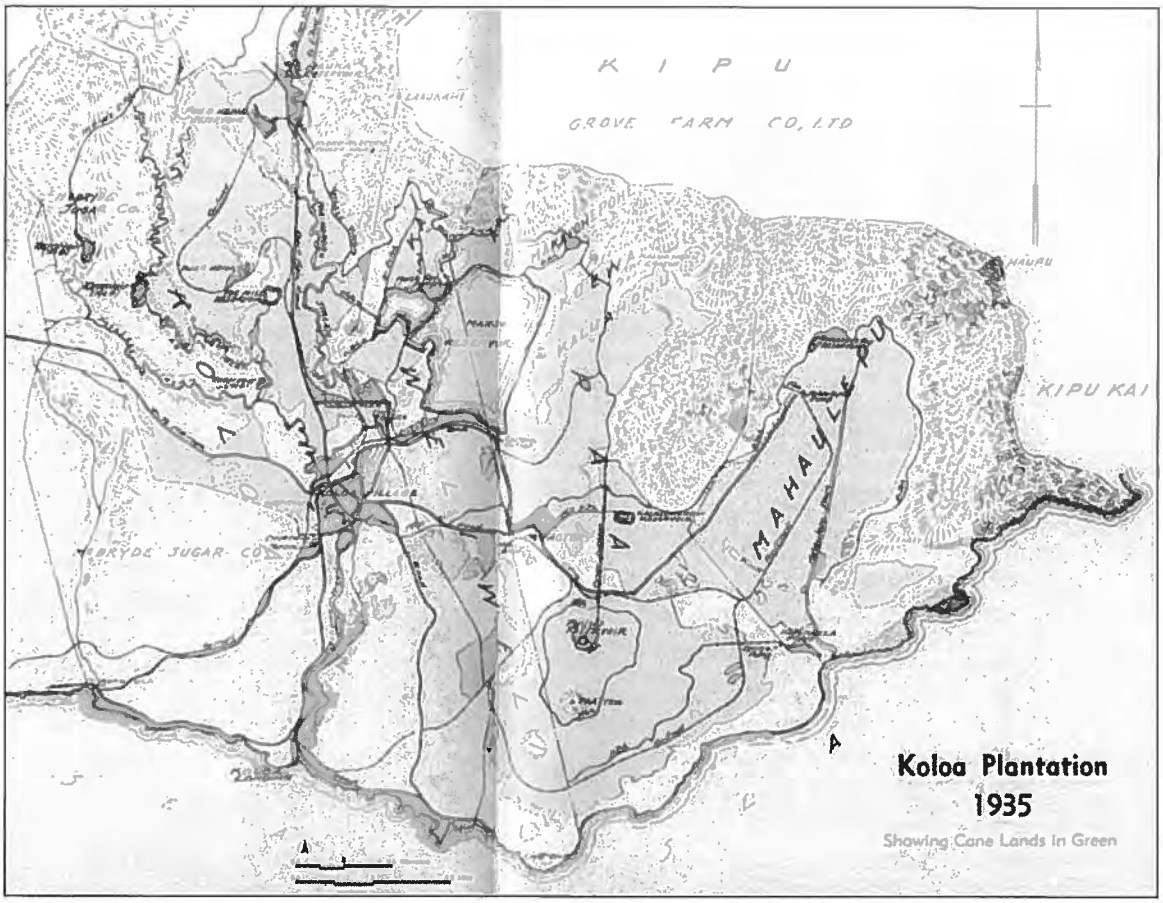


Figure 5. 1935 Map of Kōloa Plantation.

Sugar production diverted water away from the traditional crops and caused most of the other plantations to become dry and brown. Weliweli suffered from the loss of water and is described as follows:

> Weliweli is about like Pa'a (very dry, bananas, yams, and bananas were planted in the gulches). Both of these narrow land sections lie on a slight seaward promontory, Makahuena Point. W. C. Bennett (1931, p.118) found an irrigation ditch and terraces, indicating that there used to be some wet taro grown in an area which is now dry. Desiccation may have been partly caused by clearing the woodland when the first sugar plantation on Kauai was established (Handy et al. 1991:427-428).

One Land Commission Award (LCA) was granted in Weliweli in the *'ili* of Kahoana to Punipu. It consisted of dry *lo'i* (taro paddies), a *kula* (field) and house lot. The rest of Weliweli was reserved as

government land (Hammatt and Toenjes 1991). Testimony in support of Punipu's land claim for LCA 5219 was provided by Pohina:

> Pohina, sworn, says, I know the land of [the] Clmt [claimant]. It is in the ahupuaa of Weliweli, and ili of "Kahoana" lua. It consists of several dry loi, a kula and house lot. [Hala] is planted in some places (Papakilo Database).

In 1870, Eliza Sinclair bought most of Kōloa Ahupu'a and gave it as a dowry to his daughter Anne and her husband Valdemar Knudsen. After Vlademar's death the land was leased initially to Grove Farm and later the McBryde Sugar Company (Mitchell *et al.* 2005). The McBryde Sugar Company was created by Benjamin Dillingham in the 1890s from lands previously controlled by the Kōloa Agricultural Company, 'Ele'ele Plantation and Waiawa Ranch (*ibid.*). The company was able to expand lands under cultivation through development of railroad transportation system in the late 1800s to early 1900s. Kōloa Plantation was sold to Grove Farm Co. in 1948 (Smith 1991 in Walker and Goodfellow 1991).

In 1908 a lighthouse was established in the seaward portion of project area by the Lighthouse Service, which at that time was part of the U.S Commerce and Labor Department (www.uslhs.org). In 1914, the facility is described in lighthouse records as a white house with a 40 ft high lead-colored mast and a red fixed light. Between 1930 and 1951 the facility is described as a 20 ft high white pyramidal concrete tower with a white light flashing every 6 seconds. In 1984, it is characterized as an "NR on pole" and in 1988 and 2004 as a "NB on a post". Both were 20 ft high with white lights flashing every 2.5 seconds.

During World War II a Long Range Navigation (LORAN) system was developed at the Massachusetts Institute of Technology under the supervision of the National Defense Research Council. LORAN used radio waves and gave ships the ability to triangulate their locations hundreds of miles from a transmitting station (USCG 1946). In the spring of 1944, Construction Detachment C began construction of a LORAN monitoring station, Unit 207, at near Port Allen, Kaua'i. Once testing of the LORAN station was completed it was turned over to the District Coast Guard Officer of the 14th Naval District on November 8, 1944 (ibid: 65). The Port Allen LORAN facility was disestablished in 1948.

In 1951, following an initial site survey in 1950, a new station for a LORAN-A receiver was established by the Coast Guard at Makahuena Point in the project area (loran-history.info). The first commanding officer was Lt. Harley E. Dilcher. The facility was "on air" as a "dual rate low power" station in December 1951 and was operational as a "dual rate high power" facility on October 25, 1952 (*ibid.*). *Figure 6* depicts the facility in 1961. The photograph shows 5-6 buildings including a two story structure that was built in the inland portion of the large depression on the property. The large, 280 ft high antenna is situated seaward of the buildings. A website for Coast Guard veterans (fredsplace.org) includes a reference to the construction of a barbeque facility in 1974 that is still present today. The barbeque was constructed in the vicinity of the sign and flagpole shown in a 1966 photograph (*Figure 7*). The station, known as LORSTA Kaua'i was disestablished in 1979 (*ibid.*).

After the LORAN station was closed, the former Coast Guard facility was utilized by Hale 'Opio, Inc., a private nonprofit organization, that provides youth-oriented social services. The organization relocated following Hurricane Iwa that devastated the Island of Kaua'i in 1982 (Burgess, pers. communication). Since Hurricane Iwa, the project area has been vacant.

Archival research and interviews conducted for a cultural impact assessment of the property (Kailihiwa *et al.* 2011) documented traditional cultural resources in the vicinity of the project area. The area is known as a place of bountiful fish. Local fishermen continue to gather *hā'uke'uke* (sea urchin) and *'opihi* (limpet), and to catch *awa* (milkfish), *akule* (big-eyed scad fish), *moi* (thread fish), *'ō'io* (bonefish), *he'e* (octopus), and *ula* (spiny lobster). Formerly, depressions were made from clay soil in the vicinity to evaporate seawater and obtain salt. Community members continue to conduct cultural protocols at Kāne'aukai Heiau, every October during the *makahiki* season, and at a large sand dune burial site. Both sites are situated *mauka* (inland) of the project area within the grounds of The Point at Po'ipū.



Figure 6. 1961 Photograph of LORAN Station Facility (from www.loran-history.info), view to south



Figure 7. 1966 Photograph of LORAN Station Staff and Adjacent Property (from www.loran-history.info) view to north-northeast

Previous Archaeological Research

A search of DLNR-SHPD archaeological report database and other sources identified more than 30 archaeological studies for the Kōloa District. *Figure 5* shows the locations of the projects and *Table 1* summarizes the projects. Not included in the table are the studies by Thrum (1906), Bennett (1931), Kikuchi (1963) and Ching et al. (1974).

Thrum (1906) compiled a list of *heiau* on the islands of Kauai and Oahu. He identified two ceremonial sites in the project area vicinity. Weliweli Heiau is situated in the Land of Weliweli and Waiopili Heiau is in Māhā'ulepū. According to Thrum, Waiopili Heiau measures 60 by 40 ft and Weliweli Heiau is a "...paved heiau of large size, pookanaka class; walls 4 feet high; portions of same said to be still standing" (1906:36). Thrum reported that Weliweli Heiau was covered with stones cleared from an adjacent sugarcane field.

Bennett (1931) conducted a survey of archeological sites on Kaua'i for the Bishop Museum in 1928-1929. He recorded several sites in the general vicinity of the project area, including Weliweli Heiau, which he designated as Site 83. Additional sites documented by Bennett consisted of sand dune burials (Site 82) and a petroglyph complex (Site 84) at Keoneloa Beach.

In 1963, Kikuchi conducted an archaeological survey of the coastal lands in Kōloa District. He noted several sites in the project vicinity consisting of the Keoneloa Dune Burials, which he assigned State Inventory of Historic Places (SIHP) site number 97, the Keoneloa Beach Petroglyphs (Site 98) and Weliweli Heiau (Site 99). He also identified a series of walls designated as Site 100. These sites were also examined by Ching et al. (1974) during a survey of the coastal lands of Māhā'ulepū, Pā'ā and Weliweli.

The surveys in *Table 1* cover over 3,100 acres identifying 154 sites with 457 features. To aid in reconstructing settlement patterns, features were quantified by probable age and function. Traditional Hawaiian features were categorized as habitation, agricultural, ritual and burial. Density per acre values are given for the sites and features. Overall, the studies have identified 253 habitation features, 293 agricultural features, 43 burials and possible burials and 15 ritual features. Historic features were not segregated by function. Miscellaneous features are comprised of petroglyphs, salt pans and bait cups. The historic features are generally associated with the sugarcane industry or ranching activity.

One of the most notable sites in the region is the Kōloa Field System, a modern term used to describe the large system of agricultural fields that formerly extended from Lāwa'i to Weliweli and served as the main food source for the people of the Kōloa district (Mitchell *et al.* 2005). The Kōloa Field System is atypical for Hawai'i because it is an irrigated system that is not topographically restricted to the confines of a valley. It is spread out over the broad plain of Kōloa District that is broken up by ridges formed by lava channels (*ibid.*). The irrigation ditches (*'auwai*) that watered the fields were constructed along the crests of the ridges, extending from Waikomo Stream for distances of nearly 2,400 m (*ibid.*).

In its simplest form, the Kōloa Field System was a series of parallel *'auwai* with a network of feeder ditches branching off the main *'auwai* to irrigate the agricultural fields (*Figure 9*). Aqueducts were constructed within the system to convey water over low-lying ground (*Figure 10*). The field system is estimated to have covered at least 700 acres. It is likely that the acreage is much higher, but evidence of the system has been destroyed by commercial sugarcane cultivation (*ibid.*).

Several projects conducted in the vicinity of the project area were surveys of large parcels that ranged in area from 210 acres to more than 1,400 acres in extent. Walker and Rosendahl (1990) conducted an inventory survey of approximately 210 acres for the Hyatt Regency Kauai in the adjacent Land of Pā'ā. This survey identified 12 sites with 14 component features consisting of two habitation sites, four ceremonial sites, three walls assigned a boundary function and two indeterminate mounds.

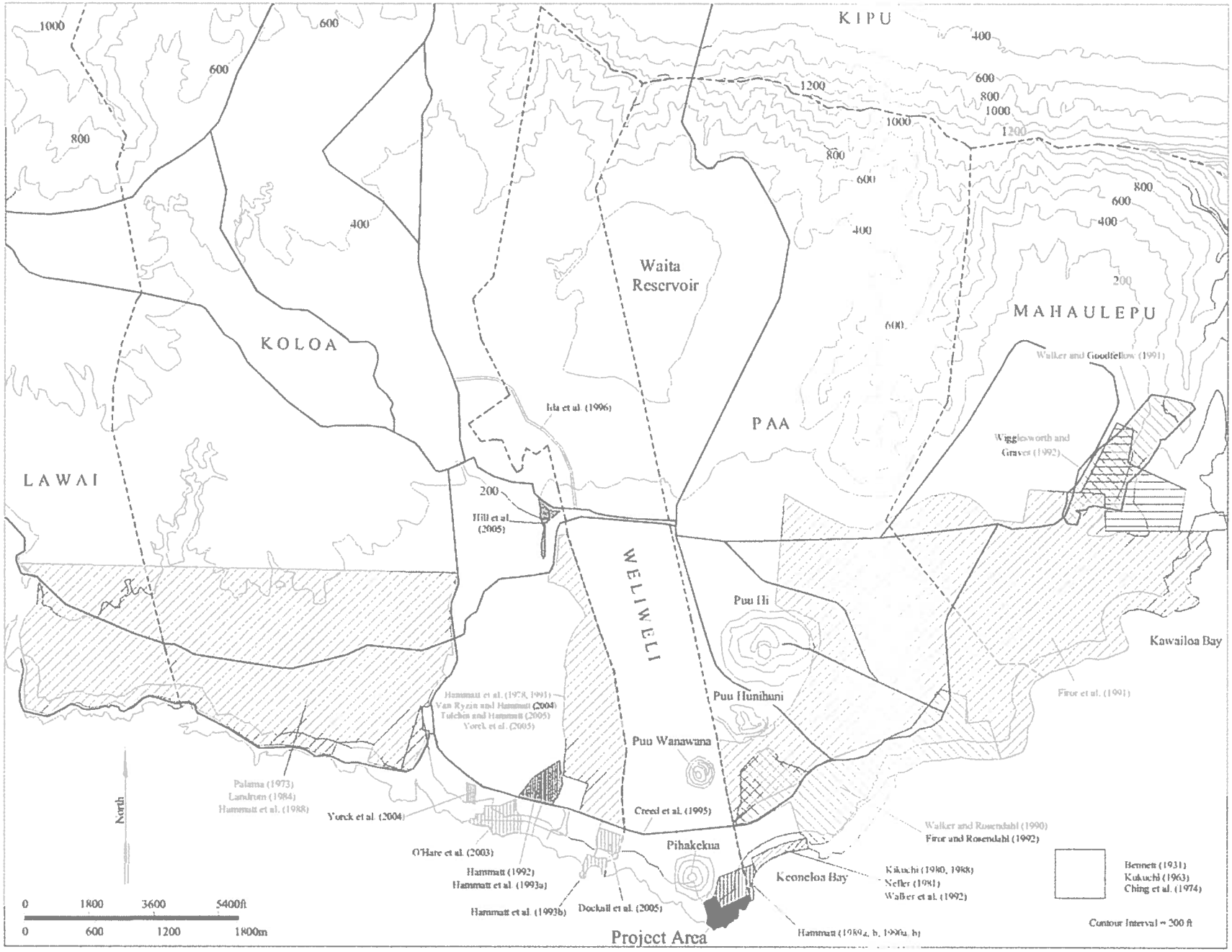


Figure 8. Previous Archaeological Work

Table 1. Summary of Previous Archaeological Work

Author	Land	Study Type*	Elevation (ft AMSL)	Location	Area (ac)	Total sites	Sites per acre	Total feas	Feas per acre	Hab Feas	Ag Feas	Ritual Feas	Burial Feas	Historic Feas	Misc. Feas	Comment
Hammatt et al. (1993b)	Koloa	AS, EX, Mon	0-10	Coastal	5.7	1	0.18	1	0.18	1						Found subsurface deposit during excavation and auger coring. - Submitted 3 radiocarbon samples with dates ranging from AD 1282-1414 to 1678-1940.
Kikuchi (1980, 1988), Neller (1981), Walker et al. (1992)	Paa	RN, EX, DR	0-10	Coastal	10.6	8	0.75	20	1.89	2		3	10	4	1	Identiifed Keoneloa Sand Dune Burials, Kaneaukai (Weliweli) Heiau and Keoneloa Beach Petroglyphs
Walker and Rosendahl (1990), Firor and Rosendahl (1992)	Paa	IS	0-70	Coastal	210	12	0.06	14	0.07	2		6		4	2	Hyatt Regency Kauai
Firor et al. (1991)	Paa, Mahaulepu	IN	0-160	Coastal, Lower slopes	1430	31	0.02	38	0.03	24	3	1	2	6	2	Grove Farm
Dockall et al. (2005)	Koloa	IS	5-10	Coastal	6.3	8	1.27	68	10.79		67				1	Identified fishpond and agricultural features
O'Hare et al. (2003)	Koloa	IS	5-20	Coastal	19	2	0.11	15	0.79	5					10	Identified coastal salt pans and bait cups potentially representing Bennetts (1931) Site 76
Hammatt (1989a, b, 1990a, b)	Weliweli, Paa	IS	20-30	Lower slopes	20	1	0.05	28	1.40				28			Excavatrions within dune deposits containing multiple burials
Creed et al. (1995)	Koloa	IS	20-30	Coastal	25	3	0.12	5	0.20		5					Survey along Poipu Road
Yorck et al (2004)	Koloa	IS	20-30	Lower slopes	9.4	7	0.74	12	1.28					12		Subsurface testing at 2 sites with no cultual remains
Hammatt (1992), Hammatt et al. (1993a)	Koloa	RN, IS	20-30	Lower slopes	7.6	4	0.53	17	2.24	8	8	1				Large portions bulldozed
Palama (1973), Landrum (1984), Hammatt et al. (1988)	Koloa, Lawai	IS	20-300	Coastal, Lower slopes	1000	57	0.06	235	0.24	134	89	4	1	11		Hammatt et al. (1988) survey encompasses previous studies
Hammatt et al. (1978, 1991), Van Ryzin and Hammatt (2004), Tulchin and Hammatt (2005), Yorck et al. (2005)	Koloa	IS	40-160	Coastal, Lower slopes	196	91	0.46	216	1.10	76	121		1	18		Village at Poi'pu Project Area
Walker and Goodfellow (1991), Wigglesworh and Graves (1992)	Mahaulepu	IS	60-240	Lower slopes	158	5	0.03	5	0.03	1			1	3		Overlapping Project Areas - Identified a total of 5 sites including a flume, two water diversion walls, a habitation site and a habitation burial site - Walker and Goodfellow excavated 9 backhoe trenchs
Ida et al. (1996)	Weliweli, Koloa	AS	180-240	Lower slopes	8.2	0										Road corridor through cane fields. No sites
Hill et al. (2005)	Koloa	IS	180-205	Lower slopes	8.6	1	0.12	1	0.12					1		Historic flume present - Part of Village at Poipu Project Area
Total/Average					**3114.4**	**154**	**0.32**	**457**	**1.45**	**253**	**293**	**15**	**43**	**59**	**16**	

**** - IS = Inventory Survey, RN - Reconnaissance Survey, AS = Assessment, EX = Excavation, Mon = Monitoring***

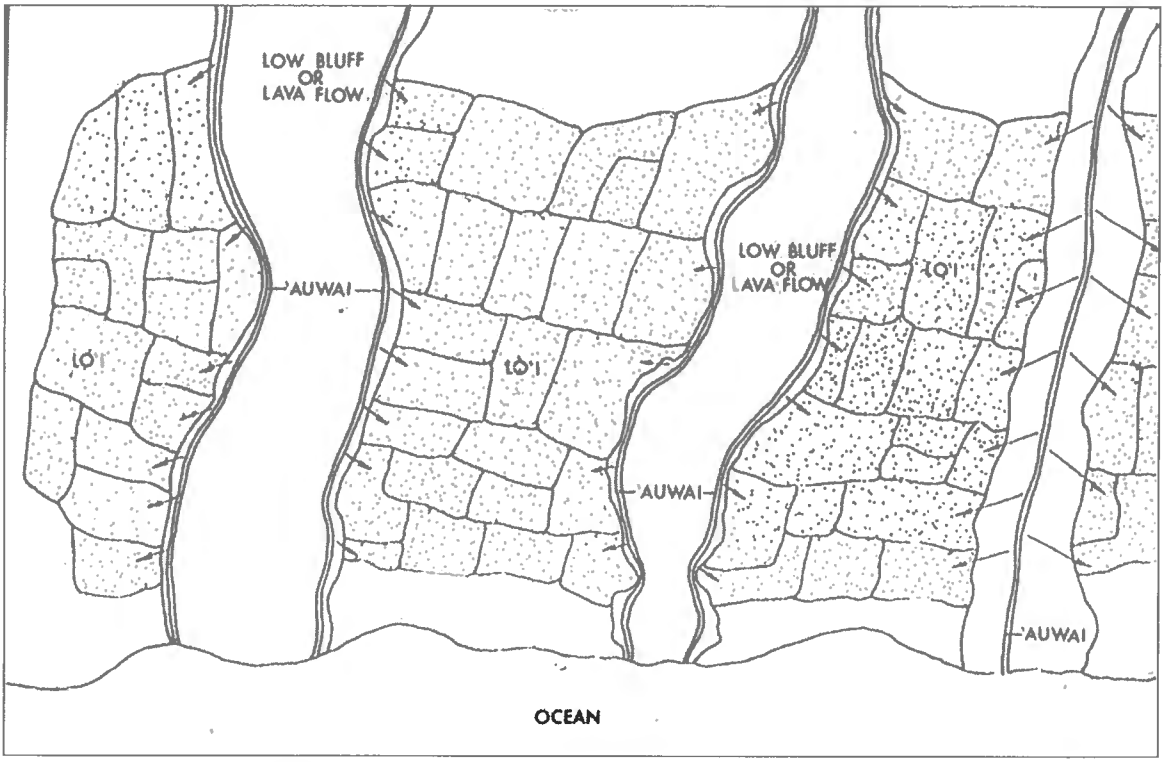


Figure 9. The basic schematic of the Kōloa Field System (from Mitchell et al., 2005:21).

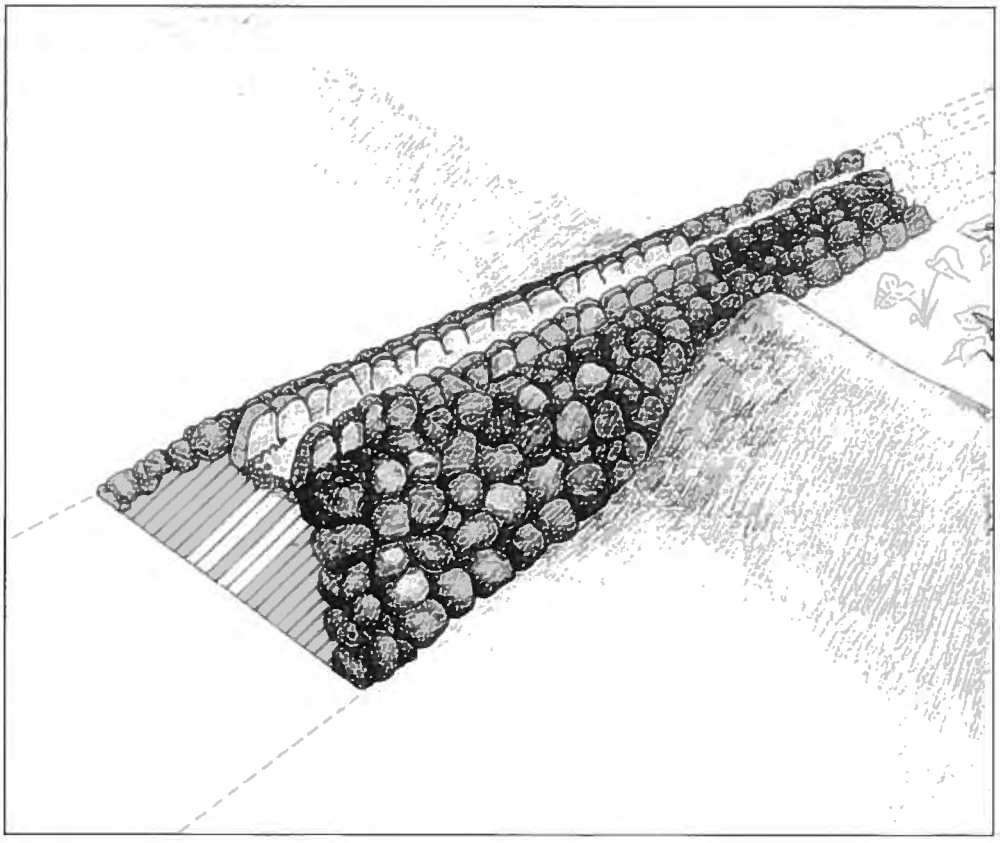


Figure 10. Raised *'auwai* in the Kōloa Field System (from Mitchell *et al.*, 2005:21).

Further data collection was subsequently undertaken within the Walker and Rosendahl (1990) project area by Firor (1992). This additional work consisted of plane table mapping, surface collection, photography and excavations. Charcoal collected from these excavations was submitted for radiometric age determination. One sample yielded a modern date, with the 19 additional samples producing dated age ranges spanning the period between AD 650 and 1954 with most ranges falling between AD 1170 and 1818.

In 1990, Firor et al. (1991) conducted an inventory survey of a c. 1,430-acre parcel situated in the Lands of Pā'ā and Māhā'ulepū. This study identified 31 sites with 38 component features. Feature functions consisted of habitation (n=34), agriculture (3), ceremonial (1), burial (2), petroglyph (20) and historic (6). The historic features consisted of an erosion control wall and five boundary walls.

A survey of a 196-acre parcel within the Land of Koloa was conducted by Cultural Surveys Hawaii (Hammatt 1991). This project was preceded by a Hammatt (1978) reconnaissance survey of the parcel. This survey identified 91 sites with 216 features. The features included 76 habitation features, 121 agricultural features, 1 burial feature and 18 historic features.

A survey of the c. 1,000-acre Kukui'ula Bay Planned Community in Kōloa and Lāwa'i was undertaken by Cultural Surveys Hawaii (Hammatt et al. 1988). This project included areas that were previously surveyed by Palama (1973) and Landrum (1984). Fifty-seven sites with 235 features were documented in this area. Feature functions consist of 135 habitation, 89 agricultural, 4 ceremonial, 1 burial and 11 historic features.

Ladd (1981) conducted archaeological surveys of four lighthouse sites for the U.S. Coast Guard in 1981. Makahuena Point was one of the four sites surveyed. Ladd noted that the project area had been heavily impacted by bulldozer clearing activities, jeep trails, and construction activities (*ibid*:1). Ladd noted a midden scatter, various concrete pads, and a series of rocks that had been painted white outlining a jeep trail (*ibid*:7). According to Ladd, none of the identified remains met the significance criteria for National Register of Historic Places (NRHP) eligibility (*ibid*: 2).

In 1991, Nancy McMahon (1991) conducted a synthesis of archaeological and historical literature relating to the location of Kāne'aukai Heiau. McMahon utilized 26 archaeological reports and historical texts attempting to pin point the location of the *heiau*. The first mention of Kāne'aukai in literature is in a report written by a student attending Lahainaluna School in Maui in 1885; however, there is no detailed description in the report. Archaeological studies of the area have assigned Kāne'aukai three different numbers, Site 83, Site 3089, and Site 477. Weliweli Heiau, Kauakahai'a fishing altar and Hali'i fishing altar are all names that have been used in the area with Kāne'aukai in various locations. McMahon concluded that there is no empirical evidence that Kāne'aukai is extant, and that it is only preserved in the present through oral histories.

In April of 2011, Haun & Associates conducted an archaeological inventory survey of the current project area. The survey identified 18 sites with 128 features. The features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following; ditch, road, stairs, utility box and walled slab. Most of these features are remnants of the U.S. Coast Guard LORAN station that was in operation from 1951 until 1979.

Subsurface testing consisted of twenty test units that were excavated throughout the inland portion of the project area. These excavations ranged in depth from 0.08 to 0.4 m. Cultural remains recovered from the excavations were limited to relatively recent (1900s) historic materials (glass, metal, wire). No prehistoric sites or deposits were identified during the study.

PROJECT EXPECTATIONS

Based on background research prehistoric use of the project area is potentially evidenced by coastal habitation sites dating to as early as the 1200s. Habitation sites would consist of platforms, enclosures, caves and small walled shelters. Trails and petroglyphs may also be present. Unlike adjacent parcels, no sand dunes are present within the project area, reducing the potential for subsurface burial features. Sites dating to the mid- to late 1800s would primarily consist of ranching and agriculture-related features such as walls, corrals, and clearing piles of stone associated with agriculture and pasture improvement.

Later historic utilization of the parcel would likely be evidenced by the remnants of U.S. federal government navigation-related infrastructure. These remains could consist of concrete foundations, roads, utilities and associated materials.

FINDINGS

The archaeological survey identified 18 sites with 128 features. The 128 features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following; ditch, road, stairs, utility box and walled slab. Feature function consists of utility (n=79), foundation (31), marker (5), transportation (4), boundary (1), disposal (1), recreation (1), soil retention (1), water diversion (1) and indeterminate (4). The location of the sites is presented in *Figure 11* and the sites are summarized in *Table 2* and are described below. Subsurface testing was undertaken during the project, consisting of the excavation of twenty 0.5 by 0.5 m test units. The results of these test excavations are discussed below in a following section.

Standard measurements are used in the following descriptions, in addition to metric values, for features/sites likely built using that measurement system. Slabs are defined as formed concrete surfaces that are usually rectangular and exceed 10 ft in maximum dimension. In most instances, slabs are structural foundations that also served as interior floors. Pads are formed concrete surfaces that are smaller than slabs in maximum dimension, less than 8 ft (most are less than 6 ft), and likely served a variety of functions as foundations for small structures, footings for larger structures, and supports for equipment or utilities. Pads that are greater than 2 ft in height are termed blocks.

Site Descriptions

Site 2130 is a complex of 15 features located in the northwestern portion of the project area, seaward of Pe'e Road. The features consist of two concrete slabs (Features A and B), five concrete pads (Features C-E and M), a set of concrete stairs (Feature G), an asphalt road (Feature H), a concrete ditch (Feature I), two boulder and concrete paths (Features J and L), a mortared stone wall (Feature K) a buried utility box (Feature N) and a walled slab (Feature O). The overall site encompasses an overall area 125 m long (northeast by southwest) and 72 m wide, an area of approximately 2.2 acres (*Figure 12*).

The Feature A and B concrete slabs are located on a level bench just below the rim of the large depression (*Figure 13*). The main portion of Feature A is rectangular in shape and is 13' 7 ¾" (4.16 m) long (north-northwest by south-southeast) by 7' 11 ⅝" (2.41 m) wide. The sides of the feature range in height from 9 ⅞" (0.25 m) to 2' 5 ½" (0.75 m). There is a rectangular projection at the southeast corner of the main slab that is 4' 11 ⅜" (1.51 m) long (north-northwest by south-southeast) and 1' 10" (0.56 m) wide. A step is located below the projection to the southeast, measuring 3' 4 ⅝" (1.21 m), 2' 7 ½: (0.8 m) wide and 1' 8 ⅞" (0.53 m) in height above the surrounding ground surface A second step is situated at the southeast end of the main slab, measuring 8' (2.44 m) long (east-northeast by west-southwest) and 2' 2 ¾" (0.68 m) wide. The step is 1' 5 ⅓" (0.44 m) high and 8 ⅝" (0.22 m) below the surface of the main slab. Electrical wires are present on the surface of the slab. A linear projection extends 9' 4 ¼" (2.85 m) to the north-northwest from the northeast corner of Feature A. This projection is 9 ⅞" (0.25 m) in height on the west side and is level with the ground surface on the east. Features D and F are located adjacent to this projection to the east.

The Feature B concrete slab is located 16' 1 ⅓" (4.91 m) to the northeast of Feature B. The area between the two slabs is level soil with concrete rubble. The main portion of Feature B is rectangular in shape and is 14' 3 ⅝" (4.36 m) long (north-northwest by south-southeast) by 7' 11 ¼" (2.42 m) wide. The sides range in height from 7 ⅞" (0.2 m) to 1' 7 ¼" (0.49 m) above the surrounding ground surface.

A rectangular projection is present along the east side of the slab, measuring 8 ⅝" (0.22 m) long north-northwest by south-southeast) and 4' 9 ½" (1.46 m) wide. A step extends across the southeast end of the main slab that is 7 ' 11 ¼" (2.42 m) long and 2' 2 ¾" (0.68 m) wide. The step is 11" (0.28 m) in height above the surrounding ground surface and is 8 ⅝" (0.22 m) below the surface of the main slab.

The Feature C concrete pad is located 2' 8 ⅝" (0.83 m) to the north of the northeast corner of Feature B, along the northern edge of the large depression. This pad is roughly rectangular in shape and is 3' ⅝" (0.93 m) long (east-northeast by west-southwest) and 2' 8 ⅝" (0.83 m) wide. The sides of the pad are

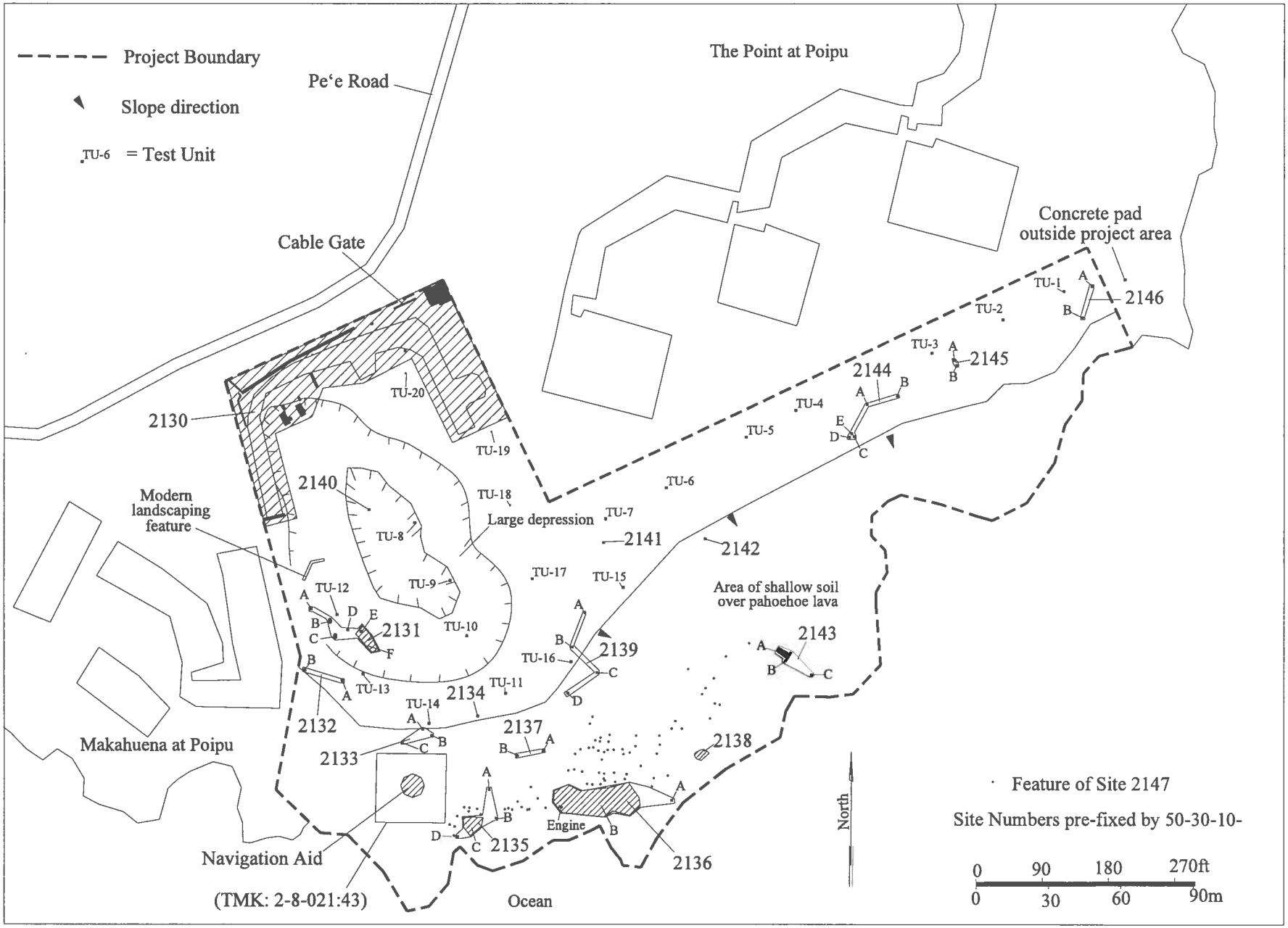


Figure 11. Site Location Map

Table 2. Summary of Sites

SIHP Site No.	Formal Type	Function	No. of Features	Formal Type														Function									Easting	Northing	Temp. Site No.
				Pad	Block	Artifact scatter	Post	Terrace	Slab	Path	Wall	Ditch	Road	Stairs	Box	Walled slab		Utility	Foundaiton	Marker	Transportation	Boundary	Disposal	Recreation	Soil Retention	Water diversion	Indeterminate			
2130	Complex	Foundation, Transportation, Utility, Boundary, Marker, Water diversion, Indeterminate	15	5					2	2	1	1	1	1	1	1		3	2	1	4	1		1		1	2	454100	2418585	1-5, 13-17
2131	Complex	Foundation, Indeterminate	6	1	1	1		3											5								1	454032	2418457	6, 7, 8
2132	Complex	Foundation	2	1			1												2									454037	2418430	30, 31
2133	Complex	Foundation	3	3															3									454077	2418403	9
2134	Concrete post	Foundation	1				1												1									454101	2418413	11
2135	Complex	Foundation, Marker, Indeterminate	4	2	1	1													1	2							1	454102	2418371	10, 18a, 18b
2136	Complex	Foundation	2	1		1												1					1					454148	2418382	19, 20
2137	Complex	Foundation	2	1	1														1	1								454124	2418397	18c, 18d
2138	Artifact scatter	Foundation	1			1													1									454194	2418396	21
2139	Complex	Foundation, Utility	4	1	1		2											1	3									454147	2418439	18e-18h
2140	Concrete block	Foundation	1		1														1									454056	2418498	12
2141	Concrete pad	Foundation	1	1															1									454153	2418485	27
2142	Concrete pad	Foundation	1	1															1									454195	2418486	26
2143	Complex	Foundation, Utility, Soil retention	3	1					1		1							1	1						1			454232	2418431	22, 25
2144	Complex	Foundation, Marker	5	4	1														4	1								454262	2418541	24
2145	Complex	Foundation	2	2															2									454299	2418559	28
2146	Complex	Foundation	2	1	1														2									454354	2418585	23
2147	Complex	Utility	73	73														73										454151	2418389	10.01-0.7, 18.01-09, 19.02-60
Total			**128**	**98**	**7**	**4**	**4**	**3**	**3**	**2**	**2**	**1**	**1**	**1**	**1**	**1**		**79**	**31**	**5**	**4**	**1**	**1**	**1**	**1**	**1**	**4**			

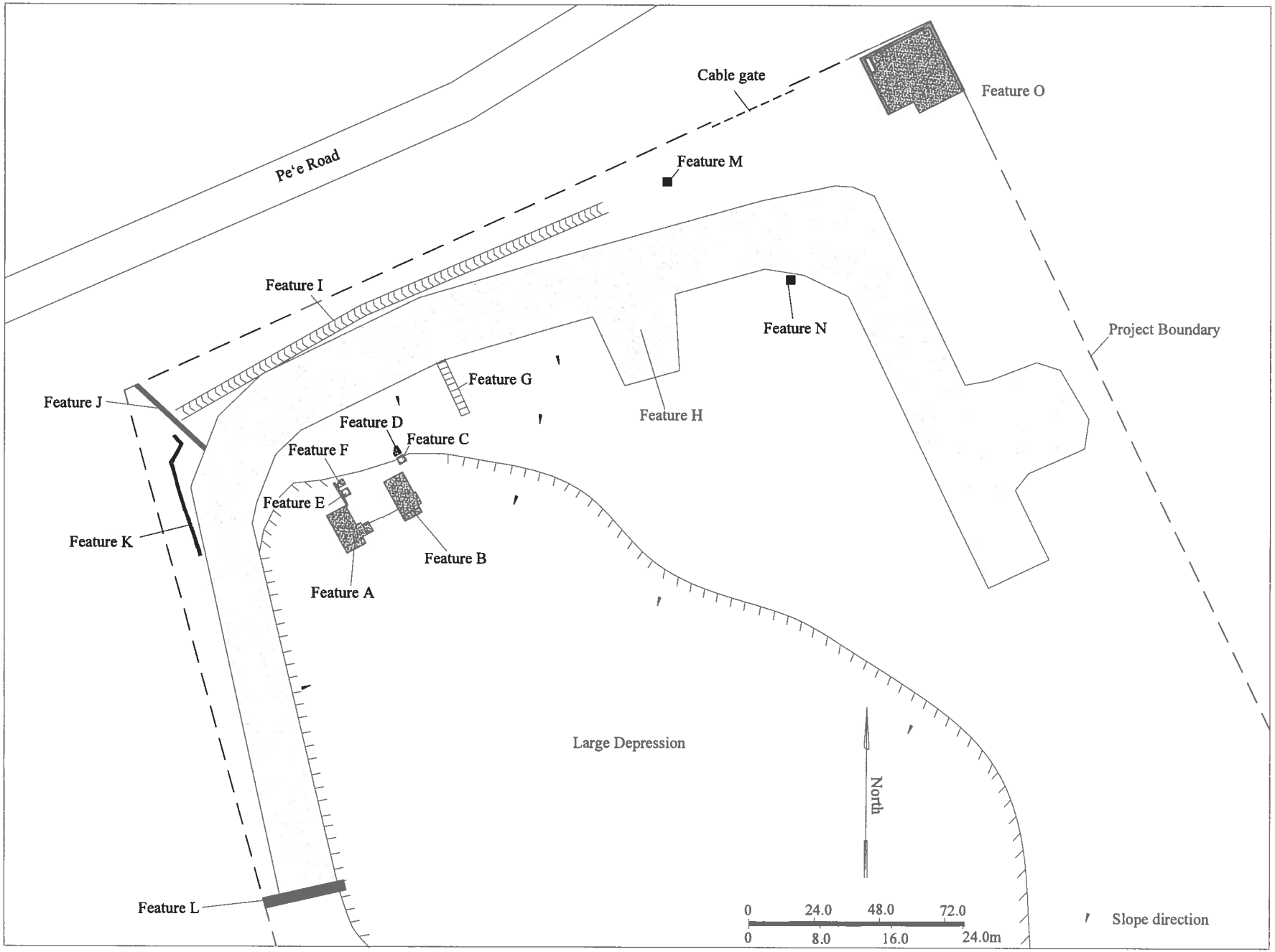


Figure 12. Plan Map of Site 2130 Complex

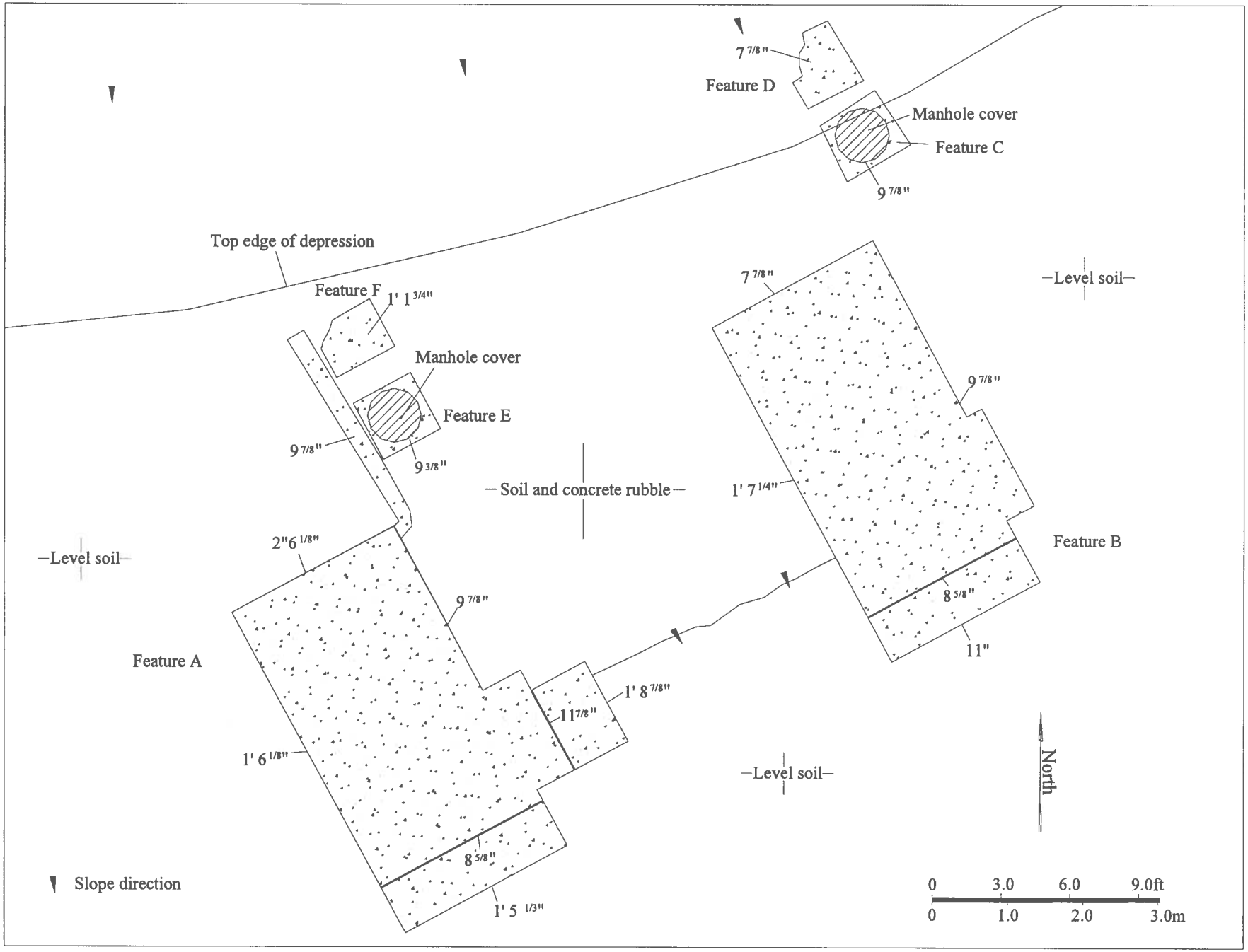


Figure 13. Plan Map of Site 2130, Features A-F

9 ⅞" (0.25 m) in height. There is a circular metal manhole cover located on top of the pad that is 2' 3 ⅞" (0.71 m) in diameter.

The Feature D concrete pad is located adjacent to Feature C to the north-northwest, above the edge of the large depression. This pad was originally rectangular in shape although the northwestern corner is missing. The pad is 3' ⅝" (0.93 m) long (north-northwest by south-southeast), 2' 8 ⅝" (0.83 m) wide and 7 ⅞" (0.2 m) in height. No cultural remains are present.

Feature E is a square concrete pad located adjacent to the northern projection at Feature A. This pad is similar to Feature C and is 2' 9 ⅞" (0.86 m) square by 9 ⅜" (0.2 m) in height. There is a 2' 3 ⅞" (0.71 m) diameter metal manhole cover in the center of the pad. No cultural remains are present.

The Feature F pad is located adjacent to Feature E to the north. This pad is rectangular in shape and the northwest corner is broken. It is 2' 10 ¼" (0.87 m) long (northeast by southwest), 2' 3 ½" (0.7 m) wide and 1' 1 ¾" (0.35 m) in height. No cultural remains are present.

Feature G is a concrete stairway located 8.5 m to the northeast of Feature D. The stairs lead down the slope from the Feature H asphalt road to the Feature A-F vicinity. It measures 22' 7 ½" (6.9 m) long (north-northwest by south-southeast) and 3' 1 ¾" (0.96 m) wide with 3 ⅞" (0.1 m) high risers (*Figure 14*). There are 19 steps, all with yellow reflective safety paint. No cultural remains are present.



Figure 14. Site 2130, Feature G Staircase, view to north

Feature H is a U-shaped asphalt road that parallels the project area boundary (see *Figure 12*). The road has an overall length of 545' 7 ½" (166.3 m) and ranges in width from 20' (6.1 m) to 37' 8 ¾" (11.5 m; *Figure 15*). From the southeastern end the road extends 149' 7 ¼" (45.6) m to the north-northwest, then turns 90 degrees to the west-southwest. It extends in this direction past the Feature A-F complex and the Feature G stairs a distance of 231' 7 ½" (70.6 m). It then angles to the south-southwest for 164' 4 ½" (50.1 m), following the edge of the large depression where it terminates at the Feature L path.

There are two projections that extend off the main road; one to the east and one to the south. The eastern projection is 36' 10 ⅞" (11.25 m) long (northeast by southwest) and 36' 8 ⅞" (11.2 m) wide. The southern projection is 29' 6 ⅓" (9.0 m) long (north-northwest by south-southeast) and 21' 3 ⅞" (6.5 m) to 32' 1 ⅞" (9.8 m) wide. No cultural remains are present at the feature.

Feature I is a concrete-lined ditch situated between the northern project area boundary and the north side of the Feature H road (see *Figure 12*). The ditch originates at the west side of the Feature J path and extends 173' 2 ¾" (52.8 m) to the east-northeast where it terminates. The ditch is 2' 11 ½" (0.9 m) wide at the top, 2' 3 ½" (0.7 m) wide at the base, with an average depth of 1' 5 ¾" (0.45 m - see *Figure 15*). No cultural remains are present.



Figure 15. Site 2130, Feature H Road and Feature I Ditch, view to west-southwest



Figure 16. Site 2130, Feature J Path, view to southeast

Feature J is a path located in the northwest corner of the site. The path originates along the northern project area boundary and extends 34' 5 ⅓" (10.5 m) to the southeast, terminating at the south side of the Feature H road. The path is 1' 7 ⅝" (0.5 m) wide and is comprised of a level linear surface bordered on the east side by a concrete and basalt stone curb, 10 ⅝" (0.27 m) in height (*Figure 16*). No cultural remains are present at the feature.

Feature K is a mortared stone wall located to the south of the Feature J path and to the west of the Feature H road. The wall has an overall length of 48' 6 ⅝" (14.8 m). From the north end the wall extends 5' 6 ⅛" (1.68 m) to the southeast, then turns to the southwest for 7' 6 ⅛" (2.29 m – *Figure 17*). It then angles to the south-southeast for 35' 9 ⅛" (10.9 m) where it terminates. The wall is 11 ⅞" (0.3 m) wide and 1' 5 ¾" (0.45 m) in height. No cultural remains are present.



Figure 17. Site 2130, Feature K Wall, view to west

Feature L is a path situated at the southern end of the western portion of the Feature H wall. The path originates outside of the project area to the west. From the western project boundary it extends 31' 2" (9.5 m) to the east-northeast, where it terminates at the western edge of the large depression. The path is 3' 11 ¼" (1.2 m) wide and is comprised of mortared stones (*Figure 18*). No cultural remains are present.

Feature M is a formed concrete pad situated along the northern portion of the site complex, north of the Feature H road and west of the Feature I ditch. The pad is rectangular in shape and is 4' 11" (1.5 m) long (north-south), 4' 1 ¼" (1.25 m) wide and 3 ¼" (0.08 m) in height (*Figure 19*). There are two 3" (0.075 m) diameter poles set vertically in the pad, spaced 1' 3 ¾" (0.4 m) apart. The poles were once painted red and are 4' ¾" (1.24 m) in height above the surface of the pad. No cultural remains are present.

Feature N is a concrete box set into the ground, located adjacent to the Feature H road to the south. The box is 2' 11 ½" (0.9 m) long (east-west) and 1' 7 ⅝" (0.5 m) wide (*Figure 20*). The sides of the



Figure 18. Site 2130, Feature L Path, view to north



Figure 19. Site 2130, Feature M Concrete Pad with Vertical Poles, view to north



Figure 20. Site 2130, Feature N Concrete Box, view to south-southeast



Figure 21. Site 2130, Feature O Walled Concrete Slab, view to north

box are level with the surrounding ground surface. There is a concrete lid sealing the box, with two metal handles set into the lid. The sides and lid of the box are cracked. No cultural remains are present.

Feature O is a walled concrete slab located in the northeastern corner of the site complex, bordering the project boundary (*Figure 21*). The feature is roughly rectangular in shape and is 29' 2 ⅓" (8.9 m) long (northeast by southwest) and 22' 11 ½" (7.0 m) to 27' 6 ⅝" (8.4 m) wide.

A mortared stone wall extends along the northeast, northwest and southwest sides of the feature, measuring 1' 4 ⅞" (0.43 m) wide and 3' 11 ¼" (1.2 m) to 4' 1 ¼" (1.25 m) in height above the slab. There is a barbeque grill located in the northwest corner of the structure that is 6' 2" (1.88 m) long (northwest by southeast), 2' 11 ⅜" (0.9 m) wide and 3 1 ⅜" (0.95 m) in height. A copper pipe is present within the grill indicating that it was fueled with propane. No cultural remains are present.

As discussed in the preceding Background section, the project area was once the site of the U.S. Coast Guard LORAN station that was in operation from 1951 until 1979. The station was known as LORSTA Kaua'i. Several of the features described above are shown in a 1961 photograph of the station (*Figure 22*).

The Feature A and B slabs, located within the large depression in northwest portion of the project area, appear to have functioned as the foundation for the large, two-story structure in the right-hand corner of the photograph. The apparent size of this structure suggests that the two slabs and the level soil area with concrete rubble that separates them, served as the foundation for this building (see *Figure 13*). The Feature H asphalt road is clearly visible in the *Figure 22* photograph. This road provided access to the buildings within the complex. Feature M, a concrete pad with two vertical metal pipes (see *Figure 19*) is present in the location of the sign located at the entrance to the facility.

The Feature G stairs functioned to access the two-story structure within the depression, represented by the Feature A and B slabs. The Feature C and E pads with manhole covers and the Feature N box functioned as associated utility features. It is possible that the manhole covers were used to access a subterranean sewer system and the concrete box potentially served as a junction box for the electrical or water lines. The Feature K wall likely served as a boundary marker for the complex and the Feature D and E pads served as foundations of undetermined specific function. The Feature O walled slab is a recreational area based on the presence of the barbeque grill.

The remnants of the other LORAN facility structures depicted in *Figure 22* are no longer present within the project area. These structures were likely destroyed with the materials removed from the property, following the abandonment of the facility after Hurricane Iwa in 1982. The tower present seaward of the facility has also been removed. The remaining remnants of the LORAN facility, designated as Features A through O of Site 2130 are assessed as significant for their information content. The site is altered and in poor to fair condition.

Site 2131 is a complex of six features located along the western side of the project area, on the western rim and upper slope of the large depression. The features consist of three terraces (Features A, B and C), a block (Feature D), a concrete pad (Feature E) and a scatter of historic debris, located in an area 33.0 m long (northwest by southeast) and 9.0 m wide. Features A, B, C and D are recently constructed features built from a combination of local stone and concrete objects that were probably collected from the immediate area.

These features were likely built by occupants of the adjacent parcel as landscaping features and although the features are modern constructions, the use of older historic materials led to their inclusion within Site 2131. A fifth modern planting feature is located 12.0 m north of Feature A, although no historic debris was noted in this location (see *Figure 11*).

Feature A is a mortared concrete and stone block capped with a cement veneer, located at the northwestern end of the site. The block measures 3' 3 ⅓" (1.0 m) long, 2' 4 ¾" (0.73 m) wide and 2' 3 ½"

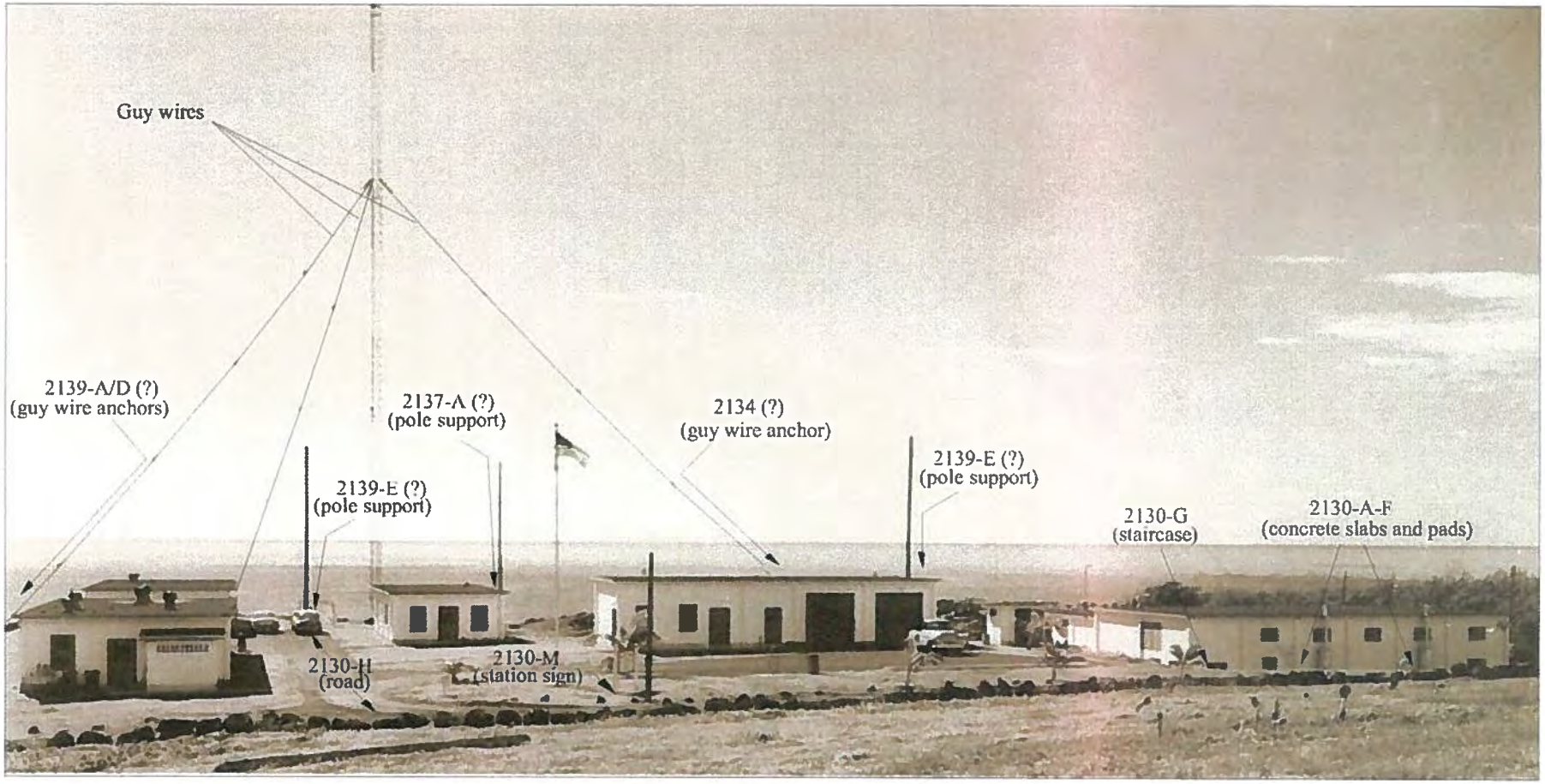


Figure 22. 1961 Photograph of LORAN Station Showing Identified Features (www.loran-history.info), view to south

(0.7 m) in height (*Figure 23*). The block has been positioned at the base of a slope with ornamental plants placed above it. A wooden crate is located upslope of the feature to the southwest.



Figure 23. Site 2131, Feature A Concrete and Stone Block, view to west

Feature B is a pair of concrete blocks that form a rough terrace located 7.5 m southeast of Feature A. Soil has been placed between the blocks planted with ornamental plants in the soil fill and below the feature to the north (*Figure 24*). The feature measures 4' 3 ⅛" (1.3 m) long, 3' 3 ½" (1.0 m) wide and 2' 11 ½" (0.9 m) in height. No cultural remains are present.

Feature C is a stone terrace located 4.7 m south (upslope) from Feature B. This feature is roughly oval in shape and is 3' 3 ½" (1.0 m) long, 2' 7 ½" (0.8 m) wide and 1' 7 ⅝" (0.5 m) in height, built of stacked and piled basalt cobbles (*Figure 25*). Several broken fragments of formed concrete are incorporated into the structure. No cultural remains are present. Feature D is terrace similar in construction to Feature C, located 4.5 m to the northeast. This terrace is 2' 3 ½" (0.7 m) long, 1' 11 ⅝" (0.6 m) wide and 2' 7 ½" (0.8 m) in height (*Figure 26*). Concrete fragments are also incorporated into Feature D.

Feature E is a formed concrete pad located 4.5 m to the east of Feature D. The pad is nearly square measuring 2' 11 ¾" (0.91 m) long, 2' 11" (0.89) m wide and 5 ⅞" (0.15 m) in height (*Figure 27*). There is a triangular configuration of bolts present on the surface. No cultural remains are located on the feature, though elements of the Feature F artifact scattered surround it.

Feature F is a scatter of historic materials that extend to the southeast from the Feature E pad. These material include metal and concrete fragments and are located in an area 11.6 m long (northwest by southeast) and 4.3 m wide (see *Figure 27*).

As stated, Features A-D are modern features that incorporated pieces of concrete that are likely the remnants of the LORAN station structures. The Feature E pad is a probable tower base based on the



Figure 24. Site 2131, Feature B Concrete Blocks, view to southeast



Figure 25. Site 2131, Feature C Terrace, view to south-southwest



Figure 26. Site 2131, Feature D Terrace, view to south



Figure 27. Site 2131, Feature E Concrete Pad and Feature F Artifact Scatter, view to southeast

presence of the bolts on the surface. The Feature F scatter potentially represents the rusted remnants of a structure or piece of equipment.

Site 2132 is a complex of two features located near the western project area boundary, south of the large depression. The features consist of a concrete pad (Feature A) and a concrete and stone post (Feature B). The Feature A pad is formed concrete and is situated at the east end of the site. It is rectangular in shape and is 1' 3 ¾" (0.4 m) long (east-west), 1' 1 ¾" wide and 2 ¾" (0.07 m) in height above the surrounding ground surface. No cultural remains are present.

Feature B is located 14.5 m to the west of Feature A adjacent to the western project area boundary. It consists of a post or block made of basalt stones and concrete (*Figure 28*). The feature is lying on its side and is 3' 7 ¼" (1.1 m) long, 1' 5 ½" (0.75 m) wide and 1' 7 ⅝" (0.5 m) thick. No cultural remains are present. The two features at the site are probable foundations based on their formal type and appearance. The site is assessed as significant for its information content. It is altered and in poor to fair condition.

Site 2133 is a complex of three concrete pads situated in the southwestern portion of the project area in an area of shallow soil. The pads are located in an area 14.3 m long (east-west) and 5.1 m wide. Feature A is situated at the western end of the site and is comprised of a rectangular formed concrete pad that measures 2' 9 ¾" (0.86 m) long (northwest by southeast), 2' 5 ⅛" (0.74 m) wide and 3 ⅞" (0.1 m) in height (*Figure 29*). There is a rectangular configuration of four bolts that appear to have been sheared off level with the surface of the pad. These bolts are 1 ¾" (0.045 m) diameter and are in an area 1' 5 ⅜" (0.44 m) long (east-west) and 9" ⅛" (0.235 m) wide. There is a metal plate present within the configuration of bolts that is 6 ¾" (0.175 m) long (north-south), 1 ⅜" (0.035m) and ⅜" (0.01m) in height. No cultural remains are present.

The Feature B pad is situated 3.75 m to the southeast of Feature A (see *Figure 29*). This feature is irregular in shape and appears to have been created by pouring concrete into a hole dug into the ground and troweling the surface level. It measures 5' 10 ¾" (1.8 m) in length (northwest by southeast) and 5' 6 ¾" (1.7 m) wide and is level with the surrounding terrain. No cultural remains are present.

The Feature C pad is located 9.0 m to the southwest of Feature A. This feature is similar to the Feature B pad in that it appears to have been created by pouring concrete into a hole dug into the ground and leveling the surface (*Figure 30*). It is roughly rectangular in shape and measures 4' 3 ⅛" (1.3 m) long (northwest by southeast) by 2' 3 ½" (0.7 m) wide. The surface is level with the surrounding terrain. No cultural remains are present.

The site is a complex of foundations that are likely associated based on the features' proximity, formal type, similar orientation and appearance. The presence of the aligned bolts and metal plate at Feature A suggest it likely served as a mount for a tower or piece of equipment. The specific function of the Feature B and C pads is unclear. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2134 is a concrete post located in the western portion of the project area, south of the large depression and 19.5 m east-northeast of the Site 2133 complex. The post is made of formed concrete and measures 1' (0.305 m) square by 2' 7 ½" (0.8 m) in height (*Figure 31*). It is embedded in the ground and is leaning to the west. A large diameter (5" or 0.13 m) cable is extending out of the top of the block attached to it by a series of 1" (0.027m) threaded bolts. A metal turnbuckle is attached to the cable base by a hinged metal plate. The turnbuckle is 1' 11 ½" (0.6 m) m long with threaded bolts extending out of it on both sides. The cable is coated in a woven mesh material and the connecting bolts and cable base are wrapped in a stiff cloth. No associated cultural remains are present at the site.

The site probably is an anchor for a tower based on its formal type and appearance. The cable probably served as a guy wire for a large tower, likely the one shown in the 1961 photograph of LORSTA Kaua'i (see *Figure 22*). The turnbuckle probably was attached to a secondary guy wire that stabilized the anchor based on its attachment to the base of the large cable attachment bracket (see *Figure 31*). The site is assessed as significant for information content. It is unaltered and in good condition.



Figure 28. Site 2132, Feature B Concrete and Stone Block, view to west



Figure 29. Site 2133, Feature A and B Concrete Pads, view to east



Figure 30. Site 2133, Feature C Concrete Pad, view to northeast



Figure 31. Site 2134 Concrete Post, view to south-southeast

Site 2135 is a complex of four features located along the coastal escarpment in the southwestern portion of the project area. A modern navigational aid is located adjacent to the site to the northwest. The features are comprised of a concrete block (Feature A), two concrete pads (Features B and D) and a scatter of rusted metal fragments (Feature C) located in an area 25.0 m long (northeast by southwest) and 8.5 m wide (see *Figure 11*).

The Feature A block is located at the north end of the site. It is made of formed concrete and is 4' 11 ¾" (1.52 m) square and 1' 11 ⅝" (0.6 m) in height above the surrounding ground surface (*Figure 32*). Forms marks are visible on the sides of the feature. No cultural remains are present.

The Feature B concrete pad is located in an area of bare lava 11.0 m to the south of Feature A. This feature is roughly oval in shape and is comprised of concrete that has been poured into a cavity in the surface lava. It measures 1' 9 ¼" (0.54 m) long (north-south) and 1' 6 ½" (0.47 m) wide (*Figure 33*). The surface of the pad is level with the surrounding ground surface and no cultural remains are present. An inscription has been imprinted into the surface of the pad reading:

Feb 16
1922

The Feature C scatter of rusted metal fragments is located 5.0 m to the west of Feature B. These fragments are present in an area 28' 6 ½" (8.7 m) long (north-south) and 26' 10 ⅞" (8.2 m) wide (*Figure 34*). No additional cultural remains, other than the metal are present.

The Feature D formed concrete pad that has been poured directly onto bedrock, 4.0 m to the west of the Feature C scatter. This pad is roughly square and is 11 ⅞" (0.3 m) long, 9 ⅞" (0.25 m) wide and 3 ⅞" (0.1 m) in height (*Figure 35*). No cultural remains are present as the feature. A metal pipe is positioned vertically in the center (0.04 m) in height. The initials "US" and "LHS" are imprinted in the surface of the pad above and below the pipe.

As discussed in the Background section of this report, "LHS" denotes the Lighthouse Service, a U.S. federal government agency that originally was part of the Department of Commerce that was transferred to the U.S. Coast Guard in 1939. The Feature A block is interpreted as a foundation based on its formal type and appearance, although its specific function is undetermined. The Feature B pad served as a marker dating to 1922. The Feature D pad potentially is a mount for a sign or piece of equipment. Alternatively, it could be a survey marker. The Feature C metal scatter potentially represents the rusted remnants of an a tower or piece of equipment. The site is unaltered and in poor to good condition. It is assessed as significant for its information content.

Site 2136 is a complex of two features located along the coastal escarpment to the east of Site 2135. The features consist of a formed concrete pad (Feature A) and a scatter of historic debris (Feature B) located in an area 52.0 m long (east-west) and 13.0 m wide.

The Feature A pad is located at the eastern end of the site. It is rectangular in shape and is 7' 7 ½" (2.3 m) long (northwest by southeast) and 6' 10 5/8" (2.1 m) wide (*Figure 36*). The pad is 10 ½" (0.27 m) in height above the surrounding lava flow surface. There is a raised pad on top of the feature along the northeast side. This pad is 2' 4 ⅓" (0.72 m) long (northwest by southeast), 2' 3 ½" (0.7 m wide) and 8 ¼" (0.21 m) in height. A rectangular configuration of four bolts is present on top of this pad. A rusted metal projection is present within this bolt pattern. There are five short plastic pipes that extend vertically out of the ground, adjacent to the pad to the southeast.

Feature B consists of a large scatter of historic debris located 13.0 m west of Feature A. The feature is covers an area 34.0 m long (east-west) and 13.6 m wide. The majority of the debris consists of small rusted metal pieces (*Figure 37*). A rusted engine is also present, located at the western end of the metal scatter (*Figure 38*).



Figure 32. Site 2135, Feature A Concrete Block, view to west



Figure 33. Site 2135, Feature B Concrete Pad with Inscription, view to south-southwest



Figure 34. Site 2135, Feature C Artifact Scatter, view to south-southeast



Figure 35. Site 2135, Feature D Concrete Pad with Inscription, view to east



Figure 36. Site 2136, Feature A Concrete Pad, view to northeast



Figure 37. Site 2136, Feature B Artifact Scatter, view to west-southwest



Figure 38. Site 2136, Feature B Engine, view to west-southwest



Figure 39 Site 2137, Feature A Concrete Block, view to south-southwest

The Feature A pad potentially supported a tower or served as a mount for a piece of equipment that required electrical and monitoring/communication connections. This is based on the presence of the vertical pipes adjacent to the pad that likely served as wire conduits. The Feature B artifact consists of rusting metal fragments and machinery parts, possibly remnants of a metal tower and associated equipment.. The site is unaltered and in fair condition. It is assessed as significant for its information content.

Site 2137 is a complex of two concrete features located in the southwestern portion of the project area, 17.0 m northeast of Site 2135 and 16.0 m northwest of Site 2136. The features are comprised of a concrete block (Feature A) and a concrete pad (Feature B). The Feature A block is located at the east end of the site. It is constructed of formed concrete and is 5' 6 ⅞" (1.7 m) square at the base, 4' 7 ⅞" (1.42 m) square at the top and 3' 8 ½" (1.13 m) in height (*Figure 39*). There is a recessed area on top of the block that is 2' 1 ⅛" (0.64 m) square by 1' 3 ¾" (0.4 m) deep. Horizontal form marks are visible on the sides of the block. No cultural remains are present.

The Feature B pad is situated 9.7 m west-southwest of Feature A. The pad is rectangular and is comprised of formed concrete. It measures 2' 8 ¼" (0.82 m) long (east-west), 1' 11 ½" (0.6 m) wide and 10 ½" (0.27 m) in height above the surrounding ground surface (*Figure 40*). Several fragments of rusted metal and a coil of old rope are present on the pad. The remnants of two rusted metal bolts are located in the approximate center and "U.S.C.G." (United States Coast Guard) has been stamped into the pad above the bolts. There is an inscription that has been carved into the top of the pad, above the "U.S.C.G" that reads:

7-16-74
MK1 BLACHOWSKI

The Feature A block probably supported a large "telephone" pole-sized post based on its similarity to an identical block at Site 2140 (see below) that still supports an intact post base. Its location roughly correlates with a pole situated immediately to the left of the flagpole shown in the 1961 photograph of LORSTA Kaua'i (see *Figure 22*). The inscription on Feature B indicates it was constructed by the Coast Guard in 1974 and probably served as a tower foundation or equipment mount based on the presence of bolts. The site is unaltered and in good condition.

Site 2138 is a scatter of concrete blocks and fragments located in a jumbled pile on the coastal escarpment, 19.5 m to the northeast of Site 2136. The site encompasses an area 5.5 m long (northeast by southwest), 4.0 m wide and 1.2 m in height, though the majority of the materials are located in a pile that is 4.0 m in diameter (*Figure 41*). The majority of the concrete objects consist of rectangular blocks that range in length from 1' 7 ¾" (0.5 m) to 3' 3 ⅓" (1.0 m) and 9 ¾" (0.25 m) to 2' 11 ½" (0.9 m) in width. The remainder of the material consists of irregularly shaped concrete fragments. The materials appear to have been impacted by wave activity. No additional cultural remains are present.

The site is interpreted as the disturbed remnant of a foundation based on the appearance of the concrete blocks. The original size and shape of the foundation is undermined as is its specific function. The site is assessed as significant for information content, is altered and in poor condition.

Site 2139 is a complex of four features located in the west-central portion of the project area to the southeast of the large depression. The features consist of two concrete posts (Features A and D), a concrete block (Feature B) and a concrete pad (Feature C) located in an area 33.5 m long (north-south) by 12.0 m wide.

Feature A consists of a formed concrete post located at the northern end of the site. It is set in the ground and is leaning slightly to the south (*Figure 42*). The post is 11 ¾" (0.3 m) square and 1' 7 ⅝ (0.5 m) in height. A metal anchor is present on top of the post. No cultural remains are present.

Feature B consists of a formed concrete block situated 14.5 m to the southwest of Feature A. It measures 5' 7 ¾" (1.72 m) square at the base, 4' 8 ¼" (1.43 m) square at the top and 3' 5 ¼ " (1.05 m) in height above the surrounding ground surface (*Figure 43*). There is a square recessed area on top of the



Figure 40. Site 2137, Feature B Concrete Pad with Inscription, view to west



Figure 41. Site 2138 Jumbled Concrete Blocks, view to southeast



Figure 42. Site 2139, Feature A Concrete Post, view to south



Figure 43. Site 2139, Feature B Concrete Block, view to west

block that is 2' 3 ⅛" (0.69 m) on each side and 2' 2 ¾" (0.68 m) in depth below the top of the block. A jumble of white and red wires is located within the recessed area. No cultural remains are present.

Feature C is a formed concrete pad located 14.0 m southeast of Feature B. It is 4' 11 ¾" (1.52 m) square and 1 ½" (0.04) m in height above the surrounding ground surface (*Figure 44*). No cultural remains are present.

Feature D is a formed concrete post located 13.5 m southwest of Feature C. The post is set vertically in the ground and is 1' 7 ½" (0.5 m) square and 4' 3 ⅛" (1.3 m) in height (*Figure 45*). Reinforcing metal rebar is visible on the broken sides of the post and a metal strap extends out of the side. A metal bracket is bolted to the post, extending 5 ⅞" (0.15 m) above the top. No cultural remains are present.

The Feature A and D posts potentially functioned a guy wire anchors like Site 2134. The more substantial Feature D post has a metal bracket that potentially served to attach a large cable like the one attached to the Site 2140 concrete post. The Feature D post lacks a metal bracket, but otherwise closely resembles the Site 2140 concrete post in form and size. The Feature B block probably supported a large post based on its similarity to an identical block at Site 2140 (see below) that still supports an intact post base. Its location roughly correlates with a pole situated immediately to the left of the main metal tower shown in the 1961 photograph of LORSTA Kaua'i (see *Figure 22*). Feature C is a concrete pad that likely functioned as a foundation for a small structure or piece of equipment. The site is unaltered and in fair to good condition. It is assessed as significant for its information content.

Site 2140 is a formed concrete block located in the base of the large depression in the northwestern portion of the project area. The pier is 4' 7 ¾" (1.42 m) by 4' 7 ¾" (1.24 m) at the top, 5' 6 ¾" (1.7 m) by 5' 7 ¾" (1.72 m) at the base and 3' 8 ½" (1.13 m) in height above the surrounding ground surface (*Figure 46*). Form marks from 6" (15 cm) planks are visible on the sides of the block. A wooden pole is set vertically into the top of the block, within a recessed area that is 1' 11 ½" (0.6 m square) by 7 ¾" (0.2 m) deep). The pole has been cut off above the top of the block, within the remaining portion measuring 1' ½" (0.32 m) in diameter and 1' 1 ¾" (0.35 m) in height. Tar is smeared on top of the block and within the recessed area. No cultural remains are present at the site.

The block functioned as a support for a large post, the base of which is still present. Its location roughly correlates with a pole situated behind the possible shop building (right bay door) in the central portion of the LORSTA Kaua'i facility shown a 1961 photograph (see *Figure 22*). The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2141 is a small, rectangular formed concrete pad located in the central portion of the project area. The pad measures 2' 9 ¾" (0.86 m) long (east-west), 2' 4 ¾" (0.75 m) wide and 2 ⅜" (0.06 m) high (*Figure 47*). There is a rectangular configuration of four bolts that appear to have been sheared off flush with the surface of the pad. These bolts are 1 ¾" (0.045 m) diameter and are in an area 1' 5 ⅜" (0.44 m) long (east-west) and 9" ⅛" (0.235 m) wide. There is a metal plate present within the configuration of bolts that is 6 ¾" (0.175 m) long (north-south), 1 ⅜" (0.035m) wide and ⅜" (0.01m) in height. No cultural remains are present at the site.

The site is interpreted as a foundation for a tower or piece of equipment based on its formal type and presence of bolts and metal plate. The site is assessed as significant for information content, is unaltered and is in good condition.

Site 2142 is a small roughly oval-shaped concrete pad located in an area of shallow soil, 41.0 m to the east of Site 2141. The pad is 1' 3 ¾" (0.4 m) long (east-west), 8 ¼" (0.21 m) wide and 1 ½" (0.04 m) in height above the surrounding ground surface (*Figure 48*). The pad is irregular and appears to have been created by pouring concrete into a hole dug into the ground. Stone aggregate within the concrete is visible indicating the pad was not trowel finished. No cultural remains are present.

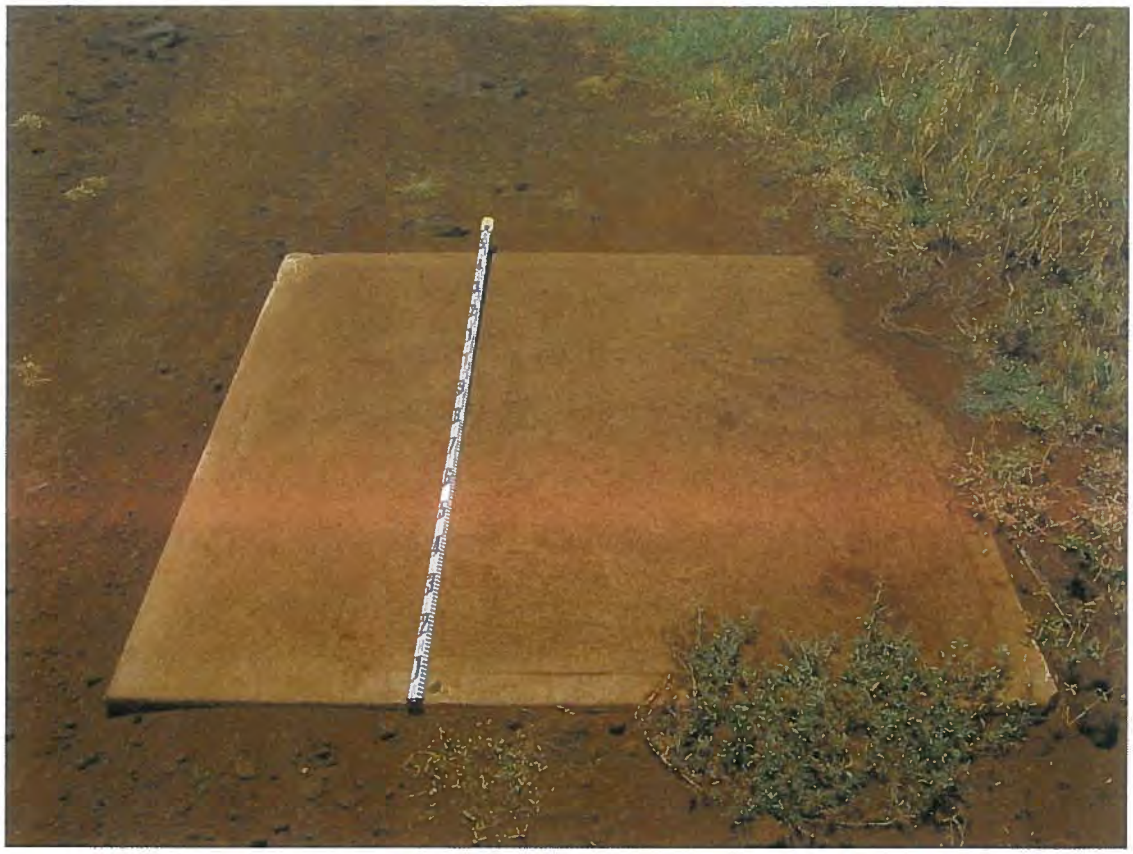


Figure 44. Site 2139, Feature C Concrete Pad, view to southwest



Figure 45. Site 2139, Feature D Concrete and Metal Post, view to east



Figure 46. Site 2140 Concrete Block, view to northwest



Figure 47. Site 2141 Concrete Pad, view to east



Figure 48. Site 2142 Concrete Pad, view to south



Figure 49. Site 2143, Feature A Concrete Slab, view to south-southwest

The site probably served to anchor wiring similar to the unformed pads at Site 2147. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2143 is a complex of three features located central seaward portion of the project area on the coastal escarpment. The features are comprised of a concrete slab (Feature A), a stone retaining wall (Feature B), and a concrete pad (Feature C) located in an area 16.5 m long (northwest by southeast) and 4.5 m wide.

Feature A consists of a rectangular, formed concrete slab located at the northwestern end of the site. The slab measures 14' 9 ⅛" (4.5 m) long (northwest by southeast), 6' 8 ¼" (2.04 m) wide and 10 ½" (0.27 m) in height (*Figure 49*). There are two 3' (0.92 m) diameter manhole covers present on top of the slab; one at the northwest end and one at the southeast end. Both manholes are positioned on raised concrete seats that are 3 ½" in height above the slab surface. The southeast seat is square and the northwest seat is broken with remnants remaining. Both manhole covers were rusted shut. No cultural remains are present.

Feature B consists of a linear cobble and small boulder retaining wall located adjacent to Feature A to the southeast. The wall is 14' 9 ⅛" (4.5 m) long (northeast by southwest) and 1' 11 ½" (0.6 m) wide, built of stacked stones and soil (*Figure 50*). The inland (northwest) side is level with the sloping terrain and the seaward (southeast) side has been built up to a maximum height of 1' 5 ⅝" (0.45 m). No cultural remains are present.

Feature C is an unformed concrete pad that was poured onto an outcrop 8.0 m to the southeast of Feature B. It is 1' 11 ½" (0.6 m) long (northwest by southeast) and 1' 3 ¾" (0.4 m) wide (*Figure 51*). The inland (northeast) side is 1" (0.03 m) in height above the outcrop and the seaward side is 1' 9 ⅝" (0.55 m) in height, extending down the side of the outcrop. The surface has been troweled level. There is a scatter of rusted metal fragment located to the northwest of the feature.

The Feature A slab is a component of a utility system, potentially for wastewater based on the presence of the manholes. The Feature B retaining wall appears to have functioned to retain the slope below Feature A. Feature C probably served to anchor wiring similar to the unformed pads at Site 2147. The site is unaltered and in fair condition. It is assessed as significant for its information content.

Site 2144 is a complex of five concrete features located in the northwestern portion of the project area. The features consist of a block (Feature A) and concrete pads (Features B-D) located in an area 27.0 m long (northeast by southwest) and 5.0 m wide.

The Feature A block is situated in the central portion of the site. This feature is a rectangular formed concrete block that was painted green. It is 5' 6 ¼" (1.68 m) square at the base, 4' 8 ⅝" (1.44 m) square at the top and 3' 6 ⅛" (1.07 m) in height (*Figure 52*). There is a column of reinforced concrete extending vertically out of the center of the block that is 10 ¼" (0.26 m) square and 1' 10 ½" (0.57 m) in height. No cultural remains are present.

The Feature B concrete pad is located 12.0 m to the east-northeast of Feature A. This pad is constructed of formed concrete and is roughly square, measuring 5' 1" (1.55m) by 4' 11 ¾" (1.52 m) and 6 ¼" (0.16 m) in height (*Figure 53*). No cultural remains are present.

Features C, D and E are formed concrete pads situated 12.5 m to the southwest of Feature A. The Feature C pad appears to be in original location although Features D and E appear to have been moved to this location because the features are chipped and not level (*Figure 54*). The Feature C pad is 4' 11 ¾" (1.52 m) square and 1' 3" (0.38 m) in height. No cultural remains are present.

Feature D is situated adjacent to Feature C to the southwest. This pad is rectangular in shape and is 2' 7 ¾" (0.81 m) long (north-south), 1' 11 ½" (0.6 m) wide and 10 ½" (0.27 m) thick. There is a piece of rusted metal that probably was for attachment, extending out of the center of the pad. "U.S.C.G" is



Figure 50. Site 2143, Feature B Retaining Wall, view to west


Figure 51. Site 2143, Feature C Concrete Pad, view to east



Figure 52. Site 2144, Feature A Concrete Block, view to northwest



Figure 53. Site 2144, Feature B Concrete Pad, view to east



Figure 54. Site 2144, Features C, D and E Concrete Pads, view to west



Figure 55. Site 2144, Feature D Concrete Pad with Inscription, view to west

stamped into the concrete above the metal (*Figure 55*). There an inscription stamp that reads, "7-17-74 - Little SKI" over a heart with an arrow through it. No cultural remains are present.

The Feature E pad is located to the northwest of Feature C. It is rectangular and is 2' 8 ¼" (0.82 m) long (north-south), 2' ¼" (0.62 m) wide and 1' 2 ½" (0.37 m) thick. No cultural remains are present.

Features A, B, C and E are interpreted as foundations based on their formal type and appearance. The Feature A foundation served as a support for a concrete post. It is identical in dimensions to the post support foundation at Site 2140 and several other features. The specific function of the other features is undetermined, although the metal embedded in Feature D suggests that it was a mount for a tower or piece of machinery. The site is altered and in fair to good condition.

Site 2145 is a complex of two adjacent formed concrete pads located in the northeastern portion of the project area, 25.5 m northeast of Site 2144 (*Figure 56*). The Feature A pad is rectangular in shape and is 6' 5 ½" (1.97 m) long (east-west), 3' ¼" (0.92 m) wide and 2 ¼" (0.06 m) in height. The pad appears to have been poured in two pieces, evidenced by a seam in the concrete that bisects it longitudinally. The southeastern corner of the pad is broken.

The Feature B pad is located 1.85 m to the southeast of Feature A. This pad is roughly square and is 3' 2 ½" (0.98 m) long (north-south), 3' ¼" (0.92 m) wide and 3 ½" (0.09 m) in height. No cultural remains were present in association with either feature.

The site likely functioned as two associated foundations based on their spatial proximity. The foundations are too small to have supported buildings and likely were used for equipment or tower facilities. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2146 is a complex of two concrete features located in the northeastern portion of the project area. The features are comprised of a concrete block (Feature A) and a concrete pad (Feature B). A second concrete pad very similar to Feature B is located outside the boundaries of the present project to the east of Feature A.

The Feature A block is constructed of formed concrete and has been painted green (*Figure 57*). The block measures 4' 7 ⅞" (1.42 m) square at the top, 5' 7 ¾" (1.72 m) square at the base and 3' 6 ⅛" (1.07 m) in height. There is a recessed area on top of the block that is 1' (0.3 m) square) and 1 ¼" (0.03 m) deep. No cultural remains are present.

The Feature B concrete pad is located 12.0 m to the south-southwest of Feature A. This feature is comprised of formed concrete and is 4' 11 ¾" (1.52 m) square and 1 ½" (0.04 m) in height above the surrounding ground surface (*Figure 58*). No cultural remains are present.

The features at Site 2146 are interpreted as foundations based on their formal type and appearance. The Feature A foundation likely served as a support for a concrete post. It is identical in dimensions to the post support foundation at the nearby Feature C at 2144, Site 2140 and several other features, except unlike the others, the interior cavity is filled with concrete. The Feature B foundation is too small to have supported a building and likely was used for equipment or a tower facility. The site is assessed as significant for information content. It is unaltered and in good condition.

Site 2147 is a complex of 73 small oval-shaped, unformed concrete pads created by pouring concrete directly onto stone outcrops. These features are present in the seaward portion of the project area, extending between Sites 2135 in the west to Site 2143 in the east (see *Figure 11*). These feature vary slightly in size and shape but most are oval in plan and average 1' 1 ¾" (0.35 m) in length and 9 ⅜" (0.24 m) in width (*Figures 59, 60* and *61)*. Most of these features have been troweled smooth on the surface. Electrical wires (bare copper and white plastic coated) extend from the long ends of these pads.



Figure 56, Site 2145, Feature A and B Concrete Pads, view to east



Figure 57. Site 2146, Feature A Concrete Block, view to northwest



Figure 58. Site 2146, Feature B Concrete Pad, view to north



Figure 59. Site 2147 Concrete Pads, view to east

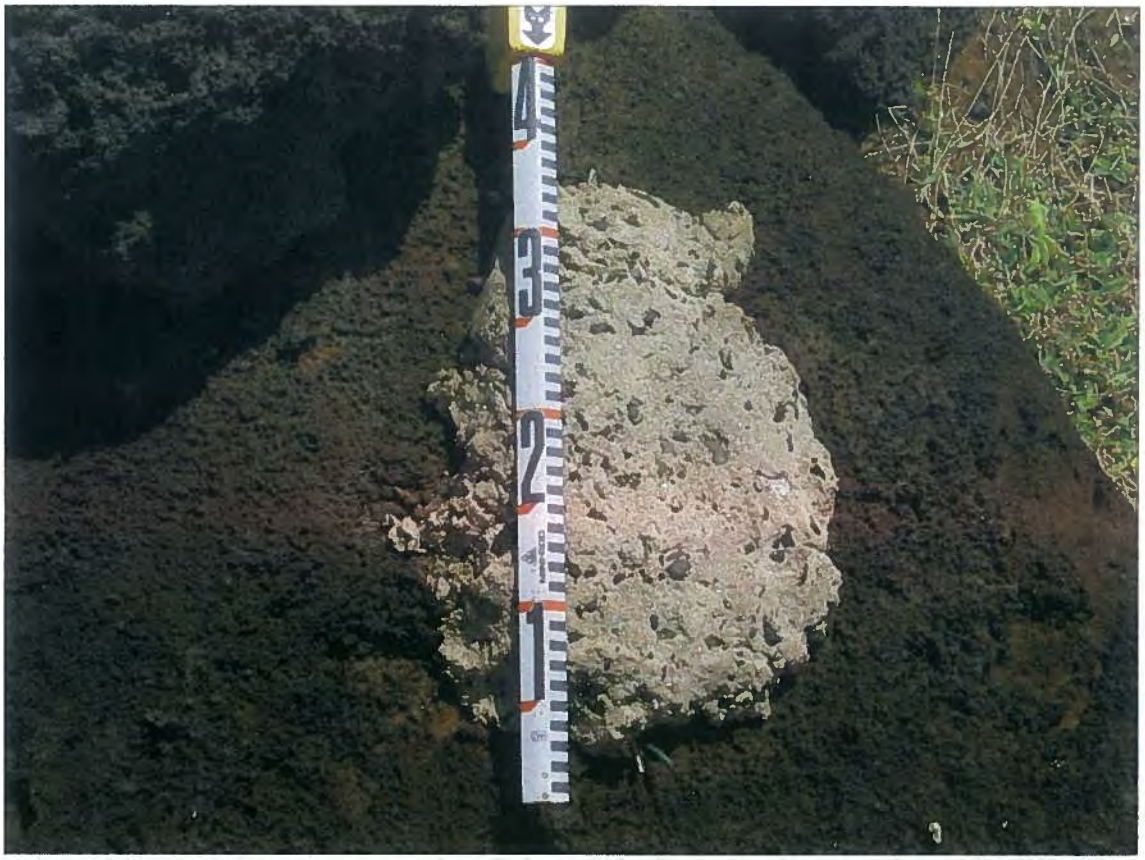


Figure 60. Concrete Pad at Site 2147, view to west



Figure 61. Concrete Pad at Site 2147, view to west

The Site 2147 concrete pads apparently functioned to secure wiring that served the towers and associated equipment. The bare copper wiring probably served to ground-protect towers and equipment during electric storms. The other wires probably provided electric power and monitoring communication. The site is unaltered and in fair to good condition.

Subsurface Testing

Subsurface testing was undertaken in 20 locations during the project. This testing involved the excavation of 20 0.5 m by 0.5 m test units, located in the inland half of the project area (see *Figure 11*). Four of the units were located within the large depression in the northwestern portion of the project area (TU-8, -9, -10 and -12) and eight were located to the north, south and east (TU-11, -13, -14, -16 thru -20). The eight remaining units (TU-1 thru -7, and -15) were located along the northern project boundary to the east of the depression.

The excavations revealed similar stratigraphy throughout the parcel consisting of a surface layer over decomposing bedrock (*Table 3*). The profiles for the 20 units are depicted in *Figures 62* through *65*. The surface layer consists of a dark reddish brown sandy silt to clay silt with 10 to 50% cobble, pebble and small boulder inclusions. This layer varied in thickness from 0.07 to 0.4 m with an average depth of 0.19 m.

The layer was designated Layer I in 19 of the units although in TU-18 it was overlain by a layer of decaying organic material. Wires were present in two of the test units (TU-2 and -16) and clear glass and waterworn coral were present in one unit (TU-3). No cultural remains were present in the deposit in the remaining units.

A sand lens was noted at the base of Layer I in two of the test units (Layer II in TU-1 and -2), located at the northeastern end of the parcel. This deposit consisted of 0.02 to 0.06 m of a brown sand. Marine shells (2 *Nerita picea* and 1 waterworn shell) and one bird bone were present in Layer II in TU-1, although no cultural remains were present in TU-2.

The subsoil throughout the parcel was comprised of a dark reddish sandy silt to clay silt saprolite with 0 to 60% pebble inclusions. This deposit is represented by Layer II in TU-8, -9, -11 and -15 and by Layer III in TU-1 and -2. The remaining units were terminated on the saprolitic layer, with the exception of TU-14 and -15, which were terminated on saprolite and bedrock. No cultural remains were present within this deposit. Examples of the test units examined during the present project are illustrated in *Figures 66* and *67*.

Table 3. Summary of Test Unit Stratigraphy

Test Unit No.	Layer	Thickness (m)	Depth (m bs)	Color	Munsell	Soil Type	Comment
1	I	0.08-0.14	0.14	Dark reddish brown	5YR 3/4	Sandy silt with 50% cobble, pebble and small boulder inclusions	No cultural remains
	II	0.03-0.06	0.18	Brown	10YR 4/3	Sand	*Nerita picea* (n=2, 0.4 grams), bird bone (n=1, 2.0 g), waterworn marine shell (n=1, 0.2 g)
	III	0.05-0.14	28	Dark reddish brown	2.5YR 3/4	Sandy silt with 60% pebble inclusions	No cultural remains; Saprolite
2	I	0.08-0.12	0.12	Dark reddish brown	5YR 3/4	Sandy silt with 50% cobble, pebble and small boulder inclusions	Wire present
	II	0.02-0.05	0.14	Brown	10YR 4/3	Sand	No cultural remains
	III	0.06-0.17	0.28	Dark reddish brown	2.5YR 3/4	Sandy silt with 60% pebble inclusions	No cultural remains; Saprolite
3	I	0.16-0.25	0.25	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	Clear glass (n=1, 0.3g), waterworn coral (n=3, 0.2 g); Terminated on saprolite
4	I	0.28-0.29	0.29	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
5	I	0.03-0.15	0.15	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
6	I	0.18-0.19	0.19	Dark reddish brown	2.5YR 3/4	Clay silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
7	I	0.1-0.12	0.12	Dark reddish brown	2.5YR 3/4	Clay silt with 20% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
8	I	0.13-0.17	0.17	Dark reddish brown	5YR 3/3	Clay silt with 30% cobble and pebble inclusions	No cultural remains
	II	0.03-0.17	0.3	Dark reddish brown	5YR 3/4	Clay silt with 60% pebble inclusions	No cultural remains; Saprolite
9	I	0.16-0.17	0.17	Dark reddish brown	5YR 3/3	Sandy silt with 30% cobble and pebble inclusions	No cultural remains
	II	0.12-0.13	0.3	Dark reddish brown	5YR 3/4	Clay silt with 60% pebble inclusions	No cultural remains; Saprolite
10	I	0.05-0.34	0.34	Dark reddish brown	5YR 3/3	Silt with 50% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
11	I	0.14-0.15	0.15	Dark reddish brown	5YR 3/3	Sandy silt with 20% cobble and pebble inclusions	No cultural remains
	II	0.14-0.15	0.3	Dark brown	7.5YR 3/3	Clay silt with no inclusions	No cultural remains; Terminated on saprolite
12	I	0.21-0.26	0.26	Dark reddish brown	5YR 3/3	Clay silt with 20% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
13	I	0.14-0.2	0.2	Dark reddish brown	5YR 3/3	Clay silt with 30% cobble and pebble inclusions	No cultural remains; Terminated on saprolite
14	I	0.06-0.19	0.19	Dark reddish brown	5YR 3/3	Clay silt with 30% cobble and pebble inclusions	No cultural remains; Terminated on saprolite and bedrock
15	I	0.16-0.17	0.17	Dark reddish brown	5YR 3/3	Clay silt with 40% cobble and pebble inclusions	No cultural remains
	II	0.09-0.14	0.31	Dark brown	7.5YR 3/3	Clay silt with 15% pebble inclusions	No cultural remains; Terminated on saprolite and bedrock
16	I	0.34-0.4	0.4	Dark reddish brown	5YR 3/3	Sandy silt with no inclusions	Wire present; Terminated on saprolite
17	I	0.08-0.17	0.17	Dark reddish brown	5YR 3/4	Clay silt with 20% pebble inclusions	No cultural remains; Terminated on saprolite
18	I	0.07-0.09	0.09	Decaying organic material	-	-	No cultural remains
	II	0.03-0.08	0.16	Dark reddish brown	5YR 3/4	Clay silt with 5% pebble inclusions	No cultural remains; Terminated on saprolite
19	I	0.06-0.07	0.07	Dark reddish brown	2.5YR 3/4	Clay silt with 30% pebble inclusions	No cultural remains; Terminated on saprolite
20	I	0.07-0.09	0.09	Dark reddish brown	2.5YR 3/4	Clay silt with 10% pebble inclusions	No cultural remains; Terminated on saprolite

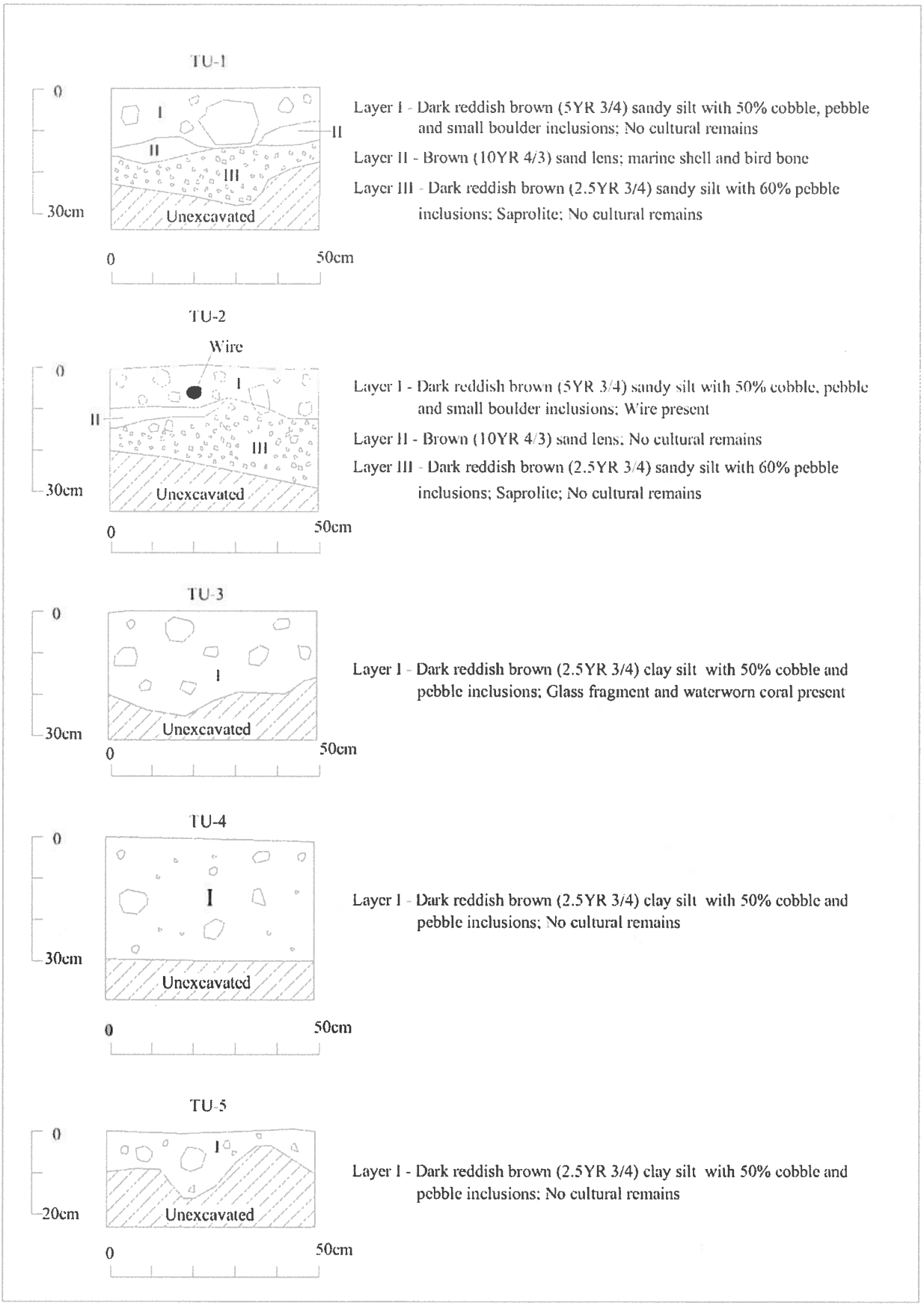


Figure 62. West Face Profiles of TUs 1-5

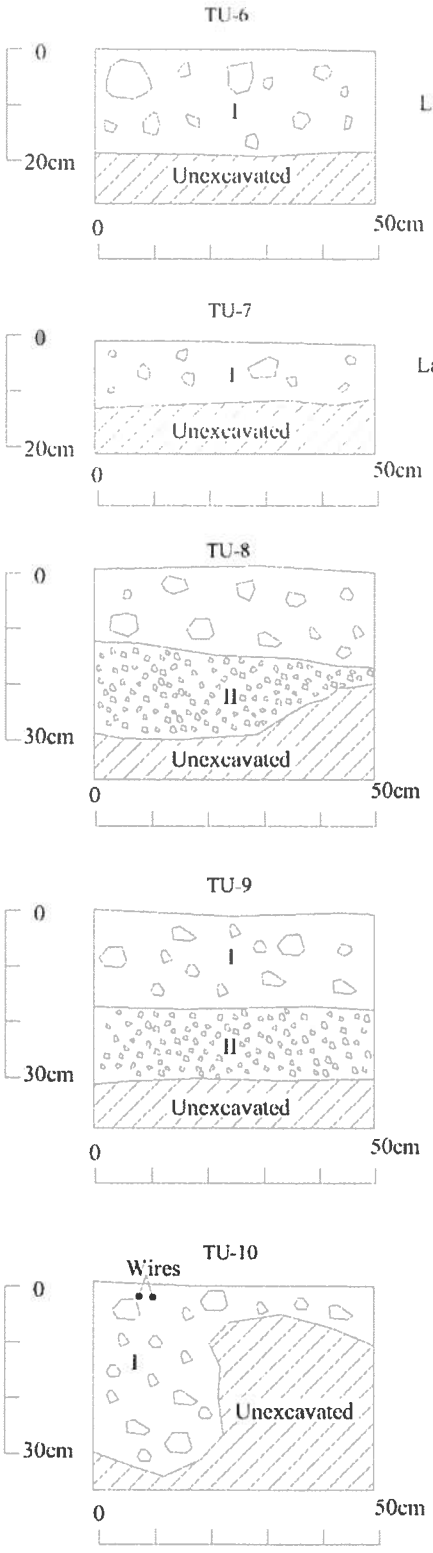
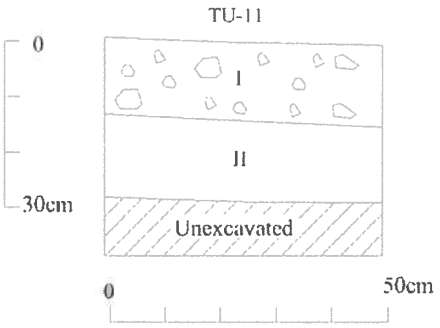
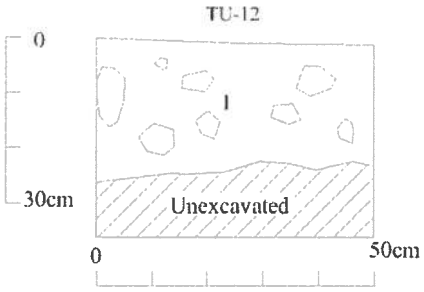


Figure 63. West Face Profiles of TUs 6-10

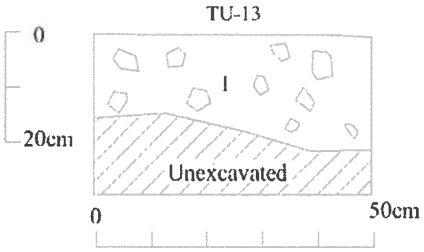


Layer I - Dark reddish brown (5YR 3/3) sandy silt with 20% cobble and pebble inclusions; No cultural remains

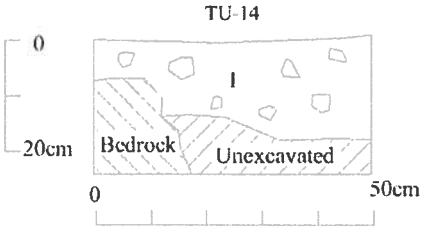
Layer II - Dark brown (7.5YR 3/3) clay silt; No cultural remains



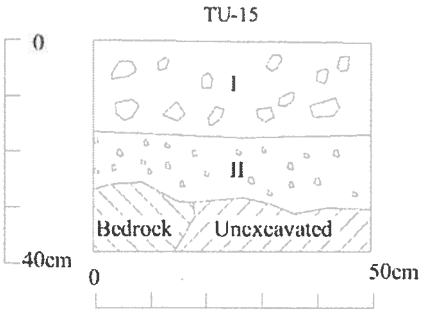
Layer I - Dark reddish brown (5YR 3/3) clay silt with 20% cobble and pebble inclusions; No cultural remains



Layer I - Dark reddish brown (5YR 3/3) clay silt with 30% cobble and pebble inclusions; No cultural remains



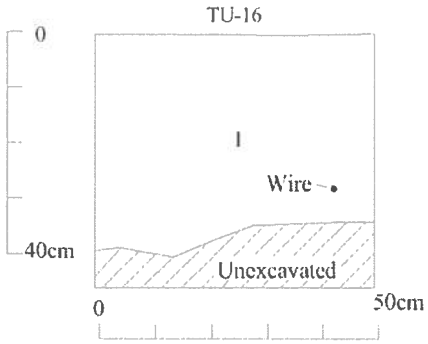
Layer I - Dark reddish brown (5YR 3/3) clay silt with 30% cobble and pebble inclusions; No cultural remains



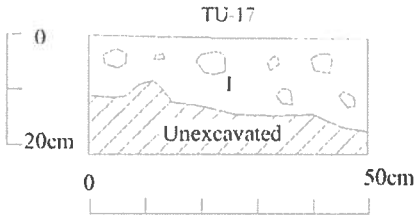
Layer I - Dark reddish brown (5YR 3/3) clay silt with 40% cobble and pebble inclusions; No cultural remains

Layer II - Dark brown (7.5YR 3/3) clay silt with 15% pebble inclusions; Saprolite; No cultural remains

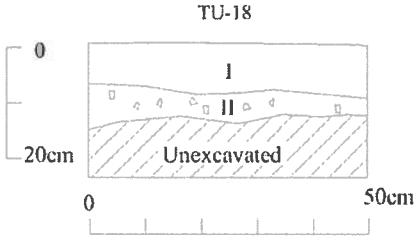
Figure 64. West Face Profiles of TUs 11-15



Layer I - Dark reddish brown (5YR 3/3) sandy silt ; Wire present

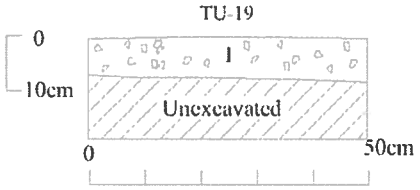


Layer I - Dark reddish brown (5YR 3/4) clay silt with 20% pebble inclusions; No cultural remains

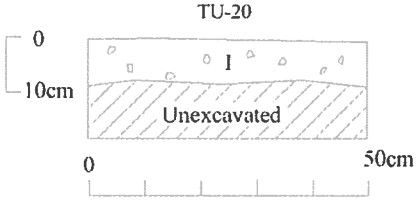


Layer I - Mulch; No cultural remains

Layer II - Dark reddish brown (5YR 3/4) clay silt with 5% pebble inclusions; No cultural remains



Layer I - Dark reddish brown (2.5YR 3/4) clay silt with 20% pebble inclusions; No cultural remains



Layer I - Dark reddish brown (2.5YR 3/4) clay silt with 10% pebble inclusions; No cultural remains

Figure 65. West Face Profiles of TUs 16-20



Figure 66. Post-excavation of TU-3, view to northeast

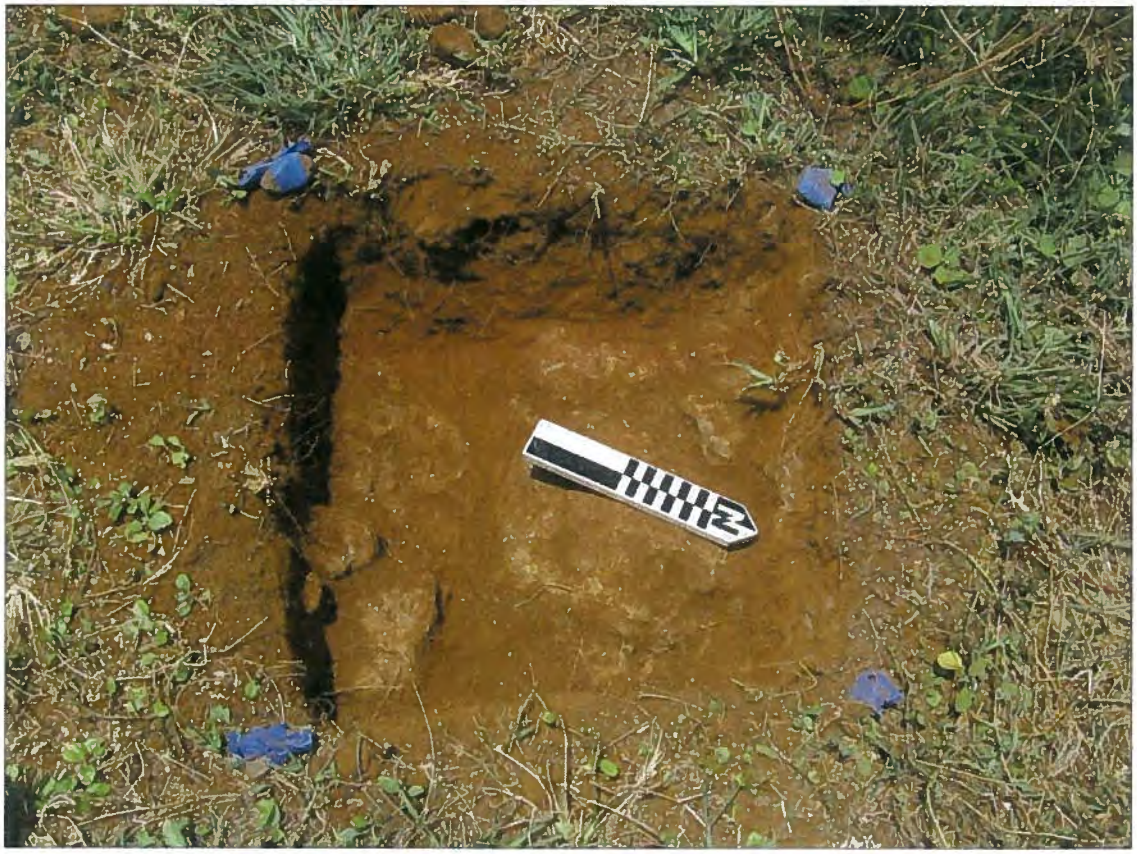


Figure 67. Post-excavation of TU-6, view to west

CONCLUSION

Discussion

The survey results generally confirm the expectations derived from historical and archaeological background research. No traditional Hawaiian sites were identified within the parcel. The absence of such sites is not surprising given the extensive historic use of the area. The survey documented 18 sites with 128 features consisting of concrete pads, concrete slabs, concrete blocks, posts, artifact scatters, terraces, paths, walls, a ditch, a road, stairs, a utility box and a walled slab.

Subsurface testing was conducted throughout the inland portion of the project area revealing a shallow surface layer of dark reddish brown sandy silt to clay silt overlying decomposing bedrock. Historic debris consisting of wire and clear glass were present in three of the units. One unit contained a sand lens that yielded a small quantity of marine shell and a bird bone.

Most of the identified features are remnants of the U.S. Coast Guard LORAN Station (LORSTA Kauai) that was in operation between 1951 and 1979. A few features on the periphery of TMK: 2-8-021:43, where a USCG LHS navigation aid is situated, may have been associated with previous facilities that were initially installed in 1908 and continue in use today.

As discussed, the majority of the features consist of formed concrete structures of varying size and shape. These features are summarized in *Table 4.* The features can be grouped into several categories based on morphology and function as follows: (1) features associated with the main LORAN station, (2) wiring anchors, (3) tower bases/equipment mounts, (4) possible wastewater utility features, (5) guy wire anchors, (6) 5' square pads, (7) 5'6-8" square post supports, (8) foundations of indeterminate function, and (9) modern landscaping features. The distribution of these categories is presented in *Figure 68.* The main buildings of the station are represented by the Site 2130 complex in the northwestern portion of the project area. These features consist of concrete structural foundations, roads, paths, and utility and drainage features.

Site 2142, Feature C at Site 2143, and the 72 features of Site 2147 all consist of small, unformed concrete pads poured directly on exposed bedrock that apparently served as wiring anchors. The features are clustered in the central seaward portion of the project area (see *Figure 11*). The features apparently secured wiring for the antenna array and associated equipment. Wires protruding from these pads consist of bare copper and plastic-sleeved wires that functioned as grounds, and to transmit electrical power and monitoring communications.

There is a large area covered with a deposit of small rusted metal fragments (Site 2136, Feature B; see *Figure 37*) that is centrally located on the seaward side of the anchor cluster (see *Figure 68*). The dense deposit of gravel-sized fragments rusted metal probably came from the large, 230 ft high metal tower that was the main antenna of the LORAN antenna array (see *Figure 22*). Rust removal and associated maintenance was probably necessary on a regular basis for such metal structures sited adjacent to the ocean.

One small concentration of eight anchors is situated adjacent to Feature C of Site 2135 (see *Figure 34*) next to the navigation aid at the west end of overall anchor cluster. Feature C is an area covered with a similar deposit of rusted metal fragments that also likely indicate the former presence of a metal tower. Two inscriptions are present on concrete pads adjacent to Feature C (see *Figure 68*, Inscriptions 1 and 2) that indicate a US LHS facility and a date of February 1922.

No anchors are present on the seaward sides of these metal fragment concentrations, possibly because the towers were designed to send/receive radio signals primarily in a southerly direction. At least three features (Site 2134, and 2139, Features A and D) are probably anchors for guy wires that stabilized the main metal tower.

Table 4. Summary of Concrete Features

Site	Feature	Type	Length	Width	Height/ Depth	Shape	Construction	Associated elements	Potential function	Similar features in project area
2130	A	Slab	13' 7 ¾"	7' 11⅝"	2' 5½"	Rectangular	Formed concrete	Projections and steps	Foundation for LORSTA building	
2130	B	Slab	14' 3⅝"	7' 1¼"	1' 7¼"	Rectangular	Formed concrete	Projections and steps	Foundation for LORSTA building	
2130	C	Pad	3' ⅝"	2' 8 ⅝"	9 ⅞"	Rectangular	Formed concrete	Manhole cover in center	Utility feature (wastewater?)	2130-E and 2143-A
2130	D	Pad	3' ⅝"	2' 8 ⅝"	7 ⅞"	Rectangular	Formed concrete	-	Foundation for ?	2130-F
2130	E	Pad	2' 9 ⅞"	2' 9 ⅞"	9 ⅞"	Square	Formed concrete	Manhole cover in center	Utility feature (wastewater?)	2130-C and 2143-A
2130	F	Pad	2' 10¾"	2' 3 ½"	1' 1 ¾"	Rectangular	Formed concrete	-	Foundation for ?	2130-D
2130	G	Stairs	22' 7 ½"	3' 1 ¾"	3 ⅞"	Linear	Formed concrete	-	Transportation	-
2130	I	Ditch	173' 2 ¾"	2' 11 ½"	1' 5 ¾" deep	Linear	Formed concrete	-	Water diversion	-
2130	J	Path	34' 5 ½"	1' 7 ⅝"	10 ⅝"	Linear	Concrete and stone	-	Transportation	2130-L
2130	K	Wall	48' 6 ⅝"	11 ⅞"	1' 5 ¾"	Linear	Mortared stone	-	Boundary	-
2130	L	Path	31' 2"	3' 11 ¾"	0	Linear	Concrete and stone	-	Transportation	2130-M
2130	M	Pad	4' 11"	4' 1 ¾"	3 ¾"	Rectangular	Formed concrete	2 vertical poles	Foundation for sign	-
2130	N	Box	2' 11 ½"	1' 7 ⅝"	0	Rectangular	Formed concrete	2 metal handles on lid	Utility junction box	-
2130	O	Walled slab	29' 2 ½"	27' 6 ⅝"	4' 1 ¾"	Rectangular	Formed concrete and mortared stone	BBQ grill	Recreation	-
2131	A	Block	3' 3½ "	2' 4 ⅜"	2' 3 ½"	Irregular	Stone and concrete	Modern landscaping feature with historic elements	Undetermined	
2131	B	Terrace	4' 3 ⅜"	3' 3 ½"	2' 11 ½"	Linear	Concrete and soil	Modern landscaping feature with historic elements	Undetermined	
2131	C	Terrace	3' 3 ½"	2' 7 ½"	1' 7 ⅝"	Oval	Stone and concrete	Modern landscaping feature with historic elements	Undetermined	
2131	D	Terrace	2' 3 ⅜	1' 11 ⅜"	2' 7 ½"	Oval	Stone and concrete	Modern landscaping feature with historic elements	Undetermined	
2131	E	Pad	2' 11 ¾"	2' 11"	5 ⅞"	Square	Formed concrete	Triangular configuation of bolts	Tower base	
2132	A	Pad	1' 3 ¾"	1' 1 ¾"	2 ¾"	Rectangular	Formed concrete	-	Foundation for ?	
2132	B	Post	3' 7 ¼"	1' 5 ½"	1' 7 ⅝"	Irregular	Stone and concrete	-	Foundation for ?	
2133	A	Pad	2' 9 ¾"	2' 5 ⅜"	3 ⅞"	Rectangular	Formed concrete	Rectangular configuration of bolts and plate on surface	Tower base or equipment mount	2141
2133	B	Pad	5' 10 ¾"	5' 6 ¾"	0	Irregular	Poured into ground	-	Foundation for ?	
2133	C	Pad	4' 3 ⅜"	2' 3 ½	0	Irregular	Poured into ground	-	Foundation for ?	
2134	-	Post	1'	1'	2' 7 ½"	Square	Formed concrete	Turnbuckle and cable	Guy wire anchor	2139-A, 2139-D
2135	A	Block	4' 11 ¾"	4' 11 ¾"	1' 11 ¾"	Square	Formed concrete	-	Foundation for ?	2139-C, 2144-C, 2146-B
2135	B	Pad	1' 9 ¼"	1' 6 ½"	0	Oval	Poured into ground	Inscription "Feb 16 1922"	Marker	
2135	D	Pad	11 ⅞"	9 ⅜"	3 ⅞"	Square	Formed concrete	Inscription "US LHS"	Marker, sign or equipment mount	
2136	A	Pad	7' 7 ½"	6' 10 ⅝"	10 ½"	Rectangular	Formed concrete	Rectangular configuration of bolts and plate on surface	Tower base or equipment mount	
2137	A	Block	5' 6 ⅞"	5' 6 ⅜"	3' 8 ½"	Square	Formed concrete	Recessed area on top	Post support	2139-B, 2140, 2144-A, 2146-A
2137	B	Pad	2' 8 ¼"	1' 11 ½"	10 ½"	Rectangular	Formed concrete	Bolts, Inscription "USGS" and "7-16-74 MK1 BLACHOWSI"	Tower base or equipment mount	2144-D
2138	-	Scatter	18'	13' 1 ½"	3' 11 ¾"	Irregular	Formed concrete	-	Undetermined	
2139	A	Post	11 ¾"	11 ¾"	1' 7 ⅝"	Square	Formed concrete	Metal anchor on top	Guy wire anchor	2139-D, 2134
2139	B	Block	5' 7 ¾"	5' 7 ¾"	3' 5 ¾"	Square	Formed concrete	Electrical wires	Post support	2137-A, 2140, 2144-A, 2146-A
2139	C	Pad	4' 11 ¾"	4' 11 ¾"	1 ½"	Square	Formed concrete		Foundation for ?	2135-A, 2144-C, 2146-B

Table 4. Summary of Concrete Features (cont.)

Site	Feature	Type	Length	Width	Height/ Depth	Shape	Construction	Associated elements	Potential function	Similar features in project area
2139	D	Post	1' 7 ½"	1' 7 ½"	4' 3 ½"	Square	Formed concrete and metal	Metal bracket and strap	Guy wire anchor	2134, 2139-A
2140	-	Block	5' 7 ¾"	5' 6 ¾"	3' 8 ½"	Square	Formed concrete	Recessed area on top with wood pole	Post support	2137-A, 2139-B, 2144-A, 2146-A
2141	-	Pad	2' 9 ¾"	2' 4 ¾"	2 ¾"	Rectangular	Formed concrete	Rectangular configuration of bolts and plate on surface	Tower base or equipment mount	2133-A
2142	-	Pad	1' 3 ¾"	8 ¼"	1 ½"	Oval	Poured into ground	-	Wiring anchor	2143-C, 2147
2143	A	Slab	14' 9 ½"	6' 8 ¼"	10 ½"	Rectangular	Formed concrete	Two manhole covers	Utility feature (wastewater?)	2130-C and E
2143	C	Pad	1' 11 ½"	1' 3 ¼"	1' 9 ¾"	Irregular	Poured onto outcrop		Wiring anchor	2142, 2147
2144	A	Block	5' 6 ¼"	5' 6 ¼"	3' 6 ¼"	Square	Formed concrete	Vertical concrete column in center	Post support	2137-A, 2139-B, 2140, 2146-A
2144	B	Pad	5' 1"	4' 11 ¾"	6 ¼"	Square	Formed concrete	-	Foundation for ?	
2144	C	Pad	4' 11 ¾"	4' 11 ¾"	1' 3"	Square	Formed concrete	-	Foundation for ?	2135-A, 2139-C, 2146-B
2144	D	Pad	2' 7 ¾"	1' 11 ½"	10 ½"	Rectangular	Formed concrete	Metal attachment, "7-17-74", "Little SKI" and Heart with arrow	Tower base or equipment mount	2137
2144	E	Pad	2' 8 ¼"	2' ¼"	1' 2 ½"	Rectangular	Formed concrete	-	Foundation for ?	
2145	A	Pad	6' 5 ½"	3' ¼"	2 ¼"	Rectangular	Formed concrete	-	Foundation for ?	
2145	B	Pad	3' 2 ½"	3' ¼"	3 ½"	Rectangular	Formed concrete	-	Foundation for ?	
2146	A	Block	5' 7 ¾"	5' 7 ¾"	3' 6 ¼"	Square	Formed concrete	Recessed area on top	Post support	2137-A, 2139-B, 2140, 2144-A
2146	B	Pad	4' 11 ¾"	4' 11 ¾"	1 ½"	Square	Formed concrete	-	Foundation for ?	2135-A, 2139-C, 2144-C
2147	72 feas.	Pad	1' 1 ¾"	9 ¾"	2 ¾"	Oval	Poured onto outcrop	-	Wiring anchors	2142, 2143-C

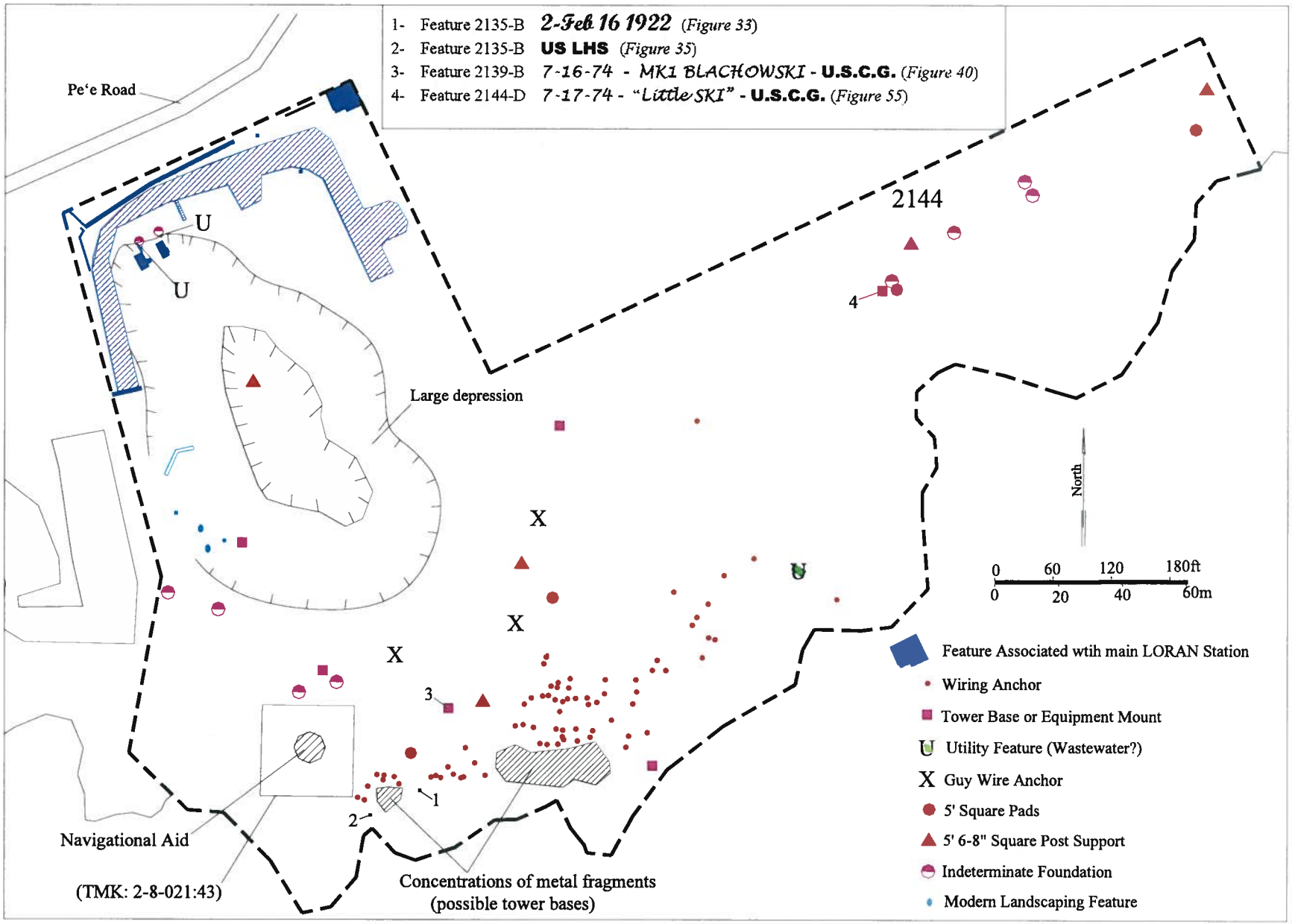


Figure 68. Distribution of Associated Features within Project Area

Three features (Site 2143-A and Site 2130-C and –E; see *Figures 13* and *49*) are formed concrete surfaces with round metal manhole covers. The covers resemble ones usually associated with wastewater transmission systems. The two at Site 2130 would have been located in or adjacent to the two story building in the depression at the west side of the main LORAN facility (see *Figure 22*). The location of these features at the lowest elevation within the main facility would be consistent with a main facility-wide gravity-fed wastewater drainage system.

Feature 2134-A has two manhole covers and is situated in a relatively isolated location at the coast in the central portion of the project area. The isolated, coastal location may indicate that the system was designed to drain into the ocean; however, no evidence of a buried pipeline connecting the two facilities was observed during the survey. Much of the intervening terrain is exposed bedrock or bedrock covered with a shallow soil deposit that would have required substantial effort to excavate. It is possible that the pipeline was on the surface and was subsequently removed. Alternatively, these manhole covers may represent access points to subterranean vaults unrelated to wastewater, potentially electrical utilities.

Six features within the project area likely functioned as tower bases or mounts for equipment based on the presence of bolts and other metal hardware protruding from formed, concrete pads (see *Figure 68*). These consist of Features 2131-E, 2133-A, 2136-A, 2137-B, 2141, and 2144-D. Four of these features are situated in a roughly linear pattern, 150-200 ft (46-61 m) apart extending from the central coast to the southwest side of the large depression. The other two are situated approximately 350 ft (107 m) apart along the inland side of the project area adjacent to The Point at Po'ipū resort. One feature from each group is dated to July 1974 (see *Figure 68*, Inscriptions 3 and 4).

There are two standardized types of formed concrete features that have nearly identical dimensions, and probably had similar functions. One type consists of standardized formed concrete blocks and the other of formed concrete pads. The first type consists of five concrete blocks that are c. 5'6" to 5' 8" square at the base tapering to 4' 8" square at the top (Features 2137-A, 2139-B, 2140, 2144-A and 2146-A). The features range from 3' 5" to 3' 8" in height and have a square hole in the upper surface that served to support a large 'telephone pole" size post (see *Figure 46*). Three of these features (2137-A, 2139-B, and 2140) probably support the three poles that were part of the LORAN antenna array seaward of the main facility (see *Figure 22*). The other two pole supports are situated at the east end of the property. One has a reinforced concrete pole remnant (2144-A; see *Figure 52*) and the hole the other one is filled with concrete (2146-A; see *Figure 57*).

The second standardized concrete feature type consists of four concrete pads that are 4' 11 ¾" square (Features 2135-A, 2139-C, 2135-A, and 2146-B; "5' Square Pads" in *Figure 68*). One of these (2135-A) is categorized as a block because it is nearly two feet thick, potentially a result of erosion exposing the lower half of the feature (see *Figure 32*). These features likely served as foundations for some type of small structure, facility, or equipment, but lack any attachment hardware. It is notable that all except one of these features is situated within approximately 50-95 ft (15-29 m) of a standardized post support feature, the only exception is the isolated post support (Site 2140) in the large depression. This apparent pairing probably indicates a functional relationship between these two standardized feature types.

There are ten pads of variable size that are categorized as indeterminate foundations (Features 2130-D, 2130-F, 2132-A, 2132-B, 2133-B, 2133-C, 2144-B, 2144-E, 2145-A, and 2145-B). The distribution of these features is shown in *Figure 68*. All appear to be paired with one other pad. Two are situated within the LORAN main facility in the inland portion of the project area. The others are situated in the eastern (2 pairs) and western (2 pairs) coastal portions of the project area. These features likely also served as foundations for some type of small structure, facility, or equipment. The pairing and overall distribution probably indicates a functional relationship between the features.

Significance Assessment

Pursuant to DLNR (1998) Chapter 275-6 (d), the initial significance assessments provided herein are not final until concurrence from the DLNR has been obtained. Sites identified during the survey are assessed for

significance based on the criteria outlined in the Rules Governing Procedures for Historic Preservation Review (DLNR 1998: Chapter 275). According to these rules, a site must possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria:

1. Criterion "a". Be associated with events that have made an important contribution to the broad patterns of our history;

2. Criterion "b". Be associated with the lives of persons important in our past;

3. Criterion "c". Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;

4. Criterion "d". Have yielded, or is likely to yield, information important for research on prehistory or history; and

5. 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 traditional 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.

The 18 sites identified within the project area are assessed as significant solely under Criterion "d". The sites have yielded information important for understanding historic land use in project area.

Recommended Treatments

The sites within the project area have been adequately documented and no further work or preservation is recommended. Although extensive subsurface testing did not identify subsurface cultural deposits or burials, it is recommended that any future development-related land disturbance be archaeologically monitored during the initial site work because significant deposits and burials were found on the adjacent property. The monitoring would be guided by a monitoring plan prepared for DLNR-SHPD review and approval.

References

Alexander, Arthur
1985 *Koloa Plantation 1835-1935.* Kauai Historical Society. Lihue.

Bennett, Wendell C.
1931 *The Archaeology of Kaua'i*, Bernice P. Bishop Museum Bulletin 80, Honolulu, HI.

Burgess, Stella
2011 Interview on 26 April 2011. Audio Recording on File at Haun & Associates.

Ching, F., S.L. Palama and C. Stauder
1974 The Archaeology of *Kona Kaua'i na ahupua'a Weliweli, Pa'a, Māhā'ulepū*: Surface Survey of the Coastal Lands, Archaeological research Center Hawai'i, Lawa'i, Kaua'i.

Ching, Harold
1985 *Hawaii's Chinese Pioneers: Notes in the Chinese Historical Society.* For Koloa's 1985 multi-Anniversary Jubilee

Cook, James
1784 *A Voyage to the Pacific Ocean: Undertaken, by the Command of His Majesty, for Making Discoveries in the Northern Hemisphere, to Determine the Position and Extent of the West Side of North America; its Distance from Asia; and the Practicability of a Northern Passage to Europe. Volume II.* Dublin.

Creed, V., G. Ida, and H. Hammatt
1995 An Archaeological Inventory Survey for Po'ipū Road Safety Improvements, Po'ipū, Kaua'i (TMK: 2-8-15, 16, 17 & 18), Cultural Surveys Hawai'i, Kailua, Hawai'i.

DLNR (Department of Land and Natural Resources)
2003 Hawaii Administrative Rules, Title 13, Department of Land and Natural Resources, State Historic Preservation Division.

Dockall, J., H. Hammatt, U. Rainalter, and S. Masciengelo
2005 Archaeological Inventory Survey of Po'ipū Beach Park, Mauka Preserve, Kōloa Ahupua'a, Kona District,

Farley, J.K.
1907 Notes on Maulili Pool, Kōloa. Thrum's Annual, Honolulu, HI.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens
1972 Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii. U.S. Department of Agriculture, Soil Conservation Service and University of Hawaii Agricultural Experiment Station. Government Printing Office, Washington D.C.

Fornander, Abraham
1918 *Fornander Collection of Hawaiian Antiquities and Folk-Lore: The Hawaiians' Account of the Formation of their Islands and Origin of Their Race, with the Traditions of Their Migrations, Etc., as Gathered from Original Sources. Memoirs of the Bernice Pauahi Bishop Museum Volume V, 1918-1919.* Bishop Museum Press. Honolulu, H.I.

Firor, J., P. Rosendahl and S. Goodfellow
1991 Archaeological Inventory Survey, Grove Farm, Kawailoa Property, Land of Mahaulepu, Koloa District, Island of Kauai. PHRI Report 597-123091 prepared for Grove Farm Properties, Inc. Lihue, HI.

Firor, J. and P. Rosendahl
1992 Additional Data Collection, Hyatt Regency Kauai, Proposed Golf Course Project Area, Land of Paa, Koloa District, Island of Kauai. PHRI Report 447 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

Fredsplace.org
nd. The Place to Meet Old Shipmates website (www.fredsplace.org)

Hammatt, H
1989a Archaeological Data Recovery Plan for Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Landmark Suites of America, Inc.

1989b A Burial Treatment Plan for the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Landmark Suites of America, Inc.

1990a Preliminary Report on Archaeological Testing for the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Sweeny Development Company, Inc.

1990b Preliminary Status Report on Further Archaeological Testing for the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kauai. Cultural Surveys Hawaii report prepared for Sweeny Development Company, Inc.

1992 Archaeological Reconnaissance of the Po'ipū Road and Lāwa'i Road Junction, Kōloa, Kaua'i, Cultural Surveys Hawai'i Inc., Kailua, Hawai'i.

Hammatt, H.H., J.H. Toenjes
1991 Archaeological Data Recovery and Construction Monitoring at the Proposed Keoneloa Bay Villas, Weliweli and Pa'a, Kaua'i (TMK 4-2-8-20:1 & 4-2-8-21:1). Prepared for Sweeney Development Company.

Hammatt, H. , R.M. Bordner and M. J. Tomonari-Tuggle
1978 Archaeological and Biological Survey of the Proposed Kīahuna Golf Village Area, Kōloa, Kona, Kaua'i Island, Hawai'i, A.R.C.H., Lāwa'i, Kaua'i.

Hammatt, H., D. Borthwick, D. Shideler and M. Stride
1988 Archaeological Inventory Survey of the Proposed Kukuiula Bay Planned Community, Koloa, Kauai. Cultural Surveys Hawaii report prepared for R.M. Towill Corporation.

Hammatt, H., W. Folk and M. Stride
1991 Archaeological Inventory Survey of the Proposed Poipulani Golf Course and Residential Development, Koloa, Kauai. Cultural Surveys Hawaii report prepared for Poipulani Development Corporation.

Hammatt, H., G. Ida, and W. Folk
1993a Archaeological Survey of 7.6 Acres at Kōloa, Kaua'i, TMK: (4) 2-8-14:30, Cultural Surveys Hawai'i, Kailua, Hawai'i.

Hammatt, H., G. Ida, W. Folk, D. Shideler, and B. Collins
1993b Archaeological Testing and Monitoring at Poi'pu Beach Park, Koloa, Kauai. Cultural Surveys Hawaii report.

Handy, E.S.C., E.G. Handy, M.K. Pukui
1991 *Native Planters in Old Hawaii, Their Life, Lore, & Environment.* Bishop Museum Press, Honolulu, HI

Hill, R., T. Tulchin, J. Tulchin and H. Hammatt
2005 Archaeological Inventory Survey for a 8.633-acre Parcel at Koloa. Cultural Surveys Hawaii report prepared for Eric A, Knudsen Trust

Ida, G., V. Creed and H. Hammatt
1996 Archaeological Investigation for Environmental Assessment of the proposed Koloa/Poipu Bypass Road, Koloa, Weliweli, Kona, Kauai. Cultural Surveys Hawaii Report prepared for Wilson Okamoto and Associates.

Joesting Edward
1987 *Kauai: The Separate Kingdom.* University of Hawaii Press

Judd, Bernice
1935 Koloa: A Sketch of its Development. In Kaua'i Museum Material, Section II. Unpublished Manuscript.

Juvik, S.P. and J.O. Juvik (editors)
1998 *Atlas of Hawaii,* Third Edition. University of Hawaii Press. Honolulu.

Kailihiwa, S., A. Haun, and J. Henry
2011 Cultural Impact Assessment, TMK: (4) 2-8-021:041, Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i, Haun & Associates Report 811 prepared for CIRI Land Decvelopment Company.

Kamakau, S.
1992 *Ruling Chiefs of Hawaii.* [Revised] Kamehameha Schools Press, Honolulu. [1842 and 1870.]

Kikuchi, W.
1963 Archaeological Survey and Excavations on the Island of Kauai, Kona District, Hawaiian Islands. Sponsored by University of Hawaii Committee for the Preservation and Study of Hawaiian Language, Art, and Culture.

1980 Letter Report on Archaeological Reconnaissance of Keoneloa Beach Area, Koloa, Kauai. Prepared for ADM International.

1988 Archaeological Reconnaissance of a Proposed Multi-Family Rental Subdivision, Pa'anau Camp, Ahupua'a of Kōloa, Kōloa District, Kaua'i, TMK 2-6-04:46. Archaios, Lawa'i, Kaua'i, HI

Knudsen, Augustus
1913 "The Defeat of Kamehameha's Army". *Hawaiian Almanac and Annual for 1914. The Reference Book of Information and Statistics Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others* pp136-141. Thos. G. Thrum, Honolulu T.H.

Krauss, Beatrice H.
1993 *Plants in Hawaiian Culture.* University of Hawaii Press, Honolulu, HI.

Ladd, E.J.
1981 Archaeological Field Survey Report, Makahuena Point, Kauai. Prepared for the 14th Coast Guard District.

Landrum, J.
1984 Archaeological Reconnaissance of Alexander and Baldwin's Lands at Kukuiula, Koloa, Kauai. Bishop Museum, Honolulu, Hawaii.

loran-histoy.info
nd. Loran Station Kauai. http://www.loran-history.info/kauai/kauai.htm

McMahon, Nancy
1991 Locating Kāne'aukai Heiau, an Archaeological and Historical Synthesis, Weliweli, Koloa, Hawaii.

Mitchell, A., R. Chiogioji, H.H. Hammatt
2005 Cultural Impact Assessment for an Approximately 203-Acre Parcel in Kōloa Ahupua'a, Kona District, Island of Kaua'i, TMK (4) 2-18—013:001; 2-8-014:001, 002, 003, 004, and 019. Prepared for the Eric A. Knudsen Trust.

Neller, E.
1981 An Archaeological Assessment of recent Disturbances to Archaeological Sites in the Poipu Kai Subdivision, Pa'a, Kauai. Historic Sites Section, De[t. of Natural resources.

O'Hare, C., D. Shideler and H. Hammatt
2003 An Archaeological Assessment of Lands in the Sheraton Kauai Resort at Koloa Ahupua'a, Kauai Island. Cultural Surveys Hawaii Report.

Palama, Stephen L.
1973 The Archaeology of Kona, Kaua'i from the Ahupua'a of Koloa to the Ahupua'a of Weliweli: Archaeological Reconnaissance of the Proposed Cane Haul

Papakilo Database
nd. Māhele 'Āina Index – Foreign Testimony – Helu 5219.
http://papakilodatabase.com/main/imageserver.php?file=01138.pdf&path=H/A/S/H/7/1/5/1/1

Pukui, M.K., S.H. Elbert
1986 *Hawaiian Dictionary, Hawaiian-English, English-Hawaiian, Revised and Enlarged Edition.* University of Hawaii Press. Honolulu, HI

Smith, H.W.
1991 Historical Documentary Research. Archaeological Inventory Survey Grove Farm Kawailoa Property Additional Parcel, Land of Mahaulepu, Koloa District, Island of Kauai. Walker and Goodfellow 1991. Appendix B pp. B-1 to B-11.

Spanamwar.com
nd. Spanish American War Centennial War Website. http://www.spanamwar.com/

Stokes, J.F.G.
1946 "Dune Sepulture, Battle Mortality, and Kamehameha's Alleged Defeat on Kauai". *Hawaii Historical Review Annual Report 1946*. Honolulu, HI.

Thrum, Thomas G.
1906 Heiaus and Heiau Sites Throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907.* Honolulu.

Townsend, John K.
1839 *Narrative of a Journey Across the Rocky Mountains, to the Columbia River, and a Visit to the Sandwich Islands, Chili, &c. with a Scientific Appendix.* Henry Perkins, Philadelphia, PA.

Tulchin, T. and H. Hammatt
2005 Archaeological Literature Review and Field Inspection for an 8.5-acre Knudsen Trust Parcel. Cultural Surveys Hawaii report prepared for Eric A. Knudson Trust.

USCG
1946 The Coast Guard at War IV, LORAN Volume II. Prepared in the Historical Section Public Information Division U.S. Coast Guard Headquarters. Aug. 1, 1946.

uscg.mil
nd. United States Coast Guard. (www.uscg.mil)

USLHS.org
nd. The United States Lighthouse Society website (uslhs.org)

Van Ryzin, K. and H. Hammatt
2004 Archaeological Data Recovery of the Eric A. Knudson Trust Lands. Koloa, Kauai. Cultural Surveys Hawaii report prepared for Eric A. Knudson Trust.

Walker, A. and P. Rosendahl
1990 Archaeological Inventory Survey, Hyatt Regency Kauai, Proposed Golf Course Project Area, Land of Paa, Koloa District, Island of Kauai. PHRI Report 447-111591 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

Walker, A. and S. Goodfellow
1991 Archaeological Inventory Survey, Grove Farm Kawailoa Property, Additional Property, Land of Mahaulepu, Koloa District, Island of Kauai. PHRI Report 597-063092 prepared for Grove Farm Properties, Inc. Lihue, HI.

Walker, A. P. Rosendahl and S. Goodfellow
1992 Archaeological Data Recovery, Phase II, Hyatt Regency Kauai Mitigation Program, Land of Paa, Koloa District, Island of Kauai. PHRI Report 472 prepared for Grove Farm Properties, Inc. Lihue, Kauai.

Westervelt, William D.
1916 *Hawaiian Legends of Ghosts and Ghost-Gods*. ForgottenBooks.org

1917 "A Hawaiian High Chief –A-Lau-Niu-Ohua (The leaf of the fruitful coconut), who lived about 1270 (According to Fornander) or 1300 (according to Kamakau)." *The Friend,* December 1917.

Wigglesworh, K. and D. Graves
1992 Archaeological Inventory Survey, Grove Farm Quarry Relocation Project, Land of Mahaulepu, Koloa District, Island of Kauai. PHRI Report 1263 prepared for Grove Farm Properties, Inc. Lihue, HI.

Wyman, Jeffries
1868 "Observations on Crania." *Proceedings of the Boston Society of Natural History. Vol XI. 1866-1868*. Press of Abner A. Kingman, Boston, MA. pp 440-462.

Yorck, J., R. Chiogioji, and H. Hammatt
2004 An Archaeological Inventory Survey of a 9.4-Acre Parcel along Waikomo Stream, Kōloa Ahupua'a, Kona District, Kaua'i Island, (TMK: (4) 2-6-04: 19 Portion), Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Yorck, J., J. Madeus, Tulchin, T., S. Freeman, J. Dockall and H. Hammatt
2005 Archaeological Inventory Survey for Makai Portion of Parcel 19 of the Eric A. Knudson Trust Lands. Koloa, Kauai. Cultural Surveys Hawaii report prepared for Eric A. Knudson Trust.

Haun & Associates

Archaeological, Cultural, and Historical Resource Management Services
73-1168 Kahuna A'o Road, Kailua-Kona, Hawai'i 96740 Phone: (808) 325-2402 Fax: 325-1520

December 2, 2012 Project 810

Pua Aiu, Ph.D., SHPD Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, Hawai'i 96707

Subject: Final Archaeological Inventory Survey for a 13.6-acre Project Area
Weliweli Ahupua'a, Koloa District, Island of Kauai
TMK: (4) 2-8-021:041
(A.E. Haun, D. Henry and S. Kailihiwa 2011, Report 810-042611)

Dear Dr. Aiu:

The subject final archaeological inventory survey (AIS) is enclosed. The draft AIS was revised based on Division review comments dated August 27, 2012 (LOG NO: 2011.1830; DOC NO: 1208SL18). The 12 review comments listed in the ATTACHMENT to the review letter are listed below followed by our response and associated revisions.

Project Area Description

1. **Revise (page 1) from "the project are varies" to "the project area varies".**
Response: Corrected

2. **Revise Fig 1 caption to include map date.**
Response: Revised as requested, listing map date of 1996

Previous Archaeological Research

3. **Revise Thrum (1907) to Thrum (1906).**
Response: Revised as requested

4. **Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".**
Response: Revised to read, "He also identified a series of walls designated as".

5. **Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".**
Response: Revised as requested

6. **Revise Table 1- to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.**
Response: Revised as requested. Date of Hill *et al.* changed from 1996 to 2005, which is the correct date

7. **Revise Fig 8 - to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005**
Response: Revised as requested

Findings

8. **Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19-1ast 4 paragraphs; page 24 - 3rd paragraph; page 26-1st paragraph (see also __ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.**
Response: Revised as requested

Subsurface Testing

9. **Revise (page 57) from "Five of the units were located" to "Four of the units were located".**
Response: Revised as requested

10. **Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks - i.e., layers I and II should both apply to TU-18.**
Response: Revised as requested

11. **Revise (page 61) Fig 64 stratum I label in TU-14.**
Response: Revised as requested

References Cited

12. **Revise - Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907.* Honolulu.**

Response: Firor 1992 changed to Firor & Rosendahl 1992 in Table 1, Figure 8 and references
Firor et al. 1991 added to references
Knutson 1914 changed to 1913 on page 7 – correct in references
Kamakau 1992 added to references
Thrum 1906 citation modified in references

If you have any further questions, or require any additional information, please contact me at (808) 325-2402.

Sincerely,

Alan E. Haun, Ph.D.
Principal Investigator

Encl. Report, CD, Copy of Review Letter

cc: CIRI Land Development Co.

810 Rec'd 9/1/12

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

PAUL J. CONROY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
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

HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

601 Kamokila Boulevard, Suite 555
Kapolei, HI 96806

August 27, 2012

Dr. Alan E. Haun, Principal Investigator
Haun &Associates
73-1168 Kahuna A'o Road
Kailua-Kona, Hawaii 96740

LOG NO: 2011.1830
DOC NO: 1208SL18
Archaeology

Dear Dr. Haun:

SUBJECT: **Chapter 6E-42 Historic Preservation Review -**
Archaeological Inventory Survey Report for 13.6 Acres, Makahuena Point
Weliweli Ahupua'a, Kōloa District, Island of Kaua'i
TMK: (4) 2-8-021:041

Thank you for the opportunity to review the draft report titled *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011). This document was received by our office on June 6, 2011; we apologize for the delayed review and thank you for your patience. This report presents the findings of an archeological inventory survey that was conducted on a 13.6-acre parcel and involved a 100% pedestrian surface survey. Sites were defined as clusters of features less than 15 m apart. The exception was a site designation applied to a series of widely scattered, nearly identical small concrete pads. The archaeological survey identified 18 sites comprised of a total of 128 features. All of the sites and features are identified as remnants of US federal government navigation-related infrastructure. The majority of the remains are associated with the former US Coast Guard Long Range Navigation (LORAN) station that operated at the point from 1951 to 1979. The documented features consist of 98 concrete pads, 7 concrete blocks, 4 artifact scatters, 4 posts, 3 terraces, 3 slabs, 2 paths, 2 walls, and one each of the following: ditch, road, stairs, utility box, and wall slab. Subsurface testing consisted of the excavation of 20 test units. No intact subsurface cultural deposits were identified during the testing.

The 18 sites are assessed as significant solely under Hawaii Register of Historic Places (HRHP) Criterion "d" for their information content, and are recommended as having been adequately documented. No further work or preservation is recommended. Although no subsurface cultural deposits were identified during subsurface testing, archaeological monitoring is recommended for future ground-disturbing activities because significant deposits and burials were found on the adjacent property. SHPD agrees with the proposed significance assessments and treatment recommendations.

The archaeological inventory survey report provides an excellent discussion of field methods, archival and historical background, previous archaeological investigations, and the project findings and sites. This report meets the requirements of Hawaii Administrative Rule 13-276-5 and is accepted by SHPD with the understanding that **some minor revisions are made** in the final document (see attachment). Please make these corrections and send one hardcopy of the document, clearly marked **FINAL**, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. Please contact Susan A. Lebo at (808) 692-8019 or Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Theresa K. Donham
Archaeology Branch Chief

ATTACHMENT

Comments and Questions: *Archaeological Inventory Survey TMK: (4) 2-8-021:041 Makahuena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i* (Haun, Henry, and Kailihiwa, June 2011).

Project Area Description

(1) Revise (page 1) from "the project are varies" to "the project area varies".
(2) Revise Fig 1 caption to include map date.

Previous Archaeological Research

(3) Revise Thrum (1907) to Thrum (1906).
(4) Revise (page 13) from "He also identified a series of walls at designated as" to "He also identified a series of wall designated as".
(5) Revise (page 17) from "The features 98 concrete pads," to "The features consist of 98 concrete pads".
(6) Revise Table 1 – to include the following studies shown in Fig 8: Palama 1973; Hammatt 1992; Hammatt et al. 1993a, and Hill et al. 1996.
(7) Revise Fig 8 – to include the following studies listed in Table 1: Walker and Goodfellow 1991; Hill et al. 2005.

Findings

(8) Revise format glitches (see sentences not right justified) in which dimensions (feet & inches) are overwritten/jumbled: page 19- last 4 paragraphs; page 24 – 3rd pargagraph; page 26-1st paragraph (see also (__ *Figure* 16)); page 31-2nd paragraph; page 34-3rd and 4th paragraphs; page 42-2nd paragraph; page 45-3rd paragraph (see also "remain ns are"); page 49-4th, 5th, & 8th paragraphs; page 53-last paragraph.

Subsurface Testing

(9) Revise (page 57) from "Five of the units were located" to "Four of the units were located".
(10) Revise (page 58) Table 3 line subdividing TU 18 into 2 blocks – i.e., layers I and II should both apply to TU 18.
(11) Revise (page 61) Fig 64 stratum I label in TU-14.

References Cited

(12) Revise – Firor 1992 appears in Table 1 and Fig 8 but not in bib; Firor & Rosendahl 1992 appears in bib but not in Table 1, Fig 8 or text; Firor et al. 1991 appears in Table 1 and Fig 8 but not in bib; Revise to include the following citation mentioned in text but absent from bib: Knudsen 1914 (see page 7; story dates 1914 but citation is 1913); Kamakau 1992 (see page 8); Thrum citation should read: Thrum, Thomas 1906 "Heiaus and Heiau Sites throughout the Hawaiian Islands." *Hawaiian Almanac and Annual for 1907*. Honolulu.

Bernard P. Carvalho, Jr.
Mayor

Gary K. Heu
Managing Director

Michael A. Dahilig
Interim Director of Planning

Dee M. Crowell
Deputy Director of Planning

PLANNING DEPARTMENT
County of Kaua'i, State of Hawai'i
4444 Rice Street, Suite A-473, Līhu'e, Hawai'i 96766
TEL (808) 241-4050 FAX (808) 241-6699

SEP 19 2011

Galen T. Nakamura
SHIRAMIZU LOO & NAKAMURA
4357 Rice Street, Suite 201
Līhu'e, Hawai'i 96766

Subject: Tax Map Key: (4) 2-8-021:041
Po'ipū, Kaua'i

This is to acknowledge receipt of your transmittal dated May 27, 2011 requesting a determination for the property referenced above.

In considering your request, please understand that the definition of a "LOT" is being referenced pursuant to Section 9-1.5 of the Kauai County Code (1987), as amended, and it reads:

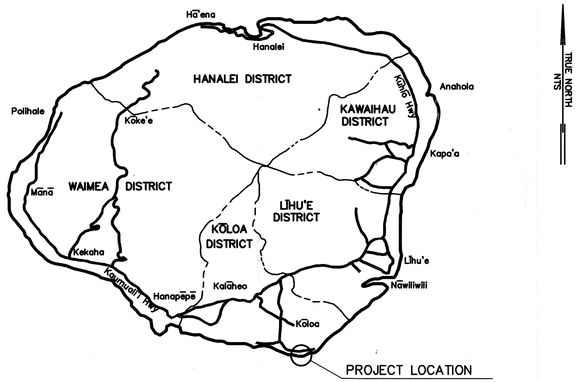
> *"LOT means a portion of land shown as a unit on an approved and recorded subdivision map."*

Based on the foregoing and information you've provided, the department recognizes the 25 parcels within the Makahuena Tract and further identified on File Plan 354 (Exhibit 2 of your transmittal) as existing lots of record. However, the department is unable to support the existence of Parcels L-1 through L-3 since there are no supporting documents that recognize the establishment of these parcels.

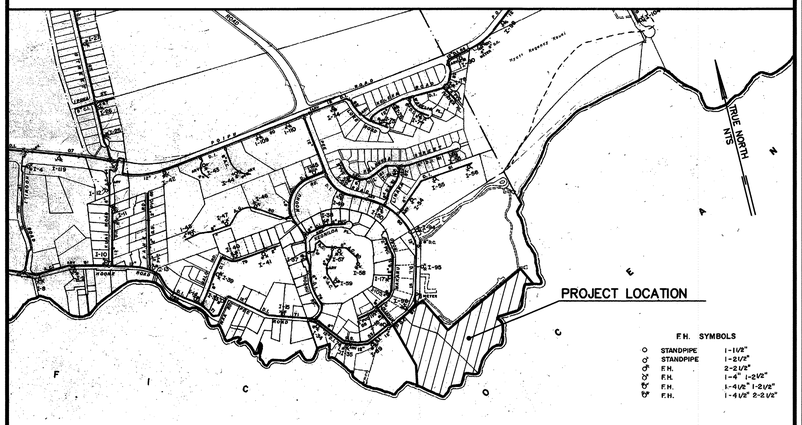
Should you have further questions regarding this matter, please contact Dale A. Cua of my staff at 808.241.4050. Aloha!

MICHAEL A. DAHILIG
Interim Director of Planning

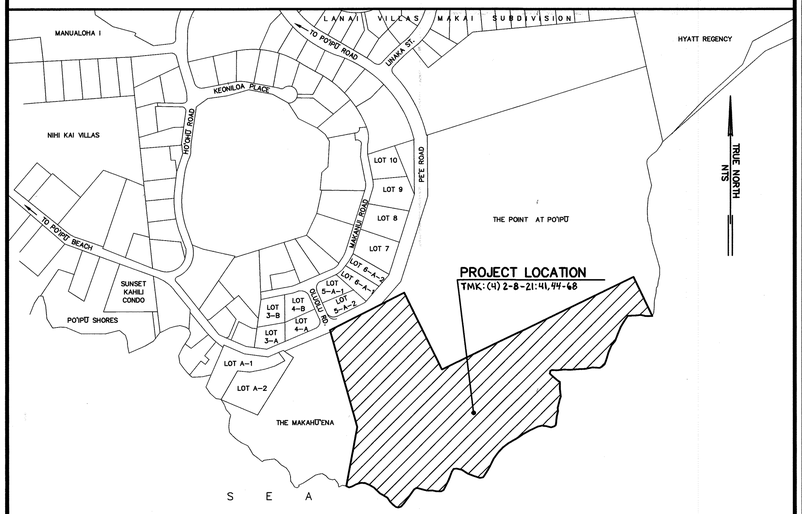
EXHIBIT M



ISLAND OF KAUA'I



VICINITY MAP



LOCATION MAP

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg

CONSTRUCTION PLANS FOR MAKAHŪ'ENA SUBDIVISION

Planning Dept. Subdivision S-2015-14

(Tentative Approval: April 14, 2015)

Weliweli, Kōloa, Kauaʻi, Hawaiʻi

TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner: CLDC Land Development Company
P.O. Box 93330
Anchorage, AK 99509

PREPARED BY:

ESAKI SURVEYING AND MAPPING, INC.
LIHU'E, KAUA'I, HAWAI'I 96766

INDEX TO DRAWINGS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
GENERAL NOTES	2 – 3
TRAFFIC CONTROL PLAN	4
EROSION CONTROL PLAN	5
GENERAL SITE PLAN	6
PLAN AND PROFILE	7 – 8
EROSION CONTROL DETAILS	9
MISCELLANEOUS DETAILS	10 – 12
WATER DETAILS	13 – 14
DRAINAGE DETAILS	15 – 16
ELECTRICAL PLAN	17
ELECTRICAL NOTES & DETAILS	18
ELECTRICAL DETAILS	19 – 21
SIGNAGE AND STRIPING SITE PLAN	22
STRIPING PLAN & ROADWAY CURVE DATA	23

APPROVED:

DIRECTOR, PLANNING DEPARTMENT COUNTY OF KAUA'I	11/4/2015 DATE
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS COUNTY OF KAUA'I	12.17.15 DATE
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION, DEPARTMENT OF HEALTH STATE OF HAWAI'I	9-14-2015 DATE
for MANAGER & CHIEF ENGINEER, DEPT. OF WATER COUNTY OF KAUA'I	10/16/15 DATE
CHIEF ENGINEER, KAUA'I ISLAND UTILITY COOP.	10/29/15 DATE
CHIEF ENGINEER, HAWAIIAN TEL COM	10/29/15 DATE
CHIEF ENGINEER, OCEANIC TIME WARNER CABLE OF HAWAI'I	10/29/15 DATE

EXHIBIT M

CONSTRUCTION PLANS FOR MAKAHŪ'ENA SUBDIVISION

NOTES FOR GENERAL CONSTRUCTION
(revised June 3, 2013)

1. All construction work is to be constructed in accordance with the publications "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" and its amendments and the "Standard Details for Public Works Construction, September 1984" as amended by the Department of Public Works, City and County of Honolulu, and the Counties of Kaua'i, Maui, and Hawai'i. The standard details are available at the County of Kaua'i clerk's office.

2. No grading between 7 PM to 7 AM on any given day or on Saturdays, Sundays and Holidays without written permission from the County Engineer and the State Department of Health.

3. Contractor to notify Public Works Department five (5) business days prior to commencing any grading work. When completed and ready for final inspection; notify Public Works Department Inspection Section.

4. Construction plans are valid for a period of one year from the date of approval. If construction does not commence within this one-year time from the date of approval, the construction plans shall be resubmitted to all reviewing and approving agencies for review, approval and recertification of the plan.

5. All grading, grubbing and stockpiling work shall be performed in accordance with County of Kaua'i ordinance no. 808.

6. After each rainfall event, the Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the County Engineer shall be payable by the Contractor.

7. During cleaning operations, the Contractor shall supply a water truck for dust control purposes until the vegetation has re-established itself. Excess water, including silt and dirt, shall not be allowed to run-off the property.

8. Benchmarks that are disturbed or destroyed shall be restored under a licensed land surveyor's direction. Copies of field notes, descriptions and new values of the new benchmark shall be sent to the department of public works survey section for review and approval prior to final acceptance of the project.

9. The Contractor shall be responsible for all overtime and/or night work payments for County's staff and inspection personnel including consultants, when the contract requires overtime or night work to be performed, or directs the contractor to work additional shifts or overtime for County's convenience.

10. Best Management Practices (BMP's) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas and the property of others.

11. Surveys shall be done under the supervision of a land surveyor licensed in the State of Hawai'i.

12. If system conditions require non-emergency night time work during the autumn seabird fall season (September 15 through December 15), use of lighting shall be restricted between 9:00 PM to 4:30 AM. If lighting of the work area is required in such situation, all lights shall be shielded (minimum light spill towards the sky) and directed downwards to the maximum extent practicable. Minimum requirements for lighting by HIOSH and OSHA shall be provided and assured by the Contractor. The Contractor shall train all employees working at night (records retained by the Contractor) on how to handle any retrieved downed birds and shall have appropriate equipment as approved by Save Our Shearwaters (SOS) on site to hold and transport any retrieved birds to a SOS facility. This requirement does not allow lighting as may be restricted by other government agencies.

13. Prior to starting any excavation activities, the Contractor shall contact the Hawai'i One Call Center at 1-866-423-7287.

HISTORIC PRESERVATION NOTES
(revised May 30, 2013)

1. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall cordon off the area and immediately notify the Planning Department at (808) 241-4050 and the State Historic Preservation Division at (808) 692-8015, which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary. In addition if human burials are found, the Contractor shall immediately notify the County of Kaua'i Police Department.

NOTES FOR CONSTRUCTION WITHIN COUNTY RIGHT-OF-WAY
(revised July 24, 2013)

1. All damaged pavement shall be restored to its original condition in accordance with County of Kaua'i, "Hawai'i Standard Specifications for Road and Bridge Construction (2005)" and its amendments and the "Standard Details for Public Works Construction, September 1984", as amended by the Department of Public Works, City and County of Honolulu, and the Counties of Kaua'i, Maui, and Hawai'i, with 2" minimum hot mixed asphalt concrete pavement (State Design Mix V) and 8" minimum base course.

2. The Contractor shall provide, install, maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of the public traffic. All such protective facilities and precautions to be taken shall conform with the rules and regulations governing the use of traffic control devices at work sites on or adjacent to public streets and highways adopted by the Highway Safety Coordinator and U.S. Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways dated 2009 and its amendments.

3. The Contractor shall, whenever necessary, properly sheet and brace all excavations to render it secure and shall remove all such sheeting and bracing before completion of the backfill for water mains. The minimum cover requirements (from top of pipe to finished grade over pipe) is three (3) feet.

4. A. A permit shall be obtained by the Contractor from the Department of Public Works, County of Kaua'i before work on a public street or highway may begin. Permit fees shall be at the Contractor's expense.

   B. Driveways shall be kept open unless owners of the abutting lots using these right-of-way are otherwise provided for satisfactorily.

   C. All work including repair of damaged pavement and shoulders shall be inspected and approved by the Department of Public Works. All unapproved work shall be considered unacceptable and shall be reworked and corrected as directed by the Department of Public Works, at the Contractor's expense.

   D. Damaged shoulders shall be restored to a condition equal to or better than existing condition.

   E. Work on a public street area may be performed only between the hours of 8:00 a.m. to 3:30 p.m. Monday through Friday, except on holidays recognized by the County of Kaua'i, unless otherwise permitted in writing by the County Engineer.

   F. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be opened to public vehicular and pedestrian traffic.

   G. No material and/or equipment shall be stockpiled or otherwise stored within County right-of-way except at locations designated in writing and approved by the County Engineer.

   H. The Contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.

   I. All existing drainage flow conditions shall be maintained.

5. The Contractor shall retain the services of a Geotechnical Engineer for quality control. Certification from the Geotechnical Engineer shall be submitted to the Department of Public Works at the completion of the construction work. The Geotechnical Engineer shall certify that the construction work meets "Standard Specifications". The Geotechnical Engineer shall also submit test results as requested by the Department of Public Works.

6. The Contractor shall hold a pre-construction meeting with the Construction Inspection and Design Sections of the Department of Public Works before commencing any work.

7. The Contractor shall exercise extreme caution to preserve benchmarks (survey monuments) whenever the center of a survey monument is less than three (3) feet from the edge of construction. The Contractor shall retain a Licensed Surveyor to reference the location of said survey monument.

8. Benchmarks that are disturbed or destroyed shall be restored under a Licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the new benchmark shall be sent to the Department of Public Works Survey Section for review and approval prior to final acceptance of the project.

9. The Contractor shall be responsible for all overtime and/or night work payments for County's staff and inspection personnel including consultants when the Contract requires overtime or night work to be performed, or directs the Contractor to work additional shifts or overtime for County's convenience.

10. If system conditions require non-emergency nighttime work during the autumn seabird fall season (September 15 through December 15), use of lighting shall be restricted to between 9:00 PM to 4:30 AM. If lighting of the work area is required in such situation, all lights shall be shielded (minimum light spill towards the sky) and directed downwards to the maximum extent practicable. Minimum requirements for lighting by HIOSH and OSHA shall be provided and assured by the Contractor. The Contractor shall train all employees working at night (records retained by the Contractor) in how to handle any retrieved downed birds and shall have appropriate equipment as approved by Save Our Shearwaters (SOS) on site to hold and transport any retrieved birds to a SOS facility. This requirement does not allow lighting as may be restricted by other government agencies.

GRADING NOTES
(revised November 6, 2014)

TEMPORARY DUST CONTROL MEASURES FOR GRADING:

1. The graded or project site that is cleared of vegetation shall be kept damp with water continuously for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened with water on a continual basis so that the site will remain moistened during the night.

2. The Contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened with water on a continual basis to prevent dust problems.

3. In applying for a grading permit, the Contractor shall submit plans, schedules and/or written measures which provides for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust and erosion problems will be minimized.

TEMPORARY EROSION CONTROL MEASURES FOR GRADING:

1. Temporary vegetative cover shall be planted within a period of 30 calendar days after the site has been graded or bared of vegetation or if the site will be suspended for more than 30 calendar days.

2. Temporary vegetative cover shall consist of 40 lbs. common rye grass seed per acre, 400 lbs. per acre 10-10-10 or equivalent fertilizer worked into the seed bed before planting. Temporary sprinkler system is to be installed concurrently with all plantings. Planting and maintenance of grass shall conform to the "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" and its amendments.

PERMANENT EROSION CONTROL MEASURES FOR GRADING:

1. The Contractor shall grass the entire project site, except paved areas with Bermuda grass sprigs. The grass shall be planted, fertilized, and maintained in accordance with the "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" and its amendments.

2. The Contractor shall grass all exposed areas that have been constructed to final grades within a period of 30 calendar days.

3. In lieu of grass sprigs (note 1), the Contractor may use hydromulch seedings and irrigation sprinkler system.

ENVIRONMENTAL CONTROL NOTES FOR GRADING

1. In accordance with Chapter 11-60.1, AIR POLLUTION CONTROL, Title 11, Hawai'i Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that effective control measures are provided to minimize or prevent any visible dust emission caused by the construction work from impacting the surrounding areas including the off-site roadways used to enter/exit the project. These measures include but are not limited to the use of water wagons, sprinkler systems, dust fences, etc.

2. In accordance with Chapter 11-55, WATER POLLUTION CONTROL and Chapter 11-54, Water Quality Standards, Title 11, Hawai'i Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that the Best Management Practice (BMP) to minimize or prevent the discharge of sediments, debris and other water pollutant into State waters are provided at all times.

3. In accordance with Chapter 11-58, SOLID WASTE MANAGEMENT CONTROL, Title 11, Hawaii Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that grub material, demolition waste and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning is prohibited.

4. Property Owner/Developer shall be responsible for obtaining and paying for all applicable permits from the Department of Health including but not limited to National Pollutant Discharge Elimination System (NPDES), Notice of Intent and General Permit for storm water, hydrostatic test and dewatering discharges prior to commencing construction. NPDES permit shall be required prior to grading or grubbing work over an area of one acre or more.

5. After each rainfall event, the Contractor shall remove all silt and debris resulting from this work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the Engineer shall be payable by the Contractor.

6. Best Management Practices (BMP's) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas and the property of others.

7. The Contractor shall obtain and comply with National Pollutant Discharge Elimination System (NPDES) permit requirements for all projects which will disturb one (1) acre or more of land. The Contractor shall not start construction until Notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawai'i and has satisfied any other permitting requirements of the NPDES permit program.

8. Noise will be generated during the grading and construction phases of this project. The applicable maximum permissible sound levels as stated in Title 11, Hawai'i Administrative Rules, Chapter 11-46, "Community Noise Control", shall not be exceeded, unless a noise permit is obtained from the Hawaii State Department of Health.

9. The property may harbor rodents which will be dispersed to the surrounding areas when the site is cleared. In accordance with Chapter 11-26, entitled VECTOR CONTROL of Title 11, HAR, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

10. A copy of the plans, construction schedule and/or written measures that is required to be submitted by the Contractor (Dust Control Measures/Plans) should also be sent to the Department Of Health for monitoring purposes.

GRADING PHASES

1. When grading work is done in phases, the Engineer must accept the completed phase prior to start of work on the next phase. Even after a completed phase has been accepted, the grassing or other means of stabilization must be maintained until project completion.

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welīweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

GENERAL NOTES

APPROVED:

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12/7/15

N/A

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

DESIGNED BY: WW	SHEET C-2
DRAWN BY: CJE	
DATE: 10/16/2015	2 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON. PLAN TND.dwg

WATER POLLUTION AND EROSION CONTROL NOTES

(revised September 10, 2015)

1. GENERAL:

A. The Contractor is reminded of the requirements of Section 209 – WATER POLLUTION AND EROSION CONTROL and Section 620 – DUST CONTROL in the "Hawai'i Standard Specifications for Road and Bridge Construction 2005," and its amendments. Section 209 describes but is not limited to: submittal requirements; scheduling of a Water Pollution and Erosion Control Conference with the County; construction requirements; method of measurement; and basis of payment. No work shall commence without a BMP plan approved by the Department of Health.

B. The Contractor shall follow the guidelines in the "Interim Best Management Practices Manual for Construction Sites for County of Kaua'i, April 2004" in developing, installing and maintaining the Best Management Practices (BMPs) for the project. The Contractor may submit alternate methods to the County for acceptance.

C. The Contractor shall keep a copy of the approved BMP Plan, NOI, etc. on the project site. The BMP Plan shall be updated to reflect any changes made during the course of construction for the duration of the project.

D. The Engineer may assess liquidated damages of up to $27,500 for non–compliance of each BMP requirement and each requirement stated in Section 209, for every day of non–compliance. There is no maximum limit on the amount assessed per day.

E. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non–compliance, or the Contractor/Owner shall reimburse the State and/or County for the full amount of the outstanding cost incurred by the State and/or County.

2. WASTE DISPOSAL:

A. Waste materials: All waste materials shall be collected and stored in a securely lidded metal dumpster that does not leak. The Dumpster shall meet all local and State Solid Waste Management Regulations. All trash and construction debris from the site shall be deposited in the Dumpster. The Dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the Office Trailer and the Contractor shall be responsible for seeing that these procedures are followed.

B. Hazardous waste: All hazardous waste materials shall be disposed of in the manner specified by local or State regulation or by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

C. Sanitary waste: All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

3. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

A. All control measures shall be inspected at least once each week and within 24 hours following any rainfall event of 0.5 inches or greater.

B. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.

C. Built up sediment shall be removed from silt fence when it has reached one–third the height of the fence.

D. Silt screen or fence shall be inspected for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground.

E. Temporary and permanent seeding and planting shall be inspected for bare spots, wash outs and healthy growth.

F. The Contractor shall submit to the County a maintenance inspection report promptly after each weekly inspection.

G. The Contractor shall select a minimum of three personnel who shall be responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

H. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

I. All slopes and exposed areas shall be grassed as final grades have been established. Grading to final grade shall be continuous, and any area in which work has been interrupted or delayed or exposed for more than 15 days shall be grassed in order to prevent dust emission, erosion and silt runoff. Areas with imported soils shall be grassed not more than 5 working days after final grades have been established.

J. Temporary erosion controls shall not be removed before permanent erosion controls are in–place and established.

4. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS:

A. The Contractor shall apply for, obtain and comply with the National Pollutant Discharge Elimination System (NPDES) requirements for Kaua'i District permit projects. This is available at the Kaua'i District Office at 3040 Umi Street, Suite 205. Due to potential costs and impacts, the Contractor needs to be aware of these requirements.

B. The Contractor shall complete and submit a Contractor's certification of NPDES compliance, including completion of the Best Management Practice (BMP) checklist and submittal of a written BMP Plan and drawings, prior to issuance of the permit to perform work upon County roadways.

C. The Contractor shall obtain and comply with National Pollutant Discharge Elimination System (NPDES) permit requirements for all projects which will disturb one (1) acre or more of land. The Contractor shall not start construction until Notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawai'i and has satisfied any other applicable requirements of the NPDES permit program.

D. The general contractor/developer/owner of the project shall be responsible for conformance with applicable provisions of the Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control."

The general contractor/developer/owner of the project shall obtain National Pollutant Discharge Elimination System (NPDES) Permit coverage(s) for the following:

1. Storm water discharges associated with construction activities that disturb one (1) acre or more, and

2. Discharges of hydrotesting effluent, dewatering effluent, and well drilling effluent to state waters.

In accordance with State law, all discharges related to project construction or operations are required to comply with State Water Quality Standards (Hawaii Administrative Rules, Chapter 11–54). Best Management Practices shall be used to minimize or prevent the discharge of sediment, debris, and other pollutants to State waters. Permit coverage is available from the Department of Health, Clean Water Branch at http://health.hawaii.gov/cwb. The owner/developer/contractor is responsible for obtaining other Federal, State, or local authorizations as required by law.

5. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

MATERIALS POLLUTION PREVENTION PLAN:

A. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory of the construction Contractor's site–specific BMP plan.

Concrete	Fertilizers
Detergents	Petroleum based products
Paints (Enamel and Latex)	Cleaning solvents
Metal Studs	Wood
Tar	Masonry Block

B. Material management practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough products as is required to do the job.

C. All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.

D. Products shall be kept in their original containers with the original manufacturer's label.

E. Substances shall not be mixed with one another unless recommended by the manufacturer.

F. A product shall be used up completely before disposing of the container.

G. Manufacturer's recommendations for proper use and disposal shall be followed.

H. The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.

HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN:

A. Products shall be kept in original containers unless they are not resealable.

B. Original labels and material safety data sheets (MSDS) shall be retained and made available to the County upon request.

C. Surplus products shall be disposed of according to manufacturer's instructions or local and State recommended regulations.

ONSITE AND OFFSITE PRODUCTS SPECIFIC PLANS:

A. The following product specific practices shall be followed onsite:

1. Petroleum based products: All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.

2. Fertilizers: Apply fertilizers used only in the minimum amounts recommended by the manufacturer. Once applied, work fertilizer into the soil to limit exposure to storm water. Storage shall be in a covered shed. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

3. Paints: Seal and store all containers when not required for use. Do not discharge excess paint to the roadway drainage system. Dispose properly according to manufacturer's instruction or state and local regulations.

4. Concrete Trucks: Wash out or discharge concrete truck drum wash water only at a designated site. Do not discharge water in the roadway drainage system or waters of the United States. Contact Drinking Water Branch, Department of Health at (808) 586–4258 to receive permission to designate a disposal site. Clean disposal site as required or as represented by the Owner's representative.

SPILL CONTROL PLAN:

A. Post a spill prevention plan to include measures to prevent and clean up each spill.

B. The Contractor shall be the spill prevention and clean–up coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area and in the office trailer onsite.

C. Clearly post manufacturer's recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of information and cleanup supplies.

D. Keep materials and equipment necessary for spill cleanup in the material storage area onsite.

E. Clean up all spills immediately after discovery.

F. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with hazardous substances.

G. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size.

WATER NOTES

(revised May 18, 2015)

1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the "Water System Standards", 2002, as adopted by the Department of Water, County of Kaua'i, including all subsequent amendments and additions.

2. The Contractor shall arrange a pre–construction conference at least ten (10) calendar days before construction and shall notify the Department of Water at least three (3) working days prior to the start of construction.

3. The Contractor shall submit the names and telephone numbers of its authorized job superintendent and at least three (3) additional persons to contact in case of an emergency during non–working hours.

4. The Contractor shall notify the Department of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or disinfection activities to insure that inspection services will be available.

5. All materials (pipe, lubricants, paints, sealants, form oil, concrete admixtures, etc.) in direct contact with the potable water shall have National Sanitation Foundation (NSF) certifications. The Contractor shall submit these certifications to the Department of Water for review and approval prior to its application.

6. The location of existing water mains and appurtenances shown on the plans are approximate only. The Contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.

7. The Contractor shall provide unobstructed access to existing hydrants, valves and water meters at all times.

8. The Contractor shall secure all excavations in accordance with OSHA regulations.

9. There shall be no physical connection between a public or private potable water system and a non–potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water supply.

10. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawai'i Standard Specifications for Road and Bridge Construction, 2005" as amended.

11. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards". The warning tape shall be four mil thick, non–metallic, acid and alkali resistant polyethylene and 6–inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "Safety Precaution Blue" and shall bear a continuous printed inscription "Caution Water Line Buried Below". Inscription shall be 2–inches high, black text.

12. All hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.01 of the "Water System Standards".

13. Unless otherwise directed, prior to the connection of any pipelines and/or laterals to the existing main, the pipelines/laterals installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Division 300, Sections 302.27 to 302.29 of the "Water System Standards".

Water samples shall be tested for total coliforms by a laboratory certified by the State of Hawai'i to perform coliform analysis. Presence of coliform bacteria is unacceptable.

In addition to the test for coliforms, a seperate test for heterotrophic plate count (HPC) shall be conducted. The HPC count shall be less than 300 CFU/ML.

Prior to chlorination, a water chlorination and sanitation contractor with a C–37D license shall submit a chlorination plan with water source, injection points, sampling points and procedure clearly defined for approval by the DOW.

The tested pipelines and/or laterals must be connected to the existing DOW system within 14 calendar days of pulling the first disinfection sample tested by a certified laboratory. The department of water will require the contractor to redo the cleaning, pressure testing, and/or disinfection of the pipelines and/or laterals at the contractor's expense if the connection is not completed within these 14 calendar days.

14. Polyurethane foam "pigs" shall be "pushed" through the length of the installed pipeline using pressurized water.

15. All connections shall be scheduled in coordination with the Department of Water.

a. An advance deposit is required for operating valves, flushing lines and notifying consumers affected by a water shutdown during connections. The Contractor will be charged the actual cost.

b. The Contractor shall place the deposit prior to scheduling the connection date.

c. Connections shall be scheduled on Tuesdays through Thursdays. No connections shall be scheduled on Mondays, Fridays, weekends and holidays.

d. All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.

e. Pumps used to de–water the connection area shall be operated in the presence of the Engineer prior to scheduling the connection date.

f. All connections shall be performed in the presence of the Engineer.

16. In order to prevent damage to the polyethylene encasement from excessive handling, the polywrap shall be installed around the barrel of the ductile iron pipe at its final location along the trenchline. The polyethylene encased pipe shall be lifted using a fabric type sling or a suitably padded cable or chain to prevent damage to the polyethylene.

17. The Contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.

The Contractor shall retain the services of a registered geotechnical engineer for quality control. The compaction test results shall be certified by the Geotechnical Engineer and submitted to the Department of Water, State Highways Division (for work done within State R/W) and the Department of Public Works (for work done within County R/W). The Geotechnical Engineer shall certify that the compaction results meet the requirements of the current standard specifications for road and bridge construction.

18. The Contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.

19. All fittings shall be mechanical joint (MJ) at each end unless otherwise noted. "Megalug" retainer glands shall be used with all mechanical joint fittings and valves used in connecting new water mains to existing water mains unless otherwise noted.

20. All water valves that will be abandoned in place shall be placed in the "closed" position. Remove top section of valve box and concrete settlement slab. Fill remainder of valve box with concrete. Place backfill and repair pavement section to applicable state or county standards. Backfill to finish grade in road shoulder area.

21. The Contractor shall obtain all applicable Department of Health permits prior to the start of construction. Permits include, but are not limited to, National Pollution Discharge Elimination System (NPDES) permits for storm water, hydrostatic test, dewatering, and for construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area.

The Contractor shall be responsible for the proper disposal of storm water discharges and effluent associated with construction activities, including hydrotesting and disinfection operations, to safeguard public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for storm water and construction water disposal, including all application, charges, fees, and taxes are the responsibility of the Contractor.

22. The Contractor is responsible for dewatering trench as necessary where groundwater is encountered. All associated costs for dewatering shall be borne by the Contractor.

23. The use of known sewer pump trucks are prohibited for DOW projects for any use, including but not limited to dewatering and testing of new facilities.

24. The Contractor shall verify outside diameter of all existing asbestos–cement (A.C.) waterlines to be connected. Contractor shall verify use of proper gaskets prior to connection. A.C. pipe and gasket information shall be submitted to Engineer for approval.

25. All removal, disposal and connection work that involves asbestos pipe/material shall be done in the presence of or by a licensed asbestos contractor.

The licensed asbestos contractor shall submit their plan for all associated removal, disposal and connection work for the project to DOW for review and approval prior to conducting the work.

26. All connections to existing A.C. pipe shall be at the nearest A.C. pipe joint. A.C. pipe shall be removed by entire length(s) to facilitate the connection. Cutting of A.C. pipe is prohibited.

27. The Contractor shall follow all applicable OSHA, HIOSH and federal regulations in handling and disposal of asbestos–cement pipe. Disposal of the pipe shall be at an approved asbestos material disposal site.

28. All waterworks brass fittings shall be in compliance with the amended Section 1417 of the Safe Drinking Water Act (SDWA) which takes effect on January 4, 2014. The amendment includes a change to the definition of "lead–free" by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material. All waterworks brass fittings installed for potable water service on January 4, 2014 and beyond shall conform to the amended definition of "lead–free."

As indicated in Section 211 of "Water System Standards" – Brass Products, all brass fittings shall conform to NSF Standard 61 and Section 1417 of the Safe Drinking Water Act (SDWA). In addition, all brass fittings shall conform to NSF Standard 372.

29. The 2011 Reduction of Lead in Drinking Water Act revised Section 1417 to:

1. In general. – For the purposes of this section, the term "Lead Free" means:
   a. not containing more than 0.2 percent lead when used with respect to solder and flux; and
   b. not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.
2. Calculation. – For the purposes of the Act, the weighted average lead content of the pipe, pipe fitting, plumbing fitting, or fixture is calculated by using the following statutory formula:
   - For each wetted component, the percentage of lead in the component is multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead in the component.
   - The weighted percentage of lead of each wetted component is added together, and the sum of these weighted percentages constitute the weighted average lead content of the product. The lead content of the material used to produce wetted components is used to determine compliance.
   - When the lead content of materials are provided as a range, the maximum content of the range must be used.

Equation: Total % Lead = (Pb%C1 x RWSAC1) + (Pb%C2 x RWSAC2) + (Pb%Cn x RWSACn)

Where: Pb% = Lead Content
C1, C2, Cn = Component
RWSA = Ratio of Wetted Surface Area
= Wetted Surface Area of Component / Total Wetted Surface Area of Entire Product
Total % Lead = Weighted Average Lead Content

EXEMPTIONS. – The prohibitions in act paragraphs (1) and (3) shall not apply to the following:
a) Pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non–potable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where water is not anticipated to be used for human consumption; or
b) Toilets, bidets, urinals fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger.

30. The Contractor shall provide continuous water service to existing customers at all times. If required, temporary service shall be provided by the contractor at his expense. If service interruptions are unavoidable, the Contractor shall notify all affected property owners prior to shutting off water service. The Contractor shall coordinate his work with the Department of Water so that water service interruptions are minimized.

31. Contractor shall install water facilities only after reaching final subgrade or higher. The Department of Water will not allow installation of any water facilities until the final subgrade layer at minimum has been achieved.

SPECIAL NOTES TO DEVELOPER:

(revised January 22, 2013)

Certification of Completion for these water system facilities will not be issued until:

1. All water improvements are complete and dedicated to the Department of Water.
2. As–built tracings are submitted to the Department of Water.
3. Final cost breakdown for the water improvements are submitted and approved by the Department of Water. The developer shall certify costs.
4. Roadway and pipeline easements are conveyed to the Department of Water, if applicable.
5. Payment of all applicable fees for the development have been received by the Department of Water. These fees include but is not limited to:
   a. Facilities Reserve Charge.
6. Other required conditions are completed, if applicable.
7. Prior to construction of the water facilities, the owner shall provide a Right of Entry for the Department of Water.

WATERLINE INSTALLATION NOTES:

1. The right–of–way and relevant property corners or easements at the proposed water meter location(s) shall be surveyed by a licensed surveyor prior to construction. The surveyed points shall be preserved throughout the project's construction.

2. The new service lateral piping may be tapped and installed horizontally from the existing waterline if there are no concrete encased utility ducts to clear at the property line.

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

GENERAL NOTES

APPROVED:

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12-17-15

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE 10/16/15

DESIGNED BY:	WW
DRAWN BY:	CJK
DATE:	10/16/2015

SHEET C-3
3 OF 23 SHEETS

Project No.: 14–211
Drawing No.: 14–211 CON PLAN TND.dwg

CONSTRUCTION NOTES FOR TRAFFIC CONTROL PLAN

(revised May 28, 2013)

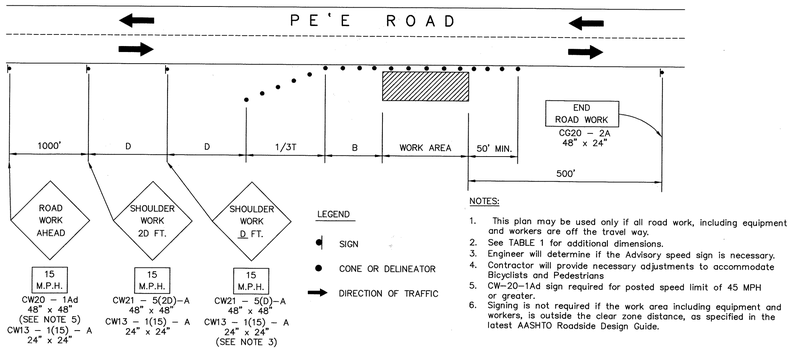
1. The permittee shall make adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the Traffic Control Plans shall be removed or covered. All signs shall be restored upon completion of the work.
5. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
6. When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the Traffic Control Plans.
7. Sign spacing (D), taper lengths (T) and spacing of cones or delineators shall be as shown in Table 1, unless otherwise noted on the Traffic Control Plans.
8. All traffic lanes shall be a minimum of 10 feet wide.
9. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
10. The backs of all signs shall be promptly removed or covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces), whenever the messages are not applicable or not in use.
11. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
12. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
13. Police Officers/Flaggers shall be present at all times.
14. Contractor to provide access and/or directional signs to reroute pedestrian traffic
15. When required by the County of Kaua'i, an advertisement shall be placed in the newspaper by the Contractor for any lane closure. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:

    A) Map of the Traffic Change Limits;
    B) Notice of starting and ending dates, times and duration;
    C) Map to show Lane Closure;
    D) Explanation of the Lane Closure, "NOTICE TO MOTORISTS & PEDESTRIANS".

    The Contractor shall be required to have any lane closure announced daily over the radio two (2) days before starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the hospitals, police, fire and ambulatory services of the lane closure.
16. All workers within the County Right of Way who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 2 or 3 requirements of "ANSI/ISEA 107–2004." "Workers" are defined as people on foot whose duties place them them within the County R/W, such as but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents (eg. EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling lane closures and installing water service connections (roadway construction).
17. The Contractor shall make every effort to minimize the use and duration of steel plates. All steel plates shall have a non–skid surfacing. The County may require the backfilling and patching of the trench due to the excessive use of steel plates.
18. The Contractor shall provide an adequate non–slip bridging material, including shoring over trenches in pavement areas. The bridging shall be able to support all types of vehicular and pedestrian traffic.
19. Where pedestrian walkways exist they shall be maintained in a safe and passable condition or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided.

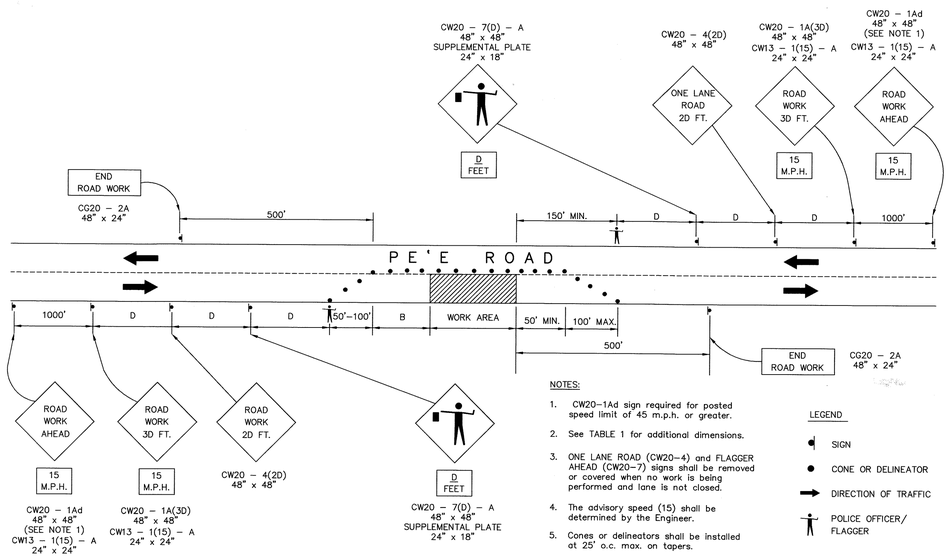
TABLE 1							
POSTED SPEED	SIGN SPACING	TAPER LENGTH (T) (FEET)		LONGITUDINAL	SPACING OF CONES OR DELINEATORS (FEET)**		
LIMIT (M.P.H.)*	(D) (FEET)	W = 12' OR LESS	W = GREATER THAN 12'	BUFFER SPACE (B) FEET	TAPER	TANGENT	WORK AREA
20	250	200	W x 17	35	20	20	10
25	250	200	W x 17	55	25	25	10
30	250	250	W x 20	85	30	30	10
35	250	250	W x 20	120	35	35	10
40	500	350	W x 30	170	40	40	10
45	500	550	W x 45	220	45	45	10
50	1000	600	W x 50	280	50	50	10
55	1000	700	W x 55	335	55	55	10

NOTES:
W = WIDTH OF LANE, SHOULDER, OR OFFSET
*USE ADVISORY SPEEDS WHEN POSTED
**NOT APPLICABLE FOR TWO-LANE HIGHWAYS



WORKING ON SHOULDER OR ROADSIDE

FIGURE 1 – TRAFFIC CONTROL PLAN



ONE–LANE, TWO–WAY TRAFFIC TAPER

FIGURE 1 – TRAFFIC CONTROL PLAN

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

TRAFFIC CONTROL PLAN

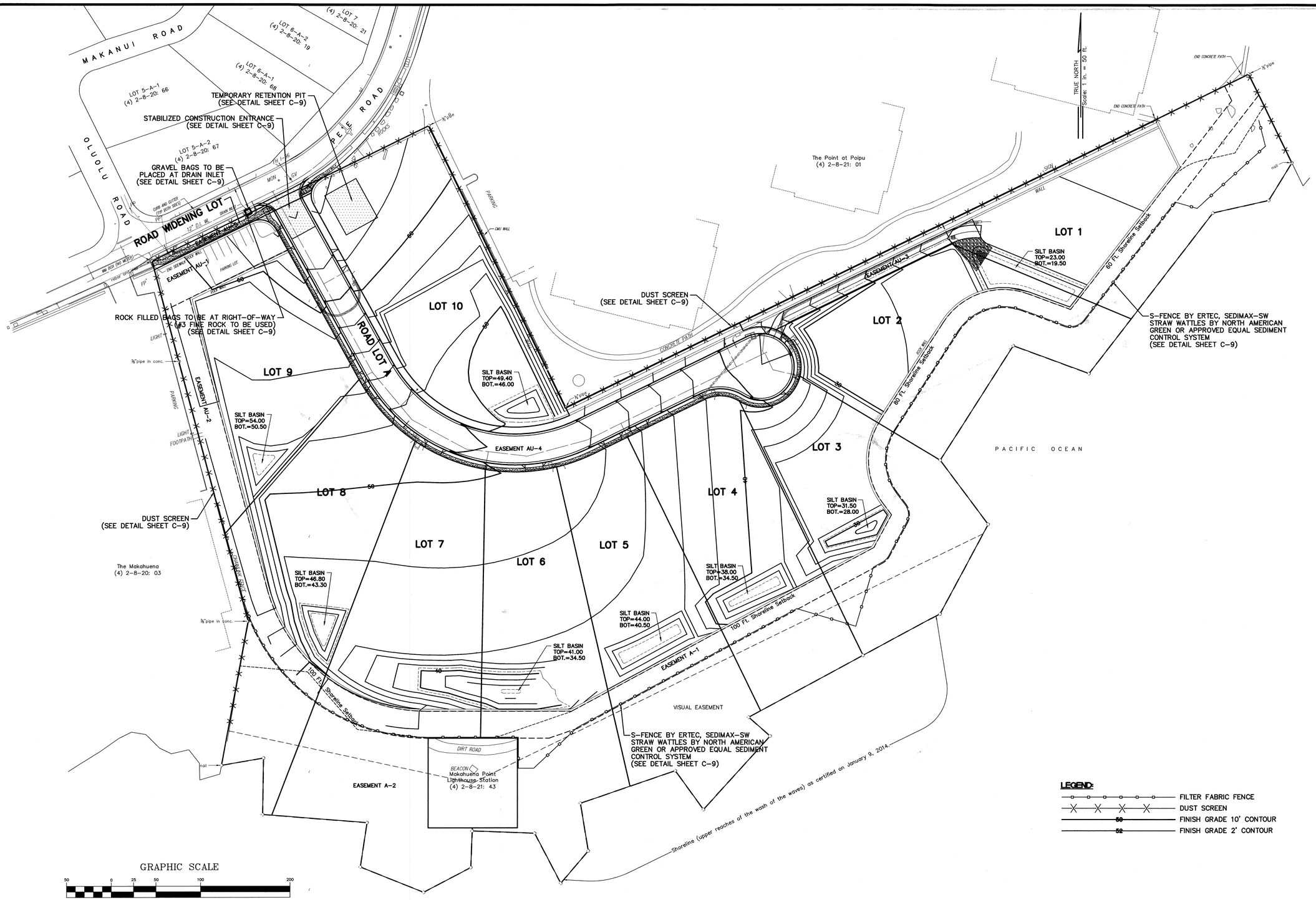
APPROVED:

12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-4
DRAWN BY: CSL	4 OF 23 SHEETS
DATE: 10/16/2015	

Project No.: 14–211
Drawing No.: 14–211 CON PLAN TND.dwg



ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHUENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

EROSION CONTROL PLAN

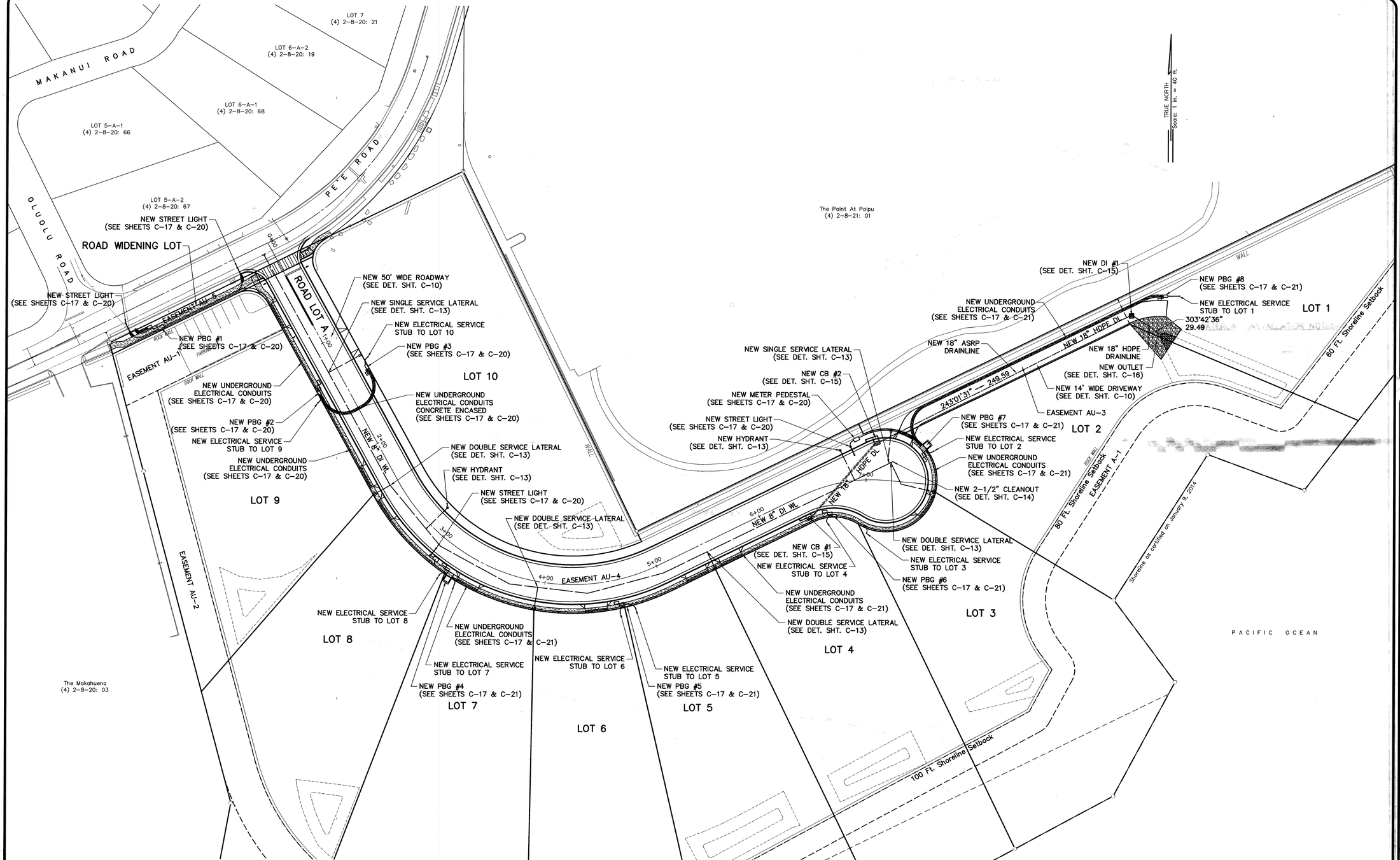
APPROVED:

12-17-15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-5
DRAWN BY: CM	
DATE: 10/16/2015	5 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS
FOR
MAKAHŪENA SUBDIVISION
Welīweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

GENERAL SITE PLAN

APPROVED:

12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

10/16/15
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-6
DRAWN BY: CSL	
DATE: 10/16/2015	6 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

STA: 0+07.25 O/S 8.00' RT.
℄ NEW ROADWAY
CONNECT TO EXIST. 12" D.I. WL
INSTALL:
1 – 12"x8" TEE, MJ
2 – 12" GATE VALVE, MJ
1 – 8" GATE VALVE, MJ
3 – 3 PC. VALVE BOX W/ COVER
2 – 12" NIPPLE (2' MIN.)
1 – 8" NIPPLE (2' MIN.)
1 – CONC. BLOCK W/STRUCTURAL STRUTS
(SEE DETAIL SHEET C–14)

LOT 5–A–1
(4) 2–8–20: 68

LOT 5–A–2
(4) 2–8–20: 67

OLULU ROAD

FH 1–96

MONO POLE W/ TV

GUARD ROCKS

CURB AND GUTTER (TYP BOTH SIDES)

12" D.I. W.L.

DRAIN INLET

5' WIDE SIDEWALK

STA: 0+00
INSTALL NEW STREET SURVEY MONUMENT
4,938.49' S
983.96' W
"PAA"
ELEV.=63.90

FOR TYPICAL ROAD SECTION SEE SHT. C–10

5' WIDE SIDEWALK

CUT & PLUG WATER METER AT MAIN

EASEMENT AU–5

EASEMENT AU–1

PBG #1

WM BOX (NO METER)

REBAR W/ CAP

ROAD WIDENING LOT

DRIVEWAY APRON

PRIVATE ROADWAY
50' WIDE

STA: 2+85.00 O/S 5.32' RT.
℄ NEW ROADWAY
INSTALL:
1 – 8"x6" TEE, MJxFE
1 – 6" GATE VALVE, FExMJ
28.50 LF 6" D.I. PIPE
1 – 3 PC. VALVE BOX W/ COVER
1 – HYDRANT ASSEMBLY
(SEE DETAIL SHT. C–13)
2 – CONC. REACTION BLOCK
1 – HYDRANT MARKER
(SEE CONNECTION DETAIL SHEET C–13)

PBG #3

SSL

24' WIDE DRIVEWAY

PBG #2

ELECTRICAL CONDUIT/WATERLINE CROSSING

STA: 2+37.44
INSTALL NEW CENTERLINE SURVEY MONUMENT
5,146.17' S
868.84' W
"PAA"
ELEV.=54.67

STA: 2+30.19 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/32 BEND MJ
1 – CONC. BLOCK

LOT 9

DRIVEWAY APRON

DRIVEWAY APRON

STA: 3+03.89 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/16 BEND MJ
1 – CONC. BLOCK

SILT BASIN
TOP = 54.00
BOT. = 50.50

4' WIDE SIDEWALK

The Makahuena
(4) 2–8–20: 03

LIGHT

¾" pipe in conc.

PARKING

LIGHT

FOOTPATH

EASEMENT AU–2

LOT 8

PBG #4

DRIVEWAY APRON

STA: 3+70.33 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/16 BEND MJ
1 – CONC. BLOCK

LOT 7

DRIVEWAY APRON

PBG #5

LOT 6

ROAD LOT A

1+00

8" DI WL
213'00"
230.15

3+00

300°07'25" — 69.07

298°22'06" — 69.07

4+00

EASEMENT AU–4

276°36'53" — 69.07

254°51'38" — 69.07

5+00

6+00

213°59' — 223.14

8" DI WL

DSL

HYD

SSL

CB #1 HYDRAULIC GRADE
LOWER ELEV. = 36.67

CB #2 HYDRAULIC GRADE
LOWER ELEV. = 33.85
UPPER ELEV. = 34.48

DI #1 HYDRAULIC GRADE
LOWER ELEV. = 21.06
UPPER ELEV. = 21.06

OUTLET HYDRAULIC GRADE
UPPER ELEV. = 21.00

The Point At Poipu
(4) 2–8–21: 01

PARKING

CMU WALL

CONCRETE PATH

STA: 6+90.00 O/S 0.34' LT.
℄ NEW ROADWAY
INSTALL:
1 – 8"x6" TEE, MJxFE
1 – 6" GATE VALVE, FExMJ
29.07 LF 6" D.I. PIPE
1 – 3 PC. VALVE BOX W/ COVER
1 – HYDRANT ASSEMBLY
(SEE DETAIL SHT. C–13)
1 – HYDRANT MARKER
2 – CONC. REACTION BLOCK
(SEE CONNECTION DETAIL SHEET C–13)

STA: 6+39.25 O/S 20.22' RT.
℄ NEW ROADWAY
INSTALL TYPE A CATCH BASIN:
TOP = 42.10
INV. = 36.43
(SEE DET. SHT. C–15)

STA: 6+41.50
INSTALL NEW CENTERLINE SURVEY MONUMENT
5,157.94' S
514.76' W
"PAA"
ELEV.=41.85

STA: 5+03.22
INSTALL NEW CENTERLINE SURVEY MONUMENT
5,218.59' S
639.02' W
"PAA"
ELEV.=48.32

STA: 4+36.77 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/16 BEND MJ
1 – CONC. BLOCK

SILT BASIN
TOP = 49.40
BOT. = 46.00

12" Pipe

LOT 10

LOT 5

STA: 5+03.22 O/S 8.00' RT.
℄ NEW ROADWAY
(H) 8" 1/32 BEND MJ
1 – CONC BLOCK

LOT 4

LOT 3

CB #1 HYDRAULIC GRADE
LOWER ELEV. = 36.67

CB #2 HYDRAULIC GRADE
LOWER ELEV. = 33.85
UPPER ELEV. = 34.48

DI #1 HYDRAULIC GRADE
LOWER ELEV. = 21.06
UPPER ELEV. = 21.06

OUTLET HYDRAULIC GRADE
UPPER ELEV. = 21.00

CB #2 TO CB #1
NORMAL DEPTH = 0.24
CRITICAL DEPTH = 0.40
DISCHARGE (cfs) = 1.17
VELOCITY (fps) = 6.32

STA: 7+17.25
INSTALL NEW STREET SURVEY MONUMENT
5,144.28' S
441.18' W
"PAA"
ELEV.=38.06

FOR TYPICAL DRIVEWAY ROAD SECTION SEE SHT. C–10)

INSTALL TYPE G2 DRAIN INLET
TOP = 23.61
INV. = 19.68
(SEE DET. SHT. C–15)

FOR TYPICAL DRIVEWAY SECTION SEE SHT. C–10

STA: 7+08.00 O/S 32.30' LT.
℄ NEW ROADWAY
INSTALL TYPE B CATCH BASIN:
TOP = 38.28
INV. = 33.50
(SEE DET. SHT. C–15)

SIGN

WALL

TRUE NORTH
Scale: 1 in. = 40 ft.

PBG #8
OUTLET TO DI #1
NORMAL DEPTH = 0.82
CRITICAL DEPTH = 0.83
DISCHARGE (cfs) = 4.70
VELOCITY (fps) = 4.73

DI #1

OUTLET

18" HDPE DL

303°42'36" — 29.45

EASEMENT AU–3

LOT 1

SILT BASIN
TOP = 23.00
BOT. = 19.50

60 Ft. Shoreline Setback

14' WIDE DRIVEWAY

DI #1 TO CB #2
NORMAL DEPTH = 0.35
CRITICAL DEPTH = 0.69
DISCHARGE (cfs) = 3.24
VELOCITY (fps) = 10.24

243°01'31" — 246.20 — 18" HDPE DL

INSTALL WARNING TAPE 1' BELOW F.G. OVER THE SSL FOR LOT 1

CB #2

PBG #7

LOT 2

STA: 7+22.00 O/S 16.85' LT.
℄ NEW ROADWAY
INSTALL:
1 – 2–1/2" CLEANOUT
1 – 8" CAP W/ 2–1/2" TAP
1 – CONC. REACTION BLOCK
(SEE DETAIL SHT. C–14)

HYD

18" HDPE DL

DI #1

86.99

1+00

CO

DSL

DRIVEWAY APRON

INSTALL WARNING TAPE 1' BELOW F.G. OVER THE DSL FOR LOTS 2 & 3

PBG #6

80 Ft. Shoreline Setback

ROCK WALL

EASEMENT A–1

Shoreline as certified on January 9, 2014

PACIFIC OCEAN

WATERLINE INSTALLATION NOTES:

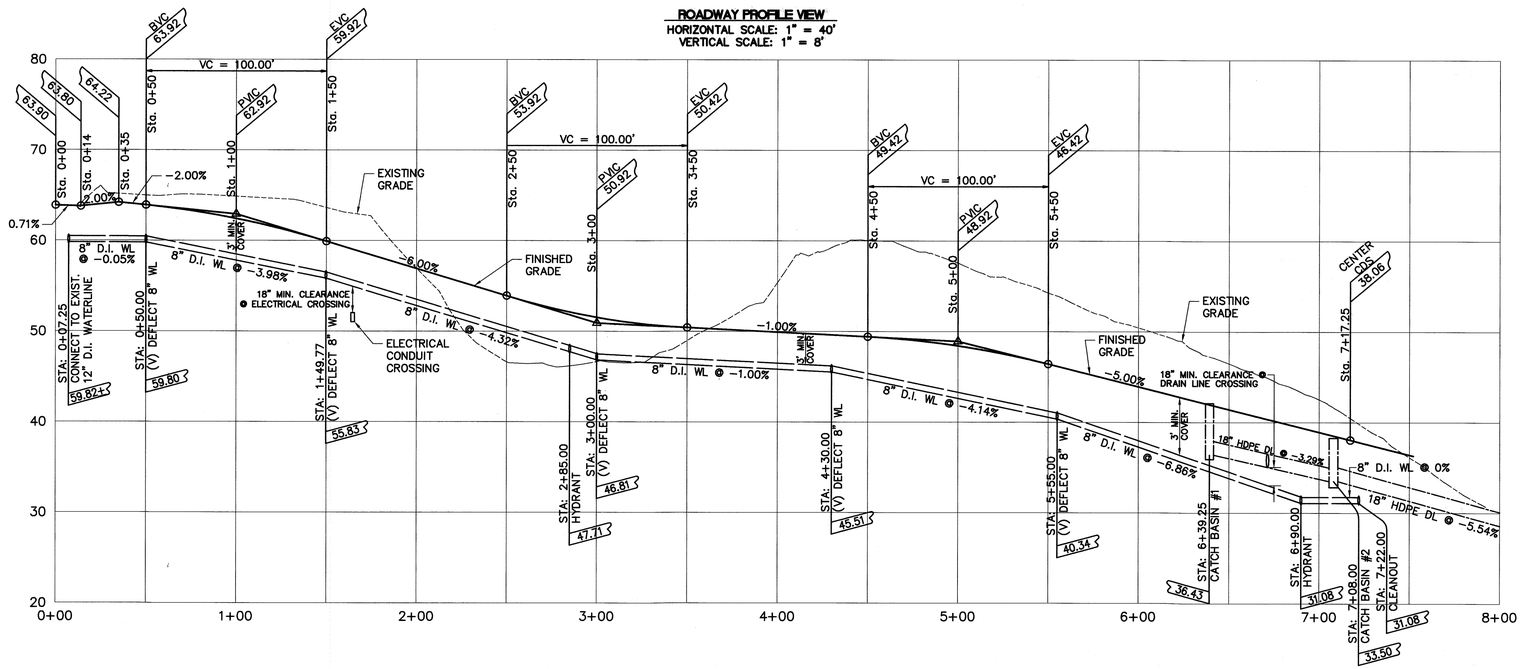
1. The right–of–way and relevant property corners or easements at the proposed water meter location(s) shall be surveyed by a licensed surveyor prior to construction. The surveyed points shall be preserved throughout the project's construction.
2. The new service lateral piping may be tapped and installed horizontally from the existing waterline if there are no concrete encased utility ducts to clear at the property line.
3. Contractor shall remove, clean, and return all angle ball valves, ball valves, and undamaged meter boxes and covers being replaced to D.O.W. baseyard in Lihu'e.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

ROADWAY PROFILE VIEW
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'



REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246–0625 Fax (808) 246–0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281–C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪTENA SUBDIVISION
Welwelo, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2–8–21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

PLAN AND PROFILE

APPROVED:

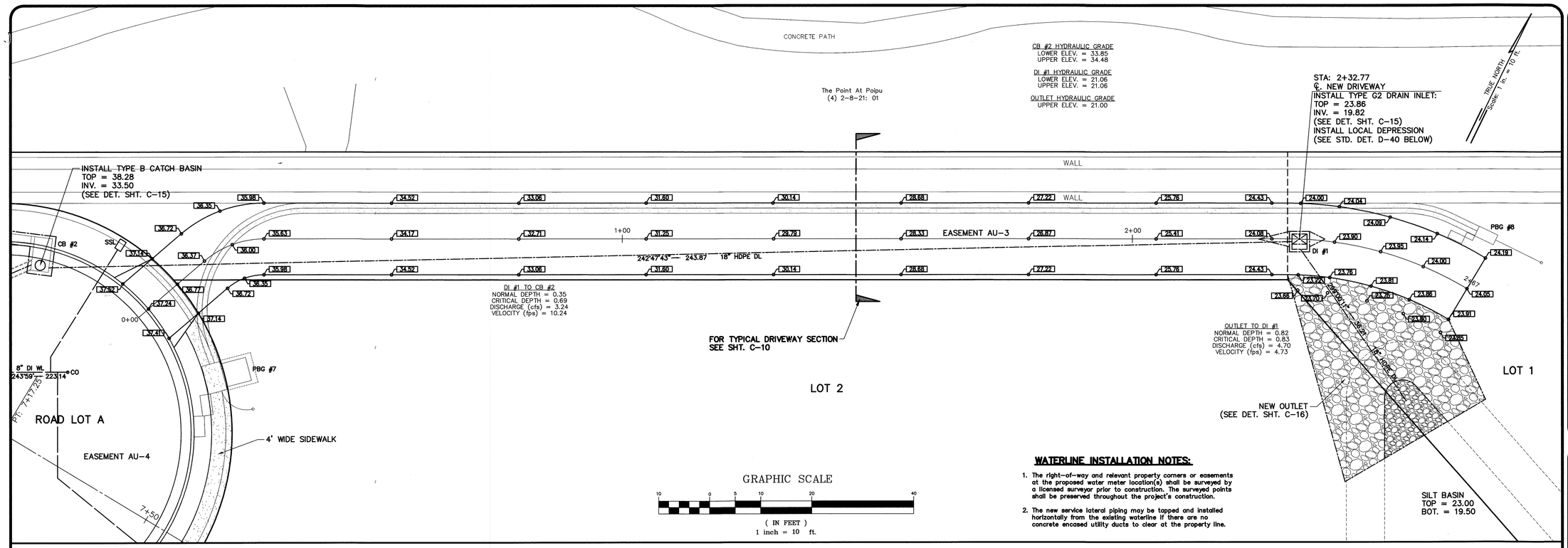
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12·17·15

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE 10/16/15

DESIGNED BY:	WW
DRAWN BY:	CW
DATE:	10/16/2015

SHEET C–7
7 OF 23 SHEETS

Project No.: 14–211
Drawing No.: 14–211 CON PLAN.dwg

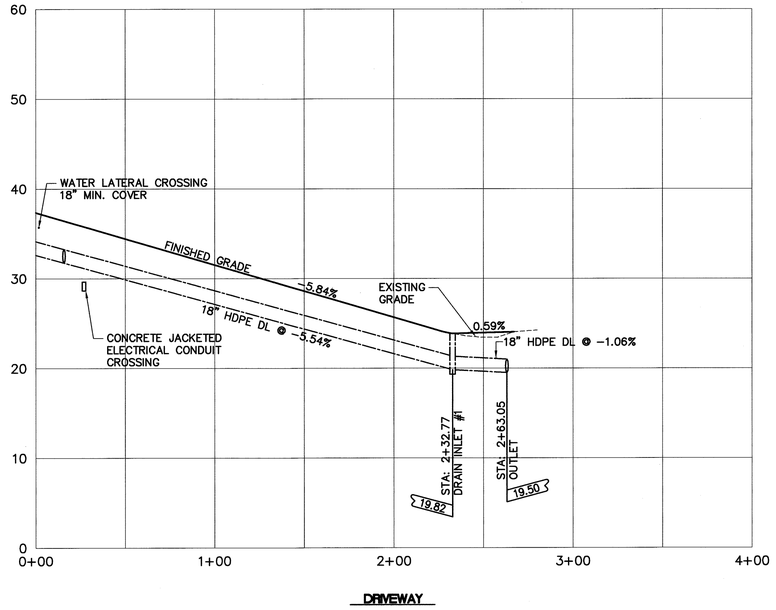


WATERLINE INSTALLATION NOTES:

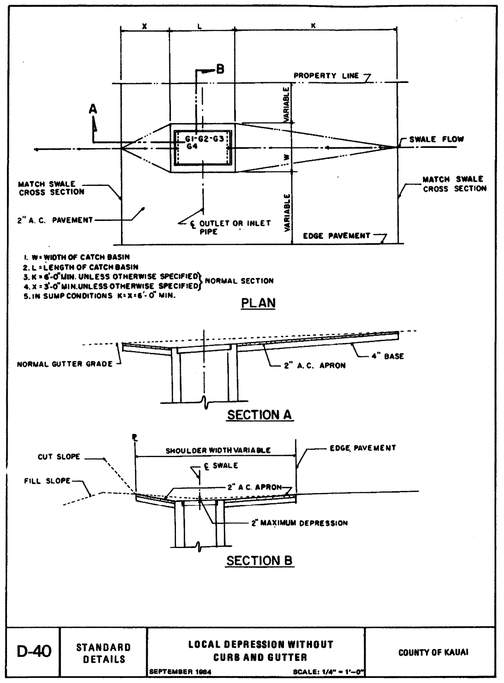
1. The right-of-way and relevant property corners or easements at the proposed water meter location(s) shall be surveyed by a licensed surveyor prior to construction. The surveyed points shall be preserved throughout the project's construction.
2. The new service lateral piping may be tapped and installed horizontally from the existing waterline if there are no concrete encased utility ducts to clear at the property line.

ROADWAY PROFILE VIEW

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'



DRIVEWAY



D-40	STANDARD DETAILS	LOCAL DEPRESSION WITHOUT CURB AND GUTTER SEPTEMBER 1984 SCALE: 1/4" = 1'-0"	COUNTY OF KAUAI

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION

Waiīwelī, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

PLAN AND PROFILE

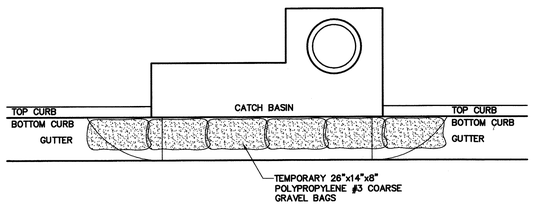
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

10/14/15
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

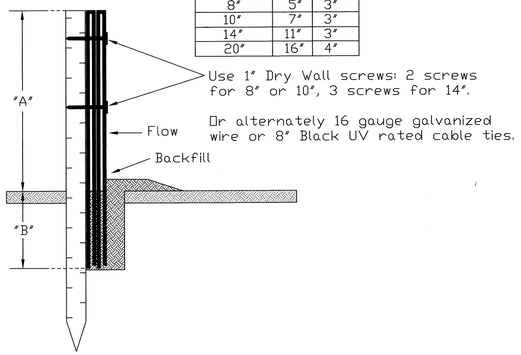
DESIGNED BY:	WW	SHEET
DRAWN BY:	CH	C-8
DATE:	10/16/2015	8 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



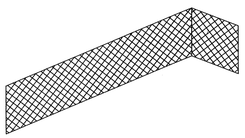
CATCH BASIN PROTECTION
NOT TO SCALE

S-Fence	"A"	"B"
8"	5"	3"
10"	7"	3"
14"	11"	3"
20"	16"	4"

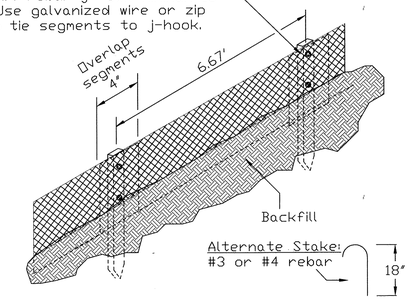


Notes:
1. Cut trench 2" to 4" wide, 3" to 4" deep.
2. Install in slot against downstream side of trench wall, backfill the trench to grade level.
3. Overlap segments by at least 3". Install stakes on downstream side of segment overlaps.
4. Use 1" Dry Wall screws: 2 or 3 places. Or alternately 16 gauge tie-wire or 8" Black UV rated staple cable ties (zip ties) to tie segments together.

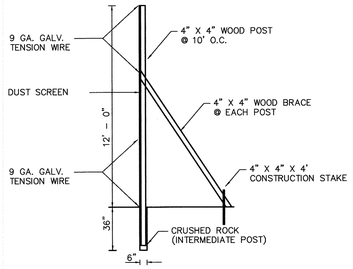
Notes:
1. Dog-leg at end-of-runs to contain sediment.
2. Install on same contour to limit scour and flow concentration. Dog-leg periodically if on down-hill run to minimize velocity scour.



Staking Methods:
1. Wooden Stake: Use 1" x 2" x 18" One at each overlap or 6.67' apart.
2. #3 or #4 rebar j-hook minimum 18" long. Use galvanized wire or zip ties to tie segments to j-hook.

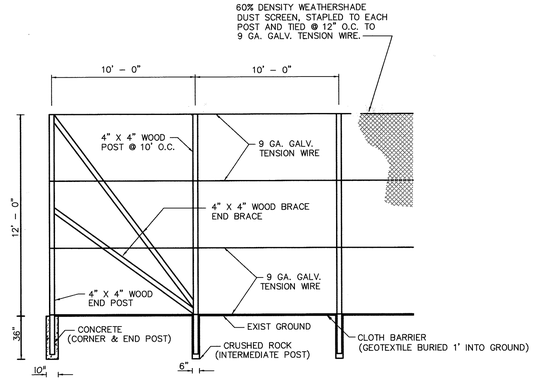


S-FENCE BY ERTEC INSTALLATION DETAILS
NOT TO SCALE



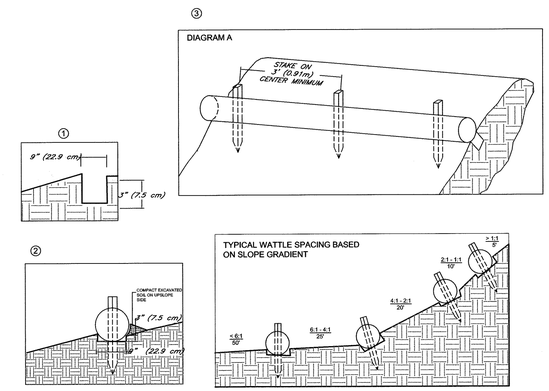
SIDE ELEVATION

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO THE START OF THE PROJECT.



FRONT ELEVATION

DUST SCREEN DETAIL
N.T.S.



1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 -1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

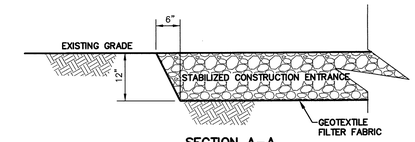
North American Green Straw Wattles are a Best Management Practice (BMP) that offers an effective and economical alternative to silt fence and straw bales for sediment control and storm water runoff.

Guidelines are provided to assist in design, installation, and structure spacing. The guidelines may require modification due to variation in soil type, rainfall intensity or duration, and amount of runoff affecting the application site.

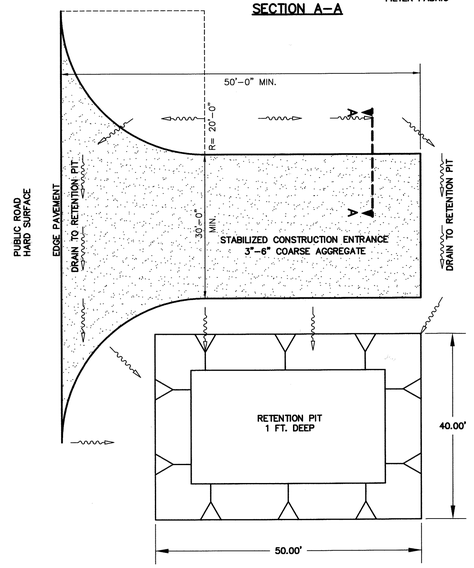
To maximize sediment containment with the Straw Wattle, place the initial structure at the top/crest of the slope if significant runoff is expected from above. If no runoff from above is expected, the initial Straw Wattle can be installed at the appropriate distance downhill from the top/crest of the slope. The final structure should be installed at or just beyond the bottom/toe of the slope. Wattles should be installed perpendicular to the primary direction of overland flow.

Straw Wattles are a temporary sediment control device and are not intended to replace rolled erosion control products (RECPs) or hydraulic erosion control products (HECPs). If vegetation is desired for permanent erosion control, North American Green recommends that RECPs or HECPs be used to provide effective immediate erosion control until vegetation is established. Straw Wattles may be used in conjunction with blankets, mats, and mulches as supplemental sediment and runoff control for these applications. Like all sediment control devices, the effectiveness of the Straw Wattle is dependent on storage capacity.

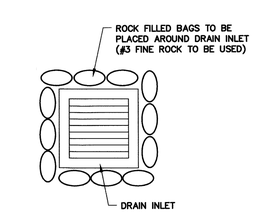
SEDIMAX-SW STRAW WATTLES BY NORTH AMERICAN GREEN INSTALLATION DETAILS
NOT TO SCALE



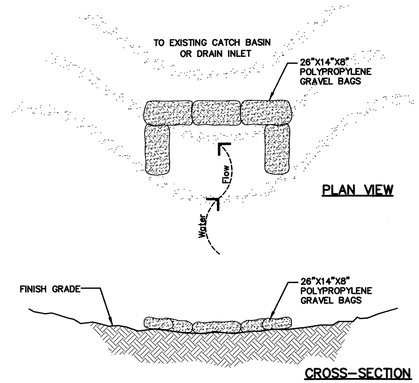
SECTION A-A



STABILIZED CONSTRUCTION ENTRANCE
NTS



DRAIN INLET PROTECTION DETAIL
NOT TO SCALE



GRAVEL BAG DETAIL
NTS

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welīwelī, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

EROSION CONTROL DETAILS

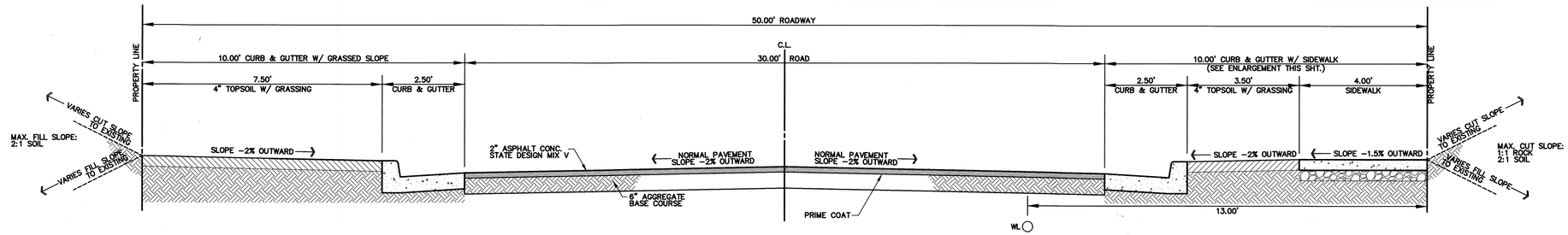
APPROVED
12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY:	WW
DRAWN BY:	CSL
DATE:	10/16/2015

SHEET C-9
9 OF 23 SHEETS

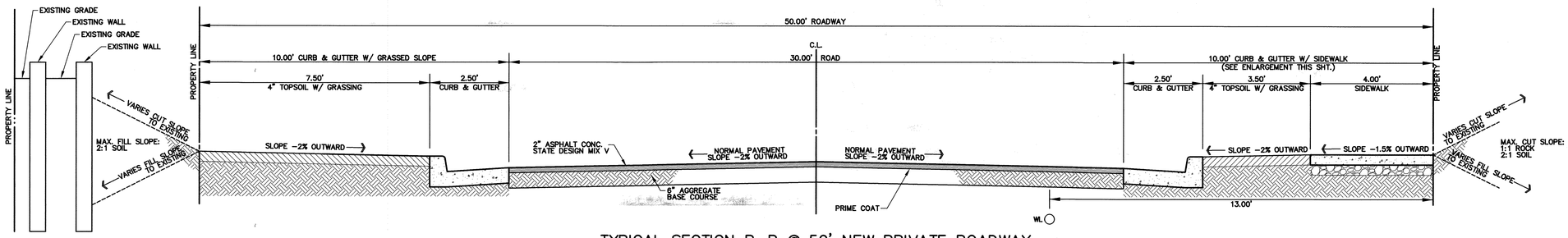
Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



TYPICAL SECTION A–A @ 50' NEW PRIVATE ROADWAY

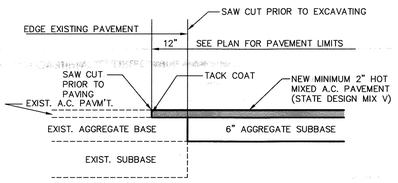
NTS

4" TOPSOIL W/ GRASSING



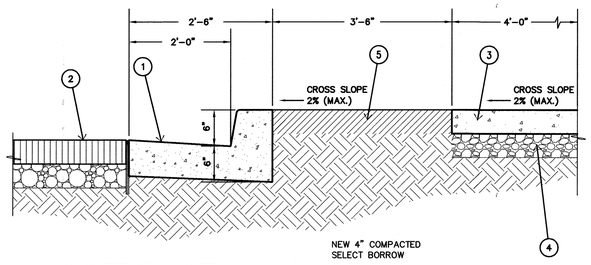
TYPICAL SECTION B–B @ 50' NEW PRIVATE ROADWAY

NTS



A.C. PAVEMENT CONNECTION DETAIL COUNTY ROAD

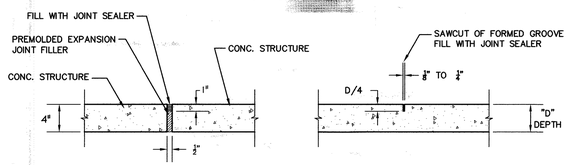
NOT TO SCALE



1. CONCRETE CURB AND GUTTER (SEE STD. DET. R-4)
2. ASPHALTIC CONCRETE PAVEMENT
3. 4" CONCRETE SIDEWALK (SEE DET. THIS SHT.)
4. 4" COMPACTED SELECT BORROW
5. GRASSED SECTION

CURB & GUTTER W/ SIDEWALK DETAIL

NTS

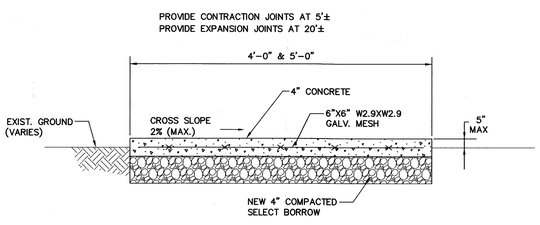


EXPANSION JOINT
INSTALL AT 20'–0" O.C.

CONTACTION JOINT
INSTALL AT 5'–0" CONC. RAMPS & WALKWAYS

EXPANSION & CONTRACTION JOINT DETAIL

NTS



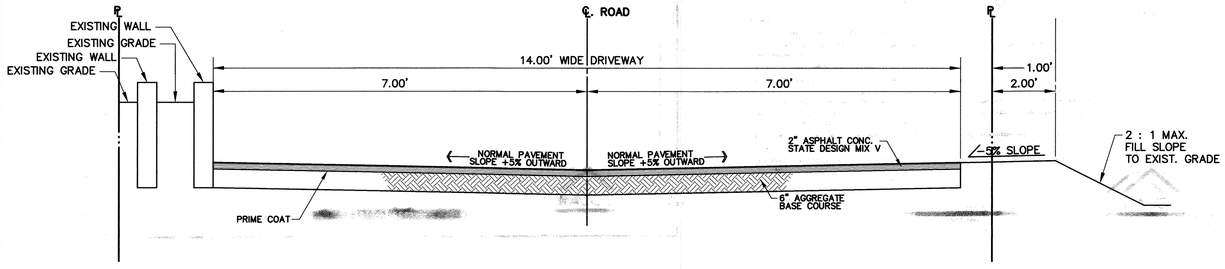
NOTES:

1. BROOM FINISH CONCRETE SURFACE PERPENDICULAR TO PATH DIRECTION.
2. INSTALL CONTRACTION JOINTS AT 5' O.C. & EXPANSION JOINTS AT 30' O.C.

(SEE DETAIL THIS SHEET)

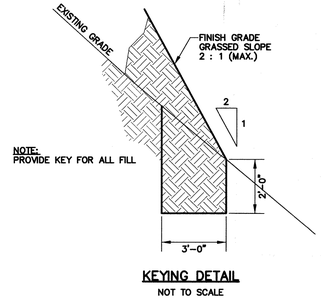
CONCRETE SIDEWALK DETAIL

NTS



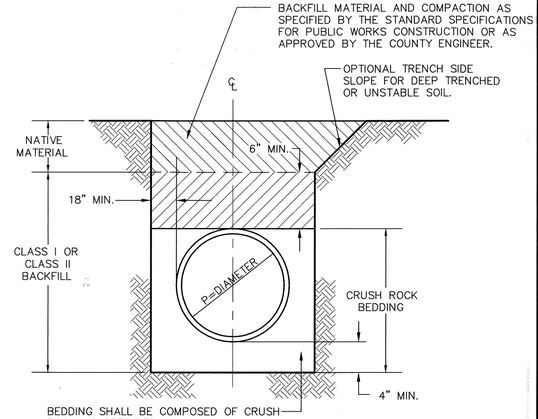
LOT 1 TYPICAL DRIVEWAY SECTION

NTS



NOTE:
PROVIDE KEY FOR ALL FILL

KEYING DETAIL
NOT TO SCALE



BEDDING SHALL BE COMPOSED OF CRUSH ROCK AS SPECIFIED BY THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OR AS APPROVED BY THE COUNTY ENGINEER.

H.D.P.E. TRENCH & BEDDING TYPICAL DETAIL
(HDPE: HIGH DENSITY POLYETHYLENE)

NOT TO SCALE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welliwell, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

MISCELLANEOUS DETAILS

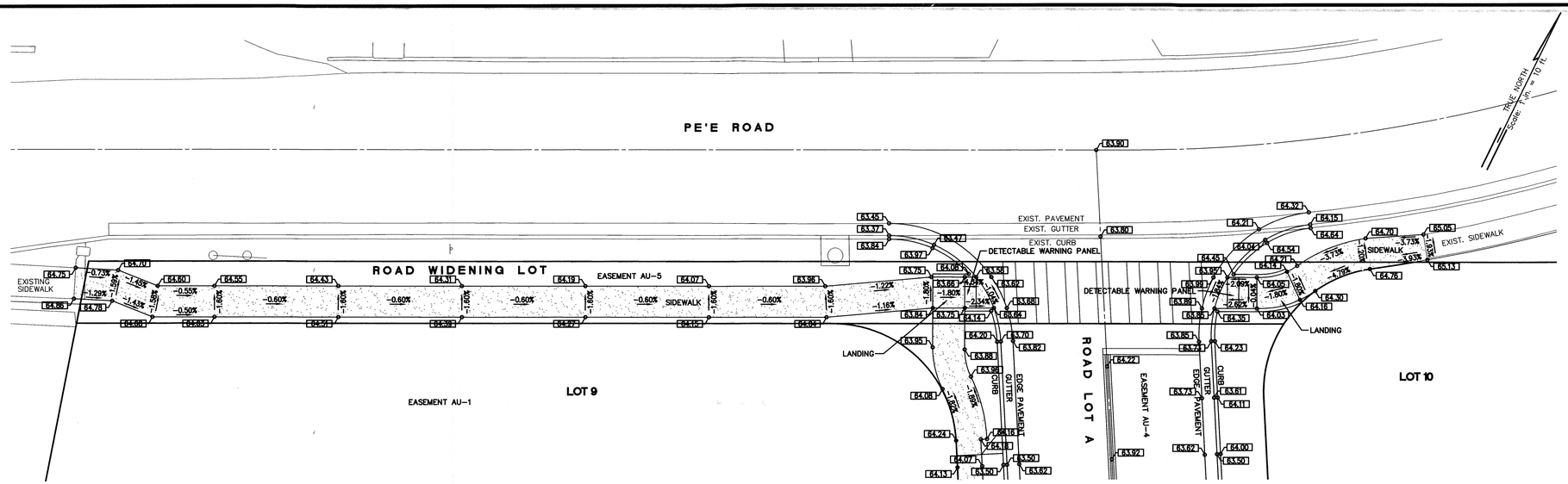
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

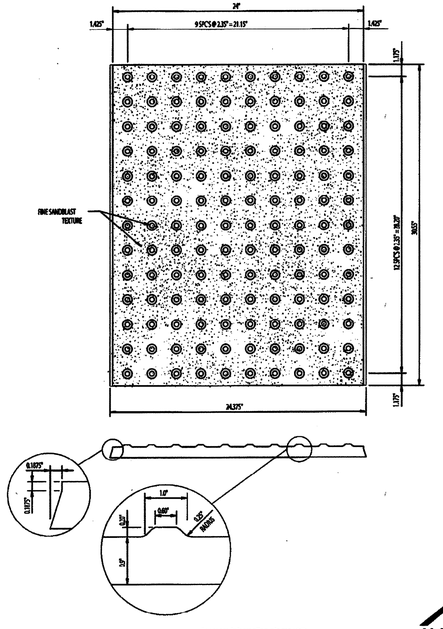
DESIGNED BY: WW	SHEET C-10
DRAWN BY: CH	
DATE: 10/16/2015	10 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



SIDEWALK AND RAMP DETAIL
SCALE: 1"=10'

MASCO CASTinTACT® 3 | CAST IN PLACE DETECTABLE WARNING PANEL 2.5' x 2'
PART# MA CT2.52

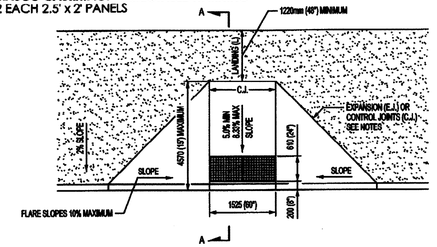


All dimensions in inches

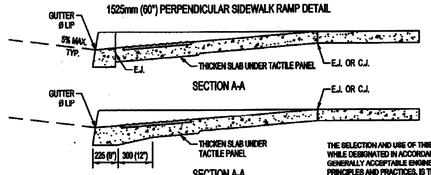
For more information please visit: CASTinTACT.com

MASCO MASONS SUPPLY

MASCO CASTinTACT® DETECTABLE WARNING
2 EACH 2.5' x 2' PANELS



1525mm (60") PERPENDICULAR SIDEWALK RAMP DETAIL



SECTION A-A
MONOLITHIC CURB & SIDEWALK

THE SELECTION AND USE OF THIS DRAWING WHILE DESIGNATED IN ACCORDANCE WITH GENERALLY ACCEPTABLE ENGINEERING PRINCIPLES AND PRACTICES, IS THE SOLE RESPONSIBILITY OF THE USER AND SHOULD NOT BE USED WITHOUT CONSULTING A REGISTERED PROFESSIONAL ENGINEER.

GENERAL NOTES

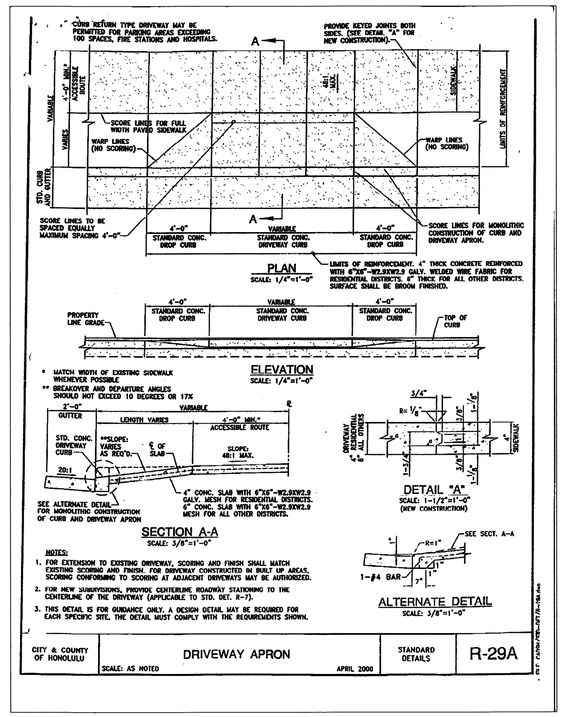
1. SIDEWALK RAMP DETAILS ARE BASED ON UNITED STATES ACCESS BOARD STANDARDS.
2. PLACE TRUNCATED DOME DETECTABLE WARNING PANELS AT THE BASE OF CURB RAMP. INSTALL ACROSS FULL WIDTH OF RAMP A MINIMUM 610mm (24") IN DEPTH AND SET BACK 200mm (8") FROM GRADE BREAK.
3. SIDEWALK CURB RAMP SLOPES SHOWN ARE RELATIVE TO THE TRUE LEVEL HORIZON (ZERO BUBBLE).
4. SIDE FLARES THAT ARE NOT PART OF THE PATH OF TRAVEL MAY BE ANY SLOPE.
5. FOR THE PURPOSES OF THIS DRAWING, A CURB RAMP IS CONSIDERED "PERPENDICULAR" IF THE ANGLE BETWEEN THE LONGITUDINAL AXIS OF THE RAMP AND A TANGENT TO THE CURB AT THE RAMP CENTER IS 75 DEGREES OR GREATER.
6. JOINTS ARE REQUIRED AT ALL SIDEWALK RAMP SLOPE BREAKS. EXPANSION JOINTS ARE RECOMMENDED BETWEEN EXISTING CONCRETE AND NEW CONCRETE WHERE APPLICABLE. (REFER TO ACI 302R)
7. SIDEWALK FLARE IS NOT NECESSARY WHERE THE RAMP IS PROTECTED FROM PEDESTRIAN CROSS TRAVEL.
8. THICKEN CONCRETE UNDER DETECTABLE WARNING PANEL.
9. IN EXTREME CLIMATES LEAVE 3/16" GAP BETWEEN SQUARE CUT PANEL JOINTS AND SEAL WITH COMPATIBLE ELASTOMERIC SEALANT.
10. ONLY USE DETAILS ALLOWED BY JURISDICTION.

E.J. = EXPANSION JOINT
C.J. = CONTROL JOINT

For more information please visit: CASTinTACT.com

MASCO MASONS SUPPLY REVISED 2/10

DETECTABLE WARNING DETAIL
NTS



ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

MISCELLANEOUS DETAILS

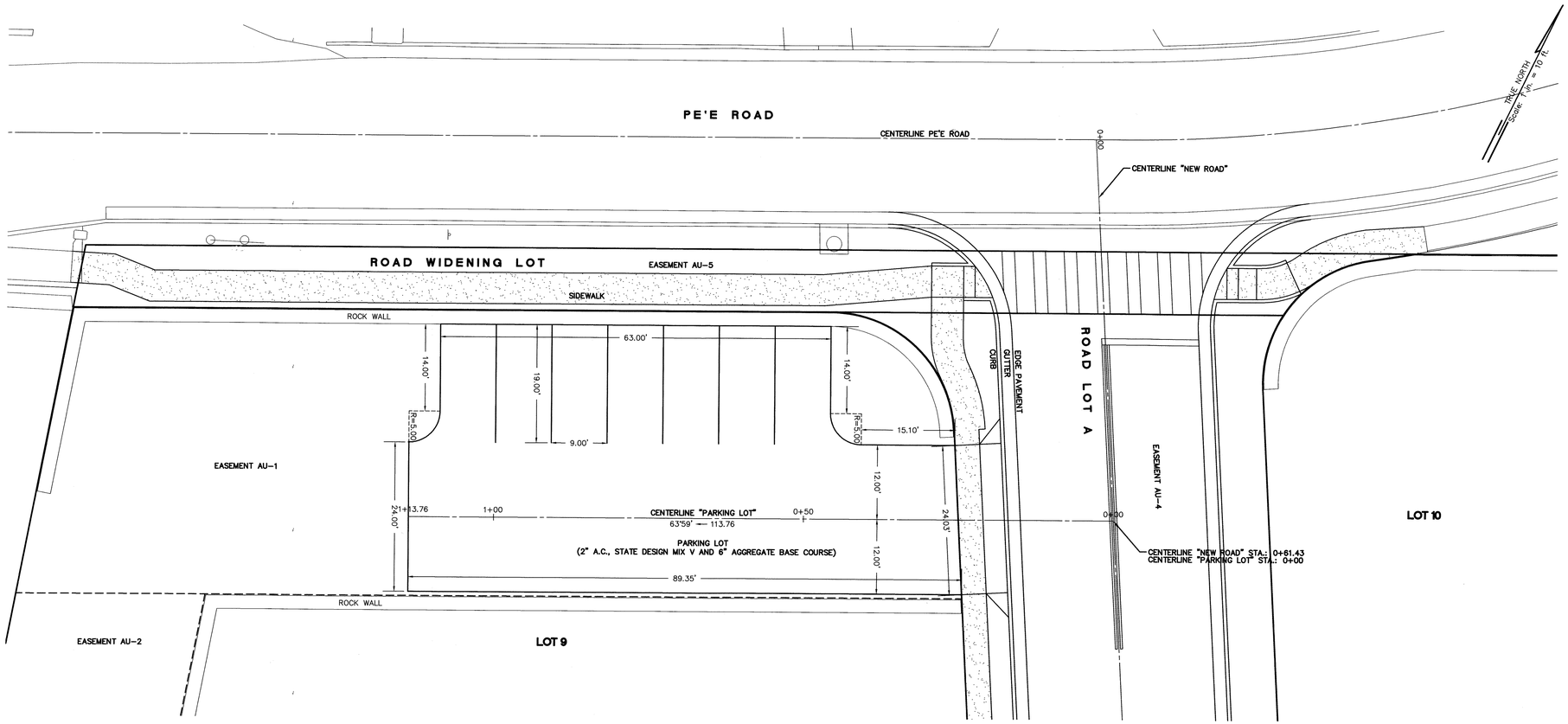
APPROVED
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE 12.17.15

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

DESIGNED BY:	WW
DRAWN BY:	CM
DATE:	10/16/2015

SHEET C-11
11 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



PARKING LOT DETAIL
SCALE: 1"=10'

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS
FOR
MAKAHŪENA SUBDIVISION
Waiwelli, Koloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

MISCELLANEOUS DETAILS

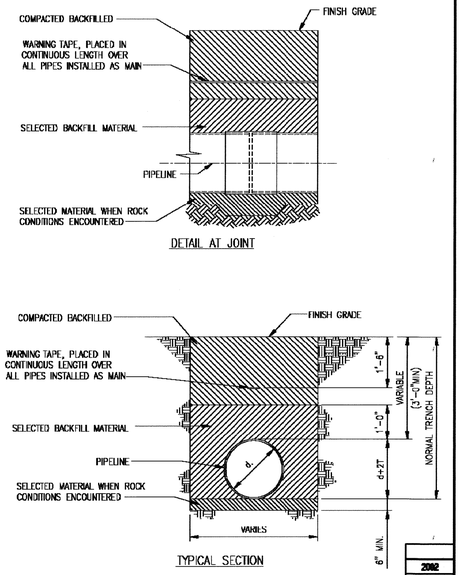
APPROVED:
12-17-15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

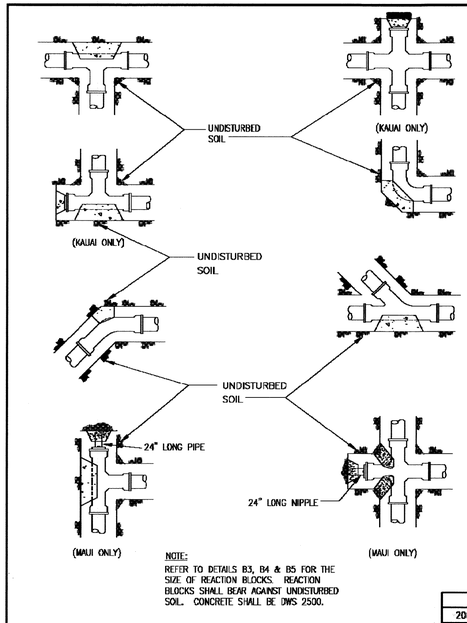
DESIGNED BY:	WW
DRAWN BY:	CSL
DATE:	10/16/2015

SHEET
C-12
12 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



KAUAI	WATERLINE TRENCH DETAILS MISCELLANEOUS DETAILS SCALE: NTS	STANDARD DETAILS	P11
		2002 REVISION	



NOTE:
REFER TO DETAILS B3, B4 & B5 FOR THE SIZE OF REACTION BLOCKS. REACTION BLOCKS SHALL BEAR AGAINST UNDISTURBED SOIL. CONCRETE SHALL BE DWS 2500.

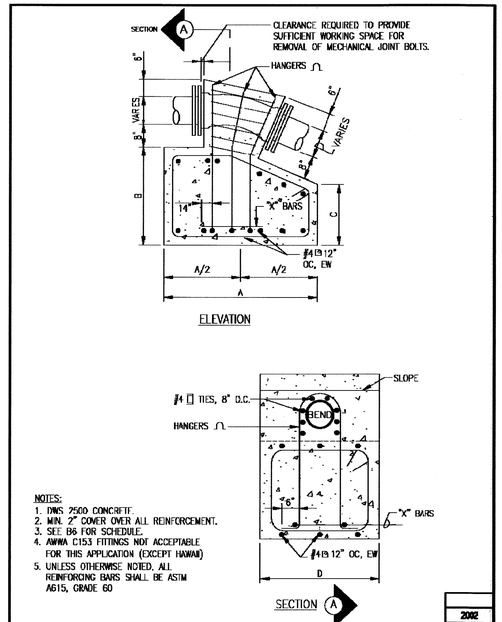
KAUAI MAUI	HORIZONTAL REACTION BLOCK FOR WATER MAINS SCALE: NTS	STANDARD DETAILS	B2
		2002 REVISION	

TOP VERTICAL THRUST BLOCK SCHEDULE

PIPE SIZE	BEND	PRESSURE 250 PSI: CONCRETE BLOCK A	B	C	D	HANGER "X" BAR	PRESSURE 150 PSI: CONCRETE BLOCK A	B	C	D	HANGER "X" BAR
4"	1/4	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/8	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/16	2'-0"	2'-0"	1'-0"	2'-0"	@24	2'-0"	2'-0"	1'-0"	2'-0"	@24
6"	1/4	4'-0"	4'-0"	1'-0"	2'-0"	@24	4'-0"	4'-0"	1'-0"	2'-0"	@24
	1/8	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/16	2'-0"	2'-0"	1'-0"	2'-0"	@24	2'-0"	2'-0"	1'-0"	2'-0"	@24
8"	1/4	4'-0"	4'-0"	1'-0"	2'-0"	@24	4'-0"	4'-0"	1'-0"	2'-0"	@24
	1/8	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24
	1/16	2'-0"	2'-0"	1'-0"	2'-0"	@24	2'-0"	2'-0"	1'-0"	2'-0"	@24
12"	1/4	5'-0"	5'-0"	1'-0"	2'-0"	@24	5'-0"	5'-0"	1'-0"	2'-0"	@24
	1/8	4'-0"	4'-0"	1'-0"	2'-0"	@24	4'-0"	4'-0"	1'-0"	2'-0"	@24
	1/16	3'-0"	3'-0"	1'-0"	2'-0"	@24	3'-0"	3'-0"	1'-0"	2'-0"	@24

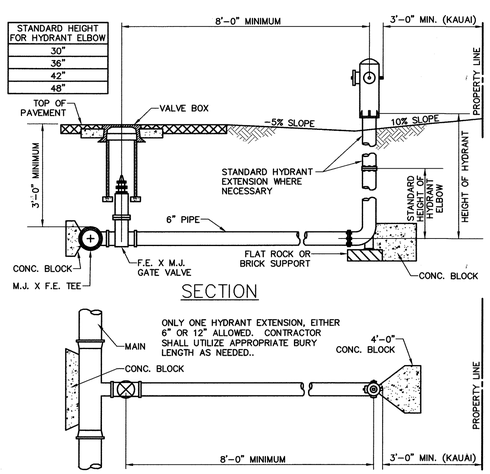
NOTE:
1. ACTUAL FIELD CONDITIONS SHALL BE VERIFIED IN THE FIELD. THE SCHEDULE DIMENSIONS AND DETAILS AS SHOWN ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR OR ENGINEER WHO PREPARED THE PLANS SHALL SUBMIT THE FINAL DESIGN AND DETAILS TO THE MANAGER FOR REVIEW AND APPROVAL AFTER FIELD VERIFICATION AND PRIOR TO INSTALLATION. FOR OAHU ONLY, THE DEPARTMENT WILL FURNISH THE FINAL DESIGN AND DETAILS FOR PROJECTS AWARDED BY THE MANAGER.
2. DIMENSIONS IN SCHEDULE REFER TO B7.
3. SCHEDULE IS NOT APPLICABLE TO BLOCKS FULLY OR PARTLY SUBMERGED IN WATER.
4. SAFETY FACTOR 1.5 BASED ON PIPE LOCATION MINIMUM 2' BELOW GROUND.

KAUAI OAHU MAUI HAWAII	TOP VERTICAL THRUST BLOCK SCHEDULE SCALE: NTS	STANDARD DETAILS	B6
		2002 REVISION	



NOTES:
1. DWS 2500 CONCRETE
2. MIN. 2" COVER OVER ALL REINFORCEMENT.
3. SEE B6 FOR SCHEDULE.
4. AWWA C153 FITTINGS NOT ACCEPTABLE FOR THIS APPLICATION (EXCEPT HAWAII)
5. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS SHALL BE ASTM A615, GRADE 60

KAUAI OAHU MAUI HAWAII	TYPICAL THRUST BLOCK AT VERTICAL BENDS SCALE: NTS	STANDARD DETAILS	B7
		2002 REVISION	



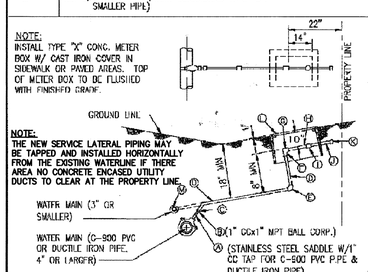
NOTES:
1. GASKETS FOR FLANGED JOINTS SHALL BE 1/8" DUCK-INSERTED RUBBER PACKING GARLOCK NO. 19.
2. BOLTS SHALL BE BREAK-OFF TYPE, 5/8" DIA. X 3" LONG MACHINE BOLTS WITH CUT THREADS, AMERICAN STANDARD COARSE HEXAGON HEADS, HOT-DIPPED GALVANIZED STEEL OR SILICON BRONZE. INSTALL BOLT WITH THREADS FACING UP.
3. NUTS SHALL BE AMERICAN STANDARD HEAVY COLD PUNCHED HEXAGON NUTS, HOT-DIPPED GALVANIZED STEEL OR SILICON BRONZE.
4. CONCRETE SHALL BE DWS 2500.
5. REFER TO PLATE FH11 FOR HYDRANT INSTALLATION WITH CURB GUARD.
6. FLANGED OUTLET FOR THE TEE IS MANDATORY.
7. TAPPING SLEEVE WITH TAPPING VALVE ASSEMBLY MAY BE USED FOR CONNECTION TO EXIST MAIN.
8. LUBRICATE HYDRANT NOZZLE THREADS WITH NON-TOXIC GREASE.
9. INSTALL HYDRANT MARKERS. (SEE PLATES FH12 AND FH13)
10. MINIMUM DIRECT DISTANCE FROM HYDRANT TO GATE VALVE SHALL BE 8'-0".
11. THE 4-1/2" NOZZLE SHOULD FACE PERPENDICULAR TO THE CURB/ROAD.

HYDRANT CONNECTION STRAIGHT RUN
SCALE: NTS

SCHEDULE OF FITTINGS

ITEM	DESCRIPTION	SINGLE SERVICE
A	STAINLESS STEEL SADDLE W/ 1" CC TAP FOR C-900 PVC PIPE & D.I. PIPE	1
B	1" CC x 1" MPT BALL CORPORATION	1
C	PACK JOINT COUPLINGS (FORD C14-44 OR APPROVED EQUAL)	1
D	1" COPPER TUBE, TYPE "K" SOFT	1
E	1" 90° COPPER ELBOW, S x S	1
F	1" COPPER MALE ADAPTER, SXT	1
G	ANGLE BALL VALVE, 1" FEMALE IPT INLET x 3/4" METER COUPLING NUT OUTLET (FORD BA13-342W OR APPROVED EQUAL)	1
H	METER SPACER, SUPPLIED BY DEPT. OF WATER & INSTALLED BY CONTRACTOR	1
I	BALL VALVE W/ HANDLE, 3/4" METER COUPLING NUT INLET x 1" FEMALE IPT OUTLET (FORD B13-342 W/ HT 34 HANDLE OR APPROVED EQUAL)	1
J	LINESETTER, 1" COPPER TUBE, TYPE "K" SOFT, 12" LONG (SEE STD. DET. L3)	1
K	1" PLASTIC THREAD PROTECTOR	1
L	TYPE "B" CONCRETE METER BOX W/ CAST IRON COVER OR ARMORCAST TYPE "B" BOX WITH ARMORCAST COVER	1
M	TEE W/ 1" BUSHING (WHEN CONNECTING TO 3" OR SMALLER MIPE)	1

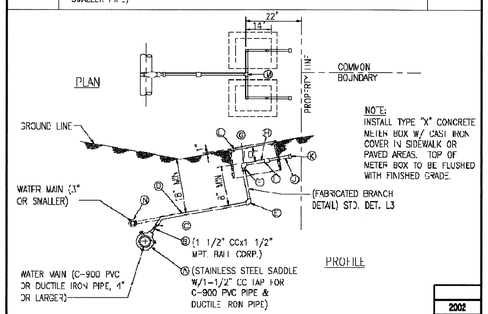
NOTE:
INSTALL TYPE "K" CONC. METER BOX W/ CAST IRON COVER IN SIDEWALK OR PAVED AREAS. TOP OF METER BOX TO BE FLUSHED WITH FINISHED GRADE.



KAUAI	SINGLE SERVICE LATERAL PLAN, PROFILE & MATERIAL LIST SCALE: NTS	STANDARD DETAILS	L1
		2002 REVISION	

SCHEDULE OF FITTINGS

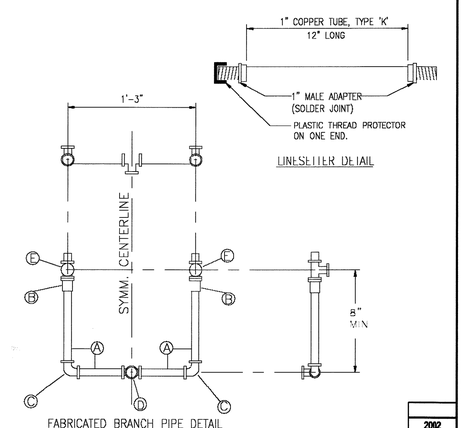
ITEM	DESCRIPTION	DOUBLE SERVICE
A	STAINLESS STEEL SADDLE W/ 1-1/2" CC TAP FOR C-900 PVC PIPE AND DUCTILE IRON PIPE	1
B	1-1/2" CC x 1-1/2" MPT BALL CORPORATION	1
C	PACK JOINT COUPLING (FORD C14-66 OR APPROVED EQUAL)	1
D	1-1/2" COPPER TUBE, TYPE "K" SOFT	2
E	1" 90° COPPER ELBOW, S x S	2
F	1" COPPER MALE ADAPTER, S x T	2
G	ANGLE BALL VALVE, 1" FEMALE IP INLET x 3/4" METER COUPLING NUT OUTLET (FORD BA13-342W OR APPROVED EQUAL)	2
H	METER SPACER, SUPPLIED BY DEPT. OF WATER & INSTALLED BY CONTRACTOR	2
I	BALL VALVE W/ HANDLE, 3/4" METER COUPLING NUT INLET x 1" FEMALE IPT OUTLET (FORD B13-342 W/ HT-34 HANDLE OR APPROVED EQUAL)	2
J	LINESETTER, 1" COPPER TUBE, TYPE "K" SOFT, 12" LONG (SEE STD. DET. L3)	2
K	1" PLASTIC THREAD PROTECTOR	2
L	TYPE "B" CONCRETE METER BOX WITH CAST IRON COVER OR ARMORCAST TYPE "B" BOX WITH ARMORCAST COVER	2
M	1" x 1" x 1-1/2" COPPER TEE, S x S x S	1
N	TEE W/ 1-1/2" BUSHING (WHEN CONNECTING TO 3" OR SMALLER MIPE)	1



KAUAI	DOUBLE SERVICE LATERAL PLAN, PROFILE & MATERIAL LIST SCALE: NTS	STANDARD DETAILS	L2
		2002 REVISION	

SCHEDULE OF COPPER FITTINGS

NO.	DESCRIPTION	SINGLE SERVICE	DOUBLE SERVICE
A	1" COPPER TUBE, TYPE "K"	1	1
B	1" COPPER MALE ADAPTER	1	2
C	1" X 90° ELBOW (CAST SOLDER)	1	2
D	1" X 1" X 1 1/2" TEE, (CAST SOLDER)		1
E	ANGLE VALVE, 1" FEMALE IPT, INLET 3/4" METER COUPLING NUT OUTLET (FORD BA13-342W OR APPROVED EQUAL)	1	2



KAUAI	FABRICATED BRANCH PIPE AND LINESETTER DETAIL SCALE: NTS SCALE: MIN	STANDARD DETAILS	L3
		2002 REVISION	

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

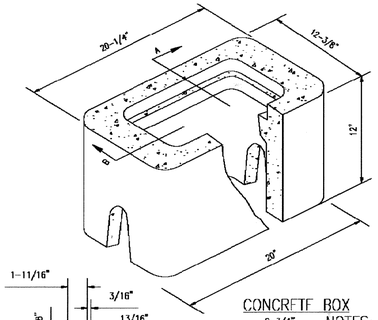
WATER DETAILS

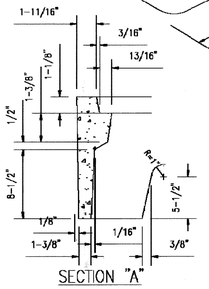
APPROVED:
N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE 10/14/15

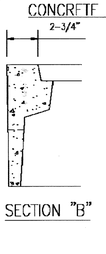
DESIGNED BY:	WW	SHEET
DRAWN BY:	CSC	C-13
DATE:	10/16/2015	13 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg





SECTION "A"



SECTION "B"

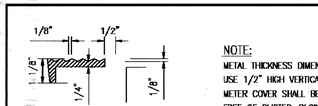
CONCRETE BOX

NOTES:

1. ACCOMMODATES 5/8" OR 3/4" METERS. (KAUAI AND HAWAII ONLY) AND 2" AND 2-1/2" PROPERTY VALVES (FOR OAHU)
2. ACCOMMODATES 2" & 2-1/2" VALVES.
3. SEE PLATE M2 FOR C.I. COVER DETAILS.
4. FOR OAHU AND HAWAII, FIBER REINFORCED CONC. IS ALLOWED.
5. INSTALL 6" WIDE X 4" THICK CONCRETE COLLAR WITH WIRE MESH IN NON-CONCRETE/SIDEWALK AREA WHERE APPLICABLE.

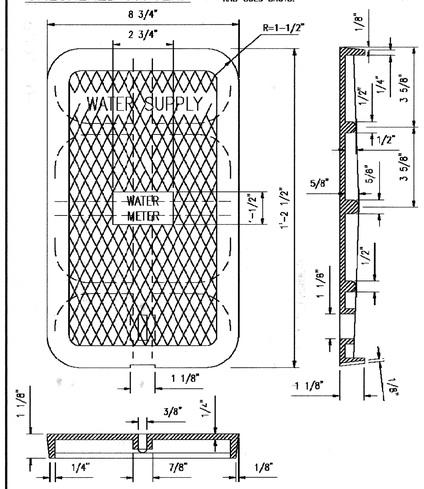
2002
REVISION

KAUAI OAHU HAWAII	METER BOX TYPE "B" SCALE: NTS	STANDARD DETAILS	M1



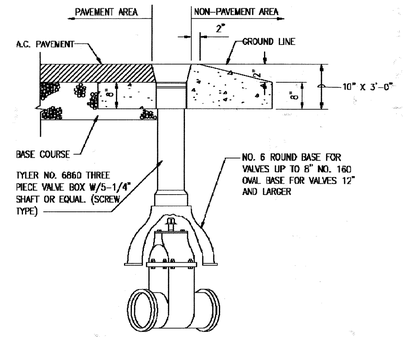
CHECKERED PATTERN

NOTE:
METAL THICKNESS DIMENSIONS ARE NET.
USE 1/2" HIGH VERTICAL LETTERS.
METER COVER SHALL BE GRAY CAST IRON, FREE OF BLISTER, BLOWHOLES, WARPAGE AND COLD SHUTS.



2001
REVISION

KAUAI OAHU HAWAII	CAST IRON COVER FOR TYPE "B" METER BOX SCALE: NTS	STANDARD DETAILS	M2



PROFILE

FOR GATE VALVE, BEVEL GEARED GATE VALVE AND BUTTERFLY VALVES



COVER

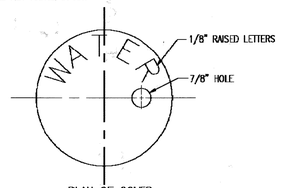
GENERAL NOTES:

1. PAVEMENT AREA: 2'-0" DIA. OR 2'-0"X 2'-0" SQUARE X 8" THICK CONCRETE SETTLEMENT SLAB.
2. NON-PAVEMENT AREA: 3'-0" DIA. OR 3'-0" X 3'-0" SQUARE X 10" THICK CONCRETE SETTLEMENT SLAB TAPERED TO 8".
3. COVER TO BE DROP LID COVER.

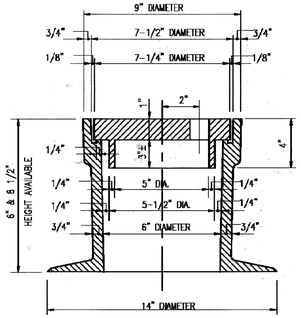
2002
REVISION

KAUAI	CAST IRON VALVE BOX DETAILS SCALE: NTS	STANDARD DETAILS	V11

NOTE:
ALL CASTINGS SHALL BE MADE ACCURATELY TO THE DIMENSIONS SHOWN. SEAT AND COVER SHALL BE MACHINED, NOT GROUND TO SECURE FLAT AND TRUE SURFACES. THE COVER SHALL NOT RATTLE IN ANY POSITION.



PLAN OF COVER

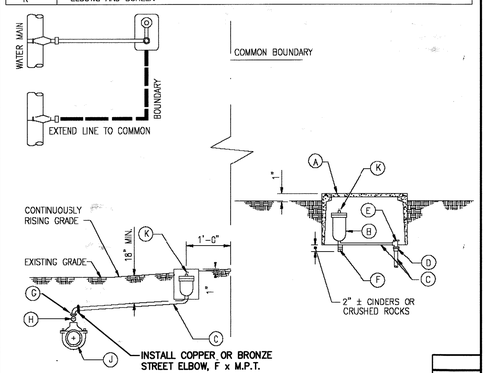


SECTION

2002
REVISION

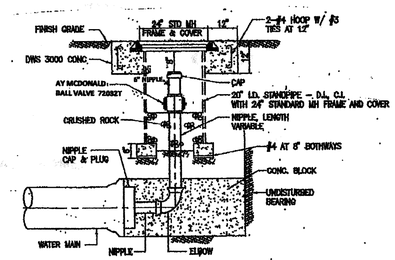
KAUAI OAHU MAUI	VALVE FRAME & COVER CAST IRON, 6" SIZE SCALE: NTS	STANDARD DETAILS	V3

ITEM	MATERIALS LIST
A	TYPE "X" METER BOX W/ CAST IRON COVER
B	1" PRESSURE AIR RELIEF VALVE **VAL-MATIC BULLETEN 15**
C	1" COPPER (TYPE "K", SOFT)
D	1" COPPER MALE ADAPTER
E	ANGLE BALL VALVE (FORD BAII-344W OR APPROVED EQUAL)
F	2" X 4" X 8" BRICK SADDLE
G	PACK JOINT COUPLING (FORD C14-44 OR APPROVED EQUAL)
H	1" CC X 1" MPT BALL CORPORATION
J	BRONZE SERVICE SADDLE W/ 1" CC TAP FOR USE ON C-900 PVC PIPE AND DUCTILE IRON PIPE OR PVC TEE W/ 1" PVC BUSING FOR USE ON 3" AND 4" PVC PIPE. SMITH-BLAIR TYPE 342 PLASTIC SERVICE SADDLE W/ 1" CC TAP FOR 3" AND 4" PVC PIPE.
K	ELBOWS AND SCREEN



2002
REVISION

KAUAI	AUTOMATIC PRESSURE RELIEF VALVE SCALE: NTS	STANDARD DETAILS	V10



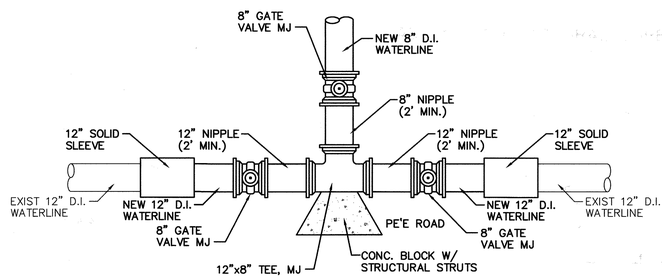
SCHEDULE OF CLEANOUT		
PIPE SIZE	CLEANOUT SIZE	TYPE OF PIPE
8" & SMALLER	2 1/2"	BRASS
12" TO 20"	4"	BRASS OR COPPER

NOTES:

1. CLEANOUT SHALL INCLUDE THE CAP, PLUG, AND APPURTENANCES AS SHOWN.
2. ALL CLEANOUTS INSTALLATION SHALL BE BRASS OR COPPER.

CLEANOUTS AND RISER
MODIFIED DWS DET. V22

NOT TO SCALE



WATERLINE CONNECTION DETAIL ⓒ
STA. 0+07.25±
SCALE: N.T.S.

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

WATER DETAILS

APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI 10/16/15 DATE

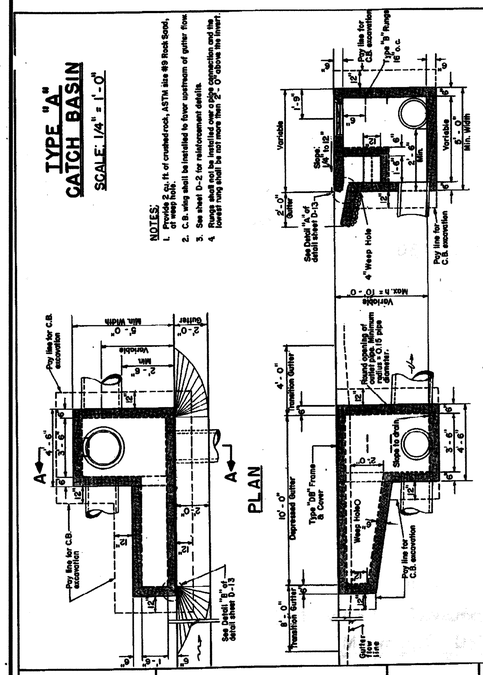
DESIGNED BY:	WW
DRAWN BY:	CH
DATE:	10/16/2015

SHEET C-14
14 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg

TYPE "A" CATCH BASIN

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "A" CATCH BASIN

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

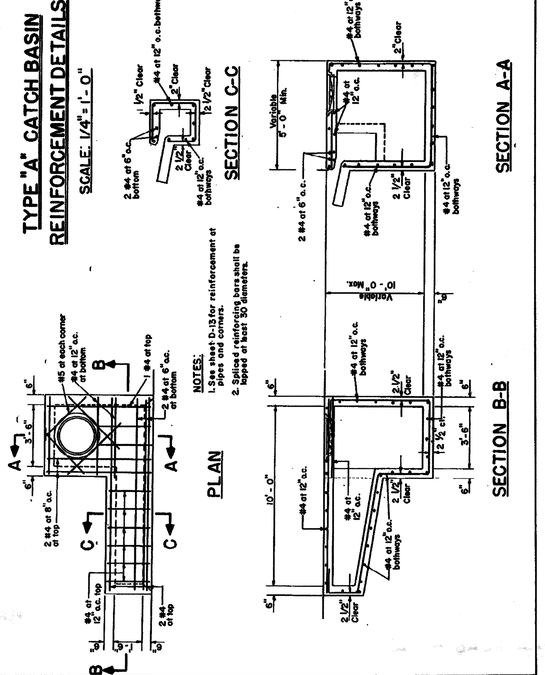
SEPTEMBER 1984

STANDARD DETAILS

D-1

TYPE "A" CATCH BASIN
REINFORCEMENT DETAILS

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "A" CATCH BASIN
REINFORCEMENT DETAILS

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

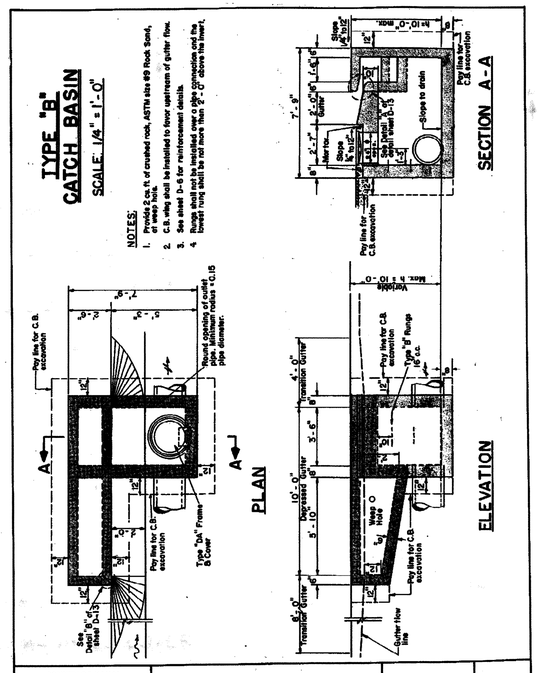
SEPTEMBER 1984

STANDARD DETAILS

D-2

TYPE "B" CATCH BASIN

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "B" CATCH BASIN

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

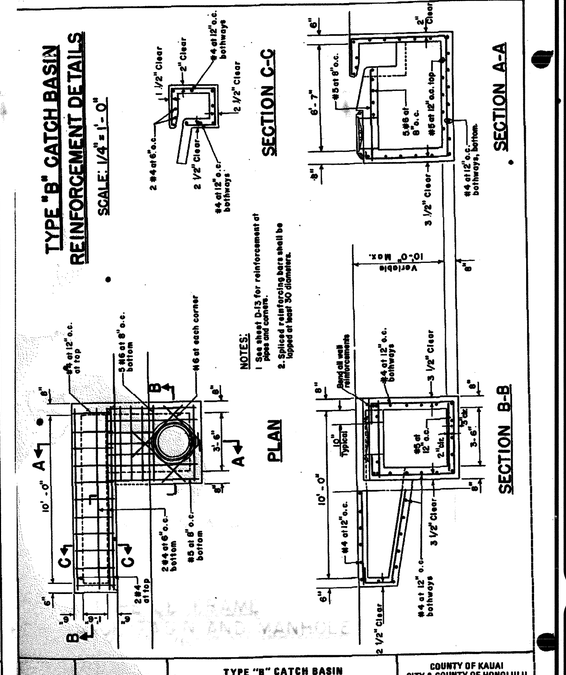
SEPTEMBER 1984

STANDARD DETAILS

D-5

TYPE "B" CATCH BASIN
REINFORCEMENT DETAILS

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



COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

TYPE "B" CATCH BASIN
REINFORCEMENT DETAILS

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

SEPTEMBER 1984

STANDARD DETAILS

D-6

ESAKI SURVEYING AND MAPPING, INC.

1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229

• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS
FOR
MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

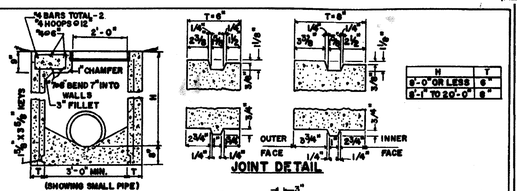
Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

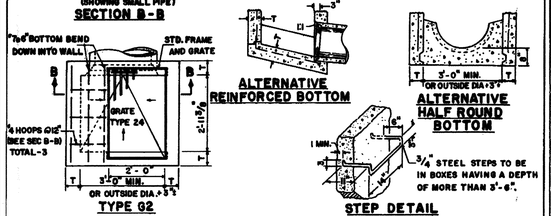
DRAINAGE
DRAINAGE DETAILS

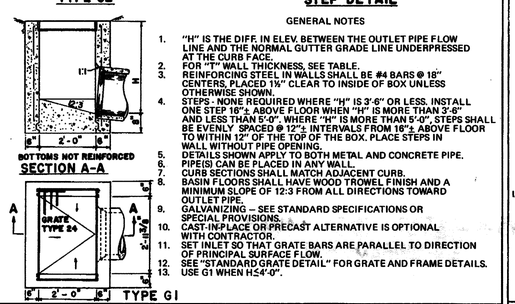
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUA'I — DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUA'I — DATE







GENERAL NOTES

1. "H" IS THE DIFF. IN ELEV. BETWEEN THE OUTLET PIPE FLOW LINE AND THE NORMAL GUTTER GRADE LINE UNDERPRESSED AT THE CURB FACE.
2. FOR "T" WALL THICKNESS, SEE TABLE.
3. REINFORCING STEEL IN WALLS SHALL BE #4 BARS @ 18" CENTERS, PLACED 1¼" CLEAR TO INSIDE OF BOX UNLESS OTHERWISE SHOWN.
4. STEPS - NONE REQUIRED WHERE "H" IS 3'-6" OR LESS. INSTALL ONE STEP 16"± ABOVE FLOOR WHEN "H" IS MORE THAN 3'-6" AND LESS THAN 5'-0". WHERE "H" IS MORE THAN 5'-0", STEPS SHALL BE EVENLY SPACED @ 12"± INTERVALS FROM 16"± ABOVE FLOOR TO WITHIN 12" OF THE TOP OF THE BOX. PLACE STEPS IN WALL WITHOUT PIPE OPENING.
5. DETAILS SHOWN APPLY TO BOTH METAL AND CONCRETE PIPE.
6. PIPE ISI CAN BE PLACED IN ANY WALL.
7. CURB SECTIONS SHALL MATCH ADJACENT CURB.
8. BASIN FLOORS SHALL HAVE WOOD TROWEL FINISH AND A MINIMUM SLOPE OF 12:3 FROM ALL DIRECTIONS TOWARD OUTLET PIPE.
9. GALVANIZING - SEE STANDARD SPECIFICATIONS OR SPECIAL PROVISIONS.
10. CAST-IN-PLACE OR PRECAST ALTERNATIVE IS OPTIONAL WITH CONTRACTOR.
11. SET INLET SO THAT GRATE BARS ARE PARALLEL TO DIRECTION OF PRINCIPAL SURFACE FLOW.
12. SEE "STANDARD GRATE DETAIL" FOR GRATE AND FRAME DETAILS.
13. USE G1 WHEN H≤4'-0".

COUNTY OF KAUAI

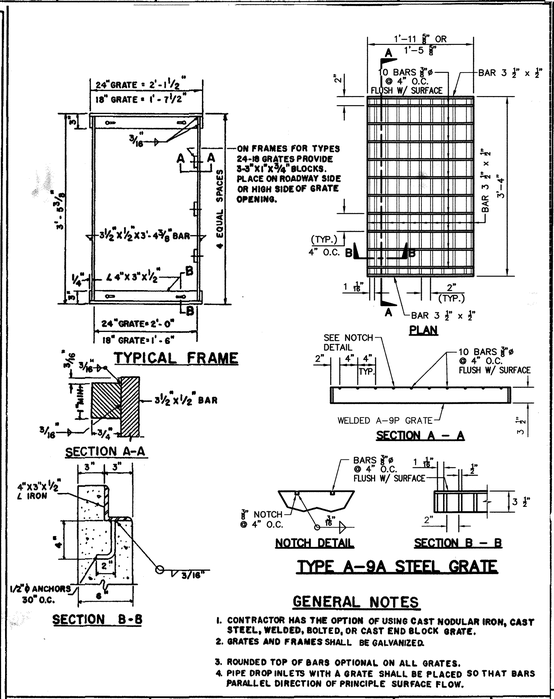
STANDARD FRAME AND GRATE

NOT TO SCALE

SEPTEMBER 1984

STANDARD DETAILS

D-39



TYPE A-9A STEEL GRATE

GENERAL NOTES

1. CONTRACTOR HAS THE OPTION OF USING CAST NODULAR IRON, CAST STEEL, WELDED, BOLTED, OR CAST END BLOCK GRATE.
2. GRATES AND FRAMES SHALL BE GALVANIZED.
3. ROUNDED TOP OF BARS OPTIONAL ON ALL GRATES.
4. PIPE DROP INLETS WITH A GRATE SHALL BE PLACED SO THAT BARS PARALLEL DIRECTION OF PRINCIPLE SURFACE FLOW.

COUNTY OF KAUAI

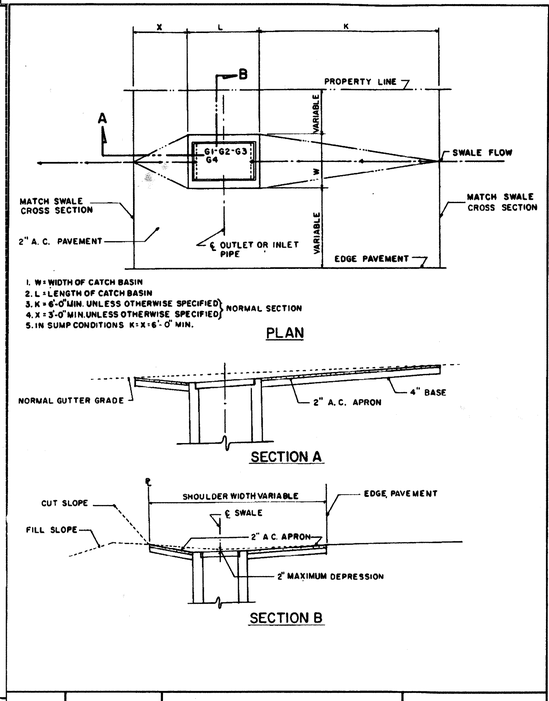
LOCAL DEPRESSION WITHOUT CURB AND GUTTER

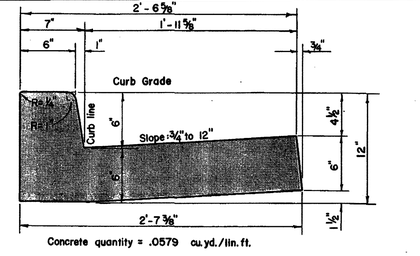
SEPTEMBER 1984

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

STANDARD DETAILS

D-40

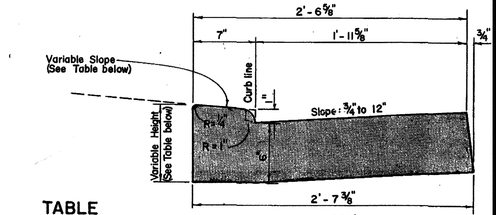




Concrete quantity = .0579 cu.yd./lin.ft.

CAST IN PLACE INTEGRAL CURB AND GUTTER

Scale: 1½" = 1'-0"



Concrete quantity = .0505 cu.yd./lin.ft.

CAST IN PLACE INTEGRAL DRIVEWAY CURB AND GUTTER

Scale: 1½" = 1'-0"

TABLE

DIST. CURB LINE TO ℄	SLOPE	HEIGHT
12'	1¼" to 12"	7 3/8"
10'	¾" to 12"	7 7/16"
8'	⅞" to 12"	7 ½"
7'	15/16" to 12"	7 9/16"
6'	1 1/16" to 12"	7 5/8"
3'	1 15/16" to 12"	8 1/8"

COUNTY OF KAUAI
CITY & COUNTY OF HONOLULU
COUNTY OF MAUI
COUNTY OF HAWAII

INTEGRAL CURB AND GUTTER,
INTEGRAL DRIVEWAY CURB AND GUTTER

SEPTEMBER 1984

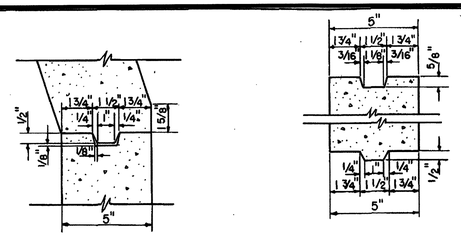
SCALE: 1-1/2" = 1'-0"

STANDARD DETAILS

R-4

DESIGNED BY:	WW	SHEET
DRAWN BY:	CH	C-15
DATE:	10/16/15	15 OF 23 SHEETS

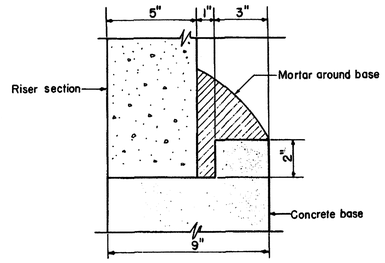
Project No.: 14-211
Drawing No.: 14-211 CON PLAN TNO.dwg



CONE SECTION

RISER SECTION

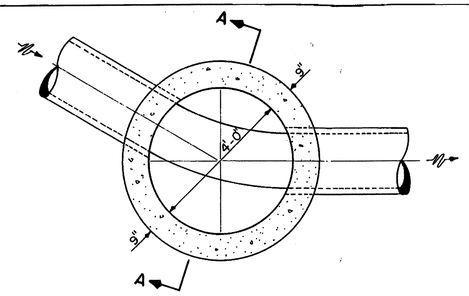
DETAIL "A"



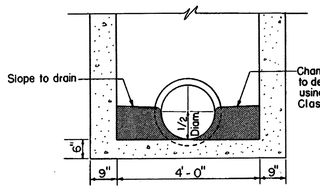
DETAIL "B"

PRE-CAST CONCRETE DRAIN MANHOLE DETAILS

COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII	PRE-CAST CONCRETE DRAIN MANHOLE DETAILS SCALE: 3" = 1'-0" SEPTEMBER 1984	STANDARD DETAILS	D-23



PLAN

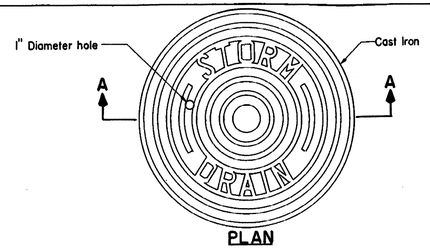


SECTION A-A

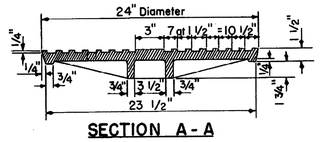
CHANNELIZING DETAILS FOR DRAIN MANHOLE

SCALE: 1/2"=1'-0"

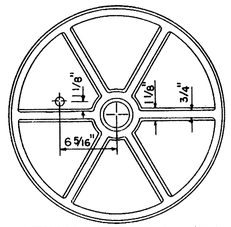
D-26	STANDARD DETAILS	CHANNELIZING DETAILS FOR DRAIN MANHOLE SEPTEMBER 1984 SCALE: 1/2" = 1'-0"	COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII



PLAN



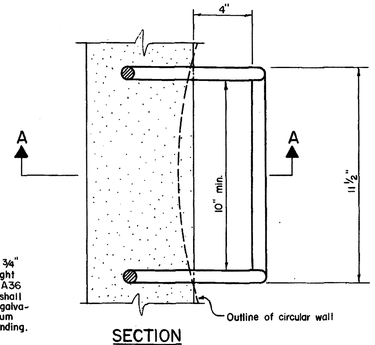
SECTION A-A



BOTTOM VIEW OF COVER

CATCH BASIN AND MANHOLE COVER

D-30	STANDARD DETAILS	CATCH BASIN AND MANHOLE COVER SEPTEMBER 1984 SCALE: 1-1/2" = 1'-0"	COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII

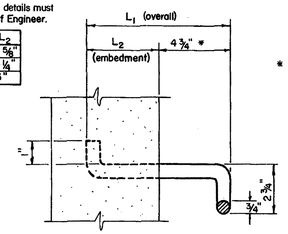


SECTION

NOTES:

1. Rungs shall be 3/4" diameter wrought iron or ASTM A36 steel rods and shall be hot-dipped galvanized or cadmium plated after bending.
2. Any deviation from these details must be approved by the Chief Engineer.

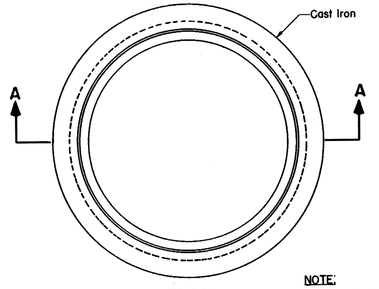
TYPE	WALLS	L_1	L_2
Type A	Brick	13 1/2"	7 5/8"
Type B	Concrete	9"	4 1/8"
Type C	Precast	7 3/8"	3"



SECTION A-A

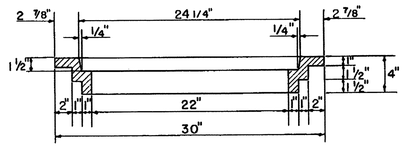
RUNGS FOR CATCH BASINS AND MANHOLES

COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII	SCALE: 3" = 1'-0" SEPTEMBER 1984	STANDARD DETAILS	D-27



PLAN

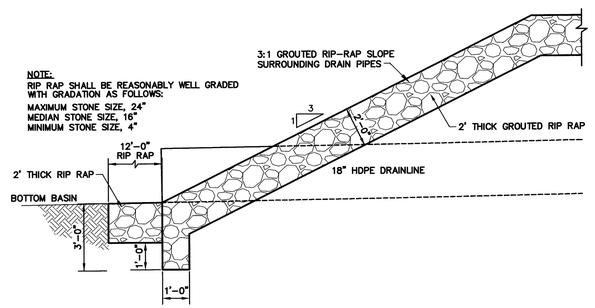
NOTE:
This frame is the same as sewer manhole frame Type 'SD'.



SECTION A-A

TYPE "DB" FRAME FOR CATCH BASIN AND MANHOLE

COUNTY OF KAUAI CITY & COUNTY OF HONOLULU COUNTY OF MAUI COUNTY OF HAWAII	TYPE "DB" FRAME FOR CATCH BASIN AND MANHOLE SCALE: 1-1/2" = 1'-0" SEPTEMBER 1984	STANDARD DETAILS	D-29



OUTLET DETAIL

NTS

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR
MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

DRAINAGE DETAILS

APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUA'I — DATE

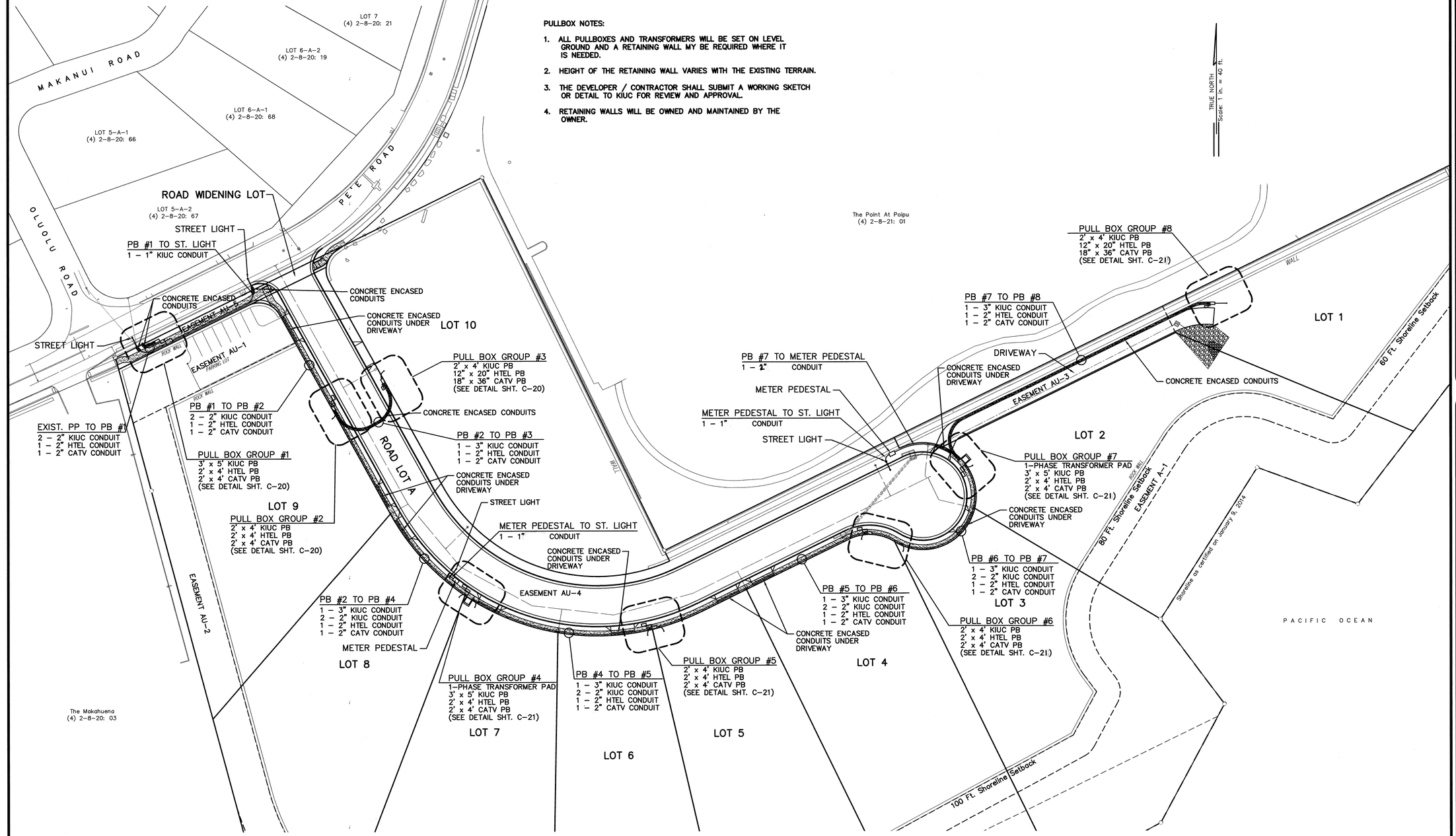
N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUA'I — DATE

DESIGNED BY:	WW	SHEET	C-16
DRAWN BY:	CSL		
DATE:	10/16/15	16 OF 23 SHEETS	

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg

PULLBOX NOTES:

1. ALL PULLBOXES AND TRANSFORMERS WILL BE SET ON LEVEL GROUND AND A RETAINING WALL MY BE REQUIRED WHERE IT IS NEEDED.
2. HEIGHT OF THE RETAINING WALL VARIES WITH THE EXISTING TERRAIN.
3. THE DEVELOPER / CONTRACTOR SHALL SUBMIT A WORKING SKETCH OR DETAIL TO KIUC FOR REVIEW AND APPROVAL.
4. RETAINING WALLS WILL BE OWNED AND MAINTAINED BY THE OWNER.



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 ft.

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
KAUAI ISLAND UTILITY COOP. DATE 10/29/15	HAWAIIAN TELCOM DATE 10/29/15	OCEANIC TIME WARNER CABLE OF HAWAII DATE 10/20/15

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHUENA SUBDIVISION
Weliweli, Koloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL PLAN

APPROVED:

12-17-15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-17
DRAWN BY: CSL	17 OF 23 SHEETS
DATE: 10/16/2015	

HAWAIIAN TELCOM NOTES
(Revised 1/19/12)

GENERAL NOTES:

1. All work on utility facilities shall be in strict accordance with specifications and requirements of Hawaiian Telcom for the facilities within their jurisdiction.
2. The Contractor shall closely coordinate all work with Hawaiian Telcom. The Contractor shall notify Hawaiian Telcom's inspector or designated representative a minimum of 3 days prior to excavation , bracing or backfilling of Hawaiian Telcom's structures or facilities. The Hawaiian Telcom inspectors are: Rick Ramones, tel. 651-2260.

CONDUIT NOTES:

1. Unless otherwise indicated, all conduits, sweeps, couplings, adapters, and bell ends shall be Schedule 40 PVC. PVC 2" and 4" DB conduits meeting GTE specification GTS-8342 may be substituted in concrete encasement application.
2. All trenches and pullboxes must be inspected by Hawaiian Telcom prior to backfilling and concrete-encasing operations.
3. All conduits shall be cleaned and be free from objectionable materials with its ends adequately covered until Hawaiian Telcom installs its cable facilities.
4. All street crossings shall be encased in a concrete jacket, which shall extend a minimum of 12 inches outside of edge of pavement.
5. Minimum clearances between electrical and telephone conduits shall be 12 inches horizontally and 6 inches vertically; however, if concrete-encased, a 3 inch clearance may be utilized in both directions.
6. Conduits for utility boxes to the individual lots shall be considered incidental to their respective main duct lines. Said conduits shall be 2" PVC unless otherwise indicated.
7. Contractor shall maintain 6" minimum separation between water pipe and top of direct buried utility ducts at intersection of water pipe and direct buried utility ducts. When utility ducts are concrete-encased at intersection of water pipe and utility ducts, a 6" minimum separation between water pipe and top of concrete-encased utility ducts shall be maintained. Stones, rocks, etc. shall not be used with backfill material, only select materials shall be used as backfill material.
8. A 4" wide warning tape orange in color with a black imprinted message "WARNING - STOP DIGGING - CALL HAWAIIAN TELCOM, COMMUNICATIONS CABLE BURIED BELOW, FAILURE TO COMPLY COULD RESULT IN LEGAL ACTION" shall be placed 12" below the surface over the duct or concrete jacket for the entire length of duct installations. See HTCO standard drawing 34028. Recommended tape is manufactured by THOR Enterprises, Inc., Sun Praire, WI 53590 (1-800-827-8467) part numbers DTOGTE-41 (1000'), and DTOGTE-46 (6000').
9. After the ducts are installed, a mandrel not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct. After which, a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left in the line. Main duct runs, except riser ducts and cross-connect pedestal ducts, should be constructed with no more than 20 foot radius curves unless indicated otherwise or approved by the Hawaiian Telcom inspector. A flexible mandrel having a diameter of 1/4" less than the inside diameter will be utilized on 2" duct runs. After which, a brush with stiff bristles shall be pulled through.
10. Install NEPTCO W1800P muletape in all new ducts after testing. The NEPTCO muletape is available in 3,000', 6,500', and 10,000' reels. The NEPTCO muletape is prelubricated and printed with sequential footage marking. Using the NEPTCO muletape, the Contractor shall measure at least one duct of a common duct run. The distance shall be marked on the record prints and submitted to the Hawaiian Telcom inspector for record keeping.

PULLBOX NOTES:

1. All type 435TB (2' X 4') & 435TB6 (2' X 6') pullboxes shall be constructed with a 12" base and a minimum of two 8" precast sections. All covers shall be of the slip not type. (Refer to HTCO standard drawings 34056 and 34078.)
2. At no time shall cement mortar, wood, or any other material be used between pre-cast sections. Leveling or raising of pullboxes shall be done at the brickwork section using cement mortar. The permanent installation of wooden wedges to level or raise the precast sections shall not be permitted.
3. All conduits shall enter boxes at 90 degree angle and flush to the wall with flared or junior end bells to prevent cable damage.
4. The 435TB pullbox base shall be placed on a minimum of 3" of #3 crushed rock backfill.
5. The Contractor shall furnish and install #4 bare copper ground wire (direct burial) from all transformer pad ground rods to the nearest Hawaiian Telcom pullbox, as specified in HTCO standard drawing 34045. Install one 5/8" X 8' ground rod in all other Hawaiian Telcom pullboxes, except in the type 436T meter boxes (12" X 20"). Ground rods are to extend 4" above the finished pullbox/handhole floor (grade) and be located 4" from the pullbox corner.
6. Extend Schedule 40 conduits 2" to 6" above finish floor in equipment room.
7. All Type I handholes, 435TB and 435TB6 boxes shall be constructed with covers of the slip not type. (Refer to HTCO standard drawing 34029.)

KIUC NOTES
(Revised 7/14/11)

UNDERGROUND CONSTRUCTION NOTES AND REQUIREMENTS:

1. These notes are not intended to be used in place of the Sevice Installation Manual, please refer to Service Installation Manual for all service issues.
2. Contractor shall contact Kaua'i Island Utility Cooperative's ("KIUC") Construction Coordinator/Inspector prior to start of work on KIUC facilities and for scheduling site inspections. [Westside: 246-2323; Eastside: 822-4995]
3. Contractor shall contact KIUC's Distribution Engineer @ 246-2373 for design approvals, standard detail drawings, and any items not addressed in these notes or drawings.
4. All contractors entering KIUC facilities must be approved by KIUC and must have proper licensing and insurance coverage. Contact KIUC Legal Coordinator @ 246-4369 for details.
5. All trenches and pullboxes must be inspected by KIUC prior to backfilling and concrete-encasing operations. For detailed trenching and backfilling requirements refer to KIUC's Service Installation Manual.
6. The Contractor shall provide a Poly-Line 200 lb. test line or equivalent as a pulling wire in all 1", 2", 3" & 4" conduits. In 5" and 6" conduits, the contractor shall install NEPTCO WP1800 muletape as a pulling line.
7. All conduits, pullboxes, handholes, & manholes shall be cleaned and free from objectionable materials. Conduit ends shall be adequately covered until the conductor is installed by the electric company. (Covers shall be Carlon Plug with Pull Tab series P258 equivalent or better)
8. For all conduit other than services, refer to conduit schedule on drawings.
9. For all services where the conductor is 3/0 or less, the distance from KIUC's handhole and Customer's meter is less than 125 feet, and not crossing any driveways or roads, the conduit shall be 2 inch Schedule 40 PVC. For services greater than 125 feet but less than 150', contact KIUC planner for field verification and underground service requirements. Any deviations will require KIUC written approval.
10. Primary and Secondary conduits for new line extensions shall be Schedule 40 PVC. (Carlon P&C Duct Type DB equivalent or better.) Under driveways and roadways, the conduits shall be encased in a minimum of 3 inch concrete jacket extending 12" outside the edge of pavement.
11. Schedule 80 PVC conduit may be substituted for the concrete encased Schedule 40 PVC for service conduit only crossing under unpaved private driveways & roadways from KIUC pole/handhole to customer's meter. If concrete driveway will be built over service conduit immediately after conduit is installed, then Schedule 40 PVC may be used provided that it meets with Rule No. 21.
12. All primary and secondary conduits which are crossing state or county roadways shall be Schedule 40 PVC encased in a minimum 3 inch concrete jacket, which shall extend a minimum of 12 inches outside of the edge of pavement.
13. Electrical supply ducts, when installed near communication cables, shall be separated from communication duct systems and buried communication cables or conductors by not less than 3 inches of concrete or 12 inches of earth when paralleling or crossing.
14. Chairs shall be installed and spaced at a maximum of 5 feet separation when concrete encasing conduits.
15. All conduits shall enter boxes at a 90 degree angle, perpendicular and flush to the wall with bell ends to prevent cable damage.
16. 90 degree conduit bends shall be factory made with a minimum radius of 3 feet in trench runs.
17. Conduit bends exceeding 90 degrees will not be accepted.
18. A 36 inch minimum horizontal clearance shall be maintained when running KIUC conduits parallel to water & sewer lines. If clearance is less than 36 inches, KIUC conduit shall be concrete encased.
19. No foreign pullboxes, handholes, manholes, concrete slabs/boxes, structures, etc. are to be installed over KIUC facilities with the exception of HTCO, CATV or waterline conduit crossings. Such crossing must be approved by KIUC's Service Assurance Department and KIUC conduit to be concrete encased. Concrete encasement must be minimum of 3 inch encasement and extend a minimum of 1 foot beyond crossing conduit or pipe.
20. Red marker tape to be placed 1 foot above electrical conduits in the trench during backfilling. (E-Z CODE WBT 6 inch wide 4 Mill polyethylene Protect-A-Line Warning Tape NA-0706 "ELECTRIC LINE" in red, equivalent or better)
21. Unless otherwise noted, the top of all conduits shall be at a depth of 24 inches.
22. All handholes, pullboxes, and manholes shall be Walker Industries type or approved equal. Contact KIUC prior to ordering underground boxes for vendor approval. Customer to submit manufacturer's shop drawings of all handholes and manholes for box sizes greater than 3'x5' for KIUC review and approval.
23. Typically, the top of all electrical utility boxes shall be 1 inch above finish grade, single phase transformer pads shall be 2 inches above finish grade and three phase transformer pads shall be 4 inches above finish grade unless otherwise noted. (Special conditions may apply to sidewalks, roadways, etc. See specific location notation.)
24. At no time shall cement mortar, wood or any other material be used between pre-cast sections of KIUC pullboxes, handholes, or manholes. The permanent installation of wooden wedges to level or raise the pre-cast sections shall not be permitted.
25. A minimum of 6 inches of #3 crushed rock backfill shall be placed loosely beneath the bottom section of handholes and pullboxes. Crushed rock or other foreign materials are not to be placed inside handholes and pullboxes.

CATV NOTES:

1. Follow all notes and specifications as Hawaiian Telcom
2. Pullbox lids shall be galvanized steel with non-slip surface and marked with: T.V. or CATV.
3. Standard pull line in all conduits shall be installed. (Pull line 200 lbs.)
4. Grounds are not required. Cable company shall install its own as they see necessary.
5. 18" X 36" pull box, refer to Hawaiian Telcom drawing #34024A (434T 18" X 36").

KIUC INSPECTORS:
- SONI TUPOU: West and South side
- BILLY WORKMAN: North and East side, 246-4343
***Linue area either one.**

WATER NOTES:

1. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION OF THE EXISTING WATER FACILITIES PRIOR TO TRENCHING. EXCAVATION AROUND EXISTING WATER FACILITIES SHALL BE DONE BY HAND.
2. MATERIAL USED FOR BACKFILLING AT THE WATER FACILITIES CROSSINGS SHALL NOT CONTAIN ANY STONES, ROCKS, OR OTHER SIMILAR MATERIAL AND SHALL NOT CONTAIN VEGETABLE MATTER OR DEBRIS OR ANY KIND. NO "ADOBE" OR SIMILAR MATERIAL SHALL BE USED.
3. PROVIDE CONCRETE ENCASEMENT FOR THE CONDUITS AT ALL WATERLINE, SERVICE LATERAL, AND HYDRANT CROSSINGS. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER AT LEAST 24-HOURS PRIOR TO SCHEDULING BACK FILLING OPERATIONS AT THE WATER FACILITIES CROSSINGS.

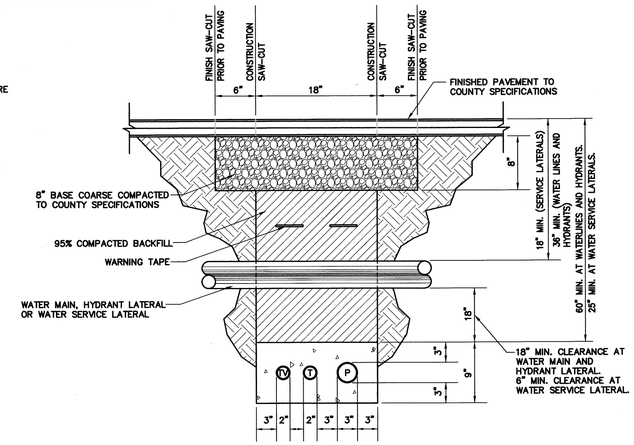
BACKFILL NOTES:

TYPE "A" BACKFILL - EARTH & GRAVEL ROCK SIZE TO BE 1" MAX. & THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION

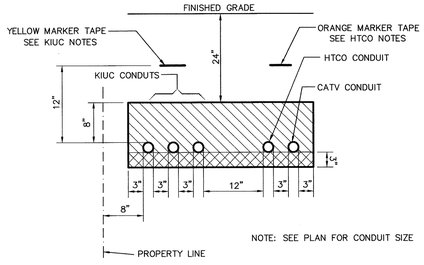
TYPE "B" BACKFILL - EARTH & GRAVEL MIXTURE MUST PASS A 1/2" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION.

NOTE: IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B" , AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL PROVIDED

CONCRETE - 3" ENCASEMENT, 3000 psi COMPRESSIVE STRENGTH AT 28 DAYS.



DETAIL AT WATER FACILITIES CROSSING
NTS



NOTE: SEE PLAN FOR CONDUIT SIZE

TYPICAL TRENCH SECTION
NTS

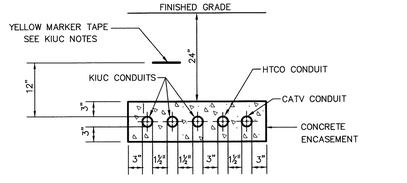
BACKFILL NOTES:

TYPE "A" BACKFILL - EARTH & GRAVEL ROCK SIZE TO BE 1" MAX. & THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION

TYPE "B" BACKFILL - EARTH & GRAVEL MIXTURE MUST PASS A 1/2" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICALES. 95% COMPACTION.

NOTE: IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B" , AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL PROVIDED

CONCRETE - 3" ENCASEMENT, 3000 psi COMPRESSIVE STRENGTH AT 28 DAYS.



NOTE: SEE PLAN FOR CONDUIT SIZE

TYP. CONC. ENCASEMENT DET.
NTS

NOTES FOR WATER FACILITIES CROSSING

1. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION OF THE EXISTING WATER FACILITIES PRIOR TO TRENCHING. EXCAVATION AROUND EXISTING WATER FACILITIES SHALL BE DONE BY HAND.
2. MATERIAL USED FOR BACKFILLING AT THE WATER FACILITIES CROSSINGS SHALL NOT CONTAIN ANY STONES, ROCKS, OR OTHER SIMILAR MATERIAL AND SHALL NOT CONTAIN VEGETABLE MATTER OR DEBRIS OR ANY KIND. NO "ADOBE" OR SIMILAR MATERIAL SHALL BE USED.
3. PROVIDE CONCRETE ENCASEMENT FOR THE CONDUITS AT ALL WATERLINE, SERVICE LATERAL, AND FIRE HYDRANT CROSSINGS. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER AT LEAST 24-HOURS PRIOR TO SCHEDULING BACKFILLING OPERATIONS AT THE WATER FACILITIES CROSSINGS.

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
10/29/15	10/29/15	10/29/15
KAUAI ISLAND UTILITY COOP. DATE	HAWAIIAN TELCOM DATE	OCEANIC TIME WARNER CABLE OF HAWAII DATE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL NOTES AND DETAILS

APPROVED:

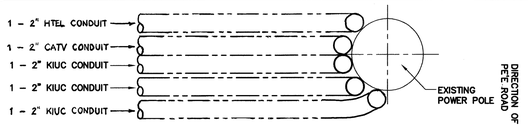
N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

for MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI 10/16/15 DATE

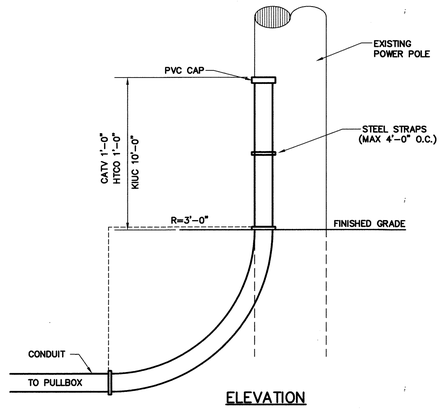
DESIGNED BY:	WW
DRAWN BY:	CSL
DATE:	10/16/2015

SHEET C-18
18 OF 23 SHEETS

Project No: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



PLAN VIEW



ELEVATION

POLE RISER DETAIL
NTS

TYPE 30-2005 KIUC 2' x 4' HANDHOLE

NOTES:

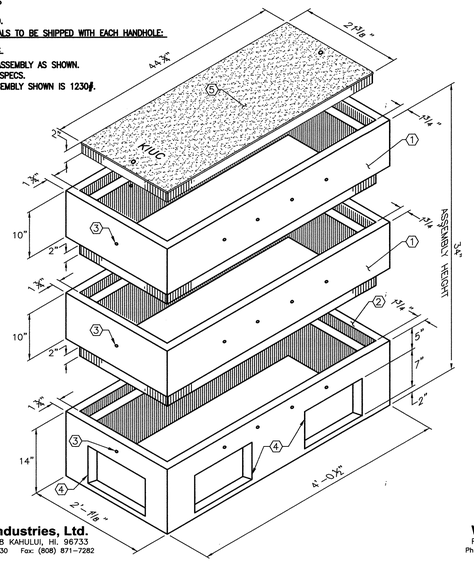
- ☐ HANDHOLE DESIGNED IN ACCORDANCE WITH KIUC STANDARDS USING 4,000 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-615 STEEL REINFORCEMENT PER CALCS.
- ☐ ALL CONCRETE AND REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-87).
- ☐ HANDHOLE TO BE PLACED ON A 6" BASE ON FIRM/COMPACTED BACKFILL OR ON UNDISTURBED SOIL.
- ☐ PRODUCT TO BE STENCILED:
  WALKER INDUSTRIES
  DATE OF POUR
  PRODUCT MARK NO.

1. TOP SECTION. WT. 400#.
2. BOTTOM SECTION W/KNOCKOUTS. WT. 430#.
3. 1/2"ø x 4" LIFTING HOLE (CONTR. TO GROUT SOLID AFTER PLACEMENT OF SECTION).
4. CONDUIT OPENING KNOCKOUT.
5. CONCRETE COVER, REFER TO HECO DWG. NO. 11312.

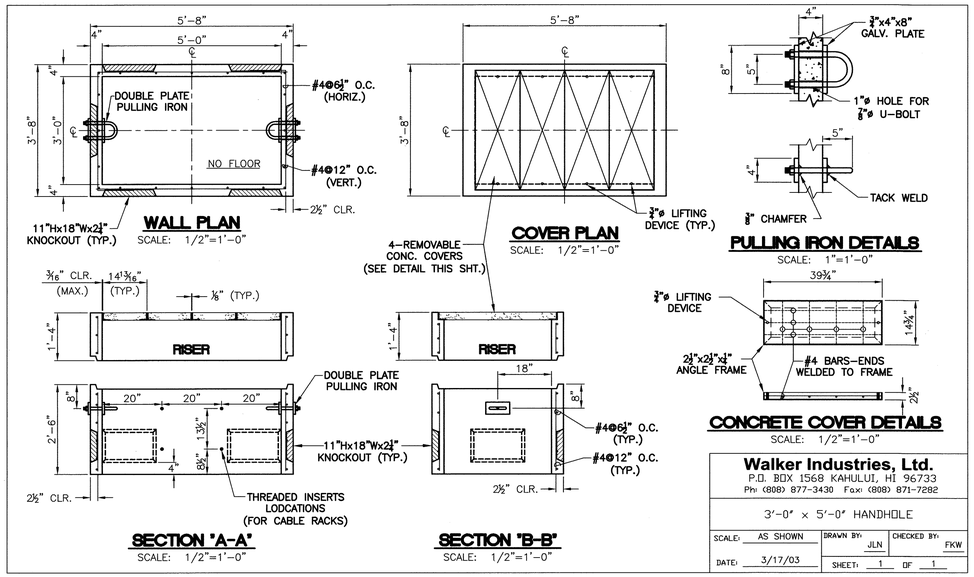
THE FOLLOWING MATERIALS TO BE SHIPPED WITH EACH HANDHOLE:

ORDERING INFORMATION:

2'x4'x34" KIUC FOR ASSEMBLY AS SHOWN.
APPROVED FOR KIUC SPECS.
TOTAL WEIGHT OF ASSEMBLY SHOWN IS 1230#.



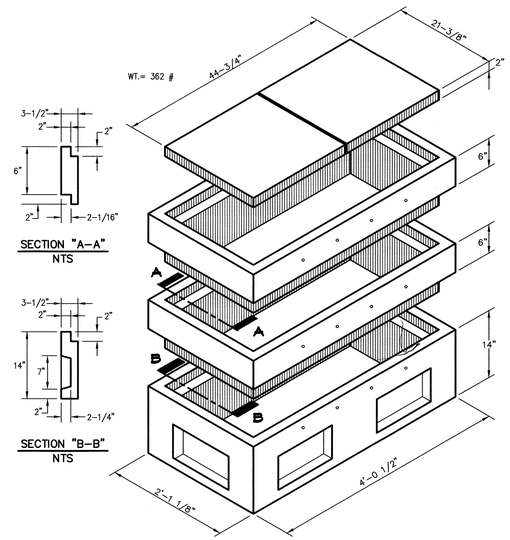
Walker Industries, Ltd.
P.O. BOX 1568 KAHULUI, HI. 96733
Ph. (808) 877-3430 Fax: (808) 871-7282



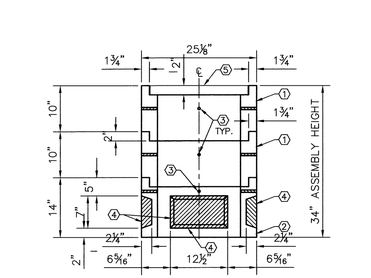
Walker Industries, Ltd.
P.O. BOX 1568 KAHULUI, HI 96733
Phn (808) 877-3430 Fax: (808) 871-7282

3'-0" x 5'-0" HANDHOLE

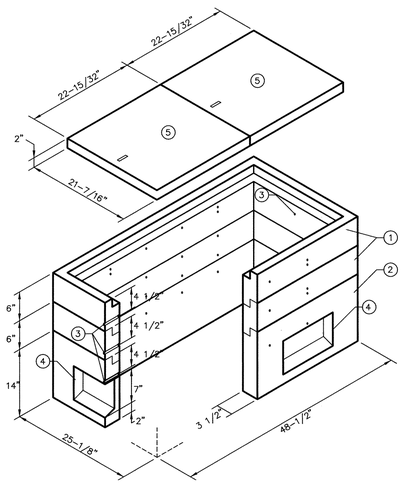
SCALE: AS SHOWN	DRAWN BY: JLN	CHECKED BY: FKW
DATE: 3/17/03	SHEET: 1 OF 1	



2' x 4' CATV PULLBOX ASSEMBLY
NTS



Walker Industries, Ltd.
P.O. BOX 1568 KAHULUI, HI. 96733
Ph. (808) 877-3430 Fax: (808) 871-7282



NOTES

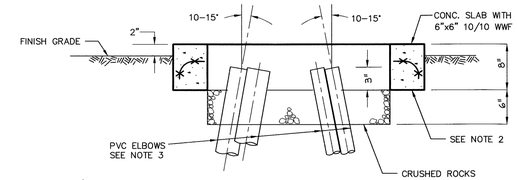
- PULLBOX DESIGNED IN ACCORDANCE WITH VERIZON STANDARDS USING 4,000 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-615 STEEL REINFORCEMENT PER CALCS.
- ALL CONCRETE AND REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-87)
- PULL BOX TO BE PLACED ON A 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
- PRODUCT TO BE STENCILED:
  WALKER INDUSTRIES
  DATE OF POUR
  PRODUCT MARK NO.

THE FOLLOWING MATERIALS TO BE SHIPPED WITH EACH HANDHOLE:
ORDERING INFORMATION:

2x4x26" VERIZON FOR ASSEMBLY AS SHOWN.
APPROVED FOR VERIZON SPECS.
TOTAL WEIGHT OF ASSEMBLY SHOWN IS 917#.

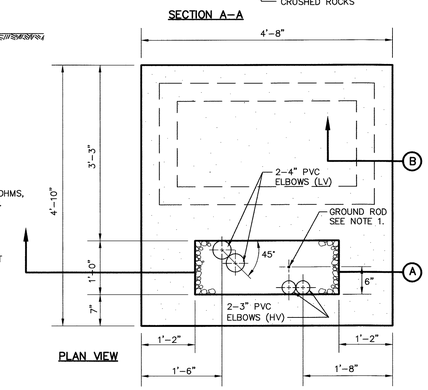
1. TOP SECTION. WT. 217#
2. BOTTOM SECTION. WT. 483#
3. 1/2"ø x 3 1/2 LIFTING HOLE (CONTR. TO GROUT SOLID AFTER PLACEMENT OF SECTION).
4. CONDUIT OPENING KNOCKOUT.
5. POLYMER COVER. REFER TO VERIZON DWG. NO. 435 TB.

2'-0" x 4'-0"x2'-2" DEEP HTCO PULLBOX
NTS



NOTES:

1. GROUND ROD, 5/8" DIA. x 8'-0", FURNISHED AND INSTALLED BY THE DEVELOPER/CONTRACTOR. IF THE RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND ROD.
2. PAD TO BE INSTALLED ON FIRM UNDISTURBED SOIL OR ON 95% COMPACTED BACKFILL.
3. PVC ELBOWS TO BE STUBBED OUT 3" ABOVE CRUSHED ROCKS AT A 10-15° ANGLE.



SINGLE PHASE TRANSFORMER PAD
NTS

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
KAUAI ISLAND UTILITY COOP. DATE 10/29/15	HAWAIIAN TELCOM DATE 10/29/15	OCEANIC TIME WARNER CABLE OF HAWAII DATE 10/29/15

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL DETAILS

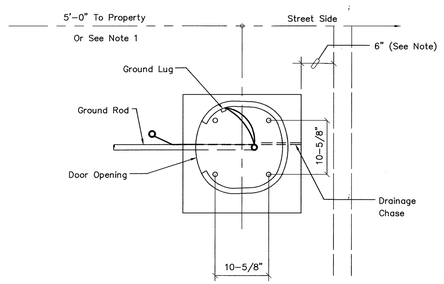
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

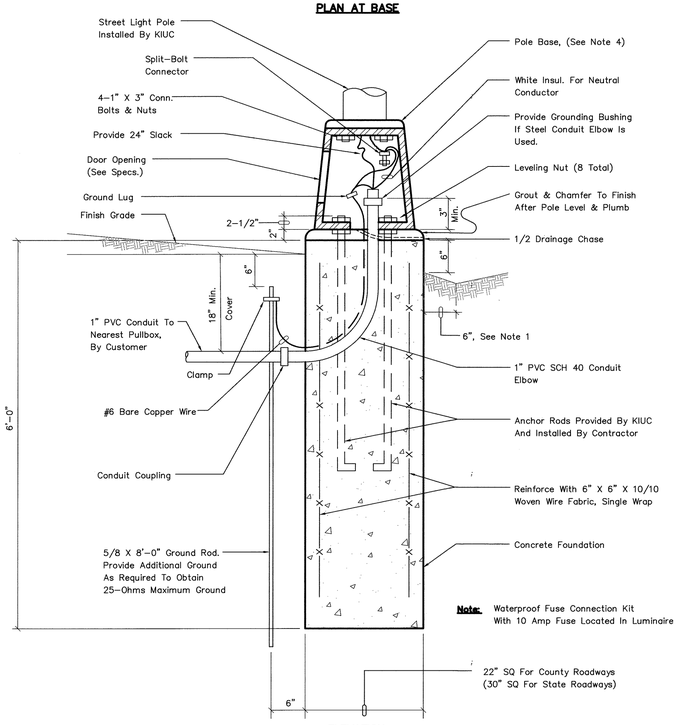
N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET
DRAWN BY: CW	C-19
DATE: 10/16/2015	19 OF 23 SHEETS

Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



PLAN AT BASE



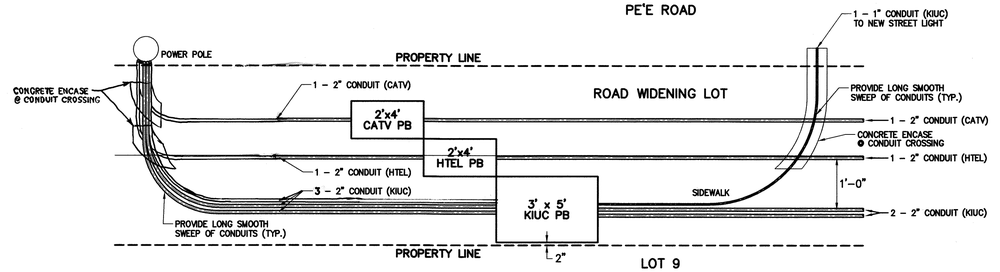
ELEVATION

NOTES:

1. Concrete Foundation To Be 6" Away From Curbing. This Applies To Streets With Curb And Gutter Construction.
2. Concrete Foundation: 3000 PSI (28-Days Compressive Strength)
3. Anchor Rods: To Be Supplied By KIUC, Unless Noted On Construction Drawings.
4. Pole Base: To Be Provided By KIUC And Installed By The Contractor.
5. Foundation: To Be Constructed By The Contractor.

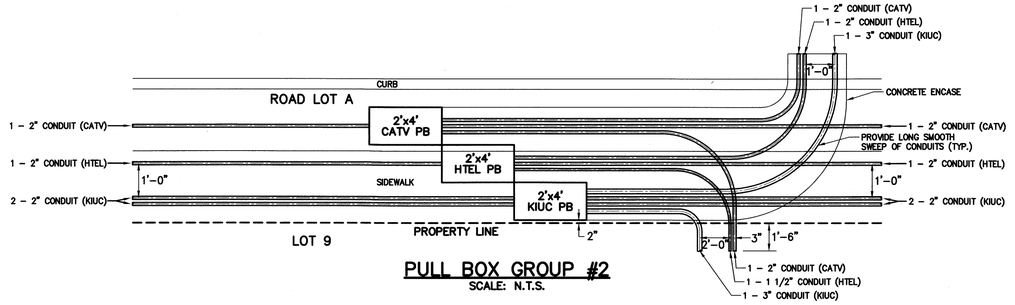
STREET LIGHT BASE DETAIL

NTS



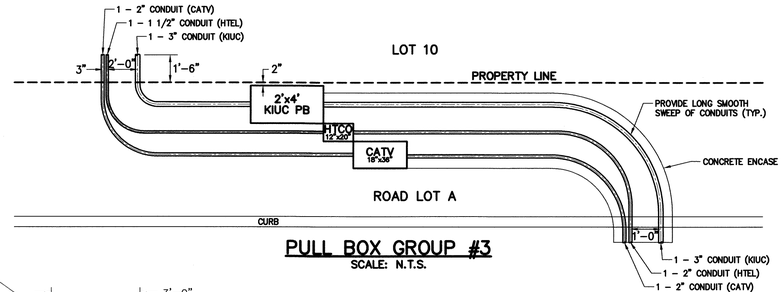
PULL BOX GROUP #1

SCALE: N.T.S.



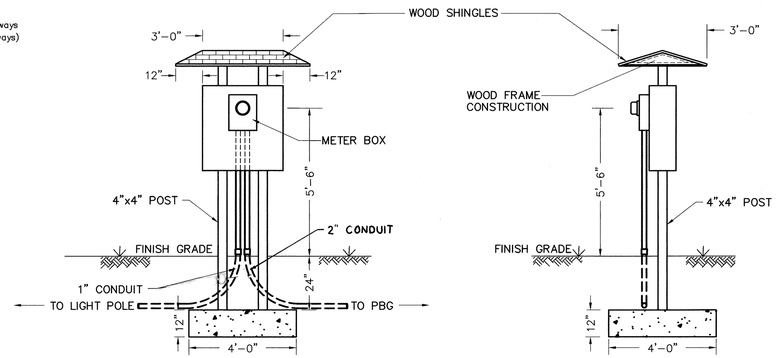
PULL BOX GROUP #2

SCALE: N.T.S.



PULL BOX GROUP #3

SCALE: N.T.S.



METER PEDESTAL DETAIL

NTS

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
10/29/15	10/29/15	10/29/15
KAUAI ISLAND UTILITY COOP. DATE	HAWAIIAN TELCOM DATE	OCEANIC TIME WARNER CABLE OF HAWAII DATE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:

CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welīweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL DETAILS

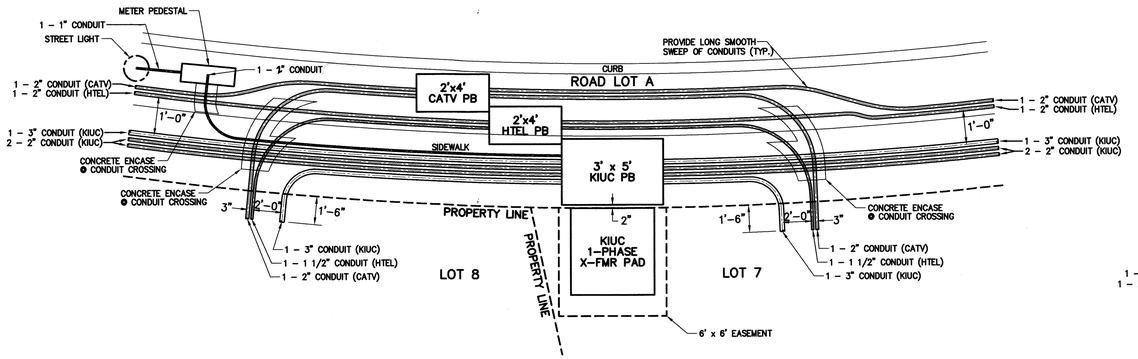
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

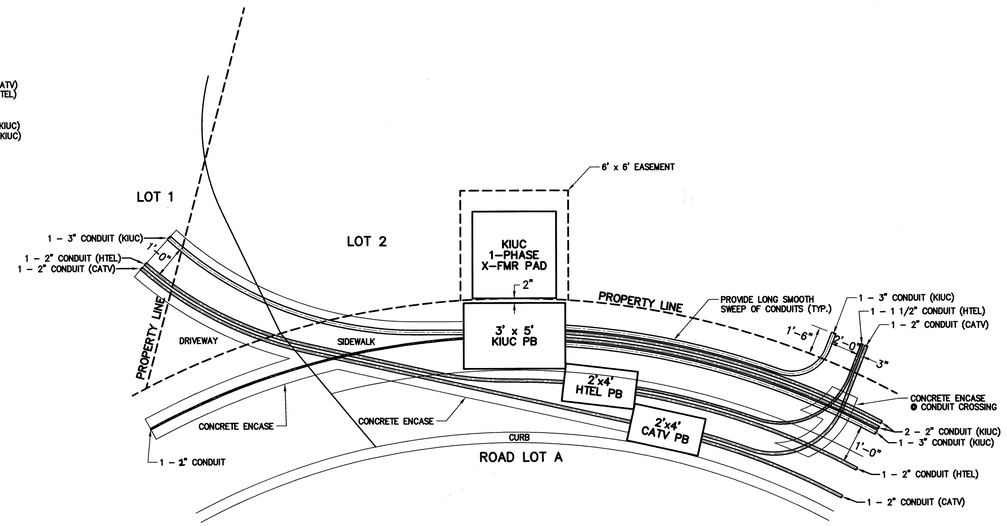
N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

		SHEET
DESIGNED BY: WW		C-20
DRAWN BY: CJL		
DATE: 10/16/2015		20 OF 23 SHEETS

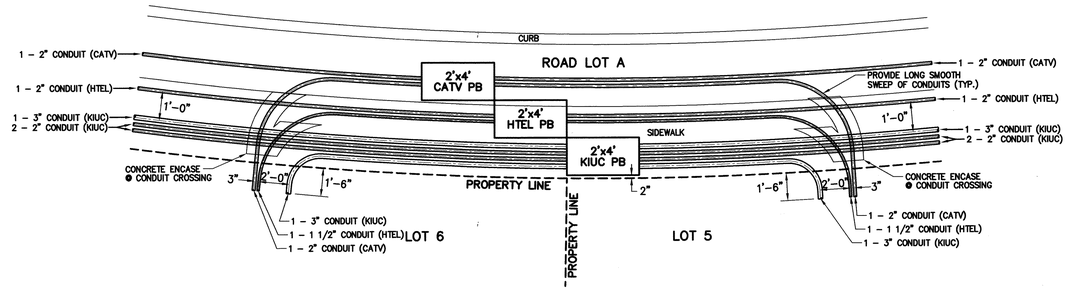
Project No.: 14-211
Drawing No.: 14-211 CON PLAN TND.dwg



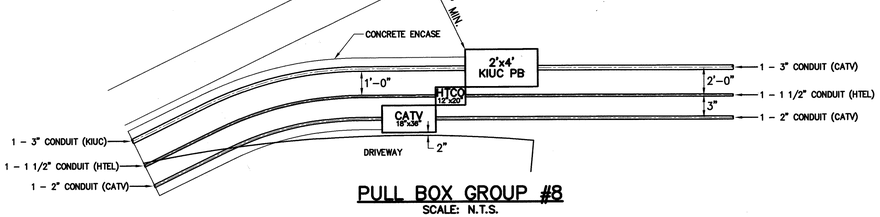
PULL BOX GROUP #4
SCALE: N.T.S.



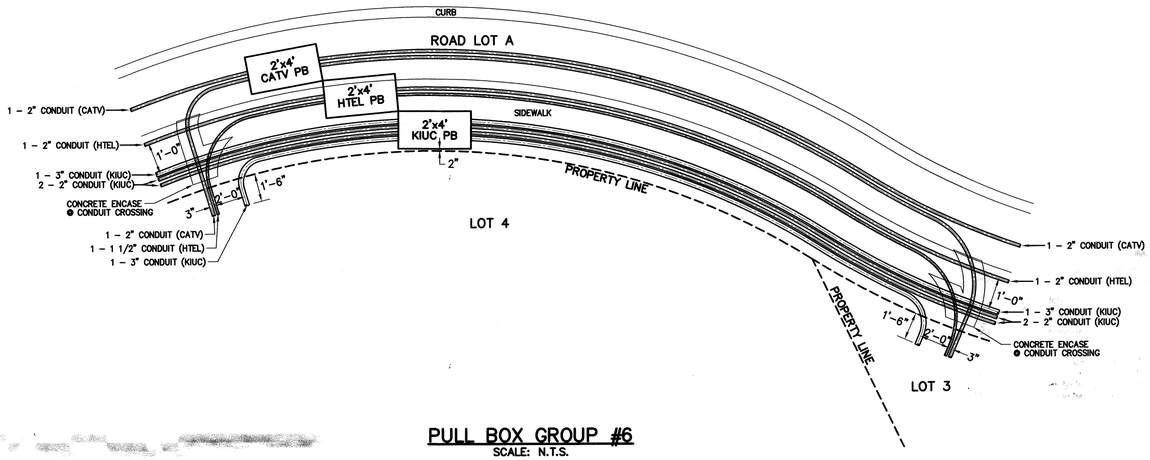
PULL BOX GROUP #7
SCALE: N.T.S.



PULL BOX GROUP #5
SCALE: N.T.S.



PULL BOX GROUP #8
SCALE: N.T.S.



PULL BOX GROUP #6
SCALE: N.T.S.

KIUC NOTES:

1. CONTACT KIUC INSPECTOR BILLY WORKMAN 246-2323 BEFORE ORDERING ANY MATERIAL AND BEFORE CONSTRUCTION OF THE UNDERGROUND FACILITIES AND AT LEAST THREE WORKING DAYS PRIOR TO TRENCH BACKFILLING FOR TRENCH INSPECTION.
2. SEE ELECTRICAL PLAN FOR CONCRETE JACKET AT ROAD CROSSING.

APPROVED:	APPROVED:	APPROVED:
10/29/15	10/29/15	10/29/15
KAUAI ISLAND UTILITY COOP. DATE	HAWAIIAN TELCOM DATE	OCEANIC TIME WARNER CABLE OF HAWAII DATE

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Lihu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR MAKAHŪENA SUBDIVISION
Welliwell, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

ELECTRICAL DETAILS

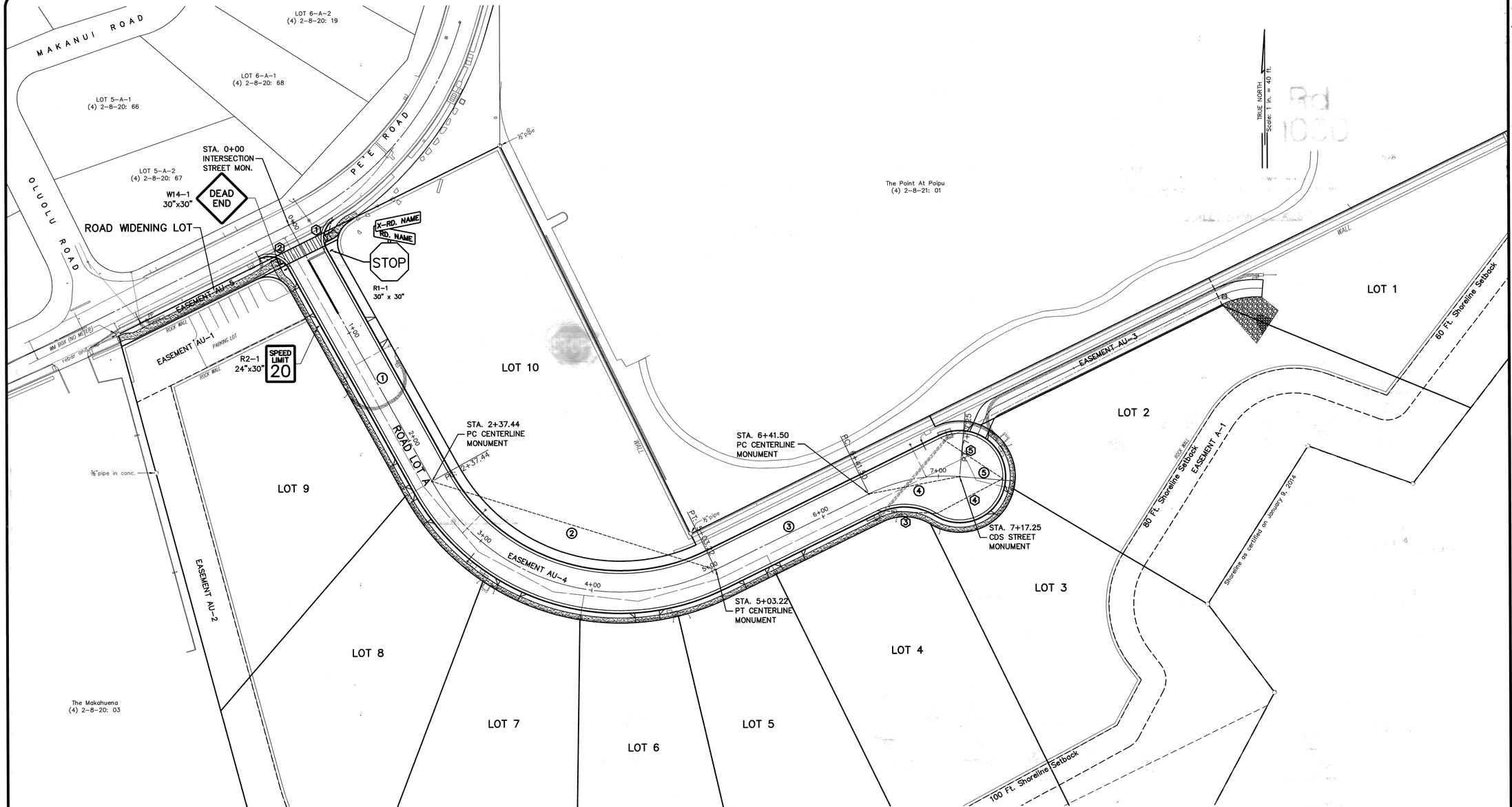
APPROVED:

N/A
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW	SHEET C-21
DRAWN BY: CSL	21 OF 23 SHEETS
DATE: 10/16/2015	

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg



AZIMUTH AND DISTANCE CENTERLINE ROAD

SYMBOL	DESCRIPTION	AZIMUTH	DISTANCE	RADIUS
①	INT. MONUMENT TO PC MONUMENT	331°00'00"	237.44	N/A
②	PC MONUMENT TO PT MONUMENT	287°29'30"	240.96	175.00
③	PT MONUMENT TO PC MONUMENT	243°59'00"	138.28	N/A
④	PC MONUMENT TO CDS MONUMENT	259°29'05"	74.83	140.00
⑤	CDS MONUMENT TO PROPERTY LINE	274°59'10"	45.00	N/A

ROADWAY CURVE DATA

①	②	③	④	⑤
Δ = 86°33'18"	Δ = 87°16'20"	Δ = 58°02'03"	Δ = 119°01'02"	Δ = 119°01'02"
Δ/2 = 43°16'39"	Δ/2 = 43°38'10"	Δ/2 = 29°01'0.5"	Δ/2 = 59°30'31"	Δ/2 = 59°30'31"
R = 20.00	R = 20.00	R = 50.00	R = 35.00	R = 35.00
T = 18.83	T = 19.07	T = 27.74	T = 59.44	T = 59.44
Lc = 30.21	Lc = 30.46	Lc = 50.64	Lc = 72.70	Lc = 72.70
C = 27.42	C = 27.60	C = 48.51	C = 60.32	C = 60.32

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED
BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS
FOR
MAKAHUENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

SIGNAGE AND STRIPING SITE PLAN

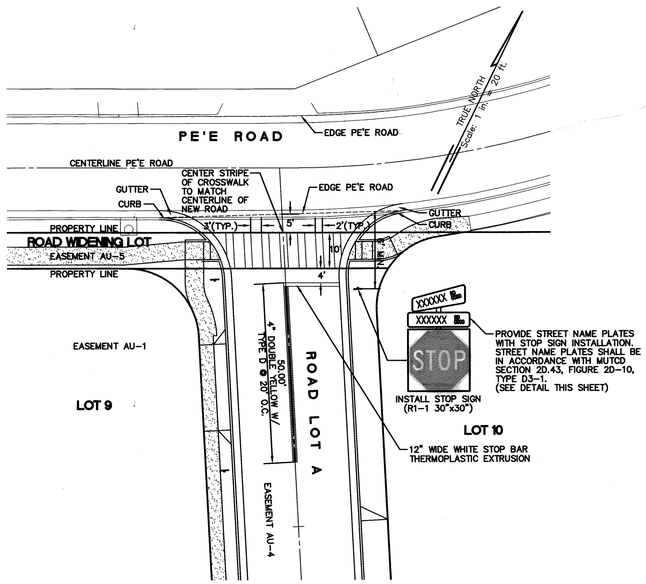
APPROVED:

12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: WW
DRAWN BY: CSC
DATE: 10/16/2015

SHEET
C-22
22 OF 23 SHEETS



CROSSWALK DETAIL
SCALE: 1"=20'

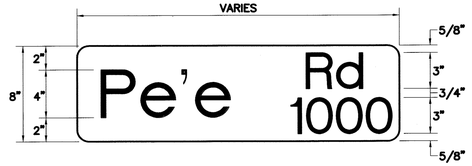
STRIPING NOTES:

1. PAVEMENT STRIPING AND SIGNAGE. AT INTERSECTIONS WITH STOP SIGNS AND STOP BARS, REFER TO STANDARD DETAILS T-9 AND T-10 FOR STRIPING DETAILS AT INTERSECTIONS AND STOP SIGN INSTALLATION. ALL ALL PAVEMENT STRIPING SHALL BE THERMOPLASTIC EXTRUSION MARKING.
2. ALL PAVEMENT STRIPING SHALL BE THERMO PLASTIC EXTRUSION MARKING. PAINTING IS NOT ACCEPTABLE.
3. THE CONTRACTOR SHALL UTILIZE GOOD WORK PRACTICES AND FOLLOW THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA), THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, STATE OF HAWAII (DOSH), THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
4. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES BEFORE ANY EXCAVATION WORK IS DONE.
5. THERMOPLASTIC EXTRUSION (NO PASSING ZONES, CHANNELIZING LINES SOLID LINES OR PAVEMENT ARROWS).
6. THERMOPLASTIC EXTRUSION (TRANSVERSE MEDIAN MARKINGS, TRANSVERSE SHOULDER MARKINGS, CHANNELIZING ISLANDS, OR EDGE STRIPING).
7. THERMOPLASTIC EXTRUSION (GUIDE LINES, STOP LINES, EXTENSION OF EDGE LINES, OR CROSSWALK MARKINGS).
8. STREET NAME PLATES SHALL NOT BE INSTALLED UNTIL ROAD NUMBERS HAVE BEEN ASSIGNED BY DPW HOUSE NUMBERING SECTION.

SIGNING NOTE:

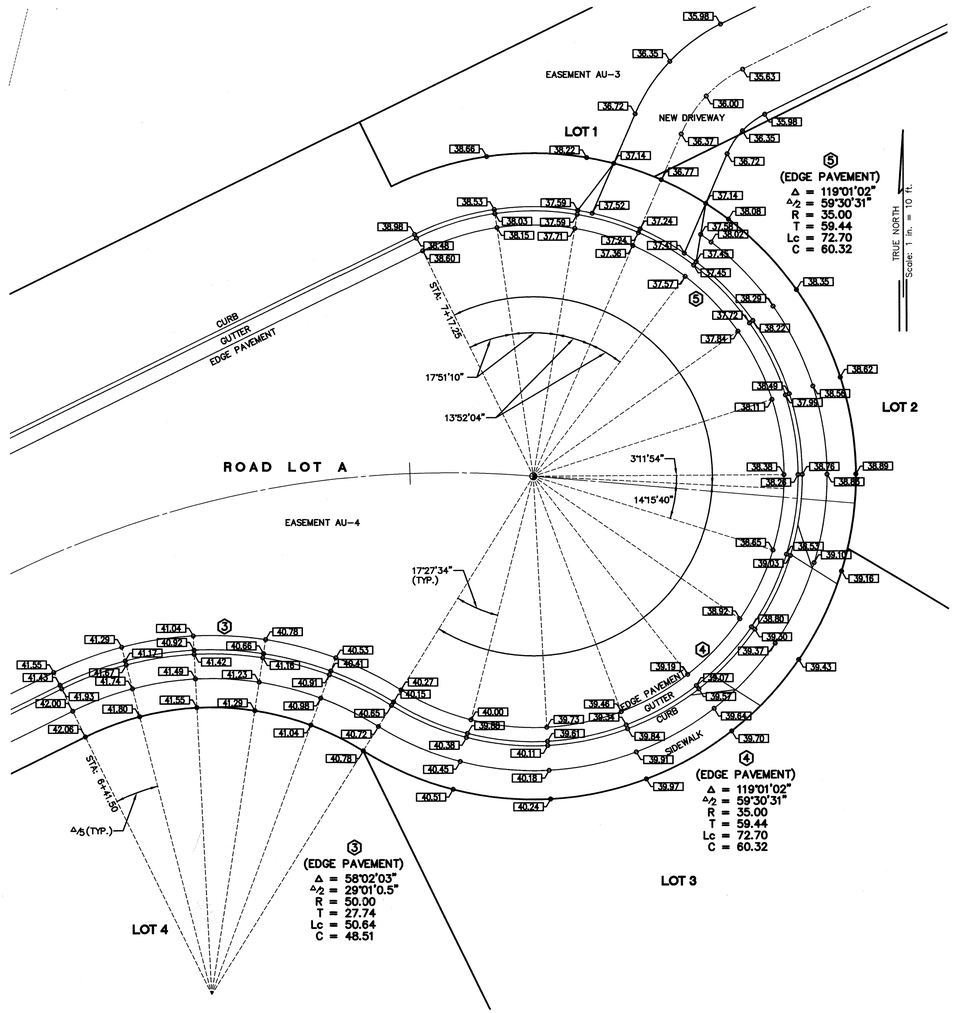
ALL POSTS FOR TRAFFIC SIGNS SHALL HAVE RM-3 FACING TRAFFIC.

SIGN PLATES:
REFER TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

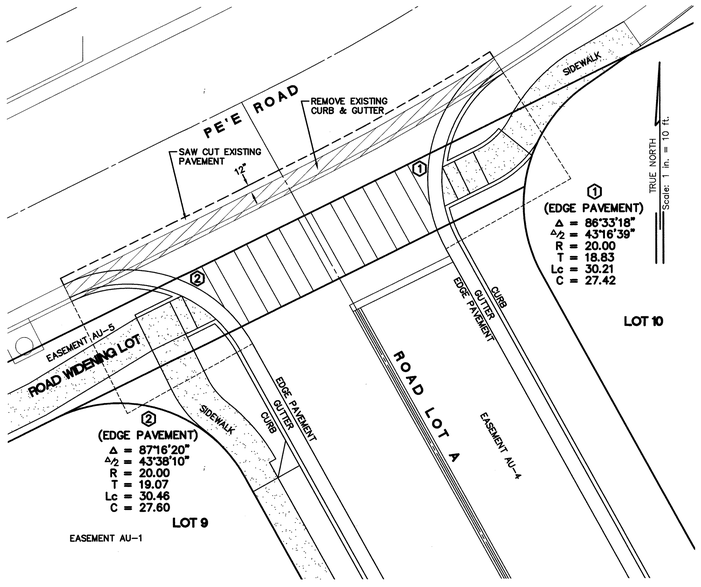


NOTES:
1. 2" LETTERS TO USED FOR ST., DR., HWY., RD...ETC.
2. STREET NUMBERS TO BE DESIGNATED BY THE DEPARTMENT OF PUBLIC WORKS.

STREET NAME DETAILS
SCALE: 1" = 6"



CUL-DE-SAC DETAIL
SCALE: 1"=10'



INTERSECTION DETAIL
SCALE: 1"=10'

ESAKI SURVEYING AND MAPPING, INC.
1610 Haleukana Street
Līhu'e, Kaua'i, Hawai'i 96766
Ph. (808) 246-0625 Fax (808) 246-0229
• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED

REVISIONS

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, USA

MY LICENSE EXPIRES : APRIL, 2016
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Wayne T. Wada

PROJECT:
CONSTRUCTION PLANS FOR
MAKAHŪENA SUBDIVISION
Weliweli, Kōloa, Kaua'i, Hawai'i
TAX MAP KEY: (4) 2-8-21: 41, 44 Thru 68

Owner:
CLDC Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509

STRIPING PLAN & ROADWAY CURVE DATA

APPROVED:
12.17.15
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) — DATE

N/A
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI — DATE

DESIGNED BY: WW	SHEET C-23
DRAWN BY: CSL	23 OF 23 SHEETS
DATE: 10/16/2015	

Project No.: 14-211
Drawing No.: 14-211 CON PLAN.dwg

EXHIBIT N

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

FOR

CIRI Land Development Company

an Alaska corporation, and a wholly owned subsidiary of
Cook Inlet Region Inc., an Alaska Native corporation

PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.
1610 HALEUKANA STREET
LIHU`E, KAUA`I, HAWAI`I 96766
(808) 246-0625

EXHIBIT N

MAKAHU`ENA POINT

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

The Makahu`ena Point property is located at the southernmost point of Kaua`i, in Weliweli, Koloa, and is comprised of 25 lots of record, tax map key (TMK) No. (4) 2-8-021: 044 – 068), one bulk lot, TMK No. (4) 2-8-021: 041, and two unnumbered road lots (the property). CIRI Land Development Company (CLDC) proposes to consolidate the existing lots of record, and re-subdivide the property into 10 single-family residential lots of approximately one acre each, which is far less dense than the currently permitted subdivision. The Makahu`ena Point subdivision is proposed to include:

- An internal road connecting to Pe`e Road, which will provide access to the lots;
- A pedestrian public access trail from Pe`e Road to the shoreline;
- A pedestrian public access trail running laterally along the entire shoreline;
- An open space area at the most makai portion of the property, adjacent to a 10,000 sq. ft. parcel owned by the USA; and
- A public parking area close to Pe`e Road.

The Department of Health (DOH) Wastewater Branch reviews all individual wastewater systems (IWS) for conformance to applicable provisions of Hawai`i Administrative Rules (HAR), Title 11, Chapter 62, entitled Wastewater Systems. The purpose of HAR 11-62 is to protect the public's health and safety by insuring that the disposal of wastewater does not contaminate water sources and attract

insects and rodents. Various requirements in Chapter 62 are used to determine: what type of IWS (if any) will be allowed, location, and the minimum design size. In addition, the Comprehensive Zoning Ordinance of the County of Kauai also addresses utility requirements. In all developments that are not accessible to public sewers, a private sewer disposal system shall be provided that meets the requirements of The County Department of Public Works and the requirements of the State Department of Health. See CZO §8-4.5(c)(3).

HAR 11-62-31.1 (1)(A) states that developments involving dwellings require at least 10,000 square feet of land area for each IWS. Each of the 10 single-family residential lots, based on the "Preliminary Site Layout & Concept Plan" (see enclosed) have an area of at least one acre. One acre is equal to 43,560 square feet, which is enough area for the design to satisfy this requirement.

The property within the County Open zoning district, and also overlaid by the Shore Constraint District. Development within the Shore Constraint District must be assessed to not cause significant harm to the (A) The water quality of the ocean, including but not limited to its clarity, temperature, color, taste and odor; (B) Fish and aquatic habitats; (C) The natural beauty of the area; (D) Navigation, safety or health; or (E) Would not substantially interfere with public use of the ocean waters or underlying lands; and (F) That other facilities are unavailable to the applicant. See CZO §8-12.5

With respect to the flood zones on the property, under the Kauai County Code, all sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems, and discharge from the systems into flood waters.

On-site waste disposal systems should be located to avoid impairment to them or contamination from them during flooding.

The property is also within the Special Management Area. Therefore, conditions may be imposed to address solid and liquid waste treatment disposition and management to minimize adverse effects upon special management area resources.

Consistent with the requirements under Article Xl, Section 1 of the Hawaii State Constitution, the County and the State have a duty to preserve and protect the State's water resources. Therefore, CLDC must comply with all regulatory requirements in developing an IWS plan for the property. I any adverse impacts are expected, CLDC will be required to implement reasonable measures to mitigate those impacts. Such measures will likely be included in any permits issued by the Department of Health for IWS's, and appropriate assessments must be made to ensure permit compliance.

On January 14, 2014, three percolation tests were conducted in different areas of the property. A map showing the approximate locations for each test is attached. While digging all of the test pits, lava bedrock was encountered 1.5 to 2 feet below existing grade. The soil was brownish granular rocky. Percolation rates varied, with test pit #1, #2, and #3 having a percolation rate of 6 minutes per inch, no percolation, and 21 minutes per inch, respectively.

The lava bedrock at shallow depth will not make seepage pits a practical option since the design would involve deep depths. Therefore, absorption beds will be designed since they can be constructed at shallower depths. Soil fill will need to be added in the area of the IWS in order to comply with HAR provisions.

HAR 11-62-34 (c)(1)(B) requires absorption bed systems to be constructed in soils with percolation rates of 60 minutes per inch or faster. The absorption bed systems are to be located on the property where there is a vertical separation of three feet or more between the bottom of the absorption bed and the lava bedrock (HAR 11-62-34 (c)(1)(C)), and 18 inches from the bottom of the absorption bed to the finished grade (HAR 11-62-34 (c)(1)(H)). Absorption beds must be constructed in stabilized fill (HAR 11-62-34 (c)(1)(D)) with a slope gradient of 8% or less (HAR 11-62-34 (c)(1)(I)). The property will be graded as shown in the "Preliminary Site Layout & Grading Plan" (enclosed), stabilized, and percolation tests will be redone to determine the required size of the absorption bed. Depending on the proposed location of the IWS, there is a possibility that slight adjustments to the finish grade will be necessary to meet separation requirements. Percolation tests will need to be conducted on all lots to assure sufficient rate and vertical separation for the absorption bed.

Each of the 10 lots will have its own IWS which will include an absorption bed and septic tank. Wastewater from the dwelling flows into the septic tank and is held there for a period of time, which allows bacteria to begin breaking down some of the solids. During this time, the oil and grease in the wastewater floats to the surface where they form a scum layer, the solids in the wastewater sink to the bottom, forming a sludge layer, and the clear water in the middle flows to the absorption bed and percolates into the ground. Biological and chemical additives are not needed to aid or accelerate decomposition. Scum and sludge must be removed periodically to keep them from entering and clogging the absorption bed.

No person may use an IWS until authorized in writing by the Director of the Department of Health. However, before the Department of Health approves the operation of an IWS, the following requirements must be satisfied:

(1) An operation and maintenance manual developed pursuant to HAR section 11-62-23.1(d)(2) as applicable shall be submitted and approved by the director; and

(2) The owner of the individual wastewater system shall certify that the individual wastewater system shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual. The certification shall include a statement that upon sale or transfer of ownership of the individual wastewater system, the sale or transfer of ownership of the individual wastewater system, the sale or transfer will include the appropriate transfer documents and provisions binding the new owner to the operation and maintenance manual. See HAR 11-62-31.1(e)

A properly maintained septic system should be inspected every year, and pumped approximately every three years, depending upon the volume of sewage entering it.

Each IWS will be designed for a five bedroom dwelling, which will have a maximum projected flow of 1,000 gallons per day (200 gallons per day per bedroom). Based on that projected flow, each system will require a 1,250 gallon septic tank (HAR 11-62-33.1 (a)(5)). The absorption bed area will be determined after the lots are graded and percolation tests are redone. Assuming the worst allowable percolation rate, the minimum design absorption area would be 1,680

square feet (see attached design calculations), which is much less than the size of the one acre lots they would be designed for.

HAR 11-62-32 states that all IWS's need to maintain minimum setback distances as indicated in Table 2 of Appendix F (enclosed). The septic tank and absorption bed will have minimum setbacks from:

- the wall line of any structure or building;
- property line;
- stream, the ocean at the vegetation line, pond, lake, or other surface water body;
- large trees;
- other IWS's;
- potable water sources serving public water systems.

The proposed use of individual wastewater systems for the 10-lot residential development is feasible for the property. The use of IWS is consistent with careful stewardship of Kauai's land and waters. The proposed use of IWS for this property will prevent any impairment to the ocean or any water underlying the property, as no waste materials will leach into the ground or ocean. Similarly, the IWS will not result in any adverse environmental effects to the public or adjacent areas. As such, there should be no discernible impact on the natural resources of the State. Strict compliance with the Department of Health regulations for the approval and certification of an IWS should be required to minimize any adverse effects on Special management Area resources.

DESIGN REQUIREMENTS:

Area Classification: Critical Wastewater Disposal Area

Lot Size: 362,332 sq,ft.

IWS Permitted: 1/10,000 sq,ft. = 36

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

FLOW:

5 Bedroom Residence
Design for 5 Bedrooms
5 Bedrooms x 200 gpd/bdrm = 1,000 gpd

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature
ESAKI SURVEYING & MAPPING, INC.
EXPIRES: APRIL 30, 2014

TANK CAPACITY:

1,250 Gallon Minimum for 5 Bedrooms
(Chapter 62-33.1, Rules Amending Title 11 Hawaii Administrative Rules)
Use 1,500 Gallon IAPMO Certified Septic Tank

PERCOLATION TEST INFORMATION:

Date of Test:	January 19, 2014
Tested By:	Wes Chibo
Percolation Rate:	60 mpi (minimum allowable rate)
Soil Description:	0-18" below grade - Brownish granular rocky, 18" below grade - Lava Bedrock
Depth of Water:	~19' above sea level

ABSORPTION FIELD REQUIREMENTS:

For 60 mpi (From Appendix F, Toble 3, Hawaii Administrative Rules, Title 11, Chapter 62)
Use 330 sq, ft./bedroom
Absorption Area Required = (5 bedrooms) x (330 sq, ft./bedroom) = 1,650 sq, ft.
Use gravelless absorption bed with eight lines and chambers
Total length required = 1,650 sq, ft. / 24 ft. = 68.75 ft.
Use 8 lines, 70.0 ft. long
Total absorption area provided = 24.0 ft. x 70.0 ft. = 1,680 sq,ft.

NOTE: Soil fill will need to be added to site.
*3' minimum vertical separation from bottom of bed to groundwater/bedrock.
*Bottom of bed must be at least 18" below finished grade.
*IWS needs to be located 50 feet away from the ocean at the vegetation line.

ESAKI SURVEYING & MAPPING, INC.
1610 Haleukana Street
Lihue, Hawaii 96766
(808) 246-0625

DESIGN CRITERIA
Tax Map Key: (4) 2-8-21: 41
Owner: CIRI Land Development Co.
Date: January 2014

Drawn By: CH | Checked By: WW | Sheet 1 Of 11

TABLE 2
April 15, 1997

Minimum Horizontal Distance From	Cesspool (ft)	Treatment Unit (ft)	Seepage Pit (ft)	Soil Absorption System (ft)
Wall line of any structure or building	5	5	5	5
Property line	9	5	9	5
Stream, the ocean at the vegetation line, pond, lake, or other surface water body	50	50	50	50
Large trees	10	5	10	10
Treatment unit	5	5	5	5
Seepage pit	18	5	12	5
Cesspool	18	5	18	5
Soil absorption system	5	5	5	5
Potable water sources serving public water systems	1000	500	1000	1000

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM

FALLING HEAD TEST PROCEDURE

1. Preparing Percolation Test Hole(s)
   1. Dig or bore a hole, four to twelve inches in diameter with vertical walls to the approximate depth of the soil absorption system (bottom of trench or bed).
   2. Scratch the side wall and bottom to remove any smeared soil and remove loose material.
   3. Place one inch of coarse sand or gravel on bottom.

B. Determine Percolation Rate
   1. Place twelve inches of water in hole and determine time to seep away. Record this time on the site evaluation form.
   2. Repeat step B.1. above. Also record this time on the site evaluation form.
   3. If the time of the second test is less than 10 minutes go to Step C, if not skip to Step D.

C. Sandy (granular) Soils
   1. Establish a fixed reference point, add water to six inches above gravel and measure water level drops every ten minutes for 1 hour.
   2. Use a shorter time interval if first six inches seeps away in ten minutes or less.
   3. Refill when necessary, do not exceed six inches of water.
   4. Record time intervals and water drops on site evaluation form.
   5. Use final water level drop interval to calculate percolation rate. (Step E)

D. Other Soils (non-granular, e.g. silt, loams & clays)
   1. Maintain at least twelve inches of water in the hole for at least four hours to presoak soil.
   2. Do not remove water remaining after four hours.
   3. Permit soil to swell at least 12 hours. (Dry clayey soils should be soaked and permitted to swell for longer periods to obtain stabilized percolation rates).
   4. After swelling, remove loose material on top of gravel.
   5. Use fixed referenced point, adjust water level to six inches above gravel and measure water level drop.
   6. If the first six inches of water seeps away in less than 30 minutes, measure water level drops every ten-minutes and run for one hour.
   7. If the first six inches of water takes longer than 20 minutes to seep away, use 30 minute time intervals for four hours or until two successive drops do not vary by more than one-sixteenth inch (stabilized rate).
   8. Refill with water only when necessary, but no adjustment during last three readings exeept to the limit of the last drop. Do no exceed six inches of water.

E. Use final drop interval to calculate percolation rate and record on site evaluation form:

$$\frac{\text{Time Interval}}{\text{Water Level Drop}} = \text{Percolation Rate}$$

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: _____ Test Performed by: _____

Owner: _____ TMK: (____) ____-____-____:____

Elevation: _____ feet
Depth to Groundwater Table: _____ feet below grade
Depth to Bedrock (if observed): _____ feet below grade
Diameter of Hole: _____ inches
Depth to Hole Bottom: _____ feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)

PERCOLATION READINGS:
Time 12 inches of water to seep away: _____ minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

____ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

____ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches

Percolation Rate (time/final water level drop): _____ minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the hottom of the soil absorption system and the groundwater table or any other limiting layer.

_____ _____
Engineer's Signature/Stamp Date

#1

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 8:45AM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 28 feet
Depth to Groundwater Table: >20 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: 18 minutes
Time 12 inches of water to seep away: 60 minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

√ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	8 3/8	10 MIN	1 13/16
10 MIN	3 5/8	10 MIN	1 13/16
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 13/16		
10 MIN	1 13/16		

Percolation Rate (time/final water level drop): 5.6 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#2

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 12:42 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 19 feet
Depth to Groundwater Table: >15 feet below grade
Depth to Bedrock (if observed): 1.5 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 1.5 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-18	BROWNISH, GRANULAR ROCKY
18	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 3/16		
10 MIN	5/8		
10 MIN	5/8		
10 MIN	0		

Percolation Rate (time/final water level drop): NONE minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#3

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 2:45 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 43 feet
Depth to Groundwater Table: 720 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3 5/8	10 MIN	1/2
10 MIN	1 3/16	10 MIN	1/2
10 MIN	1 3/16		
10 MIN	15/16		
10 MIN	11/16		
10 MIN	1/2		

Percolation Rate (time/final water level drop): 20.8 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

PERCOLATION TEST PIT LOCATIONS

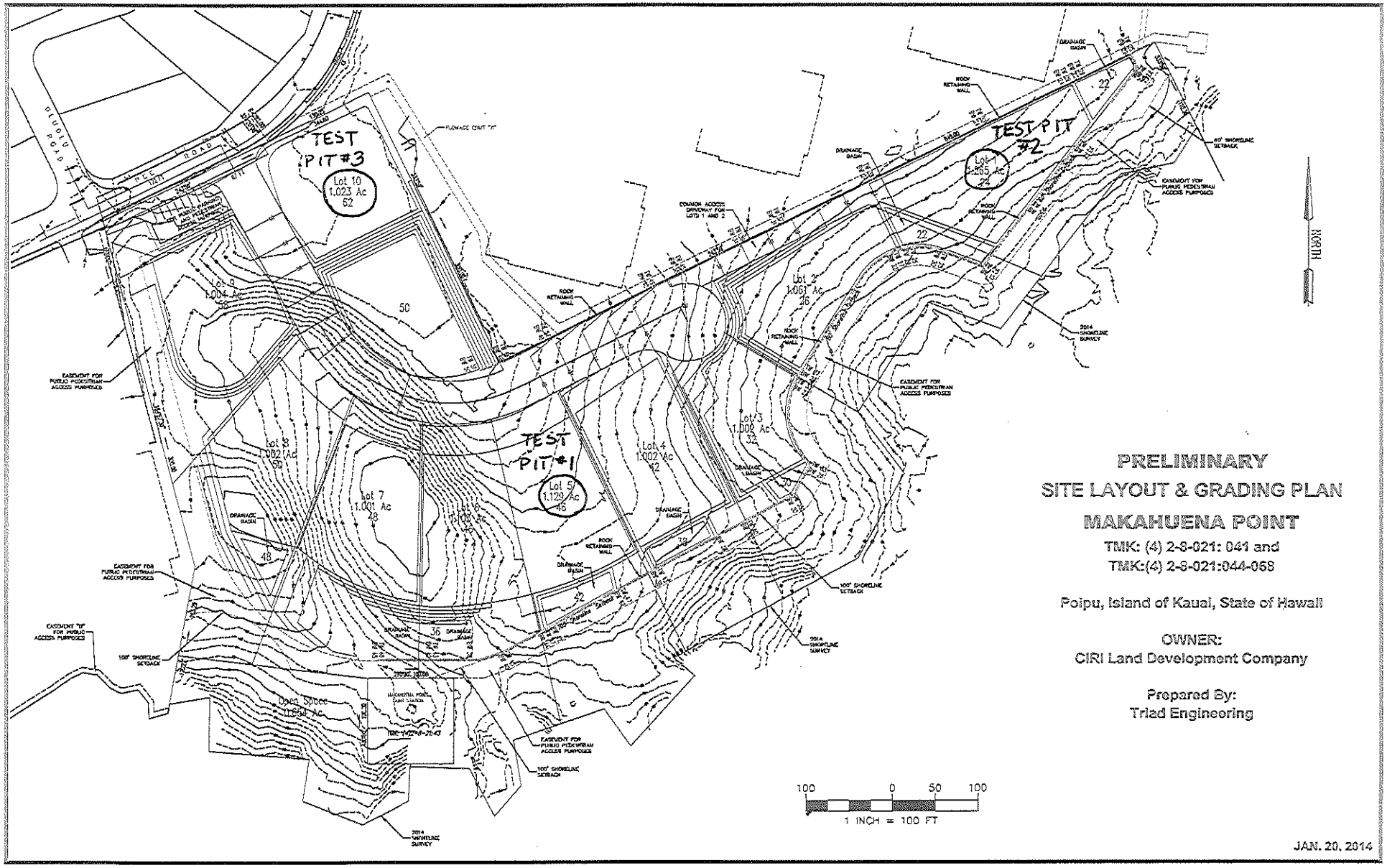


EXHIBIT O-1

B.D. NEAL & ASSOCIATES
Applied Meteorology • Air Quality • Computer Science
P.O. BOX 1808 • KAILUA-KONA, HAWAII 96745 • TELPHONE (808) 329-1627 • FAX (808) 325-6739
EMAIL: bdneal@bdneal.com

December 20, 2013

Attn: Mr. Dave Pfeifer
CIRI Land Development Company
P.O. Box 93330
Anchorage, Alaska 99509-3330

Subject: Makahuena Point Project
Air Quality Impact Assessment

Dear Mr. Pfeifer:

In response to your request, we have examined the potential air quality impacts related to the proposed Makahuena Point Project located at Poipu, Kauai. The results of this examination along with background information related to this issue and recommended mitigation measures are summarized below.

Project Description

CIRI Land Development Company (CLDC) is proposing to consolidate and re-subdivide lots on its Makahuena Point property in the Koloa District on the island of Kauai. CLDC is an Alaska corporation, and a wholly owned subsidiary of Cook Inlet Region Inc. (CIRI). CIRI is an Alaska Native corporation and one of the 12 Alaska-based regional corporations established by the Alaska Native Claims Settlement Act of 1971. CIRI was established to benefit Alaska Natives who have ties to the Cook Inlet Region of Alaska, and is owned by more than 8,100 Alaska Native shareholders of predominately Athabascan and Southeast Indian, Inupiat, Yup'ik Eskimo, Alutiiq and Aleut descent. CLDC, as the land development and investment arm of CIRI, is dedicated to making sound, long-term real estate investments in properties that are capable of providing a sustainable return to fulfill CIRI's mission to benefit current and future Native shareholders.

The CLDC property comprises approximately 13 acres of land along the coast at Poipu with 25 lots of record (tax map key (TMK) No. (4) 2-8-021: 044 - 068), one bulk lot (TMK No. (4) 2-8-021: 041), and two unnumbered road lots. The consolidation and re-subdivision will result in 10 single-family residential lots along

with associated open space and infrastructure. Access to the new subdivision will be via Pe'e Road.

Ambient Air Quality Standards

Both federal and state standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated including: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii air quality standards are comparable to the national standards except those for nitrogen dioxide and carbon monoxide which are more stringent than the national standards.

Regional and Local Climatology

Regional and local climate together with the amount and type of human activity often dictate the air quality of a given location. The climate of the Poipu area is very much affected by its situation along the southern coast of Kauai. Table 1 shows monthly mean wind speed and direction data for Lihue Airport, which is about 10 miles to the northeast. These data can be expected to be reasonably representative of the project site. Winds are predominantly trade winds from the northeast and provide good ventilation much of the time. Monthly mean speeds are about 13 to 14 mph in summer and about 11 to 12 mph during the winter months. Daily wind speeds typically vary between about 10 and 25 miles per hour.

Temperatures in the Poipu area are generally very consistent and mild. Average daily temperatures at Lihue Airport, which are not significantly different from the Poipu area, are about 70°F to 75°F. Winter months are only a few degrees cooler than summer.

As indicated in Table 2, average annual rainfall in the Poipu area amounts to about 34 inches, which means it is a moderately dry location. This is based on more than 50 years of data collected at nearby Puuhi. Summer months are the driest with an average of about 1 to 2 inches per month, while winter months receive about 4 to 5 inches.

Existing Air Quality Conditions

Air quality in the vicinity of the project site presently is mostly affected by emissions from natural, industrial,

agricultural and/or motor vehicle sources. The only air quality monitoring data that is presently collected on Kauai by the Hawaii Department of Health is obtained at Niumalu, which is about 7 miles to the northeast of the Poipu area. The purpose of this monitoring station is primarily to monitor emissions from cruise ships visiting Nawiliwili Harbor. Monitoring equipment is installed at the station to measure fine particulate, sulfur dioxide, nitrogen dioxide and carbon monoxide. This station only began operations in April 2011, so there is only a limited record available. The data reported to date suggest that air quality standards are currently being met, although a few higher concentrations of sulfur dioxide have been measured. Air quality in the Poipu area is believed to be good at the present time.

Air Quality Impacts of Project

The primary concern for this project with respect to air quality is the short-term direct and indirect impacts that could potentially occur during project construction. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from site clearing, soil excavation, aggregate processing and vehicle movement; and (2) exhaust emissions from the operation of on-site construction equipment. Indirectly, there also could be short-term air quality impacts from the disruption of traffic on nearby roadways, from slow-moving construction equipment traveling to and from the project site, and from a temporary increase in local traffic caused by commuting construction workers.

For this project, the potential for offsite fugitive dust impacts during project construction is perhaps the most significant. This is because: 1) the project site borders existing residential units on the north and west; 2) the project site is located in a windy and relatively dry area; and 3) the project site is rocky with thin layers of fine red soil typical for much of Kauai. Although the prevailing trade winds from the northeast will tend to move any fugitive dust emissions away from areas to the north of the site, residential areas to the west (The Makahuena Condominiums) could be impacted. Areas to the north or east may also be impacted at times when the occasional winds from the south or southwest occur.

Hawaii Administrative Rules, Section 11-60.1-33 state, in part, that no person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions and that no

person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates. Failure to comply with the fugitive dust requirements may result in civil and administrative fines of up to $25,000 per day per violation. Thus, to avoid potential violations of these rules, and given the sensitive nature of the property, a comprehensive dust control plan should be prepared prior to beginning construction. For this particular project, it may be appropriate to consider going beyond the norm or the traditional dust control measures in an effort to avoid or reduce conflicts.

The usual fugitive dust control measures for construction activities include:

- Watering of land clearing and earth-moving activities
- Applying water or dust suppressants on unpaved roads and material stockpiles
- Installing dust screens or wind barriers around the site boundary
- Limiting vehicle speeds onsite
- Paving or covering ingress and egress points to the site with crushed rock or other temporary covering material
- Covering all moving, open-bodied trucks transporting dusty materials
- Keeping adjacent paved roads clean from soil tracked from the site (road cleaning and/or tire washing)
- Limiting the amount of exposed areas through planning and timing of project phases
- Mulching or chemically stabilizing inactive areas that have been worked.

Installing dust screens as suggested above, while commonly done, would likely not be overly effective in controlling dust if used as the sole means of addressing fugitive dust. In addition, some find dust screens aesthetically displeasing.

Additional dust control measures could include:

- Scheduling land clearing and earth moving activities for periods of the year that are less windy and more wet (winter months in this case)
- Avoiding any rock crushing, screening or stockpiling activities onsite

- If offsite fill material is required, wetting the material prior to trucking it to the site so that it has a high moisture content
- Paving of any permanent parking areas and/or establishment of landscaping as early in the construction schedule as possible

Although the winter months are wetter and thus more advantageous for dust control, rainfall is not so excessive so as to impede site earth work.

Even with an extensive dust control program, given the nature of the project site and the nearby residential areas, it may be inevitable that there will be some offsite impacts due to dust during periods of site clearing and earth moving activities. Therefore, it may be appropriate to consider monitoring dust at the site boundaries so as to evaluate and document the effectiveness of dust control measures.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered and emits nitrogen oxides and other air pollutants. The engines for this equipment should be kept well-tuned and not allowed to operate or idle excessively.

Slow-moving construction vehicles on roadways leading to and from the project site could obstruct the normal flow of traffic to such an extent that overall vehicular emissions are increased. This impact can be mitigated by moving heavy construction equipment during periods of low traffic volume.

In summary, even with best efforts, short-term impacts from fugitive dust during initial project construction, i.e., during subdivision improvements, may potentially occur. Because of this, it may be appropriate and advisable to go beyond the normal dust control measures in preparing the project dust control plan. It should be anticipated that fugitive dust control and mitigation during project construction will likely require extra time, effort and cost.

Please call me if you have any questions concerning the information presented herein or if you wish to discuss this matter further.

Very truly yours,

Barry D. Neal

Barry D. Neal
Certified Consulting
Meteorologist

cc: Jennifer A. Benck (Carlsmith Ball)

Table 1

MONTHLY MEAN WIND SPEED AND PREVAILING DIRECTION FOR LIHUE AIRPORT, KAUAI

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (mph)	11.3	12.0	12.8	13.7	13.4	13.6	14.1	13.4	12.1	11.9	12.7	12.2	12.8
Direction	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes: Mean wind speeds are based on 32 years of data. Mean wind direction based on 20 years of data.

Source: "Local Climatological Data, Annual Summary With Comparative Data, Lihue, Hawaii, 1999", U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service, National Climatic Center, Asheville, NC.

Table 2

MONTHLY MEAN PRECIPITATION
FOR PUUHI, KAUAI

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Total Precipitation (inches)	5.15	3.41	4.08	2.24	1.87	1.12	1.60	1.92	2.09	2.62	3.49	4.72	34.31

Notes: Based on 54 years of data from the 1990's.

Source: "Climatic Summary of the United States, Supplement for 1951 through 1960, Hawaii and Pacific", U.S. Department of Commerce, Weather Bureau, Washington, D.C., 1965.

EXHIBIT O-2

GEOLOGICAL INVESTIGATION
MAKAHUENA POINT PROPERTY, KAUAI, HAWAII

Report Prepared for CIRI Land Development Company (CLDC)

by

Charles T. Blay, Ph.D., Geologist
TEOK Investigations
Poipu, Kauai

January 22, 2014
Revised February 01, 2014
Revised February 10, 2014

INTRODUCTION

General Statement:

The Makahuena Point property, occupying approximately 13 acres of coastal land at the extreme southern tip of the island of Kauai, was examined geologically over a three-day period of time in early January 2014. Principal objectives of the investigation were to describe the site's geological features in order to evaluate its stability. The character and stability of the large heavily-vegetated depression occupying the northwestern portion of the property and that of a prominent collapsed lava tube located near the central portion of the property's coastal zone were of particular interest.

Methodology:

A base map was constructed utilizing Google Earth photographic images and a portion of the 1996 edition of the Koloa, U.S. Geological Survey, 7.5-minute quadrangle map (Figures 1 and 2). The orientation of lava rock layers and related geological features were measured, to the nearest degree of strike and dip, using a standard geological compass. The "T" shaped strike and dip symbols shown in Figure 1 indicate the trend (long "strike" line) and direction of inclination (short line at right angle to strike line); the amount of inclination is indicated in degrees, from 0 to 90. Locations were established to the nearest second of latitude and lon-

gitude utilizing a hand held GPS. Geological features, especially those associated with the collapsed lava tube, are displayed in Photos 2-6. No observations were made below sea level along the coast. Also, owing to a thick weedy vegetation cover no geological observations could be made within the large, oval-shaped depression occupying the northwestern portion of the property.

GEOLOGY

General Geological Setting:

The Makahuena Point area of Kauai is composed of basaltic, pahoehoe style lava flows of the rejuvenated stage Koloa Volcanics Formation, the island's youngest volcanic rocks (Macdonald, et al, 1960, Garcia et al, 2013, Blay & Siemers, 2013). Koloa Formation volcanic vents and associated lava flows in the general vicinity of the Makahuena Point property range from as old as 1.25 million years to as young as 150 thousand years. A series of volcanic cinder and spatter cones immediately north of the property, the Poipu Volcanic Cones, have been geologically dated to have last erupted 320 thousand years ago (Garcia et al, 2013). A considerable portion, if not all, of the lava flows within the Makahuena Point property erupted from one or more of those cones. The closest volcanic cone, Pihakekuka Crater (present location of Poipu Crater Resort; Photo 1), north of the Makahuena Point property probably contributed the bulk of the lava now covering the property.

Site Geology:

Lava flows of the Koloa Volcanics are well exposed all along the rugged coastal zone but are covered by soil layers a short distance landward (Figure 1, Photos 1 and 2). Across most of the coastal zone thick, laterally extensive lava flows, the most characteristic feature of the property, dip gently seaward, mostly at only 2 to 5 degrees (Figure 2, Photo 2). There is moderate undercutting of the flows by wave erosion along the irregular, rocky shoreline.

A large, thickly-vegetated, 200 x 500 ft, oval depression, with up to 30 feet of relief, occupies the northwestern portion of the property. A distinct, collapsed, elongated lava tube, perhaps the geologically most interesting feature within the property, is well exposed at the coast near the western boundary of the property (Figures 1-2, Photos 3-4). Both the oval depression and the coastal collapsed lava tube feature are likely the result of a large connected lava tube that collapsed completely. It is highly unlikely that the vegetated oval depression is a volcanic crater. At

the coast the collapsed lava tube is 100-120 feet wide and 20-25 feet deep. It is partly filled both with large, randomly oriented, angular blocks of lava rock, and with post-tube-collapse lava flows, both of geological origin and now stable. The area of the large oval depression is thickly vegetated, and unlike the geologically-filled coastal lava tube structure, no lava rock exposures were observed within the depression.

No open lava tubes were observed above sea level. Portions of the coarse lava block rubble were in the past partly covered with lime cement; however it does not appear that it was done to maintain stability of natural geological rubble filling the collapsed tube. Locally the oxidized and disarticulated fragments of an iron netting of some sort are present, but are of unknown origin.

At the coast and immediately landward of the coastal exposures, margins of the lava tube are well defined by a thin, 3-4 ft wide zone of vertical to overturned lava rock layers (Figures 5 and 6). At such exposures, post-tube-collapse lava rock of geological origin can also be observed partly filling the tube structure.

DISCUSSION

Broad, laterally extensive lava flows and associated lava tubes are typical products of Hawaiian style volcanic eruptions. They represent the non-explosive, effusive-style eruption of liquid lava (magma), in contrast to the explosive eruption of cinder and ash of volcanoes, such as those occurring in continental localities and along the “Ring of Fire” that rims the Pacific Ocean. Lava tubes develop in order to insulate the liquid magma as it flows down slope away from the emitting vents and cones, allowing the magma to extend great distances from its source. Some tubes are preserved as elongated open cave-like features. Others collapse and are partly to completely filled by solidified blocks of lava rock and post-collapse lava flows. They are the products of the very dynamic process of the effusive eruption of magma and its emplacement away from its vent or fissure source.

The lava tube feature present on the Makahuena Point property is an example of a dynamic tube that formed, collapsed almost entirely and then was partly to almost entirely filled with both lava block rubble and lava flows which filled the tube during, and subsequent to, its collapse. Tube formation and collapse may have occurred over and over again until the lava finally stopped flowing through the tube and into its collapsed depression. Today, the composite collapsed tube structure is represented by a subtle, mostly geologically-filled, elongated surface depression.

Importantly, it appears that the tube is completely collapsed. No open tube could be delineated, based on the surface expression of both the well-exposed coastal zone and the inland, soil and vegetation covered oval-shaped depression. At present both features, the coastal partly-filled lava tube and the vegetation-covered oval-shaped depression appear stable.

SUMMARY AND CONCLUSIONS

The Makahuena Point property, occupying approximately 13 acres of coastal land at the southern tip of Kauai, was examined geologically in early January 2014. Principal objectives of the investigation were to describe the site's geological features in order to evaluate its stability.

The property is underlain by extensive lava flows of the geological formation known as the Koloa Volcanics, which locally has been dated to have formed approximately 320 thousand years ago. Most, if not all, of the lava formed from magma flowing out of a series of volcanic vents and cones located immediately north of Makahuena Point.

A prominent, northwest-trending collapsed lava tube is present at the coast near the western boundary of the property. It is displayed as a well-exposed, largely filled, elongated depression. The margins of the 100-120 ft wide tube structure are well defined by narrow (3-4 ft) zones of vertical to overturned lava rock layers. The 20-25 ft deep collapsed tube is partly filled with coarse lava block rubble and post-collapse lava flows of geological origin. There is no evidence of the lava tube structure having acted as a vent for fluids or sediments flowing into the ocean.

Inland, to the northwest, is a large, oval-shaped depression that is obscured vegetation. The 200 ft wide, 500 ft long depression displays a relief of 20-30 feet. Lava rocks were not observed within the depression owing to its soil and plant cover. It is likely part of the same lava tube that is evident at the coast, is completely collapsed, and appears stable.

The obvious lava tube structure of the Makahuena Point property appears to have collapsed completely. At the coast it is partly filled with lava block rubble and lava flows that were emplaced as the tube was actively collapsing and after various stages of collapse. At present it is a stable, no longer collapsing, feature. No open lava tubes were observed during the geological field investigation.

Today the Makahuena Point collapsed lava tube appears stable, with little or no potential for additional collapse. However, the specific area of the collapsed tube near the coast is not recommended as a site for the emplacement of large structures. In its current state, the coastal collapsed lava tube structure is one of Kauai Island's more interesting geological features.

REFERENCES CITED

Blay, C. and Siemers, R., 2013, Kauai's Geologic History: A Simplified Overview: TEOK Investigations, Koloa, Hawaii, 161 pp.

Garcia, M.O., Swinnard, L., Weis, D., Greene, A.R., Tagami, T., Sano, H., and Gandy, C.E., 2010, Petrology, geochemistry and geochronology of Kauai lavas over 4.5 myr: Implications for the origin of rejuvenated volcanism and evolution of the Hawaiian plume: Journal of Petrology, v. 51, no. 7, p. 1507-1540.

Macdonald, G.A., Davis, D.A., and COX, D.C., 1960, Geology and ground-water resources of the island of Kauai, Hawaii: Hawaii Division of Hydrology Bulletin 13, 212 pp, color geologic map.



Figure 1. Google map image of Makahuena Point property, Kauai. Location of property boundary is approximate. Elevation contours are in feet above sea level. Note general location of collapsed lava tube well exposed at shoreline which aligns northward with a large, extensively vegetated, elongate depression.

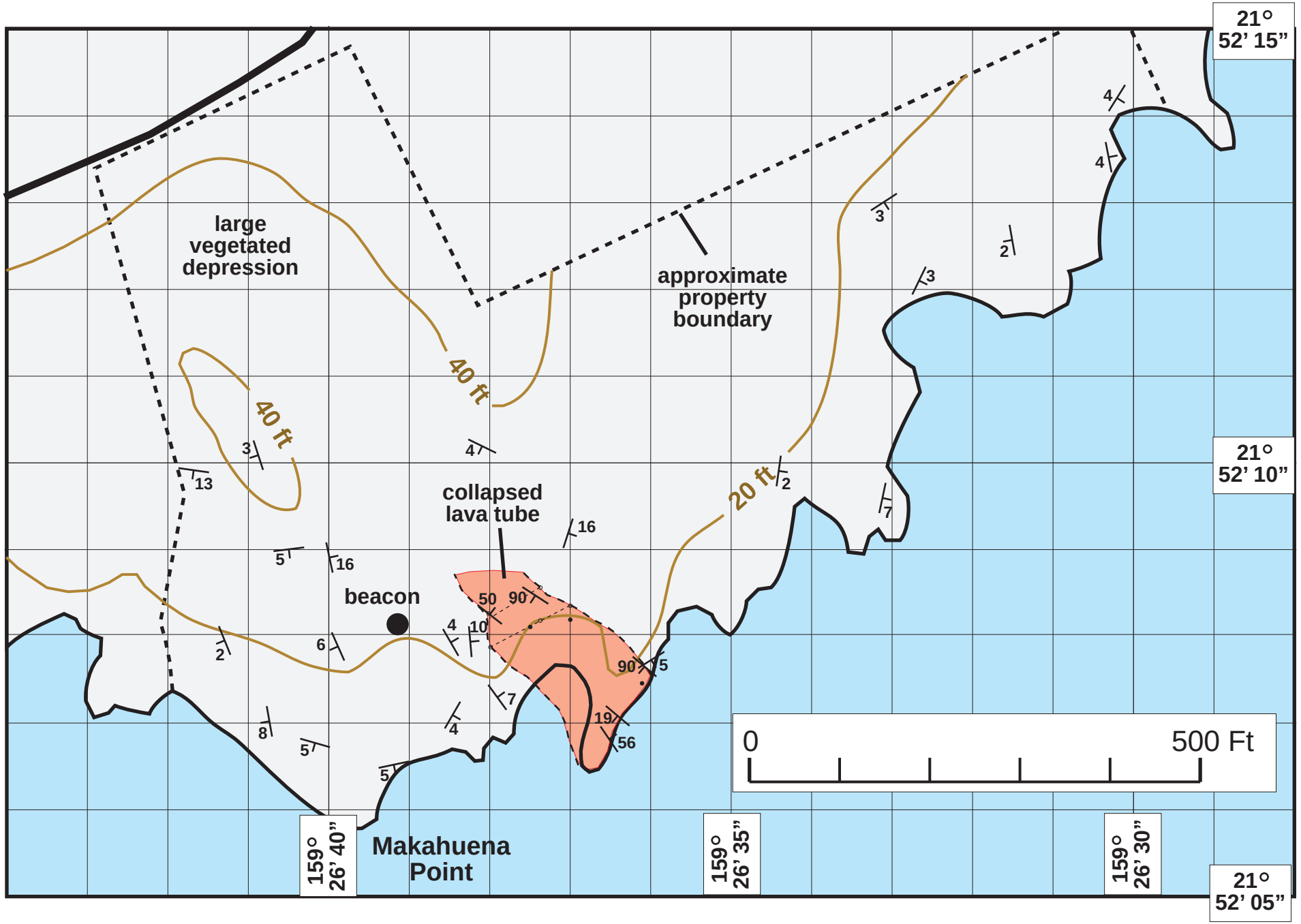


Figure 2. Locality map of Makahuena Point property, Kauai. Property boundary is approximate. Elevation contours are in feet above sea level. Note general location of collapsed lava tube well exposed at shoreline which aligns northward with a large, extensively vegetated, elongate depression. Strike and dip symbols indicate general orientation of lava flows. Grid is in degrees, minutes and seconds of latitude and longitude.



Photo 1. Google Earth image of Makahuena Point property location. Pihakekua Crater (present location of Poipu Crater Resort) most likely produced much of the lava of the Makahena Pt. area.

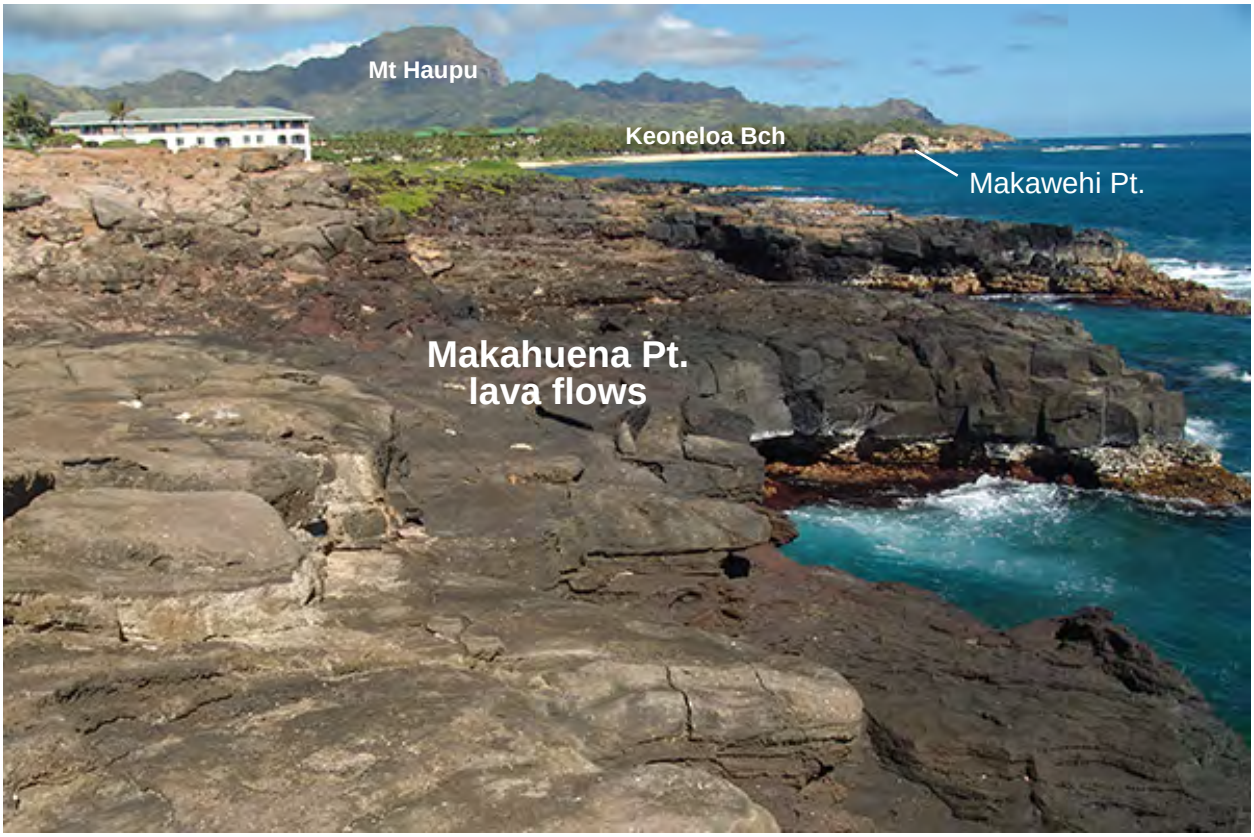


Photo 2. View east from Makahuena Point displaying the gently inclined lava flowspresent across most of the Makahuena Point property. Flows dip seaward mostly at less than 5 degrees. Keoneloa ("Shipwrecks") Beach and Makawehi Pt. is present along the distant shoreline with Haupu Mt. in the far distance.



Photo 3. Coastal view of central portion of collapsed lava tube partly filled with coarse lava block rubble and post collapse lava flows.

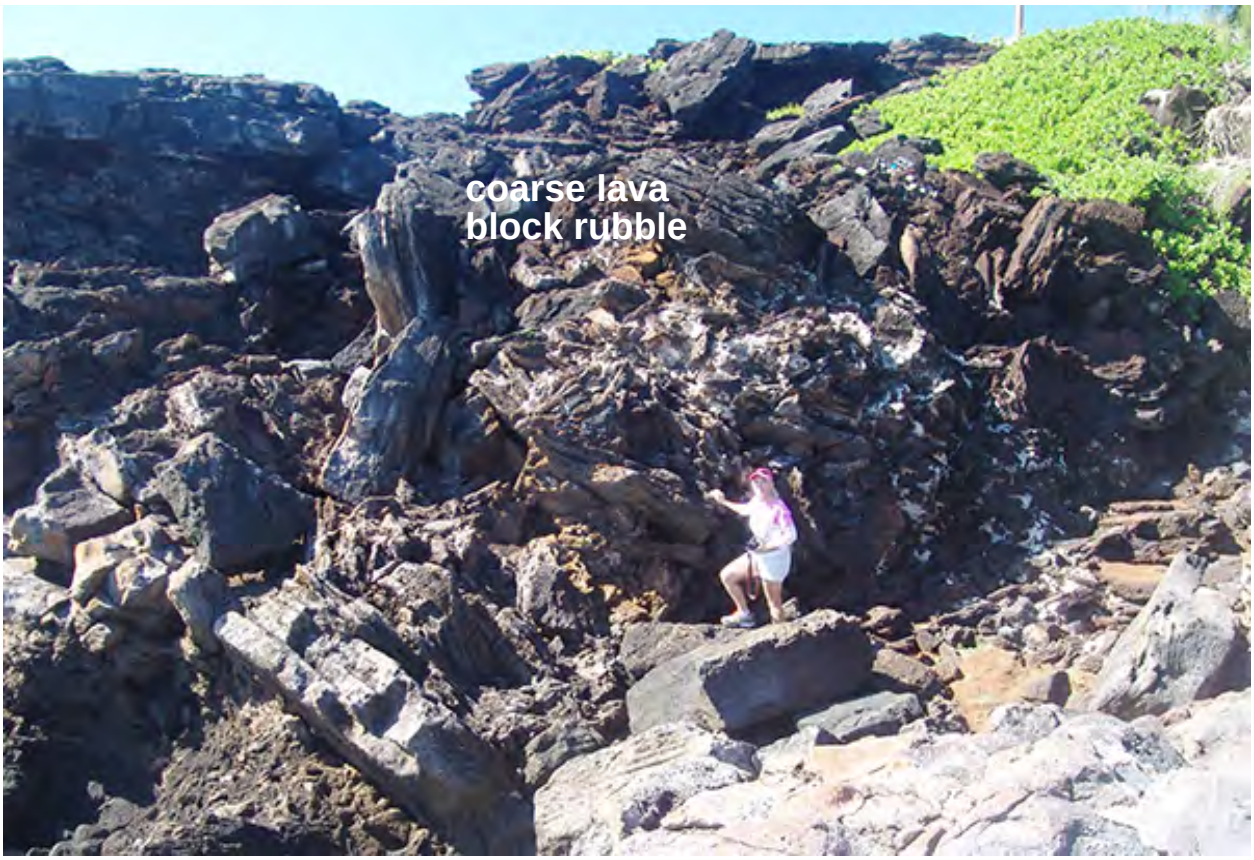


Photo 4. Chaotic lava block rubble within collapsed lava tube at coastal exposure.



Photo 5. Eastern edge of lava tube displaying roll of lava flows into collapsed tube and late stage lava flows partly filling tube after soon after collapse.

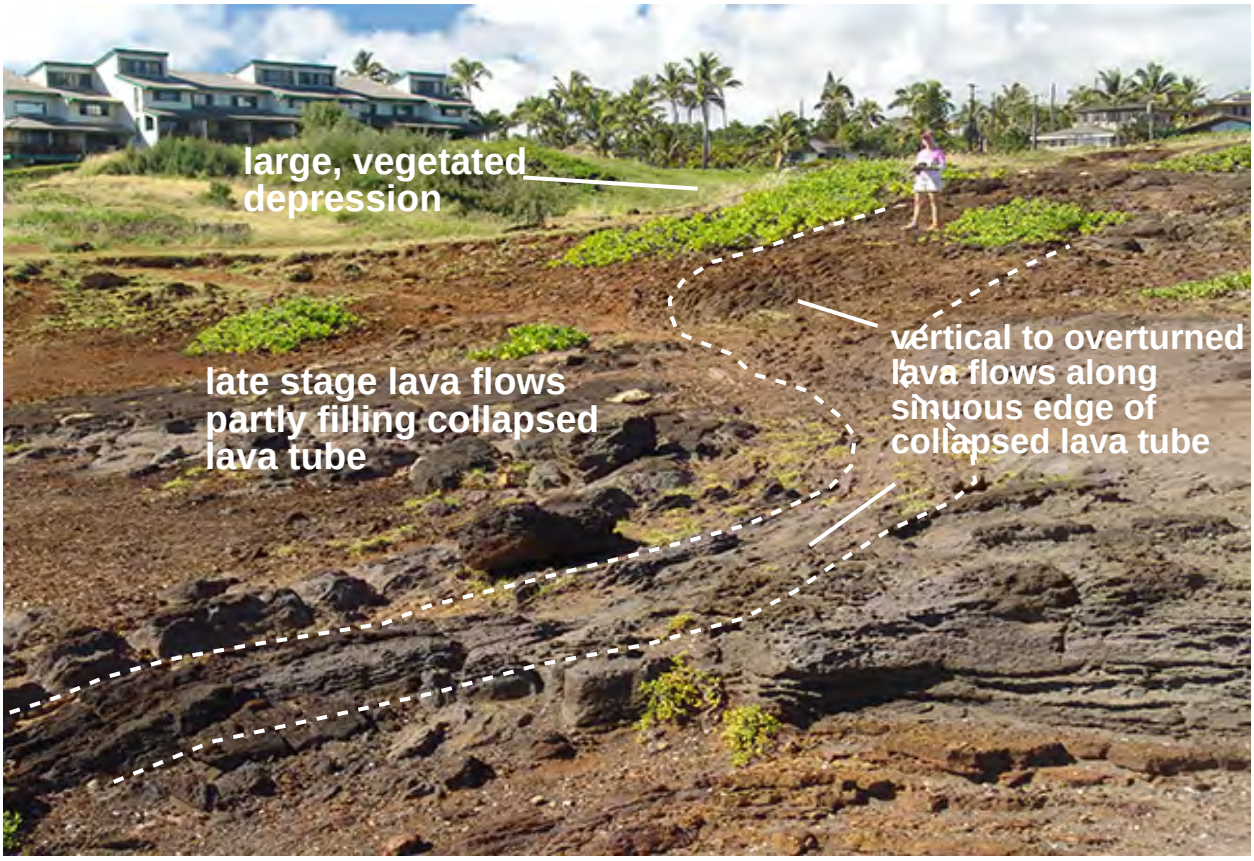


Photo 6. Sinuous edge of collapsed lava tube with vertical to overturned lava flows along margin and post collapse lava flows partly filling tube structure.

EXHIBIT O-3

AECOS No. 1269

Biological surveys for Makahū'ena Project site (TMK: 2-8-21: 041), Po'ipū, Kaua'i



Prepared For:

CIRI Land Development Co.
2525 C Street, Suite 500
Anchorage, Alaska

Prepared By:

AECOS Inc.
939 Kamehameha Highway, Suite 104
Kāne'ohe, Hawai'i

August 4, 2011

Exhibit K

EXHIBIT O-3

Biological surveys for Makahū'ena Project site (TMK: 2-8-21: 041), Po'ipū, Kaua'i[1]

August 4, 2011 *AECOS* No. 1269

Eric Guinther, Reginald David[2], Dr. Steve Montgomery[3], and Anita Manning[3]
AECOS Inc.
45-939 Kamehameha Highway, Suite 104
Kāne'ohe, Hawai`i 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: guinther@aecos.com

Introduction

The project site, owned by CIRI Land Development Company, is an approximately 13-acre (5.3-ha) coastal parcel (TMK: (4)2-8-21:041) at Makahū'ena Point, Weliweli, Po'ipū in the Kōloa District on the south side of the Island of Kaua'i (Figs. 1 and 2). A portion of the property previously was occupied by the Makahū'ena Point Lighthouse under the U.S. Coast Guard (USCG) and a few concrete structural remnants of that facility are still present. At the present time, the property is vacant land between the developments of The Point at Po'ipū (former Embassy Suites Hotel) and the Makahū'ena at Po'ipū. A modern marine navigation light (cover photo) under USCG control is located on an inholding owned by the State of Hawai'i.

The site is an L-shaped parcel (Fig. 2) that demonstrates a clear transition from wave swept cliffs, through coastal strand vegetation, into leeward (dry) scrub land. Thus, the zone closest to the shore—a wave-swept rocky substratum—supports essentially no terrestrial vegetation owing to frequent wetting by large waves and wave splash. Further inland is found a sparse, low-growing vegetation of plants tolerant of regular salt spray and minimal soil (Fig. 3). As the soil depth increases inland, plants gain density and stature, but still show the effects of strong and persistent winds. The interior leg of the parcel is

[1] This report was prepared for CIRI Land Development Co. to be used as needed to support an EA for site development ("Project"). This report will presumably become part of the public record.
[2] Rana Biological Consulting, Inc., Kailua-Kona, Hawai'i.
[3] Montane Matters, Waipahu, Hawai'i.



Figure 1. Project location on the Island of Kaua'i.

a bowl-shaped swale having steep upper margins (Fig. 4). This shape is not characteristic of an erosion swale, and the watershed is very short, lying on the seaward face of an eruption crater that presumably formed Makahū'ena Point. It has been suggested that the depression on the site represents a collapsed lava tube, although its large size casts doubt on that explanation. We suggest that the depression is a pit crater that developed on the side of Po'ipū Crater during its eruptive phase approximately 20,000 years ago (Hazlett & Hindman, 1996). Although the geology of the site represents late eruptions from the Koloa volcanic eruption series (Macdonald, Abbott, and Peterson, 1983), on the east side of the Point, perhaps just off the property, is found an excellent example of lithified sand dunes (see Fig. 9) formed when the sea level stood some 60 ft (m) lower than now (Stearns, 1966).



Figure 2. Project and survey area, Makahū'ena Point, Po'ipū. Various features from the biological surveys and described in the text are indicated.



Figure 3. Coastal portion of Project site looking west from near the eastern end of the L-shaped parcel. Tall structure on horizon near middle is Makahū'ena Point Light.



Figure 4. Inland leg of the Project parcel is a bowl-shaped swale with steep upper sides.

Methods

Biological surveys of the project site were undertaken in May-June 2011. The survey team assembled by *AECOS* Inc. included Dr. S. L Montgomery (invertebrates), Reginald David (vertebrates), and Eric Guinther (plants). Surveys were conducted independent of each other in as much as each specialty required methods standard to each discipline.

Surveys of other dryland areas have created a sizeable body of information on native invertebrates and related botanical resources found in similar areas (Bridwell, 1920; Swezey 1935). A search at the State's Office of Environmental Quality Control (2011) web site for surveys done on the subject parcel or in adjacent areas returned no reports that surveyed biota (OEQC, 2011). A search was made for independent biological studies associated with this site or with nearby sites. Searches were made in the Hawai'i State, Bishop Museum, and University of Hawai'i libraries. Online proprietary data bases such as Ingenta Connect were searched. Searches were made for publicly available articles on the internet (Google Scholar, Google Books, University of Hawaii's Scholar Space and eVols (2011). Data base searches were made in Bishop Museum's Arthropod (2002a) and Mollusk (2002b) checklists, and the University of Hawai'i, Hamilton Library's Hawai'i-Pacific Journal Index (2011). Only adventive invertebrates species were reported. Searches in the Pacific Basin Information Node specimen database which provides geographic access (2011) returned records of fossil mollusks. A search in the Hawai'i Natural Heritage Program (2011) database returned no records for this area.

Plant names used in this report generally follow Staples and Herbst (2005) and Wagner, Herbst, and Sohmers (1990, 1999). Invertebrate names follow *Freshwater & Terrestrial Mollusk Checklist* (HBS, 2002b), *Common Names of Insects & Related Organisms* (HES, 1990), and *Hawaiian Terrestrial Arthropod Checklist* (HBS, 2002a; Nishida 2002). The avian phylogenetic order and nomenclature used in this report follows *The American Ornithologists' Union Checklist of North American Birds 7th Edition* (American Ornithologists' Union 1998), and the 42nd through the 51st supplements to *Check-list of North American Birds* (American Ornithologists' Union, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011). Mammal scientific names follow *Mammals in Hawaii* (Tomich, 1986).

Botanical Survey

The botanical field survey consisted of walking a majority of the parcel on May 25, 2011. Plants were identified as they were encountered and an estimate

made of the relative abundance of each species developed as the survey progressed.

Invertebrate Survey

Field surveys for invertebrates were conducted June 2-3, 2011. Initially, a general assessment of terrain and habitats was made, followed by survey efforts at various times of day and night, vital for a thorough invertebrate survey.

Visual observation — Visual observations are a cross check that extends the reach of sampling techniques. Visual observation also included turning over rocks, examining dead wood, and other debris.

Host plant searches — Potential host plants, both native and introduced, are searched for arthropods that feed or rest on plants. For this survey, wandering transects were followed throughout the coastal and inland area with emphasis on examining native host plants.

Sweep nets — Sweeping is a common method of general collecting for most flying and perching insects. A fine mesh net is swept across plants, leaf litter, rocks, pond surfaces, etc. to collect any flying, perching, or crawling insects. Transfer from the net is either by aspiration, or by placing the net contents directly into a holding container.

Baiting — Baits are used to attract insect species to specific tastes or smells. For example, native beach crickets respond to a strong odor of decaying proteins. Baits can mimic that smell and attract those insects. Baits of old fish and odoriferous blue cheese, proven attractants, were placed at likely locations in bottle traps and checked periodically. Any insects at the bait are then observed and censused. This method is more efficient than roaming the area seeking cryptic or night active insects; baiting is a recognized method of censusing beach crickets.

Light survey — A survey of insects active at night is vital to a complete record of the fauna. Many insects are active only at night to evade birds, avoid desiccation and high temperatures, or to use night food sources, such as flowers that only open at night. A light survey employs a bright light source in front of a white cloth sheet (Fig. 5). Nocturnal insects seem to mistake the collecting light for the light of the moon, which they use to orient themselves. In attempting to navigate, disoriented insects are drawn toward the collecting light and land on the cloth in confusion. This type of collecting is most successful during the dark phase of the moon or under clouds blocking moonlight.



Figure 5. Night active invertebrates respond to a light census, being drawn to a lighted sheet as shown here.

Sampling was conducted for 6 hours on June 2 and 9 hours on June 3, 2011. The light source was a mercury vapor (MV) bulb. An additional, ultraviolet (UV) light source was used at all sites. Competing light from housing, street lights, and other artificial sources was present but not a major distraction to the census light. Locations on the site were chosen based on experience, host plant proximity, and terrain. Location choice also was influenced by a desire to shield seabirds from the light to preclude drawing any off course and towards the light. Placement locations are marked on Fig. 2.

Some invertebrate images used in this report were not taken in the course of this project. These photos, marked by © symbol, were made by Anita Manning or S. L. Montgomery and are used here because they best illustrate the discussion.

Bird Survey

Two avian count stations spaced approximately equidistant from each other were sited within the study site. Eight-minute point counts were made at each

station. Stations were each counted once. Field observations were made with the aid of Leica 10 X 42 binoculars and by listening for vocalizations. Counts were concentrated during the early morning hours, the peak of daily bird activity. Additionally, we conducted a search of the property for active Wedge-tailed Shearwater burrows, and recorded the locations of burrows with a hand-held GPS unit. Time not spent at counting stations was used to search the Project site for species and habitats not detected during count sessions.

Other Vertebrates Survey

With the exception of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), or *'ōpe'ape'a* as it is known locally, all terrestrial mammals currently found on the Island of Kaua'i are alien species, and most are ubiquitous. The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all vertebrate species observed and heard within the project area.

Survey Limitations / Conditions

Our ability to form advisory opinions is influenced in the following ways:

- **Weather**: Weather was mixed June 2-3, 2011. Rain was disruptive on June 2 and a second evening of surveying was conducted June 3 to ensure appropriate coverage. Conditions for collecting were good on June 3. Weather conditions were excellent on May 25, although onshore winds were strong.

- **Seasons**: Weather and seasonal vegetation play an especially important role in any biological survey. Host plant presence/absence, and seasonal changes, especially plant growth after heavy rains, affect the species collected. Many arthropods time their emergence and breeding to overlap or follow seasonal weather, or to coincide with growth spurts of an important food plant. Monitoring at a different time of the year might produce a different list of species. After seasonal rains, vegetation was in a good state to both identify and act as host to many invertebrates. Nevertheless, the very low number of native plants and the presence of ants—a strong alien predator on arthropods—were strong factors in limiting native invertebrates encountered; more so than the seasonal condition of vegetation.

- **Moon**: The moon was 'dark' and obscured by cloud cover on the evenings of June 2 and 3, 2011. (USNO) The nearby artificial light sources offered by street lights and buildings offered minimal competition to the arthropod census light.

- **Limited duration**: The survey provides a reasonable review of the biological resources present given the size of the property and time allotted. The area is not large, yet it is always possible that a biologist will miss one or more species if population levels are low. Surveying for a longer period of time might enlarge our lists of species. A few species reasonably expected to occur on the property were not found (see Species Not Observed on page 24).

- **Selectivity**: The plant and bird surveys attempted to chronicle all vascular plants and birds, respectively, occurring on the Project site. The invertebrate survey focused on finding terrestrial endemic and indigenous Hawaiian species. No attempt was made to completely document the common alien arthropod or all non-avian, alien vertebrate species present.

Botanical Survey Results

Vegetation

Site vegetation transitions from coastal strand through grassland into a dryland scrub across the parcel from shoreline to Pe'e Road. Fronting the Point at Po'ipū the grassland appears to be regularly mowed. Inland and both to the east and west, the land is completely developed in private homes and resort buildings and grounds. The coastal strand extends both east and west fronting the oceanfront developments, but as a narrower zone than in the Project parcel. In general, the coastal strand has a much higher proportion of native plants, approaching 100% of the vegetation cover within that part of the habitable zone closest to the ocean, whereas the interior scrub supports very little in the way of native plants.

Flora

Table 1 is a listing of the plants noted as growing on the Project parcel. The table lists plants observed in May 2011. Plants are arranged in a taxonomic order, with species listed alphabetically by family. Plant "status" follows the common name and indicates whether a species is native (endemic [**End**] or indigenous [**Ind**]), an early Polynesian introduction (before 1778; **Pol**), or non-native (either naturalized [Nat] or ornamental [Orn]). Of course native plants and naturalized non-natives are sometimes used as ornamentals. A plant species status relates to its situation generally within the Hawaiian Islands, not just the survey area.

Relative abundance values are for the property as a whole and the coding is explained in the legend at the end of the table. Notes provide additional information on each species. Note <1> indicates a plant particularly associated with the coastal strand, where its relative abundance would be higher if considered for just this area (these plants are usually absent from the interior scrub vegetation). Note <2> indicates a native or naturalized plant that appears to be part of plantings made on the property. An area on the Makahū'ena at Po'ipū development side of the Project property is being tended as an informal garden. In addition, ornamental plantings along the property line with adjacent parcels were included in the survey for completeness.

A total of 86 species of vascular plants were recorded from the Project area. The listing includes no ferns or fern allies, and one conifer (Cook pine, *Auracaria columnaris*), the remainder belonging to various taxa of flowering plants. A total of 8 species (9.3%) are considered to be indigenous (native plants also

Table 1. Flora for CIRI Land Development Company, Makahū'ena parcel, Poipu, Kauai

Species	Common name	Status	Abundance	Notes
	CONIFERS and CYCADS			
ARAUCARIACEAE				
Araucaria columnaris (G. Forst.) J.D. Hook.	Cook pine	Nat	R	<2>
	FLOWERING PLANTS			
	DICOTYLEDONE			
ACANTHACEAE				
Asystasia gangetica (L.) T. Anderson	Chinese violet	Nat	O	
Barleria repens C. Nees	pink-ruellia	Orn	U2	
AIZOACEAE				
Aptenia cordifolia (L.) N.E. Brown	hearts-and-flowers	Orn	U	
Sesuvium portulacastrum (L.) L.	*'ākulikuli*	**Ind**	C	<1>
AMARANTHACEAE				
Amaranthus lividus L.	---	Nat	R1	
Mangifera indica L.	khaki weed	Nat	O	
ANACARDIACEAE				
Schinus terebinthifolius Raddi	Christmas berry	Nat	U	
APOCYNACEAE				
Carissa macrocarpa (Ecklon) A. de Cand.	Natal-plum	Orn	R	
Plumeria rubra L.	graveyard flower	Orn	U	
Thevetia peruviana (Pers.)K. Schum.	be-still	Nat	R	
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	octopus or umbrella tree	Nat	R	
ASTERACEAE (COMPOSITAE)				
Bidens pilosa L.	Spanish needle	Nat	R1	
Emilia fosbergii Nicolson	Flora's paintbrush	Nat	U	
Gaillardia x *grandiflora* Van Houtte	*waikāhuli*	Orn	R	<2>
Hypochoreus cf. *radicata* L.	hairy cat's ear	Nat	R1	<1,3>
Pluchea indica (L.) Less.	Indian fleabane	Nat	U1	
Pluchea carolinensis (Jacq.) G. Don	sourbush	Nat	U	
Verbesina encelioides (Cav.) Benth. & Hook.	golden crown-beard	Nat	O1	
BORAGINACEAE				
Tournefortia argentea L. fill.	tree heliotrope	Nat	R	<1>
BRASSICACEAE				
Lobularia maritima Desvaux	sweet alysum	Orn	U	<2>
CACTACEAE				
Cereus hildmannianus K. Schum.	spiny tree cactus	Nat	U	
Hylocereus undatus (Haworth) Britt. & Rose	night-blooming cereus	Nat	R	<3>

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
CACTACEAE (continued)				
Opuntia ficus-indica (L.) Mill.	pānini	Nat	R1	
Selenicereus cf. *macdonaldiae* (Hooker) Britton & Rose	snake cactus	Nat	R	<3>
CAPPARACEAE				
Cleome gynandra L.	wild spider flower	Nat	R	
CASUARINACEAE				
Casuarina equisetifolia L.	ironwood	Nat	U	
CHENOPODIACEAE				
Atriplex semibaccata R. Br.	Australian saltbush	Nat	A	<1>
Chenopdium murale L.	*'aheahea*	Nat	R	
CLUSIACEAE				
Calophyllum sp.	indet. street tree	Orn	U	
CONVOLVULACEAE				
Ipomoea obscura (L.) Ker-Gawl.	---	Nat	O	
Ipomoea triloba L.	little bell	Nat	U	
Merremia aegyptia (L.) Urb.	hairy merremia	Nat	R1	
CUCURBITACEAE				
Cucumis dipsaceus Ehrenb. & Spach	teasel gourd	Nat	U1	
CRASSULACEAE				
Bryophyllum tubiflorum Harvey	chandelier plant	Nat	R3	
EUPHORBIACEAE				
Chamaesyce albomarginata (Torr. & A. Gray) Small	rattlesnake weed	Nat	R	
Chamaesyce hirta (L.) Millsp.	garden spurge	Nat	O1	
Chamaesyce hypericifolia (L.) Millsp.	graceful spurge	Nat	O	
Codiaeum variegatum (L.) Blume	croton	Orn	U	
Pedilanthus tithymaloides tithymaloides (L.) Poiteau	slipper flower	Orn	R3	<2>
Phyllanthus debilis Klein ex. Willd.	niuri	Nat	R	
Ricinus communis L.	castor beran	Nat	R	
FABACEAE				
Desmanthus pernambucanus (L.) Thellung	virgate mimosa	Nat	U	
Indigofera hendecaphylla Jacq.	prostrate indigo	Nat	R	
Macroptilium atropurpureum (DC) Urb.	---	Nat	U	
GOODINACEAE				
Scaevola taccada (J. Gaert.) Roxb.	*naupaka kahakai*	**Ind**	C	<1>
LAMIACEAE				
Ocimum basilicum L.	sweet basil	Orn	R	<2>
MALVACEAE				
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	Nat	U	

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
MALVACEAE (continued)				
Hibiscus rosa-sinensis L. cultivars	Chinese hibiscus	Orn	U	
Malvastrum coromandelianum (L.) Garcke	false mallow	Nat	C	
Sida fallax Walp.	*ilima, ilima papa*	**Ind**	C	
Sida rhombifolia L.	---	Nat	R	
MORACEAE				
Ficus microcarpa L. fil.	Chinese banyan	Nat	R	
MYRTACEAE				
Syzygium cumini (L.) Skeels.	Java plum	Nat	R	
NICTAGINACEAE				
Boerhavia acutifolia (Choisy) J.W. Moore	*alena*	**Ind**	R	<1>
Bougainvillea cult.	bougainvillea	Orn	U	
POLYGONACEAE				
Coccoloba uvifera (L.) L.	sea-grape	Orn	R	<1>
PORTULACACEAE				
Portulaca pilosa L.	---	Nat	U	<1>
PRIMULACEAE				
Anagallis arvensis L.	scarlet pimpernel	Nat	R	
SOLANACEAE				
Solanum americanum Mill.	*pōpolo*	**Ind**	O	
Solanum lycopersicum cerasiforme (Dunal) Spooner, G.J. Anderson, & R.K. Jansen	cherry tomato	Nat	U	
STERCULIACEAE				
Waltheria indica L.	*'uhaloa*	**Ind**	O	
VERBENACEAE				
Clerodendrum inerme (L.) Gaertn.	---	Orn	R3	
Lantana camara L.	lantana	Nat	C	
Stachytarpheta australis Moldenke	---	Nat	O	
Stachytarpheta jamaicensis (L.) Vahl.	Jamaica vervain	Nat	R	
Vitex rotundifolia L. fil.	*pōhinahina*	**Ind**	R	
MONOCOTYLEDONES				
AGAVACEAE				
Agave vivipara L.	---	Orn	R	<2>
Cordyline fruticosa (L.) A. Chev.	*ki*; green ti	**Pol**	R	<2>
Furcraea foetida (L.) Haw.	Mauritius hemp	Nat	R	<2>
ALOEACEAE				
Aloë vera (L.) N.L. Burm.	aloe	Orn	U1	<2>
ARECACEAE				
Cocos nucifera L.	coconut palm	**Pol**	R	

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
COMMELINACEAE				
Tradescantia spathacea Swartz	Moses-in-the-cradle	Orn	R	
LILIACEAE				
Crinum asiaticum L.	giant lily	Nat	R	
POACEAE (GRAMINEAE)				
Axonopus fisifolius (Sw.) P.Beauv.	nrw-lvd. carpetgrass	Nat	O3	
Cenchrus echinatus L.	sandbur	Nat	R	
Chloris barbata (L.) Sw.	swollen-finger grass	Nat	A	
Chloris virgata Sw.	feather fingergrass	Nat	C3	
Cynodon dactylon (L.) Pers.	Bermuda grass	Nat	A	<1>
Dactyloctenium aegyptium (L.) Willd.	beach wiregrass	Nat	R	
Digitaria insularis (L.) Mez ex Ekman	sourgrass	Nat	AA	
Eleusine indica (L.) Gaertn.	wiregrass	Nat	U	
Setaria verticillata (L.) P. Beauv.	bristly foxtail	Nat	R2	
Sporobolus virginicus (L.) Kunth	*'aki'aki*	**Ind**	A	<1>
Panicum maximum (Jacq.)	Guinea grass	Nat	AA	
STRELITZIACEAE				
Strelitzia reginae Dryander	bird-of-paradise	Orn	R	<2>

Legend to Table 1

Status = distributional status
- **End.** = endemic; native to Hawai'i and found naturally nowhere else.
- **Ind.** = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.
- Nat. = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.
- Orn. = exotic, ornamental or cultivated crop; plant not naturalized (not well-established outside of cultivation, at least at this location).
- **Pol.** = Polynesian introduction; brought to the Hawaiian Islands before 1778.

Abundance = occurrence ratings for plants on property in March 2008
- R - Rare - only one or two plants seen.
- U - Uncommon - several to a dozen plants observed.
- O - Occasional - found regularly, but not abundant anywhere.
- C - Common - considered an important part of the vegetation and observed numerous times.
- A - Abundant - found in large numbers; may be locally dominant.
- AA - Abundant - very abundant and dominant; defining vegetation type.

Numbers (as in R3) offset occurrence ratings (1 – several plants; 2 – many plants; 3 – abundant in a limited area) in cases where distribution across the survey area may be limited, but individuals seen are more than indicated by the occurrence rating alone.

Notes:
- <1> Associated with the coastal strand zone along top of cliff (Fig. 2).
- <2> Associated with landscape plantings in the area.
- <3> Plant lacking flowers or fruit; identification uncertain.

native to places outside of the Hawaiian Islands). Two additional species (2.3%) are Polynesian introductions (so-called "canoe plants"), arriving in these Islands well before 1778. The remainder (88.3%) are plants introduced to the Islands since 1778—most in the last century—and now naturalized (escaped from cultivation).

Although none of the natives growing at the Project site is considered an endemic species (defined as uniquely native to the Hawaiian Islands), the abundance of several of the indigenous species is high within the coastal strand environment (see Fig. 10). Drying winds, salt air, and shallow soil make this environment very harsh and few plants readily adapt to these conditions. All of plants found in this environment on the Project site are widespread species (in Hawai'i as well as on other tropical Pacific islands), typically dispersed by ocean currents. Nonetheless, outside of the coastal strand, it is rare to find a vegetation on lowland Kaua'i dominated by native plants.

A total of 16 species of plants (18.6%) in Table 1 are regarded as ornamentals (not naturalized in Hawai'i at this time), although many more are planted and/or cultivated on the site or immediately adjacent as ornamentals. These plants are regarded as naturalized because that is their status in the Islands. Both naturalized and native plants are planted as ornamentals in some landscaping situations.

Invertebrate Survey Results

Native terrestrial invertebrate species of note are discussed here. Also, information is provided on adventive (naturalized) species often misidentified or confused with native species. Non-native species on the Project site that constitute a danger to native species (e.g., ants) or potential hazard to humans (e.g., paper wasp) are also discussed.

The results of the survey are presented in Table 2. Although this listing shows three species as new island records[4], this is not remarkable considering the survey for available literature (see page 6) indicated no previous invertebrate surveys at this location.

Native Arthropoda ~ Araneae (spiders)

Fam. Lycosidae: *Lycosa hawaiiensis*: wolf spider

This endemic spider (Fig. 6) is known in similar environments along this coast. Wolf spiders hide by day and hunt by night in established individual territories. These quick, strong predators will feed on non-native invertebrates allowing it to adapt to a changed menu. Females provide maternal care to their young,

[4] New island record designation indicates this species has not been previously reported as present on an island.

Table 2. List of invertebrates, Makahū'ena property, Kōloa, Kaua'i, June 2011.

Taxon / Species	Common Name	Status	Frequency	Notes
MOLLUSCA				
GASTROPODA				
PULMONATA	snails and slugs			
ACHITINIDAE				
Achatina fulica	Giant African Snail	Adv	A	
SPIRAXIDAE				
Euglandina rosea	Rosy Wolf Snail	Adv	C	
ARTHROPODA				
ARACHNIDA				
ARANEAE	spiders			
HETEROPODIDAE				
Heteropoda venatoria	Cane spider	Adv	C	
ARANEIDAE				
Argiope appensa (Walckenaer 1841)	orb weaver spiders	Adv	U	
LYCOSIDAE				
Lycosa hawaiiensis Simon, 1899	wolf spider	End	U	observed only
ARTHROPODA				
INSECTA				
COLLEMBOLA	springtails			
ENTOMOBRYIDAE				
undetermined sp. 1		unknw	C	under stones
DIPTERA				
CABACIDAE				
Canaceoides hawaiiensis Wirth, 1969	beach fly	End	C	
CERATOPOGONIDAE				
Forcipomyia hardyi Wirth & Howarth, 1982		End	A	at light
CHIRONOMIDAE	bloodworm midges			
Chironomus hawaiiensis Grimshaw, 1901		End?	U	at light
HELEOMYZIDAE				
Spilochroa ornata (Johnson, 1895)		Adv	C	at light; new island record
HETEROPTERA	true bugs			
LYGAEIDAE	seed bugs			
Nysius sp.		End	U	at light

Table 2 (continued).

Taxon / Species	Common Name	Status	Frequency	Notes
HOMOPTERA	planthoppers			
CICADELLIDAE	leafhoppers			
Balclutha hospes		End	C	at light
DERBIDAE				
Cedusa sp.		Adv	U	at light; new island record
PSYLLIDAE				
Heteropsylla cubana (Cawford, 1914)		Adv	AA	on *koa haole*
HYMENOPTERA	wasps, bees, ants			
ANTHOPHORIDAE				
Ceratina sp. near *dentipes*		Adv	U	
Xylocopa sonorina F. Smith, 1874	Carpenter bee	Adv	C	
COLLETIDAE				
Hylaeus albonitens (Cockerell, 1905)		Adv	R	
FORMICIDAE	ants			
Camponotus variegatus	Carpenter ant	Adv	C	at light
Pheidole megacephala (Fabricius, 1793)	Big-headed ant	Adv	C	on soil
VESPIDAE	wasps			
Polistes exclamans Viereck, 1906	Common paper wasp	Adv	O	
LEPIDOPTERA	butterflies & moths			
CHOREUTIDAE				
Choreutis sp.	Twisted wing moth	Adv	C	at light; new island record
COSMOPTERIGIDAE				
Anatrachyntis incertulella (Walker, 1864)		Adv	O	
Ithome concolorella (Chambers, 1875)	*Kiawe* flower moth	Adv	C	
Trissodoris honorariella (Walsingham 1907)		Adv	U	
GEOMETRIDAE				
Macaria abydata Guenee, 1857		Adv	A	at light
GRACILLARIIDAE				
Caloptilia sp.		Adv	U	
NOCTUIDAE				
Achaea janata (Linnaeus), 1758	Croton caterpillar	Adv	C	
Ascalapha odorata (Linnaeus, 1758)	Black witch moth	Adv	O	at light

Table 2 (continued).

Taxon / Species	Common Name	Status	Frequency	Notes
LEPIDOPTERA (continued)				
SPHINGIDAE				
Agrius cingulata (Fabricus, 1775)	Sweet potato hornworm	Adv	U	at light
Deilephila nerii (Linnaeus), 1758	Oleander hawk moth	Adv	U	
Hippotion rosetta (Swinhoe 1892)	Boerhavia sphinx moth	Adv	U	at light
ODONATA	dragonflies; damselflies			
LIBELLULIDAE	skimmers			
Pantala flavescens (Fabricius, 1798)	Globe skimmer	Ind	U	seen in flight
ORTHOPTERA	grasshoppers, crickets			
GRYLLIDAE	crickets			
Caconemobius sandwichensis Otte,1994	Beach cricket	End	U	

Key to Table 2:

FREQUENCY = occurrence ratings:

R	Rare	seen in only one or perhaps two locations.
U	Uncommon-	seen in several locations
O	Occasional	seen with regularity
C	Common	observed numerous times
A	Abundant	found in large numbers
AA	Very abundant	abundant and dominant

STATUS:

End	endemic to Hawaiian Islands
Ind	indigenous to Hawaiian Islands
Adv	adventive
Pur	purposefully introduced
Unkw	unknown

carrying them for a few days after hatching. One individual was seen, but not captured (Manning/ Montgomery in Liittschwager & Middleton 2001).



© Figure 6. Native wolf spider

Native Arthropoda ~ Insecta

HETEROPTERA (True bugs)
Fam. Lygaeidae: *Nysius* sp.

This native seed bug, commonly found in dryland locations, uses many alien and native host plants. It is known from most islands in the Hawaiian chain. (Swezey, 1954)

ODONATA (Dragonflies and Damselflies)
Fam. Libellulidae: *Pantala flavescens*: Globe skimmer

An indigenous dragonfly (*Pantala flavescens)* (Fig. 7) was observed on the property. Among the most readily observed native insects, they are large, easily approached by people, and graceful in flight. Any small amount of fresh water will attract them and they often colonize human maintained water sources such as golf-course water hazards and stock tanks. Globe skimmers are widely distributed throughout the Hawaiian Islands from Kure to Hawai'i Island (HBS, 2002a; Nishida, 2002) and have even been found flying at sea (Howarth & Mull, 1992).



© Figure 7. Globe skimmers use a wide variety of water sources to lay eggs in.

ORTHOPTERA (Grasshoppers, Crickets)
Fam. Gryllidae: *Caconemobius sandwichensis:* Beach cricket

Caconemobius sandwichensis (Fig. 8) are specialists feeding on marine detritus in the splash zone among boulders statewide (Fig. 9; Otte, 1994). Being nocturnal, they are found by setting out traps (bottle and similar containers) with baits of rotten fish or blue cheese.





© Figure 8 (above). Native beach cricket.

Figure 9 (left). *Caconemobius* live in the splash zone of rocky beaches, emerging at night to feed on marine debris. Plants shown are two natives, *naupaka* and *'akulikuli,* prominent members of the coastal strand community.

Alien Arthropoda ~ Araneae (spiders)

Fam. Araneidae: *Argiope appensa*

A common orb weaving spider (*A. appensa*; Fig. 10) may be fearful in appearance, but is not a threat to humans. The large female is most often seen while the smaller male is less frequently noticed. The species' large and conspicuous webs often are built across footpaths because of the natural breezeway brings prey to the web. A gentle nudge with a small stick is usually sufficient to clear them from the path. This spider was seen in several locations on the property and serves as a natural pest control operator.

Fam. Heteropodidae: *Heteropoda venatoria:* Large brown spider or Cane spider

Although this fast running spider (Fig. 11) is often startling to people, they are not known to bite or harm humans. Conversely, they are helpful in controlling pests such as cockroaches. They may be encountered by work crews in piles of dry brush or under discarded wood or cardboard. They should be allowed to run away.



Figure 10. *Argiope appensa* dorsal view; larger female; smaller male upper right.



Figure 11. *Heteropoda venatoria* or Cane spider mother holding an egg pouch.

Alien Arthropoda ~ Insecta

HOMOPTERA
Fam. Psyllidae: Jumping plant louse

This alien species (Fig. 12) sucks plant juices from *koa haole.* They responded to the light survey in large numbers. Their numbers can reach levels that are annoying to hikers.



Figure 12. Jumping plant louse (*Heteropsylla cubana*)

LEPIDOPTERA (butterflies and moths)
Fam. Geometridae: *Macaria abydata*: *Koa haole* moth

This moth (Fig. 13) is common throughout the islands. It feeds on a wide variety of native and alien plants, especially legumes. The caterpillars can reach large numbers and strip plant leaves. Usually, parasites and predators are attracted to this large food source and reduce the moth population.



Figure 13. *Macaria abydata* moth and caterpillar.

Fam. Noctuidae: *Ascalapha odorata*: Black witch moth

This moth (*A. odorata*; Fig. 14) has been widely distributed in the island chain since the first sightings at Hōnaunau in 1928 (Bryan, 1929). This large moth is occasionally mistaken for a bat, especially as it is most frequently seen at dawn

or dusk. Although near homes it rests under the eaves of roofs during the day, at this location it is likely to hide under ledges, or high on tree trunks. It responded to the light survey.



© Figure 14. Black witch moths, eyes glowing in the camera flash, dine on a banana slice.

Fam. Sphingidae:

Moths of this large, easily seen group may be confused with *Manduca*, especially when the moth is resting with wings folded. *Manduca blackburnii*[5] has orange markings on the abdomen distinguishing it from other sphingids. All the caterpillars have 'horns' and form a similar brown pupa in the ground.

Agrius cingulata: Sweetpotato hornworm

This moth is widely distributed around the Hawaiian Islands. The caterpillars feed on all sweet potato, morning glory, and confamilial plants. It is the moth most easily confused with *Manduca*, the adult moth having pink markings along both sides (Fig. 15). When the moth is at rest with wings folded, these color markings are hidden.

Deilephila nerii: Oleander hawk moth

This large moth (*D. nerii*; Fig. 16), widely distributed throughout the Hawaiian chain, was found in our survey. Despite the 'oleander' name, a wide variety of

[5] *Manduca blackburnii* is a Hawaiian endemic and an ESA listed species.

plants can serve as host to the caterpillar. Common in south Asia, it first appeared in the islands at Hickam Air Force Base on O'ahu in 1974 and quickly spread out from there (Kunishi, 1976). It is distinguished by green markings on both wings and body.



©Figure 15. The Sweetpotato hornworm showing pink markings along the abdomen.



©Figure 16. An Oleander hawk moth

HYMENOPTERA (wasps, bees, ants)

Alien predatory ants are a major cause of low numbers of native arthropods. The bigheaded ant (*Pheidole megacephala*) and the carpenter ant (*Camponotus variegatus*), which prey on other insects (Zimmerman, 1948-80), are present on the property. Ants are well documented as a primary cause of low levels of native arthropods at elevations up to 2000 ft. (Perkins, 1913). Ant populations often do not overlap. Rather they have separate territories, effectively apportioning the hunting grounds between themselves, offering few, if any, ant-free zones where native arthropods can thrive.

Fam. Anthophoridae: *Xylocopa sonorina*: Sonoran carpenter bee

This large, introduced bee (Fig. 17) was seen in several areas. The name derives from their activity of chewing distinctive round, shallow tunnels for a home in soft, dry, dead wood. Males are golden and limited in number; females more numerous and black. Although relatively large, and noisy in flight, they are usually harmless. When dry wood where carpenter bees might live is disturbed, the bees will fly out to protest and may come quite close to people. They usually do not sting unless handled.



© Figure 17. Female carpenter bees are black; male bees are golden.

Species Anticipated But Not Observed

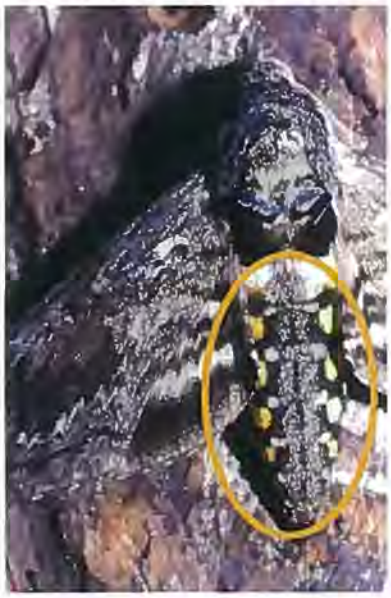
Mollusca — The Hawaiian amber snail, *Succinea* sp., is a native terrestrial mollusk approximately 6-8 mm. in length. This snail was not seen in our survey, but could reasonably be expected in the area with a longer search, having been previously recorded from Māhā'ulepū (Christensen, 1992). This group of snails may be arboreal or ground dwelling and occupies a wide range of habitats. All *Succinea* feed on decaying plant matter (Zimmerman, 2001). They often cover their shells with bits of leaf litter for camouflage (Cowie, 2006).

Insecta — Native insects that could reasonably be expected in the Project area seasonally or with a longer search, but were not seen:

- *Thyrocopa* sp., a micromoth;

- *Rhyncogonus*, a leaf weevil;
- *Cyrtopeltis kahakai*, the *Naupaka* leaf bug, is recorded in similar environments at Kapa'a (Asquith, 1993) from host plant, *naupaka kahakai* (*Scaevola sericea*), plentiful on the seaward part of the property;
- Long-legged flies, *Paraphrosylus acrosticalis* and *Hydrophorus pacificus,* are known from the shore zone statewide;
- *Hylaeus* sp., Yellow-faced bee, was found by this surveyor at a nearby coastal site in 2005 (Montgomery, 2005)

Blackburn's sphinx moth (*Manduca blackburni*; Fig. 18), an endangered species (Federal Register, 2003) which favors leeward slopes, was not found in this survey. The moth's solanaceous native host plant, *'aiea* (*Nothocestrum* sp.) and preferred alien host, tree tobacco (*Nicotiana glauca*), were not observed on the property. *Capparis sandwichiana*, a nectar plant favored by the adult moth, also was not encountered.



© Figure 18. Blackburn's sphinx moth is distinguished from other hawk moths by orange markings.

Lava Tube Habitat — Although a "collapsed lava tube" had been reported from the property, no entrances to lava tubes, a potential sensitive native invertebrate habitat, were found.

Medically Important Species on the Site

The project area includes some classic habitats for centipedes and scorpions (Fig. 19). Common paper wasps (*Polistes exclamans*) (Fig. 20) and honey bees were seen on the property. Those entering the property should be alert for species that can pose a serious risk to some individuals. Supervisors should be aware of any employee allergies. Some individuals can experience anaphylactic reactions to arthropod venom. Wasps can sting repeatedly and pose a particular hazard to children due to their smaller body weight.

Never put hands where eyes cannot see. When moving stones or removing trash, workers can greatly reduce the risk of accidental contact and bites or

stings with all species noted here by the use of gloves and wearing long sleeved shirts, long pants, and boots with socks pulled up over pant cuffs. See *What Bit Me?* (Nishida & Tenorio 1993) and *What's Bugging Me?* (Tenorio & Nishida 1995) for additional advice and cautions.



© Figure 19. Scorpions can be especially hard to detect in litter.



© Figure 20. Paper wasp.

Vertebrate Survey Results

Birds

A total of 55 individual birds representing 13 species from 11 separate families, were recorded during station counts (Table 3). Three of the species recorded: Wedge-tailed Shearwater (*Puffinius pacificus*), White-tailed Tropicbird (*Phaethon lepturus*), and Wandering Tattler (*Tringa incana*), are indigenous to the Hawaiian Islands. The two seabirds (shearwater and tropicbird) are indigenous breeding species, one of which (Wedge-tailed Shearwater) nests on the site. Wandering Tattler is an indigenous, migratory shorebird species. The remaining 10 species observed during the survey are alien (non-native species) to the Hawaiian Islands.

Table 3 - Avian Species Detected at Makahū'ena Point, June 2011

Common Name	Scientific Name	ST	RA
	PROCELLARIIFORMES		
	PROCELLARIIDAE - Shearwaters & Petrels		
Wedge-tailed Shearwater	*Puffinus pacificus*	IB	0.50
	PHAETHONIFORMES		
	PHAETHONTIDAE - Tropicbirds		
White-tailed Tropicbird	*Phaethon lepturus*	IB	0.50
	CHARADRIIFORMES		
	SCOLOPACIDAE - Sandpipers, Phalaropes & Allies		
Wandering Tattler	*Tringa incana*	IM	0.50
	COLUMBIFORMES		
	COLUMBIDAE – Pigeons & Doves		
Spotted Dove	*Streptopelia chinensis*	A	1.50
Zebra Dove	*Geopelia striata*	A	4.50
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	2.50
	STURNIDAE – Starlings		
Common Myna	*Acridotheres tristis*	A	3.00
	EMBERIZIDAE – Emberizids		
Red-crested Cardinal	*Paroaria coronata*	A	2.50
	CARDINALIDAE – Cardinals Saltators & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	1.50

Table 3 (continued).

Common Name	Scientific Name	ST	RA
	FRINGILLIDAE – Fringilline And Cardueline Finches & Allies		
	Carduelinae – Carduline Finches		
House Finch	*Carpodacus mexicanus*	A	4.00
	PASSERIDAE - Old World Sparrows		
House Sparrow	*Passer domesticus*	A	2.00
	ESTRILDIDAE – Estrildid Finches		
	Estrildinae – Estrildine Finches		
Chestnut Munia	*Lonchura atricapilla*	A	1.00
Java Sparrow	*Padda oryzivora*	A	3.50

Key to Table 3:

ST Status
RA Relative Abundance: Number of birds detected divided by the number of count stations (2)

A Alien species – Introduced to Hawai'i by humans, and have become established in the wild
IB Indigenous Resident – Native breeding species also found elsewhere naturally
IM Indigenous Migratory species – native migratory species does not breed in Hawai'i

Avian diversity and densities are in keeping with habitats present on the site, and the location along the south shore of the Island of Kaua'i. Three species—Zebra Dove (*Geopelia striata*), Java Sparrow (*Padda oryzivora*) and Common Myna (*Acridotheres tristis*)—accounted for 40% of the total number of individual birds recorded during station counts. The most commonly recorded species was Zebra Dove, which accounted for slightly more than 16% of the total number of individual birds recorded. An average of 27 birds were detected per station count—is a relatively low number—in keeping with the coastal location and limited habitats present on the site.

Seabirds — The Wedge-tailed Shearwater colony that stretches the length of the coastal strand area of the site, with at least a couple of outlying burrows further inland, represents a significant native avian resource. This colony has been expanding, albeit slowly for the past several years (David, 2011). During the course of this survey we mapped a total of 23 apparently active, or recently active, burrows (see white dots in Fig. 2; recorded positions are given in Table 4). Numerous scrapes, which appear not to be currently active, were noted but not recorded. This species is not listed under either federal or state endangered species programs; however, it is protected under the federal Migratory Bird Treaty Act (MBTA).

Table 4. Recorded coordinates of Wedge-tailed Shearwater active or recently active burrows on the Project site.

ID No.	Degrees North Latitude	Degrees West Longitude
2	21.869175	159.44464
3	21.868974	159.44434
4	21.870819	159.44163
6	21.870818	159.44163
7	21.870650	159.44185
8	21.870640	159.44206
9	21.870346	159.44221
10	21.870214	159.44237
11	21.869786	159.44276
12	21.869806	159.44276
13	21.869513	159.44314
14	21.869417	159.44298
15	21.869419	159.44296
16	21.869383	159.44296
17	21.869457	159.44284
18	21.869386	159.44317
19	21.869147	159.44353
20	21.869123	159.44354
21	21.869105	159.44354
22	21.869144	159.44364
23	21.869138	159.44371
24	21.868976	159.44435
25	21.869806	159.44400

Mammals

Two mammalian species were detected during the course of the survey. Tracks and scat of dogs (*Canis f. familiaris*) were encountered at several locations within the site. One cat (*Felis catus*) was seen prowling the shearwater colony on the northwest corner of the site.

General Discussion

Botanical Resources

For this site, maintaining a healthy mix of native plant species is particularly relevant for the coastal strand zone (Fig. 2), since this vegetation zone is presently dominated by native species. No botanical resources worthy of special protection occur landward of the strand zone.

Invertebrate Resources

Native Hawaiian plant, vertebrate, and invertebrate populations are interdependent. Certain insects are obligatorily attached to host plants, using only that plant as their food and others provide pollination for native plants. Invertebrates such as insects and snails, as well as the fruit and seeds of native plants, are the natural foods of native birds. The health of native Hawaiian ecosystems depends on habitat quality and absence or low levels of continental predators and herbivores. Sufficient food sources, host plant availability, and the absence of continental dominants comprise a classic native, healthy ecosystem. Where appropriate in the invertebrates results presentation above, host plants and introduced arthropods, birds, and mammals are noted.

Avian Resources

The findings of the avian survey are consistent with the location of the property, and the habitats present on the site. Three of the 13 avian species detected during the course of this survey, Wedge-tailed Shearwater, White-tailed Tropicbird, and Wandering Tattler are indigenous species. Wedge-tailed Shearwaters are a pelagic seabird species, which nests in Hawai'i, and in fact nests on the site. White-tailed Tropicbirds are also a pelagic indigenous breeding seabird species, though there are no resources on the site that this species utilizes. Wandering Tattlers are an indigenous migratory shorebird species that nests in the high Arctic during the late spring and summer months, returning to Hawai'i and the tropical Pacific to spend the fall and winter months each year. They usually leave Hawai'i for the trip back to the Arctic in late April or the very early part of May of each year. The single bird recorded on the site is likely one that is going to over-summer, and not make the journey north to breed.

In can be expected that at least three other migratory shorebird species, Pacific Golden-Plover (*Pluvialis fulva*), Ruddy Turnstone (*Arenaria interpres*), and Sanderling (*Calidris alba*) use resources on this site between late July and late

April each year. The remaining 10 avian species detected during this survey are all alien introductions to the Hawaiian Islands.

Two other seabird species not detected during our survey—Hawaiian Petrel (*Pterodroma sandwichensis*) and the threatened endemic sub-species of the Newell's Shearwater (*Puffinus auricularis newelli*)—have been recorded over-flying the Project area between April and the end of November each year (David, 1995; Morgan et al., 2003, 2004; David and Planning Solutions, 2008). Additionally, the Save Our Shearwaters (SOS) Program has recovered both species from the general Project area on an annual basis over the past three decades (Morgan et al., 2003, 2004; David and Planning Solutions, 2008; Save our Shearwater Program, 2010).

The petrel is listed as endangered and the shearwater as threatened under both federal (Endangered Species Act [ESA]) and State of Hawai'i endangered species statutes. The primary cause of mortality in both Hawaiian Petrels and Newell's Shearwaters is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered to be the second most significant cause of mortality of these seabirds in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way out to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, seabirds often collide with manmade structures, and if they are not killed outright, dazed or injured birds are easy targets of opportunity for feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1994; Podolsky et al., 1998; Ainley et al., 2001). There are no nesting colonies nor appropriate nesting habitat for either of these listed seabird species within the Project site.

Mammalian Resources

The findings of the mammalian survey are consistent with the location of the property and habitats currently present on the site. All three mammalian species detected during the course of this survey are alien to the Hawaiian Islands. Although no Hawaiian hoary bats were detected during the course of our survey, bats have been recorded foraging for insects within the general area on a regular basis (David, 2011). Hawaiian hoary bats are widely distributed in the lowland areas on the Island of Kaua'i, and have been documented in and around almost all areas that have some dense vegetation (Tomich, 1986; USFWS, 1998; David, 2011). There are no suitable roosting sites within the Project site for this species.

Although no rodents were detected during the course of this survey, it is likely that the four established alien Muridae found on Kaua'i—roof rat (*Rattus r. rattus*), Norway rat (*Rattus norvegicus*), European house mouse (*Mus musculus domesticus*), and possibly Polynesian rats (*Rattus exulans hawaiiensis*)—use various resources found within the project area. All of these human commensal rodents are deleterious to native ecosystems and native faunal species dependent on them.

Potential Impacts to Protected Species or Special Habitats

Critical Habitat

The subject property is not included in any federal Critical Habitat designations. Thus, development of the site will not impact Critical Habitat. No equivalent statute exists under state or county law.

Jurisdictional Waters

No federal waters or special habitats are present on the subject parcel inland from the mean high water (tide) line. The Pacific Ocean below mean higher high water (MHHW) along this shore is under federal jurisdiction as described in the Rivers and Harbors Act of 1899 and the Clean Water Act of 1972. Inland of this boundary, no streams or wetlands occur on the subject property. State of Hawai'i, Department of Land and Natural Resources (DLNR) jurisdiction extends seaward from the vegetation line (Hawaii Administrative Rules, §13-222)—a line presumably higher than the MHHW line along this wave-swept coast.

Botanical Resources

No plant species currently listed as endangered, threatened, or proposed for listing under either the federal or the State of Hawai'i's endangered species programs (DLNR, 1998; USFWS, 2005, 2010) were recorded within the Project property. Therefore, development of the site will not result in deleterious impacts to listed plant species.

Invertebrate Resources

No federal or state listed endangered or threatened land invertebrate species were noted in this survey (USFWS, 2010b).

Avian Resources

No avian species currently proposed for listing, or any that are listed under either federal or the State of Hawai'i endangered species statutes was recorded in our survey of the site (DLNR, 1998; USFWS, 2005a, 2005b, 2011). However, two listed seabirds fly over the area.

Hawaiian Petrel and Newell's Shearwater — The principal potential impact that development of this site poses to ESA-protected Hawaiian Petrel and

Newell's Shearwater is an increased threat that birds will be downed after becoming disoriented by outdoor lighting associated with either night-time construction activity or exterior lighting associated with whatever structures and appurtenances are built on the property.

Wedge-tailed Shearwater — The principal potential impacts that the development of the site poses to MBTA-protected Wedge-tailed Shearwaters are: 1) during any clearing and grubbing of the Project site where birds and burrows may be disturbed or destroyed; ad 2) an increased risk that birds will be downed after becoming disoriented by outdoor lighting associated with either night-time construction activity or exterior lighting associated with whatever structures and appurtenances that are built on the property.

Mammalian Resources

No mammalian species protected or proposed for protection under either federal or State of Hawai'i endangered species programs (DLNR, 1998; USFWS, 2005a, 2005b, 2011) were detected during the course of this survey.

Recommendations

Vegetation

- Landscape with native dryland plants for lower cost maintenance. We recommend post-construction landscaping with native dryland and coastal strand plants. Planted in a mix of ground cover, shrub, and tree heights, native plants will slow run-off and retain moisture when rain occurs. Native plants will remain green and more fire resistant throughout dry periods. Most native plantings have lower maintenance costs as well. Native species need less hedge trimming, weed-whacking, and usually grow well without fertilizers, reducing cost and the potential for non-point pollution of the ocean. Native species will provide educational, visual, and aesthetic benefits while conserving water. Native plants will create interesting areas for walking, cultural learning, nature study, and bird watching. Resources helpful in understanding Hawaiian plants in landscaping include *Native Hawaiian Plants for Landscaping, Conservation, and Reforestation* (Bornhorst & Rauch, 1994) and *Growing Native Hawaiian Plants* (Bornhorst, 2005). By prior arrangement with growers, native Hawaiian plants can be as convenient to mass plant as the introduced plants commonly used to re-vegetate after new construction.

Invertebrates

- Shield external lighting: during construction and in the finished project and roadways, it will be important to plan to shield outdoor lighting. Artificial lighting is attractive and confusing to many arthropods (see Methods: Light survey, page 6), concentrating them at night as easy prey for feeding bats or arthropod predators such as praying mantis. Insects attracted to lights at night often remain in place at dawn and are then easily seen and consumed by birds.

Birds

- Immediately prior to initiation of ground disturbance activities on the Project site, a survey for nesting Wedge-tailed Shearwaters should be conducted by a qualified biologist to record all then currently active burrows with GPS. These locations can then be plotted on construction plan documents so that the burrows can be avoided. At this site, the colony is active and expanding; as such, the current location of burrows (as in Fig. 2) is not an accurate indication of where all burrows will be next breeding

season. No construction should occur until all nesting Wedge-tailed Shearwaters have left the colony.

- If night-time work will be required in conjunction with construction activities on the property, it is recommended that construction lights be shielded to reduce the potential for interactions between nocturnally flying Wedge-tailed Shearwaters, Hawaiian Petrels, Newell's Shearwaters, and other seabirds protected under either the MBTA or ESA (or equivalent state statutes) and man-made structures (Reed et al., 1985; Telfer et al., 1987).

- Permanent exterior lights associated with any development on the property must be shielded so as to reduce the potential for interactions of nocturnally flying seabirds with man-made structures (Reed et al., 1985; Telfer et al., 1987).

- Restrict food sources: do not allow employees to feed cats or encourage cat colonies. Food meant for cats will attract rats, mice, ants and mongoose. All offer dangers to sea birds.

Mammals

- Remove trash regularly: food trash can attract mongoose, cat, and rat and mice populations, resulting in predation on birds. Population surges of such pests will make the project a poor neighbor to existing housing in the area. Provide trash cans at construction areas where food is consumed, provide can covers, and empty cans frequently. Importantly, construction supervisors need to establish with crew members a culture of using the receptacles.

- Limit animal access: do not allow employees to bring pet dogs or cats to the site. Even well behaved animals can escape a leash and fail to return on command. Dogs and cats will harass and kill ground-nesting birds.

Glossary[6]

Adventive: organisms introduced to an area but not purposefully.

Alien: not native; occurring in the locality it occupies ONLY with human assistance, accidental or purposeful. Polynesian (e.g., coconut) and post-1778 introductions (e.g., guava, goats, and sheep) are aliens.

Anaphylactic: hypersensitivity; may cause shock, respiratory distress, swelling, other problems

Arthropod: insects and related invertebrates (e.g., spiders) having an external skeleton and jointed legs.

Aeolian: wind blown, a habitat dominated by effects of wind blowing over it.

Aspiration: invertebrates are transferred from the original location (leaf, net, etc.) into a large vial. Two tubes are lodged in one stopper in the vial. Air drawn in on one tube, creates suction at the end of the second tube; the target insect is drawn into the vial by the pulling air.

Endemic: naturally occurring, without human transport, ONLY in the locality occupied. Hawaii has a high percentage of endemic plants and animals, some in very small microenvironments.

Indigenous: naturally occurring without human assistance in the locality it occupies; may also occur elsewhere, including outside the Hawaiian Islands. (e.g., *naupaka kahakai* (*Scaevola sericea*) is the same plant in Hawai'i and throughout the Pacific).

Insects: arthropods with six legs, and bodies in three sections

Invertebrates: animals without backbones (insects, spiders, snails, shrimp)

Kīpuka: an area of vegetation surrounded by younger lava flows

Larva/larval: an immature stage of development in young of many animals.

Littoral: belonging to or along the sea shore

Makai: toward the ocean

Mauka: toward the mountains

Midden: human food refuse in an archaeological setting, often in a heap or pile

6 Glossary based largely on definitions in *Biological Science: An Ecological Approach*, 7th ed., Kendall/Hunt Publishing Co., Dubuque, a high school text; on the glossary in *Manual of Flowering Plants of Hawai'i*, Vol.2, Wagner, et al., 1999, Bishop Museum Press, and other sources.

Glossary (continued).

Mollusk: invertebrates in the phylum Mollusca. Common representatives are snails, slugs, mussels, clams, oysters, squids, and octopuses.

Native: organism that originated in area where it lives without human assistance. May be indigenous or endemic.

Naturalized: an alien organism that, with time, yet without further human assisted releases or plantings, has become established in an area to which it is not native.

Nocturnal: active or most apparent at night.

Pupa: the stage between larva and adult in insects with complete metamorphosis, a non-feeding and inactive stage often inside a case

Purposefully introduced: an organism brought into an area for a specific purpose, for example, as a biological control agent.

Rare: threatened by environmental factors and in low numbers.

Senescent: Aged. Said of a plant community when most or all of the individual plants are mature and there is no regeneration or young plants in the complement.

Species: all individuals and populations of a particular type of organism, maintained by biological mechanisms that result in their breeding mostly with their kind.

Strand: Similar to littoral; describes plant community extending inland from the high tide line, typically growing on rock and sand substrata.

Vertebrates: animals with backbones (birds, mammals, reptiles)

Waxing: describes gradual increase in visible amount of the moon's disk

References

Ainley, D. G, R. Podolsky, L. Deforest, G. Spencer, and N. Nur. 2001. The Status and Population Trends of the Newell's Shearwater on Kaua'i: Insights from Modeling, *in*: Scott, J. M, S. Conant, and C. Van Riper III (editors) *Evolution, Ecology, Conservation, and Management of Hawaiian Birds: A Vanishing Avifauna.* Studies in Avian Biology No. 22: Cooper's Ornithological Society, Allen Press, Lawrence, Kansas. (Pg. 108-123).

American Ornithologist's Union. 1998. *Check-list of North American Birds.* 7th edition. AOU, Washington D.C. 829 pp.

_____. 2000. Forty-second supplement to the American Ornithologist's Union *Check-list of North American Birds. Auk*, 117: 847-858.

Asquith, A. 1993. A new species of *Cyrtopeltis* from coastal vegetation in the Hawaiian Islands (Heteroptera: Miridae: Dicyphinae). *Pac. Sci.,* 47(1): 17-20.

Banks, R. C., C. Cicero, J. L. Dunn, A. W. Kratter, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz. 2002. Forty-third supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 119: 897-906.

_____, _____, _____, _____, _____, _____, _____, and _____. 2003 Forty-fourth supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 120: 923-931.

_____, _____, _____, _____, _____, _____, _____, and _____. 2004 Forty-fifth supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 121: 985-995.

_____, _____, _____, _____, _____, _____, _____, and _____. 2005 Forty-sixth supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 122: 1031-1031.

_____, _____, _____, _____, _____, _____, _____, and _____. 2006 Forty-seventh supplement to the American Ornithologist's Union Check-list of North American Birds. *Auk*, 123: 926-936.

Banks, R. C., C. R. Terry Chesser, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz. 2007 Forty-eighth supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 124: 1109-1115.

_____ and K. Winker. 2008. Forty-ninth supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 125: 758-768.

Bonaccorso, F. J., C. M. Todd and, A. C. Miles. 2005. Interim Report on Research to Hawaiian Bat Research Consortium for The Hawaiian Hoary Bat, Ope'ape'a, *Lasiurus cinsereus semotus*. 1 September 2004 to 31 August 2005.

_____, _____, and _____. 2007. Interim Report on Research to Hawaiian Bat Research Consortium for The Hawaiian Hoary Bat, Ope'ape'a, *Lasiurus cinsereus semotus*. April 1, 2007.

_____, M. Corresen, and C, Pinzari 2009. Interim Report on Research to Hawaiian Bat Research Consortium for The Hawaiian Hoary Bat, Ope'ape'a, *Lasiurus cinsereus semotus*. February 4, 2009.

Bornhorst, H. L. 2005. *Growing native Hawaiian plants: a how-to guide for the gardener*. Bess Press, Honolulu, 104 pp.

_____ and F. D. Rauch. 1994. *Native Hawaiian plants for landscaping, conservation, and reforestation*. HITAHR, College of Tropical Agriculture and Human Resources, University of Hawaii, Honolulu. 17 pp.

Bridwell, J. C. 1920, "A New Lowland Plagithmysine Cerambycid from Oahu with Notes on its Habits. [Ewa Dryland Insect survey]," *Proceedings of the Hawaiian Entomological Society*, 4 (2): 314-327.

Bryan, Jr., E. H. 1929. Notes and Exhibitions, *Proceedings of the Hawaiian Entomological Society*, 7(2):237.

Chesser, R. T., R. C. Banks, F. K. Barker, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz, and K. Winker. 2009. Fiftieth supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 126: 1-10.

Chesser, R. T., R. C. Banks, F. K. Barker, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., J. D. Rising, and D. F. Stotz, and K. Winker. 2010. Fifty-first supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 127: 726-744.

_____, _____, _____, _____, _____, _____, _____, _____, _____, _____, and _____. 2011. Fifty-second supplement to the American Ornithologist Union Check-list of North American Birds. *Auk*, 128: 600-613.

Christensen, C. 1992. *Kauai's Native Land Shells.* Fisher Printing, Honolulu. 28 pp.

Cooper, B. A and R. H. Day. 1994. Kauai endangered seabird study. Volume 1: Interactions of Dark-rumped Petrels and Newell's Shearwaters with utility structures on Kauai, Hawaii: Final Report, TR-105847-V1, Electric Power Research Institute, Palo Alto, California.

_____. 1998. Summer Behavior and Mortality of Dark-rumped Petrels and Newell's Shearwaters at Power Lines on Kauai. Colonial Waterbirds, 21 (1): 11-19.

Cowie, R. H. 2006. Succineid project web data: *Systematics, Phylogenetics, and Biogeography*. Available on the web at URL: www.hawaii.edu/cowielab/Succineid_project/suchome; last accessed July 2011.

Daly, H. V. and K. N. Magnacca. 2003. *Insects of Hawaii.* Volume 17: *Hawaiian Hylaeus.* University of Hawaii Press, Honolulu, Hawaii. 234 pp.

David, R. E. 2010. Unpublished field notes – Kaua'i, 1980 - 2010.

_____, R. H. Day, and B. A. Cooper 2002. Results of Newell's Shearwater Surveys at the Kaluahonu, Moalepe and Anahola Memorial Colonies, Island of Kaua'i, Hawai'i, July 2002. Prep. for Planning Solutions, Inc., and Kaua'i Electric.

_____ and Planning Solutions. 2008. 2007 Save Our Shearwaters Program End of Year Report: Prep. for: Kaua'i Island Utility Cooperative & The Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife.

Department of Land and Natural Resources (DLNR). 1997. Indigenous Wildlife, Endangered and Threatened Wildlife and Plants, and Introduced Wild Birds. Department of Land and Natural Resources. State of Hawaii.

Administrative Rule §13-124-2 -§13-124-3, June 13, 1996. Exhibit 1. Feb. 1, 1997. Available on the web at URL: www.state.hi.us/dlnr/dofaw/rules/Chap124exhib.pdf.

Department of Land and Natural Resources (DLNR). 1998. Indigenous Wildlife, Endangered And Threatened Wildlife And Plants, And Introduced Wild Birds. Department of Land and Natural Resources. State of Hawaii. Administrative Rule §13-134-1 through §13-134-10, dated March 02, 1998.

Division of Forestry & Wildlife (DOFAW) 2009. Unpublished Seabird Survey Data.

Ebin, Moser + Skaggs LLP, and Rana Biological Consulting, Inc. 2010. Kaua'i Lagoons Habitat Conservation Plan. Prepared for: Kauai Lagoons, LLC & Mori Golf (Kauai), LLC.

eVols. University of Hawaii at Manoa Library. Available on the web at URL: http://evols.library.manoa.hawaii.edu/; last accessed May 2011.

Hadley, T. H. 1961. Shearwater calamity on Kauai. *'Elepaio*, 21: 60.

Hawai'i Biological Survey (HBS). 2002a update. Hawaiian Arthropod Checklist. B. P. Bishop Museum, Honolulu, Hawai'i. Available on the web at URL: http://www2.bishopmuseum.org/HBS/checklist/; Last accessed May 2011.

_____. 2002b. Hawaiian Freshwater & Terrestrial Mollusk Checklist. B. P. Bishop Museum, Honolulu, Hawai'i. Available on the web at URL: http://www2.bishopmuseum.org/HBS/checklist/; Last accessed May 2011.

Hawaii Natural Heritage Program (HNHP). Undated. *Hawaii Natural Heritage Program*, Center for Conservation Research and Training, University of Hawaii at Manoa. Data provided by Roy Kam, Database Manager, accessed May 2011.

Hawaii-Pacific Journal Index. University of Hawaii, Honolulu, Hawai'i. Accessed October 2009. Available on the web at URL: http://uhmanoa.lib.hawaii.

Hawaiian Entomological Society (HES). 1990. Common Names of Insects & Related Organisms. Committee on Common Names of Insects. 87 pp. Available on the web at URL: edu/cgi-bin/Pwebrecon.cgi; last accessed May 2011.

Hazlett, R. W., and D. W. Hyndman. 1996. *Roadside Geology of Hawaii.* Mountain Press, Missoula, Montana. 304 pp.

Howarth, F. G. and W. P. Mull. 1992. *Hawaiian Insects and Their Kin.* University of Hawai'i Press, Honolulu. 160 pp.

Ingenta Connect search service / online abstracts. Available on the web at URL: http://www.ingentaconnect.com/ ; last accessed May 2011.

Kunishi, R. 1976. "Notes and Exhibitions (Oct 1974)," *Proceedings of the Hawaiian Entomological Society*, 22(2): 175-176.

Liittschwager, D. and S. Middleton, photographers. 2001. *Remains of a Rainbow*, National Geographic / Environmental Defense Fund. Accompanying zoological captions by Manning, Montgomery, *et al.*

Montgomery, S. L. 2003. *Survey of terrestrial faunal resources on Po'ipü Beach Villas property, Po'ipü, Koloa, Kaua'i,* 21pp. Report for Po'ipü Beach Villas, LLC.

_____. 2005. *Survey of native terrestrial and stream fauna near Köloa Landing, Po'ipü, Köloa District, Island of Kaua'i,* 21pp. Report for Po'ipü Beach Villas, LLC.

Morgan, C., P. White, and R. E. David. 2003. Habitat Conservation Plan: Kaua'i Island Utility Cooperative: Working Paper No. 2 Data Analysis: Interpreting the Save Our Shearwaters Bird Recovery Database (1979-2002) for Habitat Conservation Planning. Prep. for: Kaua'i Island Utility Cooperative.

_____. 2004 Habitat Conservation Plan: Kaua'i Island Utility Cooperative: Data Report and Analysis: Save Our Shearwaters Bird Program 2003 Update. Prepared for: Kaua'i Island Utility Cooperative.

Nishida, G. M. (ed.). 2002. Hawaiian Terrestrial Arthropod Checklist. Fourth edition. *Bishop Museum Technical Report* 22: 313 pp.

_____ and J. M. Tenorio. 1993. *What Bit Me?* Univ. of Hawaii Press. 72 pp.

Office of Environmental Quality Control. Online library. Available on the web at URL: http://oeqc.doh.hawaii.gov/Shared Documents/; last accessed May 2011.

Otte, D. 1994. *The Crickets of Hawaii.* The Orthopterists' Society, Philadelphia, PA. 396 pp.

Pacific Basin Information Node (PBIN). Data base / geographic search available on the web at URL: http://pbin.nbii.gov/otherinverts/index.asp; last accessed May 2011.

Perkins, R. C. L. 1913. "Introduction. Being a review of the land-fauna of Hawaiia," and "Vertebrates." *In*: Sharp, D., ed., *Fauna Hawaiiensis. Vol. 1.* Cambridge University Press, Cambridge, and Bishop Museum Special Pub. 6.

Podolsky, R., D. G. Ainley, G. Spencer, L. de Forest, and N. Nur. 1998. Mortality of Newell's Shearwaters Caused by Collisions with Urban Structures on Kaua'i. *Colonial Waterbirds,* 21: 20-34.

Pukui , M. K., S. H. Elbert, and E. T. Mookini 1976. *Place Names of Hawaii.* University of Hawaii Press, Honolulu, Hawai'i. 289 pp.

Reed, J. R., J. L Sincock, and J. P. Hailman 1985. Light Attraction in Endangered Procellariform Birds: Reduction by Shielding Upward Radiation. Auk 102: 377-383.

Scholar Space. University of Hawaii at Manoa Library. Available on the web at URL: http://scholarspace.manoa.hawaii.edu/; last accessed May 2011.

Simons, T. R., and C. N. Hodges. 1998. Dark-rumped Petrel (*Pterodroma phaeopygia*). *In:* A. Poole and F. Gill (editors). *The Birds of North America, No. 345.* The Academy of Natural Sciences, Philadelphia, PA. and the American Ornithologists Union, Washington, D.C.

Sincock, J. L. 1981. Saving the Newell's Shearwater. Pages 76-78 in Proceedings of the Hawaii Forestry and Wildllife Conference, 2-4 October 1980. Department of Land and Natural Resources, State of Hawaii, Honolulu.

Staples, G. W. and D. R. Herbst. 2005. *A Tropical Garden Flora. Plants Cultivated in the Hawaiian Islands and other Tropical Places.* Bishop Museum, Honolulu. 908 pp.

Stearns, H. T. 1966. *Road Guide to Points of Geologic Interest in the Hawaiian Islands.* Pacific Books, Palo Alto, Ca. 66 pp.

Swezey, O. H. 1935. "Winter Revival of Insect Life in the Arid Region at Koko Head, O'ahu," *Proceedings of the Hawaiian Entomological Society*, 9: 95-96.

_____. 1954. *Forest Entomology in Hawai'i.* Special Publication 44, Bishop Museum Press, Honolulu, 266 pp.

Telfer, T. C. 1979. Successful Newell's Shearwater Salvage on Kauai. *'Elepaio,* 39:71

_____, J. L. Sincock, G. V. Byrd, and J. R. Reed. 1987. Attraction of Hawaiian seabirds to lights: Conservation efforts and effects of moon phase. *Wildlife Society Bull.*, 15: 406-413.

Tenorio, J. M. and G. M. Nishida. 1995. *What's Bugging Me?* University of Hawaii Press, Honolulu, HI, 184 pp.

Tomich, P. Q. 1986. *Mammals in Hawaii.* Bishop Museum Press. Honolulu, Hawaii. 37 pp.

U.S. Fish & Wildlife Service (USFWS). 1983. Hawaiian Dark-Rumped Petrel & Newell's Manx Shearwater Recovery Plan. USFWS, Portland, Oregon. February 1983.

_____. 1998. Recovery Plan for the Hawaiian Hoary Bat. U.S. Fish & Wildlife Service, Portland, Oregon.

_____. 2000. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for Newcomb's Snail from the Hawaiian Islands. 50 CFR Part 17. *Federal Register*, Vol. 65(No. 17): 4162-4169.

_____. 2003. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Blackburn's Sphinx Moth. *Federal Register*, 68(111; Tuesday, June 10, 2003): 34710-34766.

_____. 2005a. Endangered and Threatened Wildlife and Plants. 50 CFR 17:11 and 17:12 (Tuesday, November 1, 2005).

_____. 2005b. 50 CFR 17. Endangered and Threatened Wildlife and Plants. Review of Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petition; Annual Description of Progress on Listing Actions. *Federal Register*, 70 (No. 90; Wednesday, May 11, 2005): 24870-24934.

U.S. Fish & Wildlife Service (USFWS). 2010a. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Review of Native Species that are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule. *Federal Register*, Vol. 75(No. 217; Nov. 10): 69221-69294.

_____. 2010b. USFWS Threatened and Endangered Species System (TESS), available on the web at URL: http://ecos.fws.gov/tess_public/StartTESS.do.

_____. 2010c. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Listing the Flying Earwig Hawaiian Damselfly and Pacific Hawaiian Damselfly As Endangered Throughout Their Ranges. Final rule. *Federal Register*, 75(No. 121; June 24): 35990-36012.

U.S. Naval Observatory (USNO), Astronomical Applications Department. *Sun and Moon Data for One Day*. Available on the web at URL: http://aa.usno.navy.mil/.

Wagner, W. L., D. R Herbst, and S. H. Sohmer. 1990. *Manual of the Flowering Plants of Hawai'i*. University of Hawaii Press, Honolulu, Hawaii. 2 vols. 1854 pp.

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

Zimmerman, E. C. 1948-80. *Insects of Hawaii*. University of Hawaii Press, Honolulu.

_____. 2001. *Insects of Hawaii. Volume 1: Introduction*. University of Hawaii Press, Honolulu. xx + 206 pp.

EXHIBIT O-4



1. Ala Kinoiki (foreground) and Po'ipū Road (cross street) are the closest County highways from the Property. This photograph was taken from the east side of Ala Kinoiki. See location of photo indicated on the map below.



2. From the Ala Kinoiki/Po'ipū Road intersection the Property is not visible and thus the build out of either the 10 lot subdivision or the 25+ legal lots of record will have no impact on public views from the closest coastal County highways. This photograph was taken from the west side of Ala Kinoiki. See location of photo indicated on the map below.



3. Kaumualiʻi Highway (Route 50), the State highway nearest to the coast in this area of Kaua'i and closest to the Property, is approximately 4.8 miles from the Property. Because of this distance, the Property cannot be seen Kaumualiʻi Highway. Thus the Makahūʻena Point subdivision will not interfere with or detract from the line-of-sight toward the ocean from the State highway nearest the coast.

FIGURE 1
Public View Analysis

Makahūʻena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

EXHIBIT O-4





Current Conditions: Pe'e Road is the County road directly in front of the Property. Currently from Pe'e Road the only view of the ocean across the Property from is from the access driveway. Tall vegetation blocks ocean views from other locations along Pe'e Road. This photograph was taken near the east side of the Property; see key map on the right.





With the 25+ lot Subdivision: From this perspective build out of the 25+ legal lots of record would create a dense line of homes along Pe'e Road and the internal access road, blocking all ocean views.





With the 10-lot Subdivision: With only two homes directly fronting Pe'e Road, the 10-lot subdivision would provide for more opportunities for ocean views between the homes.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 2
Public View Analysis

Makahū'ena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: From this perspective along Pe'e Road tall vegetation blocks ocean views. This photograph was taken near the west side of the Property; see key map on the right.





With the 25+ lot Subdivision: From this perspective build out of the 25+ legal lots of record would create a dense line of homes along Pe'e Road and block all ocean views.





With the 10-lot Subdivision: With large, one-acre lots, and only two homes directly fronting Pe'e Road, the 10-lot subdivision would provide for more opportunities for ocean views between the homes.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 3
Public View Analysis

Makahū'ena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: The paved public shoreline access path in front of The Point at Poʻipū condominium and timeshare complex ends at the west Property boundary; see key map on the right. A survey stake marks the property line. The end of the paved path can be seen at the bottom left.





With the 25+ lot Subdivision: Build out of the 25+ legal lots of record would allow for up to three rows of homes between The Point at Poʻipū condominium and timeshare complex and the ocean; however from this perspective the homes would not detract from the line-of-sight toward the ocean, as the primary ocean view is to the south.





With the 10-lot Subdivision: The 10 lot subdivision, with large, one acre lots, would provide for one row of homes between The Point at Poʻipū condominium and timeshare complex and the ocean, with generous spacing between homes. From this perspective the homes would not detract from the line-of-sight toward the ocean, as the primary ocean view is to the south.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 4
Public View Analysis

Makahūʻena Point
CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: : This photograph was taken further to the east than the photograph in Figure 4; see kep map on the right. The paved public shoreline access path in front of The Point at Poʻipū condominium and timeshare complex can be seen in the foreground. The paved path ends at the west Property boundary.





With the 25+ lot Subdivision: Build out of the 25+ legal lots of record would not be very perceptible from this vantage point as Building 6 of The Point at Poʻipū condominium and timeshare complex would block most of the homes and the primary ocean view is to the south.





With the 10-lot Subdivision: Similarly, the 10 lot subdivision would not be very perceptible from this vantage point as Building 6 of The Point at Poʻipū condominium and timeshare complex would block most of the homes and the primary ocean view is to the south.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 5
Public View Analysis

Makahūʻena Point
CIRI Land Development Company
Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.





Current Conditions: This photograph was taken from the public access beach park on the eastern side of the Grand Hyatt Resort and Keoneloa (Shipwreck) Beach; see key map on the right. The Makahū'ena Point Property this the prominent point in the center of the photograph. The Point at Po'ipū condominium and timeshare complex can be seen in the center of the photograph and to the right.





With the 25+ lot Subdivision: The build out of the 25+ legal lots of record on the Property would result in a greater cluster of homes on the Makahū'ena Point Property, but would not be out of context with the large buildings of Point at Po'ipū condominium and timeshare complex and would not block the line-of-sight toward the ocean from this perspective.





With the 10-lot Subdivision: With the 10 lot subdivision, homes on the Property would not block the line-of-sight toward the ocean from this perspective and would be less dense with more open space compared to the build out of the 25+ legal lots of record on the Property.

House illustrations are representative of the general mass and scale that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

FIGURE 6
Public View Analysis

Makahū'ena Point
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

EXHIBIT O-5

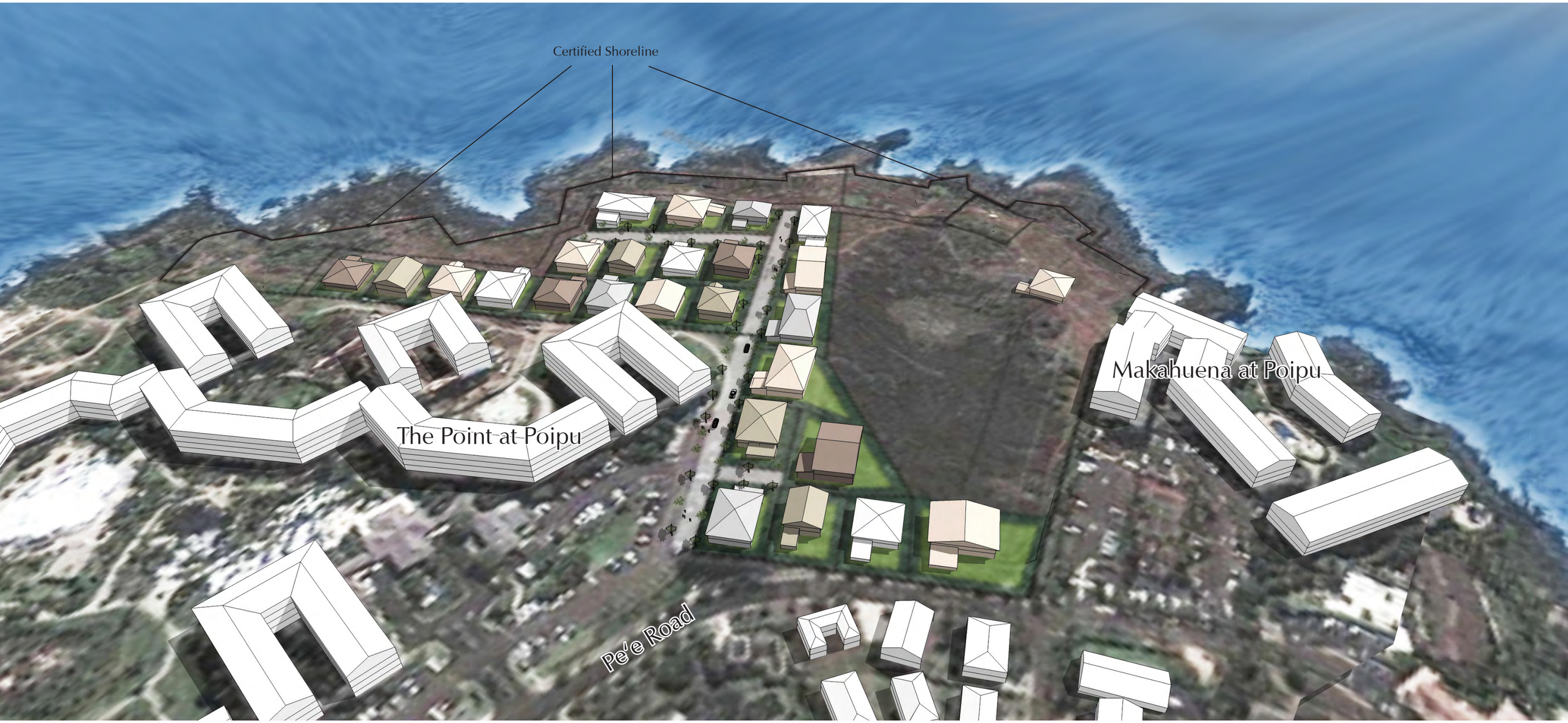


Figure 1
Visual Analysis 25+ lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

EXHIBIT O-5

PBR HAWAII & ASSOCIATES, INC.



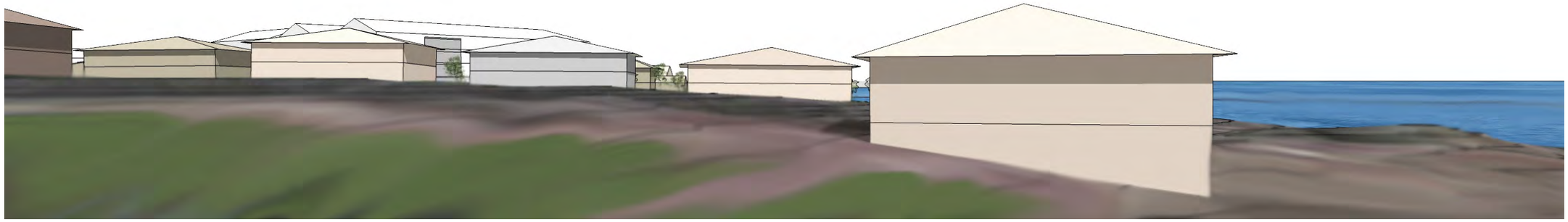
Figure 2
Visual Analysis 25+ lot Subdivision

Makahū'ena Point

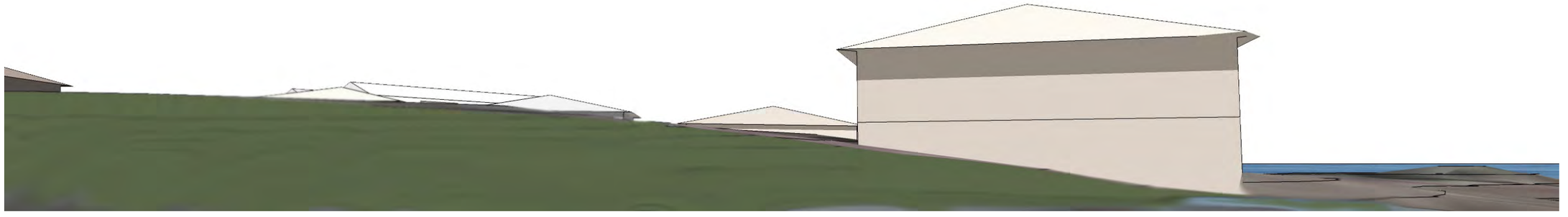
CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.



2nd Floor



1st Floor



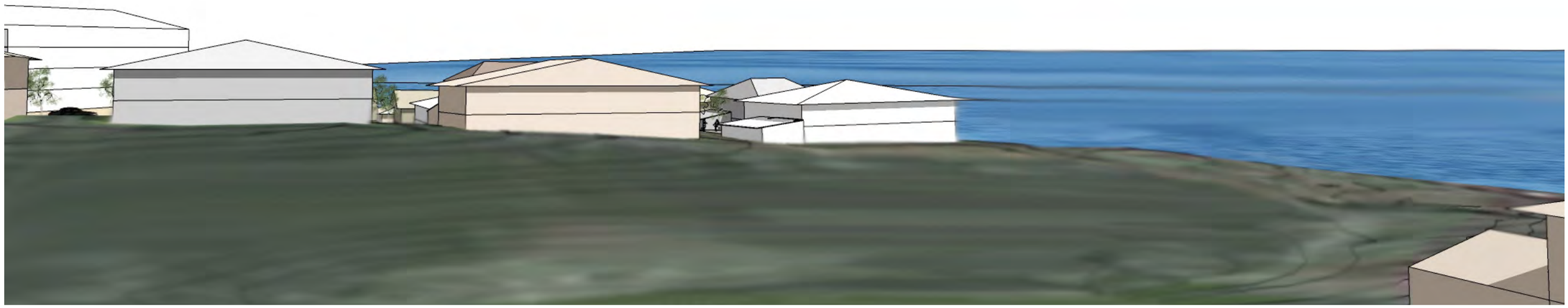
House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 3
Visual Analysis 25+ lot Subdivision
Makahū‘ena Point

CIRI Land Development Company

Island of Kaua‘i

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor



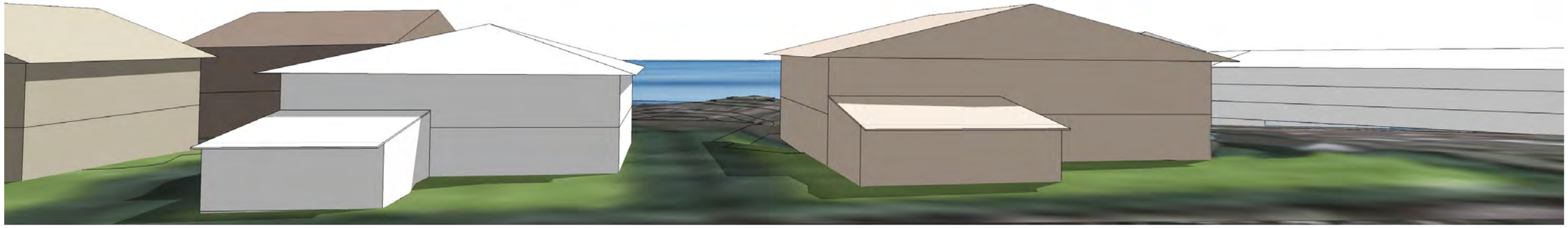
House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 4
Visual Analysis 25+ lot Subdivision

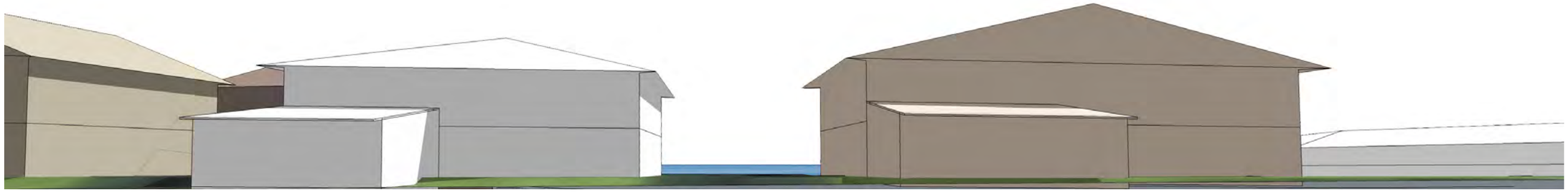
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



2nd Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 5
Visual Analysis 25+ lot Subdivision

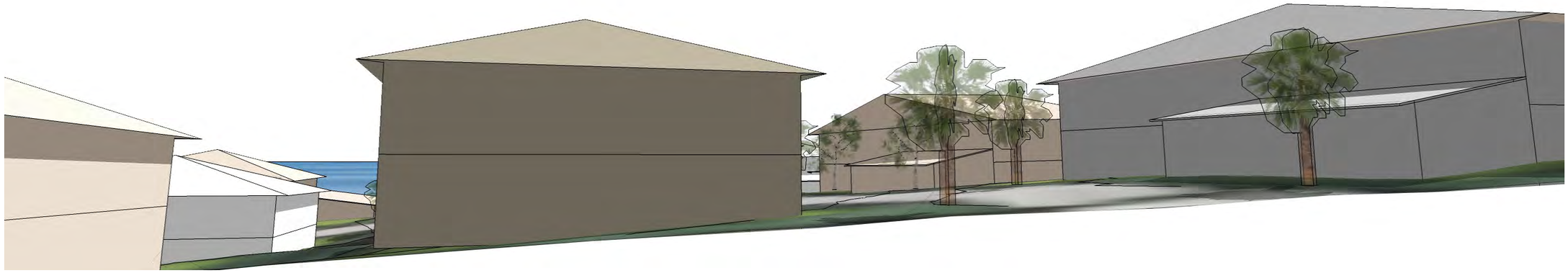
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor



Figure 6
Visual Analysis 25+ lot Subdivision
Makahū‘ena Point

CIRI Land Development Company — Island of Kaua‘i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

PBR HAWAII & ASSOCIATES, INC.

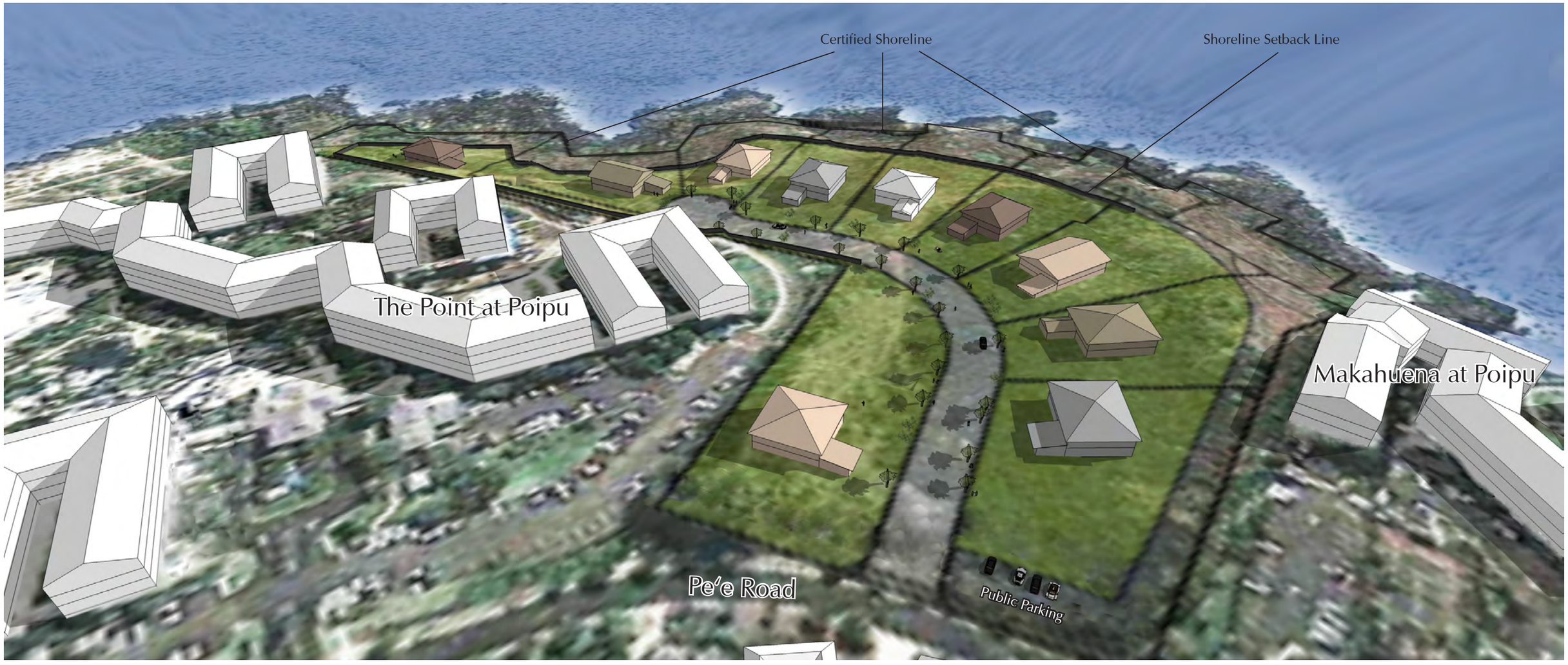


Figure 1
Visual Analysis 10 lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

PBR HAWAII & ASSOCIATES, INC.



Figure 2
Visual Analysis 10 lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

PBR HAWAII & ASSOCIATES, INC.

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.



Figure 3
Visual Analysis 10 lot Subdivision

Makahū'ena Point

CIRI Land Development Company — Island of Kaua'i

House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

PBR HAWAII & ASSOCIATES, INC.



2nd Floor



1st Floor

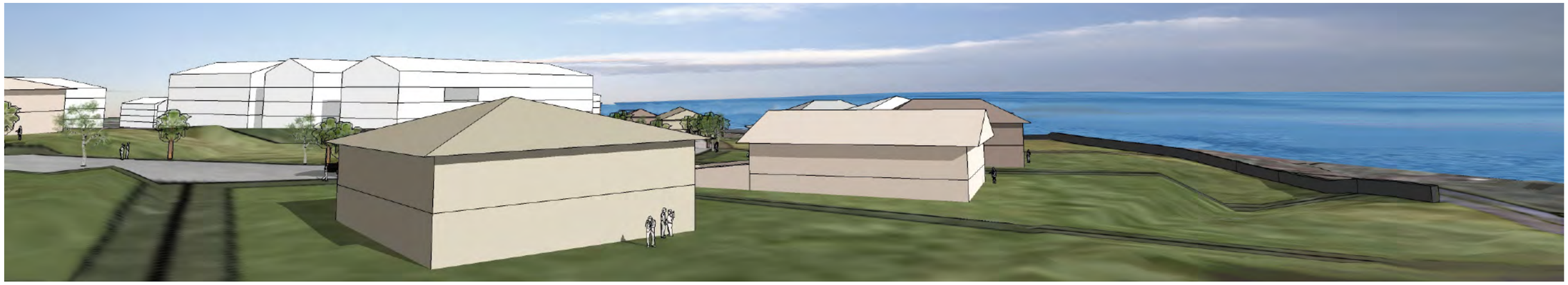


House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

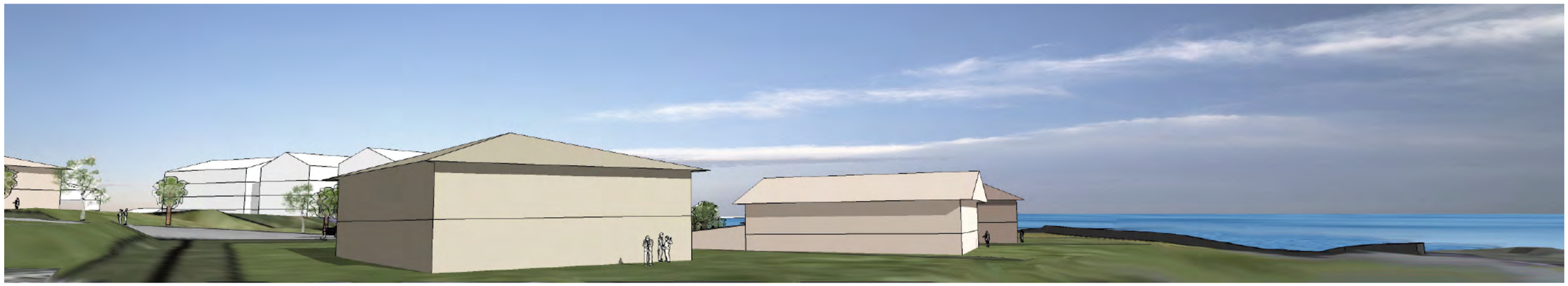
Figure 4
Visual Analysis 10 lot Subdivision
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 5
Visual Analysis 10 lot Subdivision
Makahū‘ena Point

CIRI Land Development Company

Island of Kaua‘i

PBR HAWAII & ASSOCIATES, INC.



2nd Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

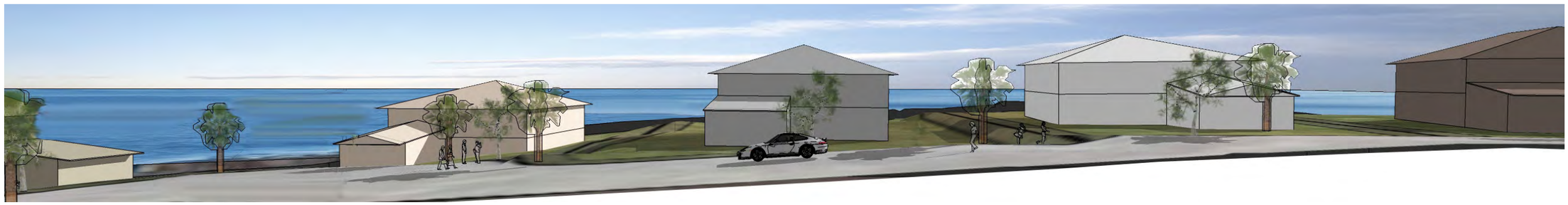
Figure 6
Visual Analysis 10 lot Subdivision
Makahū‘ena Point

CIRI Land Development Company — Island of Kaua‘i

PBR HAWAII & ASSOCIATES, INC.



3rd Floor



1st Floor

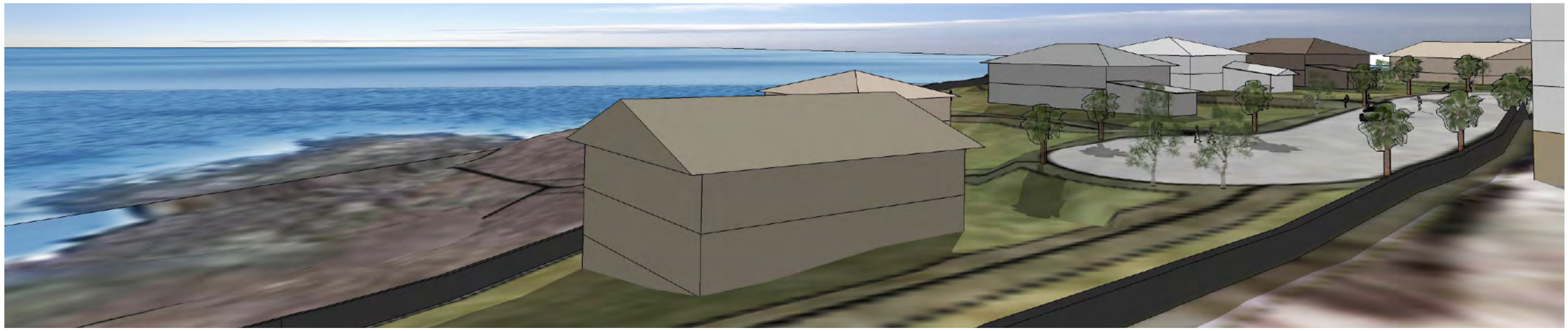


House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

Figure 7
Visual Analysis 10 lot Subdivision
Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.



4th Floor



1st Floor



House illustrations are representative of the general mass and scale of homes that could be built on the lots but are not depictions of what will actually be built and are provided for general visualization purposes only.

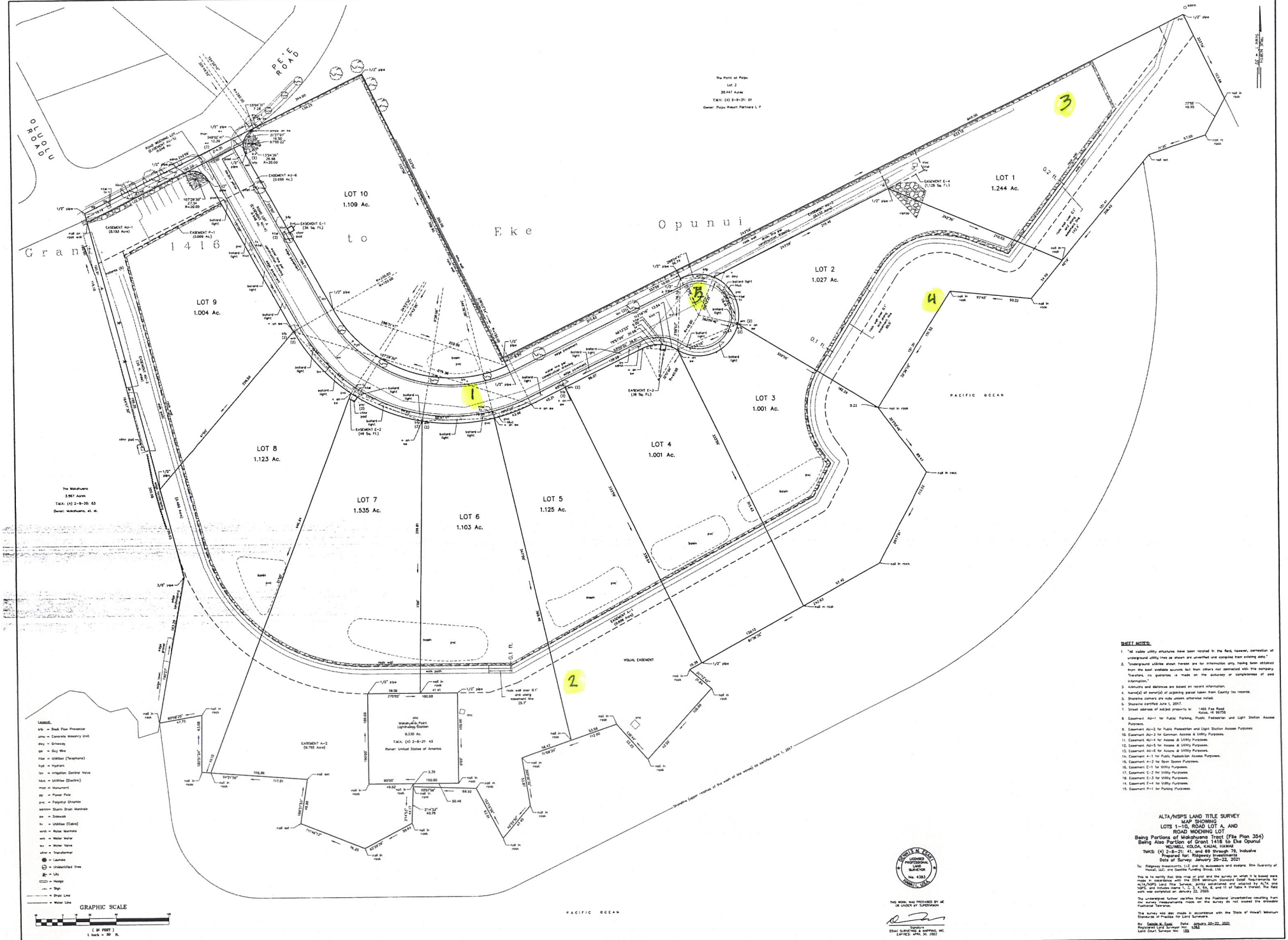
Figure 8
Visual Analysis 10 lot Subdivision

Makahūʻena Point

CIRI Land Development Company — Island of Kauaʻi

PBR HAWAII & ASSOCIATES, INC.

EXHIBIT O-6



SHEET NOTES:

1. "All visible utility structures have been located in the field, however, connection of underground utility lines as shown are unverified and compiled from existing data."
2. "Underground utilities shown hereon are for information only, having been obtained from the best available sources but from others not connected with the company. Therefore, no guarantee is made on the accuracy or completeness of said information."
3. Azimuths and distances are based on record information.
4. Name(s) of owner(s) of adjoining parcel taken from County tax records.
5. Shoreline corners are nails unless otherwise noted.
6. Shoreline certified June 1, 2017.
7. Street address of subject property is: 1465 Pee Road Koloa, HI 96756
8. Easement AU-1 for Public Parking, Public Pedestrian and Light Station Access Purposes.
9. Easement AU-2 for Public Pedestrian and Light Station Access Purposes.
10. Easement AU-3 for Common Access & Utility Purposes.
11. Easement AU-4 for Access & Utility Purposes.
12. Easement AU-5 for Access & Utility Purposes.
13. Easement AU-6 for Access & Utility Purposes.
14. Easement A-1 for Public Pedestrian Access Purposes.
15. Easement A-2 for Open Space Purposes.
16. Easement E-1 for Utility Purposes.
17. Easement E-2 for Utility Purposes.
18. Easement E-3 for Utility Purposes.
14. Easement E-4 for Utility Purposes.
15. Easement P-1 for Parking Purposes.

ALTA/NSPS LAND TITLE SURVEY
MAP SHOWING
LOTS 1-10, ROAD LOT A, AND ROAD WIDENING LOT
Being Portions of Makahuena Tract (File Plan 354)
Being Also Portion of Grant 1416 to Eke Opunui
WELIWELI, KOLOA, KAUAI, HAWAII
TMKS: (4) 2-8-21: 41, and 69 through 78, Inclusive
Prepared for: Ridgeway Investments
Date of Survey: January 20-22, 2021

To: Ridgeway Investments, LLC and its successors and assigns; Site Guaranty of Hawaii, LLC; and Seattle Funding Group, Ltd.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 6A, 6B, and 11 of Table A thereof. The field work was completed on January 22, 2020.

The undersigned further certifies that the Positional Uncertainties resulting from the survey measurements made on the survey do not exceed the allowable Positional Tolerance.

The survey was also made in accordance with the State of Hawaii Minimum Standards of Practice for Land Surveyors.

By: Daniele M. Esaki Date: January 20-22, 2021
Registered Land Surveyor No. 4383
Land Court Surveyor No. 155

DANIELE M. ESAKI
LICENSED PROFESSIONAL LAND SURVEYOR
No. 4383
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

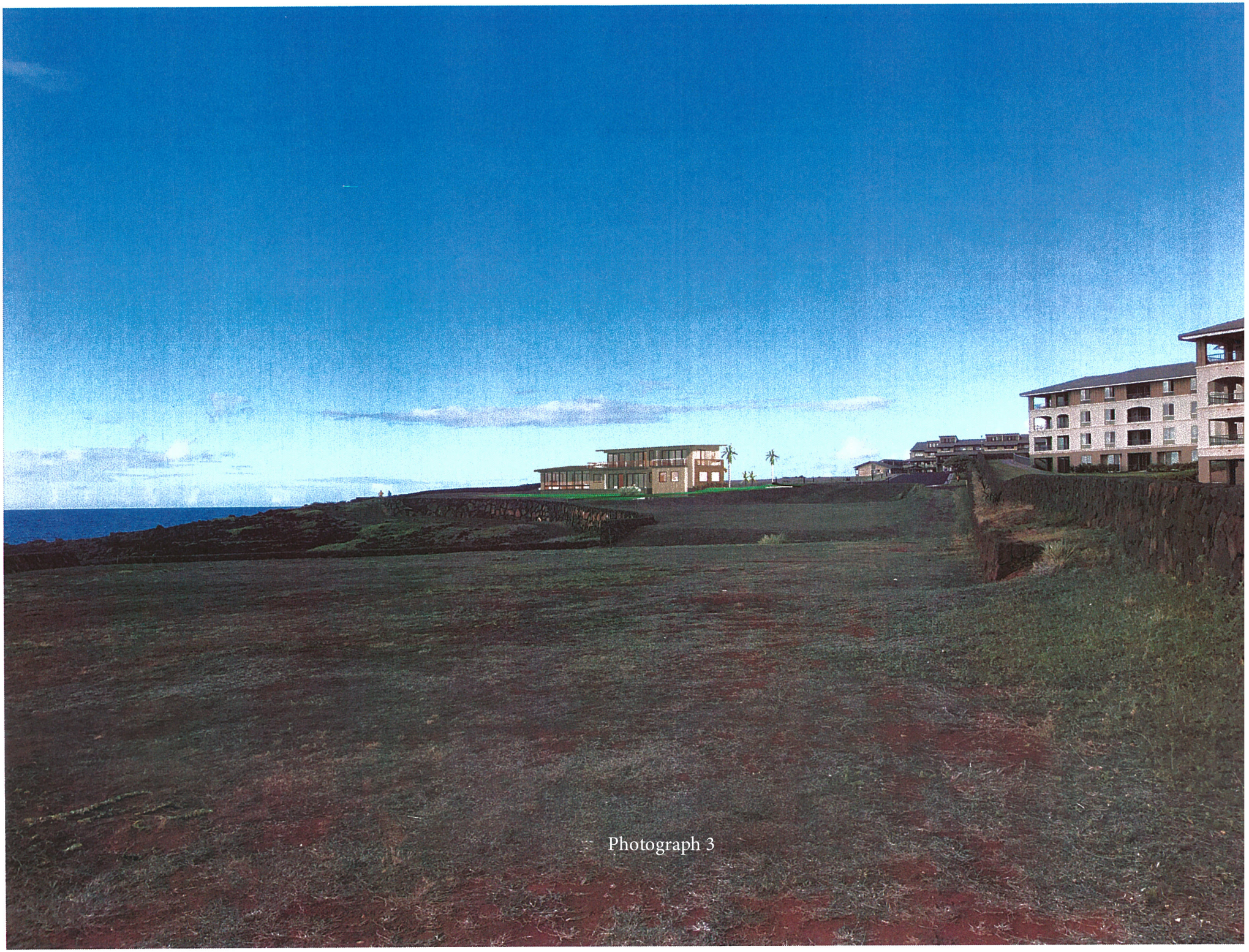
Signature
ESAKI SURVEYING & MAPPING, INC.
EXPIRES: APRIL 30, 2022

ESAKI SURVEYING & MAPPING, INC.

1610 Makahuena Street
Lihue, Kauai, Hawaii 96766



Photograph 1



Photograph 3

Photo Report



Photograph 5

EXHIBIT P

PRELIMINARY ENGINEERING REPORT

FOR

MAKAHUENA POINT

TMK: (4) 2-8-021:041; (4) 2-8-021: 044-067

Located in
Poipu, Island of Kauai, State of Hawaii

OWNER:

CIRI LAND DEVELOPMENT COMPANY
2525 C Street, Suite 500
Anchorage, Alaska 99503

Prepared By:

David A Grenier, P.E.
Hawaii. License No. 6353-C
Triad Engineering
1300 E. 68th Ave., Suite 210
Anchorage, Alaska 99518

April 7, 2014

EXHIBIT P

TABLE OF CONTENTS

1.0 INTRODUCTION

2.0 PROJECT LOCATION

3.0 TOPOGRAPHY and CURRENT DRAINAGE PATTERNS

4.0 FLOOD ZONES

5.0 SOIL CONDITIONS

6.0 OCEAN CONDITIONS

7.0 EXISTING INFRASTRUCTURE

- **7.1 EXISTING ACCESS**
- **7.2 AVAILABLE WASTEWATER FACILITIES**
- **7.3 EXISTING WATER FACILITIES**
- **7.4 AVAILABLE ELECTRIC, TELEPHONE AND TELECOMMUNICATION**

8.0 FLOOD ZONES & CONSTRAINT DISTRICTS

9.0 ANTICIATED INFRASTRUCTURE IMPROVEMENTS

- **9.1 SITE GRADING**
- **9.2 DRAINAGE PLAN**
- **9.3 STORMWATER MANAGEMENT & QUALITY**
- **9.4 EROSION CONTROL PLAN**
- **9.5 ROADWAYS**
- **9.6 WASTEWATER**
- **9.7 WATER**
- **9.8 ELECTRIC, TELEPHONE AND TELECOMMUNICATION**
- **9.9 SOLID WASTE DISPOSAL**

10.0 CONCLUSION

EXHIBITS

EXHIBIT A: Tax Map
EXHIBIT B: Preliminary Site Layout & Grading Plan
EXHIBIT C: FIRM Panel 352 of 356
EXHIBIT D: USDA Natural Resources Conservation Service Soils Map
EXHIBIT E: Department of Water Letter dated October 30, 2012
EXHIBIT F: Individual Wastewater System (IWS) Report

PRELIMINARY ENGINEERING REPORT
FOR
MAKAHUENA POINT
TMK: (4) 2-8-021:041; (4) 2-8-021: 044-067

1.0 INTRODUCTION

Landowner CIRI Land Development Company (CLDC) proposes to consolidate the existing 25+ lots of record[1] located on its 13.078 acre property (the Property) at Makahuena Point, near Poipu, and re-subdivide the Property into 10 single-family residential lots (approximately one acre each); see Exhibit A, TMK map and Exhibit B, Preliminary Site Layout & Grading Plan.

The purpose of this report is to provide information relating to the existing infrastructure in the vicinity of the Makahuena Point Property and outline additional infrastructure required to serve the new subdivision. This report will also assist in identifying site conditions and design elements that require careful consideration of Kauai's land and waters.

The existing lots were created in 1932 under a subdivision known as the Makahuena Tract (File Plan 354), which established 63 lots and associated road lots on the Property as well as on the adjacent property currently occupied by the project known as The Point at Poipu. The Point at Poipu property was consolidated and re-subdivided in the 1990s.

2.0 PROJECT LOCATION

The Property is located at the southern tip of the Island of Kauai, identified by the County as TMK 2-8-021:041 and TMKs (4) 2-8-021: 044-067; see the attached Exhibit A. The 13.078 acre Property fronts the Pacific Ocean and is located south of Pee Road with The Point at Poipu development to the northeast and The Makahuena at Poipu development to the west.

3.0 TOPOGRAPHY and CURRENT DRAINAGE PATTERNS

The general slope of the Property is from the north to a southeasterly direction toward the ocean with the exception of an existing large, oval-shaped depression located within the westerly portion of the Property. No runoff from the Property drains onto the east or west adjacent properties or onto the Pee Road right of way. The elevations on the Property range from sea level up to the 64 foot contour at Pee Road with an existing slopes ranging from the certified shoreline in the 4% to 9% with an overall average slope of the Property at 5.8 percent.

A catch basin inlet exists along the south side of Pee Road located approximately in the middle of the Property‟s road frontage. It appears that no runoff from Pee Road drains onto the Property. Minor runoff from The Point at Poipu development appears to enter the Property in the vicinity of proposed Lots 1 and 2.

[1] 25 lots of record TMK (4) 2-8-021: 044 – 068; one bulk lot TMK (4) 2-8-021: 041, and two unnumbered road lots.

4.0 FLOOD ZONES

No defined stream channels, notable drainage paths or signs of erosion exist within the Property boundary or along the shoreline which consists of rock outcrops. The Property flood zone designations are X, VE and AE flood zones with base flood elevations as identified and depicted on the FEMA Kauai County, Hawaii Flood Insurance Rate Map (FIRM) Panel 352 of 356; see attached Exhibit C.

Note that the location of the base flood elevation lines as depicted on the FIRM Panel differ somewhat from the existing and current ground elevation contour lines shown on the Preliminary Site layout and Grading Plan. This difference is due to the actual site survey performed that produced a contour map which is more precise than the methods used by FEMA. Also note that all of the proposed house pads are located above the VE Base Flood Elevations when compared to the actual surveyed ground contours.

5.0 SOIL CONDITIONS

The USDA Natural Resources Conservation Service identifies two different soil groups within the Property. The majority of the Property is classified as Koloa stony silty clay with a hydrologic soil group rating of C which is characterized as soils having a slow infiltration rate. The remainder of the site along the shore line is classified as rock outcrop; see attached Exhibit D

6.0 OCEAN CONDITIONS

The State of Hawaii classifies a small portion the waters off the Property‟s coastline west of Makahuena Point as Class AA, which is the most protective classification of marine waters, and requires that the waters remain in their natural pristine state as nearly as possible. See HAR §11-54-3(c) (Dec. 2013). The remaining waters fronting the Property from Makahuena Point to the east are classified as Class A waters. The objective of Class A waters is that their use for recreational purposes and aesthetic enjoyment be protected. See HAR §11-54-3. "Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters."

7.0 EXISTING INFRASTRUCTURE

7.1 EXISTING ACCESS

The Property has approximately 215 linear feet (lf) of frontage along Pee Road, which is a County dedicated and maintained road. Existing road improvements include asphalt concrete (AC) pavement with barrier curb and gutter. No sidewalk exists along the Pee Road frontage; however, a detached sidewalk does exist both east and west of the property along the southerly side of Pee Road. An existing driveway apron is located approximately 75 feet (ft) west of the easterly property line. Note that the driveway actually crosses The Pointe at Poipu property and will need to be abandoned and a new driveway apron will be established roughly 100 ft to the west of the current driveway location.

A dirt road exists along the westerly Property boundary which accesses a 10,000 square-foot parcel (TMK No. (4) 2-8-021:043) located in the south-western portion of the Property and is owned by the United States. The 10,000 sq. ft. parcel houses a navigational aid known as the Makahuena Light; see Exhibit A which shows the parcel labeled as "Makahuena Lighthouse."

7.2 AVAILABLE WASTEWATER FACILITIES

Currently, there are no County owned or maintained wastewater facilities available to serve the Property. The developments to the east and west have on site treatment facilities which are privately owned and maintained.

7.3 EXISTING WATER FACILITIES

There is an existing County owned and maintained 12-inch ductile iron waterline within Pe„e Road fronting the Property

7.4 AVAILABLE ELECTRIC, TELEPHONE AND TELECOMMUNICATION

Underground electrical, telephone and telecommunication facilities currently exist at the northeast corner of the Property along the southern edge of the Pee Road right of way.

8.0 FLOOD ZONES & CONSTRAINT DISTRICTS

The Property is within the Shore Constraint District and the Tsunami Constraint District. The purpose of the Shore District is to regulate development or alterations to shore and water areas which have unique physical and ecological conditions in order to protect and maintain physical, biologic and scenic resources of particular value to the public. The purpose of the Tsunami District is to minimize the threat to public health and safety as well as damage to property due to extraordinary wave action. CZO §8-12.8. Within the Tsunami District, single family dwellings are permitted, but are subject to additional construction and development standards as provided in Chapter 15, Article 1 of the Kauai County Code.

Most of the Property is in flood zone X. Therefore construction shall meeting the requirements of KCC §15-1.5(a) or 15-1.5(b), whichever is determined to be appropriate by the County Engineer. KCC §15-1.5(d). The State Commission on Water Resource Management shall be notified prior to any alteration or relocation of a watercourse. However, the CLDC Project does not entail any movement, relocation of alteration of a watercourse, so this provision is not applicable.

Other portions of the Property are in the AE and VE zones. Therefore, the construction and development standards under KCC §15-1.5 for residential structures apply. The maximum height of residential structures in the flood fringe area is the greater of 30 feet from the ground, or the base flood elevation plus 15 feet, unless otherwise permitted by the Planning Commission. KCC §15-1.5(a)(E).

Within zones AE and VE all water and sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems, and discharge from the systems into flood waters. On-site waste disposal systems should be located to avoid impairment to them or contamination from them during flooding. KCC §§15-1.5(a)(4); 15-1.5(c)(6).

Within the AE zone, no new construction shall be permitted unless it is demonstrated that the cumulative effect of the development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community. KCC §15-1.5(a)(6).

Within the VE zone, fill is prohibited for structural support and all new construction should be elevated so that the bottom of the lowest horizontal structural member of the lowest floor, excluding pilings and columns, is elevated to or above the base flood elevation. KCC §15-1.5(c). The maximum height of residential structures within the coastal high hazard area is the greater of 30 feet from the ground, or the base flood elevation plus 15 feet, unless otherwise permitted by the Planning Commission. KCC §15-1.5(c)(4).

Building plans for new construction must be certified by a registered professional structural engineer or architect that the new construction is designed and methods of construction to be used are in accordance with the accepted standards of practice for meeting the requirements of the County's flood ordinance. KCC §15-1.5(c)(7).

In addition, for areas of special flood hazard (i.e., lands within the floodplain subject to 1% or greater chance of flooding in any given year), are subject to additional development standards to minimize flood damage. All finally approved subdivision plans within these areas must provide base flood elevations within the lots, and if fill is used to elevate the site of any lot above the base flood elevation, the final ground elevations of the pads shall be certified by a registered professional civil engineer or surveyor. KCC §15-1.6.

9.0 ANTICIATED INFRASTRUCTURE IMPROVEMENTS

9.1 SITE GRADING

To construct the internal road, utilities, and house pads as shown on Exhibit B, mass grading of approximately 70 to 80% of the Property will occur. Prior to beginning the mass grading operations, the temporary erosion control measures and Best Management Practices (BMPs) will be installed as outlined in the County approved Erosion Control Plan. After the BMPs are in place, clearing and grubbing of the site will occur followed by excavation and placing of the material in accordance with the approved grading plan. All embankment material will be non-organic and compacted to 95% as directed by the project soils engineer. Dust control is a key element of the Erosion Control Plan and will be monitored on a continuous basis during the site grading operation.

The proposed house pad elevations range from an elevation of 24 feet on Lot 1, to an elevation of 62 feet on Lot 10. The proposed grading plan anticipates approximately 25,000 cubic yards (cy) of cut and fill, a balanced situation requiring no fill will be brought from offsite onto the Property. No material is anticipated to leave the site and

only classified material for road and utility construction is expected to be imported.

Grading operations will be scheduled to occur outside of the Wedge-tailed Shearwater nesting period (approximately April through October). In addition to not beginning construction within this time frame, a site inspection will be conducted to insure the site is clear of nesting birds.

9.2 DRAINAGE PLAN

Along with grading of each building pad, drainage basins will be constructed on each of the lots. These basins will be sized to contain the increase in storm water due to the home construction and the increase in impervious surfaces to ensure that surface runoff does not enter the ocean. Note that, pursuant to the limitations in the Open District, coverage on the lots with constructed buildings will be limited to no more than 10% of the total site.

The shoreline survey performed in August of 2013 was certified by the State Department of Land and Natural Resources in January 2014. Prior to beginning site grading operations, a rock retaining wall will be constructed along the makai side of Lots 1 through 8 to be located at (or slightly mauka of) the shoreline setback line, as determined by the County of Kauai. This wall will serve as a retaining structure for construction of the building pads as well as a physical barrier to prevent surface drainage on the lots from reaching the ocean. The wall, which will also be an aesthetic feature, is anticipated to range in height from 3 ft to a maximum of 10 ft. The front of the wall will be constructed with a 1:12 back pitch using face stones 18" or less in size and set using recessed mortar joints. This same style of wall will also be constructed along the north Property boundary adjacent to Lot 1 and The Point at Poipu property to act as a physical barrier as well as a retaining structure.

9.3 STORMWATER MANAGEMENT & QUALITY

The drainage systems within the proposed subdivision will be based on and follow the requirements of the County of Kauai Storm Water Runoff System Manual, which mandates that any development greater than two acres in size shall maintain the peak storm runoff to pre-development conditions.

Drainage sumps, 8 ft deep by 8 ft diameter, will be installed to control the runoff generated from the road tract and public parking spaces. Individual drainage basins, capable of handling the increase in runoff due to the addition of impervious surfaces, will be constructed on each of the lots. The rock retaining walls, as discussed above in 9.2, Drainage Plan, will be designed to prevent surface drainage from reaching the ocean. The subdivision‟s Conditions, Covenants, and Restrictions (CC&R‟s) will require that these drainage sumps and drainage basins be maintained by the subdivision‟s Homeowners Association. The CC&R‟s will also address the issue of each lot being responsible to maintain the required capacity of each drainage basin. Sizing of the basins will meet or exceed the requirements of the Kauai County Storm Water Runoff criteria with the goal of keeping surface runoff from reaching the ocean.

The total amount of impervious surface is estimated to be 0.6 acre for the road and public parking area and approximately 1.0 acre for the home improvements and driveways. Under the existing pre-development conditions, the storm drainage flow rate for the 10 year, 1 hour storm event is estimated to be 11 cubic feet per second. The estimated post development flow rate for the same storm event is estimated to be 19.5 cubic feet per second, an increase of 8.5 cfs over existing conditions. The proposed drainage facilities, consisting of drainage sumps and drainage basins, will be sized to handle the estimated 19.5 cubic feet per second (cfs) of surface runoff for the 10 year, 1 hour storm event; not simply the increase in runoff from the existing conditions. The size of each lot"s drainage basin is anticipated to be in the 4,500 cubic foot range.

In addition to the proposed improvements being sized to handle the quantity of runoff anticipated during a 10 year, 1 hour storm event, the grassed and landscaped drainage basins will provide water quality control. These proposed features will function as infiltration basins which provide the means to remove sediment and contaminants.

In summary, drainage improvements provided as part of the subdivision will improve drainage conditions over existing conditions as all drainage from the Property (pre-development and post development) is proposed to be retained on the Property during the 10 year storm event. These proposed improvements also address water quality criteria. This exceeds the requirements of the County of Kauai Storm Water Runoff System Manual, which mandates that any development greater than two acres shall maintain the peak storm runoff to pre-development conditions.

9.4 EROSION CONTROL PLAN

Temporary erosion control measures will be incorporated during construction to minimize soil loss and erosion hazards. Best Management Practices will include such measures as installation of silt fences, waddles, straw bales, a stabilized construction entry, watering for dust control as well as other measures as outlined in the approved Erosion Control Plan.

Construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control. Before issuance of a grading permit by the County of Kauai, an Erosion Control Plan and Best Management Practices (BMPs) required for the National Pollutant Discharge Elimination System (NPDES) permit will be prepared describing the implementation of appropriate erosion control measures. The NPDES permit will allow CLDC to perform erosion control measures to ensure that no discharge to the ocean occurs. The NPDES general permit covers discharges composed entirely of storm water runoff associated with construction activities, including clearing, grading, excavation and construction support activities that result in the disturbances of one acre or more of total land area. See HAR chapter 11-55. In accordance with the Department of Health regulations, as well as the requirements of the standard permit conditions, CLDC shall design, install and maintain erosion and sediment controls that minimize (i.e., reduce and/or eliminate to the extent achievable) the discharge of pollutants from earth-disturbing activities. HAR chapter 11-55. All storm water controls must be installed prior to earth-disturbance, and pollution prevention procedures must be identified and followed.

In accordance with HAR chapter 11-55, the Property will be subject to Best Management Practices to minimize the discharge of pollutants via storm water discharges. Examples include open, vegetated swales and natural or constructed depressions; structures for storm water retention, detention, velocity dissipation devices and other appropriate measures.

9.5 ROADWAYS

The proposed roadway access to the lots will be privately maintained and located within a 50 ft wide road tract. Improvements will consist of 24 ft asphalt strip pavement with grassed shoulders. No pedestrian walkway within the road tract is anticipated.

A public parking area along the north Property line of Lot 9 is proposed for public use to access the shoreline. Pedestrian access would be along the westerly Property boundary within a dedicated public access easement; see the attached Exhibit B. The proposed development will not substantially interfere with the public's use of the ocean

9.6 WASTEWATER

As stated above under 7.2, there are no County owned or maintained wastewater facilities available to provide service to this property. Two options are available to provide wastewater service to the subdivision.

The first consists of installing individual wastewater systems (IWSs) on each lot, which is addressed in a report prepared by Esaki Surveying & Mapping, Inc (see the attached Exhibit F). As detailed in the report, each IWS will be designed to meet the wastewater flow requirements of the State of Hawaii Department of Health (DOH) for a five bedroom dwelling, which would have a maximum projected flow of 1,000 gallons per day (gpd) based on 200 gallons per day per bedroom. This will result in a greater wastewater capacity for the entire property (10,000 gpd) than the total anticipated wastewater flow of approximately 3,200 gpd based on the County of Kauai Department of Public Works criteria. Using the DOH higher flow rate insures that an adequate safety factor is used in designing and sizing of the IWSs.

The second option to provide wastewater service to the project involves connecting to the adjacent property‟s on-site treatment facility. This option would require installation of a sanitary sewer main line to service each lot along with a privately owned and maintained lift station that would pump effluent to the existing neighboring wastewater treatment facility. Initial conversations with the owners and operators of “The Makahuena” development indicate that there is adequate capacity to handle the increase in flow anticipated from this the subdivision. However, there is no agreement at this time between The Makahuena condominium and CLDC for such shared use.

9.7 WATER

As stated above under 7.3, a County owned and maintained 12” ductile iron waterline is available to serve the subdivision. It is anticipated that water for the project will be

supplied by the County Department of Water. The total amount of anticipated domestic water usage by the proposed 10 lots is estimated to be approximately 5,000 gallons per day. Irrigation water usage for the project would be in addition to the domestic usage. An eight inch waterline is proposed to be connected to the waterline within Pe,,e Road and then extend within the subdivision internal roadway to provide water connections to each of the house lots. The waterline will provide water service for both domestic and irrigation use as well as for fire protection.

By letter dated October 2012, the DOW confirmed that there is adequate source, storage, and transmission to serve 25 residential lots at the Property. (see the attached Exhibit E). In the letter DOW stated that "Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities at that time. At the present time, these facilities are adequate along Pee Road." DOW also stated that their letter does not represent a commitment or approval by the DOW of proposed or future water meter requests and/or subdivision building permit applications.

CLDC will submit a written request for water service for the proposed 10 lots after obtaining the SMA and Class III Zoning Permits. The request will include detailed water demand (both domestic and irrigation) calculations, along with other information required by DOW.

9.8 ELECTRIC, TELEPHONE AND TELECOMMUNICATION

Electric, telephone, and telecommunication lines are proposed to be installed underground extending from the existing facilities along the Pee Road right of way to each lot along the proposed internal subdivision road lot. The anticipated increase in usage from the proposed 10 lots would be minimal.

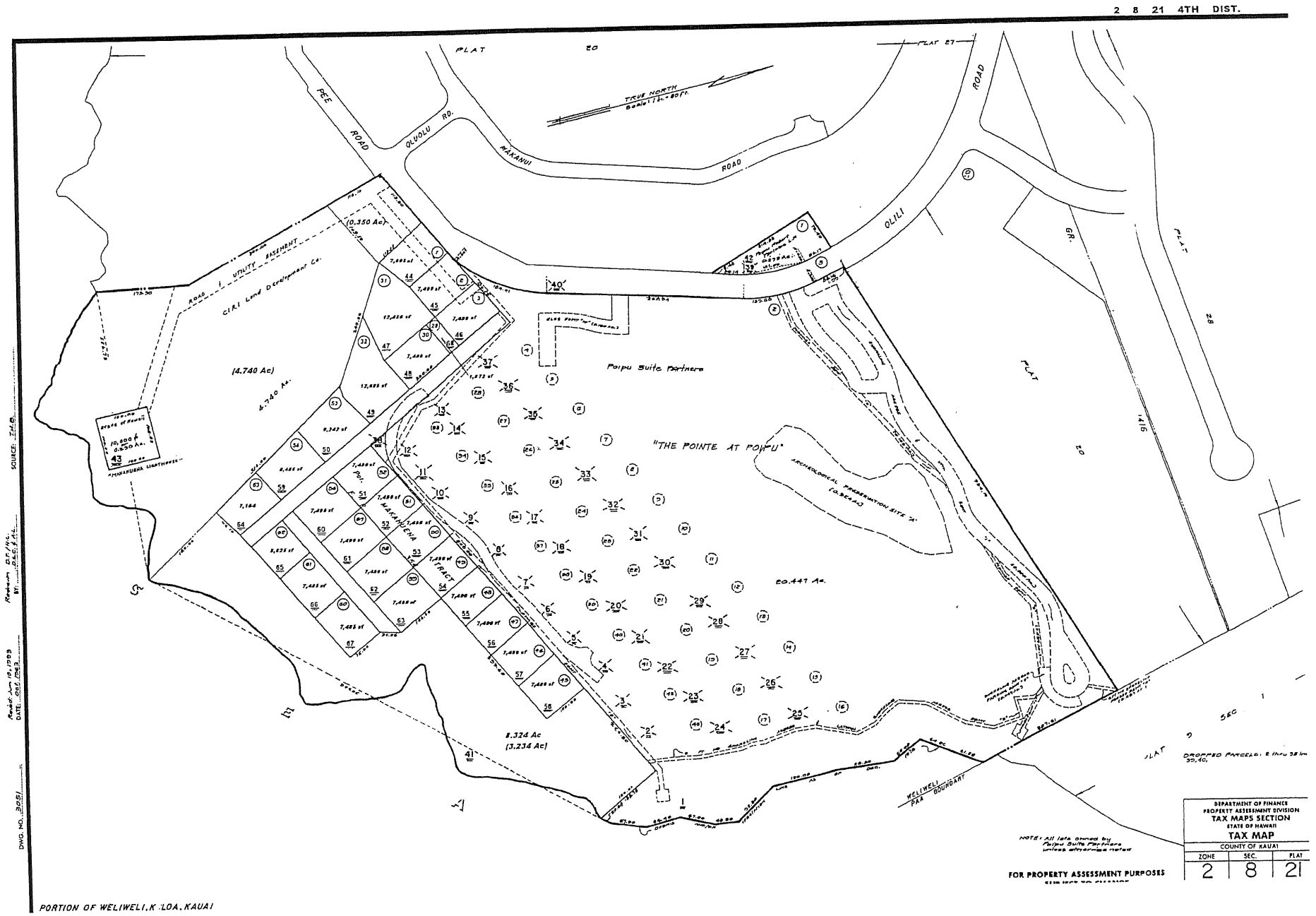
9.9 SOLID WASTE DISPOSAL

Solid waste pickup will be provided by a local private collection company for each individual lot. No community dumpster or centralized collection location will be provided.

10. CONCLUSION

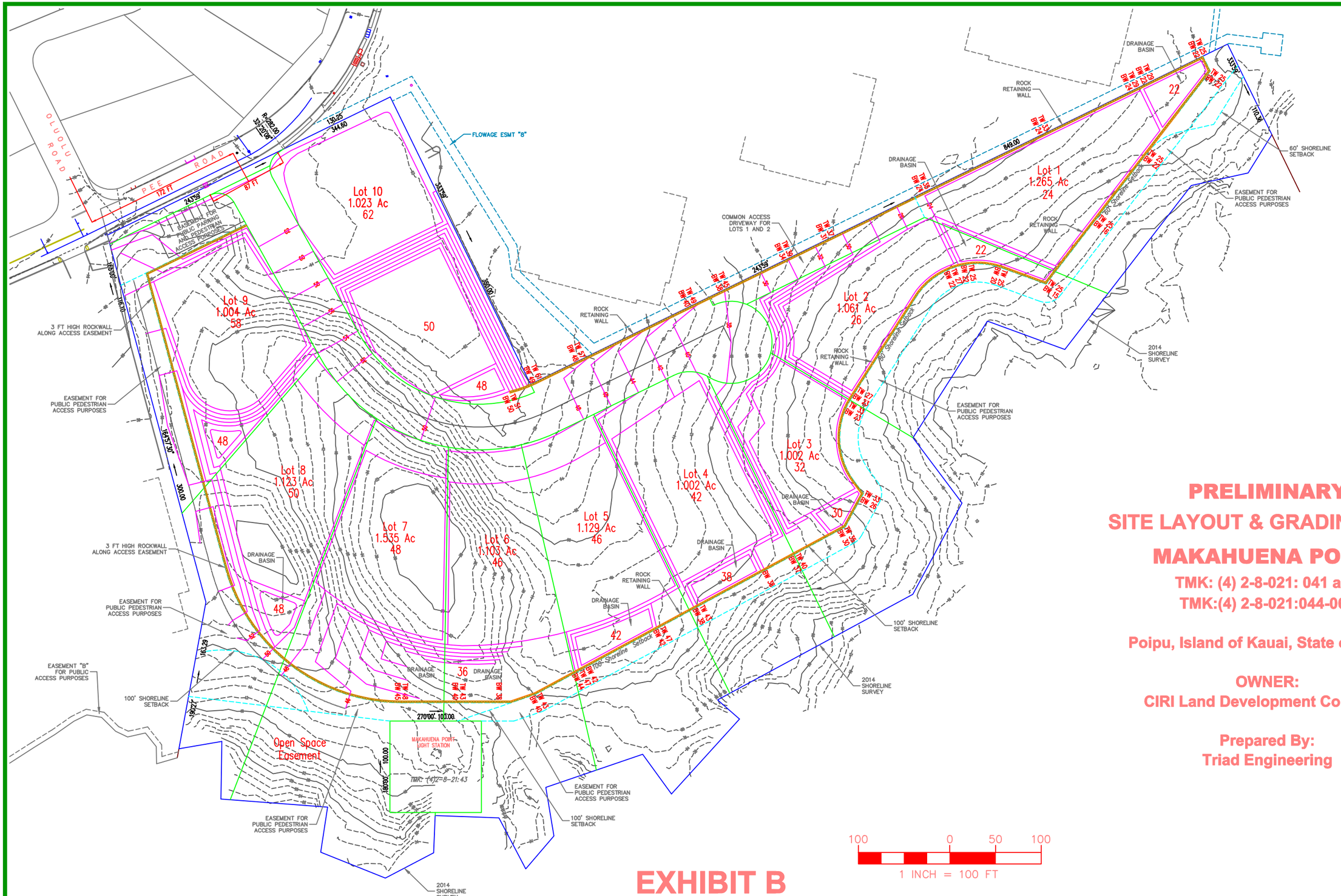
The proposed improvements for the Makahuena Point project will be designed in accordance with the applicable rules of the County of Kauai and the State of Hawaii and will minimize any adverse environmental or ecological effects to the maximum extent practicable. Public health, safety and welfare are of primary concern to CLDC during this initial planning process and will continue to be the guiding focus as the project develops.

The project design concept provisions outlined above will minimize potential adverse effects upon the site and the surrounding special management area resources. Although development of the project will entail alterations to existing land forms and vegetation, the anticipated design features and construction methods will cause minimum adverse effect to water resources and current land uses.



PORTION OF WELIWELI, K. LOA, KAUAI

EXHIBIT A



PRELIMINARY
SITE LAYOUT & GRADING PLAN
MAKAHUENA POINT

TMK: (4) 2-8-021: 041 and
TMK:(4) 2-8-021:044-068

Poipu, Island of Kauai, State of Hawaii

OWNER:
CIRI Land Development Company

Prepared By:
Triad Engineering

100 0 50 100
1 INCH = 100 FT

EXHIBIT B

MAR. 25, 2014

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' Local Tidal Datum. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 4. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the Local Tidal Datum. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from mosaicked 2-foot ground resolution satellite imagery that meets 1:12,000 scale horizontal accuracy standards provided by Digital Globe and the United States Department of Agriculture Natural Resources Conservation Service. This information was collected between July 2002 and January 2004.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

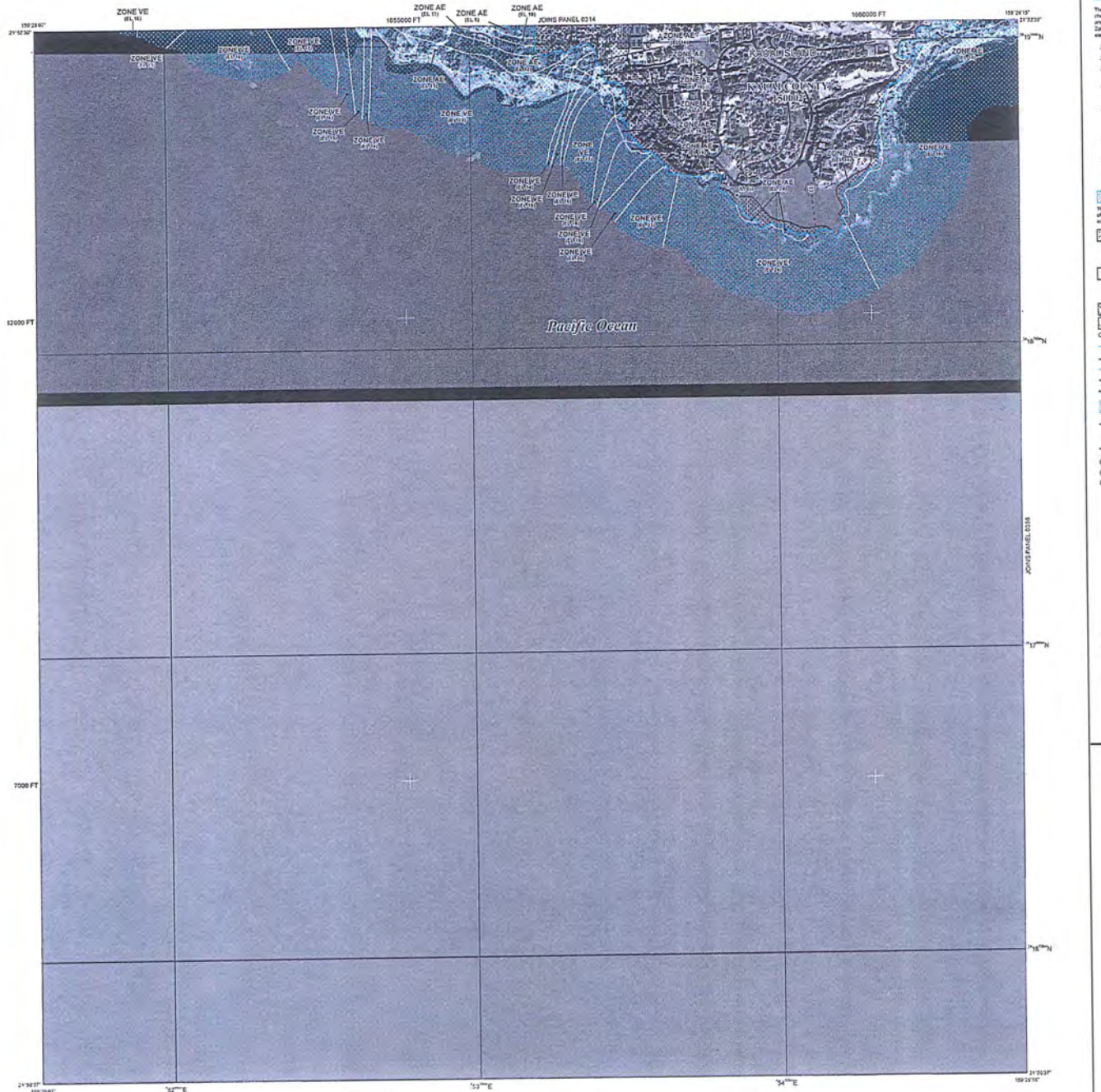
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the **separately printed Map Index** for an overview map showing the layout of map panels for the jurisdiction.

Contact the **FEMA Map Information eXchange** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Information eXchange may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov/business/nfip.

EXHIBIT C



Search

Properties and Qualities Ratings

Open All | Close All

Soil Chemical Properties

Soil Erosion Factors

Soil Physical Properties

- Available Water Capacity
- Available Water Storage
- Available Water Supply, 0 to 100 cm
- Available Water Supply, 0 to 150 cm
- Available Water Supply, 0 to 25 cm
- Available Water Supply, 0 to 50 cm
- Bulk Density, 15 Bar
- Bulk Density, One-Tenth Bar
- Bulk Density, One-Third Bar
- Linear Extensibility
- Liquid Limit
- Organic Matter
- Percent Clay
- Percent Sand
- Percent Silt
- Plasticity Index
- Saturated Hydraulic Conductivity (Ksat)
- Saturated Hydraulic Conductivity (Ksat), Standard Classes
- Surface Texture
- Water Content, 15 Bar
- Water Content, One-Third Bar

Soil Qualities and Features

- AASHTO Group Classification (Surface)
- Depth to a Selected Soil Restrictive Layer
- Depth to Any Soil Restrictive Layer
- Drainage Class
- Frost Action
- Frost-Free Days
- Hydrologic Soil Group

View Description | View Rating

View Options

Map ☑
Table ☑
Description of Rating ☑
Rating Options ☑
Detailed Description ☐

Advanced Options

Aggregation Method: Dominant Condition
Component Percent Cutoff:
Tie-break Rule: Lower / Higher

View Description | View Rating

- Map Unit Name
- Parent Material Name
- Representative Slope
- Unified Soil Classification (Surface)
- Water Features

Map — Hydrologic Soil Group

Scale: [not to scale]



⚠ *Warning: Soil Ratings Map may not be valid at this scale.*

Tables — Hydrologic Soil Group — Summary By Map Unit

Summary by Map Unit — Island of Kauai, Hawaii (HI960)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KvD	Koloa stony silty clay, 15 to 25 percent slopes	C	17.2	49.3%
rRO	Rock outcrop	D	4.1	11.9%
Subtotals for Soil Survey Area			**21.3**	**61.2%**
Totals for Area of Interest			**34.8**	**100.0%**

Description — Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options — Hydrologic Soil Group

Aggregation Method: Dominant Condition
Component Percent Cutoff: *None Specified*
Tie-break Rule: Higher

EXHIBIT D:

EXHIBIT E

Department of Water
County of Kaua'i

Water has no substitute.....Conserve it

October 30, 2012

Mr. Galen Nakamura
Shiramizu Loo & Nakamura
4357 Rice Street, Suite 201
Lihue, HI 96766

Dear Mr. Nakamura:

Subject: Water Service Inquiry: Proposed 26 Single Family Dwellings on 26 Lots (Vacant Lots, No Existing Water Meters), TMK: 2-8-21:021, 2-8-21:044-067, Pee Road, Poipu, Kauai

This is in regard to your letter dated October 15, 2012. The following Department of Water (DOW) response is for informational purposes only and describes the present water system status. It is subject to change without further notice. It does not represent a commitment or approval by the Department of the proposed or future water meter requests and/or subdivision and building permit applications. The inquirer is responsible to request information on water system status in the future.

Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, these facilities are adequate along Pee Road,

Prior to the DOW recommending water meter service or building permit approval, the applicant maybe required to:

1. Submit a formal request for water service for our review and approval.
2. Prepare and receive DOW's approval of construction drawings for the necessary water system facilities and construct said facilities. These facilities shall include but are not be limited to:
   a) The domestic service connection(s).
   b) The fire service connection(s), if applicable.
   c) The interior plumbing plans with the appropriate backflow prevention device, if applicable.
3. Pay the applicable charges in effect at the time of payment to the Department. At the present time, these charges shall include but are not be limited to the Facilities Reserve Charge (FRC) which is based on $4,600 per 5/8-inch water meter/dwelling or the FRC based on the approved water meter size; whichever amount is greater.

4. Receive a "Certification of Completion" for the construction of the necessary water system facilities from the DOW.

If you have any questions concerning the construction drawings, please contact Mr. Keith Aoki at (808) 245-5411. If you have any questions concerning the Certificate of Completion, please contact Mr. Dustin Moises at (808) 245-5459. For other questions, please contact Mr. Edward Doi at (808) 245-5417.

Sincerely,

Gregg Fujikawa
Chief of Water Resources and Planning Division

ED:loo
T-14333 Poipu, Nakamura

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

FOR

CIRI Land Development Company

an Alaska corporation, and a wholly owned subsidiary of
Cook Inlet Region Inc., an Alaska Native corporation

PREPARED BY:
ESAKI SURVEYING & MAPPING, INC.
1610 HALEUKANA STREET
LIHU`E, KAUA`I, HAWAI`I 96766
(808) 246-0625

EXHIBIT F

MAKAHU`ENA POINT

INDIVIDUAL WASTEWATER SYSTEM (IWS) REPORT

The Makahu`ena Point property is located at the southernmost point of Kaua`i, in Weliweli, Koloa, and is comprised of 25 lots of record, tax map key (TMK) No. (4) 2-8-021: 044 – 068), one bulk lot, TMK No. (4) 2-8-021: 041, and two unnumbered road lots (the property). CIRI Land Development Company (CLDC) proposes to consolidate the existing lots of record, and re-subdivide the property into 10 single-family residential lots of approximately one acre each, which is far less dense than the currently permitted subdivision. The Makahu`ena Point subdivision is proposed to include:

- An internal road connecting to Pe`e Road, which will provide access to the lots;
- A pedestrian public access trail from Pe`e Road to the shoreline;
- A pedestrian public access trail running laterally along the entire shoreline;
- An open space area at the most makai portion of the property, adjacent to a 10,000 sq. ft. parcel owned by the USA; and
- A public parking area close to Pe`e Road.

The Department of Health (DOH) Wastewater Branch reviews all individual wastewater systems (IWS) for conformance to applicable provisions of Hawai`i Administrative Rules (HAR), Title 11, Chapter 62, entitled Wastewater Systems. The purpose of HAR 11-62 is to protect the public's health and safety by insuring that the disposal of wastewater does not contaminate water sources and attract

insects and rodents. Various requirements in Chapter 62 are used to determine: what type of IWS (if any) will be allowed, location, and the minimum design size. In addition, the Comprehensive Zoning Ordinance of the County of Kauai also addresses utility requirements. In all developments that are not accessible to public sewers, a private sewer disposal system shall be provided that meets the requirements of The County Department of Public Works and the requirements of the State Department of Health. See CZO §8-4.5(c)(3).

HAR 11-62-31.1 (1)(A) states that developments involving dwellings require at least 10,000 square feet of land area for each IWS. Each of the 10 single-family residential lots, based on the "Preliminary Site Layout & Concept Plan" (see enclosed) have an area of at least one acre. One acre is equal to 43,560 square feet, which is enough area for the design to satisfy this requirement.

The property within the County Open zoning district, and also overlaid by the Shore Constraint District. Development within the Shore Constraint District must be assessed to not cause significant harm to the (A) The water quality of the ocean, including but not limited to its clarity, temperature, color, taste and odor; (B) Fish and aquatic habitats; (C) The natural beauty of the area; (D) Navigation, safety or health; or (E) Would not substantially interfere with public use of the ocean waters or underlying lands; and (F) That other facilities are unavailable to the applicant. See CZO §8-12.5

With respect to the flood zones on the property, under the Kauai County Code, all sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems, and discharge from the systems into flood waters.

On-site waste disposal systems should be located to avoid impairment to them or contamination from them during flooding.

The property is also within the Special Management Area. Therefore, conditions may be imposed to address solid and liquid waste treatment disposition and management to minimize adverse effects upon special management area resources.

Consistent with the requirements under Article Xl, Section 1 of the Hawaii State Constitution, the County and the State have a duty to preserve and protect the State's water resources. Therefore, CLDC must comply with all regulatory requirements in developing an IWS plan for the property. I any adverse impacts are expected, CLDC will be required to implement reasonable measures to mitigate those impacts. Such measures will likely be included in any permits issued by the Department of Health for IWS's, and appropriate assessments must be made to ensure permit compliance.

On January 14, 2014, three percolation tests were conducted in different areas of the property. A map showing the approximate locations for each test is attached. While digging all of the test pits, lava bedrock was encountered 1.5 to 2 feet below existing grade. The soil was brownish granular rocky. Percolation rates varied, with test pit #1, #2, and #3 having a percolation rate of 6 minutes per inch, no percolation, and 21 minutes per inch, respectively.

The lava bedrock at shallow depth will not make seepage pits a practical option since the design would involve deep depths. Therefore, absorption beds will be designed since they can be constructed at shallower depths. Soil fill will need to be added in the area of the IWS in order to comply with HAR provisions.

HAR 11-62-34 (c)(1)(B) requires absorption bed systems to be constructed in soils with percolation rates of 60 minutes per inch or faster. The absorption bed systems are to be located on the property where there is a vertical separation of three feet or more between the bottom of the absorption bed and the lava bedrock (HAR 11-62-34 (c)(1)(C)), and 18 inches from the bottom of the absorption bed to the finished grade (HAR 11-62-34 (c)(1)(H)). Absorption beds must be constructed in stabilized fill (HAR 11-62-34 (c)(1)(D)) with a slope gradient of 8% or less (HAR 11-62-34 (c)(1)(I)). The property will be graded as shown in the "Preliminary Site Layout & Grading Plan" (enclosed), stabilized, and percolation tests will be redone to determine the required size of the absorption bed. Depending on the proposed location of the IWS, there is a possibility that slight adjustments to the finish grade will be necessary to meet separation requirements. Percolation tests will need to be conducted on all lots to assure sufficient rate and vertical separation for the absorption bed.

Each of the 10 lots will have its own IWS which will include an absorption bed and septic tank. Wastewater from the dwelling flows into the septic tank and is held there for a period of time, which allows bacteria to begin breaking down some of the solids. During this time, the oil and grease in the wastewater floats to the surface where they form a scum layer, the solids in the wastewater sink to the bottom, forming a sludge layer, and the clear water in the middle flows to the absorption bed and percolates into the ground. Biological and chemical additives are not needed to aid or accelerate decomposition. Scum and sludge must be removed periodically to keep them from entering and clogging the absorption bed.

No person may use an IWS until authorized in writing by the Director of the Department of Health. However, before the Department of Health approves the operation of an IWS, the following requirements must be satisfied:

(1) An operation and maintenance manual developed pursuant to HAR section 11-62-23.1(d)(2) as applicable shall be submitted and approved by the director; and

(2) The owner of the individual wastewater system shall certify that the individual wastewater system shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual. The certification shall include a statement that upon sale or transfer of ownership of the individual wastewater system, the sale or transfer of ownership of the individual wastewater system, the sale or transfer will include the appropriate transfer documents and provisions binding the new owner to the operation and maintenance manual. See HAR 11-62-31.1(e)

A properly maintained septic system should be inspected every year, and pumped approximately every three years, depending upon the volume of sewage entering it.

Each IWS will be designed for a five bedroom dwelling, which will have a maximum projected flow of 1,000 gallons per day (200 gallons per day per bedroom). Based on that projected flow, each system will require a 1,250 gallon septic tank (HAR 11-62-33.1 (a)(5)). The absorption bed area will be determined after the lots are graded and percolation tests are redone. Assuming the worst allowable percolation rate, the minimum design absorption area would be 1,680

square feet (see attached design calculations), which is much less than the size of the one acre lots they would be designed for.

HAR 11-62-32 states that all IWS's need to maintain minimum setback distances as indicated in Table 2 of Appendix F (enclosed). The septic tank and absorption bed will have minimum setbacks from:

- the wall line of any structure or building;
- property line;
- stream, the ocean at the vegetation line, pond, lake, or other surface water body;
- large trees;
- other IWS's;
- potable water sources serving public water systems.

The proposed use of individual wastewater systems for the 10-lot residential development is feasible for the property. The use of IWS is consistent with careful stewardship of Kauai's land and waters. The proposed use of IWS for this property will prevent any impairment to the ocean or any water underlying the property, as no waste materials will leach into the ground or ocean. Similarly, the IWS will not result in any adverse environmental effects to the public or adjacent areas. As such, there should be no discernible impact on the natural resources of the State. Strict compliance with the Department of Health regulations for the approval and certification of an IWS should be required to minimize any adverse effects on Special management Area resources.

DESIGN REQUIREMENTS:

Area Classification: Critical Wastewater Disposal Area

Lot Size: 362,332 sq,ft.

IWS Permitted: 1/10,000 sq,ft. = 36

WAYNE T. WADA
LICENSED PROFESSIONAL ENGINEER
No. 5281-C
HAWAII, U.S.A.

FLOW:

5 Bedroom Residence
Design for 5 Bedrooms
5 Bedrooms x 200 gpd/bdrm = 1,000 gpd

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Signature
ESAKI SURVEYING & MAPPING, INC.
EXPIRES: APRIL 30, 2014

TANK CAPACITY:

1,250 Gallon Minimum for 5 Bedrooms
(Chapter 62-33.1, Rules Amending Title 11 Hawaii Administrative Rules)
Use 1,500 Gallon IAPMO Certified Septic Tank

PERCOLATION TEST INFORMATION:

Date of Test:	January 19, 2014
Tested By:	Wes Chibo
Percolation Rate:	60 mpi (minimum allowable rate)
Soil Description:	0-18" below grade - Brownish granular rocky, 18" below grade - Lava Bedrock
Depth of Water:	~19' above sea level

ABSORPTION FIELD REQUIREMENTS:

For 60 mpi (From Appendix F, Toble 3, Hawaii Administrative Rules, Title 11, Chapter 62)
Use 330 sq, ft./bedroom
Absorption Area Required = (5 bedrooms) x (330 sq, ft./bedroom) = 1,650 sq, ft.
Use gravelless absorption bed with eight lines and chambers
Total length required = 1,650 sq, ft. / 24 ft. = 68.75 ft.
Use 8 lines, 70.0 ft. long
Total absorption area provided = 24.0 ft. x 70.0 ft. = 1,680 sq,ft.

NOTE: Soil fill will need to be added to site.
*3' minimum vertical separation from bottom of bed to groundwater/bedrock.
*Bottom of bed must be at least 18" below finished grade.
*IWS needs to be located 50 feet away from the ocean at the vegetation line.

ESAKI SURVEYING & MAPPING, INC.
1610 Haleukana Street
Lihue, Hawaii 96766
(808) 246-0625

DESIGN CRITERIA
Tax Map Key: (4) 2-8-21: 41
Owner: CIRI Land Development Co.
Date: January 2014

Drawn By: CH | Checked By: WW | Sheet 1 Of 11

TABLE 2
April 15, 1997

Minimum Horizontal Distance From	Cesspool (ft)	Treatment Unit (ft)	Seepage Pit (ft)	Soil Absorption System (ft)
Wall line of any structure or building	5	5	5	5
Property line	9	5	9	5
Stream, the ocean at the vegetation line, pond, lake, or other surface water body	50	50	50	50
Large trees	10	5	10	10
Treatment unit	5	5	5	5
Seepage pit	18	5	12	5
Cesspool	18	5	18	5
Soil absorption system	5	5	5	5
Potable water sources serving public water systems	1000	500	1000	1000

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM

FALLING HEAD TEST PROCEDURE

1. Preparing Percolation Test Hole(s)
   1. Dig or bore a hole, four to twelve inches in diameter with vertical walls to the approximate depth of the soil absorption system (bottom of trench or bed).
   2. Scratch the side wall and bottom to remove any smeared soil and remove loose material.
   3. Place one inch of coarse sand or gravel on bottom.

B. Determine Percolation Rate
   1. Place twelve inches of water in hole and determine time to seep away. Record this time on the site evaluation form.
   2. Repeat step B.1. above. Also record this time on the site evaluation form.
   3. If the time of the second test is less than 10 minutes go to Step C, if not skip to Step D.

C. Sandy (granular) Soils
   1. Establish a fixed reference point, add water to six inches above gravel and measure water level drops every ten minutes for 1 hour.
   2. Use a shorter time interval if first six inches seeps away in ten minutes or less.
   3. Refill when necessary, do not exceed six inches of water.
   4. Record time intervals and water drops on site evaluation form.
   5. Use final water level drop interval to calculate percolation rate. (Step E)

D. Other Soils (non-granular, e.g. silt, loams & clays)
   1. Maintain at least twelve inches of water in the hole for at least four hours to presoak soil.
   2. Do not remove water remaining after four hours.
   3. Permit soil to swell at least 12 hours. (Dry clayey soils should be soaked and permitted to swell for longer periods to obtain stabilized percolation rates).
   4. After swelling, remove loose material on top of gravel.
   5. Use fixed referenced point, adjust water level to six inches above gravel and measure water level drop.
   6. If the first six inches of water seeps away in less than 30 minutes, measure water level drops every ten-minutes and run for one hour.
   7. If the first six inches of water takes longer than 20 minutes to seep away, use 30 minute time intervals for four hours or until two successive drops do not vary by more than one-sixteenth inch (stabilized rate).
   8. Refill with water only when necessary, but no adjustment during last three readings exeept to the limit of the last drop. Do no exceed six inches of water.

E. Use final drop interval to calculate percolation rate and record on site evaluation form:

$$\frac{\text{Time Interval}}{\text{Water Level Drop}} = \text{Percolation Rate}$$

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: _____ Test Performed by: _____

Owner: _____ TMK: (____) ____-____-____:____

Elevation: _____ feet
Depth to Groundwater Table: _____ feet below grade
Depth to Bedrock (if observed): _____ feet below grade
Diameter of Hole: _____ inches
Depth to Hole Bottom: _____ feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)

PERCOLATION READINGS:
Time 12 inches of water to seep away: _____ minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

____ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

____ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches

Percolation Rate (time/final water level drop): _____ minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the hottom of the soil absorption system and the groundwater table or any other limiting layer.

_____ _____
Engineer's Signature/Stamp Date

#1

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 8:45AM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 28 feet
Depth to Groundwater Table: >20 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: 18 minutes
Time 12 inches of water to seep away: 60 minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

√ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	8 3/8	10 MIN	1 13/16
10 MIN	3 5/8	10 MIN	1 13/16
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 13/16		
10 MIN	1 13/16		

Percolation Rate (time/final water level drop): 5.6 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#2

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 12:42 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 19 feet
Depth to Groundwater Table: >15 feet below grade
Depth to Bedrock (if observed): 1.5 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 1.5 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-18	BROWNISH, GRANULAR ROCKY
18	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3		
10 MIN	1 13/16		
10 MIN	1 3/16		
10 MIN	5/8		
10 MIN	5/8		
10 MIN	0		

Percolation Rate (time/final water level drop): NONE minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

#3

DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST

Date / Time: 1/19/14 2:45 PM Test Performed by: WES CHIBA

Owner: CIRI LAND DEVELOPMENT CO. TMK: (4) 2 - 8 - 21 : 41

Elevation: 43 feet
Depth to Groundwater Table: 720 feet below grade
Depth to Bedrock (if observed): 2 feet below grade
Diameter of Hole: 12 inches
Depth to Hole Bottom: 2 feet below grade

Depth, inches below grade	Soil Profile (color, texture, other)
0-24	BROWNISH, GRANULAR ROCKY
24	LAVA BEDROCK

PERCOLATION READINGS:
Time 12 inches of water to seep away: N/A minutes
Time 12 inches of water to seep away: _____ minutes

Check one:

___ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

✓ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at lest every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time Interval	Drop in Inches	Time Interval	Drop in Inches
10 MIN	3 5/8	10 MIN	1/2
10 MIN	1 3/16	10 MIN	1/2
10 MIN	1 3/16		
10 MIN	15/16		
10 MIN	11/16		
10 MIN	1/2		

Percolation Rate (time/final water level drop): 20.8 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp Date

PERCOLATION TEST PIT LOCATIONS

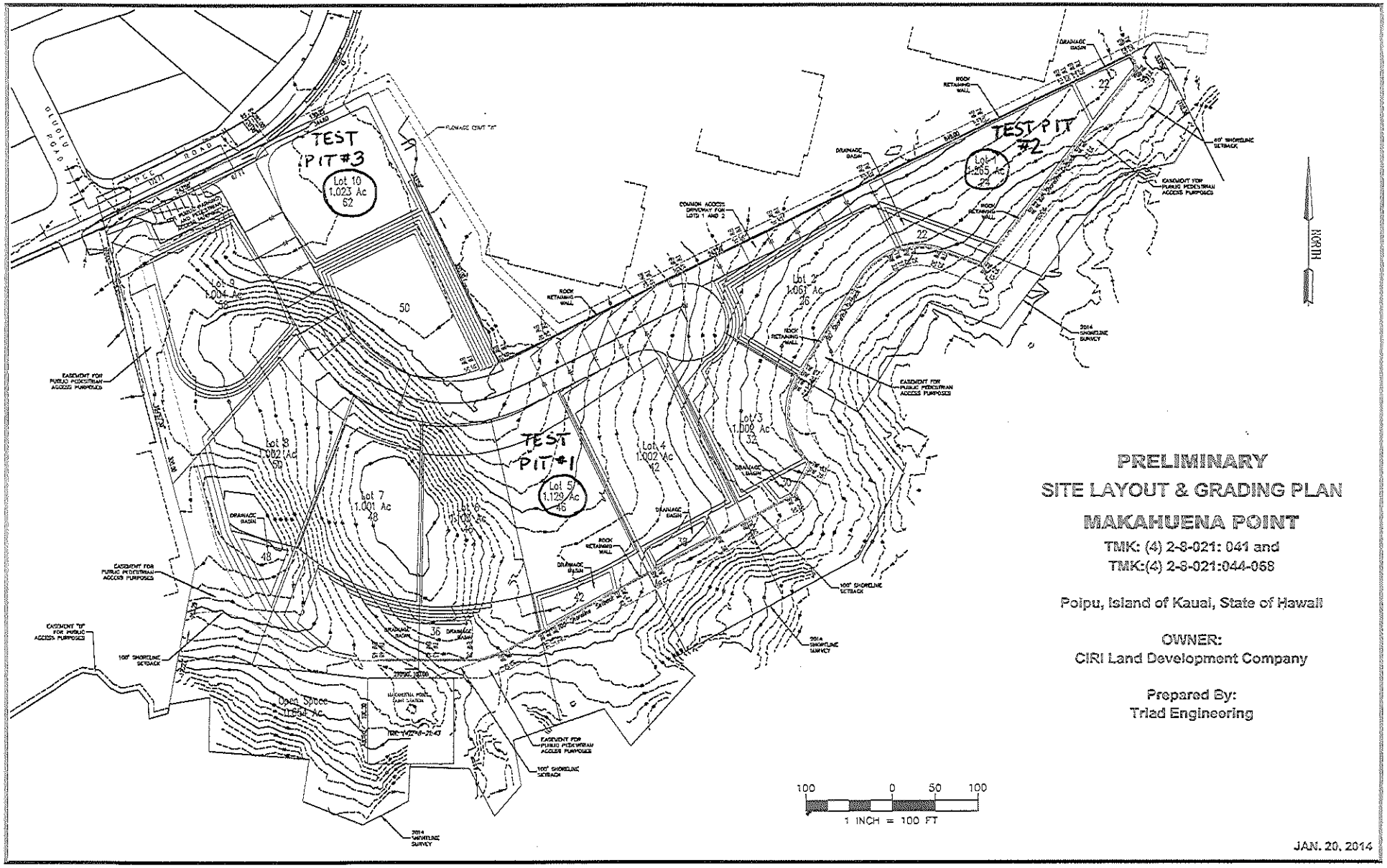


EXHIBIT Q

SERVICES CONTRACT

THIS SERVICES CONTRACT ("Contract"), effective 6 day of June, 2020 ("Effective Date") by and between **CIRI Land Development Company**, with principal offices at 725 E Fireweed Lane, Suite 800, Anchorage, Alaska 99503 ("Owner") and **Kani Wildlife Control, LLC**, with principal offices at PO Box 1206, Kekaha, Hawaii, 96752 ("Contractor") is for the purpose of engaging Contractor to perform, or cause to be performed services, for the benefit of Owner's property, for the compensation herein provided all upon the terms and conditions set forth below.

ARTICLE 1
Work / Compensation / Payment

1.1 Contractor shall perform predator cat control as set forth above and as further described below (the Work) at Owner's property known as Makahū'ena Estates located off Pe'e Road on Kauai (the Property).

- Contractor shall monitor the Property monthly to actively trap and conventional control with removal of feral cats

Such Work shall be performed in a good workmanlike manner and will be completed in accordance with the specifications outlined above.

1.2 Contractor agrees to perform the Work for Sixty-five Dollars an hour ($65/hr.) (the Contract Price), not to exceed One Thousand Dollars ($1,000) in a 30-day period without prior approval. Contractor shall submit monthly requests for payment to Owner. All requests for payment shall contain an itemized list detailing the Work done, including times and dates with specific reference to the Property. Owner shall review the invoices and pay Contractor within 30 days of receipt and approval of an invoice.

ARTICLE 2
Independent Contractor Status

2.1 Contractor is an independent contractor. Contractor shall not be deemed to be the agent, employee, partner, joint venturer or any other legal or business relationship of Owner for any purpose. Contractor shall be solely responsible for and shall maintain adequate records while performing Work hereunder and shall be solely responsible for and shall file or make, on a timely basis, all tax returns and payments required to be filed with or made to any federal, state, or local authority, including all self-employment taxes or returns, with respect to Contractor's Work hereunder. Contractor shall not enter in any agreement (written or otherwise) with a third party on behalf of Owner or otherwise purport to bind Owner.

2.2 Contractor shall provide competent supervision for performance of the Work and shall be responsible for all acts of employees or subcontractors of the Contractor and shall allow only qualified persons to perform the Work.

ARTICLE 3
Representations

3.1 In order to induce Owner to enter into this Contract, Contractor represents as follows:

3.1.1 Contractor has full experience and proper qualifications to perform the Work. Contractor is the holder of all governmental consents, licenses, permits or other authorizations required to permit Contractor operate or conduct its business now and as contemplated by the Contract.

3.1.2 None of the execution and delivery of this Contract, the performance of the Work herein contemplated or compliance with the terms and provisions in this Contract shall conflict with or result in a breach of, or require any consent under any agreement or instrument to which Contractor is a party or by which it is bound or to which it is subject, or constitute a default under any such agreement or instrument.

3.1.3 The scope of work described herein is sufficient to describe the requirements for the Work. Contractor has given Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered, if any, in the scope of work.

ARTICLE 4
Insurance and Indemnity

4.1 Contractor shall maintain, and require its subcontractors, if any, to maintain at all times while obligated to perform hereunder a: (1) Commercial General Liability policy of combined single limit insurance coverage with bodily injury, (including death of any person), in the amount of $1,000,000 per occurrence and/or $2,000,000 aggregate and if Contractor has employees, (2) Contractor shall provide statutory Workers Compensation coverage for Contractor's employees and Employers Liability Coverage, with minimum limits of $500,000 Bodily Injury/Each Accident, $500,000 Bodily Injury by Disease/Policy Limit and $500,000 Bodily Injury by Disease/Each Employee. If Contractor is required to drive in the performance of the Work and/or drives on the Property, Contractor shall maintain in addition to the above requirements Business Automobile/Motor Vehicle Liability coverage with limits of liability not less than $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles. If Contractor is required to perform remediation of hazardous materials including but not limited to asbestos containing materials, lead, contaminated soil, or if its operations create an exposure to hazardous materials, Contractor must in addition to the above requirements, carry a Contractors Pollution Liability policy with limits not less than $1,000,000 per occurrence and not less than $2,000,000 aggregate for Bodily Injury, Personal Injury, and Property Damage. Each Owner and Manager, their agents, assigns, parents, subsidiaries, subcontractors, and employees shall be named as an additional insured on each required policy except Workers Compensation. Contractor's

insurance shall be primary and non-contributory. Contractor waives any rights of subrogation against Owner and Contractor's policies of insurance shall acknowledge or permit such waiver. A certificate of insurance evidencing such requirements shall be furnished by the Contractor prior to the commencement of any Work. No required coverage shall be suspended, voided, canceled, reduced in coverage or endorsed to lower limits except after 30 days prior written notice is given to Owner.

4.2 Contractor hereby agrees to indemnify and hold Owner and the Property free of and harmless from, and shall defend against, any and all actions, liabilities, claims and expenses (including attorney's fees) arising from any acts or omissions of Contractor and / or its employees and agents related to this contract for services, and / or arising from any services or material provided to the Property by Contractor and / or its agents and employees.

ARTICLE 5
Standard of Care

5.1 Contractor's Work shall be performed in a competent, diligent manner, and to the satisfaction of Owner using the professional skill and judgment ordinarily exercised by similarly situated professionals in Contractor's industry performing like work in like circumstances and in compliance with the requirements of this Contract and shall comply with all laws, ordinances and enforceable directions of governmental agencies having regulatory authority over the Property and the Work ("Standard of Care").

5.2 Contractor shall use due diligence in performing under this Contract so as to protect the Property (and all improvements therein), adjoining property and all persons and property at or near the performance area of Contractor. Contractor shall promptly, and at its expense, repair, replace or otherwise restore property and improvements damaged by its employees, equipment, subcontractors, suppliers and the like.

5.3 If any Work performed by Contractor is incomplete, defective, or fails to meet the requirements of this Contract, Contractor shall promptly undertake such steps as are necessary to complete or remedy the Work.

ARTICLE 6
Default

6.1 Each of the following shall constitute a "default" by Contractor hereunder:

6.1.1 Failure of Contractor to (a) make prompt payment for labor and materials required for performance hereunder, (b) supply enough workmen or equipment to timely perform hereunder, or (c) comply with this Contract generally or any law, ordinance or the like applicable to this Contract or the work hereunder.

6.1.2 Any (a) attachment, execution or other judicial levy upon the assets of Contractor, (b) assignment of the benefits of this Contract for the direct or indirect benefit of creditors of Contractor, (c) any agreement whereby Contractor loses control of its business to a committee of its creditors, (d) judicial appointment of a receiver, trustee, or similar officer to take possession of he business or assets of Contractor, or (e) filing of any petition by or against Contractor under any chapter of the Federal Bankruptcy laws or the commencement of a case or proceeding under such laws.

6.2 If any default occurs, and without prejudice to any other remedy, Owner may terminate Contractor's performance hereunder upon 24 hours prior written notice. Thereupon, Owner may take such action deemed necessary to effect completion of the Contract Work.

ARTICLE 7
Term

7.1 The term of this Contract shall commence upon the Effective Date and continue on a month-to-month basis. Either the Owner or the Contractor may cancel this Contract with thirty (30) days written notice. This Contract shall be deemed cancelled upon receipt of notice of the sale of the Property.

ARTICLE 8
Liens

8.1 Should the performance of the Work or services, or any portion thereof, convey Mechanic's lien rights to the Contractor or any subcontractor, Contractor shall provide lien waivers from itself and any Subcontractors prior to payment by Owner. If any shall file liens against the work, Contractor shall promptly obtain and file a release of any such lien.

ARTICLE 9
General Provisions

9.1 Contractor agrees that it will not directly or indirectly, interfere with other contractors and/or labor engaged by Owner in the maintenance and/or operation of the Property.

9.2 All permits required by governing agencies and all sales and similar taxes shall be secured and paid for by the Contractor, the cost of which is included in the total Contract Price.

9.3 Contractor warrants that its employees and the employees of its subcontractors, if any, providing services under this Contract are authorized by federal law to work in the United States and that such employment strictly complies with the requirements of 8 CFR Part 274(a). Breach of this warranty shall constitute a material breach of this Contract.

9.4 Contractor's Taxpayer Identification Number (TIN) is 81-422-4050

9.5 If at any time any controversy should arise between Owner and Contractor regarding anything pertaining to this Contract and which the parties hereto do not promptly adjust and determine, then the written orders from Owner to Contractor shall be followed.

9.6 The waiver by Owner of any requirement of this Contract shall not be deemed a waiver of any subsequent failure to perform, or construed as precluding Owner from insisting on strict adherence to the terms of this Contract in the future. The remedies and rights of Owner, in the event of any default hereof by Contractor, are cumulative.

9.7 Notices, demands and requests required or desired to be given hereunder shall be in writing and delivered either personally or by deposit into the U.S. Mail, postage prepaid, certified or registered mail, return receipt requested, or by recognized overnight air courier addressed to the party at its address at the beginning hereof.

9.8. Contractor shall not assign this Contract, or any rights, benefits, or monies due or to become due to Contractor hereunder. Nothing herein shall preclude or prohibit Owner from assigning or transferring the whole or any part of this Contract.

9.9 This Contract shall be construed and enforced in accordance with the laws of the State of Hawaii. Venue of any action under this Contract shall be exclusively in Hawaii State Court. In the event of litigation involving a dispute arising out of this Contract, the prevailing party shall be entitled to receive actual reasonable attorneys' fees and costs, pursuant to applicable court rule, incurred in connection therewith.

9.10 This Contract supersedes all prior negotiations, proposals and understandings, if any, of the parties hereto, and constitutes the entire understanding of the parties with reference to the work to be performed under this Contract. This Contract shall not be modified except by a writing signed by all of the parties.

9.11 This Contract and all of the representations, warranties and conditions herein contained shall be binding upon and inure to the benefit of the heirs, executors, administrators, legal representatives, assigns or other successors in interest (to the extent permitted hereunder) of each of the parties hereto.

IN WITNESS WHEREOF, this Contract has been executed as of the date set forth above.

OWNER:
CIRI Land Development Company

DocuSigned by:
Chad Nugent
AD73777A0C144F2...

Name: Chad Nugent
Title: President

CONTRACTOR:
Kani Wildlife Control, LLC

Name: Janoah Young
Title: Accounts manager/Owner

EXHIBIT Q-1

Kani Wildlife Control, LLC
PO BOX 1206
Kekaha, HI 96752
(808)754-3960
kaniwildlifecontrol@outlook.com

KANI WILDLIFE CONTROL

CUSTOMER: David Weekes

LOCATION: 1645 Pe'e Rd

CITY & ZIP: Koloa, HI 96756

PHONE: 801-634-9075

Animal(s) To Control: Feral Cats

This animal control contract made this day of_____ , between Kani Wildlife Control, LLC and the above listed customer who declares himself/herself to be the resident/owner/manager (hereafter Customer) of the property listed above and desires control of said animal causing transient or domiciled damage at the building and/or premises stated herein. The above person agrees that they are authorized to request wildlife control services for the property listed above.

Kani Wildlife Control will continue to trap and/or exercise appropriate control methods until the live animal source of the problem is solved/maintained or until contract terms has ended. Kani Wildlife Control reserves the right to modify the contract if circumstances such as too many non-target catches, or poor occupant cooperation occurs. Before such action occurs, Kani Wildlife Control will notify customer in advance. Trapping for animals causing transient damage, such as rooting, wallowing, and/or trampling will be conducted for the duration of time specified by the customer. Depending on the circumstances, Kani Wildlife Control reserves the right to discontinue trapping, or return at a later date.

Refundable Security Deposit: The customer is responsible for the security of the traps and/or cameras. The deposit per trap/camera is: **$500.00/trap - $500/camera.** Customers will only be requested to put the money up front if Kani Wildlife Control believes the situation to be of high risk. If traps and/ or cameras are stolen or damaged, excluding damages sustained by targeted animals, the above figure(s) will be required to be paid by the customer.

RATES

Delivery and Setup Fee Per Trap:$0_____Number of Traps: 2-4 based on populations

- Daily Trap Fee Per Trap: $0_____
- Number of Days: ON-Going Maintenance
- Monthly Trap Fee with Property Scout: $1950_____
- Number of Months: Continuous- until either party provides written notice of cancellation.
- Camera: $100.00

Hourly Service Rate: $NA (For Conventional Control, a state issued permit may be required)

Customer understands that he/she is responsible to provide Kani Wildlife Control access to the listed property. Customer is also responsible to remove items from the access area(s) that may be damaged or soiled from Kani Wildlife Control work. State law requires that all traps be accessible by Kani Wildlife Control on a regular/daily basis. Failure to assist Kani Wildlife Control in this regard may result in additional charges to cover fines.

Janoah Young
KWC WCO Signature

David Weekes
Customer Signature

EXHIBIT Q-1

Kani Wildlife Control, LLC
PO BOX 1206
Kekaha, HI 96752
(808)754-3960
kaniwildlifecontrol@outlook.com

Kani Wildlife Control Mutual Obligations and Disclaimers:

I. CUSTOMER OBLIGATIONS:

(CUSTOMER Initial _____)

A. ACCESS & CHECKING TRAPS: The customer shall permit Kani Wildlife Control, its agents and employees free entrance and exit to the customer premises with necessary materials and equipment at reasonable times for the performance of the services to be rendered under this agreement. Customer understands that State law requires all traps to be checked by Kani Wildlife Control on a daily basis. Failure to permit access to Kani Wildlife Control may result in fines, UNLESS SPECIFIC ALTERNATIVE ARRANGEMENTS HAVE BEEN MADE. The customer is also responsible to remove / protect items that may be damaged or soiled by Kani Wildlife Control work. Kani Wildlife Control is not responsible for items not removed from the working area and access points. Animals urinate and defecate at various times and may do so when being removed from a building. Further, the customer shall vacate the premises for periods required and as directed by Kani Wildlife Control, if necessary.

B. INFORMATION: Customer is obligated to provide Kani Wildlife Control with information regarding observed animal movements or actions in a timely manner. The customer understands that she/ he is the eyes and ears of Kani Wildlife Control. Failure to notify Kani Wildlife Control may result in greater damage to the property.

2. Kani Wildlife Control OBLIGATIONS:

A. WORKMANSHIP: Kani Wildlife Control, its employees and agents will render their service in a good workmanlike manner according to the customary and approved methods and procedures prevailing in the business of animal damage control. Kani Wildlife Control agrees to exercise the greatest care in trapping said animal(s) in order to avoid damage to the customer property. However, the customer is still responsible to remove items that may be damaged in accordance with section B. Under CUSTOMER OBLIGATIONS.

B. ANIMAL DISPOSITION: Said animal(s) shall be handled in accordance to customer preference as long as it abides with state law. If an animal is released on customer property, Kani Wildlife Control can offer no guarantee that said animal will not damage property and / or re-enter property.

C. EQUIPMENT: Customer understands that Kani Wildlife Control will remove traps/camera(s), add trap/camera(s), change traps/camera(s) or any combination of the above in accordance to the situation. Kani Wildlife Control will not always designate these changes on the contract. However, the customer will still be responsible for trap and camera security as well as associated fees.

3. DISCLAIMERS:

The process(es) used to eradicating, evicting and controlling animal(s) subjects involves equipment that may be hazardous to human beings and animals. Therefore, Kani Wildlife Control disclaims any responsibility for any injuries or damage that may occur to any person(s) or animal(s) as a result of said trap(s) and / or equipment being used.

Further, the trap(s) themselves and any animal caught in said trap(s) may be hazardous to any person(s) or animal(s) who may get too close to said trap(s) or captured animal(s). Therefore, the customer understands and agrees that Kani Wildlife Control will not be responsible for any injuries resulting from any person(s) or animal(s) coming too close to said trap(s), whether said trap(s), is empty or whether there is any animal(s) trapped therein.

The target animal(s) may cause damage to the premises or cause injury to person(s), animal(s) or property prior to being captured, when captured or being released on the customer property. It is possible that trapped animal(s) may escape from said trap(s). Any animal(s) caught in said trap(s) may damage or contaminate the area around and underneath said trap(s). It is also possible that the animal may escape while being removed from the premises by Kani Wildlife Control. Therefore, the customer understands and agrees that Kani Wildlife Control will not be responsible for any injuries to person(s) or animal(s) or any damage to property caused by said animal(s) while on the residents premises.

As there may be more than one animal and / or causes regarding the Owner's complaints, Kani Wildlife Control does not guarantee that all animals and / or animal carcasses have been found and / or removed or that the cause of owner's complaints has been rectified.

Kani Wildlife Control, LLC
PO BOX 1206
Kekaha, HI 96752
(808)754-3960
kaniwildlifecontrol@outlook.com

KANI WILDLIFE
CONTROL

As Kani Wildlife Control is in the business of handling animal problems, the customer understands and agrees that Kani Wildlife Control is not responsible for disclosing any damage that may have been caused by any animal, nor is Kani Wildlife Control liable for any damage caused by any animal, person or nature.

EXHIBIT R

Association of Owners of Makahuena Estates

RIGHT OF ENTRY PERMIT

Effective 9/1/2021 through 8/31/2022

Permission is hereby granted to State of Hawaii, DLNR, Division of Forestry and Wildlife and its successors, consultants, assignees, licensees and agents ("Permittee"), whose address is 3060 Eiwa Street, Room 306, Lihue, Hawaii 96766, by the Association of Owners of Makahuena Estates ("Permittor" or "Association"), 3214 N. University Ave #104 Provo, UT 84604, to enter the following described Association Property:

Approximately 13 acres of real property generally located at on Pe'e Road, between the Makahuena at Poipu and The Point at Poipu condominiums as shown on Exhibit A ("the Permit Area), also known as and being Lots 1 - 10 of the Makahuena Estates Subdivision.

1. SCOPE

a. This Permit is issued for the purpose of allowing Permittee's agents to enter the Property to monitor wildlife, retrieve any carcasses and documenting the same by taking photographs and global positioning system ("GPS") points. This Permit is subject to the following terms and conditions:

1) This Permit and any rights hereunder are not assigned or transferred by Permittee and any attempt to do so shall be void and not merely voidable.

2) Permittee shall be responsible for obtaining legal access across other private or public lands. Permittee understands and agrees that the issuance of this Permit does not, in any way, establish any right of precedent whatsoever to the lands described herein or to any improvements on those lands. This Permit does not authorize use of any land outside the Permit Area.

3) Prior to accessing the Permit Area via Maka Rd., Permittee shall contact the Association's designated representative at least 24 hours in advance to ensure that Permittee can access the site safely and without disturbing any construction activities. Provided that in the event a downed wedge-tailed shearwater is observed on Property, Permittee shall notify Permittor of the need to enter the Property and thereafter may immediately enter the Property in order to retrieve said bird(s).

2. TERMS

a. This Permit shall be, and remain, in force from **9/1/21 - 8/31/22** unless sooner terminated or revoked as described in this Permit, provided, however, that no termination, revocation or expiration of this Permit shall affect the liability assumed or any indemnity given by Permittee with respect to acts which shall have been done or have happened before the date of the termination or expiration of this Permit.

b. The Permit is revocable for cause for violation of a Permit provision. A revocation for cause is effective immediately. The Permit is also revocable without cause. A revocation without cause is effective immediately.

3. STANDARD OF OPERATIONS

a. Permittee shall observe all federal, state and local laws and regulations applicable to the Permit Area and shall obtain, prior to commencing operations, all permits, licenses and government approvals necessary for activities under this Permit. Permittee's failure to obtain such authorizations or approvals or comply with the terms and conditions of such authorizations or approvals shall be considered a breach of the terms and conditions of the Permit and may be cause for Permit suspension or termination, at the Association's option.

b. Permittee shall conduct all activities in such a manner as to ensure the least practical temporary and permanent harm to the Permit Area and in a manner that will avoid degradation of air, land and water quality. Permittee shall keep the Permit Area in a neat, orderly, safe and sanitary condition. Permittee shall not operate any equipment on the Permit Area.

c. Any structure, property or land harmed or damaged by Permittee during permitted activities on the Permit Area shall be reconstructed, repaired, rehabilitated and restored by Permittee as may be required by state and federal resource agencies or the Association, as soon as practical, so that the condition thereof, at the sole discretion of the Association, is at least equal to the condition thereof immediately prior to such damage or destruction. Permittee shall immediately cease and/or eliminate any condition existing or occurring as a result of Permit activities, which may cause harm or damage to any person, structure, property, land, waterway or wildlife.

d. Burial of trash or waste is prohibited. All refuse and non-combustible material shall be removed from the Permit Area. All waste generated during the operations shall be removed from the Association's lands or otherwise disposed of in a manner acceptable to the Association. "Waste" means all discarded non-hazardous matter, including but not limited to, human waste, trash, garbage and refuse.

e. Upon completion of all activities, the Association's property will be returned to its natural environment and repairing any damage caused by the Permittee and its users.

4. INSURANCE

a. Permittee shall, at its sole expense, secure and maintain in force, throughout the term of this Permit, such insurance and such limits necessary and customary for the work to be performed by Permittee under this Permit. Permittee shall provide evidence of such insurance coverage upon request of the association.

5. LIABILITY AND INDEMNIFICATION

a. Permittee shall have the duty to defend and indemnify the Association and hold it harmless against any and all liability for any and all claims (including but not limited to claims in tort, negligence, or pursuant to statute), liens, demands, suits, damages, costs, losses and expenses (including costs and attorney's fees), and for any and all injury to or death of persons and damage to or loss of property, resulting from, arising out of, or in any way connected with, the use or occupation of the Permit Area by the Permittee, its agents, employees, contractors and assignees, the exercise of the privileges granted Permittee by this Permit, or the failure of Permittee, its agents, employees, contractors and assignees to perform fully any and all of the terms and conditions associated with the Permit.

b. Permittee shall be liable to the Association for any liabilities, damages, injuries or expenses incurred by the Association in any way arising from or connected with any activity, including restoration of the Permit Area, under this Permit, whenever such damage, cost or expenses results from any breach of the terms or stipulations associated with the Permit, or from any wrongful or negligent act of Permittee, its agents, employees, contractors or assignees.

6. COMMUNICATIONS BETWEEN PERMITTEE AND THE ASSOCIATION

Unless otherwise indicated, all notifications to be made shall be delivered to:

David Weekes
Association of Owners of
Makahuena Estates
3214 N. University Ave #104
Provo, UT 84604
Phone: (801) 634-9075

IN WITNESS WHEREOF, the parties hereto have executed these presents as of the 3 day of September, 2021.

PERMITTOR:

ASSOCIATION OF OWNERS OF MAKAHUENA ESTATES

By: Tanner Weekes

Its: Vice President

LESSEE:

DLNR, DIVISION OF FORESTRY AND WILDLIFE

By:

Its:

IN WITNESS WHEREOF, the parties hereto have executed these presents as of the ____day of _____, 2021.

PERMITTOR:

ASSOCIATION OF OWNERS OF
MAKAHUENA ESTATES

By:

Its:

LESSEE:

DLNR, DIVISION OF FORESTRY AND
WILDLIFE

Thomas Kaiakapu

By:

Its: Kauai Wildlife Manager

EXHIBIT "A"

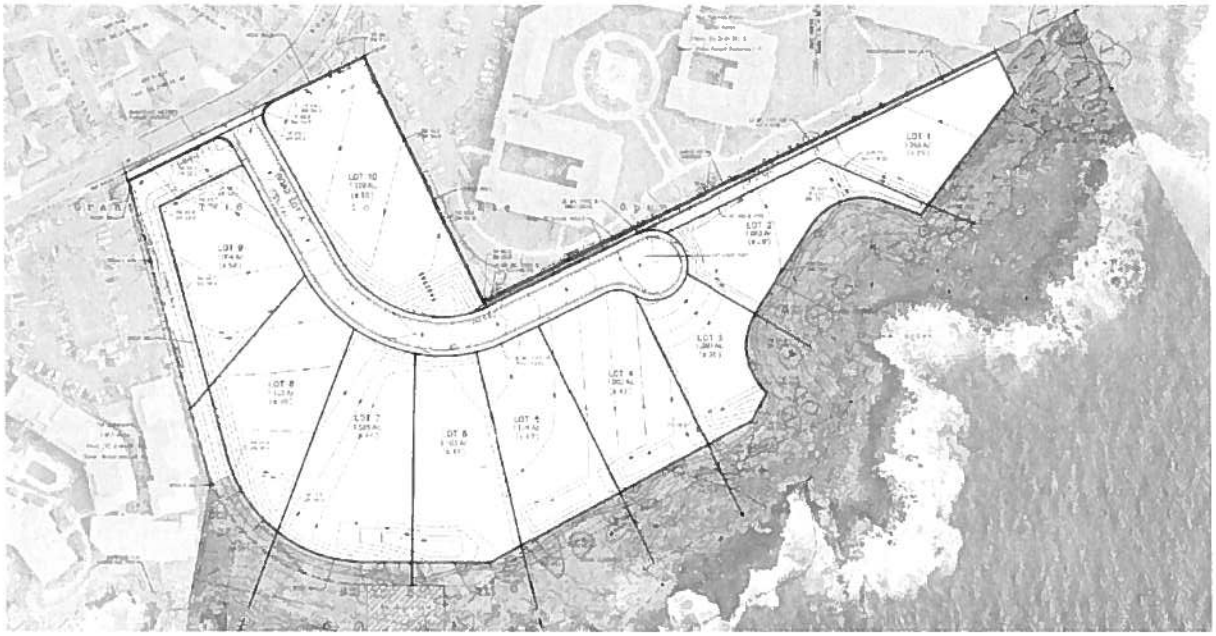


EXHIBIT S

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.
808.523.2557

JLIM@CARLSMITH.COM

OUR REFERENCE NO.:
064510-00001

May 9, 2016

VIA U.S. MAIL AND EMAIL MDAHILIG@KAUAI.GOV

Michael A. Dahilig
Director
County of Kauai Planning Department
Pi`ikoi Building
4444 Rice Street, Suite 473
Līhu'e, HI 96766

Re: Status Of Certain Conditions Under Class III Zoning Permit Z-III-2015-1 Special Management Area Use Permit SMA(U)-2015-1, TMK Nos. (4) 2-8-021:041, 044-068, & Two Unnumbered Road Lots, Poipu, Kauai

Dear Director Dahilig:

This firm represents CIRI Land Development Company ("**CLDC**") an Alaska corporation. On August 26, 2014, the Kauai Planning Commission approved the above-referenced Class III Zoning Permit and Special Management Area Use Permit (collectively, the "**Permits**"), to allow CLDC to develop the subject property. CLDC sought the Permits in order to consolidate the pre-existing 28+ lots into a 10-lot residential subdivision to be known as Makahuena Point, which will also include one roadway lot, a public parking area, a mauka/makai pedestrian access easement, an open space easement area, and a lateral pedestrian access easement parallel to the makai boundary of the property.

This letter is to update you on CLDC's discussions with the Department of Land and Natural Resources Division of Forestry and Wildlife ("**DOFAW**") regarding compliance with Condition 5(b) and (f) of the Permits. You may recall, the Planning Commission imposed Condition 5(b) and (f) in response to a letter from DOFAW that was submitted to the Planning Commission at the hearing on August 26, 2014.

In that letter DOFAW acknowledged that the Wedge-Tailed Shearwater ("**WTS**") is not listed as an endangered or threatened species under the federal Endangered Species Act or under Chapter 195D, Hawaii Revised Statutes. Nevertheless, DOFAW requested that the Commission impose certain conditions on the Permits to minimize impacts to nesting WTS and protect their

EXHIBIT S

nesting habitats.

A. **Report on Condition 5(b).**

Permit Condition 5(b) provides:

> 5. To protect faunal species, the following shall be required:
>
> b. The rock wall along Lots 1-7 on the mauka side shall be adjusted so that the seabirds can walk up the slope on the top of the wall. Coastal vegetation such as naupaka shall be encouraged along the makai side of the rock wall.

Regarding Condition 5(b), DOFAW's concern was avoiding a situation where the rock wall that will be constructed by CLDC throughout the property, adjacent to the proposed public access easement, created an environment that could entrap the WTS on the mauka/residential side of the rock wall. DOFAW thought that sloping the top of the rock wall could make it easier for the WTS to reach the top of the wall and return to the sea.

CLDC's biologist, Reginald David, met with DOFAW representatives Thomas Kaiakapu, DOFAW Kauai Wildlife Manager, and Brooke McFarland, DOFAW biologist, in November to discuss appropriate means of addressing DOFAW's concerns and Condition 5(b) of the Permits. In lieu of sloping the rock wall, which could create a potentially dangerous condition for humans, Mr. David discussed having the rock wall constructed with pipes set close to the ground, so that WTS will easily be able to pass through the rock wall. A sketch of the proposal that was shared with DOFAW is enclosed here. The pipes that will be installed within the rock wall will provide safe passage for WTS, in the unlikely event that any WTS nest on the mauka side of the wall, and have difficulty leaving the property. In addition, CLDC will install native vegetation makai of the rock wall, in the proposed Open Space Easement area.

B. **Report on Condition 5(f).**

Permit Condition 5(f) provides:

> 5. To protect faunal species, the following shall be required:
>
> f. The Applicant shall work with DLNR-DOFAW toward restoration of coastal habitat in the Open Space Easement area in the makai western portion of the property. This includes the cost of removal of invasive non-native vegetation and the planting of appropriate seabird-friendly vegetation within the Open Space Easement in the makai western corner of the property.

With respect to Condition 5(f), Messrs David and Kaiakapu and Ms. McFarland discussed areas where CLDC intends to plant naupaka or similar native vegetation in order to establish a welcoming environment for nesting WTS. DOFAW expressed a desire for CLDC to

undertake the restoration of coastal habitat in the Open Space Easement area, and to do so without DOFAW participation. CLDC will pursue that goal.

DOFAW reviewed the enclosed sketch, showing the areas where CLDC intends to plant new naupaka, and expressed support for these plans. However, DOFAW indicated that the patch of naupaka proposed makai of the USA parcel may not be practical. CLDC's biologist, Mr. David, concurs with that opinion. Therefore, CLDC does not intend to install that particular area of naupaka. In addition, the existing areas of naupaka makai of the rock wall will generally be retained, with some allowances for the construction of the rock wall.

C. **Additional Protective Measures.**

In addition, and per your suggestion, CLDC confirms its intention to alert DOFAW on the timing of the initial construction of subdivision improvements at the property. As you may recall, your office signed off on the Makahuena Subdivision Construction Plans in January of this year. However, due to the relatively short window for certain aspects of the construction due to the bird nesting season (non-nesting season being January through March), CLDC was forced to delay the start of construction (i.e., installation of dust fences, construction staging areas, and similar activities) until the fall of 2016. Significant earth disturbance is planned for January 2017, which is after the WTS nesting season.

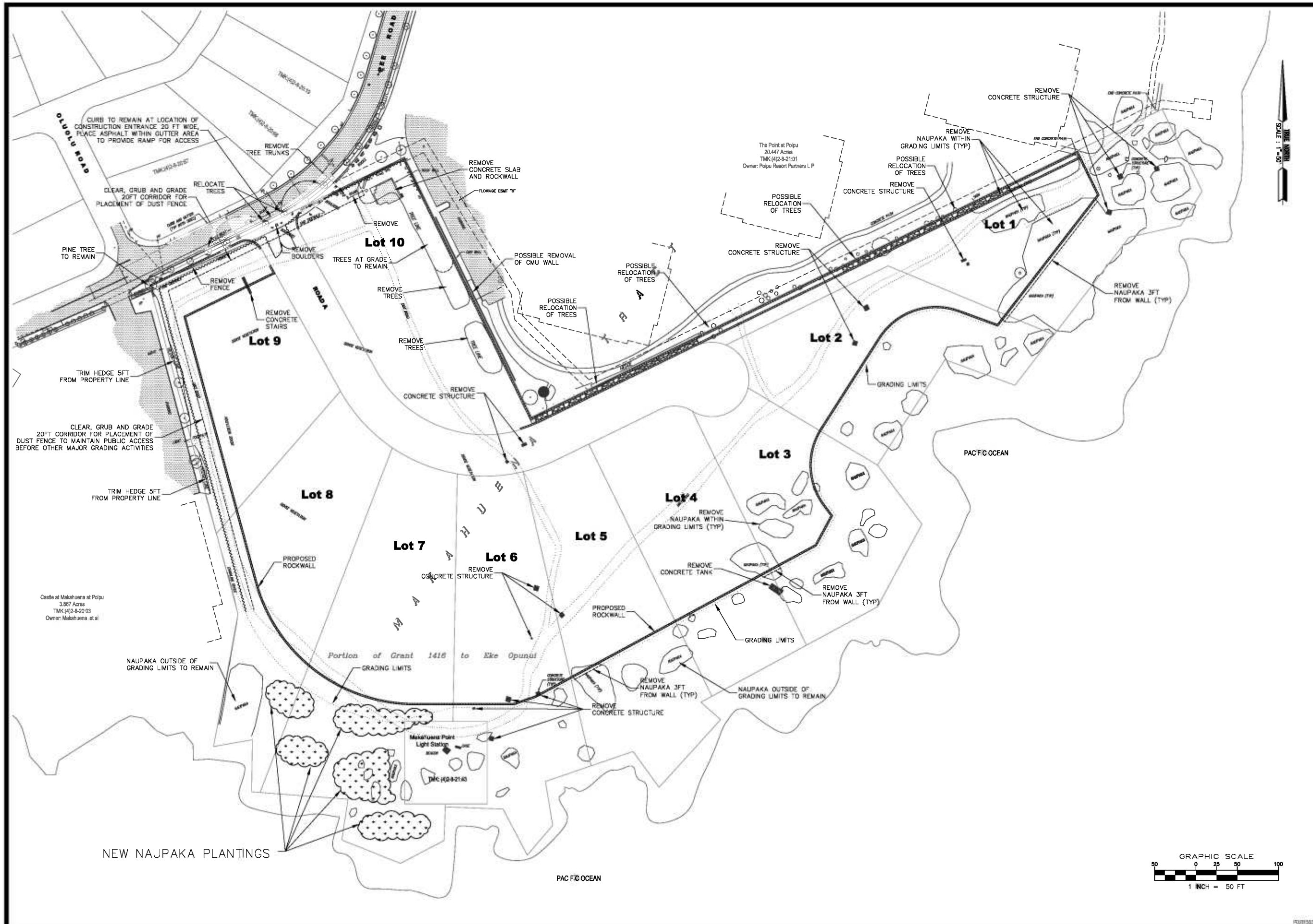
As such, CLDC intends to have Mr. David survey the property prior to CLDC's initial construction/mobilization activities, so that any active nests can be noted and avoided during construction. Per Ms. McFarland's request, CLDC, through Mr. David, will keep DOFAW apprised of the start of the initial construction/mobilization work.

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

Very truly yours,

Jennifer A. Lim

JAB1
Enclosure(s)
cc: CIRI Land Development Company
Thomas Kaiakapu, DLNR-DOFAW
Reginald David, Rana Biological Consulting, Inc.



TRIAD ENGINEERING
73-4840 KANALANI ST, PMB 430
KAILUA KONA, HAWAII 96740-2622
(808) 325-1744 TE@TRIADHAWAII.COM

Makahuena Point Subdivision
Street & Waterline Plans

DEMOLITION & NAUPAKA
PRESERVATION/REPLANTING PLAN

REVISIONS | APPROVED

LLL	LVL	DAG
FILE: MAKAHUENA-POINT.DWG DEMO-PLAN		
(4) 2-8-021:041	10-15-2015	
JOB NO: H15-003	SCALE: HORIZ: 1" = 50' VERT: NA	

1 of 1

STRUCTURAL NOTES:

1) ALL CONSTRUCTION SHALL CONFORM TO THE 2006 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) INCLUDING LOCAL JURISDICTION AMENDMENTS.

2) NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

3) VERIFY ALL DIMENSIONS WITH CIVIL PLANS PRIOR TO START OF CONSTRUCTION – RESOLVE ANY DISCREPANCY WITH ENGINEER. DO NOT SCALE DRAWINGS.

4) THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO, BRACING, SHORING, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SITE SAFETY, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO.

5) THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.

6) ROCK WALLS SHALL BEAR ON FIRM, UNDISTRURBED NATIVE SOIL. ALL SOIL BELOW ROCK WALL SHALL BE COMPACTED TO 95% MINIMUM IN ACCORDANCE TO ASTM D698. ROCK WALL DESIGN BASED ON SOILS REPORT 15-5793 BY HIRATA & ASSOCIATES, INC. DATED MAY 1, 2015. DESIGN SOIL PRESSURE = 3,000 PSF AT 12" BELOW LOWEST ADJACENT FINISHED GRADE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE SOIL BEARING PRESSURE AND TO DETERMINE WHETHER UNSUITABLE SOIL CONDITIONS (I.E. EXPANSIVE OR COLLAPSIBLE SOILS, LOOSE FILL, ETC.) EXIST.

7) DESIGN LOADS:

ROCK BOULDERS = 155 PCF MINIMUM

WIND:

WIND SPEED = 130 MPH (3 SEC GUST), I=0.77
EXPOSURE "D"

8) MATERIALS OF CONSTRUCTION:

MORTAR – ASTM C270, TYPE S, 1800 PSI AT 28 DAYS
GROUT – ASTM C476, 2000 PSI AT 28 DAYS

ROCK RETAINING WALL NOTES:

1) THE BASE ROCK SHALL BE EMBEDDED 12" INTO THE SOIL. PLACEMENT OF BASE ROCKS AT GRADE FOLLOWED BY SUBSEQUENT BACKFILLING OF THE "TOE AREA" SHALL NOT BE PERMITTED. THE BASE SHALL BE SLOPED FRONT TO BACK AT – 4.0%. THE LONGITUDINAL SLOPE OF THE BASE OF THE WALL HALL NOT HAVE A SLOPE GREATER THAN 1 VERTICAL TO 10 HORIZONTAL ALONG THE WALL LENGTH, OTHERWISE, A STEPPED BASE SHALL BE REQUIRED.

2) ROCKS SIZED AS "TWO MAN" (APPROXIMATELY 200–700 POUNDS AND 18–28 INCH NOMINAL DIAMETER) OR GREATER SHALL BE TIGHTLY FITTED AND INTERLOCK WITH NEIGHBORING ROCKS. SMALLER ROCK MAY BE INTERMITTENTLY USED FOR "STRUCTURAL CHINKING" WHICH ALLOWS LARGE ROCKS TO REST IN A STABLE MOVEMENT FREE POSITION. VOID SPACES BETWEEN LARGER ROCK SHALL BE TIGHTLY FILLED OR "AESTHETICALLY CHINKED" SUCH THAT LARGE GAPS BETWEEN ROCKS IN THE EXPOSED FACE ARE REASONABLY WELL FILLED. THERE SHALL BE NO LOOSE ROCK OR SCREE PRESENT AT ANY POINT IN THE EXPOSED FACE OR TOP OF THE WALL.

3) NO ROCK LARGER THAN THE NOMINAL "TWO MAN" SIZE (APPROXIMATELY 200–700 POUNDS AND 18–28 INCH NOMINAL DIAMETER) SHALL BE PERMITTED TO BE EXPOSED IN THE FRONT FACE OR TOP ROCK LAYER. TIGHTLY FITTED SMALLER ROCK USED FOR THE PURPOSE OF FILLING VOIDS OR "CHINKING" SHALL NOT BE SUBJECT TO THIS LIMITATION.

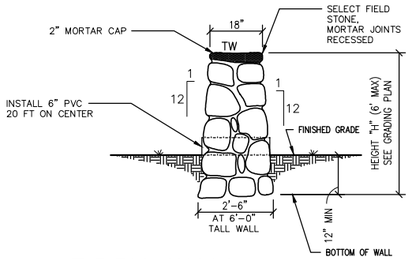
4) ALL ROCK SHALL BE SOUND, ANGULAR LEDGE ROCK THAT IS RESISTANT TO WEATHERING. THE LONGEST DIMENSION OF ANY INDIVIDUAL ROCK SHALL NOT EXCEED THREE TIMES ITS SHORTEST DIMENSION.

5) ALL ROCKS DELIVERED TO OR FOUND ON SITE AND INCORPORATED IN THE PROJECT SHALL MEET THE FOLLOWING MINIMUM SPECIFICATIONS:
   A) ABSORPTION – ASTM C–127 OR AASHTO T–85 NOT MORE THAN 2% FOR IGNEOUS AND METAMORPHIC ROCK TYPES AND 3% FOR SEDIMENTARY ROCK TYPES.
   B) ACCELERATED EXPANSION – (15 DAYS, CRD–C–148 *1, *2) NOT MORE THAN 15% BREAKDOWN.
   C) SOUNDNESS (MSSO4 AT 5 CYCLES – ASTM C–88 OR CRD–C–137) NOT GREATER THAN 5% LOSS.
   D) UNCONFINED COMPRESSIVE STRENGTH – ASTM D–2938 INTACT STRENGTH OF 6,000 PSI OR GREATER.
   E) BULK SPECIFIC GRAVITY (155 PCF – ASTM C–127 OR AASHTO T–85) GREATER THAN 2.48.

   *1. IN ACCORDANCE WITH THE CORPS OF ENGINEERS TESTING PROCEDURE CRD–C–148, "METHOD OF TESTING STONE FOR EXPANSIVE BREAKDOWN ON SOAKING IN ETHYLENE GLYCOL.

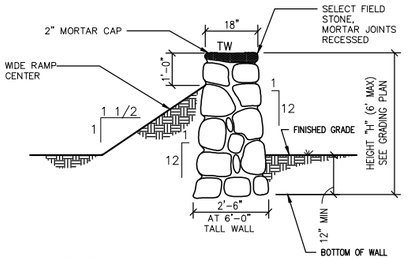
   *2. ACCELERATED EXPANSION TESTS SHOULD ALSO INCLUDE ANALYSIS OF THE FRACTURES AND VEINS FOUND IN THE ROCK.

6) THE DENSITY OF THE ROCKS SHALL BE EQUAL TO OR GREATER THAN ONE HUNDRED FIFTY–FIVE (155) PCF.



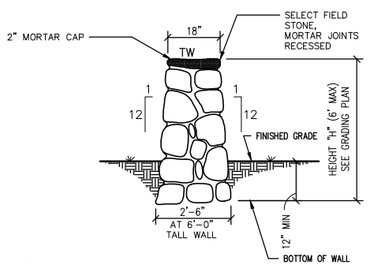
2 ROCK WALL– SCREEN WALL – TYPE B

SCALE: NTS



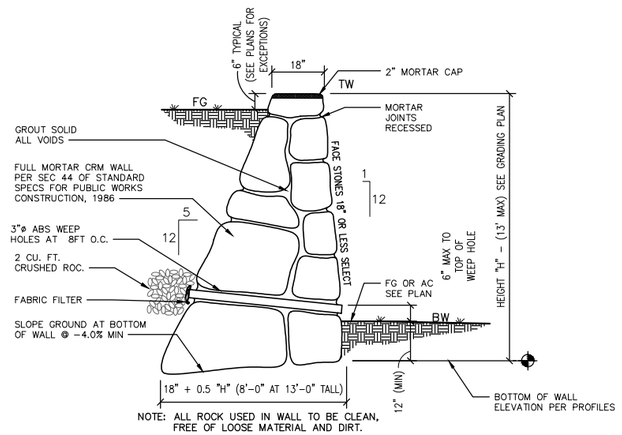
2 ROCK WALL– SCREEN WALL – TYPE B1

SCALE: NTS



1 ROCK WALL– SCREEN WALL – TYPE A & E

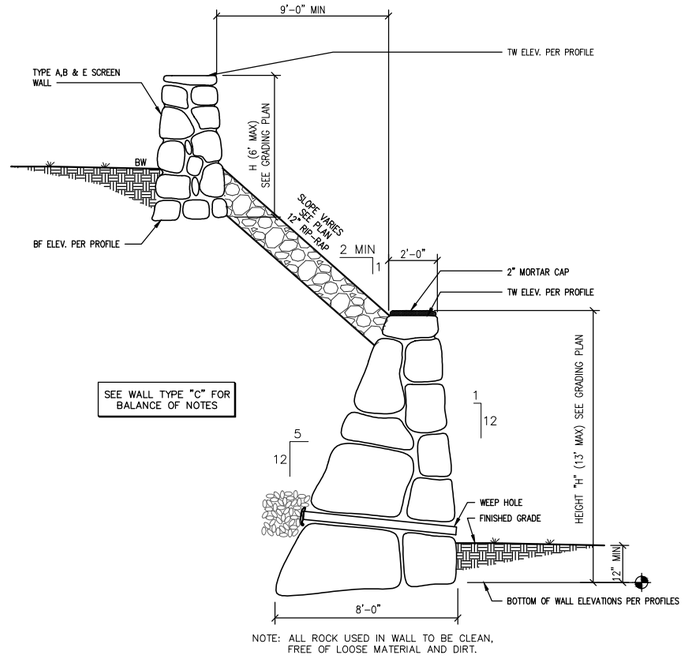
SCALE: NTS



NOTE: ALL ROCK USED IN WALL TO BE CLEAN, FREE OF LOOSE MATERIAL AND DIRT.

3 ROCK WALL RETAINING WALL–TYPE C

SCALE: NTS



NOTE: ALL ROCK USED IN WALL TO BE CLEAN, FREE OF LOOSE MATERIAL AND DIRT.

4 ROCK WALL – TERRACED RETAINING WALL – TYPE D

SCALE: NTS

THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION, AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION (AS DEFINED UNDER SECTION 16-62-2 OF CHAPTER 62)

LIC. EXP.

Engineer

TRAD ENGINEERING
73-4840 KANALANI ST, PMB 430
KAILUA KONA, HAWAII 96740-8822
(808) 325-1744 TEDTRUDHAM@GMAIL.COM

Makahuena Point Subdivision

RETAINING WALL DETAILS

APPROVED

REVISIONS

DESIGNED AW | DRAWN AV | CHECKED JEG

FILE: \MAKAHUENA WALL PLANS.DWG :RETAINING WALL PLAN

TMK: (4) 2-8-021:041

DATE: 8-19-2016

SCALE: HORIZ: NA VERT: NA

JOB NO: H15-003

SHEET S-4 -- OF -- SHEETS

EXHIBIT T

Cultural Impact Assessment

at Makahūʻena Point, *Weliweli Ahupuaʻa, Kona, Kauaʻi*

Prepared by McMahon Consulting
3-2600 Kaumualii Hwy., Suite 1300 –PMB 306
Lihue, *Kauaʻi*, HI 96766

January 2014



Figure 1: ***Moi Hole at Makahūʻena Point***

EXHIBIT T

Table of Contents

Project Summary 1
Environmental Setting 2
Geology 2
Soils 3
Previous Archaeological Investigations 3
Traditional Background 7
Kaua'i 7
Weliweli and Makahū'ena Point 9
Land Commission Awards 10
Place Names 10
Mythology and Mo'olelo 11
Informants 12
Traditional Uses 13
Recommendations 13
Bibliography 15

List of Figures

Figure 1: *Moi Hole at Makahū'ena Point* ..... cover
Figure 2: 1921 Aerial Photograph of *Kōloa*.. 3
Figure 3: Previous archaeological work in Kona District. 7

List of Tables

TABLE 1: PREVIOUS INVESTIGATIONS NEAR/AT MAKAHŪ'ENA POINT 4
TABLE 2: (*HAUN ET. AL 2011*) *MAKAHŪ'ENA* INVESTIGATIONS 6

Project Summary

McMahon Consulting conducted a cultural assessment for an approximately 13.078 acre land area, formerly designated as TMK: (4) 2-8-021: 041, and a 10,000 square foot parcel designated as TMK (4) 2-8-021: 043, located at *Makahūʻena* Point, *Weliweli ahupuaʻa* within the Traditional District of *Kona*, island of *Kauaʻi*. The larger parcel contains 28 subdivided lots that were created in the 1930's. The property is owned by CIRI Land Development Company ("CLDC"), an Alaska corporation, and wholly owned subsidiary of Cook Inlet Region Inc. (“CIRI”), which is an Alaska Native corporation and one of the 12 Alaska-based regional corporations established by the Alaska Native Claims Settlement Act of 1971. CIRI was established to benefit Alaska Natives who have ties to the Cook Inlet Region of Alaska; the company is owned by more than 8,100 Alaska Native shareholders of predominately Athabascan and Southeast Indian, Inupiat, Yup'ik Eskimo, Alutiiq and Aleut descent. The 10,000 sq. ft. parcel is owned by the United States. CLDC acquired the property from the United States in 1996. CLDC now proposes to develop the property for residential lots and related uses. Although the CLDC property contains over 25 legally recognized subdivided lots, CLDC's proposed *Makahūʻena* project anticipates a less dense development of approximately 10 residential lots and related uses.

The Constitution of the State of Hawaii states the duty of the State and its agencies is to preserve, protect and prevent interference with the traditional and customary practices of native Hawaiians. Article XII, Section 7 of the Constitution requires the State to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. " Furthermore, Act 50, passed by the Hawaii State Legislature in 2000, requires environmental impact statements to "identify the address effects on Hawaii's culture, and traditional and customary rights."

The purpose of a cultural impact assessment is to identify the possibility of on-going cultural activities and resources within a project area or its vicinity, and assess the potential impacts that a proposed development may have on those resources. This cultural assessment has been prepared to fulfill the requirements of a cultural impact assessment, as outlined by the Office of Environmental Quality Control guidelines under Chapter 343 Hawaiʻi Revised Statutes, and as required under Article XII, Section 7 of the Hawaii State Constitution. This assessment is a compilation of information from pertinent literature and records, mythological and legendary sources, previous archaeological investigations, a history of the *Kōloa* area, modern land use, and interviews conducted with cultural practitioners and elders.

There is a paucity of data regarding pre-Contact settlement and historic land tenure for the parcel, and limited mythological and legendary references. The parcel had been owned by the Federal Government, specifically the U.S. Coast Guard, who utilized it starting in 1908 for a now decommissioned light house, and later a Long Range Navigation (LORAN) station. The only structures present on the parcel are the remnants of support structures for the manning and

upkeep of the lighthouse and a former LORAN station. Hale Opio used the property until 1982. Excavations by Haun *et al.* (2011) revealed no subsurface cultural deposits. Test trenching revealed soil that is shallow, with poorly drained clay-loam over saprolitic bedrock.

One Land Commission Award (LCA) was granted in *Weliweli* in the *ʻili* of Haoana in Punipu, and another that borders *Weliweli* to Ka'ana'ana within the ʻ*ilis* of *Halehinahina* and *Lapapohaku.* The rest of the *ahupuaʻa* was reserved as government land. Previous cultural investigations reveal that the area has been utilized, and still is, for fishing practices.

Environmental Setting

Geology

Makahūʻena Point is the terminus of a series of small eruptions along the *Poipu* Fault that that produced four craters extending across the *Kōloa* plain approximately 2.3 to 1.0 mya, producing 40 vents, spatter and cinder cones, and a tuff cone. *Kōloa* lavas cover about half of the surface of the eastern part of the island to the floor of the *Lihue* Basin. The last crater produced the lava flow that is *Makahūʻena* Point. Ranging southwest *mauka* to *makai* the first crater has been turned into the *Puuhi* Reservoir, likely during the tenure of the *Kōloa* Sugar plantation. The second *Puʻu* lies on the slopes of the reservoir and is shown on the USGS *Kōloa* Quad topographic map as a cinder pit named *Puʻu Hunihuni.* The third crater is named *Puʻu Wanawana*, situated on the *Kōloa* Plain above the present *Weliweli* Road *makai* of the parcel. The fourth crater is named *Puʻu Pihakekua* also called *Poipu* crater, which lies in the northwest corner of *Makahūʻena* Point. It is likely that this eruption caused the formation of the point. Finally, a shallow unnamed collapsed crater is present on the parcel. The rugged coastline of the promontory of *Makahūʻena* separates the sandy beaches of *Poipu* on the west and *Keoneloa* Bay on the east.

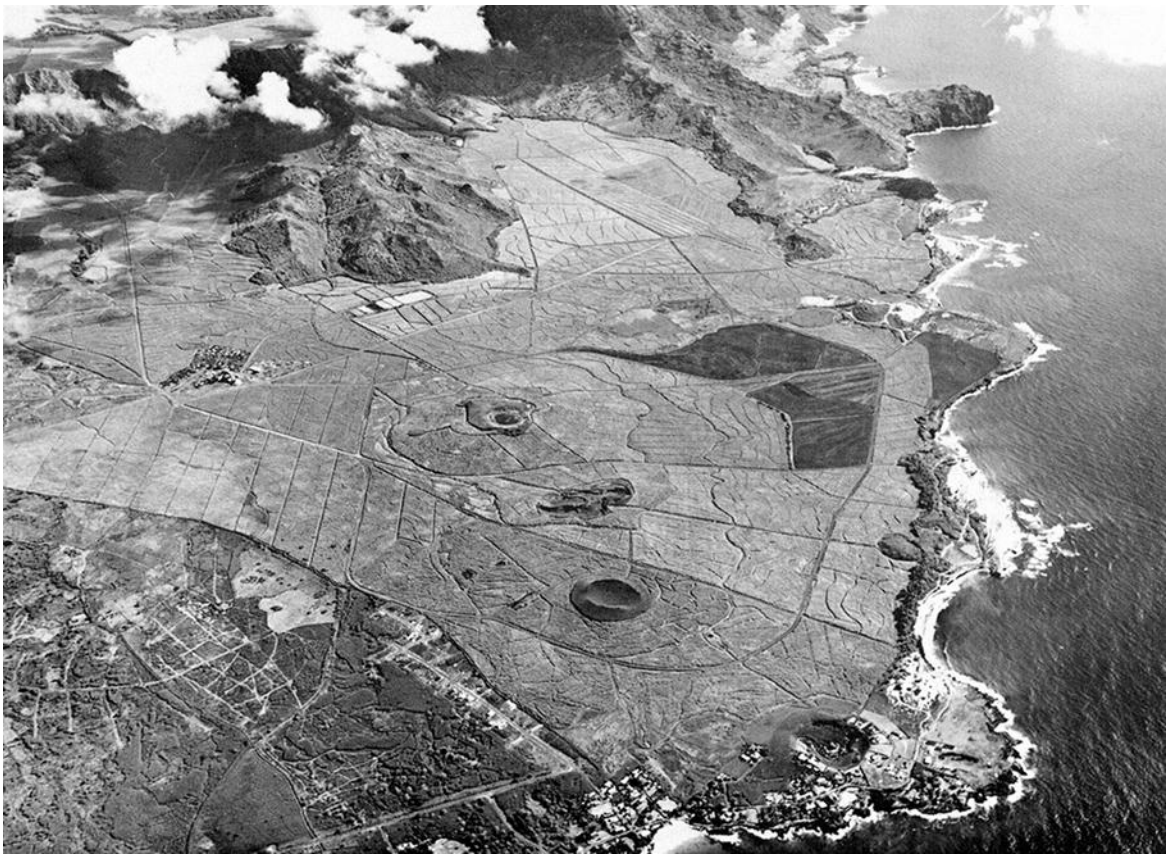


Figure 2: 1921 Aerial Photograph of *Kōloa*. *Note Makahūʻena Point at bottom right.*

Soils

The soils of *Makahūʻena* consist of *Kōloa* Stony silt clay on a 15-25% slope at the *mauka* side of the parcel with the *makai* portion classified as Rock Land. The area is classified as a moderate to severe erosion hazard, with maximum soil depths of 20 inches over a *pahoʻehoʻe* flow. The coastal portions of the parcel are classified as Rock land, which is defined by Foote et al. as, "areas where exposed bedrock covers more than 90 percent of surface (1972:119).

Previous Archaeological Investigations

There have been numerous archaeological investigations in the vicinity of *Makahūʻena*, with many sites being re-recorded and assigned different site numbers. Thrum recorded *heiau* sites on *Kauaʻi* (Thrum 1906) and Bennett recorded sand dune burials at adjacent *Keoneloa* beach (Site 82), and petroglyphs (Site 84) (Bennett 1931). These surveys were conducted prior to the developments at *Poipu*, *Keoneloa* beach and former *Kōloa* Plantation lands for residential, hotels and condominium lots.

There were three investigations at *Makahūʻena* Point. One consisted of a survey by Ladd under the auspices of the U. S. Coast Guard 14th District to record impacts to the historic lighthouse located at the point (Ladd 1981). In 1983 a reconnaissance survey of the coastal lands of the

Kona district was conducted within the *ahupua'a* of *Weliweli* and *Mahaulepu.* Three boundary walls were recorded in *Weliweli.* The first (site 3195) is interpreted as a boundary wall dividing a "housing tract from the cane lands." The second (site 3196) is interpreted as a boundary wall separating Grove Farm land from private landowners. The third (site 3198) is a wall located "in the vicinity of "*Pu'u Pihakekua* crater" adjacent to the project area (Ching et al. 1983).

The State Historic Preservation *Kaua`i* archaeologist synthesized available archaeological and historic literature related to the location of *Kane'aukai Heiau* in an attempt to pinpoint the location of this *heiau* said to be located at *Makahū'ena* Point. This *heiau* had been written about as early as 1885 (Lahainaluna School 1885) but no locational data was provided, and later archaeological investigations attempting to pinpoint the location resulted in the assignation of different site numbers; Site 83 (Bennett 1931), (Kikuchi 1963), and SIHP# 3089 (Hammatt 1989a, 1990a, 1990b, 1990c) and 477 (McMahon 1991). None of these later investigations provided data to conclusively locate this *heiau,* and the synthesis concluded that *Weliweli Heiau, Kauakaha'i* fishing alter and *Hali'i* fishing alter are all applied to *Kane'aukai Heiau* in various location. McMahon determined that the existence of the *heiau* was only preserved through oral histories *(*McMahon 1991) [Table 1].

TABLE 1
PREVIOUS INVESTIGATIONS NEAR/AT *MAKAHŪ'ENA* POINT

Investigation	Site #	Investigation	Results
Lahainaluna Schools	None	Oral history identifies *Kane'aukai Heiau*	No locational data provided
Ching, Palama, Stauder	3195 3196 3197 3198	*The Archaeology of Kona, Kaua'i Na Ahupua'a Weliweli, Pa'a, Mahaulepu Surface Survey of Coastal Lands*	Three *mauka* sites and one site located near *Pu'u Pihakekua* at *Makahū'ena* Point
Kikuchi 1963	Site 97	*Archaeological Survey and Excavations on the Island of Kauai, Kona District, Hawaiian Islands.*	Inland of *Makahū'ena* Point
Ladd 1980	None	*Archaeological Field Survey Report, Makahū'ena Point, Kaua'i.*	No NRHP significance
Hammatt 1989a	Site 82	*Archaeological Data Recovery Plan for Keoneloa Bay Villas, Weliweli and Pa'a.*	Identified a rock alignment as possible *Kane'aukai Heiau*
Hammatt 1990a	Site 82	*Preliminary Report on Archaeological Testing for the Proposed Keoneloa Bay Villas. [TMK: (4) 2-8-20: 21].*	Noted "large rectangular boulder alignments on the east and north side, but other two sides not identified"
Hammatt 1990b	Site 82	*Preliminary Status Report on Archaeological Testing for the Proposed Keoneloa Bay Villas*	SPD requires further investigation

Investigation	Site #	Investigation	Results
		[TMK: (4) 2-8-20: 21].	
1990c	Site 3089	*Update on our Research on Kane'aukai Heiau, Keoneloa Bay, Weliweli.*	Survey of *Keoneloa* Bay Villas project complete. SHPD requests further documentation
1991		*Testing of Possible Heiau, Keoneloa, Weliweli, Kōloa, Kaua'i* [TMK: (4) 2-8-20:21]	No definitive determination of *heiau*
Haun et al. 2011	Site 2130-2147	*Archaeological Inventory Survey, TMK: (4) 2-8-021:041, Makahū'ena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua'i*	Survey of the project area, found 18 sites, all historic and related to Coast Guard occupation
McMahon 1991	Site 477	*Locating Kane'aukai Heiau: An Archaeological and historical Synthesis, Weliweli, Kōloa, Kaua'i.*	Synthesis of all data determines that *heiau* only survive in the oral histories

In 2011, an Archaeological Inventory Survey (AIS) of *Makahū'ena* Point recorded historic remnants and debris of the former historic lighthouse (constructed in 1906) support buildings and infrastructure, and from the LORAN station that operated between 1952 and 1979. The survey identified 18 sites with 128 features consisting of concrete pads, concrete blocks, metal artifact scatters, posts, terraces, slabs, paths walls, a ditch, road, stairs, a utility box and a walled slab. Twenty subsurface trenches recorded 20th century historic materials, but no pre-Contact sites or deposits (Haun *et al.* 2011) [Table 2].

TABLE 2
(*HAUN ET. AL 2011*)
MAKAHŪ'ENA INVESTIGATIONS

Table 2. Summary of Sites

SIHP Site No.	Formal Type	Function	No. of Features	Formal Type													Function										Easting	Northing	Temp. Site No.
				Pad	Block	Artifact scatter	Post	Terrace	Slab	Path	Wall	Ditch	Road	Stairs	Box	Walled slab	Utility	Foundation	Marker	Transportation	Boundary	Disposal	Recreation	Soil Retention	Water diversion	Indeterminate			
2130	Complex	Foundation, Transportation, Utility, Boundary, Marker, Water diversion, Indeterminate	15	5					2	2	1	1	1	1	1	1	3	2	1	4	1		1		1	2	454100	2418585	1-5, 13-17
2131	Complex	Foundation, Indeterminate	6	1	1	1		3										5								1	454032	2418457	6, 7, 8
2132	Complex	Foundation	2	1			1											2									454037	2418430	30, 31
2133	Complex	Foundation	3	3														3									454077	2418403	9
2134	Concrete post	Foundation	1				1											1									454101	2418413	11
2135	Complex	Foundation, Marker, Indeterminate	4	2	1	1												1	2							1	454102	2418371	10, 18a, 18b
2136	Complex	Foundation	2	1		1											1					1					454148	2418382	19, 20
2137	Complex	Foundation	2	1	1													1	1								454124	2418397	18c, 18d
2138	Artifact scatter	Foundation	1			1												1									454194	2418396	21
2139	Complex	Foundation, Utility	4	1	1		2										1	3									454147	2418439	18e-18h
2140	Concrete block	Foundation	1		1													1									454056	2418498	12
2141	Concrete pad	Foundation	1	1														1									454153	2418485	27
2142	Concrete pad	Foundation	1	1														1									454195	2418486	26
2143	Complex	Foundation, Utility, Soil retention	3	1					1		1						1	1						1			454232	2418431	22, 25
2144	Complex	Foundation, Marker	5	4	1													4	1								454262	2418541	24
2145	Complex	Foundation	2	2														2									454299	2418559	28
2146	Complex	Foundation	2	1	1													2									454354	2418585	23
2147	Complex	Utility	73	73													73										454151	2418389	10.01-0.7, 18.01-09, 19.02-60
Total			128	98	7	4	4	3	3	2	2	1	1	1	1	1	79	31	5	4	1	1	1	1	1	4			

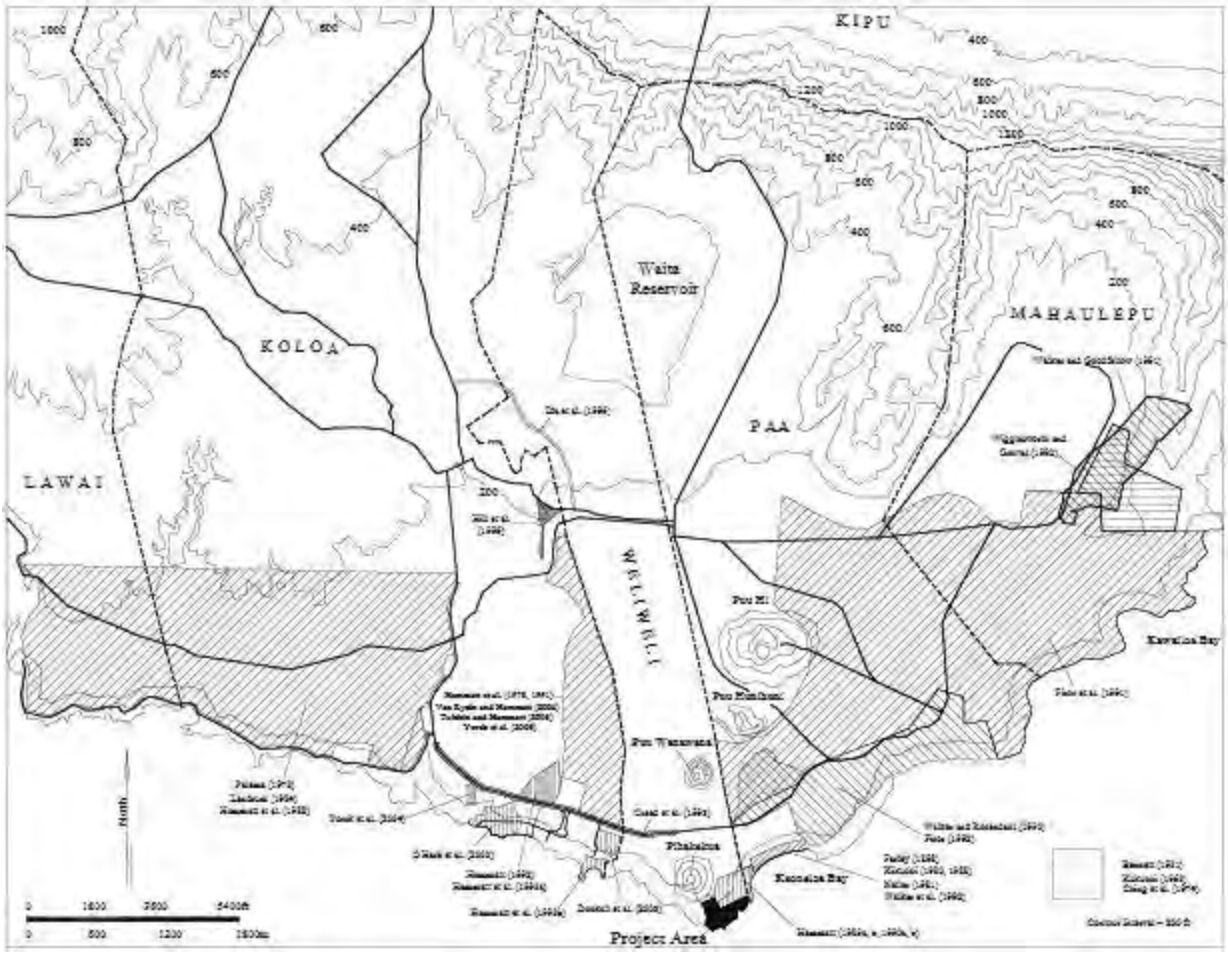


Figure 3: Previous archaeological work in Kona District.

Traditional Background

Kaua'i

Kaua'i is the oldest of the eight major islands of the *Hawaii*an chain. Radio carbon dates from *Pa'a* suggest the island was settled by Polynesians from the Marquesas Islands, and later, Tahiti as early as 200 A.D (Walker and Rosendahl 1990). A rock shelter excavated in the 1950's at *Ha'ele'ele* in *Kōloa* produced evidence of occupation starting in the 11th century A.D. (Kirch 1985). An old rock altar atop *Wai'ale'ale* attests to the deep spirituality of the first Hawaiians. Their sacred places once lined the Wailua River, considered to be one of the most sacred areas in all the Hawaiian Islands.

Before European contact [sic 1796], *Kaua'i*'s geographic location meant relative isolation from the other islands, an advantage resulting in never being defeated by, or ruled by a chief of another island (Bennett 1931). According to sources (*Kamakau* 1961; Fornander 1969; Dukas 2004) during *Kalaunuiohua's* War, also called *Kawelewelei* War (ca. 1480 – 1500) *Kalaunuiohua* (*Hawai'ii*) fought against the chiefs of Maui, Moloka`i, and West O'ahu, eventually being defeated at *Kōloa* by *Kukona*, chief of *Kaua'i*.

Kauaʻi was discovered on January 20, 1778, when the two British ships under Captain James Cook, the Resolution and Discovery, sailed into *Waimea* Bay documenting villages all along the southern shoreline passing *Makaʻhuena* Point. Christian missionaries arrived on *Kauaʻi* shortly thereafter, establishing a church in *Hanalei* on the north shore called *Waioli Huila*. The little green church still stands. The missionaries would later establish churches in *Waimea* and *Kōloa.*

In 1810 the island was ceded to *Kamehameha* I to prevent an invasion and to maintain its political independence until the death of *Kaumualiʻi* in 1824. In April of 1796, *Kamehameha I* attempted an abortive invasion of *Kauaʻi*, but suffers a major disaster in the *Kauaʻi* channel. Locals reported that the warriors of *Kamehameha I* was able to land two war canoes but were defeated on the beach at Keoneloa Bay, and the rest driven off. Most believe the battle actual took place at Mahaulepu. A second attempt resulted in *Kamehameha* and his invading army being caught in a storm in the Kauaʻi Channel and aborting the invasion.

Near the bank of the *Waimea* River are the remains of Fort Elizabeth. It was constructed in 1816 by the Russians during their attempt to established forts on *Kauaʻi* and *Oʻahu*. The Russians occupied this fort for only a short time, and later in the historic period by Hawaiians, who renamed the fort *Ka Ula Pa*. The great battle took place there for *Kauaʻi* with descendants of *Kaumualiʻi,* George *Humehume,* his son and the *Oʻahu* warriors sent there to protect the interests of the *Oʻahu* chiefs.

"The natives of all the islands seem very generally to prefer the hot and barren side to the cooler and more verdant situations further up the valley" (Jarvis 1844:121), Many villages were located near the ocean and the numerous fresh water streams where wet taro cultivation was practiced. Archaeological investigations have confirmed this settlement pattern on *Kauaʻi* recording numerous archaeological features (583 sites, including 175 enclosures and 108 house platforms) integrated with an extensive agricultural field complex that was drawing water from *Waikomo* Stream in *Kōloa* (Sinoto 1975; Hammatt *et. al.* 1978). This agricultural field system, now labeled the *Kōloa* Field System, was probably developed between 1200-1400 AD and maintained historically up to the 1840s when *Kauaʻi* is known to have produced large quantities of sweet potatoes for the booming California market" (Kirch 1985: 104). The *Kōloa* Field System formerly extended from *Lawaʻi* to *Weliweli* and served as the main food source for the people of the *Kōloa* district (Hammatt *et al.* 1991; Mitchell *et al.* 2005). The *Kōloa* Field System is atypical for Hawaiʻi because it is an irrigated system that is not topographically restricted to the confines of a valley. It spreads out over the broad plain of Kona District which is broken up by ridges formed by lava channels (*ibid.*). The irrigation ditches (`auwai) that watered the fields were constructed along the crests of the ridges, extending from *Waikomo* Stream for distances of nearly 2,400 m (*ibid.*).

Paʻa has been referred to as "very dry but breadfruit, yams and bananas were planted in the gulches" (Handy and Handy 1972:153). Handy further states that the early Hawaiians in the *Kōloa* area "had many taro plantations but the sweet potatoes must have had a large place in the subsistence economy of the people" (1940:153). A local informant told Handy that she

remembered stone walls that enclosed sweet potato growing areas. *Weliweli* was also a rather dry *ahupua'a* and archaeological evidence shows that Hawaiians extended the waters of *Waikomo* Stream into this land with the *Kōloa* Field System. Much of the archaeological remnants found are from the recent historical cattle ranching activities of the Knudsen family in *Weliweli* (Hammatt *et al*. 1991). Many believe that major water sources for *Weliweli* were diverted by late historic sugar cane cultivation.

In 1848, a division of land between the crown, government, lesser chiefs (*Konohiki*) and native tenants of the land was formalized under the *Mahele*. The *Mahele* converted land held in tenure to fee-simple, allowing Native Hawaiians to own lands they lived and worked on. In *Pa'a* Natives Hawaiians applied for and received lands. The documented claims confirmed that primary residences were located along the coast, with people cultivating both wet and dry land taro, sweet potatoes and constructing salt pans and fishponds. Other plots of land inland where used for the cultivation of sweet potato, wet-land taro and orange and banana trees.

With the arrival of foreigners, the southeast coast of *Kaua'i* began to change. By 1836, agriculturalists were experimenting with crops such as tapioca, mulberry for silkworms, and coffee. In 1835 Ladd & Co began a twelve acre sugar plantation. By 1850 the plantation, known as the *Kōloa* Plantation, had grown to 450 acres, yielding a crop of approximately two tons. A new mill was constructed in 1854 and then rebuilt in 1913, however, sugar cane cultivation was not initiated on a large scale until the 1880s and 1890s. An 1891 map by M.D. Monserrat shows that the project area was not in cane cultivation. The McBryde Sugar Company took over operations in the late 1890s. In the 1890s, Benjamin F. Dillingham incorporated "three estates, namely *Kōloa* Agricultural Co. (No connection with *Kōloa* Sugar Co.); *Ele'ele* Plantation, and *Wahiawa* Ranch" (Cond`e 1985). Theo. H. Davies was the acting agent until 1909 when Alexander and Baldwin took over agency control. By 1935 the plantation owned 2776.67 acres and leased 1180 acres.

Weliweli and *Makahū'ena* Point

Weliweli is now a dry *ahupua'a*. Any water that had been available to the *makai* portions of the *ahupua'a* was redirected away by the *Kōloa* Plantation as flumes and ditches were constructed to water sugar cane fields. Handy *et.al.* describes the *ahupua'a:*

> "*Weliweli* is about like *Pa'a* (very dry, bananas, yams were planted in the gulches). Both of these narrow land sections lie on a slight seaward promontory, *Makahū'ena* Point. W.C. Bennett (1931: 118) found some irrigation ditches and terraces, indicating that there used to be wet taro grown in an area which is not dry. Desiccation may have been partly caused by clearing the woodland when the first sugar plantation on *Kaua'i* was established" (Handy *et al.*1991: 427-428)

Land Commission Awards

The 2011 archaeological survey noted a single Land Commission Award (LCA) for *Weliweli*, however, there may be more than one (Ching 1983). The first is in the *ʻili* of *Kahoana* to *Punipu* (LCA 5219):

> *Pohina*, sworn, says, I know the land of [the] Clmt. It is in the *ahupuaʻa* of *Weliweli*, and the *ʻili* of *Kahoana lua*. It consists of several dry *loʻi*, a *kula* and house lot. [Hala] is planted in some places (*Papakilo* Database).

Ching lists another LCA that has a boundary to *Weliweli*. This LCA is to *Kaʼanaʼana* (LCA 3584):

> Located in *Kōloa* Hikina, consisting of four places….No. 4 the entire ʻ*ili o Kiki-a-ola.* No. 4 is bounded*: mauka* by *ʻili O Halehinahina* and *ʻili Lapapohakui*; *Puna* (east) by the *ahupuaʻa* of *Weliweli*; *makai* by *ʻili O Kapahaʼalaea; Hanapepe* (west) by *ʻili O Kapalakea. Foreign Testimony, v. 13:3, February 16, 1850; 3 acres, 2 roods, 27 rods.*

Place Names

The literal translation of *Makahūʻena* is "*eyes overflowing heat*" while *Poipu* is designated a land division and also translates as*" completely overcast or crashing (as in waves)* (Pukui *et. al.* 1974). Though *puʻu* are known to be sacred places, there are no place names associated with the *puʻu* that extend down through *Kōloa* to *Makahūʻena*. It is postulated here that these may refer to the most *makai* crater, *Puʻu Pihakekua*, which is now known as *Poipu* crater. Also, the name *Poipu* may relate to the crashing of the surf against the cliffs of *Makahūʻena.*

Makahūʻena also translates as "*the eyes of the spirit*", a reference to night marchers passing through *Weliweli* to make their leap into *Pō* (the nether world) at *Makahūʻena* Point (Kalihiwa et al. 2011). The *Kōloa* District, known in traditional times as the *Kona* District, is adjoined by the *ahupuaʻa* of *Kōloa* and *Paʻa*. The word *weliweli* is a reduplication of *weli* that means "violent, dreadful, horrible, fearful, ferocious; revered; respectful, as of the chief; [or] full of fear" depending upon the context (Pukui and Elbert 1986:384).

Mythology and Mo'olelo

There are few legends or chants associated with *Makahū'ena* Point, and very little for *Weliweli ahupua'a*. One story concerns the gourd of *La'amaomao*, in which the winds of Hawaii were stored. This gourd belonged to *Paka'a*, a servant and advisor to *Keawenuiaui* the ruling chief of *Hawai`i*. *La'amaomao*, *Paka'a*'s mother, has the ability to control the winds (Fornander 1918: 72). *Paka'a*'s son, *Kuapaka'a*, calls all the winds to all the islands to discredit the advisors who replaced *Paka'a* as advisor to the king. During *Kuapaka'a's* chant he names the wind that blows through *Weliweli* as *Kuiamanini* (Fornander 1918: 96)

One legend recites the search by *Pele* for a home, but is continually driven off by *Wakea*, the ancestor of the people. *Pele* has been searching throughout the islands, and now has landed on *Kaua'i* (Wichman 2001):

Pele's canoe with red sails
Reached Kaua'i just at dawn.
The sound of digging on the cliffs
Woke Wakea from his sleep.
Wakea asked:
Who is digging there at Ke'e?
I, Pele, came the answer.
I am digging a pit to find fire.
A fire pit on Kaua'i, a home for Pele?
Not so, said Wakea
Each time you dig a hole
The waters of Ka-wa-kiki
Will drown your fire.
Kaua'i is no place for you
Move on!

A story relates the involvement with the warrior *Lima-loa* with the demi-god *Kamapua'a* in the last battle in the long running war between the districts of *Puna* and *Kona*. In the tale, the war between *Kona* and *Puna* has been ongoing for three generations as the result of the refusal of marriage by the lovely grand-daughter of *Mo'ikeha*, the heir to *Puna*, to *Keli'ikoa*, prince of *Kona*. *Kamapua'a*, in the guise of a man, boasts at the ease with which *Kukona*'s warriors will defeat *Mo`ikeha*. *Kukona,* the chief of *Kona,* has fought on the side of *Puna* with his warrior *Lima-loa*, and does not believe it will be so easy. *Kamapua'a* takes to the battlefield with *Lima-loa* and *Kukona* and defeats all who challenge him. *Kamapua'a* is finally challenged by *Makali'i,* chief of *Kona*, and chants an insult:

"The sea is destroying the sands of Kahalahaa,
The sea of Hanalei is roaring
The sea of Ha'ena is shallow
While the sea of Ka-lalau breaks over the land.
The spray of the sea flies up,

And my wind and cloud forms appears,
O Makali‘i-nui-ku-a-ka-wai-ea,
Small clouds, large clouds,
Tall clouds, and short clouds
And the large cloud standing close to heaven,
That heaven is furious because of you
O Makali‘i-nui-ku-a-ka-wai-ea
Your land is not mine,
The whole of Kaua‘i has become mine.”

Makali‘i realizes that this is *Kamapua‘a*, and chants many chants in hopes that *Kamapua‘a* will spare his life. *Kamapua‘a* does spare his life, commanding him give up his kingdom to *Kukona* and live apart from everyone in the mountain of *Ha‘upu*. Satisfied at ending the wars, *Kamapua‘a* sails to Tahiti (Wichman 2001).

The name Kane‘aukai is associated with the boundary between the *ahupua‘a* of *Weliweli* and *Pa‘a*. A deity of fisherman, he taught those who wished to fish at the point the proper chants to attract fish. Fish caught off the *Makahū‘ena* Point by local fisherman today include*: awa* (milkfish)*, ‘ō‘io* (bonefish) *he‘e* (octopus*), ula* (spiny lobster) *akule* (big-eye scad), and *moi* (thread fish). The cover photo shows on of the *moi* fishing locations. They also gathered *hā‘ue‘uke´ (sea urchin)* and ‘*opihi* (limpet) from the rocks. Salt pans were constructed to collect salt in the sections of the point that contain shallow soil (Kalihiwa *et al.* 2011). Unfortunately, no salt pans were located during the archaeological inventory by Haun *et al*. (2011).

Informants

During the previous work for this project (Kalihiwa et al 2011 in Haun et al. 2011) there was an extensive attempt to contact individuals and organizations that they had contacted for this project. In addition to letters, emails, and telephone calls, a public notice was placed in *Ka Wai Ola* and in *The Garden Island* newspaper (*The Garden Island* –Wednesday (4/27/11), Friday (4/29/11), and Sunday (5/1/11) and *Ka Wai Ola* – May 2011). Only a few informants came forward with information on traditional uses during these studies.

Some of the same informants were contacted for this study, are considered cultural practitioners and elders of the community were also contact by Haun and Kalihiwa. The following individuals were: Ruper Rowe, Stella Burgess, Kepa Maly and Kauai Historical Society archivist, Malina Pereza. Attempts were made to contact others but they were unavailable at the time of this study.

Traditional Uses

According to informants, *Makahūʻena* also means the "eyes of the spirits". *Makahūʻena* Point may have been named so from the *leina*, or jumping off point to *Pō* (nether world), present at this locality. The night marchers are known to come through *Kōloa* down to *Makahūʻena*. The night marchers are wandering spirits that have not continued on to *Pō* because they either have unfinished business, or are lost (Kalihiwa et al 2011).

Fisherman currently frequent this area to fish for *moi* (thread fish, *Polydactilis sexfilis*) and *ʻōʻio* (bonefish, *Albula vulpes*). The western part of the shore at *Makahūʻena* is known for having an abundance of *moi* (*ibid.*).

According to informants there were small salt beds on the property. Salt is not collected off of the rocks on Kauaʻi, but collected from beds called *puʻuwai* dug in shallow clay soils. The water is added to the bed to evaporate, and the red-stained salt of Kauaʻi is collected. This process was given to the people of Kauaʻi by the goddess *Hina* (*ibid*.). There is no evidence of this traditional activity today.

Recommendations

The objective of this assessment is to identify any culturally significant resources or traditional cultural practices that occurred within the project area and its vicinity. Local fishermen continue to gather and catch a variety of fish and marine invertebrate species for subsistence along the shoreline and rocky edges at *Makahūʻena*. Future development of the property has the potential to adversely affect the exercise of these traditional practices for subsistence related marine exploitation. This adverse effect can be mitigated by including explicit plans to ensure, and potentially enhance access and parking to the shoreline.

In addition, during the design and layout of the adjacent development project of the Point at *Poipu*, the building layouts were designed around the four directions winds and around the burial preserve (author's personal knowledge). The chant of the winds of *Weliweli* which are well documented in early accounts and referenced in current studies (Fornander 1918; Kalihiwa *et al* in Haun *et al.* 2011) are still remembered as significant in the eyes of present day cultural practitioners and *kupuna*. This should be considered while designing the layout in order to enhance and take advantage of the winds, as well as let the spirits pass through as they do at the Point at *Poipu*.

There also is a *leina* or leaping off place to *Pō* at *Makahūʻena* Point. Because it is believed that the night marchers continue to pass through this location on their way to *Pō*, open access needs to be maintained.

Although no burials have been identified on the property during the archaeological inventory survey (Haun *et al.* 2011) numerous burials have been identified in sand deposits at and adjacent to *Keoneloa* Bay to the north and east. Haun's (2011) work recommends that

archaeological monitoring be conducted under an approved archaeological monitoring plan. The State Historic Preservation Division agreed with the findings of the report and the recommendations (Letter: 8/27/2012 LOGNO.: 2011.1830/DOCNO.: 1208SL18). It is recommended that the recommendations be followed through to protect any *iwi kapuna* (ancestral remains) that may be inadvertently discovered. If human remains are encountered during future development-related activities, the remains will be treated following the procedures outlined in Hawai`i Revised Statutes (HRS) Chapter 6E-43. Work in the area of the discovery will be halted, the remains stabilized if necessary and DLNR-SHPD will be consulted for guidance.

Bibliography

Anonymous

1885 Lahainaluna Schools, HEN 43, #17. Manuscript, B. P. Bishop Museum Library. Honolulu

Bennett, Wendell C.

1931 *The Archaeology of Kauai*. Bernice P. Bishop Museum Bulletin 80. Honolulu, HI

Ching, K. W. Francis, Stephen L. Palama, and Catherine Stauder

1983 *The Archeology of Kona, Kauaʻi, Na Ahupuaʻa Weliweli, Paʻa, Maha'ulepu, Surface Survey of Coastal Lands*. *Hawaiian* Archaeological Journal 74-1, Archeological Research Center *Hawai`i*. Prepared Fort Leadership Homes of Hawaiʻi, Inc.

Ching, Francis K. W.

1983 *Final Report Archaeological Reconnaissance Kukuiula-Kualu, Kōloa/Lawai, Kauai.* Prepared for the Royal Order of *Kamehameha* I, Chapter 3 –Kaumualii and for Alexander & Baldwin, Inc.

Conde, J.C.

1978 *Narrow Gauge In A Kingdom, The Hawaiian Railroad Company, 1878-1897.* Railhead Publications, 1985

Dukas, Neil Bernard

2004 *A Military History of Sovereign Hawaii*. Mutual Publishing, Honolulu.

Firor, J. and P. Rosendahl

1992 *Additional Data Collection, Hyatt Regency Kauaʻi Proposed Golf Course Project Area, Land of Paʻa, Kōloa District, Island of Kauaʻi.* PHRI Report 447 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens

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

Fornander, Abraham

1918 *Fornander Collection of Hawaiian Antiquities and Folk-Lore: The Hawaiians' Account of the Formation of their Islands and Origin of Their Race, with the Traditions of Their Migrations, Etc., as Gathered from Original Sources.*

Memoirs of the Bernice *Pauahi* Bishop Museum, Volume V. 1918-1919. Bishop Museum Press, Honolulu, HI

Hammatt, Hallett

1989a *Archaeological Data Recovery Plan for Keoneloa Bay Villas, Weliweli and Pa'a.* Cultural Surveys *Hawai`i*. Prepared for Sweeny Development Company.

1990a *Preliminary Report on Archaeological Testing for the Proposed Keoneloa Bay Villas. [TMK: (4) 2-8-20: 21].* Cultural Surveys, *Hawai`i*. Prepared for Land Mark Suites of America.

1990b *Preliminary Status Report on Archaeological Testing for the Proposed Keoneloa Bay Villas [TMK: (4) 2-8-20: 21].* Prepared for Sweeny Development Company.

1990c *Update on our Research on Kane'aukai Heiau, Keoneloa Bay, Weliweli.* Prepared for Sweeny Development Company

1991 *Testing of Possible Heiau, Keoneloa, Weliweli, Kōloa, Kauai* [TMK: (4) 2-8-20:21]. Letter report, Cultural Surveys *Hawai'i*, January 16, 1991.

Hammatt, H., R. M. Bordner and M. J. Tomonari-Tuggle

1978 *Archaeological and Biological Survey of the Proposed Kiahuna Golf Village Area, Kōloa, Kona, Kaua'i Island, Hawaii.* A.R.C.H., Lawai, *Kaua`i*

Hammatt, H., W. Folk and M. Stride

1991 Archaeological Inventory Survey of the Proposed Poipulani Golf Course and Residential Development, *Kōloa*, Kauai. Cultural Surveys Hawaii report prepared for Poipulani Development Corporation.

Handy, E. S. C., E. G. Handy, M. K. Pukui

1991 *Native Planters of Old Hawaii, Their Life, Lore & Environment.* Bishop Museum Press. Honolulu, HI

1940 *The Hawaiian Planter, vol. 1."* BPBM Bull. 161

Haun, Alan E., Dave Henry, and Solomon H. Kailihiwai III

2011 *Archaeological Inventory Survey [TMK: (4) 2-8-021: 041], Makahū'ena Point, Weliweli Ahupua'a, Kōloa District, Island of Kaua`i (Final).* Haun and Associates, Kailua-*Kona*, *Hawai`i*. For CIRI Land Development Company, 2525 C Street, Suite 500, Anchorage, Alaska, 99503.

Jarves, James Jackson

1844 *History of the Hawaiian or Sandwich Islands*, Edward Moxon, Dover Street, London.

Kailihiwa, S., A. Hann, and J. Henry
2011 Cultural Impact Assessment, TMK: (4) 2-8-021:041, Makahūʻena Point, Weliweli Ahupuaʻa, *Kōloa* District, Island of Kauai, Haun & Associates Report 811 prepared for CIR1 Land Development Company.

Kamakau, S.
1992 *Ruling Chiefs of Hawaii.* [Revised] *Kamehameha* Schools Press. Honolulu. [1842 and 1870]

Kikuchi, William
1963 *Archaeological Survey and Excavations on the Island of Kauai, Kona District, Hawaiian Islands.* Sponsored by the University of *Hawaiʻi* Committee for the Preservation and Study of *Hawaiian* Language, Art, and Culture

Kirch, Patrick V.
1985 *Feathered Gods and Fishhooks, and Introduction to Hawaiian Archaeology and Prehistory.* University of *Hawaiʻi* Press. Honolulu

Ladd, Edward J.
1981 *Archaeological Field Survey Report, Makahūʻena Point, Kauai.* Prepared for the 14th Coast Guard District

McGerty, Leanne and Robert Spear
2001 *Cultural Impact Assessment (CIA) for a Proposed Well Site at Mahaulepu, Kōloa, Kauaʻi, Hawai`i [TMK: (4) 2-9-03].* Scientific Consultants Services, Inc., Honolulu, Hawai`i. For Ron Terry, Geometrician.

McMahon, Nancy
1991 *Locating Kaneʻaukai Heiau: An Archaeological and Historical Synthesis, Weliweli, Kōloa, Kauaʻi.* State Historic Preservation Division, Department of Land and Natural Resources, January 2, 1991.

Mitchell, A., R. Chiogioji, H.H. Hammatt
2005 Cultural Impact Assessment for an Approximately 203-Acre Parcel in Kōloa Ahupuaʻa, Kona District, Island of Kauaʻi, TMK (4) 2-18—013:001; 2-8-014:001, 002, 003, 004, and 019. Prepared for the Eric A. Knudsen Trust.

Papakilo Database
nd. Mahele ʻAina Index –Foreign Testimony –Helu 5219
http://papakilodatabase.com/main/imageserver.phpo?file=01138.pdf&path=H/H/A/S/H/7/1/5/1/12/

Pukui, Mary Kawena, Samuel H. Elbert, and Ester T. Mookini
1974 *Place Names of Hawaii*, University of *Hawai`i* Press, Honolulu.

Sinoto, A.
1975 *Archaeological Reconnaissance Survey of Knudsen Trust Lands at Kōloa, Poipu, Kaua'i*. Typescript in Library, BPBM

Smith, H. W.
1991 *Historical Documentary Research. Archaeological Inventory Survey, Grove Farm, Kawailoa Property Additional Parcel, Land of Mahaulepu, Kōloa District, Island of Kaua'i.* Walker and Goodfellow 1991. Appendix B pp. B-1 to B-11

Thrum, Thomas G.
1906 *Heiaus and Heiau Sites Throughout the Hawaiian Islands*. *Hawaiian* Almanac and Annual for 1906. Honolulu.

2001 *Pele Ma, Legends of Pele from Kaua'i.* Bamboo Press, Honolulu.

Walker, A. and P. Rosendahl
1990 Archaeological Inventory Survey, Hyatt Regency Kauai, Proposed Golf Course Project Area, Land of Pa'a, *Kōloa* District, Island of Kauai. PHRI Report 447-111591 prepared for Grove Farm Properties, Inc. and Ainako Resorts Associates.

DEPARTMENT OF PLANNING
KA'ĀINA HULL, DIRECTOR
JODI A. HIGUCHI SAYEGUSA, DEPUTY DIRECTOR

DEREK S.K. KAWAKAMI, MAYOR
MICHAEL A. DAHILIG, MANAGING DIRECTOR

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of a Special Management Area Use Permit for the construction of a single-family residence (SFR).
Permit Application Nos.	Special Management Area Use Permit SMA(U)-2022-5 Class III Zoning Permit Z-III-2022-2 (For PC information & concurrence)
Name of Applicant(s)	MAKAHUEANA – PREFERED A, LLC. et. al.

II. PERMIT INFORMATION

PERMITS REQUIRED	
☐ **Use Permit**	
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☒ **Zoning Permit Class** ☐ IV ☒ III	A Class III Zoning Permit is a procedural requirement since the proposed development is situated within the Shore Constraint District (S-SH), pursuant to Section 8-12.5(d) of the Kaua'i County Code (1987), as amended.
☒ **Special Management Area Permit** ☒ Use ☐ Minor	Pursuant to Section 205A of the Hawaii Revised Statutes (HRS) and the Special Management Area Rules and Regulations of the County of Kaua'i, a SMA Use Permit is required as defined in Section 7.3(C) of the SMA Rules and Regulations where the Director finds that the proposal (1) is a "Development" as defined in Section 1.4F; and (2) is in excess of $500,000.
AMENDMENTS	
☐ **Zoning Amendment**	
☐ **General Plan Amendment**	

F. 2. P. 1

APR 12 2022

☐ State Land Use District Amendment	

Date of Receipt of Completed Application: February 10, 2022
Date of Director's Report: March 23, 2022
Date of Public Hearing: April 12, 2022
Deadline Date for PC to Take Action (60TH Day): June 11, 2022

III. PROJECT DATA

PROJECT INFORMATION			
Parcel Location:	The project site is located on the makai side of Pee Road in Poipu, situated approximately 500 feet south of its intersection with Pee Road, within the Makahū'ena Estates Subdivision.		
Tax Map Key(s):	(4) 2-8-021:072	**Area:**	49,005 square feet

ZONING & DEVELOPMENT STANDARDS	
Zoning:	Open (O)
State Land Use District:	Urban
General Plan Designation:	Resort
Height Limit:	Thirty (30) feet
Max. Land Coverage:	Not to exceed 10% of the parcel or lot area OR 4,360 SF
Parking Requirement:	2 min. parking spaces required per dwelling unit
Front Setback:	10'-0"
Rear Setback:	Five (5) feet or ½ the wall plate height, whichever is greater
Side Setback:	Five (5) feet or ½ the wall plate height, whichever is greater
Community Plan Area:	South Kauai Community Plan
Community Plan Land Use Designation:	N/A
Deviations or Variances Requested:	N/A

IV. LEGAL REQUIREMENTS

Section 8.0, 9.0, and 10.0 of the Special Management Area Rules and Regulations:	This report is being transmitted to the Applicant and Planning Commission in order to satisfy the requirements of Sections 8.0, 9.0 and 10.0 of the Special Management Area Rules and Regulations. The application was received on February 10, 2022 and the Applicant, through its authorized agent, was notified accordingly of the Planning Department's intent to commence permit processing.
Public Hearing Date:	APRIL 12, 2022

V. PROJECT DESCRIPTION AND USE

As represented, the Applicant is proposing to construct a two-story single-family residence featuring 5 bedrooms with 5.5 bathrooms and containing a total living area of approximately 3,997 square feet (SF). In addition, the Applicant is proposing a 2-car garage, guesthouse, pool, and lanai areas (covered & open). The project will be developed within the Open (O) zoning district and the areas are broken down as follows, as represented:

FLOOR AREA	
Main Level	2,788 square feet (SF)
Upper Level	1,209 SF
Covered Lanais (Lower)	360 SF
Open Area (Upper)	748 SF
Pool	497 SF
Garage	802 SF
Guesthouse (above Garage)	500 SF

The subject parcel is identified as Lot 5 of the "Makahū'ena Estates Subdivision" and contains approximately 1.125 acres or 49,005 SF. As mentioned in the application, the subject parcel was a part of a 10-lot subdivision that was created through Subdivision Application No. S-2015-14 and Special Management Area Use Permit SMA(U)-2015-1. There are no existing improvements within the subject parcel. Plans and elevations of the proposed development are illustrated through Exhibits 'H', 'I' and 'O-6' of the Application.

VI. APPLICANT'S REASONS/JUSTIFICATION

(See application)

VII. ADDITIONAL FINDINGS

1. The State Land Use District (SLUD) designation for this parcel "Urban" which allows for urban growth in a specified area.

2. The subject property is within and adjacent to properties that are located within the Visitor Designation Area (VDA) and the General Plan designation is "RESORT". According to the General Plan, this Resort area consistently posts the highest occupancy rate among island resort areas.

3. The General Plan designation (GP) is "Resort". According to the GP, areas designated as Resort are generally within the Visitor Destination Area (VDA) and have the infrastructure to support these type of developments. In certain areas of the island, there is growing public concern for the infrastructure serving these areas that include utilization of roadways, wastewater systems, and parks.

4. The project is immediately adjacent to high-density development to the west & east, and single-family residences to the north. The proposed development abuts a resort facility (The Point at Po'ipū) along its eastern boundary and a condominium (Makahū'ena at Po'ipū) project along its western boundary.

5. The subject parcel is considered a shoreline property and would be subject to the County's shoreline setback requirements contained in Chapter 8, Article 27 of the Kaua'i County Code (1987). At the time the SMA Use Permit was considered for the subdivision, a **one hundred (100) feet** shoreline setback line was established for Lot 5.

6. As previously noted by the County Department of Public Works (DPW) during the SMA Use Permit application for the subdivision, a portion of the subject property is located in Special Flood Hazard Area (SFHA) Zones 'VE' and 'AE'. Zone VE areas are Coastal High Hazard Areas (Tsunami), whereas Zone AE areas are those area that have one-percent (1%) chance of being inundated by a 100-year flood. However, most of the property is located in Non-SFHA Zone 'X' which is an area determined to be outside the 0.2% annual chance 500-year floodplain. The parcel is also within the tsunami evacuation zone.

7. <u>Special Management Area (SMA)</u>
   In addressing the issues of the Special Management Area and its objectives and policies, the following aspects will be considered and evaluated:

a. Recreational Resources
b. Cultural/ Historic Resources
c. Scenic resources
d. Coastal Hazard
e. Coastal Ecosystem

Furthermore, the proposal does not:

- Involve dredging, filling or otherwise altering any bay, salt marsh, river mouth, slough or lagoon;
- Reduce the size of any beach or other area usable for public recreation;
- Reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers, and streams within the SMA; and
- Adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries, potential or existing agriculture uses of land.

8. The subject property is within the Shore Constraint District (S-SH) and a small portion is within the Tsunami Constraint District (S-TS). Pursuant to Section 8-12.5(c) of the KCC, before a permit can be granted (in this case, an SMA Use Permit & Class III Zoning Permit), it must be determined that the proposed development will not cause significant harm to:

   - the water quality of the ocean, including but not limited to its clarity, temperature, color, taste and odor;
   - fish and aquatic habitats
   - the natural beauty of the area
   - navigation, safety or health, or
   - would not substantially interfere with public use of the ocean waters or underlying lands; and
   - that other facilities are unavailable to the Applicant.

9. CZO Development Standards
   The proposed development is subjected to standards prescribed in Sections 8-4.3, 8-4.5 and 8-9.2:

   a. **Setback Requirements:** Front property line setbacks are ten feet (10'-0") with a side and rear property line setback of five feet (5'-0") or half the distance of the plate height whichever is greater. As proposed, the structure complies with the setback requirements specified by the CZO.

b. **Land/Lot Coverage:** The subject property is within the County Open zoning district. Thus, the allowable land coverage should not exceed more than 10% of the parcel or lot area, as prescribed in Section 8-9.2(a) of the CZO.

Per Section 8-1.5 of the CZO, "Land Coverage" is defined as "*a man-made structure, improvement or covering that prevents normal precipitation from directly reaching the surface of the land underlying the structure, improvement or covering. Structures, improvements and covering include roofs, surfaces that are paved with asphalt, stone, or the like such as roads, streets, sidewalks, driveways, parking lots, tennis courts, patios, and lands so used that the soil will be compacted so as to prevent substantial infiltration, such as parking of cars and heavy and repeated pedestrian traffic.*"

c. **Building Height:** The South Kauai Community Plan allows dwellings and other structures to be no more than thirty (30) feet to the highest point of the roof measured at each point along the building from the finished grade at the main entry, and no more than two (2) stories above and one (1) story below from the finished grade at the main entry, over twenty (20) feet measured from the finished grade at the main entry to the highest exterior wall plate line.

VIII. AGENCY COMMENTS

Comments from applicable government agencies are being sought and are expected at time of the public hearing scheduled on April 12, 2022. The agency comments have been received are attached in Exhibit 'A'.

IX. PRELIMINARY EVALUATION

In evaluating the Applicant's proposal to allow residential development on the subject parcel, the following are being considered and responses are taken from the Application (beginning from Page 11).

1. General Plan
   The proposed development satisfies the following policies of the General Plan, as taken from Section 1.3 and 1.4:

   A. 1.3, entitled "VISIONS AND GOALS"

      1) **Goal #1 "Sustainable Island"** – The Makahū'ena Estates Subdivision was carefully planned and developed to be consistent with the vision, goals, and policies of the General Plan. The overall density of the subdivision was

reduced from at least 25 dwelling units to ten, only nine of which are within the VDA. A public parking area and an open space and public access easement were dedicated to the County to protect the natural coastal systems that support life, air, water, soil, and living organisms on the makai portion of Lot 5. The development of the proposed single-family residence should not negatively affect the sustainability of the island.

2) **Goal #2 "Unique and Beautiful Place"** –The proposed development ensures the care and protection of the treasured resources, traditions, and qualities of the natural, built, and human environment of Makahū'ena Point. The proposed development maintains the perpetual protection of the natural coastal ecosystem along the makai portion of Lot 5 and will not infringe upon the rights of the community to engage in their cultural traditions and practices and provides opportunities for recreation and meditative contemplation along the coastline. Further, the development is consistent with the tenets of the Public Trust Doctrine as provided in Article 11, Section 1 of the Hawaii State Constitution to, "conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air minerals and energy sources", and "promotes the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State."

3) **Goal #3 "A Healthy and Resilient People"** – The development of a single-family residence would be consistent with these principles and not interfere with the community's use of the coastal access area. This specific development is part of a larger subdivision project that increased the resilience and vitality of the community, and promoted better health outcomes through improved coastal access opportunities related to the natural, built, and social environment.

4) **Goal #4 "An Equitable Place, with Opportunity for All"** – Short term and long-term job opportunities will result from the construction and continued maintenance of this specific development as is typical with high-end residential vacation rental properties. This subdivision was specifically designed and permitted to ensure equitable opportunities for recreation and shared spaces for all of Kaua'i, not just the landowners in the neighborhood. Anyone on Kaua'i can park in the public parking lot at Makahū'ena Estates Subdivision and access the entire coastline all the way to Māhā'ulepū. The coastal access area allows for fishing off of the makai portion of Lot 5 in perpetuity and such opportunities benefit, not burden, disadvantaged groups on Kaua'i. Applicant embraces this kuleana and has

designed the proposed development to complement the environment and character of the area.

B. Section 1.4, entitled "POLICIES TO GUIDE GROWTH"

1) **Policy #1 "Manage Growth to Preserve Rural Character"**– The project is consistent with the policy since it is contained within an existing neighborhood that has been planned for residential development and within the Po'ipū growth boundaries.

2) **Policy #3 "Recognize the Identity of Kauai's Individual Towns and Distracts"**– The proposed residence would be constructed within the development boundaries established previously through SMA Use Permit for the entire subdivision where it delineates and preserves the open space along the coastline.

3) **Policy #8 "Protect Kauai's Scenic Beauty"** – The proposed SFR would be consistent in preserving the natural views of Makahū'ena Point. The proposed development involves relatively low massing and it's situated in such a way that protects and preserves both mauka and makai views along the coastline. Since the overall density of the subdivision was reduced from a total of 25 to 10 lots, the views in this area have been protected and further assisted by the open space access easement along the makai portion of Lot 5 as well as shoreline abutting parcels. In further assuring compatibility with the surrounding area, the proposed SFR has been designed to complement the rugged coastal cliff area of Makahū'ena Point and incorporates dark earth tones and design features that blend in with the natural environment.

4) **Policy #9 "Uphold Kaua'i as a Unique Visitor Destination"** – The subdivision was specifically designed to ensure that the nine lots within the VDA do not negatively affect the community character of Po'ipū . Further, the location of the SFR within the pre-approved building envelope will limit the physical footprint of transient accommodation uses and ensure that such uses do not encroach upon the dedicated open space coastal access easement area.

5) **Policy #14 "Prepare for Climate Change"** – The project should not contribute to or exacerbate concerns regarding rising sea levels along Makahū'ena Point. By restricting the development of Lot 5 to the mauka side of the existing rock wall along the coastline and in compliance with the shoreline setback that was established by the previous SMA Use Permit for

the subdivision, the proposed SFR should not be affected by any coastal hazards.

6) **Policy #15 "Respect Native Hawaiian Rights and Wahi Pana"** – As represented, a cultural impact assessment (CIA) was prepared during the Makahū'ena Estates Subdivision permitting process. Although the CIA did not identify any traditional and customary practices occurring in the area that is now Lot 5, the CIA stated that fisherman continue to gather and catch a variety of fish for subsistence purposes and harvest various marine invertebrates along the shoreline and rocky edges of Makahū'ena Point. In response, the developer has dedicated areas for public parking lot and coastal open space access easements to the County to ensure these traditional and customary practices may continue in perpetuity.

2. Native Hawaiian Traditional and Cultural Rights

The original parcel was initially subdivided in 1932 under a subdivision known as the "Makahū'ena Tract" (File Plan 354) that established 63 lots and associated roadway lots (within this subdivision as well as the adjacent parcel presently referred to as The Point at Po'ipū property). The residential lots that are now encumbered by the Point at Po'ipū property were consolidated and re-subdivided in the 1990s and thus leaving the 25 pre-existing lots. They were subsequently consolidated in 2015 and resubdivided into a total of 10 lots.

As noted, a Cultural Impact Assessment Report (CIA) was prepared and submitted during the SMA Use Permit for the subdivision in 2015. The CIA did not identify any traditional and customary practices occurring within the area, however it did mention that fisherman continue to utilize the coastline to gather and catch a variety of fish for subsistence purposes, and harvest various marine invertebrates along the shoreline and rocky edges of Makahū'ena Point.

Based on the information contained in the CIA where known cultural practitioners and kumu of various Hawaiian arts were consulted, and evaluating historical information that was available to the department, the department finds that the proposed Project involving the construction of the residential building on the subject parcel should have no impact on any known Hawaiian traditional or customary practices for the following reasons:

a. There are no known traditional or customary practices of native Hawaiians that are presently occurring within the Project Site.

b. There are no special gathering practices taking place within any portion of the Project Site that is makai of the existing rock wall.

c. The Project will not detrimentally inhibit access to any streams; access to the shoreline or other adjacent shoreline areas; or gathering along any streams, the shoreline or in the ocean.

d. There are known religious practices taking place within the project site.

e. There are no known pre-contact cultural or historic sites or resources located within the project site.

f. There are no known burials within the petition area.

The CIA recognizes that all traditional and customary practices, and all valued cultural, and natural resources in the area involve subsistence fishing and gathering within the open space access easement makai of the subdivision's rock wall. In addressing this subject further, it is noted that the developer dedicated areas for a public access and parking (easements to the County) in order to ensure traditional and customary practices may continue in perpetuity. The public parking area is situated along the northern section of the subdivision, along Pee Road and encumbers Lot 9, and the coastal access easement to the shoreline is along the western boundaries of Lots 8 & 9 of the subdivision.

3. SMA Rules and Regulations

The COK SMA Rules and Regulations contain objectives, policies and guidelines designed to protect coastal resources. Within the SMA, special consideration is given to recreational opportunities, cultural and historic resources, scenic qualities and open space, coastal ecosystems, and coastal hazards. In evaluating the proposed development relative to the goals and objectives of the SMA Rules and Regulations, the following aspects are taken into consideration:

a. Public Access and Coastal Recreation – The project will not negatively impact on any public recreational opportunities located near the project area. As previously noted, the developer has provided public parking and access to the shoreline.

b. Cultural/ Historical Resources – In the FINAL Archaeological Inventory Survey (AIS) dated November 2012, it identified 18 sites with 128 features throughout the subdivision. However, all of them were the remnants of the U.S. Federal Government navigation-related infrastructure that was in operation over the larger parcel for over 100 years. In the AIS, it indicates

that a portion of Site 2139, i.e. feature C, and Site 2141 were likely located within the subject property. The consultant worked closely with SHPD and a recommendation was made that no further work or preservation was necessary of any of the site or features discussed in the AIS. Presently, there are no current historic sites or features on the parcel and the proposed development should not have any significant adverse effect to any historic resources.

However, should any historical artifacts, shell or charcoal deposits, burials and stone pavings are discovered during construction within the petitioned area, the petitioner shall stop work in the immediate area and contact the State Department of Land & Natural Resources (DLNR), Historic Preservation Division (SHPD) to mitigate the situation.

c. Scenic and Open Space Resources – The project site is surrounded by developed lands and this parcel does offer views to the ocean as observed along Pe'e Road. A detailed visual analysis of the proposed development is illustrated in Exhibits O-4, O-5, and O-6 of the Application. In order to further ensure that the project is compatible with its surroundings and to minimize the visual impact of future structures, the external color should be of a moderate to dark earth-tone colors, and the Applicant should provide substantial landscaping. The proposed color scheme and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application or during the subdivision process.

d. Coastal Hazards – The subject property is located within a flood zone and all new development will be required to conform to the requirements noted in the County's Flood Ordinance, as administered by the County Department of Public Works (DPW). Therefore, the risk of potential damage due to coastal hazards will be minimized.

e. Coastal Ecosystems – The Application indicates that there are no known rare, threatened or endangered plant or critical habitats are located within the project site. However along the shoreline, the wedge-tailed Shearwater colony has been expanding very slowly over the past several years and it stretches along the coast for 3-4 miles between the resorts at Po'ipū and Makahū'ena.

The subject property has been extensively disturbed by previous activities, and the site is surrounded by developed lands. The construction of the proposed residence should be required to conform to the requirements of the Department of Public Works regarding grading, drainage, and runoff

concerns from the proposed development, as well as the Department of Health regarding the proposed IWS and fugitive dust, drainage, noise, and solid waste, if/when applicable.

It is further noted that the developer has worked closely with the State DLNR, Division of Forestry and Wildlife (DOFAW), Kauai Branch in establishing mitigation measures to minimize the potential impacts of the development to the bird's nesting/burrow areas.

4. CZO Development Standards
   As proposed, the project complies with the building height, setback, and off-street parking requirements for development within the Open (O) zoning district, as specified in Sections 8-4.3 & 8-4.5 the Comprehensive Zoning Ordinance (CZO).

   However in reviewing the land coverage calculations provided in the Application, it is unclear as to whether all of the improvements that are considered land coverage, as defined in Section 8-1.5 of the CZO, have been included in the calculations. In order to ensure that the development remains under 10% land coverage for the subject parcel, as specified in Section 8-9.2(a) of the CZO, the Applicant should work closely with the Planning Department prior to building permit application.

Finally, it is uncertain as to whether the Applicant has made provisions for night illumination with the project, based on the preliminary plans that have been submitted. If so, night illumination should be designed to minimize adverse impacts on the Federally Listed Threatened Species, Newell's Shearwater and other seabirds. Night lighting should be shielded from above and directed downwards and shall be approved by the U.S. Dept. of the Interior Fish and Wildlife Service. If external lighting is to be used in connection with the proposed project, all external lighting should be only of the following type: *downward-facing shielded lights*. Spotlights aimed upward or spotlighting of structures is prohibited.

X. PRELIMINARY CONCLUSION

Based on the foregoing, it is concluded that through proper mitigative measures, the proposed development can be considered and it should not have any significant adverse impacts to the environment nor the surrounding neighborhood. It is further concluded that the proposed development complies with the policies and guidelines of the Special Management Area Rules and Regulations in that:

1. The development will not have any substantial adverse environmental or ecological effect.

2. The development is consistent with the objectives/goals/policies of the County General Plan, the Comprehensive Zoning Ordinance, and other applicable ordinances.

   Furthermore, the proposal DOES NOT:

   a. involve dredging, filling, or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;
   b. reduce the size of any beach or other area usable for public recreation;
   c. reduce or impose restrictions upon public access to tidal and submerged lands, beaches, rivers or streams within the special management area; and
   d. adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, estuarine sanctuaries or existing agricultural uses of land.

Through proper mitigation measures, the proposed development would be in compliance with the criteria outlined for the granting of a Special Management Area Use Permit. The Applicant should institute the "Best Management Practices" to ensure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those in the surrounding area of the proposal.

Additionally, the Applicant should implement to the extent possible sustainable building techniques and operational methods for the project.

XI. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion, it is hereby recommended that the proposed development involving the construction of a single-family residence and associated site improvements through Special Management Area Use Permit SMA(U)-2022-5 and Class III Zoning Permit Z-III-2022-2 be **APPROVED** subject to the following conditions:

1. The proposed improvements shall be constructed as represented. Any changes to said development shall be reviewed by the Planning Director to determine whether Planning Commission review and approval is warranted.

2. Prior to building permit application, the Applicant shall work closely with the Planning Department to ensure that the proposed development remains under

the 10% land coverage requirement for the parcel, as specified in Section 8-9.2(a) of the CZO.

3. To ensure that the project is compatible with its surroundings and to minimize the visual impact of the structure, the external color of the proposed residence shall be of a moderate to dark earth-tone color. The proposed color scheme and a landscape plan should be submitted to the Planning Department for review and acceptance prior to building permit application.

4. The Applicant shall submit for review and approval by the Planning Department, a landscape plan composed of native species, or species common to the area, to help to screen the proposed structures, and integrate the site with its surroundings.

5. If external lighting is to be used in connection with the proposed project, all external lighting shall only of the following type: *downward-facing shielded lights*. Spotlights aimed upward or spotlighting of structures is prohibited.

6. Unless otherwise stated in the permit, once permit is issued, the Applicant must make substantial progress, as determined by the Director, regarding the development or activity within two (2) years, or the permit shall be deemed to have lapsed and be no longer in effect.

7. The Applicant shall develop and utilize Best Management Practices (BMPs) during all phases of development in order to minimize erosion, dust, and sedimentation impacts of the project to abutting properties.

8. The Applicant is advised that should any archaeological or historical resources be discovered during ground disturbing/construction work, all work in the area of the archaeological/historical findings shall immediately cease and the Applicant shall contact the State Department of Land and Natural Resources, Historic Preservation Division at (808) 692-8015 and the Planning Department at (808) 241-4050 to determine mitigation measures.

9. The Applicant shall resolve and comply with the applicable standards and requirements set forth by the State Health Department, State Historic Preservation Division-DLNR, and the County Departments of Public Works, Fire, Transportation, and Water.

10. To the extent possible within the confines of union requirements and applicable legal prohibitions against discrimination in employment, the Applicant shall seek

to hire Kauai contractors as long as they are qualified and reasonably competitive with other contractors and shall seek to employ residents of Kauai in temporary construction and permanent resort-related jobs. It is recognized that the Applicant may have to employ non-Kauai residents for particular skilled jobs where no qualified Kauai residents possesses such skills. For the purposes of this condition, the Commission shall relieve the Applicant of this requirement if the Applicant is subjected to anti-competitive restraints on trade or other monopolistic practices.

11. The Applicant is advised that prior to construction and/or use, additional government agency conditions may be imposed. It shall be the Applicant's responsibility to resolve those conditions with the respective agency(ies).

12. The Planning Commission reserves the right to revise, add, or delete conditions of approval in order to address or mitigate unforeseen impacts the project may, create, or to revoke the permits through the proper procedures should conditions of approval not be complied with or be violated.

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for APRIL 12, 2022 whereby the entire record should be considered prior to decision-making. The entire record should include but not be limited to:

a. Pending government agency comments;
b. Testimony from the general public and interested others; and
c. The Applicant's response to staff's report and recommendation as provided herein.

By _____
DALE A. CUA
Planner

Approved & Recommended to Commission:

By _____
KA'ĀINA S. HULL
Director of Planning

Date: 3/30/2022

EXHIBIT "A"

(Agency Comments)

For reference

RECEIVED
FEB 15 2022
County of Kauai
Transportation Agency

County of Kaua'i
PLANNING DEPT

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

22 MAR -5 A1:37

FROM: Kaaina S. Hull, Director (Dale) February 14, 2022

SUBJECT: Class III Zoning Permit Z-III-2022-2, Special Management Are Use Permit SMA(U)-2022-5, Dwelling, Single Family Detached
Tax Map Key: (4) 2-8-021:072, Makahuena - Preferred A Llc, Applicant

RECEIVED

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

CTA HAS NO FURTHER COMMENT ON THIS PROJECT.

THANKS!

3.2.2022

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Dale) February 14, 2022

SUBJECT: Class III Zoning Permit Z-III-2022-2, Special Management Are Use Permit SMA(U)-2022-5, Dwelling, Single Family Detached
Tax Map Key: (4) 2-8-021:072, Makahuena - Preferred A Llc, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☒	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☒	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

No comments or concerns from Fire

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

ORDINANCE NO._____ BILL NO. _____

A BILL FOR AN ORDINANCE TO AMEND CHAPTER 11A, KAUA'I COUNTY CODE 1987, AS AMENDED, RELATING TO ENVIROMENTAL IMPACT FEES.

SECTION 1. Finding and Purpose. The Council finds that the County of Kaua`i is currently in a housing crisis with the current housing inventory unable to meet the local demand for housing units.

The Council also finds that residential multi-family developments have been a lower cost method of increasing housing inventory when compared to single family dwelling units.

The Council also finds that residential multi-family developments are also a specific strategy for increasing housing inventory within the communities' town cores as recommended in the 2018 General Plan

The Council also finds that Chapter 11A of the Kaua`i County Code charges the same Environmental Impact Assessment (EIA) fee for a residential multifamily unit as it does for the hotel and resort units.

The Council further finds that to reduce the barriers of cost for multi-family units, and to encourage the development of residential multi-family units during the housing crisis, it is appropriate to remove the EIA fees for multi-family developments

The purpose of this ordinance is to amended the Kaua'i County Code 1987, as amended to remove the EIA fees for multifamily residential developments.

SECTION 2. Chapter 11A-1.3 Imposition, Kaua'i County Code 1987, as amended is hereby amended by amending section (e) to read as follows:

A fee is hereby assessed upon each new subdivision and the construction of each new hotel, motel, [multifamily dwelling,]multi-family time share unit, multi-family transient vacation rental unit, commercial and industrial facility within the County. (Ord. No. 396, August 11, 1980)

SECTION 3. Chapter 11A-2.2 Applicability; Assessment , Kaua'i County Code 1987, as amended is hereby amended by amending section (e) to read as follows:

The provisions of this Chapter shall apply to:

(a) An existing building approved prior to the effective date of the ordinance codified in this Chapter when such building is enlarged or altered to increase the number of dwelling units in the case of subdivisions, hotels, motels [and multifamily developments], multi-family time shares, multi-family transient vacation rentals, or increase the gross building area in the case of commercial and industrial developments.

F.4.a.

APR 12 2022

(b) An existing building approved prior to the effective date of the ordinance codified in this Chapter when such building is demolished and a new building is constructed in its place. This Chapter shall apply only to any additional dwelling units built in the case of subdivisions, hotels, motels [and multifamily developments], multi-family time shares, multi-family transient vacation rentals, or the gross building area increased in the case of commercial and industrial developments.

(c) Land and building subdivisions for single-family residential purposes consisting of the first six (6) lots or units shall be assessed two hundred fifty dollars ($250.00) per lot or unit. One (1) lot or unit shall be exempt from assessment. Subdivision of all lots or units subsequent to the initial six (6) shall be assessed the full fee applicable to the lots or units as provided in Subsection (d) of this Section, regardless of the change in ownership of the lot or unit assessed since the first assessment.

(d) Land and building subdivisions for single-family residential purposes consisting of more than six (6) lots or units shall be assessed five hundred dollars ($500.00) per lot or unit. One (1) lot or unit shall be exempt from assessment.

(e) Each new hotel, motel [and multifamily dwelling] multi-family time share, and multi-family transient vacation rental unit shall be assessed one thousand dollars ($1,000.00) per unit.

(f) Each new commercial development shall be assessed one hundred dollars ($100.00) per the minimum number of parking stalls serving that development as required by the Comprehensive Zoning Ordinance.

(g) Each new industrial building shall be assessed twenty-five cents ($0.25) per square foot of gross building area.

(h) Any development consisting of more than one (1) use (i.e., hotel development containing commercial building area or combined commercial and industrial building areas) shall be assessed a separate fee for each such use as provided hereinabove and shall not be assessed only according to the predominant use. (Ord. No. 396, August 11, 1980)

Ka'āina S. Hull
Director of Planning

Jodi A. Higuchi Sayegusa
Deputy Director of Planning

COUNTY OF KAUA'I
PLANNING DEPARTMENT

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration for an Ordinance to amend Chapter 11A, Kaua'i County Code, as amended, relating to Environmental Impact Fees
Permit Application No.:	Zoning Amendment ZA-2022-5
Name of Applicant(s):	COUNTY OF KAUA'I, PLANNING DEPARTMENT

II. PERMIT INFORMATION

AMENDMENTS	
☒ **Zoning Amendment**	Pursuant to KCC Section 8-3.4(a), as amended, a Zoning Amendment is necessary because it involves the changing of legislation text whenever the public necessity and convenience and the general welfare require an amendment.
☐ **General Plan Amendment**	
☐ **Community Plan Amendment**	
☐ **State Land Use District Amendment**	

III. LEGAL REQUIREMENTS

KCC Section 8-3.4	
Public Hearing Date:	April 12, 2022
Date of Publication:	March 11, 2022
Date of Director's Report:	March 12, 2022

F.4.a.1.
APR 12 2022

IV. DESCRIPTION OF THE AMENDMENT

The proposed legislation amends Chapter 11A-1.3 and 11A-2.2(a) (b) (e) Applications of Regulations of the Comprehensive Ordinance (1987), amending the Environmental Impact Assessment (EIA) fees for multi-family dwellings. Each new hotel, motel, and multi-family dwelling are assessed at one thousand dollars ($1,000.00) per unit. This amendment will exempt multi-family dwellings from EIA fees. Fees for multi-family time share units and multi-family transient vacation rental units would still be subjected to the $1,000.00 per unit fee.

V. AMENDMENT JUSTIFICATION

Allowing multi-family structures within the Neighborhood Center, Neighborhood General, and Residential Community designations encourages in-fill housing development in existing town centers. By exempting the EIA fees for multi-family dwellings, approvals could be streamlined without the necessity of remitting extra fees that could be compounded along with construction costs and other permit fees.

VI. AGENCY COMMENTS

See attached Exhibit A.

VII. PRELIMINARY EVALUATION

In evaluating the proposed zoning amendment, the following aspect should be taken into consideration:

1. The proposed request is to be evaluated pursuant to Section 8-3.4(d) of the KCC, as amended, relating to the consideration of a proposed amendment and it reads:

   > "(d) Consideration. In considering an amendment, the Planning Commission shall consider the purposes of the existing and proposed changes to the Zoning Ordinance. A change in the Zoning Map or text shall not be made unless the change will further the public necessity and convenience and the general welfare."

   The proposed legislation will promote the public necessity, convenience, general safety and welfare by facilitating the permit process for the Environmental Impact Assessment (EIA) fees exemption for multi-family dwellings outside of the Visitor Designation Area (VDA).

2. General Plan
   The proposed bill is in alignment with the following goals and policies of the General Plan, which emphasizes the protection and preservation of Kaua'i's

natural beauty:

A. Section 1.3, entitled "Visions and Goals"

1) **Goal #1: "A Sustainable Island"-** Multi-family dwellings can expand housing inventory when constructed in existing communities without consuming open space or creating residential sprawl. Eliminating excessive fees encourages this type of development.

2) **Goal #2: "A Unique and Beautiful Place"-** Encouraging new multi-family dwellings within in existing town core areas, can expand housing inventory without using valuable open space.

3) **Goal #3: "A Healthy and Resilient People"-** Existing town core centers provide a community where one can live with limited reliance on the automobile, favorable to destination walking and cycling.

4) **Goal #4: "An Equitable Place, with Opportunity for All"-** Infill development can diversify Kaua'i's housing stock through "missing middle" housing in walkable communities. "Missing middle" housing is characterized as multi-unit housing types such as duplexes and fourplexes. Incentive to infill development by reducing or eliminating environmental assessment fees (EIA).

B. Section 1.4, entitled "Policies to Guide Growth"

1) **Policy #1: "Manage Growth to Preserve Rural Character"-** Eliminating EIA fees and to encourage multi-family dwelling development within existing town core will preserve precious open space and preserve Kaua'i's rural character.

2) **Policy #4: Design Healthy and Complete Neighborhoods"-** Encouraging infill development of multi-family dwellings within existing town cores creates safe and convenient neighborhoods without taking away precious open space.

3) **Policy #6: "Reduce the Cost of Living"-** The combination of transportation and housing consumes much of the average Kaua'i household income. Providing a diversity of housing types as duplexes and fourplexes within existing town cores connects jobs and affordable transportation.

4) **Policy #8: "Protect Kaua'i's Scenic Beauty"-** Kaua'i's natural views and landmarks provides a sense of place to kama'āinas and visitors. Protecting the scenic beauty and natural landmarks will ensure that Kaua'i's unique identify will be preserved over time. Using multi-family

dwellings as infill development in areas within proper infrastructure, preserves open space and views between towns.

VIII. PRELIMINARY CONCLUSION

Based on the foregoing findings and evaluation, it is concluded that the proposal is reasonable and appropriate.

IX. PRELIMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion, it is recommended that the subject request to amend Section 8-1.4(e) of the Kaua'i County Code (1987), as amended, be **APPROVED.**

By _____
Romio Idica
Planner

Approved & Recommended to Commission:

By _____
KA'ĀINA S. HULL
Director of Planning

Date: 3/15/2022

EXHIBIT "A"

(Agency Comments)

For reference

COUNTY OF KAUAI

'22 JAN 28 P1:50

PLANNING DEPT.

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Romio) 1/20/2022

SUBJECT: Zoning Amendment ZA-2022-5,
Cok, Planning Department, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☐	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☐	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

CTA HAS NO FURTHER COMMENT ON THIS MATTER.

THANKS!

1.27.2022

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Romio) 1/20/2022

SUBJECT: Zoning Amendment ZA-2022-5,
Cok, Planning Department, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☐	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☐	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

No comments or concerns from Fire

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

ORDINANCE NO._____ BILL NO. _____

A BILL FOR AN ORDINANCE TO AMEND CHAPTER 8, KAUA'I COUNTY CODE 1987, AS AMENDED, RELATING TO ADDITIONAL DWELLING UNIT

SECTION 1. Findings and Purpose. The Council finds that Kaua`i is currently in a housing crisis with the current housing inventory unable to meet the local demand for housing units.

The Council also finds that the Additionally Dwelling Unit (ADU) program has resulted in over 1000 units built within our urban and rural cores, and many more within this area still qualify for ADUs to be constructed in the future.

The Council also finds that the Additional Dwelling Unit standards for road widening under Kaua'i County Code (KCC) Section 8-15.1(4)(E) extends the time it takes to get an ADU Clearance Form by at least two to three months.

The Council also finds that while the original intent of the requirement for a road widening agreement was to ensure non-standard roadways be brought up to county standards, there have been no substandard roads brought into conformity through ADU associated road widening agreements.

The Council also finds that removing Section 8-15.1 (4)(E) will remove this unnecessary two to three month delay in the ADU clearance form process.

The purpose of this ordinance is to amend the Comprehensive Zoning Ordinance to remove the requirement for a lot of record to have direct access to a County standard road or have the Subdivision Ordinance or the "Kaua'i County Planning Commission Road Widening Policy" be applied to the ADU clearance form process.

SECTION 2. Chapter 8, Article 15, Kaua'i County Code 1987, as amended is hereby amended by amending Sec. 8-15.1, to read as follows:

(a) Additional Dwelling Unit. Notwithstanding other provisions to the contrary, for any lot where only one (1) single family residential dwelling or farm dwelling is a generally permitted use or is allowed through a Use Permit, one (1) additional single family residential dwelling unit (attached or detached) or farm dwelling may be developed, provided:

(1) All applicable County requirements, not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements.

(A) If the additional dwelling unit is to be built in a Special Treatment District or Constraint District, all requirements of such district shall be met.

F.4.b.

APR 12 2022

(B) Notwithstanding any other provision to the contrary, for lots in the Urban and Rural State Land Use Districts which were rezoned from Residential to Open District after September 1, 1972, the maximum lot coverage shall be the same as the Residential District requirement.

(2) The provisions of this Subsection shall not apply to lots developed under a project development, or other multi-family development, or similar provisions where the aggregate number of dwelling units for such development exceeds the density otherwise allowed in the zoning district.

(3) For lots on which an additional dwelling unit is developed, no guest house under Sec. 8-4.3(a)(2) shall be allowed. An existing guest house may be converted into a dwelling unit but no additional guest house may be constructed.

(4) The following public facilities are found adequate to service the additional dwelling unit:

(A) Public sanitary sewers, an individual wastewater system (or cesspool), or a private sanitary sewer system built to County standard and approved by the Department of Health.

(B) For sewered areas, the availability and capability of a public sewer system shall be confirmed in writing by the Department of Public Works. The availability of a private sewer system shall be confirmed in writing by the Department of Health.

(C) The availability of water shall be confirmed in writing by the Department of Water.

(D) Approval in writing from the Kaua'i Fire Department is required for all parcels.

[(E) The lot must have direct access to a street which has an all weather surface (asphalt or concrete) roadway pavement continuous to the major thoroughfare, or if the street does not have such all weather surface, there shall be funds specifically appropriated in the capital improvement budget ordinance for such roadway pavement. The Planning Director and County Engineer shall apply the standards and criteria for requiring road improvements established in the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy," (as may be amended from time to time), for those roads which are considered substandard.]

(5) Facilities clearance may be obtained prior to application for Building Permit. Forms for facilities clearance will be available from the Building Division, Department of Public Works. The form, approved by all agencies, shall be submitted with the Building Permit application. Where complete plans and specifications are submitted for Building Permit application processing, the submission of the facilities clearance form shall be attached with the Building Permit and processed concurrently.

(6) Nothing contained in this Section shall affect private covenants or deed restrictions that prohibit the construction of a second dwelling unit on any lot.

(b) Expiration. Subsection (a) of this Section is hereby repealed December 31, 2006. No Building Permit shall be granted for an additional dwelling unit under Subsection (a) after such repeal date, except as provided in Subsection (d).

(c) Upon expiration of Subsection (a), any additional dwelling unit built pursuant to a valid Building Permit obtained under Subsection (a) shall thereafter be considered a conforming structure and use, notwithstanding Article 13 of the Comprehensive Zoning Ordinance relating to nonconforming structures and uses.

(d) Notwithstanding the expiration of Subsection (a), and subject to compliance with all applicable legal requirements and conditions, a Building Permit for an additional dwelling unit shall be granted for a lot in existence as of December 31, 2006 which, up to December 31, 2006, was eligible to apply for an additional dwelling unit under Subsection (a) and for which an ADU Facilities Clearance Form is certified as complete by the Planning Director as of June 15, 2007, or for which an ADU Facilities Clearance form was signed by the authorized employees of all agencies or departments listed in the ADU Facilities Clearance Form and submitted with a Building Permit application prior to November 22, 2006, provided that:

(1) The term "lot in existence as of December 31, 2006," as used in Subsection (d) shall not apply to any lot created by the relocation of a kuleana lot by consolidation and resubdivision pursuant to the provisions of Chapter 9, Kaua'i County Code 1987, as amended ("Subdivision Ordinance"), where such consolidation and resubdivision occurs after December 31, 2006.

(2) All applicable County requirements not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes, and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements.

(A) If the additional dwelling unit is to be built in a Special Treatment District or Constraint District, all requirements of such district shall be met.

(B) Notwithstanding any other provision to the contrary, for lots in the Urban and Rural State Land Use Districts which were rezoned from Residential to Open District after September 1, 1972, the maximum lot coverage shall be the same as the Residential District requirement.

(3) The provisions of this Subsection shall not apply to lots developed under a project development, or other multi-family development, or similar provisions where the aggregate number of dwelling units for such development exceeds the density otherwise allowed in the zoning district, or where additional dwelling units are specifically prohibited by zoning ordinance.

(4) For lots on which an additional dwelling unit is developed, no guest house under Sec. 8-4.3(a)(2) shall be allowed. An existing guest house may be converted into an additional dwelling unit, but no additional guest house may be constructed.

(5) The following public facilities are found adequate to service the additional dwelling unit:

(A) Public sanitary sewers, an individual wastewater system (or cesspool), or a private sanitary sewer system built to County standards and approved by the Department of Health.

(B) For sewered areas, the availability and capability of a public sewer system shall be confirmed in writing by the Department of Public Works. The availability of a private sewer system shall be confirmed in writing by the Department of Health.

(C) The availability of water (including, but not limited to, source, transmission, and storage lines/facilities) shall be confirmed in writing by the Department of Water.

(D) Approval in writing from the Kaua'i Fire Department is required for all parcels.

[(E) The lot must have direct access to a street which has an all-weather surface (asphalt or concrete) roadway pavement continuous to the major thoroughfare, or if the street does not have such all-weather surface at the time of application for a Building Permit, there exists funds specifically appropriated in the capital improvement budget ordinance for such roadway pavement. The Planning Director and County Engineer shall apply the standards and criteria for requiring road improvements established in the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy" (as may be amended from time to time), for those roads which are considered substandard.]

(6) An ADU Facilities Clearance Form as prescribed by the Planning Director shall be completed prior to application for a Building Permit and shall be submitted with the Building Permit application. Completion of the ADU Facilities Clearance Form shall not guarantee the issuance of a Building Permit. All requirements and conditions on the completed ADU Facilities Clearance Form shall be met prior to issuance of a Building Permit based on legal requirements at the time of Building Permit issuance. The Planning Director shall certify the ADU Facilities Clearance Form as complete, only if every signature blank on the Form has been signed by the respective department or agency, and the applicant has signed an affidavit prescribed by the Planning Director verifying: (A) that there is no restriction or covenant applicable in any deed, lease, or other recorded document which prohibits the construction or placement of an additional dwelling unit on the applicable lot; and (B) that the applicant understands that completion of an ADU Facilities Clearance Form does not guarantee or vest any right to a Building Permit, and that all conditions and requirements in existence at the time of Building Permit application shall be met before a Building Permit can be issued. The Planning Department shall keep a record of all ADU Facilities Clearance Forms that are issued and shall retain the original affidavits and the original ADU Facilities Clearance Forms that are certified as complete by the Department.

(7) The applicant shall obtain a re-certification from the Planning Department certifying that applicant has met the requirements set forth in Sec. 8-15.1(d)(6). A regulatory fee of Two Hundred Fifty Dollars ($250.00) shall be charged upon registration for a re-certification. If the applicant fails to obtain a re-certification by June 30, 2017, the entitlement to the additional dwelling unit shall be deemed

terminated and no building permit shall be issued for the additional dwelling unit. The Planning Director shall notify the applicant in writing that the entitlement to the additional dwelling unit has been terminated. The applicant may appeal the termination to the Planning Commission in accordance with the Rules of Practice and Procedure of the Planning Commission.

(8) Where a regulatory fee has been paid, the fee payment shall be deposited to the "ADU Re-certification Fund." There is hereby established and created a fund to be known as the "ADU Re-certification Fund." The fees collected pursuant to this subsection are hereby deemed appropriated upon receipt, and may be expended by the Department of Planning for the hiring of persons employed on a fee, contract, or piecework basis, or independent contractors to assist in conducting inspections. The maximum number of persons that may be hired with these fees shall be determined by the Budget Ordinance. The fees may also be expended for materials, supplies, and equipment that facilitate inspections, and for payment of overtime to conduct inspections.

(9) Nothing contained in this Section shall affect private covenants or deed restrictions that prohibit the construction of a second dwelling unit on any lot.

(10) Notwithstanding any law to the contrary:

(A) it is the applicant's responsibility to resolve any outstanding conditions with the respective governmental agencies; and

(B) new assessments may be applicable to the property that is the subject of the ADU Facilities Clearance Form. (Ord. No. 935, November 14, 2012; Ord. No. 981, December 24, 2014; Ord. No. 1003, June 15, 2016; Ord. No. 1006, October 5, 2016)

SECTION 3. Chapter 8, Article 4, Kaua'i County Code 1987, as amended, is hereby amended by amending Sec. 8-15.2, to read as follows:

(a) Notwithstanding other provisions to the contrary, for any residentially zoned lot where only one single family residential dwelling is permitted, one (1) additional single family residential dwelling unit (attached or detached) may be developed, provided:

(1) All applicable County requirements, not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements.

(2) The provisions of this Subsection shall not apply to lots developed under a project development, or other multi-family development, or similar provisions where the aggregate number of dwelling units for such development exceeds the density otherwise allowed in the zoning district.

(3) For residentially zoned lots on which an additional dwelling unit is developed, no guest house under Sec. 8-4.3(a)(2) shall be allowed. An existing guest house may be converted into a dwelling unit but no additional guest house may be constructed.

(4) The following public facilities are found adequate to service the additional dwelling unit:

(A) Public sanitary sewers, an individual wastewater system (or cesspool), or a private sanitary sewer system built to County standards and approved by the Department of Health.

(B) For sewered areas, the availability and capability of a public sewer system shall be confirmed in writing by the Department of Public Works. The availability of a private sewer system shall be confirmed in writing by the Department of Health.

(C) The availability of water shall be confirmed in writing by the Department of Water.

(D) Approval in writing from the Kaua'i Fire Department is required for all parcels.

[(E) The lot must have direct access to a street which has an all weather surface (asphalt or concrete) roadway pavement continuous to the major thoroughfare, or if the street does not have such all weather surface, there shall be funds specifically appropriated in the capital improvement budget ordinance for such roadway pavement. The Planning Director and County Engineer shall apply the standards and criteria for requiring road improvements established in the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy," (as may be amended from time to time), for those roads which are considered substandard.]

(5) Facilities clearance may be obtained prior to application for Building Permit. Forms for facilities clearance will be available from the Building Division, Department of Public Works. The form, approved by all agencies, shall be submitted with the Building Permit application. Where complete plans and specifications are submitted for Building Permit application processing, the submission of the Facilities Clearance Form will be attached with the Building Permit and processed concurrently.

(6) Nothing contained in this Section shall affect private covenants or deed restrictions that prohibit the construction of a second dwelling unit on any residential lot. (Ord. No. 935, November 14, 2012)

Ka'āina S. Hull
Director of Planning

Jodi A. Higuchi Sayegusa
Deputy Director of Planning

COUNTY OF KAUA'I
PLANNING DEPARTMENT

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of a Bill for an Ordinance Amending Chapter 8, Kaua'i County Code 1987, as amended, relating to the Comprehensive Zoning Ordinance (CZO).
Permit Application Nos.	Zoning Amendment ZA-2022-6
Name of Applicant(s)	COUNTY OF KAUA'I, PLANNING DEPARTMENT

II. PERMIT INFORMATION

AMENDMENTS	
☒ **Zoning Amendment**	Pursuant to KCC Section 8-3.4(a), as amended, a Zoning Amendment is necessary when changing the text whenever the public necessity and convenience and the general welfare require an amendment.
☐ **General Plan Amendment**	
☐ **Community Plan Amendment**	
☐ **State Land Use District Amendment**	

III. LEGAL REQUIREMENTS

KCC Section 8-3.4	
Public Hearing Date:	April 12, 2022
Date of Publication:	March 11, 2022
Date of Director's Report:	March 21, 2022

F.4.b.1.
APR 12 2022

IV. DESCRIPTION OF THE AMENDMENT

The proposed legislation (see Exhibit A) is being initiated by the County of Kaua'i Planning Department, and it would amend Sections 8-15.1 (a)(4)(E) & 8-15.1(d)(5)(E) of the Comprehensive Zoning Ordinance (CZO) relating to Additional Dwelling Units.

In order to qualify for an Additional Dwelling Unit (ADU), the CZO requires the lot of record to have direct access onto a County standard roadway with an all-weather surface (asphalt or concrete pavement). If it is not available, the Planning Director and County Engineer may apply the standards and criteria for requiring such road improvements as established by the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy."

V. AMENDMENT JUSTIFICATION

Kaua'i is currently in a housing crisis with the current housing inventory unable to meet the local demand for housing units. The Additional Dwelling Unit (ADU) program helps with the housing demand. It has resulted in over 1,000 units built within our urban and rural town cores.

The ADU permitting process requires an ADU Clearance Form to be routed to various County and State Agencies before submitting a building permit application. The ADU Clearance Form can be completed by all departments in a few weeks. However, the road widening requirement under Kaua'i County Code (KCC) Sections 8-15.1(a) & 8-15.1(d) extends the time it takes to get a completed ADU Clearance Form by at least two to three months. While the original intent of the requirement for a road widening agreement was to ensure non-standard roadways be brought up to county standards, in the 40 years this process has been in effect there has not been a single substandard road brought into conformity through the ADU clearance process involving associated road widening agreements. The proposed amendment would remove unnecessary delays attributed to the ADU clearance form process.

VI. AGENCY COMMENTS

See attached Exhibit B.

VII. PRELIMINARY EVALUATION

In evaluating the proposed zoning amendment, the following aspect should be taken into consideration:

1. Comprehensive Zoning Ordinance (CZO)

The proposed amendment is to be evaluated pursuant to Section 8-3.4(d) of the CZO, Kaua'i County Code (KCC), as amended. The section, reads:

> "(d) Consideration. In considering an amendment, the Planning Commission shall consider the purposes of the existing and proposed changes to the Zoning Ordinance. A change in the Zoning Map or text shall not be made unless the change will further the public necessity and convenience and the general welfare."

As Previously mentioned, the intent of the amendment is to remove the requirement for a lot of record to have direct access onto a County standard road or have the Subdivision Ordinance or the "Kaua'i County Planning Commission Road Widening Policy" be applied to the ADU clearance form process furthering the public necessity and convenience.

2. General Plan

The 2018 General Plan sets forth a vision, goals, and policies to guide future growth on Kaua'i. The proposed amendment is consistent with the overall vision and policies outlined in the 2018 General Plan.

A. Section 1.4, entitled "Policies to Guide Growth"

i. **Policy #1: "Manage Growth to Preserve Rural Character"**
By removing the ADU road widening agreement we are expediting the process to accommodate ADUs in a matter that maintains the rural characteristics of our communities.

ii. **Policy #2: Provide Affordable Housing While Facilitating a Diversity of Privately-Developed Housing for Local Families**
The ADU road widening agreement is an unnecessary regulatory step that establishes a barrier to the development of a diverse array of privately-developed housing types.

B. Section 1.1.3, entitled "General Plan Framework"

"**Objectives and Actions by Sector** – The ten sectors represent the areas that must be considered in policy implementation. Within each sector are several subsections which elaborate on more specific topics. Each subsection has an objective that details the policy direction specific to the topic. Actions are forward-looking and are organized by the implementation tool available to the County. Actions represent what is needed to move policy forward. They include code changes, updated or new plans, partnership needs, and projects."

- The proposed legislation aligns with the 2018 General Plan "objectives and Actions by Sector" by updating the ADU Clearance Form requirements to facilitate a more efficient and logical process.

VIII. PRELIMINARY CONCLUSION

Based on the foregoing findings and evaluation, it is concluded that the proposal is reasonable and appropriate. It is also consistent with the policies and recommendations of the Kaua'i General Plan.

IX. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion, it is recommended that Zoning Amendment ZA-2022-6 be **APPROVED**.

By _____
SHELEA BLACKSTAD
Planner

Approved & Recommended to Commission:

By _____
KĀĀINA HULL
Director of Planning

Date: 3/21/2022

EXHIBIT "A"

(Draft Ordinance)

ORDINANCE NO._____ BILL NO. _____

A BILL FOR AN ORDINANCE TO AMEND CHAPTER 8, KAUA'I COUNTY CODE 1987, AS AMENDED, RELATING TO ADDITIONAL DWELLING UNIT

SECTION 1. Findings and Purpose. The Council finds that Kaua`i is currently in a housing crisis with the current housing inventory unable to meet the local demand for housing units.

The Council also finds that the Additionally Dwelling Unit (ADU) program has resulted in over 1000 units built within our urban and rural cores, and many more within this area still qualify for ADUs to be constructed in the future.

The Council also finds that the Additional Dwelling Unit standards for road widening under Kaua'i County Code (KCC) Section 8-15.1(4)(E) extends the time it takes to get an ADU Clearance Form by at least two to three months.

The Council also finds that while the original intent of the requirement for a road widening agreement was to ensure non-standard roadways be brought up to county standards, there have been no substandard roads brought into conformity through ADU associated road widening agreements.

The Council also finds that removing Section 8-15.1 (4)(E) will remove this unnecessary two to three month delay in the ADU clearance form process.

The purpose of this ordinance is to amend the Comprehensive Zoning Ordinance to remove the requirement for a lot of record to have direct access to a County standard road or have the Subdivision Ordinance or the "Kaua'i County Planning Commission Road Widening Policy" be applied to the ADU clearance form process.

SECTION 2. Chapter 8, Article 15, Kaua'i County Code 1987, as amended is hereby amended by amending Sec. 8-15.1, to read as follows:

(a) Additional Dwelling Unit. Notwithstanding other provisions to the contrary, for any lot where only one (1) single family residential dwelling or farm dwelling is a generally permitted use or is allowed through a Use Permit, one (1) additional single family residential dwelling unit (attached or detached) or farm dwelling may be developed, provided:

(1) All applicable County requirements, not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements.

(A) If the additional dwelling unit is to be built in a Special Treatment District or Constraint District, all requirements of such district shall be met.

(B) Notwithstanding any other provision to the contrary, for lots in the Urban and Rural State Land Use Districts which were rezoned from Residential to Open District after September 1, 1972, the maximum lot coverage shall be the same as the Residential District requirement.

(2) The provisions of this Subsection shall not apply to lots developed under a project development, or other multi-family development, or similar provisions where the aggregate number of dwelling units for such development exceeds the density otherwise allowed in the zoning district.

(3) For lots on which an additional dwelling unit is developed, no guest house under Sec. 8-4.3(a)(2) shall be allowed. An existing guest house may be converted into a dwelling unit but no additional guest house may be constructed.

(4) The following public facilities are found adequate to service the additional dwelling unit:

(A) Public sanitary sewers, an individual wastewater system (or cesspool), or a private sanitary sewer system built to County standard and approved by the Department of Health.

(B) For sewered areas, the availability and capability of a public sewer system shall be confirmed in writing by the Department of Public Works. The availability of a private sewer system shall be confirmed in writing by the Department of Health.

(C) The availability of water shall be confirmed in writing by the Department of Water.

(D) Approval in writing from the Kaua'i Fire Department is required for all parcels.

[(E) The lot must have direct access to a street which has an all weather surface (asphalt or concrete) roadway pavement continuous to the major thoroughfare, or if the street does not have such all weather surface, there shall be funds specifically appropriated in the capital improvement budget ordinance for such roadway pavement. The Planning Director and County Engineer shall apply the standards and criteria for requiring road improvements established in the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy," (as may be amended from time to time), for those roads which are considered substandard.]

(5) Facilities clearance may be obtained prior to application for Building Permit. Forms for facilities clearance will be available from the Building Division, Department of Public Works. The form, approved by all agencies, shall be submitted with the Building Permit application. Where complete plans and specifications are submitted for Building Permit application processing, the submission of the facilities clearance form shall be attached with the Building Permit and processed concurrently.

(6) Nothing contained in this Section shall affect private covenants or deed restrictions that prohibit the construction of a second dwelling unit on any lot.

(b) Expiration. Subsection (a) of this Section is hereby repealed December 31, 2006. No Building Permit shall be granted for an additional dwelling unit under Subsection (a) after such repeal date, except as provided in Subsection (d).

(c) Upon expiration of Subsection (a), any additional dwelling unit built pursuant to a valid Building Permit obtained under Subsection (a) shall thereafter be considered a conforming structure and use, notwithstanding Article 13 of the Comprehensive Zoning Ordinance relating to nonconforming structures and uses.

(d) Notwithstanding the expiration of Subsection (a), and subject to compliance with all applicable legal requirements and conditions, a Building Permit for an additional dwelling unit shall be granted for a lot in existence as of December 31, 2006 which, up to December 31, 2006, was eligible to apply for an additional dwelling unit under Subsection (a) and for which an ADU Facilities Clearance Form is certified as complete by the Planning Director as of June 15, 2007, or for which an ADU Facilities Clearance form was signed by the authorized employees of all agencies or departments listed in the ADU Facilities Clearance Form and submitted with a Building Permit application prior to November 22, 2006, provided that:

(1) The term "lot in existence as of December 31, 2006," as used in Subsection (d) shall not apply to any lot created by the relocation of a kuleana lot by consolidation and resubdivision pursuant to the provisions of Chapter 9, Kaua'i County Code 1987, as amended ("Subdivision Ordinance"), where such consolidation and resubdivision occurs after December 31, 2006.

(2) All applicable County requirements not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes, and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements.

(A) If the additional dwelling unit is to be built in a Special Treatment District or Constraint District, all requirements of such district shall be met.

(B) Notwithstanding any other provision to the contrary, for lots in the Urban and Rural State Land Use Districts which were rezoned from Residential to Open District after September 1, 1972, the maximum lot coverage shall be the same as the Residential District requirement.

(3) The provisions of this Subsection shall not apply to lots developed under a project development, or other multi-family development, or similar provisions where the aggregate number of dwelling units for such development exceeds the density otherwise allowed in the zoning district, or where additional dwelling units are specifically prohibited by zoning ordinance.

(4) For lots on which an additional dwelling unit is developed, no guest house under Sec. 8-4.3(a)(2) shall be allowed. An existing guest house may be converted into an additional dwelling unit, but no additional guest house may be constructed.

(5) The following public facilities are found adequate to service the additional dwelling unit:

(A) Public sanitary sewers, an individual wastewater system (or cesspool), or a private sanitary sewer system built to County standards and approved by the Department of Health.

(B) For sewered areas, the availability and capability of a public sewer system shall be confirmed in writing by the Department of Public Works. The availability of a private sewer system shall be confirmed in writing by the Department of Health.

(C) The availability of water (including, but not limited to, source, transmission, and storage lines/facilities) shall be confirmed in writing by the Department of Water.

(D) Approval in writing from the Kaua'i Fire Department is required for all parcels.

[(E) The lot must have direct access to a street which has an all-weather surface (asphalt or concrete) roadway pavement continuous to the major thoroughfare, or if the street does not have such all-weather surface at the time of application for a Building Permit, there exists funds specifically appropriated in the capital improvement budget ordinance for such roadway pavement. The Planning Director and County Engineer shall apply the standards and criteria for requiring road improvements established in the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy" (as may be amended from time to time), for those roads which are considered substandard.]

(6) An ADU Facilities Clearance Form as prescribed by the Planning Director shall be completed prior to application for a Building Permit and shall be submitted with the Building Permit application. Completion of the ADU Facilities Clearance Form shall not guarantee the issuance of a Building Permit. All requirements and conditions on the completed ADU Facilities Clearance Form shall be met prior to issuance of a Building Permit based on legal requirements at the time of Building Permit issuance. The Planning Director shall certify the ADU Facilities Clearance Form as complete, only if every signature blank on the Form has been signed by the respective department or agency, and the applicant has signed an affidavit prescribed by the Planning Director verifying: (A) that there is no restriction or covenant applicable in any deed, lease, or other recorded document which prohibits the construction or placement of an additional dwelling unit on the applicable lot; and (B) that the applicant understands that completion of an ADU Facilities Clearance Form does not guarantee or vest any right to a Building Permit, and that all conditions and requirements in existence at the time of Building Permit application shall be met before a Building Permit can be issued. The Planning Department shall keep a record of all ADU Facilities Clearance Forms that are issued and shall retain the original affidavits and the original ADU Facilities Clearance Forms that are certified as complete by the Department.

(7) The applicant shall obtain a re-certification from the Planning Department certifying that applicant has met the requirements set forth in Sec. 8-15.1(d)(6). A regulatory fee of Two Hundred Fifty Dollars ($250.00) shall be charged upon registration for a re-certification. If the applicant fails to obtain a re-certification by June 30, 2017, the entitlement to the additional dwelling unit shall be deemed

terminated and no building permit shall be issued for the additional dwelling unit. The Planning Director shall notify the applicant in writing that the entitlement to the additional dwelling unit has been terminated. The applicant may appeal the termination to the Planning Commission in accordance with the Rules of Practice and Procedure of the Planning Commission.

(8) Where a regulatory fee has been paid, the fee payment shall be deposited to the "ADU Re-certification Fund." There is hereby established and created a fund to be known as the "ADU Re-certification Fund." The fees collected pursuant to this subsection are hereby deemed appropriated upon receipt, and may be expended by the Department of Planning for the hiring of persons employed on a fee, contract, or piecework basis, or independent contractors to assist in conducting inspections. The maximum number of persons that may be hired with these fees shall be determined by the Budget Ordinance. The fees may also be expended for materials, supplies, and equipment that facilitate inspections, and for payment of overtime to conduct inspections.

(9) Nothing contained in this Section shall affect private covenants or deed restrictions that prohibit the construction of a second dwelling unit on any lot.

(10) Notwithstanding any law to the contrary:

(A) it is the applicant's responsibility to resolve any outstanding conditions with the respective governmental agencies; and

(B) new assessments may be applicable to the property that is the subject of the ADU Facilities Clearance Form. (Ord. No. 935, November 14, 2012; Ord. No. 981, December 24, 2014; Ord. No. 1003, June 15, 2016; Ord. No. 1006, October 5, 2016)

SECTION 3. Chapter 8, Article 4, Kaua'i County Code 1987, as amended, is hereby amended by amending Sec. 8-15.2, to read as follows:

(a) Notwithstanding other provisions to the contrary, for any residentially zoned lot where only one single family residential dwelling is permitted, one (1) additional single family residential dwelling unit (attached or detached) may be developed, provided:

(1) All applicable County requirements, not inconsistent with Sec. 46-4(c), Hawai'i Revised Statutes and the County's zoning provisions applicable to residential use are met, including, but not limited to, building height, setback, maximum lot coverage, parking, and floor area requirements.

(2) The provisions of this Subsection shall not apply to lots developed under a project development, or other multi-family development, or similar provisions where the aggregate number of dwelling units for such development exceeds the density otherwise allowed in the zoning district.

(3) For residentially zoned lots on which an additional dwelling unit is developed, no guest house under Sec. 8-4.3(a)(2) shall be allowed. An existing guest house may be converted into a dwelling unit but no additional guest house may be constructed.

(4) The following public facilities are found adequate to service the additional dwelling unit:

(A) Public sanitary sewers, an individual wastewater system (or cesspool), or a private sanitary sewer system built to County standards and approved by the Department of Health.

(B) For sewered areas, the availability and capability of a public sewer system shall be confirmed in writing by the Department of Public Works. The availability of a private sewer system shall be confirmed in writing by the Department of Health.

(C) The availability of water shall be confirmed in writing by the Department of Water.

(D) Approval in writing from the Kaua'i Fire Department is required for all parcels.

[(E) The lot must have direct access to a street which has an all weather surface (asphalt or concrete) roadway pavement continuous to the major thoroughfare, or if the street does not have such all weather surface, there shall be funds specifically appropriated in the capital improvement budget ordinance for such roadway pavement. The Planning Director and County Engineer shall apply the standards and criteria for requiring road improvements established in the Subdivision Ordinance and the "Kaua'i County Planning Commission Road Widening Policy," (as may be amended from time to time), for those roads which are considered substandard.]

(5) Facilities clearance may be obtained prior to application for Building Permit. Forms for facilities clearance will be available from the Building Division, Department of Public Works. The form, approved by all agencies, shall be submitted with the Building Permit application. Where complete plans and specifications are submitted for Building Permit application processing, the submission of the Facilities Clearance Form will be attached with the Building Permit and processed concurrently.

(6) Nothing contained in this Section shall affect private covenants or deed restrictions that prohibit the construction of a second dwelling unit on any residential lot. (Ord. No. 935, November 14, 2012)

EXHIBIT "B"

(Agency Comments)

COUNTY OF KAUAI

'22 JAN 28 P1:5?

PLANNING DEPARTMENT

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Shelea) 1/20/2022

SUBJECT: Zoning Amendment ZA-2022-6,
Cok, Planning Department, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire-Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☐	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☐	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

CTA HAS NO FURTHER COMMENT ON THIS MATTER.

THANKS!

1.27.2022

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

COUNTY OF KAUA'I
PLANNING DEPARTMENT
4444 RICE STREET, SUITE A473 LĪHU'E, HAWAI'I 96766
(808) 241-4050

FROM: Kaaina S. Hull, Director (Shelea) 1/20/2022

SUBJECT: Zoning Amendment ZA-2022-6,
Cok, Planning Department, Applicant

TO:

☐	Department of Transportation - STP	☒	DPW-Engineering
☐	DOT-Highway, Kauai(info only)	☐	DPW-Wastewater
☐	DOT-Airports, Kauai (info only)	☐	DPW-Building
☐	DOT-Harbors, Kauai (info only)	☐	DPW-SolidWaste
☒	State Department of Health	☐	Department of Parks & Recreation
☐	State Department of Agriculture	☒	Fire Department
☐	State Office of Planning	☒	County Housing-Agency
☐	State Dept. of Bus. & Econ. Dev. Tourism	☐	County Economic Development
☐	State Land Use Commission	☐	KHPRC
☐	State Historic Preservation Division	☒	Water Department
☐	DLNR- Land Management	☐	Kaua'i Civil Defense
☐	DLNR- Foresty & Wildlife	☐	U.S. Postal Department
☐	DLNR- Aquatic Resources	☐	UH_Sea_Grant
☐	DLNR- OCCL	☒	County Transportation Agency
		☐	Other:

FOR YOUR COMMENTS (pertaining to your department):

No Comments or concerns from Fire

This matter is scheduled for a public hearing before the County of Kauai Planning Commission on 4/12/2022 at the Lihue Civic Center, Moikeha Building, Meeting Room 2A-2B, 4444 Rice Street, Lihue, Kauai, at 9:00 am or soon thereafter. If we do not receive your agency comments within one (1) month from the date of this request, we will assume that there are no objections to this permit request. Mahalo!

ORDINANCE NO._____ BILL NO. _____

A BILL FOR AN ORDINANCE TO AMEND CHAPTER 8, KAUA'I COUNTY CODE 1987, AS AMENDED, RELATING TO A PLANNING DEPARTMENT TRANSIENT VACATION RENTAL PROGRAM ACCOUNT.

SECTION 1. Finding and Purpose. The Kaua'i County Council finds that the County of Kauai has a comprehensive zoning policy for transient vacation rental (TVR) management within Section 8-17 of the Kauai County Code that establishes the following:

1) The outright permissible use of TVRs within the Visitor Destination Area (VDA);
2) A prohibition on TVRs operating outside of the VDA;
3) The program and regulations for establishing and renewing Transient Vacation Non-Conforming Use Certificates (TVNCUCs) for legally non-conforming TVRs located outside of the VDA;
4) Enforcement regulations and processes for the Planning Department to enforce against illegal TVR operations.

These priorities comprise the Planning Department's TVR program that operates to restrict the proliferation of vacation rentals in residential and other areas outside of the VDA, which have historically caused significant and negative impacts to residential neighborhoods and agricultural lands.

The Council finds that through pro-active monitoring of the world wide web for illegal TVR operation advertisements, decisive enforcement actions, and partnerships with Airbnb and Expedia, the County of Kauai Planning Department has brought the number of illegal TVRs operating on Kauai down from an estimated 1,500 operations in 2017 to an estimated less than 50 operations today.

The Council finds that to maintain this low level of illegal TVR activity, annual processing of TVNCUCs is necessary, continuous monitoring and action against any new illegal TVR operations are necessary, real-time awareness to shifts and changes in the regional and global TVR industry and its corresponding platforms and venues is necessary, TVR enforcement resources and trainings are necessary, and illegal TVR litigation will continue to need to be addressed.

The Council finds that there are currently 420 legally non-conforming TVRs that are annually renewed through the TVNCUC program. The renewal fee for each of these non-conforming TVRs is $750.00 per year and requires ongoing permit processing, compliance review, and monitoring throughout the year. The Department's review and monitoring of TVNCUCs often result in litigation and generates most of the Planning Department's recent TVR enforcement litigation cases.

The purpose of this Ordinance is to amend the Comprehensive Zoning Ordinance to create a Planning Department Transient Vacation Rental Program Account within Fund 251 for the purposes of annually processing TVNCUCs, contract and purchase TVR enforcement resources

F. 4.C.
APR 12 2022

and services, receive and attend TVR enforcement and TVR program management trainings and workshops, and support the County Attorney's Office in litigation efforts against illegal TVR operations' lawsuits against the County Kauai. This fund will receive up to $250,000.00 per year from the total amount of TVNCUC renewal fees annually collected.

SECTION 2. Sec. 8-17.10 Application of Regulations, Kaua'i County Code 1987, as amended is hereby amended to read as follows:

Sec. 8-17.10 Nonconforming Use Certificates for Single Family Vacation Rentals.

(a) The purpose of this Section is to provide a process to identify and register those single family transient vacation rentals as nonconforming uses which have been in lawful use prior to March 7, 2008 and to allow them to continue subject to obtaining a Nonconforming Use Certificate as provided by this Section.

(b) The owner, operator or proprietor of any single family transient vacation rental which operated outside of a Visitor Destination Area prior to March 7, 2008 shall obtain a Nonconforming Use Certificate for single family vacation rentals.

(c) No Nonconforming Use Certificate shall be issued by the Planning Director unless the use as a single family rental is a legal use under the Comprehensive Zoning Ordinance, and the applicant provides a sworn affidavit and demonstrates to the satisfaction of the Planning Director that a dwelling unit was being used as a vacation rental on an ongoing basis prior to March 7, 2008. The Planning Director, in making the decision, shall take into consideration, among other things, the following guidelines:

(1) The applicant had a State of Hawai'i general excise tax license and transient accommodations tax license for the purpose of the lawful operation of single family transient vacation rentals for a period long enough to demonstrate actual payment of taxes.

(2) That prior to March 7, 2008, applicant had deposits for reservations by transient guests in exchange for compensation for use of subject property as a vacation rental.

(3) That applicant had transient guests occupy subject property in exchange for compensation prior to March 7, 2008, with a pattern of consistency that evidences an ongoing and lawful enterprise.

(d) Applications for Nonconforming Use Certificates for single family transient vacation rentals located on land designated "Agricultural" pursuant to Chapter 205 of the Hawai'i Revised Statutes shall be made within sixty (60) days of August 16, 2010. If an operator as defined under Subsection (c) fails to apply for a Nonconforming Use Certificate within sixty (60) days of August 16, 2010, then the Planning Director shall assess an administrative late application processing fee of one thousand five hundred dollars ($1,500.00) at filing. A Nonconforming Use Certificate may be issued for a single family transient vacation rental located on land in the State of Hawai'i's land use Agricultural District if:

(1) It was built prior to June 4, 1976; or

(2) The applicant has obtained a Special Permit under Hawai'i Revised Statutes, Sec. 205-6 which specifically permits a vacation rental on the subject property.

(A) An application for a Special Permit shall include verification by the applicant that the farm dwelling unit was being used as a vacation rental on an ongoing basis in accordance with Subsection (c).

(B) An application for a Special Permit pursuant to Hawai'i Revised Statutes Sec. 205-6 and Chapter 13 of the Rules of Practice and Procedures of the Planning Commission that is deemed complete by the Planning Director must be filed within one (1) year of August 16, 2010. Upon completion of the application, the Planning Director shall issue a provisional certificate that will allow the transient vacation rental to operate. The provisional certificate shall be null and void after the Planning Commission or the Land Use Commission makes a decision upon the application.

(C) In addition to the Special Permit standards set forth in Hawai'i Revised Statutes Sec. 205-6 and Chapter 13 of the Rules of Practice and Procedure of the Planning Commission, the Planning Commission may only grant a Special Permit if, prior to March 7, 2008: (i) the property upon which the transient vacation rental is located had a registered agricultural dedication pursuant to the guidelines set forth in the County of Kaua'i's Department of Finance Real Property Tax Division Agricultural Dedication Program Rules; (ii) a bona fide agricultural operation existed, as shown by State General Excise Tax Forms and/or Federal Income Tax Form 1040 Schedule F filings; or (iii) the Planning Commission finds that the size, shape, topography, location or surroundings of the property, or other circumstances, did not allow an applicant to qualify for an agricultural dedication pursuant to the County of Kaua'i's Department of Finance Real Property Tax Division Agricultural Dedication Program Rules or inhibited intensive agricultural activities.

(D) If the application for the Special Permit is granted, then the transient vacation rental operation shall be subject to conditions imposed by the Planning Commission or the Land Use Commission.

(E) If the application for Special Permit is denied, then the Nonconforming Use Certificate shall not be issued and the transient vacation rental must cease operation.

(e) The owner, operator, or proprietor shall have the burden of proof in establishing that the use is properly nonconforming based on the following documentation which shall be provided to the Planning Director as evidence of a nonconforming use: records of occupancy and tax documents, including all relevant State of Hawai'i general excise tax filings, all relevant transient accommodations tax filings, Federal and/or State of Hawai'i income tax returns for the relevant time period, reservation lists, and receipts showing payment. Other reliable information may also be provided. Based on the evidence submitted, the Planning Director shall determine whether to issue a Nonconforming Use Certificate for the single family transient vacation rental.

(f) The Planning Director shall make available to the public at the Planning Department counter and on the County of Kaua'i website a list of all completed applications for Nonconforming Use Certificates. Applications deemed completed shall concurrently be made available to the public. Copies of applications shall also be made available to the

public as public information, as provided by H.R.S. Chapter 92F (the Uniform Information Practices Act). Such list shall include the names of the applicants and the tax map key number of the parcels which are the subject of the applications. The Planning Department may physically inspect a single family transient vacation rental prior to a Nonconforming Use Certificate being issued.

(g) The Planning Director shall prepare an application form which shall be available to the public. If an operator as defined under Subsection (c) fails to apply for a Nonconforming Use Certificate within sixty (60) days of August 16, 2010 the Planning Director shall assess an administrative late application processing fee of one thousand five hundred dollars ($1,500.00) at filing. Applications received more than one (1) year after August 16, 2010 shall not be accepted and the use of a transient vacation rental shall be deemed discontinued.

(h) The owner or lessee who has obtained a Nonconforming Use Certificate under this Section shall apply to renew the Nonconforming Use Certificate annually on the date of issuance of the Nonconforming Use Certificate.

(1) Each application to renew shall include proof that there is a currently valid State of Hawai'i general excise tax license and transient accommodations tax license for the nonconforming use and shall be received by the Department prior to the expiration date of a held Nonconforming Use Certificate. Failure to meet this condition will result in the automatic denial of the application for renewal of the Nonconforming Use Certificates.

(2) Upon renewal, the Planning Department may initiate re-inspection of properties for compliance with other provisions of this chapter, or other pertinent land use laws, and may withhold approval of a renewal application and issue cease and desist notices to the applicant until all violations have been resolved to the satisfaction of the Planning Director.

(3) The applicant shall pay an annual renewal fee of seven hundred fifty dollars ($750.00) [which shall be deposited into the County General Fund. (Ord. No. 935, November 14, 2012; Ord. No. 950, July 17, 2013; Ord. No. 974, September 30, 2014)].

There is hereby established and created an account to be known as the "Planning Department Transient Vacation Rental Program Account" within Fund 251. Up to $250,000 of these renewal fees shall be deposited into this account annually. The remaining balance shall be deposited into the County General Fund annually. The fees collected pursuant to this Section are hereby deemed appropriated upon receipt and may be expended to retain/hire part time employees and/or independent contractors to assist in the review and renewals of Non-conforming Use Certificates annually and also to enforcement of the Comprehensive Zoning Ordinance and other Codes, Statutes, or regulations the Planning Department has the authority to enforce. The fees may also be expended for materials, supplies, education, training, and legal representation, and equipment that facilitate inspection and enforcement of nonconforming use certificates and/or violations. The fees collected shall not lapse at the close of the fiscal year.

SECTION 3. If any provision of this Ordinance or application thereof to any person, or circumstance is held invalid, the invalidity does not affect the other provisions or applications of this Ordinance which can be given effect without the invalid provisions or application, and to this end, the provisions of this Ordinance are severable.

SECTION 4. Ordinance material to be repealed is bracketed. New material is underscored. When revising, compiling or printing this Ordinance for inclusion in the Kauai County Code 1987, as amended, the brackets, bracketed material, and underscoring need not be included.

SECTION 5. This Ordinance shall take effect upon approval.

Introduced by

DEPARTMENT OF PLANNING
KA'ĀINA HULL, DIRECTOR
JODI A. HIGUCHI SAYEGUSA, DEPUTY DIRECTOR

DEREK S.K. KAWAKAMI, MAYOR
MICHAEL A. DAHILIG, MANAGING DIRECTOR

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of a Bill for an Ordinance to Amend Chapter 8, Kaua'i County Code (1987), As Amended, Relating to a Planning Department Transient Vacation Rental Program Account
Permit Application Nos.	Zoning Amendment ZA-2022-7
Name of Applicant(s)	COUNTY OF KAUA'I PLANNING DEPARTMENT

II. PERMIT INFORMATION

AMENDMENTS	
☒ **Zoning Amendment**	Pursuant to KCC Section 8-3.4(a), as amended, a Zoning Amendment is necessary when changing the text whenever the public necessity and convenience and the general welfare require an amendment.
☐ **General Plan Amendment**	
☐ **Community Plan Amendment**	
☐ **State Land Use District Amendment**	

III. LEGAL REQUIREMENTS

KCC Section 8-3.4	
Public Hearing Date:	April 12, 2022
Date of Publication:	March 11, 2022
Date of Director's Report:	March 14, 2022

IV. PROJECT DESCRIPTION AND USE

The proposed bill for an ordinance is being initiated by the County of Kaua'i Planning Department and is hereby submitted to the Planning Commission for review and approval.

The purpose of this legislation is to amend the Comprehensive Zoning Ordinance

F. 4. C. 1.
APR 12 2022

to create a Planning Department Transient Vacation Rental Program Account within Fund 251 for the purposes of annually processing TVNCUCs, contract and purchase TVR enforcement resources and services, receive and attend TVR enforcement and TVR program management trainings and workshops, and support the County Attorney's Office in litigation efforts against illegal TVR operations' lawsuits against the County Kauai. This fund will receive up to $250,000.00 per year from the total amount of TVNCUC renewal fees annually collected.

Please refer to the attached proposed draft bill (Exhibit A) for further details.

V. APPLICANT'S REASON'S/JUSTIFICATION

The Planning Department has a comprehensive zoning policy for transient vacation rental (TVR) management within Section 8-17 of the Kauai County Code that establishes the following:

1) The outright permissible use of TVRs within the Visitor Destination Area (VDA);
2) A prohibition on TVRs operating outside of the VDA;
3) The program and regulations for establishing and renewing Transient Vacation Non-Conforming Use Certificates (TVNCUCs) for legally non-conforming TVRs located outside of the VDA;
4) Enforcement regulations and processes for the Planning Department to enforce against illegal TVR operations.

These priorities comprise the Planning Department's TVR program that operates to restrict the proliferation of vacation rentals in residential and other areas outside of the VDA, which have historically caused significant and negative impacts to residential neighborhoods and agricultural lands.

Through pro-active monitoring of the world wide web for illegal TVR operation advertisements, decisive enforcement actions, and partnerships with Airbnb and Expedia, the Planning Department has brought the number of illegal TVRs operating on Kauai down from an estimated 1,500 operations in 2017 to an estimated less than 50 operations today.

However, in order to maintain this low level of illegal TVR activity, annual processing of TVNCUCs is necessary, continuous monitoring and action against any new illegal TVR operations are necessary, real-time awareness to shifts and changes in the regional and global TVR industry and its corresponding platforms and venues is necessary, TVR enforcement resources and trainings are necessary, and illegal TVR litigation, in the form of appeals of the Planning Director's enforcement actions, will continue to need to be addressed.

There are currently 420 legally non-conforming TVRs that are annually renewed through the TVNCUC program. The renewal fee for each of these non-conforming TVRs is $750.00 per year and requires ongoing permit processing, compliance review, and monitoring throughout the year. The Department's review and monitoring of TVNCUCs often result in litigation and generates most of the Planning Department's recent TVR enforcement litigation cases.

The creation of the proposed account will help fund the necessary staffing, education and enforcement activities of the Department without impacting the General Fund.

VI. FINDINGS

The Enforcement Section of the Planning Department is proposing to expand our zoning enforcement capabilities by adding to the budget of Planning an Enforcement Account within Fund 251 funded by a portion of the annual renewal fee's for transient vacation rentals outside of the Visitor Destination Area.

These monies are intended to 1) maintain TVNCU renewal process, 2) retain independent contractors to assist in enforcement, 3) materials, supplies, enforcement education and training, and 4) legal representation.

VII. PRELIMINARY EVALUATION

In reviewing the proposed legislation, the following items are taken into consideration:

1) Independent contractors have been utilized successfully by the department in the TVR enforcement process. Obtaining their services has been reduced to funding limitations.

2) The nature of TVR enforcement evolves in real time and there will persistently be a need for not just online monitoring but for staff to be constantly trained and educated on new industries and technologies available for short term rentals.

3) Training and education are necessary components to improving the enforcement process to ensure the enforcement cases are not dismissed on technicalities, which has occurred.

4) Legal representation, particularly against TVNCU holders that appeal actions by the Planning Department (these appeals constitute the vast majority of our litigation cases), are both costly and lengthy endeavors.

VIII. PRELIMINARY CONCLUSION

Based on the foregoing findings and evaluation, it is hereby concluded that the proposed amendment to Chapter 8 of the KCC is necessary to improve TVR program management and enforcement efficiency.

IX. PRELMINARY RECOMMENDATION

Pursuant to the evaluation and explanations above, it is recommended that Zoning Amendment ZA-2022-7 be **approved.**

By _____
ANDRES EMAYO
Supervising Inspector, Enforcement

Approved & Recommended to Commission:

By _____
KA'ĀINA S. HULL
Director of Planning

Date: 3/14/2022

Ka'āina S. Hull
Director of Planning

Jodi Higuchi
Deputy Director of Planning

COUNTY OF KAUA'I
PLANNING DEPARTMENT

DIRECTOR'S REPORT

I. SUMMARY

Action Required by Planning Commission:	Consideration of the Applicant's request to amend Condition No. 1 of the subject permits to allow for the installation of an emergency back-up generator.
Permit Application Nos.	Class IV Zoning Permit Z-IV-2003-19 Use Permit U-2003-18
Name of Applicant(s)	T-Mobile (previously Voicestream PCS II Corporation)

II. PERMIT INFORMATION

PERMITS REQUIRED	
☒ **Use Permit**	Pursuant to Section 8-2.4 of the KCC, 1987, as amended, a Use Permit was required for public utilities and facilities within the Resort (RR-20) zoning district.
☐ **Project Development Use Permit**	
☐ **Variance Permit**	
☐ **Special Permit**	
☒ **Zoning Permit Class** ☒ IV ☐ III	Pursuant to Section 8-3.2 of the KCC, 1987, as amended, a Class IV Zoning Permit was a procedural requirement for obtaining a Use Permit in the Resort (RR-20) Zoning District.
☐ **Special Management Area Permit** ☐ Use ☐ Minor	
AMENDMENTS	
☐ **Zoning Amendment**	
☐ **General Plan Amendment**	
☐ **State Land Use District Amendment**	

H.1.a.
APR 12 2022

Date of Receipt of Completed Application:	N/A
Date of Director's Report:	March 21, 2022
Date of Public Hearing:	APRIL 12, 2022
Deadline Date for PC to Take Action (60TH Day):	N/A

III. PROJECT DATA

PROJECT INFORAMTION			
Parcel Location:	The subject property is located at the Coconut Marketplace in Waipōuli.		
Tax Map Key(s):	4-3-002:018	**Area:**	7.559 Acres
ZONING & DEVELOPMENT STANDARDS			
Zoning:	Resort		
State Land Use District:	Urban		
General Plan Designation:	Resort		
Height Limit:	30 feet		
Max. Land Coverage:	60% of lot area		
Parking Requirement:	N/A		
Front Setback:	10 feet		
Rear Setback:	10 feet		
Side Setback:	5 feet		
Community Plan Area:	East Kauai Community Plan		
Community Plan Land Use Designation:	Resort		
Deviations or Variances Requested:	N/A		

IV. LEGAL REQUIREMENTS

Section 8-3.1(f), KCC:	N/A
Planning Commission Date:	April 12, 2022

V. PROJECT DESCRIPTION AND USE

The existing telecommunications facility is located within Coconut Marketplace Center in Waipōuli, situated makai of Kūhiō Highway, northeast of the northern intersection of Papaloa Road and Kūhiō Highway. The project involves antennas and accessory equipment mounted within a faux water tank in the shopping center to serve as stealthing, and two utility storage rooms that are used for ground mounted equipment. There were also site improvements that included installation of underground conduits in order to connect the

antenna cables from the utility rooms to the faux water tower. The development conceals all of the telecommunication equipment and antennas from the surrounding area.

The subject permits were originally approved by the Planning Commission on March 11, 2003, that allowed for the placement/establishment of a telecommunication facility on the subject parcel. The primary intent of implementing the telecommunication facility at the Coconut Marketplace was to expand wireless communication along the eastern portion of the island to ensure unbroken cellular service from Līhu'e to Kapa'a.

On January 9, 2019, the Planning Commission approved a request to amend the subject permits to allow for Co-location of multiple carriers that would be subject to the review and discretion of the Planning Director. Currently, T-Mobile and Verizon Wireless are the two carriers that are Co-locating on the faux water tank tower and are using two separate utility/equipment rooms within the Coconut Marketplace facility.

The Applicant is requesting to remove Condition No. 1 of the Approval Letter dated January 9, 2019 (Exhibit 'A'), to allow for the installation of a new emergency back-up generator on the project site. As represented, the emergency generator will provide emergency power exclusively to T-Mobile equipment and will not be used by other carriers.

The emergency generator will be located on the landscaped area between the driveway curb and the T-Mobile utility/equipment room. A site plan and elevations of the proposed structures are attached (Exhibit 'B'). The proposed development will include the following:

1. A 25kW generator with a 240-gallon diesel sub-tank on a new concrete slab on grade. The 240-gallon diesel sub-tank will have a vent pipe extending to a maximum height of 12'0".

2. A 156 square foot concrete wall enclosure with a stucco finish and color to match the existing buildings in the project area. The concrete enclosure consists of concrete walls on three sides with a metal framed access gate with composite cladding facing towards the driveway. The concrete enclosure will have a maximum height of 7'10" above grade.

The subject property contains a land area of 7.56 acres and is designated Resort District (RR-20). The existing Coconut Marketplace Center was initially constructed in 1971 and is currently being used as a mixed-use commercial shopping center that consists of commercial retail businesses and services, and restaurants.

The immediate surrounding area consists of Resort zoned properties that are utilized as resort hotels. There are very few single-family residences (R-10) across the south end of the subject parcel along Wailua Kai Street. The property mauka of the highway is in the County Agriculture (A) zoning district.

VI. APPLICANT'S REASONS/JUSTIFICATION

According to the Applicant's request, the proposed emergency back-up generator is needed to provide continuous and uninterrupted electrical power to T-Mobile's cellular mobile network that provides service to the greater Kapa'a community.

In 2007, there was Federal legislation approved by Congress implemented by the Federal Communications Commission (FCC) to require an emergency back-up power source for all cell sites that are normally powered from local commercial power, and it was directly related to the catastrophe caused by Hurricane Katrina.

As previously noted, the Applicant is requesting to remove Condition No. 1 of the Approval Letter dated January 9, 2019, to allow for the installation of an emergency back-up generator. The condition currently reads:

1. *As represented by the applicant, no emergency or back up power generators will be installed in the project area.*

Attached for the Planning Commission's reference is a copy of the Applicant's request of the foregoing permit (refer to Exhibit 'C').

VII. PRELIMINARY EVALUATION

In evaluating the applicant's request to allow for an emergency back-up generator on the project site, the following item is being considered:

Use Permit

Pursuant to Article 3 of the Comprehensive Zoning Ordinance (CZO), Chapter 8 of the Kauai county Code (1987), the purpose of the Use Permit Procedure is to assure the proper integration into the community of uses which may be suitable only in specific locations of a district, or only under certain conditions, or only if the uses are designed, arranged or conducted in a particular manner, and to prohibit the uses if proper integration cannot be assured. Section 8-3.2 of the CZO specifies a Use Permit may be granted only if the Planning Commission finds that the use meets the following criteria:

1) The use must be a compatible use;
2) The use must not be detrimental to persons or property in the area;
3) The use must not cause substantial environmental consequences; and
4) The use must not be inconsistent with the intent of the Comprehensive Zoning Ordinance (CZO) and General Plan.

Based on the foregoing, the following aspects are taken into consideration:

1. The proposed development is a compatible use with the existing Coconut Marketplace Center and serves as an accessory to the function and use of the existing telecommunication facility.

2. The emergency generator will only be used for emergency purposes during local power outages and will not be detrimental to persons or property in the area. The emergency generator will be sound attenuated by a concrete enclosure.

3. The use is consistent with the Comprehensive Zoning Ordinance (CZO) and the 2018 General Plan.

Federal Legislation

According to correspondence release by the Federal Communications Commission entitled "Order on Reconsideration" involving recommendations of the Katrina Panel reviewing the impacts of Hurricane Katrina on communications networks, the Federal Communications Commission released the Katrina Panel Order that adopted a rule requiring some communications providers to have emergency/back-up power. The back-up power rule adopted states:

"Local exchange carriers (LECs), including incumbent LECs (ILECs) and competitive LECs (CLECs), and commercial mobile radio service (CMRS) providers must have an emergency backup power source for all assets that are normally powered from local AC commercial power, including those inside central offices, cell sites, remote switches and digital loop carrier system remote terminals. LECs and CMRS providers should maintain emergency backup power for a minimum of 24 hours for assets inside central offices and eight hours for cell sites, remote switches and digital loop carrier system remote terminals that are normally powered from local AC commercial power. LECs that meet the definition of a Class B company as set forth in Section 32.11(b)(2) of the Commission's rules and non-nationwide CMRS providers with no more than 500,000 subscribers are exempt from this rule."

VIII. PRELIMINARY CONCLUSION

Based on the foregoing findings and evaluation, it is concluded that through proper mitigative measures and compliance efforts, the proposed development can be considered and it should not have significant adverse impacts to the environment or the surrounding neighborhood. The proposal is generally in compliance with the criteria outlined for the granting of a Use Permit and Class IV Zoning Permit.

The applicant should implement "Best Management Practices" to insure that the operation of this facility does not generate impacts that may affect the health, safety, and welfare of those living or working in the surrounding area of the proposal.

IX. PRELMINARY RECOMMENDATION

Based on the foregoing evaluation and conclusion, the proposed amendments to Use Permit U-2003-18, and Class IV Zoning Permit Z-IV-2003-19 can be considered for approval. It is recommended that Condition of Approval Number 1 be amended as follows (Note: Condition Numbers 2 through 9 do not require amendment but are presented here to re-edify the existing conditions of approval for the subject permits):

(Language to be repealed are bracketed and stricken; additional language to existing Conditions are underscored. Should the Commission accept any or all of the Department's recommended amended Conditions of Approval, later reproductions of said amended Conditions shall exclude bracketed and stricken material)

[~~1. As represented by the applicant, no emergency or back up power generators will be installed on the project area.~~]

1.[~~2.~~] Future proposals for co-location of telecommunication antennas as well as other telecommunication equipment similar in nature to the subject proposals are subjected to review by the Planning Director, provided such proposals are consistent with the terms and conditions of this permit, as well as any other previous permits issued for the subject property. The Director reserves the right to forward such co-location request to the Planning Commission should there by any potential design or visual impacts that could not be mitigated, or because of anticipated impacts that may adversely impact the environment or the safety and welfare of community.

2.[~~3.~~] The Applicant shall submit color schemes/samples to be utilized in the proposed facility for the review and approval of the Planning Department prior installation of the panel antennas on the existing tower.

3.[~~4.~~] Should the use of the proposed telecommunication facility be discontinued or abandoned for a period of one year, the applicant shall remove all of its telecommunication equipment and antennas from the project site.

4.[~~5.~~] Prior to or at time of building permit application, the applicant shall remit payment of an Environmental Impact Assessment fee of $100.

5.[~~6.~~] In order to minimize adverse impacts on Federally Listed Threatened Species, such as Newell's Shearwater and other seabirds, all external lighting shall be only of the following types: shielded lights, cut-off luminaries, or indirect lighting. Spotlights aimed upward or spotlighting of structures shall be prohibited. This restriction does not apply to exterior lighting necessary to comply with the requirements of the Federal Aviation Administration.

6.[~~7.~~] The applicant is advised that should any archeological or historic resources be discovered during ground disturbance/construction work, all work in the area of the archaeological/historical resources shall immediately cease and the applicant shall contact the Department of Land and Natural Resources-Historic Preservation Division (742-7033) and the Planning Department (241-6677)

7.[~~8.~~] The applicant shall resolve and comply with all applicable requirements or conditions as recommended by the State Department of Health, County Water, Fire and Public Works Departments.

8.[~~9.~~] The Planning Commission reserves the authority to impose additional conditions, modify or delete conditions stated herein, or revoke the subject permits through proper procedures should the applicant fail to comply with the conditions of approval or if unforeseen problems are generated by the proposed use at the project site.

9.[~~10.~~] Prior to installation, the applicant shall consult with the Kauai Police Department to address any potential interference with public safety radio systems. Any such interference shall be resolved to the Kauai Police Departments' satisfaction at the applicant's expense.

The Planning Commission is further advised that this report does not represent the Planning Department's final recommendation in view of the forthcoming public hearing process scheduled for April 12, 2022 whereby the entire record should be considered prior to decision making. The entire record should include but not be limited to:

a. pending government agency comments;

b. testimony from the general public; and

c. the Applicant's response to staff's Director's Report and recommendation as provided herein.

By Kenneth A. Estes
KENNETH ESTES
Planner

Approved & Recommended to Commission:

By
KA'ĀINA S. HULL
Director of Planning

Date: 3/24/2022

EXHIBIT 'A'

(APPROVAL LETTER DATED JANUARY 9, 2019)

PLANNING COMMISSION
THE COUNTY OF KAUA'I

KA'ĀINA S. HULL, CLERK OF THE COMMISSION

Sean Mahoney
CHAIR

Glenda Nogami Streufert
VICE-CHAIR

Kanoe Ahuna
Donna Apisa
Elesther Calipjo
Roy Ho
Kimo M. Keawe
MEMBERS

JAN 09 2019

Mike Beason
Cellco Partnership dba Verizon
2001 Ualakaa Street,
Honolulu, HI 96822

Subject: Amendment to Class IV Zoning Permit Z-IV-2003-19
Amendment to Use Permit U-2003-18
Tax Map Key: (4) 4-3-002:018
Wailua, Kaua'i
Cellco Partnership dba Verizon, Applicant

This letter memorializes the action taken by the Kaua'i Planning Commission effective January 8, 2019 to amend the above subject permits to allow co-location for multiple carriers. The approval, per your consent, is subject to the following conditions:

1. As represented by the applicant, no emergency or back up power generators will be installed on the project area.

2. Future proposals for co-location of telecommunication antennas as well as other telecommunication equipment similar in nature to the subject proposals are subjected to review by the Planning Director, provided such proposals are consistent with the terms and conditions of this permit, as well as any other previous permits issued for the subject property. The Director reserves the right to forward such co-location request to the Planning Commission should there by any potential design or visual impacts that could not be mitigated, or because of anticipated impacts that may adversely impact the environment or the safety and welfare of community.

3. The Applicant shall submit color schemes/samples to be utilized in the proposed facility for the review and approval of the Planning Department prior installation of the panel antennas on the existing tower.

4. Should the use of the proposed telecommunication facility be discontinued or abandoned for a period of one year, the applicant shall remove all of its telecommunication equipment and antennas from the project site.

5. Prior to or at time of building permit application, the applicant shall remit payment of an Environmental Impact Assessment fee of $100.

6. In order to minimize adverse impacts on Federally Listed Threatened Species, such as Newell's Shearwater and other seabirds, all external lighting shall be only of the following types: shielded lights, cut-off luminaries, or indirect lighting. Spotlights aimed upward or spotlighting of structures shall be prohibited. This restriction does not apply to exterior lighting necessary to comply with the requirements of the Federal Aviation Administration.

7. The applicant is advised that should any archeological or historic resources be discovered during ground disturbance/construction work, all work in the area of the archaeological/historical resources shall immediately cease and the applicant shall contact the Department of Land and Natural Resources-Historic Preservation Division (742-7033) and the Planning Department (241-6677)

8. The applicant shall resolve and comply with all applicable requirements or conditions as recommended by the State Department of Health, County Water, Fire and Public Works Departments.

9. The Planning Commission reserves the authority to impose additional conditions, modify or delete conditions stated herein, or revoke the subject permits through proper procedures should the applicant fail to comply with the conditions of approval or if unforeseen problems are generated by the proposed use at the project site.

10. Prior to installation, the applicant shall consult with the Kauai Police Department to address any potential interference with public safety radio systems. Any such interference shall be resolved to the Kauai Police Department' satisfaction at the applicant's expense.

Sincerely,

KĀĀINA S. HULL
Clerk, Kaua'i Planning Commission

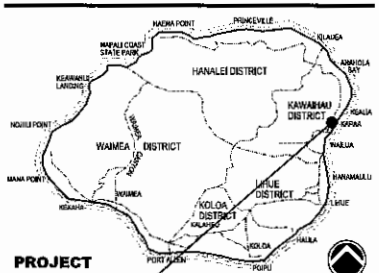
Cc: County- Public Works, Fire, Water, Housing, Transportation
State- Health, Historic Preservation Division
File Z-IV-2003-19

EXHIBIT 'B'

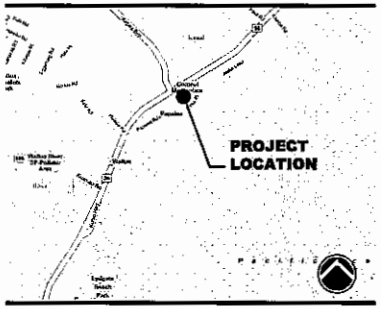
(PROPOSED SITE PLAN AND ELEVATIONS)

100% PCD
NOT FOR
CONSTRUCTION

VICINITY MAP



LOCATION MAP



SITE DIRECTIONS

FROM LIHUE AIRPORT:

• HEAD SOUTHEAST HOOLIMALIMA PLACE TOWARD MOKULELE LOOP	46 FT
• TURN RIGHT ONTO MOKULELE LOOP	341 FT
• KEEP RIGHT TO CONTINUE TOWARD KAANA STREET	256 FT
• CONTINUE ONTO KAANA STREET	200 FT
• TURN RIGHT ONTO HI-51 NORTH	1.8 MI
• CONTINUE ONTO HI-56 NORTH	4.1 MI
• TURN RIGHT ONTO ALEKA STREET	184 FT
• TURN RIGHT	315 FT

T-Mobile

EXISTING TELECOMMUNICATIONS FACILITY
SITE NAME: NEW COCONUT MARKETPLACE-RELO
SITE ID: HI03337A
PROJECT: HARDENING

4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SYMBOLS

GRID NUMBER/LINES

BUILDING SECTION CUT (DETAIL NO., SIM., SHEET NO.)

WALL SECTION CUT (DETAIL NO., SIM., SHEET NO.)

DETAIL CALL-OUT (DETAIL NO., SIM., SHEET NO.)

DETAIL CALL-OUT (DETAIL NO., SHEET NO.)

DATUM LINE (REFERENCE, NAME, ELEVATION)

ROOM NUMBER TAG (DEPARTMENT, ROOM NAME, ROOM NUMBER, ROOM S.F.)

ELEVATION TAG (SHEET NO., DETAIL NO.)

CEILING TYPE TAG (GYP. BRD., CEILING TYPE, 1'-0" A.F.F., CEILING HEIGHT)

REVISION TAG (AREA REVISED, REVISION NO.)

NORTH ARROW

CENTERLINE

KEY NOTES

PROJECT DATA

SITE NAME:
NEW COCONUT MARKETPLACE

SITE ADDRESS:
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746

PARCEL #:
TMK: (4) 4-3-002:018

LEGAL OWNER:
SMK, INC.
766 POHUKAINA STREET
HONOLULU, HAWAII 96813

APPLICANT/LESSEE:
T-MOBILE WEST, LLC
3375 KOAPAKA STREET, #G300
HONOLULU, HAWAII 96819

COORDINATES (NAD 83):
LATITUDE: 22.052991250°
LONGITUDE: -159.329183900°
GROUND ELEVATION: 55.8' (AMSL)

JURISDICTION:
COUNTY OF KAUAI

FLOOD ZONE:
FIRM ZONE "X"

ZONING:
COMMERCIAL

SMA/SHORELINE:
YES

OCCUPANY (T-MOBILE):
U

CONST. TYPE:
V-B

SETBACKS:
75'-0" FROM KUHIO HIGHWAY
5'-0" ALL OTHER SIDES

SHEET INDEX

ARCHITECTURAL DRAWINGS

Ocs1	TITLE SHEET, VICINITY and LOCATION MAPS, SYMBOLS, PROJECT DATA, SHEET INDEX, APPROVALS
Ocs2	SPECIFICATIONS, ABBREVIATIONS
A01	OVERALL SITE PLAN
A02	ENLARGED SITE PLAN, NOTES
A03	WEST ELEVATION/SECTION & SOUTH ELEVATION
A04	STRUCTURAL NOTES
A05	FOUNDATION PLAN, STRUCTURAL DETAILS
A06	STRUCTURAL DETAILS
A07	DETAILS

ELECTRICAL DRAWINGS

E01	OVERALL ELECTRICAL SITE PLAN, ELECTRICAL SPECIFICATIONS, ENERGY BUDGET, ELECTRICAL SYMBOLS
E02	ENLARGED ELECTRICAL SITE PLAN, DUCT SECTION, SIDEWALK REPAIR DETAIL
E03	PARTIAL SITE GROUNDING PLAN, GROUNDING KEY NOTES
E04	SINGLE-LINE DIAGRAM, PANEL SCHEDULE
E05	ELECTRICAL DETAILS

PROJECT CONSULTANTS

STRUCTURAL ENGINEER
IWAMOTO ENGINEERING CONSULTANTS, INC.
98-029 HEKAHA STREET
AIEA, HAWAII 96701, SUITE 37
(PH) (808) 486-5202

CONTACT: RON IWAMOTO

ELECTRICAL ENGINEER
ITANO & ASSOCIATES, INC.
1150 SOUTH KING STREET, SUITE 1007
HONOLULU, HAWAII 96814
(808) 271-2255

CONTACT: DARREL ITANO

CODES AND STANDARDS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

1. IBC, 2012 EDITION W/LOCAL AMENDMENTS
2. UPC, 2012 EDITION W/LOCAL AMENDMENTS
3. NATIONAL ELECTRIC CODE, 2017 EDITION
4. NFPA 1 2018 W/LOCAL AMENDMENTS
5. COMPREHENSIVE ZONING ORDINANCE
6. ANSI/EIA-222-G LIFE SAFETY CODE

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION/PUBLIC ACCESS. ADA ACCESSIBILITY NOT REQUIRED.

PROJECT DESCRIPTION

- NEW 25 kW EMERGENCY GENERATOR WITH 240 GALLON DIESEL SUB-TANK SECURED TO A NEW CONCRETE PAD ON GRADE.
- NEW CONCRETE ENCLOSURE WALLS & CONCRETE SLAB ON GRADE WITH ACCESS GATES AT NEW GENERATOR
- NEW AUTOMATIC TRANSFER SWITCH INSTALLED AT THE EXISTING EQUIPMENT ROOM.
- NEW LED WORK LIGHTS INSTALLED ADJACENT TO GENERATOR

APPROVALS

DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE CONSTRUCTION DRAWINGS DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

	SIGNATURE	DATE
REPRESENTATIVE		
RF ENGINEER		
SITE OWNER		

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 | JOB NO.

LICENSURE:

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO
HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

TITLE SHEET, LOCATION and VICINITY MAPS, PROJECT DATA, SHEET INDEX

CURRENT ISSUE DATE/ISSUED FOR
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION

SHEET NUMBER
Ocs1
1 OF -- SHEETS

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 0100 - GENERAL PROVISIONS

1. ALL WORK and MATERIALS SHALL BE IN ACCORDANCE WITH THE 2012 EDITION OF THE I.B.C., THE LATEST RULES AND REGULATIONS OF ALL APPLICABLE STATE and/or LOCAL CODES, LAWS, AMENDMENTS, ORDINANCES and STATUTES. NOTHING IN THE DRAWINGS or SPECIFICATIONS IS TO BE CONSTRUED AS REQUIRING or PERMITTING WORK CONTRARY TO THESE RULES, REGULATIONS and CODES. IF SO, CONTACT THE ARCHITECT FOR RESOLUTION.
2. THE DRAWINGS INDICATE LOCATION, DIMENSIONS, REFERENCE and TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION. WORK NOT PARTICULARLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO PARTS WHICH ARE DETAILED.
3. DO NOT SCALE THE DRAWINGS. EXISTING CONDITIONS SHALL BE VERIFIED IN THE FIELD. WHERE DISCREPANCIES BETWEEN THE DRAWING DIMENSIONS and THE FIELD CONDITIONS OCCUR, THEY SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
4. DETAILED DRAWINGS and LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS. PREFERENCE SHALL BE GIVEN TO THE FIGURED DIMENSIONS ON THE DRAWINGS and GENERAL NOTES/SPECIFICATIONS ARE INTENDED TO AGREE and SUPPLEMENT EACH OTHER. ANYTHING INDICATED ON ONE and NOT IN THE OTHER SHALL BE EXECUTED AS IF BOTH. IN CASES OF DIRECT CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN (CONTACT THE ARCHITECT FOR RESOLUTION).
5. ALL CONTRACTORS SHALL VISIT THE SITE and VERIFY THAT ALL EXISTING CONDITIONS AGREE WITH THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY IF ENVIRONMENTAL ASSESSMENT OF THE PROJECT SITE WILL BE REQUIRED. ALL CONTRACTORS SHALL BE DEEMED TO HAVE INSPECTED THE SITE and SATISFIED HIMSELF AS TO THE TRUE CONDITION UNDER WHICH THE WORK IS TO BE PERFORMED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION PRIOR TO THE START OF CONSTRUCTION.
6. THE CONTRACTOR SHALL PATCH or REPAIR ALL MATERIALS, EQUIPMENT and SURFACES DAMAGED BY THE CONTRACTOR or HIS SUB-CONTRACTORS DURING THE EXECUTION OF THE WORK.
7. THE CONTRACTOR SHALL CLEAN-UP DEBRIS AS THE WORK PROGRESSES. PROVIDE FOR TRASH REMOVAL FROM THE SITE. FINAL CLEANING AFTER SUBSTANTIAL COMPLETION, BUT PRIOR TO FINAL INSPECTION, SHALL INCLUDE A THOROUGH CLEANING OF ALL SURFACES INSTALLED. ALL EXCESS MATERIAL, DEBRIS, TRASH, ETC. SHALL BE REMOVED FROM THE SITE.
8. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC and OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK SHALL BE RELOCATED AS DIRECTED. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING or PIER DRILLING AROUND or NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BY NOT LIMITED TO
   A) FALL PROTECTION
   B) CONFINED SPACE
   C) ELECTRICAL SAFETY
   D) TRENCHING and EXCAVATION.
9. THE CONTRACTOR SHALL COORDINATE NEW WORK WITH THE LANDLORD TO AVOID DISRUPTIONS TO THE BUILDING/TENANT ACTIVITIES. OBTAIN ALL NECESSARY APPROVALS FOR WORK, AND GIVE PROPER NOTIFICATION WHEN ADJACENT PARTIES OR PUBLIC WAYS MAY BE AFFECTED. CONTRACTOR SHALL ALSO COORDINATE THE HOURS OF OPERATION, PARKING/LOADING/ UNLOADING AREAS and HOURS OF CONSTRUCTION.
10. ALL MATERIALS SHALL BE DELIVERED TO THE JOB SITE IN THE ORIGINAL CONTAINERS and STORED IN A SAFE, DRY PLACE PROTECTED FROM EXPOSURE TO THE ELEMENTS OR DAMAGE. ALL MATERIALS SHALL BE INSTALLED/APPLIED PER THE MANUFACTURER'S SPECIFICATIONS.
11. THE CONTRACTOR SHALL PROVIDE and PAY FOR ALL NECESSARY TEMPORARY WATER and ELECTRIC SERVICES and LIGHTING REQUIRED DURING THE ENTIRE CONSTRUCTION PERIOD.
12. THE CONTRACTOR SHALL SUBMIT TO T-MOBILE WEST, LLC. PROJECT ENGINEER FOR ARCHITECT'S REVIEW, REQUIRED SUBMITTALS INCLUDING SHOP DRAWINGS, PROJECT DATA and SAMPLES.
   A. PRIOR TO EACH SUBMITTAL, REVIEW and COORDINATE ALL ASPECTS OF EACH SUBMITTAL. AFFIX CONTRACTORS STAMP and SIGNATURE TO EACH SUBMITTAL TO CERTIFY THAT REVIEW/COORDINATION HAS BEEN PERFORMED. LACK OF CONTRACTOR'S CERTIFICATION WILL BE CAUSE FOR REJECTION.
13. THE CONTRACTOR SHALL PAY OF ALL PERMITS and FEES AND ARRANGE FOR ALL GOVERNMENT INSPECTIONS/APPROVALS AS REQUIRED and SHALL SECURE THE CERTIFICATE OF OCCUPANCY. PROVIDE COPIES TO THE ARCHITECT/OWNER.
14. THE CONTRACTOR SHALL TEST, ADJUST and BALANCE ALL SYSTEMS and PROVIDE COPIES OF TEST REPORTS and OPERATING INSTRUCTIONS TO OWNER.
15. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH ONE SET OF 11X17 REPRODUCIBLE AS-BUILT DRAWINGS. CLEARLY INDICATE REVISIONS TO THE ORIGINAL CONTRACT DRAWINGS.

DIVISION 2 - SITE WORK and DRAINAGE (NOT USED)

DIVISION 3 - CONCRETE (NOT USED)

DIVISION 4 - MASONRY (NOT USED)

DIVISION 5 - METALS

SECTION 05500 - METAL FABRICATION

PART 1 - GENERAL

1. QUALITY ASSURANCE: COMPLY WITH THE LATEST GOVERNING CODES and REGULATIONS. PROVIDE PRODUCTS FROM MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE FOR A MINIMUM OF THREE (3) YEARS. DELIVER, TRANSPORT and STORE MATERIALS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

PART 2 - PRODUCTS

1. STANDARD: ALL MATERIALS SHALL COMPLY WITH:
   A) STEEL PLATES, SHAPES and BARS: ASTM A 36
   B) CONCRETE INSERTS: GALVANIZED FERROUS CASTINGS
   C) NON-SHRINK NONFERROUS GROUT: CE CRD C588
   D) GALVANIZING: HOT-DIP GALVANIZING IN ACCORDANCE WITH ASTM A 123
   E) ELECTRODES FOR WELDING: COMPLY WITH AWS CODE. USE E70XX ELECTRODES

PART 3 - EXECUTION

1. PREPARATION: CLEAR TREES, BRUSH and DEBRIS FROM THE SITE AREA AS REQUIRED. PRIOR TO EXCAVATION and CONSTRUCTION, GRUB ORGANIC MATERIAL TO A MINIMUM OF 12 INCHES BELOW ORIGINAL GROUND LEVEL. PRIOR TO PLACEMENT OF FILL or BASE MATERIALS, ROLL THE SOIL. WHERE UNSTABLE SOIL CONDITIONS OCCUR, CONSULT THE ARCHITECT/ENGINEER FOR RESOLUTION.

DIVISION 6 - WOOD and PLASTICS (NOT USED)

DIVISION 7 - THERMAL and MOISTURE PROTECTION

SECTION 07900 - JOINT SEALERS

PART 1 - GENERAL

1. GENERAL CHARACTERISTICS: PROVIDE TYPE, GRADE, CLASS HARDNESS, and SIMILAR CHARACTERISTICS OF MATERIAL AS INDICATED or, WHERE NOT INDICATED, TO COMPLY WITH MANUFACTURER'S RECOMMENDATIONS RELATIVE TO EXPOSURES, TRAFFIC, WEATHER CONDITIONS and OTHER FACTORS OF THE JOINT SYSTEM FOR BEST POSSIBLE OVERALL PERFORMANCE. JOINT SEALERS ARE REQUIRED TO PERMANENTLY MAINTAIN AIRTIGHT and WATERPROOF SEALS, WITHOUT FAILURES IN JOINT MOVEMENT ACCOMMODATION, COHESION, ADHESION, MIGRATION, STAINING, and OTHER PERFORMANCES AS SPECIFIED.

PART 2 - PRODUCTS

1. MATERIALS -- SEALANT: ONE-PART POLYURETHANE, CLASS A, TYPE II, AS MANUFACTURED BY TREMCO, or APPROVED EQUAL.
2. MATERIALS -- SEALANT BACKER ROD: NON-ABSORPTIVE CLOSED CELL COMPRESSIBLE/FLEXIBLE PLASTIC or RUBBER ROD STOCK WHICH IS COMPATIBLE WITH SEALANT (POLYETHYLENE, BUTYL, NEOPRENE, POLYURETHANE, PVC)

PART 3 - EXECUTION

1. INSTALLATION: INSTALL EXTERIOR SEALANTS WHEN TEMPERATURE IS IN THE RANGE RECOMMENDED BY MANUFACTURER FOR INSTALLATION. CLEAN JOINT SURFACES and PRIME or SEAL AS RECOMMENDED BY SEALANT MANUFACTURER. SUPPORT SEALANTS FROM BACK WITH CONSTRUCTION AS SHOWN, or WITH JOINT FILLER or BACKER ROD.

DIVISION 8 - DOORS and WINDOWS (NOT USED)

DIVISION 9 - FINISHES

SECTION 09900 - PAINTING

PART 1 - GENERAL SCOPE OF WORK

1. THE WORK TO BE DONE BY THE PAINTING CONTRACTOR SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, LABOR, TOOLS, and EQUIPMENT REQUIRED TO COMPLETE THE PAINTING AS SPECIFIED. SURFACES CONCEALED BY PORTABLE OBJECTS and BY SURFACE MOUNTED ARTICLES READILY DETACHABLE BY REMOVAL OF FASTENERS and BOLTS ARE INCLUDED IN THE SCOPE OF WORK. SURFACES CONCEALED BY PANEL BOARDS, MACHINERY and FIXED EQUIPMENT ARE NOT INCLUDED. DO NOT COAT SURFACES IN CONCEALED SPACES UNLESS SPECIFICALLY STATED. DO NOT PAINT OVER REQUIRED LABELS or EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME or NOMENCLATURE PLATES.
2. WORKMANSHIP: ALL MATERIALS SHALL BE APPLIED FREE FROM RUNS, SAGS, WRINKLES, STREAKS, SHINERS, and BRUSH MARKS. ALL MATERIALS SHALL BE APPLIED UNIFORMLY. IF ANY REDUCTION OF THE COATING'S VISCOSITY IS NECESSARY IT SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURERS LABEL DIRECTIONS. BEFORE PAINTING COMMENCES, ALL OTHER CRAFTS SHALL HAVE COMPLETED THEIR WORK, and SHALL HAVE REMOVED ALL DIRT and DEBRIS RESULTING THEREFROM.

PART 2 - PRODUCTS

1. MATERIALS: SPECIFICATIONS ARE BASED ON COATINGS AS MANUFACTURED BY SHERWIN WILLIAMS EXCEPT AS OTHERWISE SPECIFIED. REQUESTS FOR CHANGES or VARIATIONS MUST BE MADE BY THE PAINTING CONTRACTOR IN WRITING. COLORS SHALL BE THOSE APPROVED BY THE ARCHITECT. ALL PRIMERS and UNDERCOATS ARE TO BE TINTED TO THE APPROXIMATE SHADE OF THE SELECTED FINISH COAT. (AS APPLICABLE)

PART 3 - EXECUTION

1. SURFACE PREPARATION -- CLEANING: ALL SURFACES ARE TO BE FREE OF LOOSE MORTAR, DIRT, GREASE, OIL, LOOSE PAINT and, OTHER FOREIGN MATTER WHICH COULD PREVENT PROPER ADHESION.
2. CAULKING and SEALANT COMPOUNDS SHALL BE ALLOWED TO CURE FOR TIMES STATED IN MANUFACTURERS LITERATURE PRIOR TO BEING COATED.
3. SURFACE REPAIRS: REPAIR ALL CRACKS, HOLES, CREVICES and BREAKS ON SUBSTRATE PRIOR TO APPLYING COATINGS.
4. APPLICATION: APPLY COATINGS STRICTLY PER MANUFACTURERS PRINTED APPLICATION INSTRUCTIONS.
5. SCHEDULE OF FINISHES:
   A) CONCRETE and MASONRY SURFACES: 2-COATS LATEX BASE DRYLOK MASONRY WATERPROOFER APPLIED PER MANUFACTURER SPECIFICATIONS. 1-COAT PRO INDUSTRIAL ZERO VOC ACRYLIC (SEMI-GLOSS).
   B) ARMORSEAL 33 EPOXY PRIMER/SEALER, 2-COATS ARMOR SEAL 1000 HS W/ANTI-SLIP AGGREGATE).
   C) GALVANIZED METALS: 1-COAT PRO INDUSTRIAL PRO-CRYL UNIVERSAL ACRYLIC PRIMER, 2-COATS PRO INDUSTRIAL ZERO VOC ACRYLIC (SEMI-GLOSS).
   D) WOOD: 1 COAT EXTERIOR LATEX PRIMER, 2-COATS PRO INDUSTRIAL ZERO VOC ACRYLIC (SEMI-GLOSS).
   E) PANEL ANTENNAS: 1 MULTI-PURPOSE LATEX PRIMER, 2-COATS PRO INDUSTRIAL ZERO VOC ACRYLIC (SEMI-GLOSS).
   F) GYPSUM BOARD: 1 COAT PREMIUM WALL & WOOD PRIMER, 2 COATS SUPERPAINT INTERIOR ACRYLIC LATEX (SEMI-GLOSS).
   G) CABLING and PVC CONDUIT: 1 MULTI-PURPOSE LATEX PRIMER, 2-COATS PRO INDUSTRIAL ZERO VOC ACRYLIC (SEMI-GLOSS).

DIVISION 10 - SPECIALTIES (NOT USED)

DIVISION 11 - EQUIPMENT (NOT USED)

DIVISION 12 - FURNISHINGS (NOT USED)

DIVISION 13 - SPECIAL CONSTRUCTION (NOT USED)

DIVISION 14 - CONVEYING SYSTEMS (NOT USED)

DIVISION 15 - MECHANICAL (NOT USED)

DIVISION 16 - ELECTRICAL (SEE ELECTRICAL)

ABBREVIATIONS

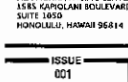
A.C.	AIR CONDITIONING	GL.	GLASS	SQ.	SQUARE
ACOUS.	ACOUSTICAL	GND.	GROUND	S.S.	STAINLESS STEEL
A.D.	AREA DRAIN	GR.	GRADE	STA.	STATION
ADJ.	ADJUSTABLE	GYP.	GYPSUM	STD.	STANDARD
A.E.S.	ABOVE EXISTING SLAB	H.A.	HOSE BIB	STL.	STEEL
A.F.F.	ABOVE FINISH FLOOR	H.B.	HOLLOW CORE	STOR.	STORAGE
AL.	ALUMINUM	HDR.	HEADER	STRL.	STRUCTURAL
APPROX.	APPROXIMATE	HDWD.	HARDWOOD	SURR.	SURROUND
ARCH.	ARCHITECTURAL	HDWE.	HARDWARE	SUSP.	SUSPENDED
ASPH.	ASPHALT	HGT.	HEIGHT	SYM.	SYMMETRICAL
BD.	BOARD	H.M.	HOLLOW METAL	T.C.	TOP OF CURB
BLDG.	BUILDING	HORIZ.	HORIZONTAL	TEL.	TELEPHONE
BLK.	BLOCK	HR.	HOUR	TEMP.	TEMPERED
BLKG.	BLOCKING	I.D.	INSIDE DIAMETER	T&G	TONGUE & GROOVE
BM.	BEAM	INSUL.	INSULATIONS	THK.	THICK
BOT.	BOTTOM	INT.	INTERIOR	THR.	THRESHOLD
CAB.	CABINET	JST.	JOIST	T.P.	TOP OF PAVEMENT
CEM.	CEMENT	JT.	JOINT	TRD.	TREAD
CER.	CERAMIC	KIT.	KITCHEN	T.V.	TELEVISION
CLG.	CEILING	K.O.	KNOCK OUT	TYP.	TYPICAL
CLKG.	CAULKING			T.W.	TOP OF WALL
CLR.	CLEAR	LAM.	LAMINATE	UNF.	UNFINISHED
C.M.U.	CONCRETE MASONRY UNIT	LAV.	LAVATORY	U.O.N.	UNLESS OTHERWISE NOTED
CNTR.	COUNTER	LT.	LIGHT		
COL.	COLUMN	MAX.	MAXIMUM	UR.	URINAL
CONC.	CONCRETE	MA.	MEDICINE		
COND.	CONDITION		CABINET	VERT.	VERTICAL
CONN.	CONNECTION	MECH.	MECHANICAL	VEST.	VESTIBULE
CONSTR.	CONSTRUCTION	MEMB.	MEMBRANE		
CONT.	CONTINUOUS	MET.	METAL	W/	WITH
CONTR.	CONTRACTOR	MFR.	MANUFACTURER	W.C.	WATER CLOSET
CORR.	CORRIDOR	MILL.	MILLWORK	WD.	WOOD
C.R.M.	CONCRETE RUBBLE MASONRY	MIN.	MINIMUM	WDW.	WINDOW
		MIR.	MIRROR	W/O	WITHOUT
		MISC.	MISCELLANEOUS	WP.	WATERPROOF
CTR.	CENTER	M.O.	MASONRY OPENING	W.R.	WATER RESISTANT
DBL.	DOUBLE	MTD.	MOUNTED	WSCT.	WAINSCOT
DET.	DETAIL	MUL.	MULLION	WT.	WEIGHT
DIA.	DIAMETER	MWC.	MILLWORK CONTRACTOR	W.W.F.	WELDED WIRE FABRIC
DIM.	DIMENSION			W.W.M.	WELDED WIRE MESH
DN.	DOWN				
D.O.	DOOR OPENING	(N)	NEW		
DR.	DOOR	N.I.C.	NOT IN CONTRACT		
D.S.	DOWNSPOUT				
DWG.	DRAWING	NO., #	NUMBER		
DWR.	DRAWER	NOM.	NOMINAL		
		N.T.S.	NOT TO SCALE		
(E)	EXISTING				
EA.	EACH	O.A.	OVERALL		
E.J.	EXPANSION JOINT	O.C.	ON CENTER		
EL.	ELEVATION	O.D.	OUTSIDE DIAMETER		
ELEC.	ELECTRICAL				
ELEV.	ELEVATOR	O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED		
EMER.	EMERGENCY				
ENCL.	ENCLOSURE				
E.P.	ELECTRICAL PANEL BOARD	OPNG.	OPENING		
EQ.	EQUAL	OPP.	OPPOSITE		
EQPT.	EQUIPMENT				
EXIST.	EXISTING	PL.	PLATE		
EXP.	EXPANSION	P. LAM.	PLASTIC LAMINATE		
EXT.	EXTERIOR	PLAS.	PLASTER		
F.A.	FIRE ALARM	PLBG.	PLUMBING		
F.B.	FLAT BAR	PLYWD.	PLYWOOD		
F.D.	FLOOR DRAIN	PNL.	PANEL		
FDN.	FOUNDATION	POL.	POLISHED		
F.A.	FIRE EXTINGUISHER	PR.	PAIR		
		PRCST.	PRECAST		
FIN.	FINISH	PTD.	PAINTED		
FL.	FLOOR				
FLASH.	FLASHING	RAD.	RADIUS		
FLUOR.	FLUORESCENT	R.D.	ROOF DRAIN		
F.O.C.	FACE OF CONCRETE	REFRIG.	REFRIGERATOR		
		REINF.	REINFORCED		
F.O.F.	FACE OF FINISH	REQ.	REQUIRED		
F.O.M.	FACE OF MULLION	RM.	ROOM		
F.O.S.	FACE OF STUDS	R.O.	ROUGH OPENING		
FPRF.	FIREPROOF				
FR.	FRAME	S.C.	SOLID CORE		
FT.	FOOT or FEET	SCH.	SCHEDULE		
FTG.	FOOTING	SCR.	SCREEN		
FURR.	FURRING	SECT.	SECTION		
FUT.	FUTURE	SHT.	SHEET		
		SIM.	SIMILAR		
GA.	GAUGE	SL.	SLOPE		
GALV.	GALVANIZED	SLDG.	SLIDING		
G.A.	GRAB BAR	SPEC.	SPECIFICATION		

100% PCD NOT FOR CONSTRUCTION

McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1650
HONOLULU, HAWAII 96814 (808) 524-2446

ISSUE 001 — JOB NO.

LICENSURE:



PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO
HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

SPECIFICATIONS

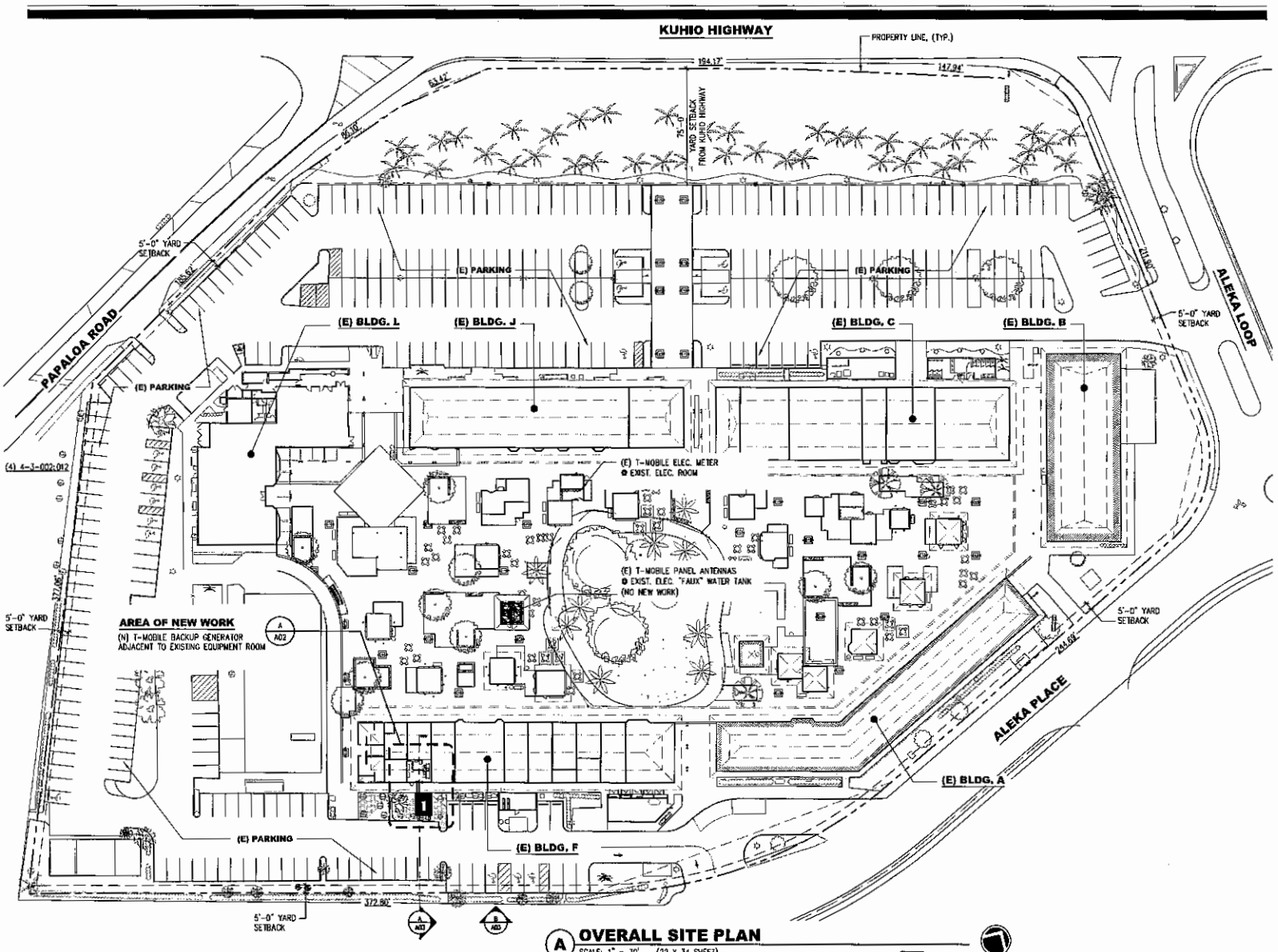
CURRENT ISSUE DATE/ISSUED FOR

12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION

SHEET NUMBER

0cs2 2 OF — SHEETS



A OVERALL SITE PLAN
SCALE: 1" = 30' (22 X 34 SHEET)
SCALE: 1" = 60' (11 X 17 SHEET)

100% PCD NOT FOR CONSTRUCTION

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE: 001 JOB NO.:

LICENSURE:

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO
HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

OVERALL SITE PLAN

CURRENT ISSUE DATE/ISSUED FOR
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION

SHEET NUMBER
A01
3 OF --
SHEETS

SCOPE OF WORK NOTES:

GENERAL:

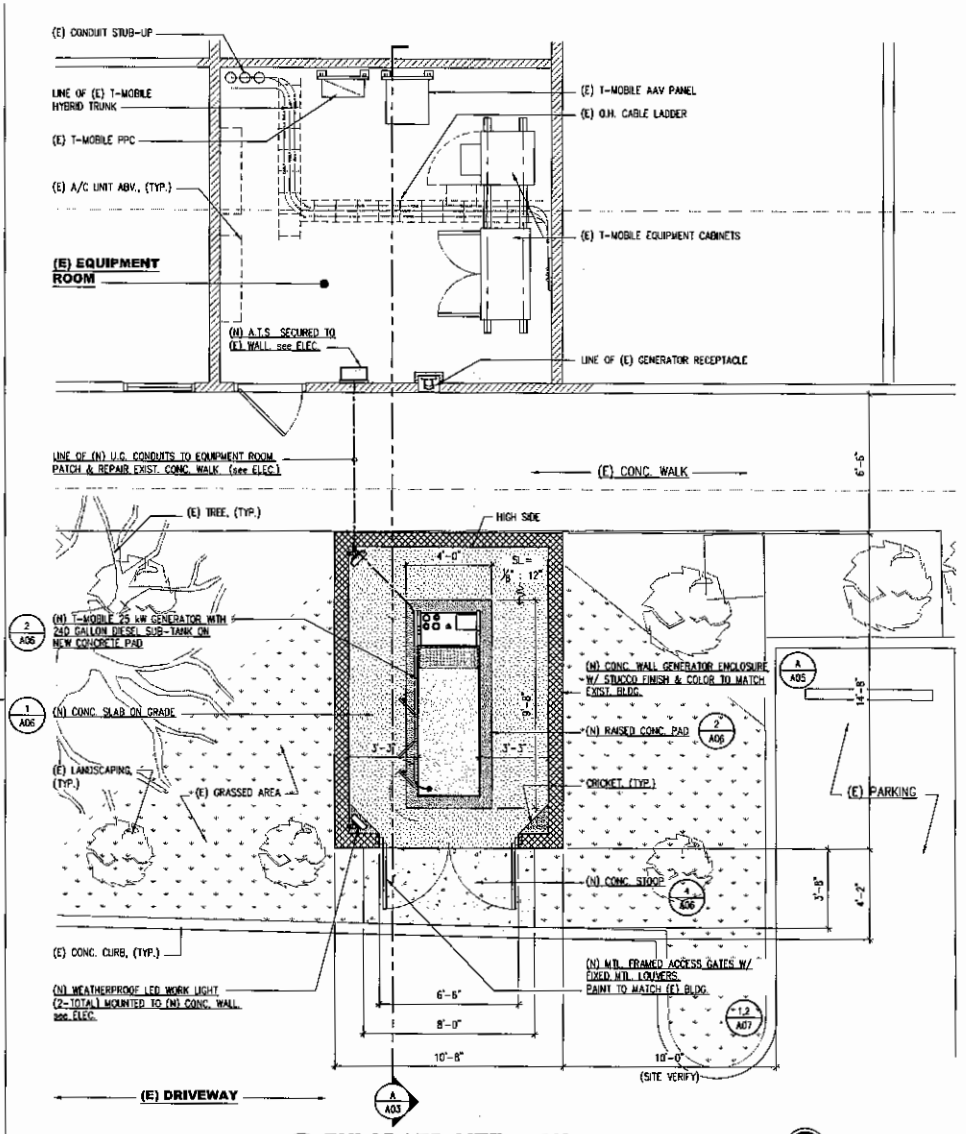
1. NEW GENERAC 25 kW DIESEL GENERATOR PROVIDED BY T-MOBILE WEST, LLC. AND INSTALLED BY GENERAL CONTRACTOR.
2. NEW GENERAC AUTOMATIC TRANSFER SWITCH PROVIDED BY T-MOBILE WEST, LLC. AND INSTALLED BY CONTRACTOR. SEE E-SHEETS.
3. NEW GENERATOR ENCLOSURE LED WORKING LIGHTS. SEE E-SHEETS.
4. EXISTING GENERATOR RECEPTACLE TO REMAIN. NEW ATS TO BE INSTALLED AT EXISTING WALL.
5. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND TONE AS REQUIRED.
6. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION TO ORIGINAL CONDITIONS.

CONDUITS:

1. ALL CONDUIT ROUTING FROM NEW GENERATOR ENCLOSURE TO EXISTING EQUIPMENT ROOM TO BE UNDERGROUND
2. INSTALL MULETAPE IN EACH CONDUIT.
3. ONE (1) NEW 2" CONDUIT (POWER), & ONE (1) NEW 1" CONDUIT (CONTROLS) TO RUN FROM NEW GENERATOR TO NEW ATS.
4. ONE (1) NEW 1" CONDUIT (BRANCH CIRCUITS) TO RUN FROM NEW GENERATOR ENCLOSURE (WORKING LIGHTS/OUTLET) TO PPC PANEL.
5. ONE (1) NEW 1" CONDUIT (ALARMS) TO RUN FROM NEW GENERATOR TO RBS CABINET.
6. ONE (1) NEW 1" CONDUIT (GROUND) TO RUN FROM NEW GENERATOR EXTERIOR GROUND RING TO EXISTING INTERIOR EQUIPMENT ROOM GROUND HALO RING.
7. ONE (1) NEW 2" CONDUIT (POWER) TO RUN FROM NEW ATS TO PPC.
8. ONE (1) NEW 2" CONDUIT (POWER) TO RUN FROM NEW ATS TO EXISTING KIUC SERVICE POINT OF CONNECTION AT PPC
9. ALL CONDUITS AND CABLING DESCRIBED ABOVE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR. SEE E-SHEETS.

GROUNDING:

1. NEW EXOTHERMIC CONNECTIONS FROM EXISTING GROUND RING TO NEW MECHANICAL CONNECTION AT GENERATOR CHASSIS. GENERATOR CONTRACTOR TO SITE VERIFY. SEE GROUNDING PLAN AND SPECIFICATIONS.



A ENLARGED SITE PLAN

SCALE: 3/8" = 1'-0" (22 X 34 SHEET)
SCALE: 3/16" = 1'-0" (11 X 17 SHEET)

100% PCD
NOT FOR CONSTRUCTION

McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE: 001
JOB NO.:

LICENSURE:

BRIAN A. SUZUKI LICENSED PROFESSIONAL ARCHITECT No. 9115 HAWAII, U.S.A.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

ENLARGED SITE PLAN

CURRENT ISSUE DATE/ISSUED FOR

12/24/2021 -- PERMIT

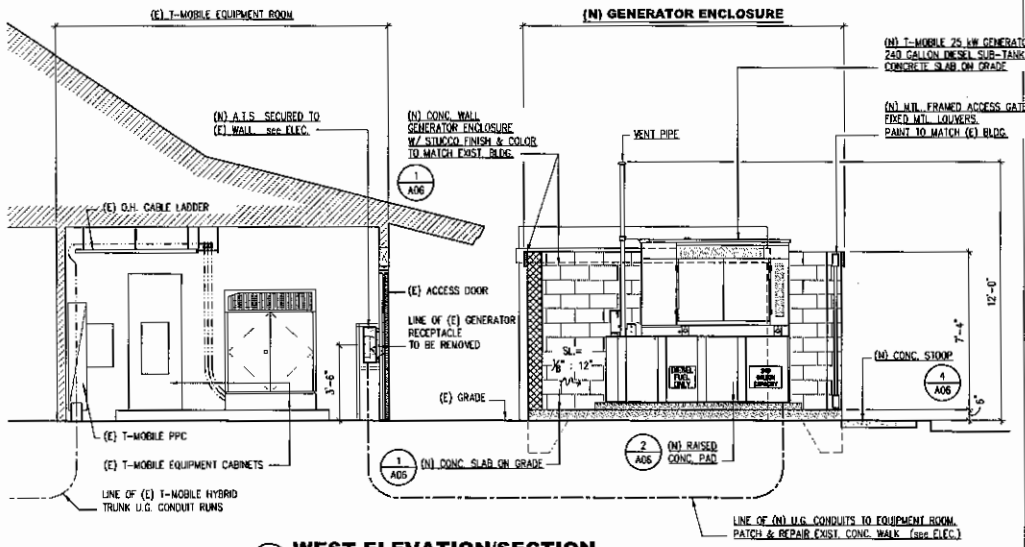
REV.	DATE	DESCRIPTION

SHEET NUMBER

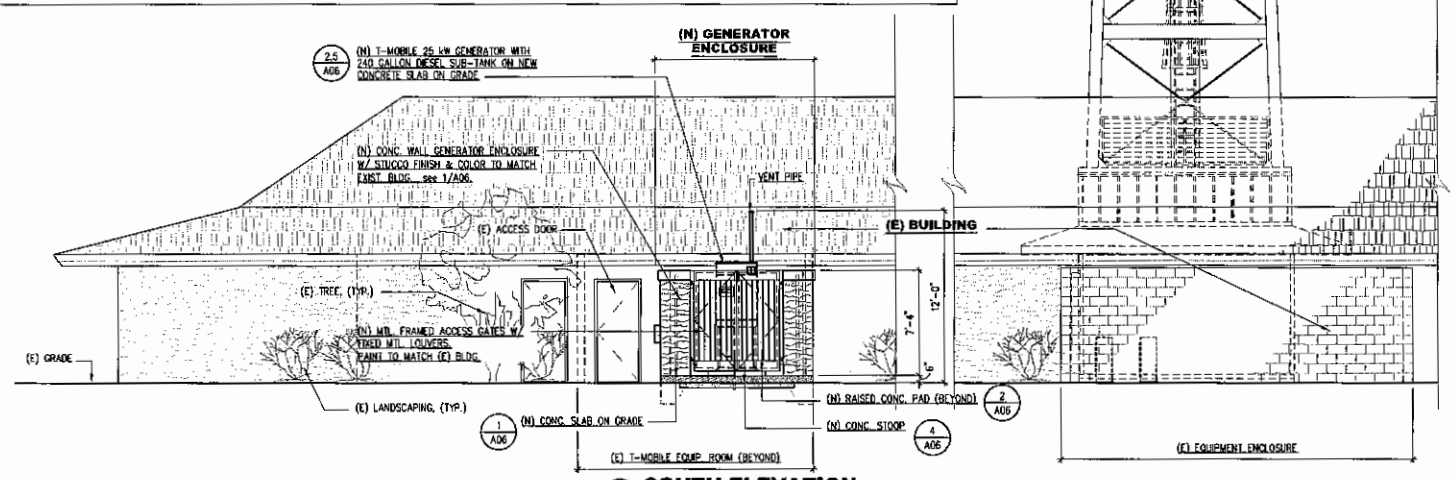
A02

4 OF -- SHEETS

100% PCD
NOT FOR
CONSTRUCTION



A WEST ELEVATION/SECTION
SCALE: 3/8 = 1'-0" (22 X 34 SHEET)
SCALE: 3/16" = 1'-0" (11 X 17 SHEET)



B SOUTH ELEVATION
SCALE: 1/4 = 1'-0" (22 X 34 SHEET)
SCALE: 1/8" = 1'-0" (11 X 17 SHEET)

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1030
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 | JOB NO.

LICENSURE:

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO
HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

WEST ELEVATION/SECTION, SOUTH ELEVATION

CURRENT ISSUE DATE/ISSUED FOR
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION
△		
△		
△		
△		
△		
△		

SHEET NUMBER
A03
5 OF
SHEETS

100% PCD
NOT FOR
CONSTRUCTION

GENERAL:

A. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STATE BUILDING CODE OF HAWAII (IBC, 2006 EDITION AS AMENDED BY THE CITY AND COUNTY OF HONOLULU). HOWEVER, WHERE REFERENCE IS MADE TO PERFORMANCE CONFORMING TO OTHER STANDARDS THE MORE STRINGENT SHALL APPLY.

B. THE CONTRACTOR SHALL COMPARE ALL THE CONTRACT DOCUMENTS WITH EACH OTHER AND REPORT IN WRITING TO THE ARCHITECT ALL INCONSISTENCIES AND OMISSIONS.

C. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE ARCHITECT ALL INCONSISTENCIES AND OMISSIONS.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED FOR STABILITY OF STRUCTURAL MEMBERS AND SYSTEMS.

E. CONSTRUCTION LOADING SHALL NOT EXCEED DESIGN LIVE LOAD UNLESS SPECIAL SHORING IS PROVIDED. ALLOWABLE LOADS SHALL BE REDUCED IN AREAS WHERE THE STRUCTURE HAS NOT ATTAINED FULL DESIGN STRENGTH.

F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE ADJACENT PROPERTIES, STRUCTURES, STREETS AND UTILITIES DURING THE CONSTRUCTION PERIOD.

G. DETAILS NOTED AS TYPICAL ON THE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED.

H. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS MUST SUBMIT IN WRITING ANY REQUESTS FOR MODIFICATIONS TO THE PLANS AND SPECIFICATIONS.

DESIGN CRITERIA:

A. SEISMIC
- a. SEISMIC IMPORTANCE FACTOR: 1.00
- b. MAPPED SPECTRAL RESPONSE ACCELERATIONS:
  - a. Ss 0.615
  - b. S1 0.179
- c. SPECTRAL RESPONSE COEFFICIENTS
  - a. Sds 0.536
  - b. Sd1 0.248
- d. SEISMIC DESIGN CATEGORY: C

B. WIND
- a. BASIC WIND SPEED -- 3 SECOND GUST 105 MPH
- b. WIND IMPORTANCE FACTOR & BUILDING CATEGORY 1.00
- c. WIND EXPOSURE CATEGORY B

FOUNDATION:

1. SLAB SHALL BE CONSTRUCTED UPON UNDISTURBED, NATURAL, SUBGRADE OR COMPACTED GRANULAR FILL WITH AN ASSUMED MINIMUM NET ALLOWABLE BEARING CAPACITY OF 2000 PSF.
2. STRUCTURAL FILL AND BACKFILL MATERIAL SHALL CONSIST OF A GRANULAR, WELL-GRADED MATERIAL, FREE OF ORGANIC MATTER, DEBRIS, AND PARTICLES GREATER THAN 3 INCHES IN MAXIMUM DIMENSION. IT SHALL BE NON-EXPANSIVE WITH LESS THAN 15 PERCENT OF FINES PASSING THE U.S. STANDARD #200 MESH SIEVE. IT SHALL HAVE A CBR VALUE OF AT LEAST 25, A LIQUID LIMIT OF 25 PERCENT OR LESS, AND A PLASTICITY INDEX OF 10 OR LESS.

REINFORCED CONCRETE:

1. CONCRETE AND RELATED WORK SHALL BE MIXED, PLACED, AND CURED IN ACCORDANCE WITH ACI 318 (LATEST EDITION), "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", PUBLICATION SP-15.
2. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS Fy=60,000 PSI.
3. FABRICATION OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-80 (LATEST EDITION), "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES."
4. ALL REINFORCEMENT BARS SHALL BE SECURELY WIRED AND SUPPORTED TO PREVENT SHIFTING WHEN CONCRETE IS PLACED.
5. REINFORCEMENT STEEL SHALL HAVE A MINIMUM CONCRETE COVER OF 3".
6. WHERE LAPPING OF BARS IS REQUIRED, BARS SHALL BE LAPPED 24 BAR DIAMETERS MINIMUM.
7. CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSION STRENGTH OF 4,000 PSI WITH A MAXIMUM SLUMP OF 3" AT TIME OF PLACING.
8. FOUNDATION SLAB SHALL BE LEVEL WITHIN ±1/4" AND HAVE A LIGHT BROOM FINISH. PROVIDE 3/4" x 45° CHAMFER ON ALL EXPOSED CONCRETE EDGES.

CONCRETE MASONRY UNITS (CMU):

A. REINFORCED MASONRY ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

B. CONCRETE MASONRY UNITS SHALL BE TYPE II, NORMAL WEIGHT HOLLOW LOAD-BEARING UNITS CONFORMING TO ASTM C-90 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI.

C. MORTAR SHALL BE TYPE "M" CONFORMING TO ASTM C270 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS.

D. GROUT SHALL CONFORM TO ASTM C476 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS.

E. ALL CELLS AND BOND COURSES WITH REINFORCEMENT AND INSERTS SHALL BE SOLID GROUTED. CLEANOUTS SHALL BE PROVIDED FOR ALL GROUT POURS OVER 5'-4" IN HEIGHT.

F. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1 1/2 INCHES BELOW THE TOP OF THE UPPERMOST UNIT.

G. CONDUITS SHALL BE LOCATED A MINIMUM OF TWO CELLS AWAY FROM WALL ENDS, CORNERS, AND INTERSECTIONS.

H. THE CONTRACTOR SHALL LOCATE CONSTRUCTION JOINTS SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE STRESSES.

I. WALLS SHALL BE CONSTRUCTED IN CONVENTIONAL RUNNING BOND, UNLESS OTHERWISE NOTED.

J. SEE ARCHITECTURAL DRAWINGS FOR LAYING PATTERN, HEIGHT OF UNITS, SURFACE TEXTURE, AND JOINT TYPE.

K. UNLESS OTHERWISE NOTED, CMU WALLS SHALL BE REINFORCED AS FOLLOWS:
8 INCHES THICK, #4 @ 24" O.C. VERTICAL REINFORCING,
2 - #4 @ 48" HORIZONTAL REINFORCING.

L. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW:
- a. STEEL REINFORCEMENT SHOP DRAWINGS WHICH SHALL INCLUDE DETAILS OF FABRICATION, BENDING, PLACEMENT, MATERIAL, GRADE, SCHEDULES, AND BENDS, PREPARED ACCORDING TO ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
- b. MATERIAL CERTIFICATES, SIGNED BY MANUFACTURERS CERTIFYING THAT THE MATERIAL AND GRADE INDICATED FOR REINFORCING BARS COMPLY WITH THE REQUIREMENTS.

REINFORCING STEEL:

A. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.

B. CLEAR DISTANCE BETWEEN THE SURFACE OF A BAR AND ANY SURFACE OF A MASONRY UNIT SHALL BE NOT LESS THAN 1/2 INCH, UNLESS OTHERWISE NOTED.

C. REINFORCING STEEL SHALL BE SPLICED WHERE INDICATED ON PLANS. PROVIDE LAP SPLICE LENGTH PER TYPICAL DETAILS AND SCHEDULE, UNLESS OTHERWISE NOTED.

D. BAR LAPS SHALL BE MADE AWAY FROM POINTS OF MAXIMUM STRESS. SPLICES SHALL BE STAGGERED WHERE POSSIBLE.

E. UNLESS OTHERWISE NOTED, ALL HORIZONTAL REINFORCING STEEL AT WALL AND WALL FOOTING CORNERS AND INTERSECTIONS SHALL EXTEND TO THE FAR FACE OF THE CORNER AND HOOKED A LENGTH OF 48 BAR DIAMETERS, BUT NOT LESS THAN 24 INCHES, AROUND THE CORNER.

F. BAR BENDS AND HOOKS SHALL BE "STANDARD HOOKS" IN ACCORDANCE WITH ACI 318.

G. WELDING OF REINFORCING STEEL IS NOT PERMITTED.

STRUCTURAL STEEL:

A. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION.

B. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.

D. STEEL WIDE FLANGE SECTIONS SHALL CONFORM TO ASTM A992.

H. BOLTS FOR STRUCTURAL STEEL TO STRUCTURAL STEEL CONNECTIONS SHALL CONFORM TO ASTM A307, GRADE A UNLESS OTHERWISE NOTED.

K. ANCHOR RODS FOR ANCHORAGE TO CONCRETE OR MASONRY SHALL CONFORM TO ASTM F1554 GRADE 36 UNLESS OTHERWISE NOTED.

O. ALL STEEL SHALL BE PRIME PAINTED IN THE SHOP.

P. EXPOSED STEEL SHALL BE HOT-DIPPED GALVANIZED.

Q. THE FOLLOWING SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW:
- a. MILL TEST REPORTS SIGNED BY MANUFACTURERS CERTIFYING THAT STRUCTURAL STEEL, BOLTS, AND OTHER COMPONENTS COMPLY WITH REQUIREMENTS.

SPECIAL INSPECTION:

A. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT SPECIAL INSPECTION OF PORTIONS OF THE WORK, AS REQUIRED BY THE BUILDING CODE OF THE CITY AND COUNTY OF HONOLULU, IS MADE AT THE APPROPRIATE TIME. THE CONTRACTOR SHALL GIVE TIMELY NOTICE OF WHEN AND WHERE INSPECTIONS ARE TO BE MADE AND PROVIDE ACCESS FOR THE INSPECTOR. THE CONTRACTOR SHALL CORRECT DEFECTIVE WORK AT NO ADDITIONAL COST TO THE OWNER AND PAY FOR RE-INSPECTION.

B. THE FOLLOWING STRUCTURAL WORK REQUIRES SPECIAL INSPECTION:
- a. DRILLED AND EPOXIED THREADED RODS IN CONCRETE OR MASONRY
- b. STRUCTURAL MASONRY

E. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE OWNER, LICENSED ENGINEER OR ARCHITECT OF RECORD, AND OTHER OWNER-DESIGNATED PERSONS. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT TO THE OWNER AND LICENSED ENGINEER OR ARCHITECT OF RECORD, STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THIS CODE. PRIOR TO THE FINAL INSPECTION REQUIRED UNDER THE BUILDING CODE SECTION 109.3.10 THE LICENSED ENGINEER OR ARCHITECT OF RECORD SHALL SUBMIT A WRITTEN STATEMENT VERIFYING RECEIPT OF THE FINAL INSPECTION REPORTS AND DOCUMENTING THAT THERE ARE NO UNRESOLVED CODE REQUIREMENTS THAT CREATE SIGNIFICANT PUBLIC SAFETY DEFICIENCIES.

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 | JOB NO.

LICENSURE:

BEAU A. SUZUKI — LICENSED PROFESSIONAL ARCHITECT — No. 9115 — HAWAII, U.S.A.

This work was prepared by me or under my supervision. Construction of this project will be under my observation.

Expiration date of license: April 30, 2023. "Observation or Construction" shall be defined in chapter 464, Hawaii Administrative Rules for Professional Engineers, Architects, Surveyors and Landscape Architects, State of Hawaii, Subchapter 5, Section 16-601-5, definitions effective 5/28/10.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO
HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

STRUCTURAL NOTES

CURRENT ISSUE DATE/ISSUED FOR

12/24/2021 -- PERMIT

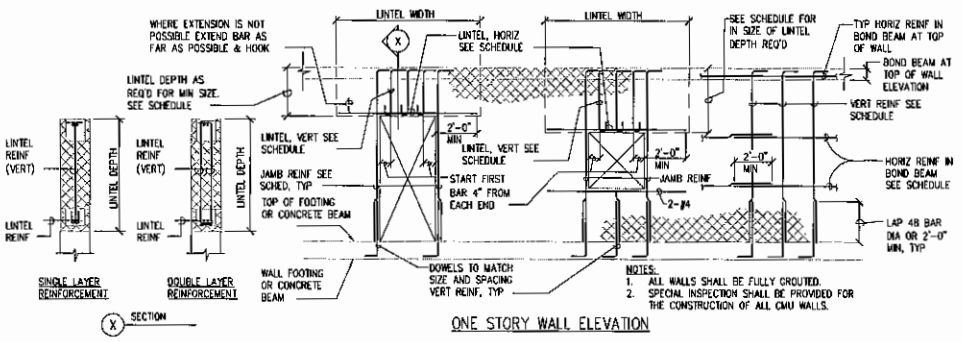
REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

SHEET NUMBER

A04

6 OF -- SHEETS

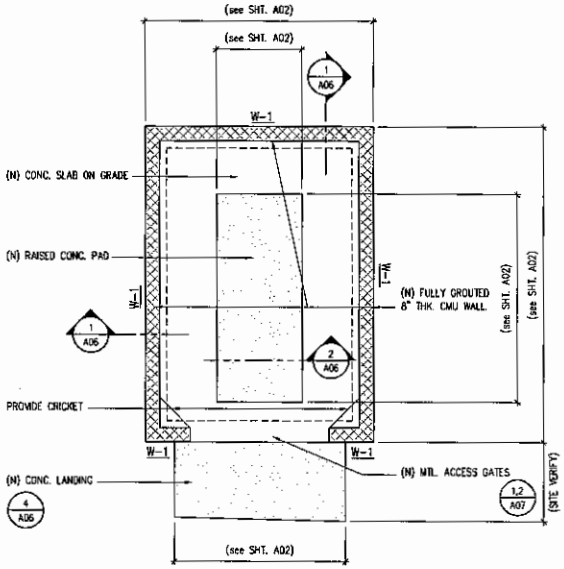
100% PCD
NOT FOR
CONSTRUCTION



OPENING SCHEDULE					
OPENING WIDTH	LINTEL DEPTH	REINFORCING			REMARKS
		JAMB	LINTEL HORIZ	LINTEL VERT	
W ≤ 4'-8"	1'-4"	2-#4	2-#4	#4 AT 16"	

CMU WALL REINFORCING SCHEDULE				
LOCATION	WALL THICKNESS	BAR SIZE AND SPACING		
		HORIZ	VERT	REMARKS
W-1	8"	2-#4 AT 48"	#4 AT 32" CENTERED	TYPICAL

2 TYPICAL CMU WALL ELEVATION

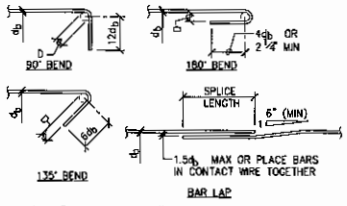


A FOUNDATION PLAN

SCALE: 3/8" = 1'-0" (22 x 34 SHEET)
SCALE: 3/16" = 1'-0" (11 x 17 SHEET)

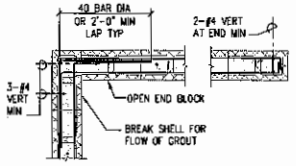
MINIMUM SPLICE & EMBEDMENT LENGTHS					
BAR SIZE	LAP SPLICE		EMBEDMENT		
			STRAIGHT		
	BOT BAR OR WALL BAR	TOP BAR	BOT BAR OR WALL BAR	TOP BAR	W/ STD HOOK
#3, #4	29"	38"	22"	29"	11"
#5	36"	47"	28"	36"	14"
#6	43"	56"	33"	43"	17"

1. LENGTHS ARE FOR CONCRETE BEAMS & COLUMNS WITH REBAR SPACED 1 BAR DIAMETER MIN OC. AND CONCRETE WALLS WITH REBARS SPACED 2 BAR DIAMETERS MIN O.C. INCREASE BAR LENGTH 50% FOR BARS SPACED CLOSER THAN MINIMUMS SPECIFIED.
2. "TOP BARS" ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST BELOW.



D = 6d_b FOR #5 AND SMALLER
D = 8d_b FOR #9 TO #11

3 TYPICAL REBAR SPLICE & EMBEDMENT LENGTH SCHEDULE



NOTE:
PROVIDE CONTINUOUS HORIZONTAL TRUSS TYPE JOINT REINFORCING BETWEEN BOND BEAMS AT 16" MAX.

1 TYPICAL CMU WALL REINFORCING INTERSECTION

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1850
HONOLULU, HAWAII 96814 (808) 524-2446

ISSUE 001 JOB NO.

LICENSURE:

BRIAN A. SUZUKI LICENSED PROFESSIONAL ARCHITECT No. 9115 HAWAII, U.S.A.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

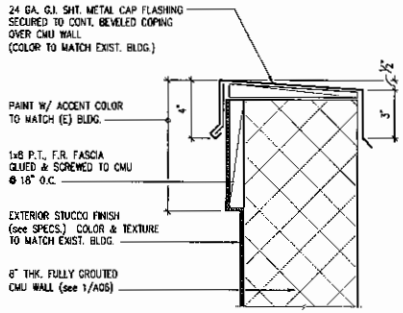
FOUNDATION PLAN, STRUCTURAL DETAILS

CURRENT ISSUE DATE/ISSUED FOR:
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION

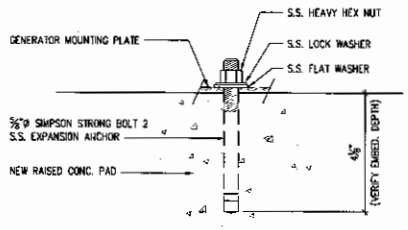
SHEET NUMBER
A05
7 OF -- SHEETS

100% PCD
NOT FOR
CONSTRUCTION



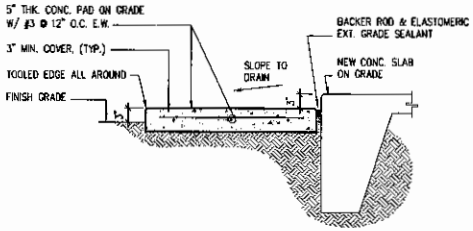
6 CAP FLASHING DETAIL

SCALE: 3" = 1'-0" (22 X 34 SHEET)
SCALE: 1 1/2" = 1'-0" (11 X 17 SHEET)



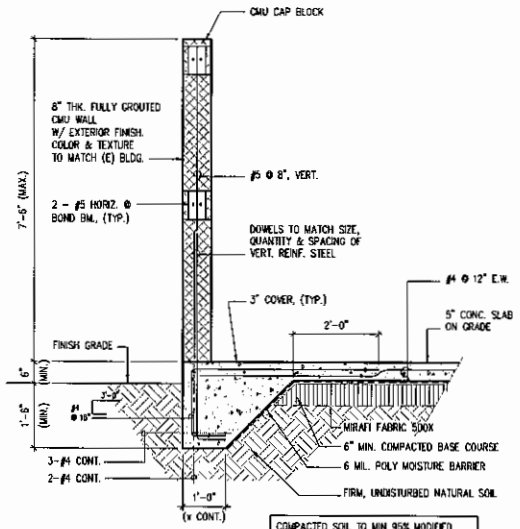
3 ANCHOR BOLT DETAIL

SCALE: 6" = 1'-0"
SCALE: 3" = 1'-0"



4 CONC . STOOP DETAIL

SCALE: 1" = 1'-0" (22 X 34 SHEET)
SCALE: 1/2" = 1'-0" (11 X 17 SHEET)

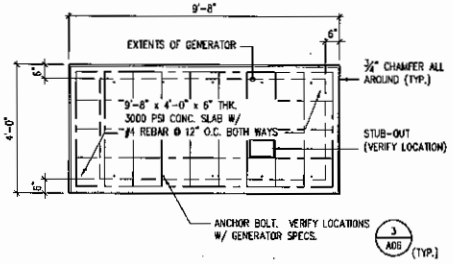


1 WALL SECTION

SCALE: 3/4" = 1'-0" (22 X 34 SHEET)
SCALE: 3/8" = 1'-0" (11 X 17 SHEET)

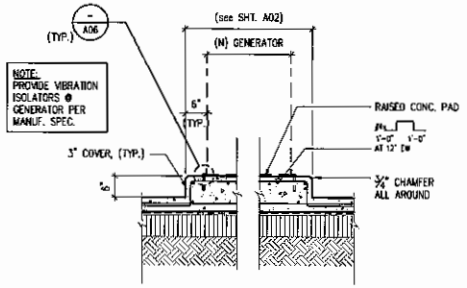
NOTES:

1. CONTRACTOR SHALL VERIFY STUB-OUT LOCATIONS AT CONCRETE PAD FOR GENERATOR AS PER MANUFACTURERS SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY ANCHOR BOLT LOCATIONS AT CONCRETE PAD FOR GENERATOR AS PER MANUFACTURERS SPECIFICATIONS. ALL HARDWARE TO BE STAINLESS STEEL
3. IF EQUIPMENT SET DATE WILL BE WITHIN 24 HRS. OF SLAB POUR THEN CONTRACTOR SHALL USE 5000 P.S.I. CONCRETE (MIN.) TO OBTAIN MIN. 1800 P.S.I. CONCRETE WITHIN THE ALLOTTED 48 HRS. (NO EXCEPTIONS).
4. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN FROM PLANT 48 HOURS PRIOR TO POUR.



5 GENERATOR PAD PLAN

SCALE: 1/2" = 1'-0" (22 X 34 SHEET)
SCALE: 1/4" = 1'-0" (11 X 17 SHEET)



2 GENERATOR PAD SECTION

SCALE: 3/4" = 1'-0" (22 X 34 SHEET)
SCALE: 3/8" = 1'-0" (11 X 17 SHEET)

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 JOB NO.

LICENSURE:

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

STRUCTURAL DETAILS

CURRENT ISSUE DATE/ISSUED FOR

12/24/2021 -- PERMIT

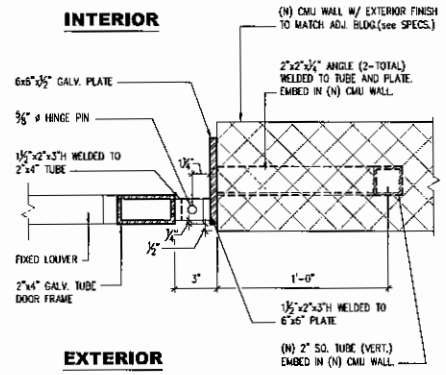
REV.	DATE	DESCRIPTION

SHEET NUMBER

A06

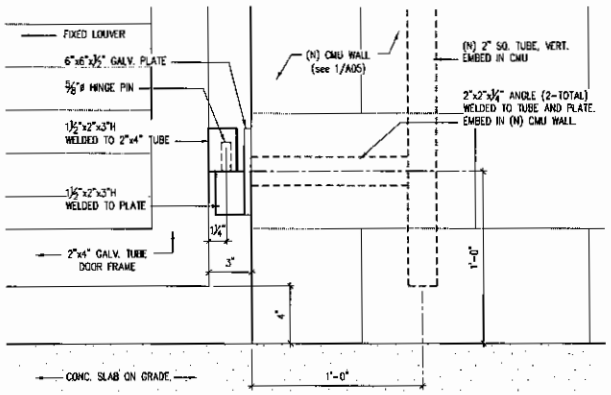
8 OF - SHEETS

100% PCD
NOT FOR
CONSTRUCTION



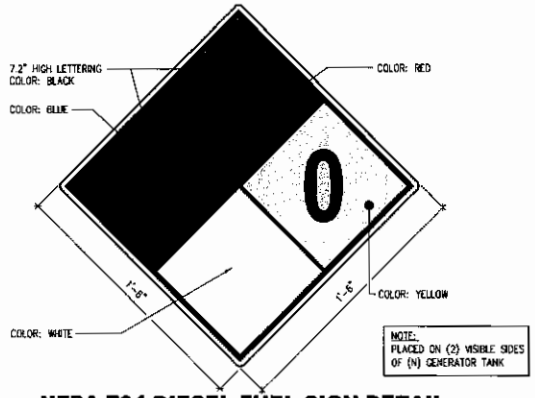
1 DOOR FRAME/JAMB DETAIL

SCALE: 3" = 1'-0" (22 X 34 SHEET)
SCALE: 1 1/2" = 1'-0" (11 X 17 SHEET)



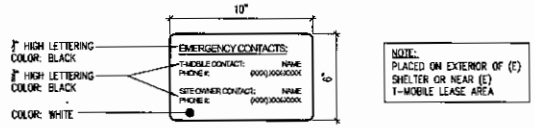
2 DOOR FRAME/JAMB ELEVATION

SCALE: 3" = 1'-0" (22 X 34 SHEET)
SCALE: 1 1/2" = 1'-0" (11 X 17 SHEET)



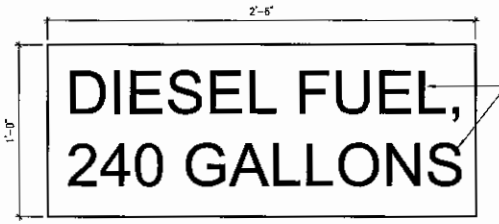
NOTE:
PLACED ON (2) VISIBLE SIDES OF (N) GENERATOR TANK

NFPA 704 DIESEL FUEL SIGN DETAIL



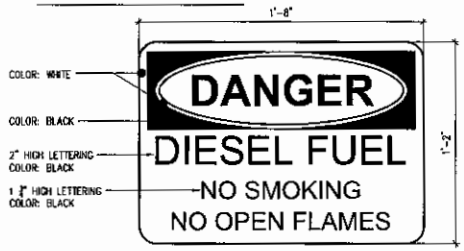
NOTE:
PLACED ON EXTERIOR OF (E) SHELTER OR NEAR (E) T-MOBILE LEASE AREA

EMERGENCY CONTACT SIGN



NOTE:
PLACED ON (2) VISIBLE SIDES OF (N) GENERATOR TANK.

FUEL SIGN DETAIL



NOTE:
PLACED ON VISIBLE SIDE OF (N) GENERATOR TANK.

NO SMOKING/NO OPEN FLAMES DETAIL

1 SIGNAGE DETAILS

SCALE: 3" = 1'-0" (22 X 34 SHEET)
SCALE: 1 1/2" = 1'-0" (11 X 17 SHEET)

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE A050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 JOB NO.

LICENSURE:

BEAU A. SUZUKI
LICENSED PROFESSIONAL ARCHITECT
No. 9113
HAWAII, U.S.A.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO
HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

DETAILS

CURRENT ISSUE DATE/ISSUED FOR

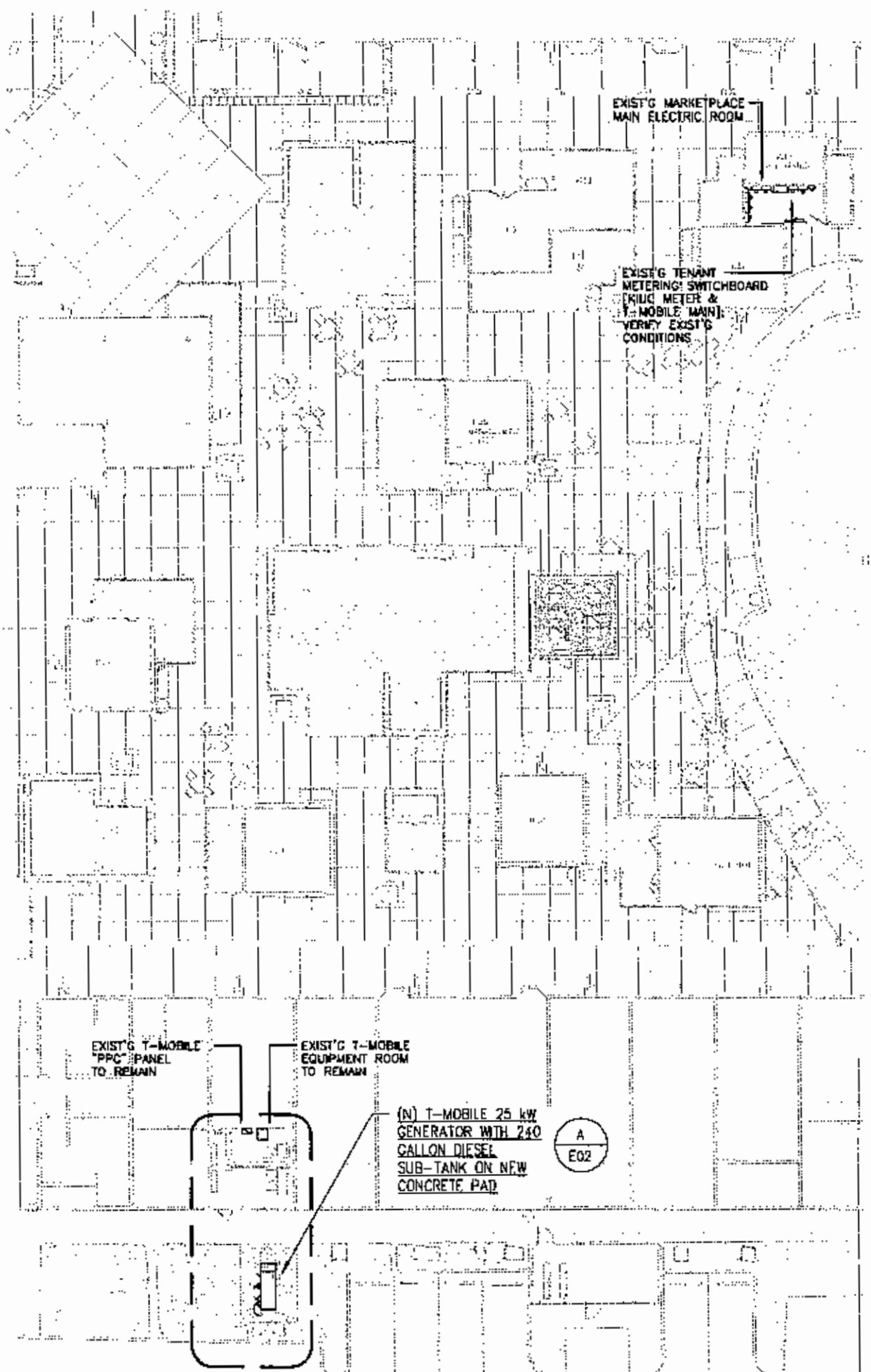
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION

SHEET NUMBER

A07

9 OF -- SHEETS



(A) OVERALL SITE ELECTRICAL PLAN

SCALE: 1/16 = 1'-0" (22 X 34 SHEET)
SCALE: 1/32" = 1'-0" (11 X 17 SHEET)

0 4 8 16 24 32ft.

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

1.01 GENERAL CONDITIONS: DRAWINGS AND GENERAL PROVISIONS OF CONTRACT APPLY TO WORK OF THIS SECTION.

1.02 SCOPE: FURNISH ALL MATERIALS REQUIRED TO COMPLETE ALL ELECTRICAL WORK. "PROVIDE" SHALL MEAN "FURNISH AND INSTALL" WHEN USED HEREIN.

A. IN GENERAL, THE FOLLOWING WORK IS INCLUDED:

1. ELECTRICAL EMOLITION WORK AS INDICATED OR REQUIRED.
2. INSTALL AND CONNECT T-MOBILE FURNISHED GENERATOR SET AND AUTOMATIC TRANSFER SWITCH.
3. PROVIDE GROUNDING SYSTEM FOR TELEPHONE EQUIPMENT PER T-MOBILE REQUIREMENTS.

B. WIRING AND CONNECTING OF ALL ELECTRICAL EQUIPMENT SUPPLIED FOR INSTALLATION AND USE IN THIS CONTRACT NOT SPECIFICALLY LISTED AS "WORK BY OTHERS".

C. COORDINATE AND ARRANGE ELECTRIC (POWER) SERVICE CONNECTIONS WITH KAUAI ISLAND UTILITY COOPPERATIVE (KIUC).

D. COORDINATE AND ARRANGE COMMUNICATION SERVICE CONNECTIONS WITH HAWAIIAN TELCOM (HTCOM).

E. FURNISHING OF "CONTRACTOR SUBMITTALS" AND "PROJECT RECORD DRAWINGS".

1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS:

A. ELECTRIC SERVICE EXISTING BY KAUAI ISLAND UTILITY COOPERATIVE (KIUC).

B. TELEPHONE CABLING AS FURNISHED BY TELEPHONE SERVICE CARRIER AS SELECTED BY T-MOBILE.

C. TELEPHONE EQUIPMENT FURNISHED BY T-MOBILE.

1.04 QUALITY ASSURANCE:

A. COMPLY WITH THE REQUIREMENTS OF THEKAUAI COUNTY, STATE, KIUC, HAWAIIAN TELCOM AND T-MOBILE.

B. OBTAIN AND PAY FOR ALL REQUIRED FEES, PERMITS, LICENSES, ASSESSMENTS AND INSPECTIONS.

C. SPECIFICATIONS ARE ACCOMPANIED BY ARCHITECTURAL PLANS AND DIAGRAMMATIC ELECTRICAL PLANS SHOWING APPROXIMATE LOCATIONS OF LUMINAIRES, OUTLETS AND OTHER ELECTRICAL EQUIPMENT. LOCATIONS ARE APPROXIMATE AND BEFORE INSTALLATION, CONTRACTOR SHALL STUDY ADJACENT CONSTRUCTION DETAILS AND MAKE INSTALLATION IN THE MOST LOGICAL MANNER.

D. PRIOR TO THE START OF ROUGH-IN WORK, VERIFY ALL DIMENSIONS AND SIZES OF EQUIPMENT AT THE JOB SITE. CIRCUITS AND RACEWAY ROUTE ARE DIAGRAMMATIC AND MAY BE ALTERED IN ANY LOGICAL MANNER. HOWEVER, ALL CHANGES FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ARCHITECT AND INDICATED ON THE PROJECT RECORD DRAWINGS.

E. INSTALLATION SHALL BE COMPLETE IN EVERY DETAIL AND READY FOR USE. ANY ITEM SUPPLIED BY THE CONTRACTOR DEVELOPING DEFECTS WITHIN ONE (1) YEAR AFTER FINAL ACCEPTANCE SHALL BE REPLACED BY MATERIALS, APPARATUS OR PARTS, INCLUDING INSTALLATION LABOR TO MAKE SUCH DEFECTIVE PORTION OF COMPLETE SYSTEM CONFORM TO THE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS, WITHOUT ADDITIONAL COST TO THE OWNER OR T-MOBILE.

1.05 SUBMITTALS:

A. SUBMIT FOR REVIEW ELECTRONIC VERSION (.PDF) OF SHOP DRAWINGS OR CATALOG CUTS OF THE FOLLOWING EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT: ELECTRICAL APPARATUS.

B. "PROJECT RECORD DRAWINGS" SHALL INDICATE ALL CHANGES FROM THE CONTRACT DRAWINGS OF ALL CONCEALED WIRING. RECORD THIS INFORMATION ALONG WITH ANY REQUIRED CHANGES FROM THE CONTRACT DRAWINGS ON REPRODUCIBLE SEPIAS OR VELLUM. SUBMIT PROJECT RECORD DRAWINGS FOR REVIEW PRIOR TO THE FINAL SITE VISIT BY ARCHITECT.

PART 2 – PRODUCTS:

2.01 MATERIALS: MATERIALS AND EQUIPMENT SHALL BE NEW AND THOSE ITEMS LISTED BY UNDERWRITER'S LABORATORIES SHALL BEAR "UL" LABEL OF APPROVAL.

A. GALVANIZED RIGID CONDUIT (GRC) & ELECTRICAL METALLIC TUBING (EMT): HOT DIPPED GALVANIZED, 1/2", MINIMUM, GRC WITH THREAD FITTINGS. EMT WITH COMPRESSION OR SET SCREW FITTINGS.

B. PLASTIC CONDUIT: PVC, SCHEDULE 40.

C. WIRES: CONDUCTORS SHALL BE COPPER, 600 VOLTS, NO. 12 AWG, MINIMUM. CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID. CONDUCTORS NO. 8 AND LARGER SHALL BE STRANDED. UNLESS SPECIFIED OR INDICATED OTHERWISE, OR REQUIRED TO BE OTHERWISE BY NFPA 70, ALL POWER AND LIGHTING WIRES SHALL BE NEC TYPE XHHW, THW OR THWN.

D. METERING EQUIPMENT: TYPE AND RATINGS AS INDICATED. COMPLY WITH REQUIREMENTS OF T-MOBILE AND KIUC. VERIFY AND COORDINATE EQUIPMENT AND MOUNTING WITH KIUC AND T-MOBILE.

E. HARDWARE, SUPPORTS, BACKING, ETC.: PROVIDE ALL HARDWARE, SUPPORTS, BACKING AND OTHER ACCESSORIES NECESSARY TO INSTALL ELECTRICAL EQUIPMENT. WOOD MATERIALS SHALL BE TERMITE TREATED; IRON AND STEEL MATERIALS SHALL BE GALVANIZED FOR CORROSION PROTECTION AND NONFERROUS MATERIALS SHALL BE BRASS OR BRONZE.

PART 3 – EXECUTION

3.01 CONSTRUCTION METHODS:

A. COMPLY WITH ALL LOCAL ORDINANCES AND REGULATIONS OF THE COUNTY OF KAUAI, THE STATE, KIUC, HAWAIIAN TELCOM AND T-MOBILE. IN ADDITION, WORKMANSHIP SHALL BE SUBJECT TO ARCHITECT'S REVIEW.

B. CONSTRUCTION SHALL CONFORM TO CONSTRUCTION PRACTICES AS RECOMMENDED BY AMERICAN ELECTRICIANS HANDBOOK BY CROFT (LATEST EDITION), NATIONAL ELECTRICAL CODE, NATIONAL ELECTRICAL SAFETY CODE AND APPLICABLE INSTRUCTIONS OF MANUFACTURERS OF EQUIPMENT AND MATERIAL SUPPLIED FOR PROJECT.

C. RACEWAYS:

1. GRC SHALL BE USED IN DAMP AND WET LOCATIONS AND WHERE SUBJECT TO PHYSICAL DAMAGE.
2. PVC MAY BE USED ONLY WHERE INDICATED AND NOT SUBJECT TO PHYSICAL DAMAGE.
3. PROVIDE PULL WIRE IN ALL EMPTY RACEWAYS.
4. INSTALL GROUND CONDUCTOR PER NATIONAL ELECTRICAL CODE.

D. CONDUCTORS:

1. CONDUCTOR FILL IN RACEWAYS SHALL CONFORM TO NEC CHAPTER 9, TABLE 3A.
2. FORM WIRES NEATLY IN ENCLOSURES AND BOXES.
3. SPLICES: SPLICES IN CURRENT CARRYING CONDUCTORS ARE NOT ALLOWED.

E. GROUNDING:

1. GROUNDING REQUIREMENT SHALL CONFORM TO T-MOBILE PRACTICE FOR PRIMARY GROUNDING SYSTEM FOR CELLULAR RADIO STATIONS AND T-MOBILE REQUIREMENTS.
2. METALLIC ENCLOSURES, RACEWAYS, AND ELECTRICAL EQUIPMENT SHALL BE GROUNDED ACCORDING TO THE REQUIREMENTS PER NATIONAL ELECTRICAL CODE, ARTICLE 250.
3. GROUND CONNECTION TO EQUIPMENT, RACEWAYS, MOTORS, GROUNDING TYPE RECEPTACLES AND OTHER METALLIC PARTS DIRECTLY EXPOSED TO UNGROUNDED CONDUCTORS BY CONTINUOUS NO 14, MINIMUM, GREEN COPPER CONDUCTOR.

F. FINISHING: PATCH, REPAIR AND RESTORE ALL STRUCTURAL AND ARCHITECTURAL ELEMENTS CUT, DRILLED OR DAMAGED FOR THE INSTALLATION OF ELECTRICAL SYSTEM. PATCHING, REPAIRING AND RESTORING SHALL BE SUBJECT TO REVIEW AND ACCEPTANCE BY THE ARCHITECT.

G. TESTING: TEST ALL WIRING AND CIRCUITS TO INSURE PROPER OPERATION ACCORDING TO THE FUNCTIONS SPECIFIED. ALL TESTS SHALL BE MADE IN THE PRESENCE OF T-MOBILE AND THE ARCHITECT.

END OF SECTION

SYMBOLS

[J]	JUNCTION BOX, SIZE AND TYPE AS NOTED
(E)	EQUIPMENT CONNECTION
WP	WEATHERPROOF
KIUC	KAUAI ISLAND UTILITY COOPERATIVE
HTCOM	HAWAIIAN TELCOM
———	WIRING IN EXISTING RACEWAY
———	WIRING IN RACEWAY BELOW GRADE
———	WIRING IN EXPOSED RACEWAY
———	WIRING IN FLEXIBLE METAL RACEWAY
— G —	GROUNDING CONDUCTOR

VERIFY EXISTENCE AND CONTINUITY OF SERVICE GROUND TO THE PROJECT AREA. CARRY GREEN GROUND WIRE THROUGHOUT NEW WORK AND GROUND EQUIPMENT PER THE NEC.

NOTE:

PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH 120-VOLT CIRCUIT (DO NOT USE COMMON NEUTRAL CONDUCTOR).

WIRING SHALL CONFORM TO NEC ARTICLE 310.15(B)(2).

COUNTY OF KAUA'I
CHAPTER 12, KAUA'I COUNTY BUILDING CODE
KAUA'I COUNTY CODE 1987, AS AMENDED
ARTICLE 6 – ENERGY CONSERVATION CODE

To the best of my knowledge, this project's design substantially conforms to:

Section 12-6.3 Adoption of the International Energy Conservation Code (IECC)
Section 12-6.4 Local Amendments to the IECC
For electrical and lighting systems (Section C405 and C408).

COMPLIANCE METHOD

- ☑ 2015 IECC as amended. Mandatory & Prescriptive
- ☐ 2015 IECC as amended. Mandatory & Total Building Performance
- ☐ ASHRAE Standard 90.1-2013. Mandatory & Prescriptive
- ☐ ASHRAE Standard 90.1-2013. Mandatory & Energy Cost Budget

INFORMATION IN CONSTRUCTION DOCUMENTS	YES	N/A
Interior Lighting		
Occupant sensor controls. C405.2.1	☐	☑
Time switch controls. C405.2.2	☐	☑
Daylight responsive controls. C405.2.3	☐	☑
Daylight zones on plans. C405.2.3.2 & C405.2.3.3	☐	☑
Guest room controls. C405.2.4	☐	☑
Interior lighting fixture schedule		
Input power for interior lighting fixtures. C405.4.1	☐	☑
Interior lighting fixture locations	☐	☑
Lighting control functional performance testing requirement. C408.3	☐	☑
Exterior lighting		
Exterior lighting controls. C405.2.5	☐	☑
Exterior lighting fixture schedule	☐	☑
Input power for exterior lighting fixtures	☐	☑
Exterior lighting fixture locations	☐	☑
Electrical		
Electrical transformer efficiency. C405.7	☐	☑
Tenant submetering. C405.10	☑	☐

FUNCTIONAL TESTING

C408.3.1 Functional testing. Prior to passing final inspection, the registered design professional shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturer's instructions. Functional testing shall be in accordance with sections C408.3.1.1 and C408.3.1.2 and for the applicable control type.

NOTES:

SIGNATURE: ______
DATE: 12.24.2021
NAME: Darrel Itano
TITLE: Electrical Engineer
LICENSE NO.: 4637-E [Expires: 04.30.2022]

CHAPTER 12, ARTICLE 6 – ENERGY CONSERVATION CODE, Adoption of the 2015 IECC
Revised 24 June 2018

100% PCD NOT FOR CONSTRUCTION

McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE: 001 | JOB NO.:

LICENSURE:

DARREL T. ITANO
LICENSED PROFESSIONAL ENGINEER
No. 4367-E
HAWAII, U.S.A.

This work was prepared by me or under my supervision. Construction of this project will be under my observation.

Expiration date of license: APRIL 30, 2022
"Observation of Construction" shall be defined in chapter 115, Hawaii Administrative Rules for Professional Engineers, Architects, Surveyors and Landscape Architects, State of Hawaii, Subchapter 1, Section 16-115-2 Definitions effective 6/23/23

PROJECT INFORMATION

T · ·Mobile·

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

OVERALL ELECTRICAL SITE PLAN
ELECTRICAL SYMBOLS
ELECTRICAL SPECIFICATIONS
ENERGY BUDGET

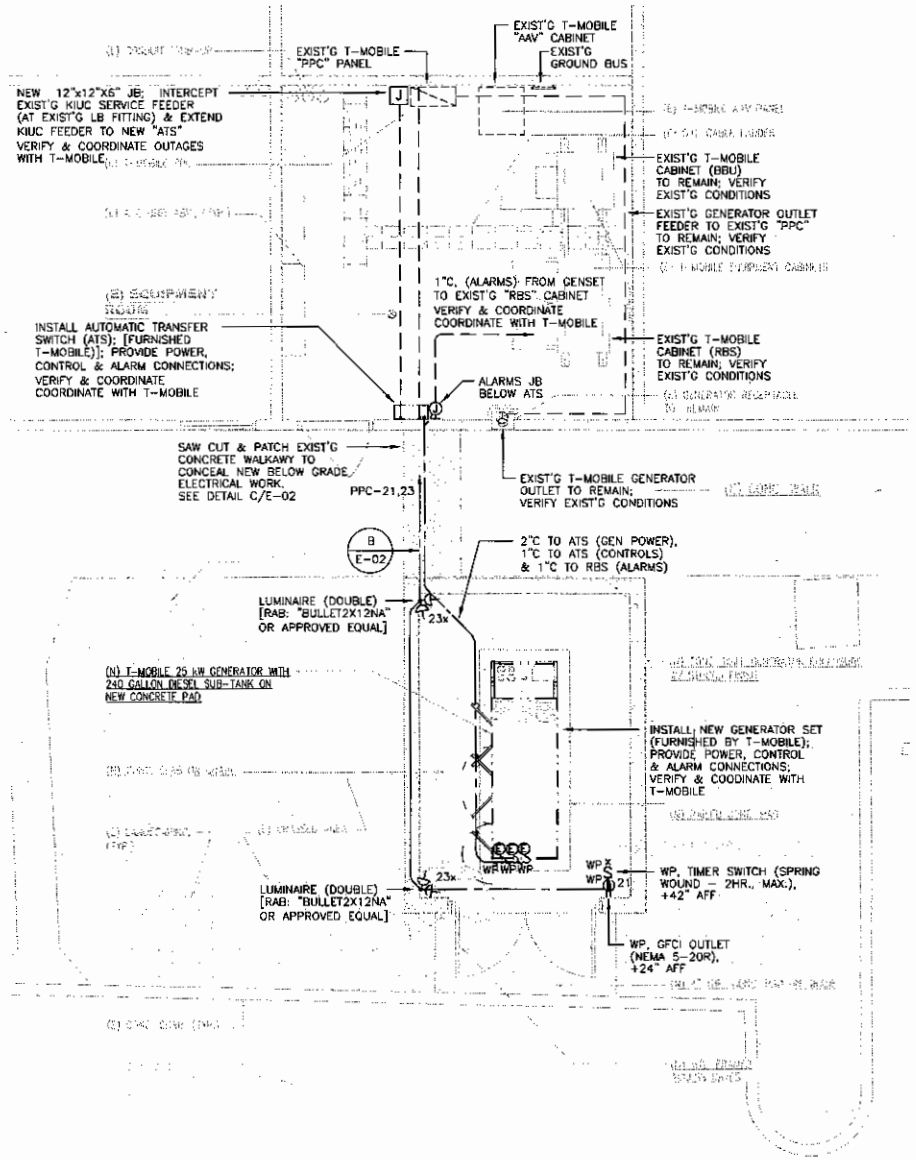
CURRENT ISSUE DATE/ISSUED FOR

12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION
△		
△		
△		
△		
△		
△		

SHEET NUMBER

E01



A ENLARGED ELECTRICAL SITE PLAN

SCALE: 3/8" = 1'-0" (22 X 34 SHEET)
SCALE: 3/16" = 1'-0" (11 X 17 SHEET)

0 1 2 4FL

BACKFILL NOTES

TYPE "A"

BEACH SAND, EARTH OR EARTH AND GRAVEL. THE MAXIMUM ROCK SIZE SHALL BE 1" AND THE MIXTURE SHALL CONTAIN NO MORE THAN 50 PERCENT BY VOLUME OF ROCK PARTICLES.

TYPE "B"

SELECT GRANULAR MATERIAL PASSING A 1-INCH SIEVE SUCH AS 3/4-INCH AGGREGATE BASE COURSE GRAVEL, S4C OR MATERIAL THAT IS FREE OR ORGANICS, DEBRIS, HIGHLY PLASTIC CLAY AND MEETS THE FOLLOWING GRADATION:

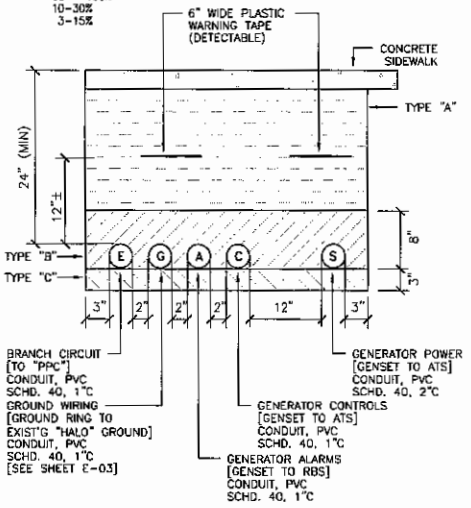
SIEVE SIZE	PASSING, BY WEIGHT
1"	100%
3/4"	90-100%
#4	35 - 100%
#40	10-30%
#200	3-15%

TYPE "C"

IF THE NORMAL MATERIAL IN THE BOTTOM OF THE TRENC NOT TYPE "B", AN ADDITIONAL 3" SHALL BE EXCAVATED . TYPE "B" BACKFILL SHALL BE PROVIDED.

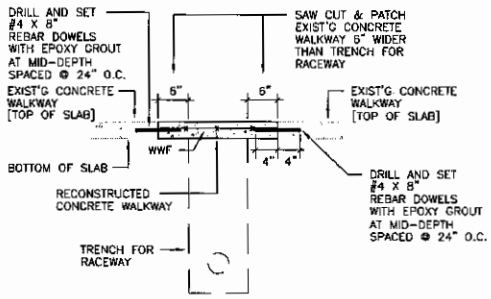
CONCRETE

3" ENCASEMENT. 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS. MAXIMUM AGGREGATE FOR DUCTLINE CONCRETE: 3/4"



B DUCT SECTION

NOT TO SCALE (22 X 34 SHEET)



C SIDEWALK REPAIR DETAIL

NOT TO SCALE (22 X 34 SHEET)

100% PCD
NOT FOR
CONSTRUCTION

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 | JOB NO.

LICENSURE:

DARREL T. TANO LICENSED PROFESSIONAL ENGINEER No. 4367-E HAWAII U.S.A.

This work was prepared by me or under my supervision.
Commencing of this project will be upon my discretion.
Expiration date of License: APRIL 30, 2023
"Observation of Construction" shall be defined in chapter 16, Hawaii Administrative Rules for Professional Engineers, Architects, Surveyors and Landscape Architects, State of Hawaii, Subchapter 1, Section 16-115-1, Definitions effective 9/30/04.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

ENLARGED ELECTRICAL SITE PLAN
DUCT SECTION
SIDEWALK REPAIR DETAIL

CURRENT ISSUE DATE/ISSUED FOR

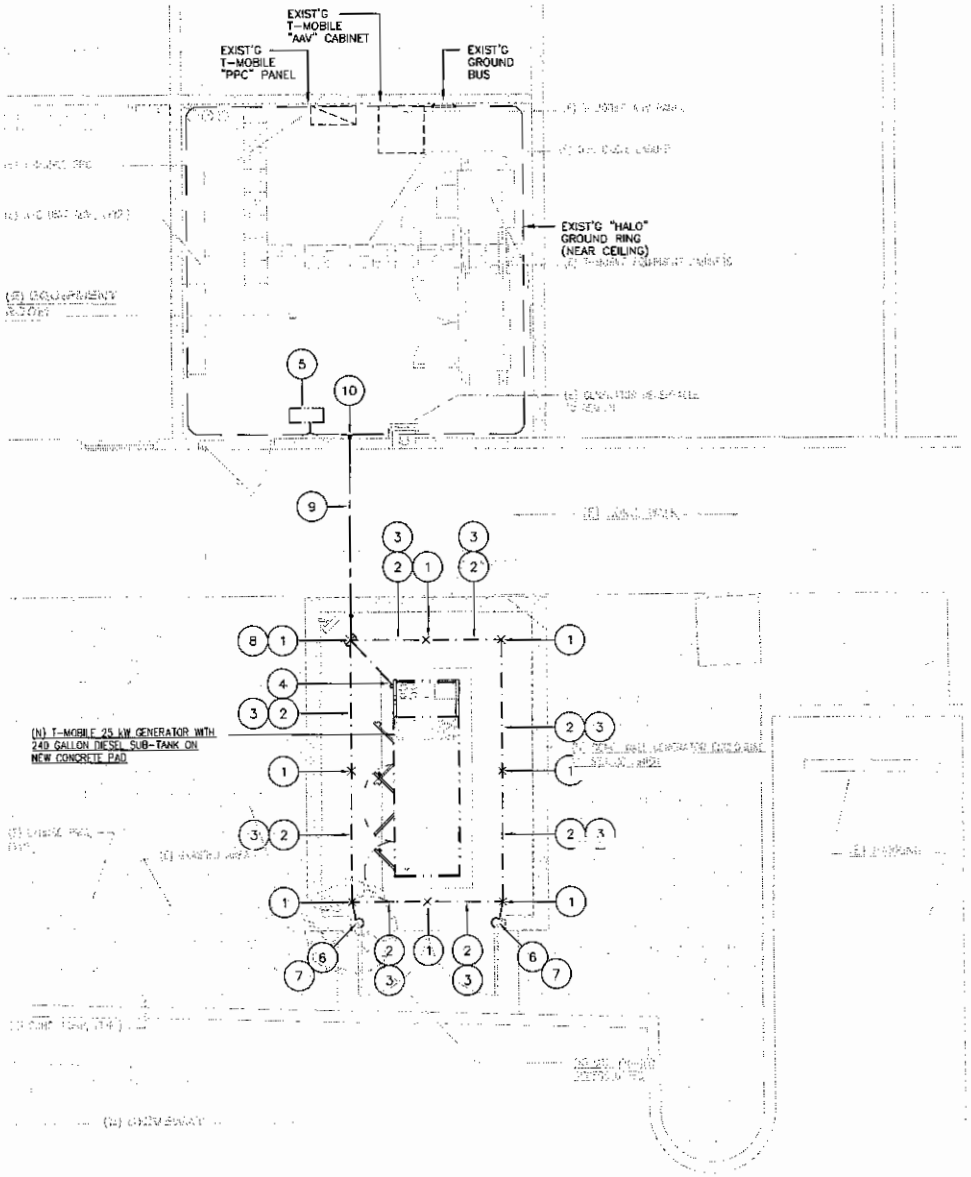
12/24/2021 – PERMIT

REV.	DATE	DESCRIPTION

SHEET NUMBER

E02

OF 14 SHEETS



A PARTIAL SITE GROUNDING PLAN

SCALE: 3/8 = 1'-0" (22 X 34 SHEET)
SCALE: 3/16" = 1'-0" (11 X 17 SHEET)

0 1 2 4ft.

GROUNDING KEY NOTES

1. 5/8" DIAMETER, 8' LONG SOLID COPPER GROUND ROD, APPROXIMATELY 24" FROM EQUIPMENT PERIMETER. TOP OF GROUND ROD SHALL BE AT 24" BELOW FINISHED GRADE. T-MOBILE MAY DIRECT THE CONTRACTOR TO PROVIDE ADDITIONAL GROUNDING TO ACHIEVE 3 OHMS RESISTENCE. TEST GROUNDING SYSTEM AND CERTIFY RESULTS.
2. GROUND RING SHALL BE BURIED 24" BELOW FINISHED GRADE AND APPROXIMATELY 24" FROM PAD PERIMETER. THE RING SHALL BE CONSTRUCTED OF #2 TINNED, SOLID COPPER. NO BEND SHALL HAVE CURVE OF LESS THAN TWO FEET RADIUS. BOND ALL GROUND CONNECTIONS BY THERMOWELD PROCESS.
3. ALL CONDUCTORS TO GROUND RING SHALL BE CONSTRUCTED OF #2 TINNED SOLID COPPER CONDUCTOR BURIED AT 24" BELOW FINISHED GRADE.
4. 1" PVC, STUB AT BASE OF GENERATOR WITH #2 TINNED, SOLID COPPER GROUND CONDUCTOR FROM GROUND BUS TO GENERATOR BASE. PROVIDE DOUBLE LUG GROUND CONNECTOR AT GENERATOR BASE; CONNECT TO GROUND RING.
5. GROUND "ATS" ENCLOSURE TO EXISTING 'HALO GROUND RING WITH #2 GREEN, COPPER GROUND CONDUCTOR. PROVIDE DOUBLE LUG GROUND CONDUCTOR AT "ATS" ENCLOSURE. SEE DETAIL SHEET E-05
6. CONNECT ACCESS GATE FRAME TO GROUND RING WITH #2 TINNED, SOLID COPPER CONDUCTOR. CADWELD TO FRAME AND THE EXTERIOR GROUND RING.
7. ACCESS GATES SHALL BE BRIDGED USING #2/0 INSULATED, STRANDED WELDING CABLE. CADWELD TO THE FRAME AND GATE. SEE DETAIL ON SHEET E-05.
8. GROUND ACCESS (INSPECTION) BOX. SEE DETAIL SHEET E-05.
9. 1" PVC, #2, GREEN COPPER GROUND CONDUCTOR FROM GENERATOR GROUND RING TO ROOM "HALO" GROUND RING. SEE SHEET E-02 AND E-05 FOR ADDITIONAL REQUIREMENTS AND DETAILS.
10. CONNECT GROUND CONDUCTOR FROM GENERATOR GROUND RING TO EXISTING EQUIPMENT ROOM "HALO" GROUND RING. SEE SHEET E-05 FOR "HALO" RING CONNECTION DETAIL.

100% PCD NOT FOR CONSTRUCTION

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 | JOB NO.

LICENSURE:

GARREL T. ITANO LICENSED PROFESSIONAL ENGINEER No. 4367-E HAWAII, U.S.A.

This work was prepared by me or under my supervision. Construction of this project will be under my observation.

Expiration date of license: APR. 30, 2022
"Observation of Construction" shall be defined as chapter 216, Hawaii Administrative Rules for Professional Engineers, Architects, Surveyors and Landscape Architects, State of Hawaii Subchapter 1, Section 16-115-2, Determine effective 8/28/15.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

PARTIAL SITE GROUNDING PLAN
GROUNDING KEY NOTES

CURRENT ISSUE DATE/ISSUED FOR

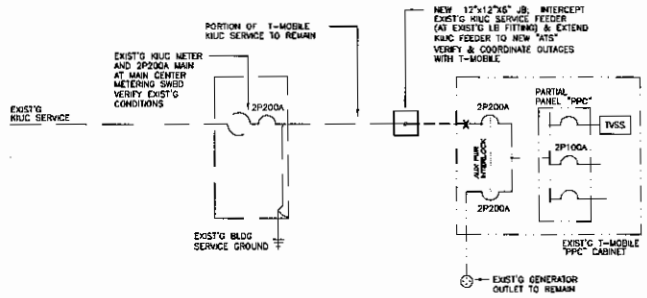
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION
△		
△		
△		
△		
△		
△		

SHEET NUMBER

E03

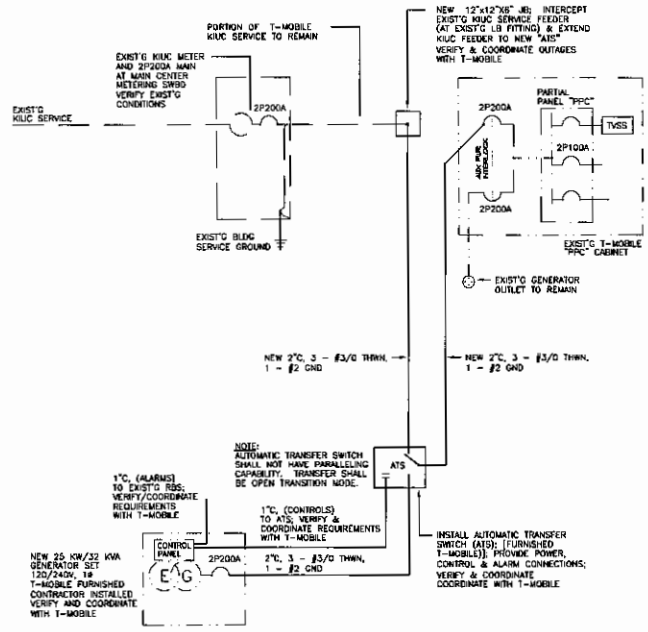
OF 12 SHEETS 14



A SINGLE LINE DIAGRAM - EXISTING

NOT TO SCALE

(E) EXISTING
(N) NEW



B SINGLE LINE DIAGRAM - NEW

NOT TO SCALE

(E) EXISTING
(N) NEW

PANEL PPC [EXISTING] 120 / 240 VOLTS 1 PHASE 3 WIRE

TYPE PART OF "PPC" CABINET 10 KAIC, MIN. BREAKERS

[X] GROUND KIT [ ] FLUSH MOUNTING [X] SURFACE

225A BUS
2P200A MAIN BREAKER

NOTES: ALL BREAKERS EXISTING UNLESS NOTED

CKT	LOAD	BKR	WIRE SIZE	L1	L2	WIRE SIZE	BKR	LOAD	CKT
1	TVSS	2 P 20A	E	10.0		C	2 P 100A	RBS CABINET	2
3			E		10.0	E			4
5	BBU CABINET	2 P 50A	E	0.7			2 P 15A	SPARE	6
7			E		0.7				8
9	ACCU -1A	2 P 30A	E	4.0			2 P 15A	SPARE	10
11			E		4.0				12
13	ACCU -1B	2 P 30A	E	2.0 0.7		E	20A	ROOM LIGHTS	14
15			E		2.0 0.7	E	20A	ROOM OUTLETS	16
17	P F B	1 P					1 P	P F B	18
19	P F B	1 P					1 P	P F B	20
21	OUTLET - GENERATOR AREA	20A (1)	10	0.5			1 P	P F B	22
23	LIGHTS - GENERATOR AREA	20A (1)	10		0.5		1 P	P F B	24
	TOTAL KVA/PHASE			17.9	17.6		CONN LOAD		35.5
							DEM FAC		0.8
							DEM LOAD		28.6

E = EXISTING WIRING
(1) = PROVIDE NEW BREAKER IN EXISTING SPACE

100% PCD
NOT FOR
CONSTRUCTION

MA McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001
JOB NO.

LICENSURE:

DARREL T. ITANO
LICENSED PROFESSIONAL ENGINEER
No. 4367-E
HAWAII, U.S.A.

This work was prepared by me or under my supervision. Documents of this project will be sealed by December.

Expiration date of license: APRIL 30, 2023
"Observations of Construction" shall be defined in chapter 16, Hawaii Administrative Rules for Professional Engineers, Architects, Surveyors and Landscape Architects, State of Hawaii, Subchapter 1, Section 16-115-1. Definitions otherwise 8/29/15.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

SINGLE LINE DIAGRAM
PANEL SCHEDULE

CURRENT ISSUE DATE/ISSUED FOR

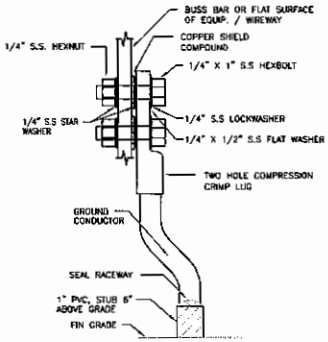
12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

SHEET NUMBER

E04

13 OF 14 SHEETS

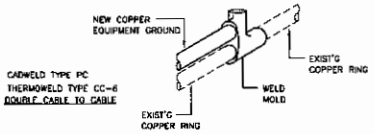


FOR GROUNDING OF ELECTRICAL EQUIPMENT ONLY

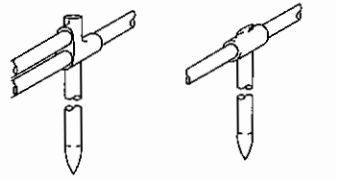
NOTES

1. ALL GROUND WIRES RUNNING FROM EQUIPMENT TO OTHER EQUIPMENT, BUS BARS OR GROUND RINGS SHALL BE ROUTED IN 1" PVC RACEWAY.
2. THE ENTIRE LUG AND AREA TO BE SPRAYED WITH CLEAR LACQUER OR COLD GALVANIZING SPRAY AFTER INSTALLATION

D EQUIPMENT GROUNDING DETAIL
NOT TO SCALE



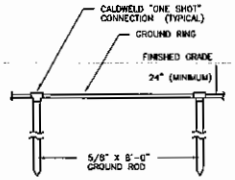
C GROUND RING CONNECTION DETAIL
NOT TO SCALE



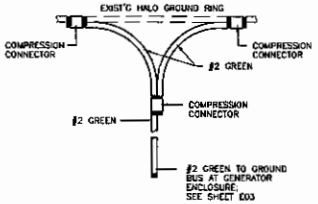
CADWELD TYPE NC
THERMOWELD TYPE CR-17
DOUBLE CABLE TO GROUND ROD

CADWELD TYPE GT
THERMOWELD TYPE CR-2
HORIZONTAL TO GROUND ROD

B GROUND RING DETAIL
NOT TO SCALE



A GROUND RING DETAIL
NOT TO SCALE



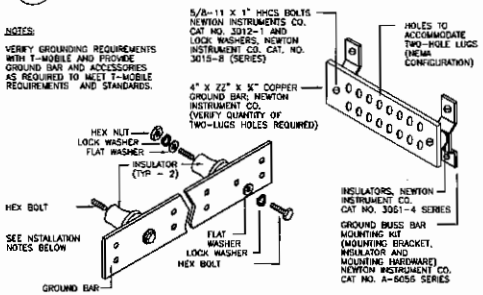
INSTALLATION NOTES:

1. BOLTS, WASHERS, AND NUTS SHALL BE STAINLESS STEEL.
2. SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF TWO EXPOSED THREADS.
3. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
4. APPLY COPPER-SHIELD COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN.

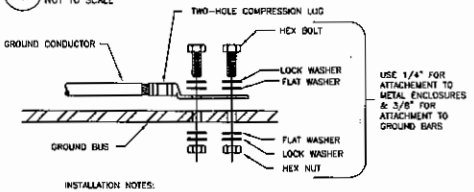
H "HALO' GROUND RING CONNECTION DETAIL
NOT TO SCALE

NOTES:

VERIFY GROUNDING REQUIREMENTS WITH T-MOBILE AND PROVIDE GROUND BAR AND ACCESSORIES AS REQUIRED TO MEET T-MOBILE REQUIREMENTS AND STANDARDS.



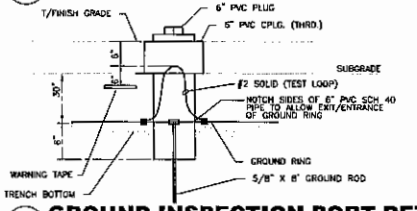
G GROUND BUS DETAIL
NOT TO SCALE



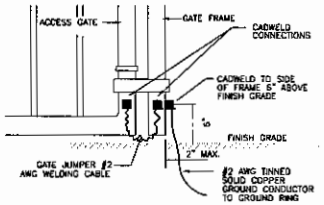
INSTALLATION NOTES:

1. BOLTS, WASHERS, AND NUTS SHALL BE STAINLESS STEEL.
2. SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF TWO EXPOSED THREADS.
3. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
4. APPLY COPPER-SHIELD COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND.

F GROUND BUS CONNECTION DETAIL
NOT TO SCALE



F GROUND INSPECTION PORT DETAIL
NOT TO SCALE



I GATE GROUNDING DETAIL
NOT TO SCALE

100% PCD
NOT FOR
CONSTRUCTION

McPEAK ARCHITECTS
ALA MOANA PACIFIC CENTER
1585 KAPIOLANI BOULEVARD,
SUITE 1050
HONOLULU, HAWAII 96814 (808) 524-3446

ISSUE 001 | JOB NO.

LICENSURE:

DARREL T. ITANO LICENSED PROFESSIONAL ENGINEER No. 4367-E HAWAII, U.S.A.

PROJECT INFORMATION

T-Mobile

NEW COCONUT MARKETPLACE-RELO HARDENING

T-MOBILE SITE I.D.: HI03337A
4-484 KUHIO HIGHWAY
KAPAA, KAUAI, HAWAII 96746
TMK: (4) 4-3-002:018

SHEET TITLE

ELECTRICAL DETAILS

CURRENT ISSUE DATE/ISSUED FOR

12/24/2021 -- PERMIT

REV.	DATE	DESCRIPTION

SHEET NUMBER

E05

14 OF 14 SHEETS

EXHIBIT 'C'

(APPLICANT'S LETTER OF REQUEST)

Telecom Site Development Services, Inc.
Consultant to T-Mobile

Sent via email to: planningdepartment@kauai.gov

February 8, 2022

Kauai Planning Commission
4444 Rice Street, Suite A473
Lihue, Hawaii 96766

RE: Request to be Placed on the March 8th Planning Commission Agenda Regarding a Request to Remove Condition #1 from Class IV Zoning Permit Z-IV-2003-19 & Use Permit U-2003-18
TMK: (4) 4-3-002:018

Dear Planning Commission Chair Apisa & Members:

I am a consultant to T-Mobile and am currently working with the landlord of the Coconut Marketplace for the installation of an emergency backup generator. The shopping center owner, SMK, Inc., has approved of the use and installation of our new emergency generator. This generator is needed to provide continuous and uninterrupted electrical power to T-Mobile's cellular mobile network that provides service to the greater Kapaa community.

The amendments to the above referenced Class IV Zoning and Use Permits were granted to Verizon in 2019 and contains a Condition #1 which states:

"1. As represented by the applicant, no emergency or back up power generators will be installed on the project area."

At this time T-Mobile respectfully request that the Kauai Planning Commission remove this Condition #1 in order that T-Mobile may proceed with its plans to install an emergency back-up power generator. The January 9, 2019 Planning Commission Letter along with a copy of T-Mobile's emergency generator plans are attached.

Mahalo for your time.

Les Young
Consultant to T-Mobile

Attachment: January 9, 2019 Planning Commission Letter
T-Mobile Emergency Generator Plans dated 12/24/2021

1506 Ala Mahamoe Street Honolulu, Hawaii 96819
Phone: 808-265-1271 Email: youngl024@hawaii.rr.com