CHARMAINE TAVARES
Mayor

KATHLEEN ROSS AOKI
Director

ANN T. CUA
Deputy Director

COUNTY OF MAUI

DEPARTMENT OF PLANNING

December 2, 2010

Ms. Katherine Puana Kealoha, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Kealoha:

SUBJECT: FINAL ENVIRONMENTAL ASSESSMENT (EA) FOR A SHORELINE SLOPE REPAIR AND SEAWALL, LOCATED IN THE SHORELINE SETBACK AREA, AT 11 HALE MALIA PLACE, NAPILI, MAUI, HAWAII; TMK: (2) 4-3-003:096 (SM1 2009/0018) (EA 2009/0008) (SSV 2009/0005)

At its regularly scheduled meeting on November 23, 2010, the Maui Planning Commission accepted the Final EA for the subject project, and issued a *Finding of No Significant* Impact (FONSI). Please publish the Final EA and this FONSI determination in the December 23, 2010 issue of the Office of Environmental Quality Control (OEQC) *Environmental Notice*.

I have attached the completed OEQC Publication Forms and two (2) copies of the Final EA and two (2) CDs.

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

Sincerely,

CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for KATHLEEN ROSS AOKI
Planning Director

Attachments
xc: James A. Buika, Staff Planner
Jonathan Starr, Chair, Maui Planning Commission
Matt Sleppin, Chris Hart & Partners, LLC
West Maui Community Association (w/ Report)
Lahaina Public Library (w/ Report)
Project File (w/ Report)
General File
KRA:CIY:JAB:sa
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HRS Chapter 343 Final Environmental Assessment

in support of an

Application for Special Management Area Use Permit and Application for Shoreline Setback Variance

11 Hale Malia Place
Shoreline Slope Repair and Seawall

TMK (2) 4-3-003:096
Napili, Maui, Hawaii

July, 2010

Prepared for:
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415/775-1220

Prepared by:
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I. PROJECT INFORMATION

A. PURPOSE OF THE REQUEST

The purpose of this Final Environmental Assessment (EA) is to analyze the potential impacts related to the construction of permanent erosion control and slope stabilization structures at the site of a catastrophic slope and seawall failure that resulted from severe storm activity in December, 2007.

This Final EA is submitted in support of the following application requests: 1). Special Management Area (SMA) Use Permit; and 2). Shoreline Setback Variance. Preparation of an EA is required in compliance with the provisions of Chapter 343, Hawaii Revised Statutes (HRS), since the project involves an action within the Shoreline Setback Area (**See:** Appendix A, Certified Shoreline Survey Map, and Appendix B, Shoreline Setback Determination)

B. PROJECT PROFILE

Project:	Erosion control and slope stabilization
Project Address:	11 Hale Malia Place Napili, Maui, Hawaii
Project TMK:	(2) 4-3-003:096
Parcel Size:	0.29 acres (12,632 square feet)
Existing Land Use:	Single-family Residence
Access:	Hale Malia Place

C. IDENTIFICATION OF THE APPLICANT/OWNER

Land Owner:	Ms. Marcia Lucas
Address:	2440 Vallejo St. San Francisco, CA 94123
Contact:	Mr. John Edwards, AIA Edwards Design Group, Inc.
Phone:	Voice: (808) 951-5926 x606 Facsimile: (808) 951-6519

D. CONSULTANTS

Land Use Planner & Landscape Architect:	Chris Hart & Partners, Inc. 115 N. Market Street Wailuku, Maui, Hawaii 96793
Phone:	Voice: (808) 242-1955 Facsimile: (808) 242-1956
Contact:	Mr. Christopher L. Hart, ASLA, President
Architect/Owner's Representative:	Edwards Design Group, Inc. 1357 Kapiolani Blvd. #1120 Honolulu, Hawaii 96814
Phone:	Voice: (808) 951-5926 x606 Facsimile: (808) 951-6519
Contact:	Mr. John Edwards, AIA
Civil Engineer:	R.T. Tanaka Engineers, Inc. 871 Kolu St. Wailuku, Hawaii 96793
Phone:	Voice: (808) 242-6861 Facsimile: (808) 244-7287
Contact:	Mr. Kirk Tanaka, P.E.
Structural/Geotechnical Engineer:	Meta Engineering, Inc. P.O. Box 4604 Honolulu, Hawaii 96812
Phone:	Voice: (808) 394-1420 Facsimile: (808) 394-1430
Contact:	Mr. Paul Weber, P.E.

E. ACCEPTING AGENCY

Agency:	Maui Planning Commission c/o Department of Planning, County of Maui 250 South High Street Wailuku, Maui, Hawaii 96793
Phone:	Voice: (808) 270-7735 Facsimile: (808) 270-7634
Contact:	Ms. Kathleen Ross Aoki, Planning Director

F. MAJOR LAND USE, DEVELOPMENT AND CONSTRUCTION APPROVALS

1. Building Permits from Department of Public Works (DPW) for bank stabilization structures.
2. Special Management Area (SMA) Use Permit by the Maui Planning Commission, via the Department of Planning.
3. Shoreline Setback Variance (SSV) approval by the Maui Planning Commission, via the Department of Planning.

G. EARLY CONSULTATION

The following agencies and individuals were consulted during the preparation of the Draft EA (**See:** Appendix C, "Summary of Early Public and Agency Consultation").

FEDERAL

1. Department of the Army, Corps of Engineers
2. Natural Resources Conservation Service
3. U.S. Fish and Wildlife Service

STATE OF HAWAII

1. Department of Land & Natural Resources, Office of Coastal and Conservation Lands
2. Department of Land & Natural Resources, Historic Preservation Division
3. Department of Land & Natural Resources, Land Division
4. University of Hawaii Sea Grant Extension Service
5. University of Hawaii Environmental Center
6. Department of Health
7. Dept of Business Economic Development & Tourism
8. Office of Hawaiian Affairs
9. Department of Hawaiian Home Lands
10. Department of Transportation
11. Department of Education

COUNTY OF MAUI

1. Department of Planning
2. Department of Public Works

3. Department of Environmental Management
4. Department of Fire Control & Public Safety
5. Department of Housing & Human Concerns
6. Department of Parks and Recreation
7. Department of Water Supply
8. Police Department

OTHER

1. Maui Electric Company
2. Neighboring Owners and Registered Lessees within 500 feet

H. COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT

The following agencies and individuals were consulted and responded to request for comment on the Draft Environmental Assessment during preparation of this Final EA (**See:** Appendix D, "Summary of Public and Agency Comments on Draft Environmental Assessment," and Appendix E, "Response to Comments from Maui Planning Commission on Draft Environmental Assessment").

Agencies providing comment on Draft Environmental Assessment

FEDERAL

1. Department of the Army, Corps of Engineers

STATE OF HAWAII

1. Department of Land & Natural Resources, Office of Coastal and Conservation Lands
2. University of Hawaii Sea Grant Extension Service
3. Department of Land & Natural Resources, Division of Aquatic Resources
4. Department of Land & Natural Resources, Engineering Division
5. Department of Land & Natural Resources, State Historic Preservation Division

COUNTY OF MAUI

1. Maui Planning Commission
2. Department of Planning, Zoning Administration and Enforcement Division
3. Department of Water Supply

Agencies with no substantive comment on Draft Environmental Assessment

STATE OF HAWAII

1. Department of Accounting and General Services
2. Maui/Lana'i Islands Burial Council

COUNTY OF MAUI

1. Department of Public Works, Development Services Administration
2. Department of Environmental Management
3. Department of Fire and Public Safety

II. DESCRIPTION OF THE PROPERTY AND PROPOSED ACTION

A. PROPERTY LOCATION

The subject parcel, TMK No. (2) 4-3-003:096, is located at 11 Hale Malia Place, Napili, Island of Maui. The parcel is located approximately 1.5 miles south of the resort community of Kapalua, in an area of residential development situated *makai* of Lower Honoapiilani Rd. (**See:** Figures No. 1.1 and 1.2, "Regional and Aerial Location Maps," and No. 2, "TMK Map"). The 0.29-acre (12,623.29 square foot) project site lies in the State *Urban* District, is proposed for *Single-Family* use by the West Maui Community Plan and is zoned *R-3 Residential District* by Maui County.

B. EXISTING LAND USE

Existing structures on the parcel include a single-family residence with attached garage, and a lanai structure including a swimming pool/spa. A shoreline bluff previously hardened by a rock and concrete veneer fronts the *makai* boundary of the property (**See:** Figures 3.1-3.5, "Site Photographs"). The bluff frontage is approximately 75 feet and the height of the bluff is approximately 29 feet above sea level.

C. LAND USE DESIGNATIONS

State Land Use Classification:	Urban (**See**: Figure No. 4, "State Land Use Map")
West Maui Community Plan:	SF Single Family (**See**: Figure No. 5, "West Maui Community Plan Map")
County Zoning:	R-3 Residential (**See**: Figure No. 6, "County Zoning Map")
Flood Zone Designation:	X - Minimal Flooding (**See**: Figure No. 7, "Flood Insurance Rate Map")
Special Designations:	Special Management Area (SMA) (**See**: Figure No. 8.1, "SMA Map"); Shoreline Setback Area

D. PROJECT BACKGROUND AND NEED

The existing single-family home was constructed in 1999-2000, on the site of a previously existing residence that was demolished in 1999. The rock and concrete facing previously fronting the bluff is estimated to have been constructed during the 1980s by a former owner. In December of 2007, severe high surf activity, combined with inundation of the *makai* yard area atop the bluff by heavy rains, resulted in the collapse of the rock facing, along with a portion of the bluff (**See:** Figure No. 3.1-3.5, "Site Photographs").

The unstable condition created by the slope collapse raised concerns about public safety and injury risk, along with risk of potential catastrophic property loss for the property owner and damage to neighboring properties. Based upon a site visit conducted on February 25, 2008 by representatives of Chris Hart & Partners, Inc., the County of Maui, Department of Planning, and the State of Hawaii, DLNR, Office of Coastal and Conservation Lands, the property owner was advised to apply for an Emergency SMA Permit for permanent bank stabilization. The SMA Emergency Permit Application was submitted to the Planning Department in April of 2008, and granted approval in May of 2008. A revised approval including a time extension was granted in December of 2008 (**See:** Appendix F, "SMA Emergency Permit").

Due to the urgency of the situation, as well as the risk involved with constructing and then removing a temporary structure on the unstable bluff face, representatives of OCCL and the Planning Department agreed that near-term emergency protection measures implemented under the Special Management Area (SMA) Emergency Permit should be concurrent with the permanent shoreline protection measures. The permanent shoreline protection measures would ultimately be subject to a SMA/SSV application and approval process as well as environmental review pursuant to Chapter 343, Hawaii Revised Statutes (HRS). The purpose of such an approach was to create, as quickly as possible, a long-term solution that would stabilize the bank at the shoreline in order to:

- Prevent further erosion of the bank and damage to the existing residence;
- Prevent potential undermining of the neighboring shoreline protection structures and associated damage to neighboring properties;
- Remove the public hazard associated with the unstable bluff; and
- Prevent earthen soils from eroding and entering the coastal waters

The purpose of this review is to obtain the necessary government approvals as outlined

above, and as required by Condition #11 of the SMA Emergency Permit approval (**See:** Appendix F).

E. ALTERNATIVES PREVIOUSLY CONSIDERED

The following alternatives were considered in developing the mitigation response to the slope collapse at the subject property:

2. No Action: This alternative would forego any mitigation measures.

Positive Impacts: By leaving the property in its existing state, the short term impacts associated with construction would be avoided.

Negative Impacts: This alternative does not address the liability/risk relative to public safety and damage to adjacent properties. The cost associated with loss of the existing residence from further erosion of the bluff would be an undue burden for the landowner to absorb. Erosion of silty clay soil from the bluff, and associated turbidity and sedimentation, poses a health risk to the coastal ecosystem. This alternative was deemed undesirable, and was dropped from consideration.

3. Relocation of Existing Residence: This alternative would relocate the existing single-family residence.

Positive Impacts: There would be no immediate construction-related impacts associated with development, and no risk of damage to the nearshore environment directly associated with the residence and swimming pool structures collapsing onto the shoreline area.

Negative Impacts: Impacts to the nearshore environment from continued erosion of the coastal bluff would continue. Likewise, the risks to public safety and neighboring properties would continue. There is insufficient space to relocate the residence on the lot. This alternative was therefore deemed infeasible and was dropped from consideration.

4. Removal of Lanai and Pool from Shoreline Setback Area: This alternative would remove the legally nonconforming portion of the lanai and pool structure that currently lies within the Shoreline Setback Area.

Positive Impacts: This alternative would remove a portion of a hardened structure from within the Shoreline Setback Area. The building lanai, of which the swimming pool is a part, was determined to be outside of the Shoreline Setback Area when the existing

residence was constructed in 1999, as well as when a portion of the lanai previously consisting of a koi pond was converted into the existing pool in 2003. Due primarily to changes in the shoreline setback calculations, approximately 200 square feet of the lanai now lies within the Shoreline Setback Area.

Negative Impacts: According to the project's consulting Geotechnical and Structural Engineer, the presence of the swimming pool was not a contributing factor in the collapse of the bluff. Removing the portion of the pool and lanai structure that is located within the Shoreline Setback Area would have no positive impact on the property or the shoreline area, as it would neither mitigate the threat to the existing habitable structure, nor the threat to public health, safety and welfare created by the collapsing bluff. This alternative was determined not to be a practical alternative for mitigating the threats to the property, the shoreline and the nearshore environment, and was therefore dropped from consideration.

5. Alternative Wall Design #1: Gunite/Shot-crete Facing

This alternative would involve injection grouting at the base of the bluff and the installation of concrete grade beams along the top of the bluff to provide support. Ground anchors and micropiles anchored into bedrock would be installed to stabilize the bank, and the face of the bank would then be covered with a sprayed-on concrete ("Gunite" or "Shot-Crete") finish.

Positive Impacts: This alternative would involve a shorter construction time frame than other bank stabilization alternatives and would also represent the least expensive alternative.

Negative Impacts: The sloped, exposed concrete face would create a visible pocket along the coastline, as the gunite surface follows the contour of the collapsed bluff face; thus, from an aesthetic standpoint, this alternative is not preferable. This alternative also provides limited opportunities to effectively address drainage concerns at the top of the bluff, and furthermore has a relatively short life span. This alternative was deemed sub-optimal, and was dropped from consideration.

5. Alternative Wall Design #2: Gabion Baskets or Dura-Block

This alternative would incorporate the installation of concrete grade beams along the top and bottom of the bluff to provide support, as well as micropiles and ground anchors secured into bedrock to stabilize the bank. Gabion baskets (caged riprap) or Dura-Block (dry-stacked masonry block) would be used to construct wing walls at adjacent property

lines and a main wall along the face of the bluff. High-drainage fill material will be placed behind the wall to improve drainage.

Positive Impacts: This alternative would involve a short construction time frame, and could be accomplished at a relatively moderate cost. It is an aesthetically superior alternative to the gunite, as the sloped wall could be covered with vegetation. This alternative would also provide a better opportunity for improved drainage than a gunite facing would provide, since space behind the gabion wall could be filled with high-drainage material.

Negative Impacts: This alternative does not provide a structural solution to mitigate further erosion, but functionally creates a veneer on an unstable slope. This alternative also has the shortest expected longevity of the alternatives considered, approximately 15 to 20 years. This alternative was deemed to be an unsuitable solution, and was dropped from consideration.

F. DESCRIPTION OF PROPOSED ACTION (PREFERRED ALTERNATIVE)

The preferred alternative is a cast-in-place concrete wall, tied against the bluff using micropiles anchored into bedrock. This alternative involves injection grouting at the base of the bluff and the installation of concrete grade beams along the top and bottom of the bluff to provide support for the wall. Concrete wing walls, installed perpendicular to the bluff at the lot boundary with adjacent properties, are integrated into the main wall system. High-drainage fill material is placed in areas where pockets exist between the wall and the face of the bluff, in order to maximize drainage. Ground anchors and micropiles are also installed beneath the swimming pool structure and anchored into bedrock, in order to shore up the pool structure and remove the surcharge weight of this structure from the top of the bluff. This alternative offers the greatest amount of protection for the site against further erosion and collapse, as well as the greatest structural longevity. In addition, the cast-in-place concrete tie-back facing is designed to blend in with the surrounding lava rock in order to minimize the structure's aesthetic impact when viewed from the water. (**See:** Appendix G, "Wall and Drainage System Drawings"). This alternative was determined to be the most practicable alternative relative to the intent of the shoreline setback rules, in terms of protecting ocean resources.

G. SHORELINE SETBACK DETERMINATION.

A survey of the shoreline fronting the lots was submitted to the Department of Land and Natural Resources (DLNR) for certification on June 15, 2009, and certified on September 15, 2009. (**See**: Appendix A, "Certified Shoreline Survey Map").

Section §12-203-4 of the Shoreline Rules for the Maui Planning Commission, pertaining to the establishment of Shoreline Setback lines, states:

> *"(a). All lots shall have a shoreline setback line that is the greater of the distances from the shoreline as calculated under the methods listed below or the overlay of such distances:*
>
> > *(i). Twenty-five feet plus a distance of fifty times the annual erosion hazard rate from the shoreline;*
> >
> > *(iii). For irregularly shaped lots, or where cliffs, bluffs, or other topographic features inhibit the safe measurement of boundaries and/or the shoreline, the shoreline setback line will be equivalent to twenty-five percent of the lot's depth as determined by the Director, to a maximum of one hundred fifty feet from the shoreline."*

Section §12-203-4 of the Shoreline Rules states,

> *"where the shoreline is fixed by (1). artificial structures that are nonconforming or that have been approved by appropriate government agencies and for which engineering drawings exist to locate the interface between the shoreline and the structure; or (2). exposed natural stabilized geographic features such as cliffs and rock formations, the Annual Erosion Hazard Rate shall cease at the interface."*

As the subject parcel is fronted by a high cliff, and the shoreline is fixed by an *"artificial structure"* which has *"been approved by appropriate government agencies and for which engineering drawings exist to locate the interface between the shoreline and the structure,"* the Shoreline Setback is equivalent to twenty-five percent of the lot's depth.

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

Average Lot Depth:	72.2 + 120.3 + 109.3 = 301.8
	301.8 / 3 = **100.6 feet**
Shoreline Setback:	100.6 x 0.25 = 25.15 = **25.2 feet**

The proposed Shoreline setback for the subject property is therefore 25.2 feet.

The existing residence is sited outside of the Shoreline Setback as determined by the ALD method. The pool and lanai structure encroaches slightly into the current Shoreline Setback area; however, at the date of their permitting and construction, the pool and lanai were determined to lie outside of the Shoreline Setback Area and therefore qualify as an existing, legally non-conforming structure within the Shoreline Setback Area. Construction of the erosion control and slope stabilization structures involves an action within the Shoreline Setback Area. Chapter VII of this application addresses the justification for the Shoreline Setback Variance (SSV).

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

A. PHYSICAL ENVIRONMENT

1. Land Use

Existing Conditions. The subject property is located in Napili, in an area known as Alaeloa, at TMK: (2) 4-3-003:096 (**See:** Figures No. 1.1 and 1.2, "Regional and Aerial Location Maps," and No. 2, "TMK Map"). The parcel is located along Keonenui Bay, situated on the northwest coast of West Maui, seven miles north of Lahaina Town and 1.5 miles south of Kapalua. The subject parcel and surrounding parcels are zoned for residential use.

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

North:	Zoning: R-3 Residential Community Plan: Single Family State Land Use: Urban **Existing uses**. Single-Family Residence.
South:	Zoning: R-3 Residential Community Plan: Single Family State Land Use: Urban **Existing uses**. Kahana Sunset Condominiums
East:	Zoning: R-3 Residential Community Plan: Single Family State Land Use: Urban **Existing uses.** Lower Honoapiilani Road; Single-Family Residences.
West:	Zoning: N/A Community Plan: N/A State Land Use: N/A **Existing uses.** Pacific Ocean.

Potential Impacts and Mitigation Measures. The project site is located within an area that is zoned for residential use and community planned for single-family and multi-family residential uses. The proposed long-term residential use of the property is permitted within the zoning district. The construction of the wall involves an action in the shoreline setback area. Chapter VII of this report contains an application for Shoreline Setback Variance to support construction of the wall, which is necessary in order to protect a residence which is being threatened. In the context of the *West Maui Community Plan*, adopted in 1996 in order to guide future development in the area, the existing use of the property is consistent with the proposed single family uses and the wall construction is supported because it meets the criteria set forth in the SMA Emergency Permit process.

2. Shoreline Conditions and Processes

Existing Conditions. The subject property is located along the northern portion of Keonenui Bay, between Alaeloa Point and Haukoe Point, approximately 3500 feet south of Napili Bay. Keonenui Bay is typical of this stretch of Maui's coastline, about 500 - 600 feet long and situated between two headlands, which protrude 400 to 500 feet seaward. The properties immediately south of the subject property, are occupied by the Kahana Sunset resort and condominiums. Shoreline properties further south are occupied by single-family residences. Vertical rock and concrete walls protect the properties along nearly the entire 500 - 600 foot stretch of coastline.

South of the property, fronting the Kahana Sunset, a sandy beach extends approximately 20 feet *makai* of a rock seawall. To both the north and south of the Kahana Sunset, the beach narrows dramatically, transitioning to an irregular, rough, rocky shore.

The beach at the base of the bluff fronting the property can be characterized as having an ephemeral profile. In essence, this means that sand comes and goes more or less regularly from nearshore deposits, depending on incident wave conditions. Photographic evidence documenting beach conditions at the site over a period of 35 years from 1975 to present shows variation, but no significant overall change, in beach conditions over time (**See:** Figure No. 12.1 – 12.3, "Historic Shoreline Conditions").

Potential Impacts and Mitigation Measures. Construction of the wall should have no significant negative impact on the beach fronting the property, nor on adjacent beaches and shoreline properties, for the following reasons: first, the wall hardens only approximately 75 feet of shoreline. The remaining 500 - 600 feet of shoreline along Keonenui Bay is already lined with vertical walls. Further, there is little sand fronting the subject property and the silty clay soil substrate on the subject property does not

constitute a resource for replenishment of beach sand. The wall is built on, and fronted by, rocky outcrops. These outcrops function as a naturally hardened shoreline at the base of the bluff, and absorb the primary forces of the waves and currents. The base of the wall is landward of the rock outcrops, which form a vertical cliff at the waterline. The wall is therefore not anticipated to have a significant impact on existing coastal processes, and should not aggravate or contribute to erosion.

3. Marine Resources

Existing Conditions. The nearshore seafloor in the bay consists primarily of sand in the central part of the bay, and coral, limestone and rock along the perimeter and beyond about 400 feet offshore. There is a narrow patch of rocky, cobble bottom close to shore in front of the subject property.

Nearshore waters adjacent to the project site are classified as open coastal "A," according to the Water Quality Standards map prepared by the State Office of Environmental Planning and Hawaii Department of Health (**See**: Figure No. 11, "Water Quality Standards Map").

Potential Impacts and Mitigation Measures. The immediate project area for the wall construction is inland of the waterline, and is expected to have no impact on marine resources.

4. Topography and Soils

Existing Conditions. The elevation on the upland portion of the project site ranges from 45 feet above mean sea level (AMSL) at the project driveway along Hale Malia Place to approximately 30 feet AMSL at the edge of the bluff, with a slope averaging approximately 15%.

According to the "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii (August 1972)," prepared by the United States Department of Agriculture Soil Conservation Service, the soils within the project site are classified as Kahana Silty Clay, 7 to 15% slopes (KbC) and Rough, Broken and Stony Land (rRS). Kahana Silty Clay, 7 to 15% slopes (KbC) is characterized by moderately rapid permeability, slow to medium runoff, and slight to moderate erosion hazard. Rough, Broken and Stony Land (rRS) is characterized as very steep, stony gulches or rock outcrops, where much of the surface area is covered with stones. Runoff is rapid and geologic erosion is active.

Potential Impacts and Mitigation Measures. The site is suitable for the subject development. The wall is designed to minimize extensive grading.

5. Flood and Tsunami Zone

According to Panel No. 150003 0264E of the Flood Insurance Rate Map, September 25, 2009, prepared by the United States Federal Emergency Management Agency (FEMA), the project site is situated in Flood Zone X. Zone X represents areas determined to be outside of the 0.2% annual chance floodplain. The National Flood Insurance Program does not regulate developments within Zone X (**See**: Figure No. 7, "Flood Insurance Rate Map").

Potential Impacts and Mitigation Measures. The existing residence is not located in a flood hazard or tsunami inundation zone. The wall is engineered to withstand the level of design forces necessary to minimize the likelihood that an extreme event would damage the structure. The project should not be affected by, or have adverse impacts upon its neighbors with regards to flood hazard potential. See Section III.D.3 for a discussion on drainage.

6. Terrestrial Biota (Flora and Fauna)

Existing Conditions. The U.S. Army Corps of Engineers Wetland Maps do not indicate the presence of wetlands in or around the subject property. Existing vegetation on the property primarily consists of grasses and native and non-native trees and shrubs. Avifauna typically found in the area includes the common mynah, several species of dove, cardinal, house finch, and house sparrow. Mammals common to this area include cats, dogs, rats, mice, and mongoose. No known rare, endangered, or threatened species of flora or fauna were discovered on the subject property.

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

7. Air Quality

Existing Conditions. Air quality refers to the presence or absence of pollutants in the atmosphere. It is the combined result of the natural background and emissions from many pollution sources. The impact of land development activities on air quality in a

proposed development's locale differs by project phase (site preparation, construction, occupancy) and project type. In general, air quality in West Maui is considered relatively good. Non-point source emissions (automobile) are not significant to generate a high concentration of pollutants. The relatively high quality of air can also be attributed to the region's exposure to wind, which quickly disperses concentrations of emissions. West Maui is currently in attainment of all pollutant criteria established by the Clean Air Act, as well as the State of Hawaii Air Quality Standards.

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

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

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

8. Noise Characteristics

Existing Conditions. The noise level is an important indicator of environmental quality. In an urban environment, noise is due primarily to vehicular traffic, air traffic, heavy machinery, and heating, ventilation, and air-conditioning equipment. Ramifications of various sound levels and types may impact health conditions and an area's aesthetic appeal. Noise levels in the vicinity of the project area are generally low. Traffic noise from Lower Honoapiilani Road and noise associated with the residential uses nearby are the predominant sources of background noise in the vicinity of the subject property.

Potential Impacts and Mitigation Measures. In the short-term, the project could generate some adverse impacts during construction. Noise from heavy construction equipment would be the dominant source of noise during the construction period. To minimize construction related impacts to the surrounding neighbors, the developer will limit construction activities to normal daylight hours, and adhere to the Department of Health's Administrative Rules, Chapter 11-46, Community Noise Control." In the longer-term, the project should not impact existing noise conditions in the area.

9. Archaeological/Historical/Cultural Resources

Existing Conditions. An Archaeological Monitoring Plan was prepared for the site in March of 2009 by Scientific Consultant Services, Inc. (SCS). The Archaeological Monitoring Plan was approved by the State Historic Preservation Division (SHPD) on April 9, 2009 (**See:** Appendix I, "Archaeological Monitoring Documents"), and Chris Hart & Partners, Inc. was notified of its approval on April 13, 2009. At this time, it was discovered that approval of building permits for the wall pursuant to the SMA Emergency Permit had not triggered review by SHPD. As a result, building permits had been approved and ground disturbing activities had already commenced at the site as of late March of 2009, without an archaeological monitor present.

An Archaeological Field Inspection was conducted at the subject property on April 14, 2009, by SCS archaeologist David Perzinski. Although excavation for placement of the wall was largely complete by this time, no structures had yet been placed, and the entire profile of the face of the cliff was visible for Mr. Perzinski's inspection. No material cultural remains or sites were identified during archaeological testing.

A Cultural Impact Assessment Report (CIA) for the project was prepared by historical consultant Jill Engledow, based upon archival research as well as consultation with individuals knowledgeable about historical and cultural practices associated with the area surrounding the project site. In May of 2009, during preparation of the CIA, Ms. Engledow interviewed former property owner Joan McKelvey, who indicated the possible presence of a burial cave at the site. Ms. McKelvey stated that the cave had been exposed by a partial collapse of the bluff circa 1980, and that her husband subsequently sealed the cave over with concrete (**See:** Appendix J, "Cultural Impact Assessment Report"). SCS archaeologist David Perzinski returned to the site on May 22, 2009 to investigate the possible existence of a burial cave at the site. No evidence of a cave was visible; therefore, it was determined that any cave present at the site had not been exposed by the collapse or subsequent excavation.

At its regular meeting on February 23, 2010, the Maui Planning Commission reviewed the Draft Environmental Assessment for the project and requested that the Applicant obtain statements from all individuals involved on-site with excavation for and construction of the wall that no potential human remains or Hawaiian artifacts had been encountered. Release forms were obtained from all contractors involved with excavation and construction at the site, and are included in Appendix E.

In addition, the Planning Commission requested that the Maui/Lanai Islands Burial Council (MLIBC) be contacted to provide comment on the project. The Applicant's representatives appeared before the MLIBC at its regular meetings on March 25 and April 29, 2010. Based upon presentation of the foregoing information, the MLIBC had no comment on the project.

Potential Impacts and Mitigation Measures. No surface or subsurface cultural remains were identified during archaeological inspection of the project site, nor during excavation for or construction of the wall. The project archaeologist has recommended that no future mitigation is necessary for the subject parcel.

The CIA concluded that because the subject property has long been developed for residential use, and because the cliff-top lot does not provide shoreline access, the project is unlikely to have an impact on use of the shoreline and/or associated cultural concerns. The CIA also concluded that there appear to be few, if any, other cultural resources that might be impacted by the armoring of the cliff below the property, and that the project does not interfere with any known, ongoing Hawaiian or non-Hawaiian gatherings, practices, protocols or access. It is instead an environmental issue, and decisions about the impact of the wall construction are more properly addressed by experts on the health of the shoreline.

The project is therefore not anticipated to have any impact on significant cultural and historic properties.

10. Visual Resources

Existing Conditions. The subject property is situated *makai* of Lower Honoapiilani Road within a residential area of Napili. The parcel does not front, and is not visible from, Lower Honoapiilani Road.

Napili offers sweeping views of the Pacific Ocean, Lanai, and Molokai. Public views of these resources exist in various locations from Lower Honoapiilani Road and

Honoapiilani Highway. Numerous scenic resources have been identified in the Napili area, which are identified and discussed in the Maui Scenic Coastal Resources Study, August 1990 (**See:** Figure No. 11, "Coastal Scenic Resources Map"). The resource/inventory map in this report identifies the views of the Pacific Ocean as a distinctive scenic resource along Lower Honoapiilani Road in the area of the project. The ocean is visible through nearby properties along Lower Honoapiilani Road.

Potential Impacts and Mitigation Measures. As the subject property is located in a private subdivision separated from Lower Honoapiilani Road by other existing development, no public views are available toward or through the subject property (**See:** Figure No. 3.1-3.5, "Site Photographs"). Development of the project will leave the view toward and through the subject property unchanged. The wall construction is designed to blend in with the surrounding bluff, such that it is not anticipated to impact the visual aesthetics of the site when viewed from the ocean. As such, the project is not anticipated to significantly impact public view corridors or the visual character of the site and its immediate environs.

B. SOCIO-ECONOMIC ENVIRONMENT

Potential Impacts and Mitigation Measures. Because of the limited scope of this project, impacts on the socio-economic environment will be minimal. The project will not cause a significant increase in the population of Napili. On a short-term basis, the project will support construction and construction-related employment.

C. PUBLIC SERVICES

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

D. INFRASTRUCTURE

1. Water

The Maui Department of Water Supply (DWS) provides public water service for the West Maui region. In addition to the County, private water utilities such as the Kapalua Water Company and the Hawaii Water Service Company provide domestic water

service for the Kapalua Resort and Kaanapali Resort, respectively. Domestic water and fire flow for the project will be provided by the County water system. The project area is served by 8-inch and 12-inch County waterlines on Lower Honoapiilani Road.

Potential Impacts and Mitigation Measures. Low flow drip irrigation and drought tolerant plants will be incorporated into the landscape planting plan in order to conserve water. As the project does not involve any alterations to the existing residence or other actions that would increase domestic water or fire flow demand, the project is not anticipated to impact County water systems.

2. Sewer

There exists a 21-inch gravity sewerline on Lower Honoapiilani Road, which is part of the County's Napili-Honokowai wastewater transmission system. The lot has an existing sewer lateral which connects to the sewer line. Wastewater collected from the area is transported to the Lahaina Wastewater Reclamation facility located approximately 2¾ miles south of the project site.

Potential Impacts and Mitigation Measures. The existing residence connects to the existing lateral and, given the nature of the project, no change in flow is expected. At the present time, the existing collection and transmission systems, pumping facilities and treatment plant have the capacity to handle the anticipated wastewater generated by the existing residence. According to the Wastewater Reclamation Division, County of Maui, the County is not charging assessment fees for any collection system upgrades or treatment plant facility expansion at this time.

3. Drainage

Generally, storm runoff generated by the residential property has discharged into the shoreline fronting the property either by sheet flow or by existing drainpipe outlets. The roof runoff and driveway are collected by the existing drainage system(s) that conveys the runoff to the shoreline bluff via underground pipes. The landscaped areas along the sides of the residence and the grassed (lawn) area behind the building drain into the shoreline bluff by surface flow.

Drainage calculations prepared by the Project Civil Engineer indicate that the existing residence and grassed/landscaped areas can generate 1.0 and 1.1 cubic feet per second (cfs) for 10-year and 50-year storm, respectively.

Potential Impacts and Mitigation Measures. The drainage system is laid out in Figure 6 of the Drainage Report and Best Management Practices Plan (**See:** Appendix H, "Drainage Report"). The main feature of the system is the installation of subsurface retention basins that are sized to retain the 50-year, 1-hour storm runoff volume generated by the existing residence. Storing the anticipated runoff volume will mitigate significant adverse drainage effects by the 50-year intensity storm on the shoreline.

The subsurface retention basins consist of 30 feet of combined 48" and 24" perforated pipes and 30 feet of single 24" perforated pipes, enveloped in crushed rock (refer to Appendix A of the Drainage Report for typical sections). The cumulative capacity of the basins is approximately 933 cubic feet (cf), which is greater than the expected 50-year, 1-hour storm volume of 791 cf, resulting in a reduction of about 142 cf.

Aside from the subsurface retention basins, the drainage system also includes grated drain inlets and drainage pipes. Lawn runoff will be collected by the grated drain inlets while the PVC drain pipes will collect and convey roof runoff to the retention basins. Existing drainage pipe outlets that directly discharge into the shoreline bluff have been removed and/or intercepted to empty into the retention basin.

4. Roadway

Lower Honoapiilani Road, which provides access to the project site, is a two-lane, paved county roadway providing access for local traffic to properties in Napili and Kahana. It begins at its intersection with Honoapiilani Highway near Honokowai Stream in Kaanapali, and continues to its terminus in the Resort Community of Kapalua.

Potential Impacts and Mitigation Measures. Access for the subject property is from Lower Honoapiilani Road via Hale Malia Place. Since Hale Malia Place is a private roadway, the project is exempt from Section 16.26.3304 "Improvements to Public Streets", Maui County Code (MCC). No roadway improvements will be required for the construction of the project. It is anticipated that there will be no significant impacts on traffic on Lower Honoapiilani Road because of the limited scope of the project.

5. Electrical, Telephone, Cable and Data Systems

The existing residence connects to existing electrical, telephone, CATV and data systems already serving the project vicinity. Because of the limited scope of this project, no increase in demand on these systems is expected, and therefore no significant impact is anticipated

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE LAW

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes four major land use districts into which all lands in the State are placed. These districts are designated Urban, Rural, Agricultural, and Conservation. The subject property is within the Urban District (**See:** Figure No. 4, "State Land Use Map"). The existing single-family residence is permitted within the Urban District.

B. MAUI COUNTY ZONING

The subject property is situated within the County of Maui's R-3 Residential District (**See**: Figure No. 6, "County Zoning Map"). The existing residence is an outright permitted use within the R-3 district.

C. GENERAL PLAN OF THE COUNTY

As stated in the Maui County Charter, *"The purpose of the General Plan is to recognize and state major problems and opportunities concerning the needs and the development of the County and the social, economic and environmental effects of such development and set forth the desired sequence, patterns and characteristics of future development."*

The term "General Plan" is presently used to describe a bundle of planning and policy documents that are designed to guide the future growth and direction of Maui County. The General Plan process calls for the preparation of a "Countywide Policy Plan", followed by a "Maui Island Plan", and then the regional "Community Plans. A draft of the Maui Island Plan is currently being reviewed by the Maui County Council.

The Countywide Policy Plan is an over-arching statement of values and acts as an umbrella document for the Maui Island Plan and the regional Community Plans. The Countywide Policy Plan was adopted by Ordinance No. 3732 and went into effect on March 24, 2010. The following Countywide Goals, Objectives and Policies of the Countywide Policy Plan are applicable to the project:

Goal: **A. Protect the Natural Environment**

Objective No. 2: Improve the quality of environmentally sensitive, locally valued natural resources and native ecology of each island

Policies:
2a. Protect and restore nearshore reef environments and water quality.
2b. Protect marine resources and valued wildlife.

Analysis: The project was evaluated to be the most practical and effective solution for long-term protection of the nearshore coastal resource. The project is being implemented in consideration of environmental analysis of the shoreline area and processes, and the potential environmental impacts to the ocean resources, including the nearshore reef environment and associated marine life.

Goal: **I. Improve Physical Infrastructure**

Objective No. 4: Direct growth in a way that makes efficient use of existing infrastructure and to areas where there is available infrastructure capacity

Policies:
4a. Capitalize on existing infrastructure capacity as a priority over infrastructure expansion.
4d. Promote land use patterns that can be provided with infrastructure and public facilities in a cost-effective manner.

Analysis: The project site is located in an area of existing urban development and contains the necessary infrastructure and public services to support the proposed project.

Goal: **J. Promote Sustainable Land Use and Growth Management**

Objective No. 4: Improve and increase efficiency in land use planning and management.

Policies:
4a. Assess the cumulative impact of developments on natural ecosystems, natural resources, wildlife habitat, and surrounding uses.
4**b.** Ensure that new development projects requiring discretionary permits demonstrate a community need, show consistency with the General Plan, and provide an analysis of impacts.

Analysis: Through the Environmental Assessment (EA), Shoreline Setback Variance (SSV), and Special Management Area (SMA) review processes, detailed in Sections V through VII of this report, the subject development has undergone a thorough analysis of potential cumulative impacts to the natural environment; consistency with the County General Plan; and adequacy of response to a community need. In addition, early consultation was conducted with applicable government agencies, as well as with community members residing within 500 feet of the subject property, as part of the preparation of the Final EA.

D. WEST MAUI COMMUNITY PLAN

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

The subject property is located within the West Maui Community Plan area and has a SF Single Family designation (**See**: Figure No. 5, "Community Plan Map"). The West Maui Community Plan was adopted by ordinance No. 2476 on February 27, 1996.

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

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

Analysis. The project site is community planned for single family residential use. The existing single family residence is consistent with the scale of surrounding properties. Infrastructure in the area is adequate and the existing use is consistent with land use objectives.

Goal: ***Environment.*** *A clean and attractive physical, natural and marine environment in which man-made developments on or alterations to the natural and marine environment*

are based on sound environmental and ecological practices, and important scenic and open space resources are preserved and protected for public use and enjoyment.

Objectives and Policies:

1. *Protect the quality of nearshore and offshore waters. Monitor outfall systems, streams and drainage ways and maintain water quality standards. Continue to investigate, and implement appropriate measures to mitigate, excessive growth and proliferation of algae in nearshore and offshore waters.*

11. *Prohibit the construction of vertical seawalls and revetments except as may be permitted by rules adopted by the Maui Planning Commission governing the issuance of Shoreline Area Management (SMA) emergency permits, and encourage beach nourishment by building dunes and adding sand as a sustainable alternative.*

Planning Standards:

6. Environmental Aspects

   c. Prohibit the construction of vertical seawalls, except as approved by the Planning Commission of the County of Maui

Analysis: In consideration of the alternatives, the preferred alternative (constructing approximately 75 feet of sea wall) was judged to be the most practical alternative.

Within the context of the objectives and policies of the West Maui Community plan discussed above, consideration of a vertical seawall may be allowed if the project meets the criteria set forth in the SMA Emergency Permit process. The purpose of the SMA Emergency Permit is provided in section §205A-22 of the Hawaii Revised Statutes and section §12-202 of the *Special Management Area Rules for the Maui Planning Commission*. The definition provided in HRS §205A-22 states that an emergency permit may allow development in either of two conditions: "*to prevent substantial physical harm to persons or property* ***or*** *to allow the reconstruction of structures damaged by natural hazards.*"

Additionally, seawalls may be permitted by the Maui Planning Commission. The SMA/SSV application will be reviewed by the Maui Planning Commission and is subject to that body's approval.

As described in Sections II and III of this report, the wall is a long-term solution to address an impending public safety hazard as well as a physical hazard to structures on the subject property and adjacent properties. The action was initially permitted by the Planning Director through the SMA Emergency Permit Process.

The project will also help protect the quality of nearshore waters as recommended by the West Maui Community Plan. The wall will aid in the prevention of earthen soils from being eroded and transported to the coastal waters via wave action and runoff from *mauka* portions of the site.

V. SPECIAL MANAGEMENT AREA OBJECTIVES AND POLICIES

The subject project is located within the Special Management Area (SMA). As such, the project will require approval of an SMA Use Permit. Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to SMA objectives, policies, and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Planning Commission.

A. RECREATIONAL RESOURCES

Objective: Provide coastal recreational resources accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreation planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

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

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

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

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

(v) Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having standards and conservation of natural resources;

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

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

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

Analysis. The project site abuts the shoreline; however, the project will not have a direct impact on the public's use or access to the shoreline area. Public shoreline access exists at Hui Road E, approximately 800 feet to the south of the project site.

The subject parcel abuts a small bay located between two rocky headlands. The entire length of the shoreline is armored with vertical seawalls. The project will enhance safety in the shoreline area immediately beneath the subject property and aid in protection of nearshore waters from erosion-borne sediment. The wall structure is located along the unstable bank *mauka* of the shoreline and will not protrude further seaward than the certified shoreline. Therefore, the improvement does not narrow the usable section of the shoreline area and will not inhibit lateral access along the shoreline.

B. HISTORICAL/CULTURAL RESOURCES

Objective: Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.
Policies:
(a) Identify and analyze significant archeological resources;
(b) Maximize information retention through preservation of remains and artifacts or salvage operations; and
(c) Support state goals for protection, restoration, interpretation, and display of historic structures.

Analysis. As discussed in Section III.A.9 above, the project is not expected to impact any significant archaeological or cultural resources.

C. SCENIC AND OPEN SPACE RESOURCES

Objective: Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.
Policies:
(a) Identify valued scenic resources in the coastal zone management area;

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

(c) Preserve, maintain, and where desirable, improve and restore shoreline open space and scenic resources; and

(c) *Encourage those developments that are not coastal dependent to locate in inland areas.*

Analysis. As discussed in Section III of this report, numerous scenic resources have been identified in the Napili area, which are identified and discussed in the Maui Coastal Scenic Resources Study, August 1990 (**See**: Figure No. 11, "Coastal Scenic Resources Map"). The resource/inventory map in this report identifies makai views of the Pacific Ocean, Lana'i and Moloka'i as the significant scenic resources in the immediate vicinity of the project site.

As discussed in Section III.A.10 above, the project will not interfere with views toward the ocean (**See:** Figures No. 3.1-3.5, "Site Photographs"and No. 11, "Coastal Scenic Resources Map"). The seawall will utilize a similar rock/masonry facing to be consistent with the existing seawalls elsewhere along Keonenui Bay. The growth of an overhanging *naupaka* hedge at the top of the bluff may provide visual mitigation, de-emphasizing the height of the wall.

The wall is constructed against a vertical bluff face and does not protrude above the existing *mauka* grade of the property, thus by topographic nature it will not block scenic views of the ocean or mountains.

D. COASTAL ECOSYSTEMS

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

Policies:

(a) Improve the technical basis for natural resource management;

(b) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(c) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(d) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Analysis. The project will protect the quality of the nearshore marine environment by preventing siltation from erosion of the sea cliff. Based upon existing development within the project area, it is unlikely that the improvements will have a significant impact on coastal ecosystems.

E. ECONOMIC USES

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

Policies:

(a) Concentrate coastal dependent development in appropriate areas;

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

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

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental impacts are minimized; and

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

Analysis. The existing single-family residential use of the property is consistent with the State's urban land use designation, as well as the Maui County Zoning and West Maui Community Plan designations. As such, the project is within an area that has been planned for growth and development and provides the supporting infrastructure and services required to service this growth.

The wall stabilizes the erodible sea cliff at the subject property, leading to both public benefits and private benefits to the applicant and neighboring landowners. Public benefits include the removal of a safety hazard, and prevention of silty clay soils entering coastal waters. Private benefits include greater site safety and the prevention of loss of property and structures.

F. COASTAL HAZARDS

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

Policies:

(a) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;

(b) Control development in areas subject to storm wave, tsunami, flood, erosion, subsidence, and point and non-point pollution hazards;

(c) Ensure that developments comply with requirements of the Federal Flood Insurance Program;

(d) Prevent coastal flooding from inland projects; and

(e) Develop a coastal point and nonpoint source pollution control program.

Analysis. The project will protect the upland portion of the property and associated structures from erosion due to storm waves. Stabilization of the shoreline will also provide greater site safety to the residents living along the shoreline. Shoreline stabilization will also protect the beach and nearshore waters from impacts related to eroded silty clay soils transported by wave action or inland runoff.

Since the subject area is prone to storm wave action, the project's impact on a potential evacuation of the area should be considered. Considering that the existing site conditions consist of an eroding earthen bank, which cannot be traversed, the project will not obstruct a tsunami evacuation route.

G. MANAGING DEVELOPMENT

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

Policies:

(a) Use, implement, and enforce existing laws effectively to the maximum extent possible in managing present and future coastal zone development;

(b) Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and

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

Analysis. The development of the project is being conducted in accordance with applicable State and County requirements. Opportunity for review of the project is provided through the County's Special Management Area (SMA) permitting process and the State's Environmental Assessment (EA) review process.

H. PUBLIC PARTICIPATION

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

Policies:

(a) Maintain a public advisory body to identify coastal management problems and to provide policy advise and assistance to the coastal zone management program.

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

(c) Organize workshops, policy dialogues, and site-specific medications to respond to coastal issues and conflicts.

Analysis. Early Consultation was conducted with applicable government agencies, as well as with neighbors within 500 feet of the subject property, as part of the preparation of the Draft EA and again in preparation of this Final EA. (**See:** Appendix C, "Summary of Early Public and Agency Consultation," and Appendix D, "Summary of Public and Agenc Comments on Draft Environmental Assessment").

In conjunction with the submittal of the Special Management Area application, a Notice of Application was mailed to property owners within 500 feet. The mail-out described the project and solicited any issues or concerns that need to be addressed through the permitting process. A number of governmental agencies have also been consulted and copies of this application were circulated to various agencies by the Department of Planning. During the scheduled public hearings, the public will have an opportunity to review and comment on the project. Landowners located within 500 feet of the project will be notified of the scheduled public hearing dates. Public hearing dates and location maps will also be published in the Maui News on two separate occasions. The public will be allowed to participate in the public hearing portion of the Maui Planning Commission's review process. The Environmental Assessment process also provides an opportunity for public comment.

I. BEACH PROTECTION

Objective: Protect beaches for public use and recreation.

Policies:

(a) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

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

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

Analysis. The shoreline fronting the project site is artificially hardened; therefore, according to Section §12-203-4 of the Shoreline Rules, the Annual Erosion Hazard Rate is considered to cease at the interface between the wall and the shoreline. Using the Average Lot Depth (ALD) method, as detailed in Section II.G above, results in a shoreline setback of 25.2 feet. The project involves construction of a seawall within the shoreline setback area and therefore requires a Shoreline Setback Variance, which is the subject of Section VII of this report.

As the shoreline is rocky and hence naturally hardened up to approximately four (4) feet AMSL, and the silty clay substrate underlying the project site does not represent a resource for beach replenishment, no impacts on beach protection are anticipated. The construction of the project on the subject property is not expected to have a direct physical impact upon any public beaches.

J. MARINE RESOURCES

Objective: Implement the State's ocean resources management plan.

Policies:

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

(b) Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(c) Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;

(d) Assert and articulate the interest of the state as a partner with federal agencies in the sound management of the ocean resources within the United States exclusive economic zone;

(e) Promote research, study, and understanding of ocean processes, marine life, and other ocean development activities relate to and impact upon the ocean and coastal resources; and

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

Analysis. The project does not involve the direct use or development of marine resources. In addition, with the incorporation of erosion and drainage control measures during construction and after construction as identified in this report, there should not be significant adverse impacts to nearshore waters from point and non-point sources of pollution. Therefore, the subject project will not produce any significant impacts on any coastal or marine resources.

VI. APPLICATION FOR SHORELINE SETBACK VARIANCE

The subject development involves an action within the Shoreline Setback Area. As such, it is subject to the requirements of a Shoreline Setback Variance, which is required for all proposed structures, facilities, construction or any such activities which are normally prohibited within the shoreline setback area. A discussion of the project's relationship to the required submittals and significance criteria for a Shoreline Setback Variance follows (See also Section 1, "Application Forms," at the beginning of this document).

Evidence that the applicant is the owner or lessee of record of the real property.

See: Section 2 at the beginning of this document

A notarized letter of authorization from the legal owner if the applicant is not the owner.

See: Section 3 at the beginning of this document

Original and two (2) copies of the shoreline survey certified by the Department of Land and Natural Resources within the preceding twelve (12) months.

See: Appendix "A". The shoreline survey was submitted for certification on June 15, 2009. The map indicates that the shoreline follows the base of a rocky cliff that runs along the *makai* boundary of the subject property and adjoining properties.

Original and 1 set of a site plan showing the location of the shoreline drawn to a minimum scale of 1"=20'. The shoreline and existing conditions along properties immediately adjacent shall also be shown on the site plans. It shall also include contours at a minimum interval of 2 feet, together with all natural and man-made features in the subject area unless otherwise required by the Director.

See: Appendix "A," Shoreline Survey Map.

A written justification for the requested variance.

The Maui County Shoreline Rules were established to address competing demands for utilization and preservation of the beach and ocean resources. These rules are necessary because development and other man-made improvements have resulted in encroachment of structures near the shoreline and, in numerous instances, erosion and other disturbances affecting the natural movement of the shoreline. These rules are also necessary because the Hawaiian Islands are subject to coastal natural hazards such as, tsunamis, high wave action, sea level rise, hurricanes, coastal flooding, and coastal erosion that pose hazards to residences and other structures near the shoreline. Such hazards may necessitate the need to harden the shoreline to protect structures which may have an adverse impact on the environment.

As set forth in Chapter 203, Shoreline Rules for the Maui Planning Commission, Section 2, "Purpose", and HRS chapter 205A, as amended, development in the shoreline setback area may be permitted where it meets the following criteria:

(1) That use and enjoyment of the shoreline area be ensured for the public to the fullest extent possible;

Analysis. As discussed in Section V.A above, the project will not prevent the public from full use and enjoyment of the shoreline area to which it is already entitled. The project will not have a direct impact on the public's use or access to the shoreline area, as public shoreline access exists approximately 800 feet to the south of the project site. The project will enhance safety in the shoreline area immediately beneath the subject property and aid in protection of nearshore waters from erosion-borne sediment. The wall structure is located along the bank *mauka* of the shoreline and will not protrude further seaward than the certified shoreline. Therefore, the improvement does not narrow the usable section of the shoreline area and will not inhibit lateral access along the shoreline.

(2) That the natural shoreline environment be preserved;

Analysis. The shoreline area fronting the subject property is composed of rock and cobble, with a rock ledge extending to approximately 4 feet AMSL, transitioning thereafter to a vertical bluff composed of silty clay soils. Since the shoreline is naturally hardened, no structures are proposed for construction on the shoreline itself, and no dune or beach resource is present on the site, the project does not alter the natural shoreline environment.

(3) That man-made features in the shoreline area be limited to features compatible with the shoreline area;

Analysis. The project involves construction of a wall to armor the cliff face *mauka* of the shoreline, similar to armoring structures of comparable design on properties fronting nearly the entire shoreline along Keonenui Bay. The project therefore does not include any new actions or features that are incompatible with the shoreline as it currently appears.

(4) That the natural movement of the shoreline be protected from development;

Analysis. As discussed in Section II.G of this document, according to Section §12-203-4 of the Shoreline Rules, the Annual Erosion Hazard Rate ceases at the interface between the wall and the shoreline. The project therefore involves the construction of a vertical wall within the shoreline setback area as determined by the Average Lot Depth (ALD) method.

The shoreline area fronting the subject property is composed of rock and cobble, with a rocky ledge extending to approximately 4 feet AMSL, transitioning thereafter to a vertical bluff composed of silty clay soils. Since the shoreline is naturally hardened, no structures are proposed for

construction on the shoreline itself, and no dune or beach resource is present on the site, the project is note expected to alter the natural shoreline.

This information and the discussion in No. 2 above suggest that the natural movement of the shoreline would not be affected by the project, and therefore, the project is not expected to have an effect on the natural movement of the shoreline.

(5) That the quality of scenic and open space resources be protected, preserved, and where desirable, restored; and

Analysis. Since no alterations are proposed to the existing residence, existing views through the project site will be preserved. As further detailed in Sections III.A.10, V.C, and VI above, the project does not interfere with public views to, toward, or along the shoreline. The project will therefore have no significant effect on the quality of scenic and open space resources.

(6) That adequate public access to and along the shoreline be provided.

Analysis. Public access to the shoreline exists approximately 800 feet to the south of the subject property. The project does not restrict public lateral access along the shoreline.

The variance request meets §12-203-15 "Criteria for approval of a variance" under paragraph (a)(8): *Private facilities or improvements which will neither adversely affect beach processes nor artificially fix the shoreline; provided that, the commission also finds that hardship will result to the applicant if the facilities or improvements are not allowed within the shoreline area;*

(b) A structure or activity may be granted a variance upon grounds of hardship if:
(1) The applicant would be deprived of reasonable use of the land if required to fully comply with the shoreline setback rules;

Analysis. As discussed in Section II.E above, a range of alternatives were considered in order to determine the most reasonable response to threats to public safety and private property caused by the slope collapse. It was determined that the slope stabilization work conducted at the site was the most feasible option for protecting public safety and preserving the property owner's right to use the property as the site of a single family residence. This conclusion was supported by the Planning Department in their granting of an SMA Emergency Permit to expedite the work (**See:** Appendix F, "SMA Emergency Permit").

(2) The applicant's proposal is due to unique circumstances and does not draw into question the reasonableness of the shoreline setback rules; and

Analysis. The project does not draw into question the reasonableness of the shoreline setback rules. The purpose of the wall is to prevent future erosion of the property and damage to a single-family residence; to prevent potential undermining of the neighboring shoreline protection structures; to prevent

earthen soils from eroding and entering the coastal waters; and to remove the public safety hazard associated with the unstable bluff.

(3) The proposal is the practicable alternative which best conforms to the purpose of the shoreline setback rules.

Analysis. As discussed in the above written justification for the requested variance, and in Section II.E of this document, the preferred alternative is the practicable option which best conforms to the purpose of the Shoreline Setback Rules.

Original and 1 copy of a preliminary drainage and erosion control report, and a grading plan.

As discussed in Section III.A.2, "Topography and Soils," the lot slopes east to west toward the shoreline. Grading on the site will be minimal. Drainage is discussed in Section III.D.3 "Drainage" along with proposed erosion control mitigation measures (**See**: Appendix H, "Drainage Report and Best Management Practices").

Original and 1 copy of an environmental assessment may be required.

This application is part of the Draft Environmental Assessment prepared for the subject development.

Photographs of the shoreline area.

See: Figures No. 3.1-3.5 and Appendix B

VII. ENVIRONMENTAL ASSESSMENT SIGNIFICANCE CRITERIA

Since the subject project involves an action within the Shoreline Setback Area, an Environmental Assessment is required by Chapter 343, Hawaii Revised Statutes (HRS). A finding of no significant impact (FONSI) is warranted. In accordance with Title 11, Department of Health, Chapter 200 and Subchapter 6, Section §11-200-12, Environmental Impact Statement Rules, and based on the detailed analysis contained within this document, the following conclusions are supported.

1. **The proposed action will *not* result in an irrevocable commitment to loss or destruction of natural or cultural resources.**

   Analysis. As documented in this report, the project will not involve the loss or destruction of any natural or cultural resource (**See**: Section III).

2. **The proposed action will *not* curtail the range of beneficial uses of the environment.**

   Analysis. The subject property is within the State's Urban District and is zoned and community planned to allow for single-family residential development. There are no unique or important environmental or natural resources on the property, the use of which would be impacted by the construction of the wall.

   The wall will enhance safety in the shoreline area immediately beneath the subject property, and will also aid in protection of nearshore waters from erosion-borne sediment. The location of the structure is not within a section of the beach that is traversed or utilized, but rather is positioned upon a rocky ledge against the face of the sea cliff, and therefore does not narrow the area available for lateral access. Based upon existing development on neighboring properties, it is unlikely the improvements will result in a significant change to the coastal area. Thus, the project will not curtail the range of beneficial uses of the environment.

3. **The proposed action will *not* conflict with State or County long-term environmental policies and goals as expressed in Chapter 344, HRS, and those which are more specifically outlined in the Conservation District Rules.**

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

including near and off-shore coastal waters. The project will not have any impact on flora and fauna, nor on archeological or cultural resources.

4. **The proposed action will *not* substantially affect the economic or social welfare and activities of the community, county or state.**

   Analysis. The project will improve public safety in the immediate area. Short-term economic impacts will result from the increase in activity associated with the construction of the project. Because of the limited scope of this project, impacts on the socio-economic environment will be minimal (**See**: Section III.B).

5. **The proposed action will *not* substantially affect public health.**

   Analysis. There are no special or unique aspects of the project that will have a direct impact on public health.

6. **The proposed action will *not* result in substantial secondary impacts.**

   Analysis. The project is not a population generator nor does it trigger any Maui County residential workforce housing requirements. Increased activity at the site during the construction phase may result in a marginal increase in traffic and associated noise and air pollution at the project driveway. However, as analyzed in Section III of this report, the increase in the level of these impacts is minimal and with the incorporation of mitigation measures will not substantially impact the environment.

   Based on existing development in the project vicinity, the wall construction is not expected to cause any secondary effects that would significantly impact the coastal area.

7. **The proposed action will *not* involve substantial degradation of environmental quality.**

   Analysis. Mitigation measures were implemented during the construction phase in order to minimize negative impacts on the environment, especially with regards to construction runoff. The design of the wall has incorporated mitigation measures to minimize impacts to nearshore water quality that could arise from an increase in runoff generated on the site as a result of the project (See Section III for a discussion of drainage). The wall will prevent the erosion of earthen, silty soils and associated degradation of coastal waters. Other environmental resources such as endangered

species of flora and fauna, air and water quality, and archeological resources will not be significantly impacted by the subject project.

8. **The proposed project will not produce cumulative impacts and does *not* have considerable effect upon the environment or involve a commitment for larger actions.**

   Analysis. The project does not involve a commitment for larger action on behalf of the applicant or any public agency. The subject property is State and County zoned and community planned for urban development and, as such, is part of the planned future growth of the region. As described in this report, the project will not significantly impact public infrastructure and services including roadways, drainage facilities, water systems, sewers and educational facilities. In addition, the project is not anticipated to induce an overall significant increase in population growth and will therefore not produce considerable effect on the environment nor require a commitment for larger actions by governmental agencies.

   Armoring of a shoreline area is known to lead to successive armoring of adjacent shoreline areas, which creates a larger (cumulative) structure that can have greater impacts. As discussed above, the subject property is the last property along the 500 - 600 feet of shoreline between two rocky headlands that is not armored with a vertical seawall. Therefore, the erosive effects of wave action and other coastal hazards can be magnified at the subject property in the absence of an armoring structure. Given that near total shoreline armoring exists along Keonenui Bay, construction of the wall does not encourage additional development or require a commitment for larger actions.

9. **The proposed project will *not* affect a rare, threatened, or endangered species, or its habitat.**

   Analysis. As described in Section III of this report, there are no rare, threatened, or endangered species of flora and fauna at the project site.

10. **The proposed action will *not* substantially or adversely affect air and water quality or ambient noise levels.**

    Analysis. As described in Section III of this report, there is a potential for negative impacts to air or water quality and ambient noise levels related to short-term construction activities. Air, noise and dust impacts will be mitigated through implementation of standard mitigation measures as identified previously in this report. It is not anticipated that there will be significant long-term impacts to air or water quality and ambient noise levels due to the operation phase of the development.

11. The proposed action will *not* substantially affect or be subject to damage by being located in an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone areas, estuary, fresh waters, geologically hazardous land or coastal waters.

Analysis. According to Panel No. 150003 0264E of the Flood Insurance Rate Map, September 25, 2009, prepared by the United States Federal Emergency Management Agency (FEMA), the project site is situated in Flood Zone X. Zone X represents areas determined to be outside of the 0.2% annual chance floodplain. The National Flood Insurance Program does not regulate developments within Zone X (**See**: Figure No. 7, "Flood Insurance Rate Map").

The project therefore should not be affected by or have adverse impacts upon its neighbors with regards to flood hazard potential.

12. The proposed action will *not* substantially affect scenic vistas or view planes identified in county or state plans or studies.

Analysis. As discussed in Sections III.A.10 and V.C above, the project does not interfere with existing *makai* views. The wall is designed to blend in to the shoreline area, mitigating its effects on *mauka* views toward the site. The growth of an overhanging naupaka hedge at the top of the bluff is anticipated to provide further visual mitigation, de-emphasizing the height of the wall. The project is therefore not expected to have any significant adverse effects on visual resources. Figures No. 3.1-3.2, "Site Photographs," and No. 10, "Coastal Scenic Resources Map" document the project's potential impacts on visual resources.

13. The proposed action will not require substantial energy consumption

Analysis. Within the context of existing levels of power consumption and vehicular energy usage in the region, and on the Island of Maui, build-out of the project is not anticipated to generate any significant increase in energy consumption.

VIII. FINDINGS AND CONCLUSIONS

This Final Environmental Assessment examines the environmental and socio-economic impacts associated with the applicant's proposal to construct a structurally engineered slope retaining system in order to prevent loss of property, remove a public safety hazard, and prevent degradation of nearshore waters. The project site is 0.29 acres located in Napili, Maui, Hawaii.

The project is not anticipated to result in significant environmental impacts to surrounding properties, nearshore waters, natural resources, and/or archaeological and historic resources on the site or in the immediate area. Except for the construction of the wall, which is the subject of Section VI of this report, the project does not encroach on the shoreline setback area. Public infrastructure and services, including roadways, sewer and water systems, medical facilities, police and fire protection, parks, and schools are adequate to serve the project and are not anticipated to be significantly impacted by the project. The project is not anticipated to negatively impact public view corridors and is not anticipated to produce significant adverse impacts upon the visual character of the site and its immediate environs.

The subject property is situated within the State's Urban District, is County zoned R-3 Residential, and is community planned for Single-Family Residential use. Therefore, the project is in conformance with State and County land use plans and policies including Chapter 205A, HRS, as well as the West Maui Community Plan Land Use Map.

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

IX. REFERENCES

County of Maui, Department of Planning. 1991. *The General Plan of the County of Maui, 1990 Update.* Wailuku, Hawaii.

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

County of Maui, Office of Economic Development. 2004. *Maui County Data Book.* Wailuku, Hawaii.

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

United States Federal Emergency Management Agency (FEMA). Revised September 25, 2009. *Flood Insurance Rate Map* Community Panel Map Number 150003 0264E.

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

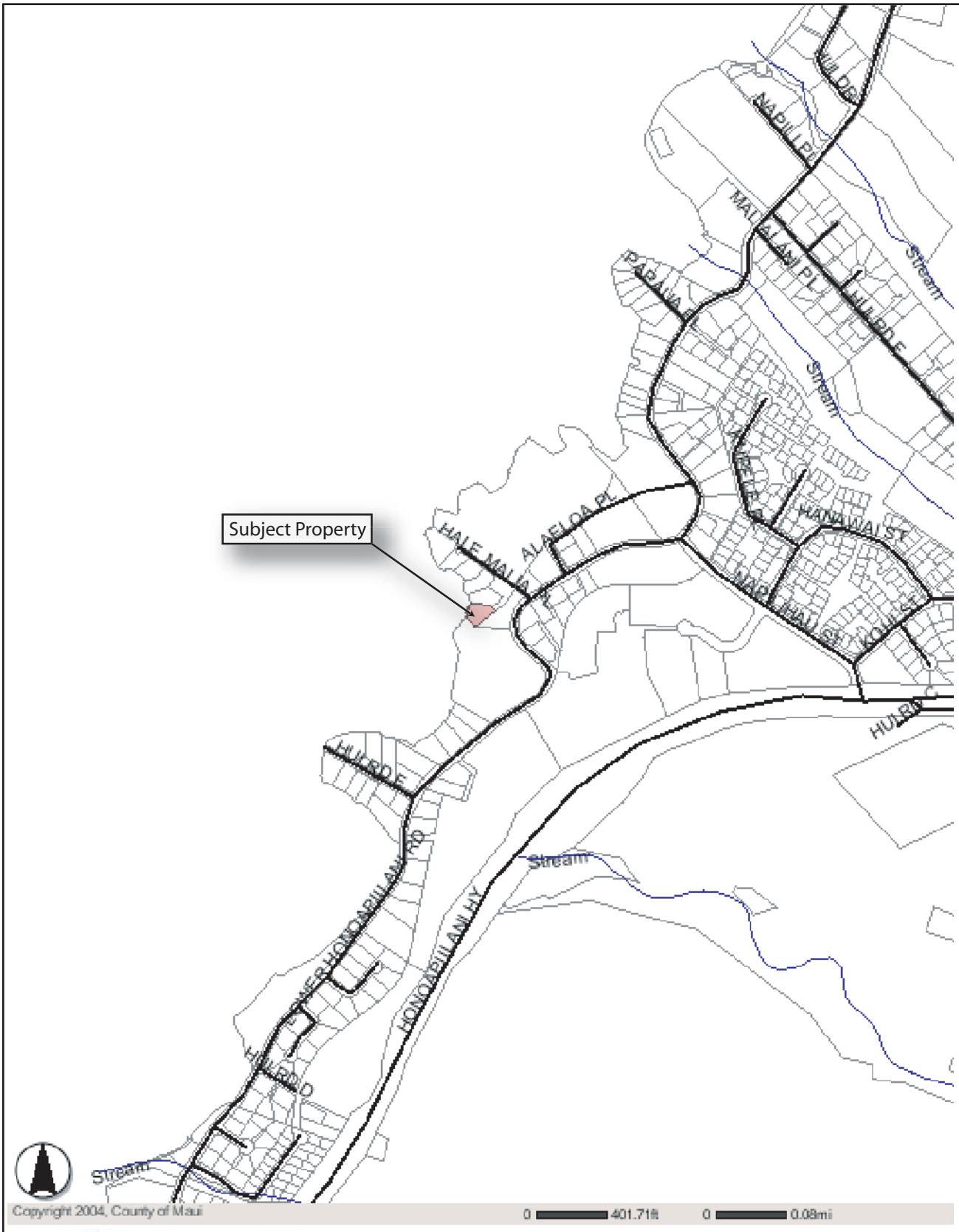


Figure 1.1

Regional Location Map

11 Hale Malia Place
Slope Repair

CHRIS HART & PARTNERS, INC.

Figure 1.2

Aerial Location Map

11 Hale Malia Place
Slope Repair

CHRIS HART & PARTNERS, INC.

BACK TO 2-4-3

BACK TO 2-4

BACK TO 2-0

Subject Property

Figure 2

TMK Map
11 Hale Malia Place Slope Repair

CHRIS HART & PARTNERS, INC.

1. View of slope failure from above, facing south

2. View from below, facing south from northwest corner of subject parcel at shoreline

3. View from above, showing top of failed slope and edge of pool

4. View from below, facing north from southwest corner of subject parcel at shoreline

Figure 3.1

Site Photographs	CHRIS HART & PARTNERS, INC.
11 Hale Malia Place Slope Repair	

Photos 5 - 10: Construction Phase Activity at Project Site

Figure 3.2

Site Photographs
11 Hale Malia Place Slope Repair

CHRIS HART & PARTNERS, INC.

11. Finished wall from below, facing southeast.

12. Finished wall from below, facing north-northeast

13. Finished wall from below, showing transition at south property boundary

14. Finished wall from below, facing southeast.

Figure 3.3

Site Photographs
11 Hale Malia Place Slope Repair

CHRIS HART & PARTNERS, INC.

15. Yard area at top of bluff, facing south

16. Yard area at top of bluff, facing north

17. Yard area at top of bluff, facing south toward boudnary with adjacent property

Figure 3.4

Site Photographs	CHRIS HART & PARTNERS, INC.
11 Hale Malia Place Slope Repair	

18. Entry to project driveway at *mauka* property boundary

19. View of existing residence from Keonenui Bay, showing collapsed bluff

20. South side yard of subject property, facing *mauka*

21. South side yard of subject property, facing *makai*

Figure 3.5

Site Photographs

11 Hale Malia Place
Slope Repair

CHRIS HART & PARTNERS, INC.

Figure 4

- Agricultural
- Conservation
- Rural
- Urban

State Land Use Map

11 Hale Malia Place
Slope Repair

CHRIS HART & PARTNERS, INC.

Figure 5

Community Plan Map

11 Hale Malia Place
Slope Repair

CHRIS HART & PARTNERS, INC.

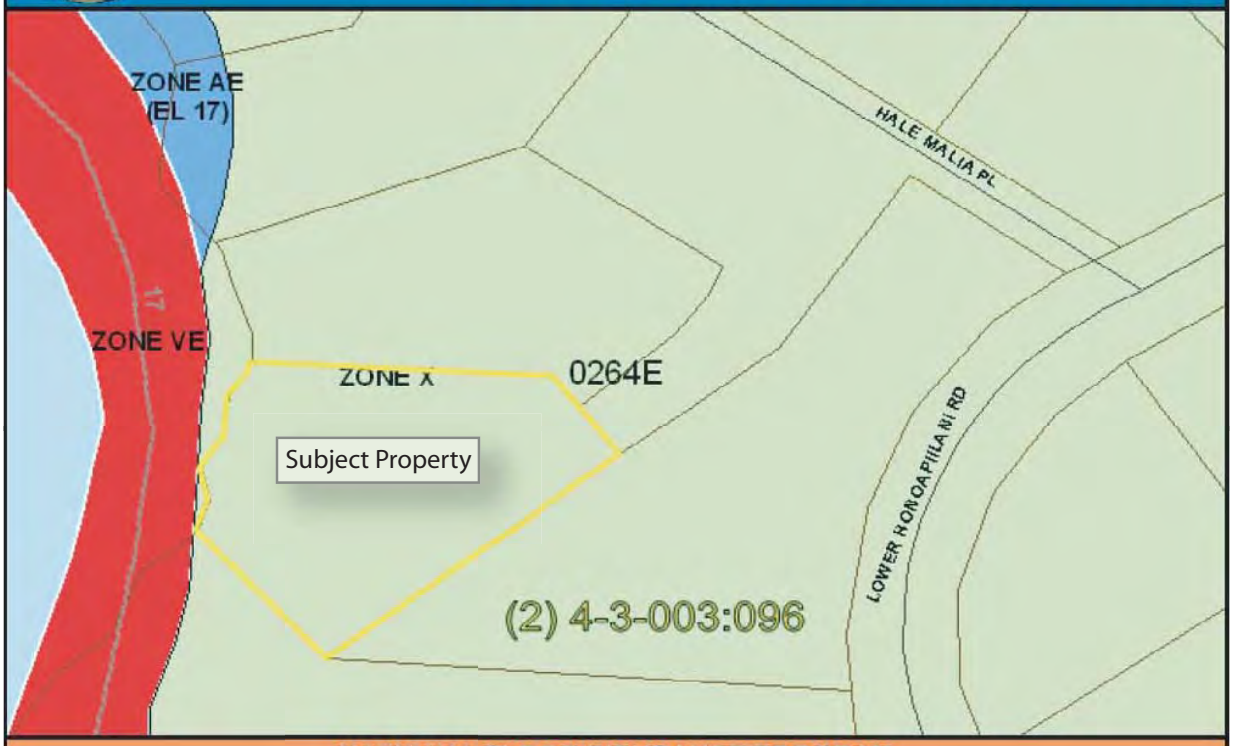
R-3 Residential District

Figure 6

County Zoning Map	CHRIS HART & PARTNERS, INC.
11 Hale Malia Place Slope Repair	

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard 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 requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	MAUI
TMK NO:	(2) 4-3-003:096
PARCEL ADDRESS:	11 HALE MALIA PL
FIRM INDEX DATE:	SEPTEMBER 25, 2009
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	1500030264E
PANEL EFFECTIVE DATE:	SEPTEMBER 25, 2009

PARCEL DATA FROM:	APRIL 2009
IMAGERY DATA FROM:	MAY 2005

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
County of Maui	
Francis Cerizo, CFM	(808) 270-7771
State NFIP Coordinator	
Carol Tyau-Beam	(808) 587-0267

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

Preliminary DFIRM Disclaimer: If this map has been identified as "PRELIMINARY", please note that it is being provided for commenting purposes only and is not to be use for official/legal decisions or regulatory compliance.

Figure 7

11 Hale Malia Place
Slope Repair

Flood Insurance Rate Map

CHRIS HART & PARTNERS, INC.

Special Management Area (SMA)

Figure 8.1

11 Hale Malia Place Slope Repair
Special Management Area (SMA) Map

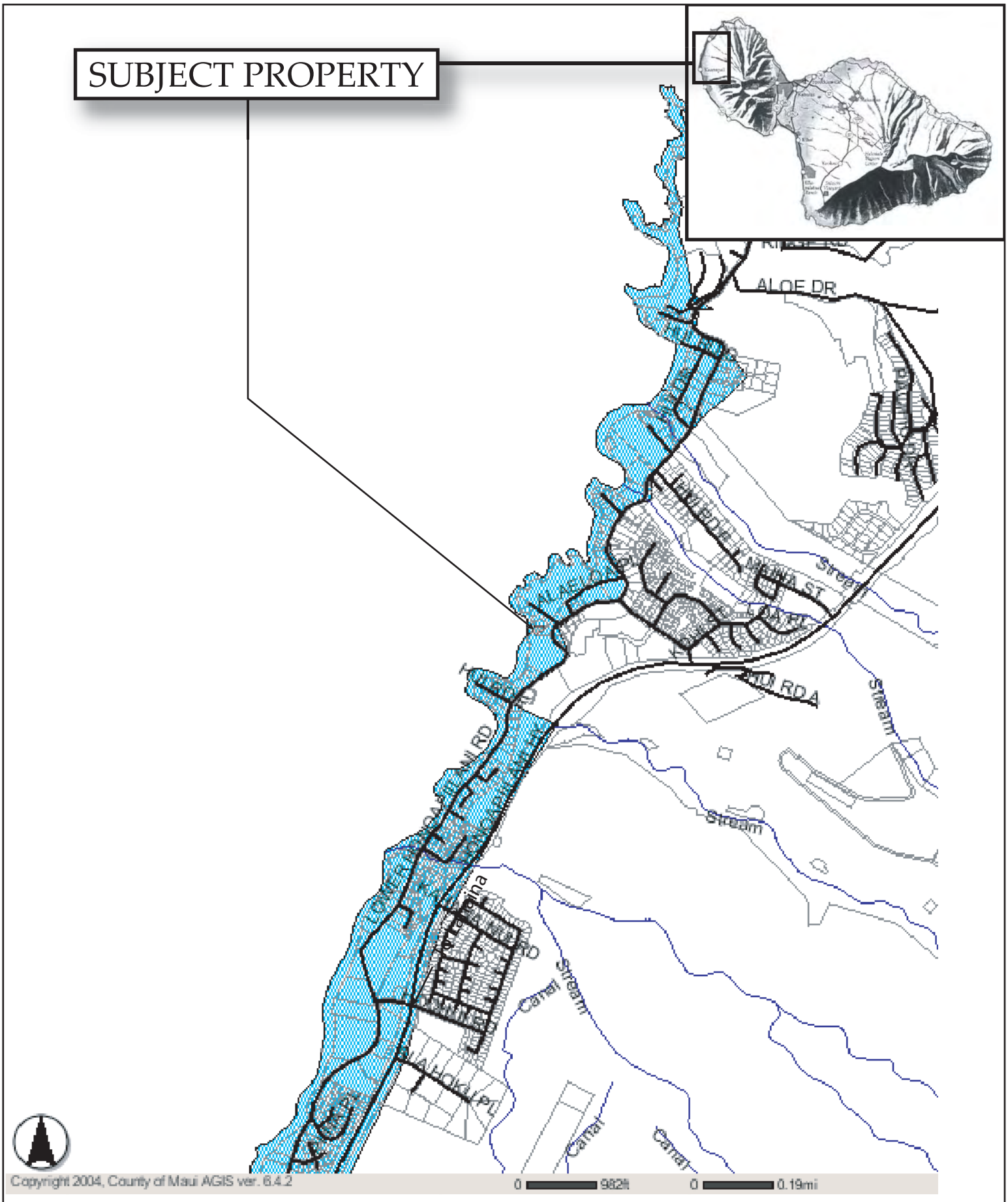
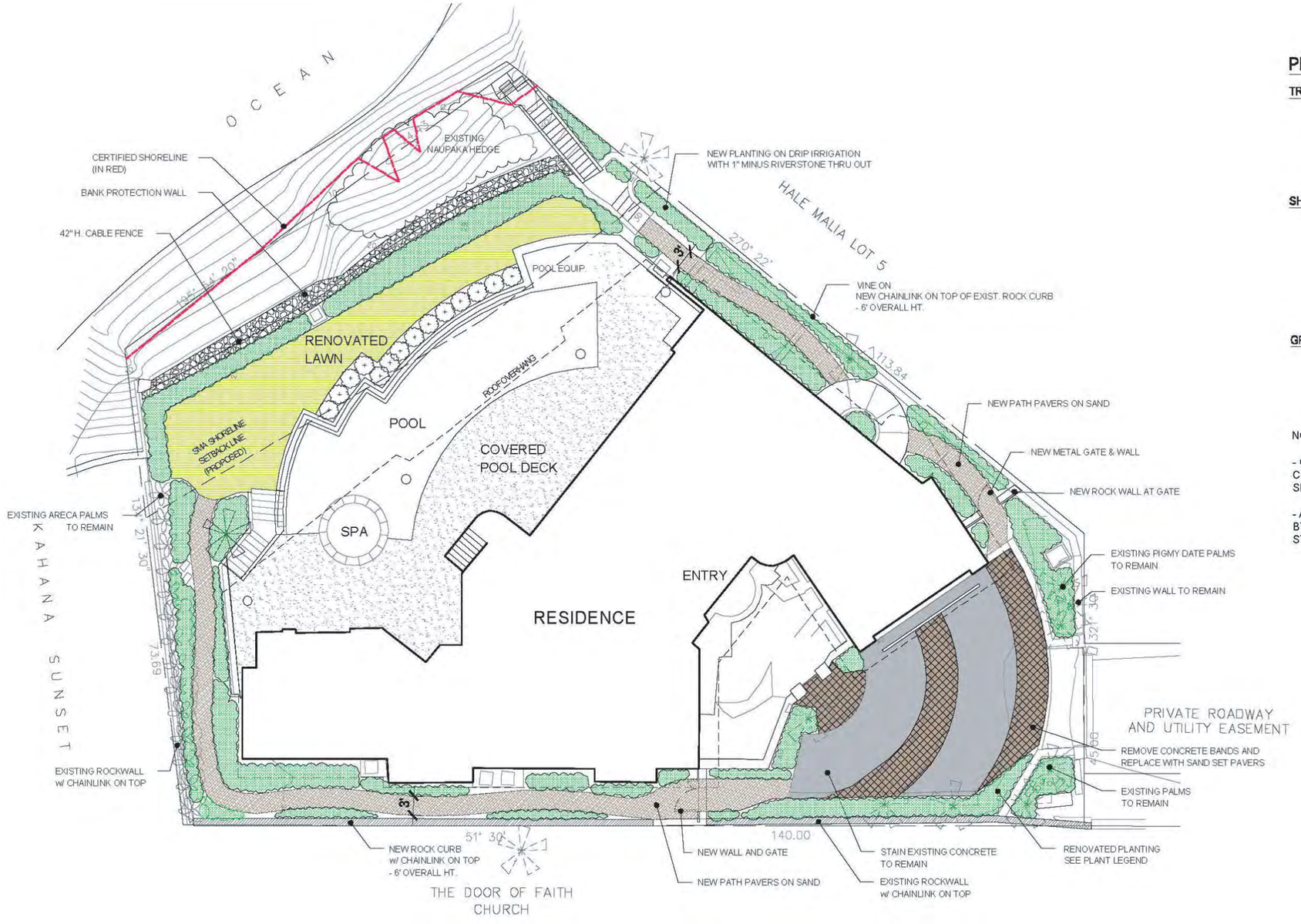


Figure 8.2

Tsunami Evacuation Zone

11 Hale Malia Place Slope Repair
Tsunami Evacuation Zones

CHRIS HART & PARTNERS, INC.



PLANT PALETTE

TREES

- PLUMERIA
- JATROPHA
- ARECA PALM
- PIGMY DATE PALM
- MACARTHUR PALM

SHRUBS

- GOLDEN DURANTA
- ELDORADO 'YELLOW-VEIN'
- RED GINGER
- GREEN TI
- GARDENIA
- BAMBOO
- CROTON

GROUNDCOVER

- LAUAE FERN
- HEMIGRAPHIS
- BACOPA

NOTES:

- ONLY BEACH QUALITY SAND & COMPOST TO BE USED IN SHORELINE SETBACK

- ALL PLANTING WILL BE WATERED BY AN AUTOMATIC IRRIGATION SYSTEM

CHRIS HART & PARTNERS

Preliminary Landscape Plan

LUCAS RESIDENCE

11 HALE MALIA PLACE, MAUI, HI

BAR SCALE 0 4 8 16 32

SCALE: 1/8"=1'-0"
PROJECT: 09-039
DATE: 10/20/09
REV. DATE: 5/20/09

Figure 9

Concept Landscape Site Plan	CHRIS HART & PARTNERS, INC.
11 Hale Malia Place Slope Repair	

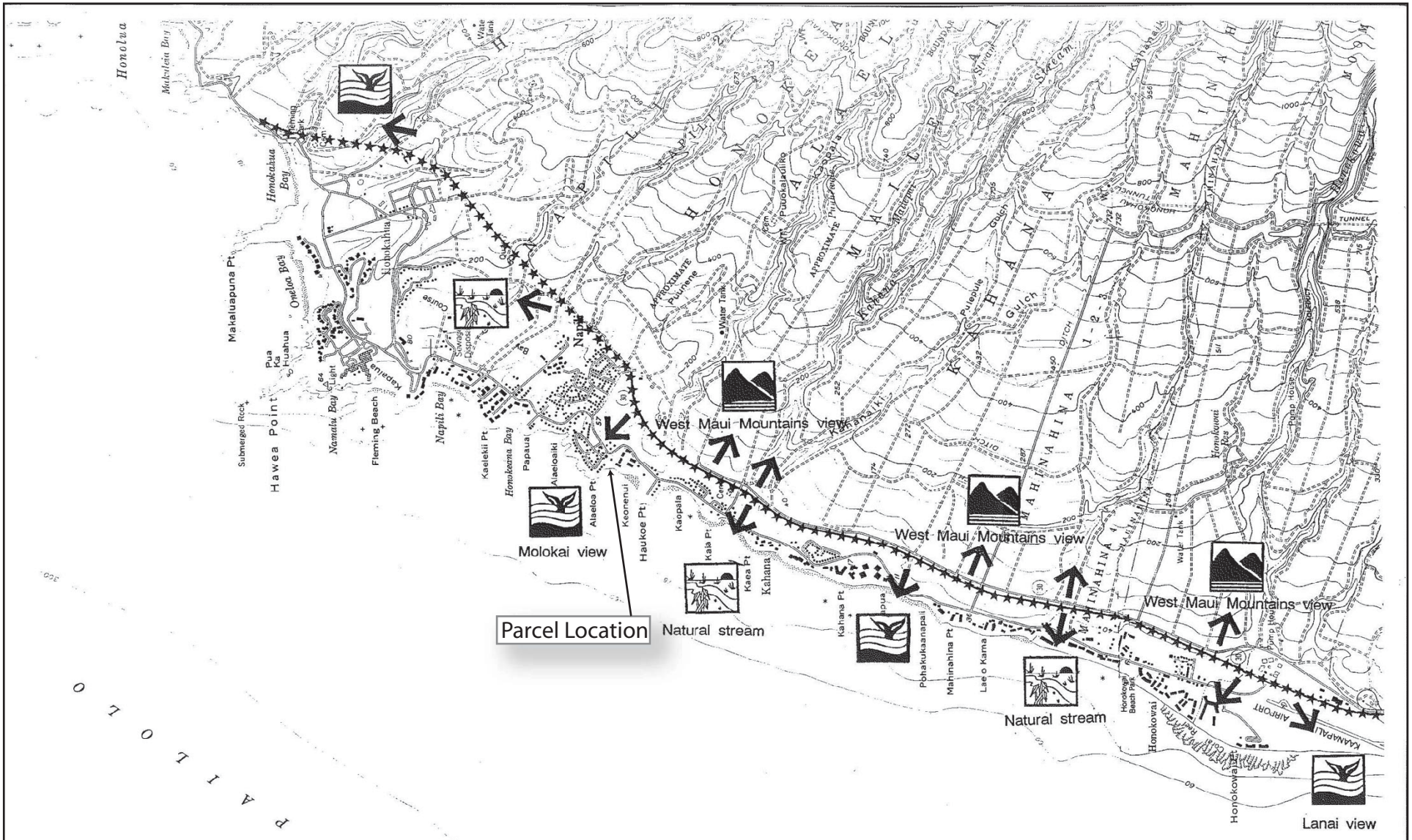


Figure 10

11 Hale Malia Place Slope Repair	CHRIS HART & PARTNERS, INC.
Coastal Scenic Resources Map	

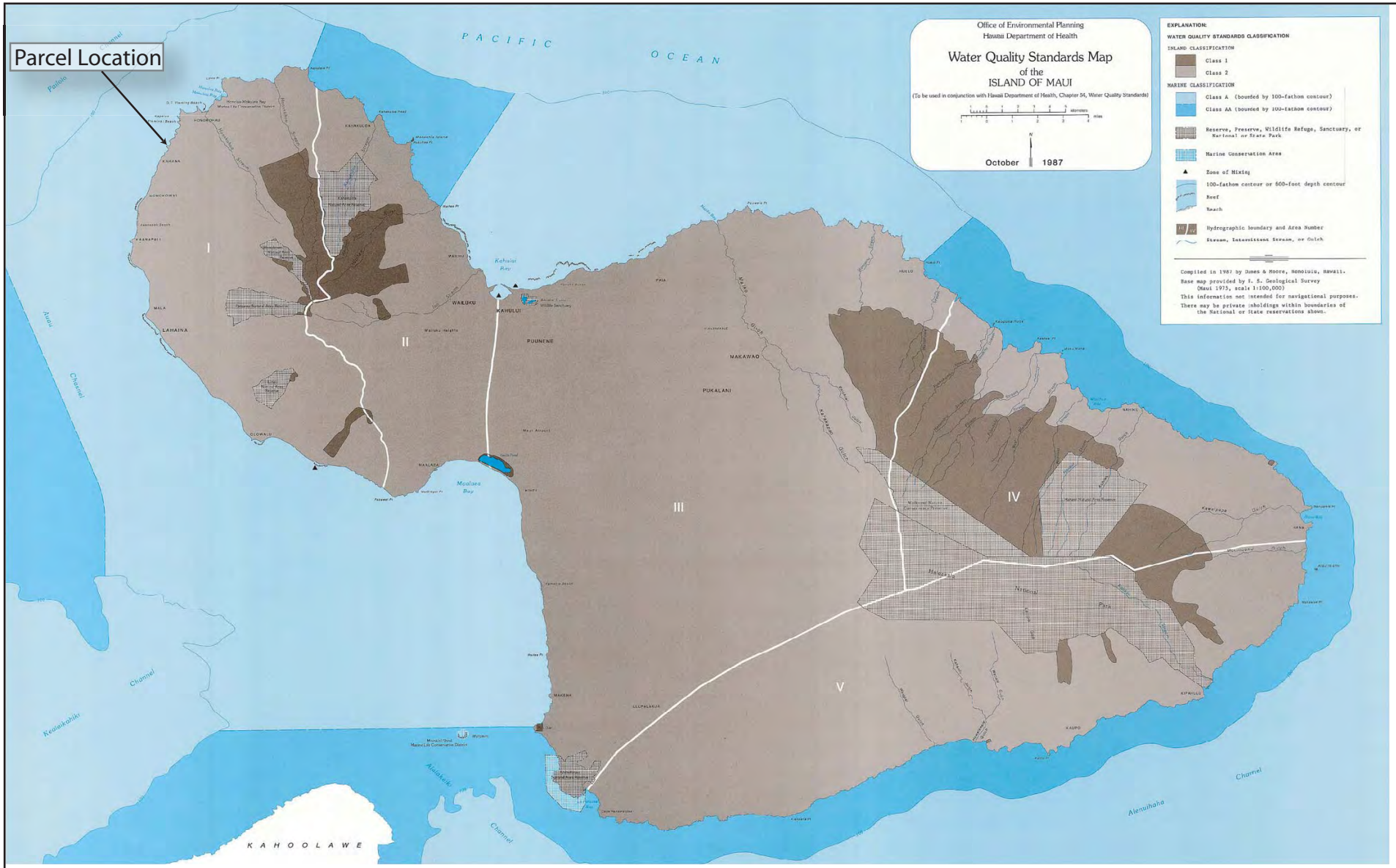


Figure No. 11

11 Hale Malia Place Slope Repair
Maui Water Quality Standards Map

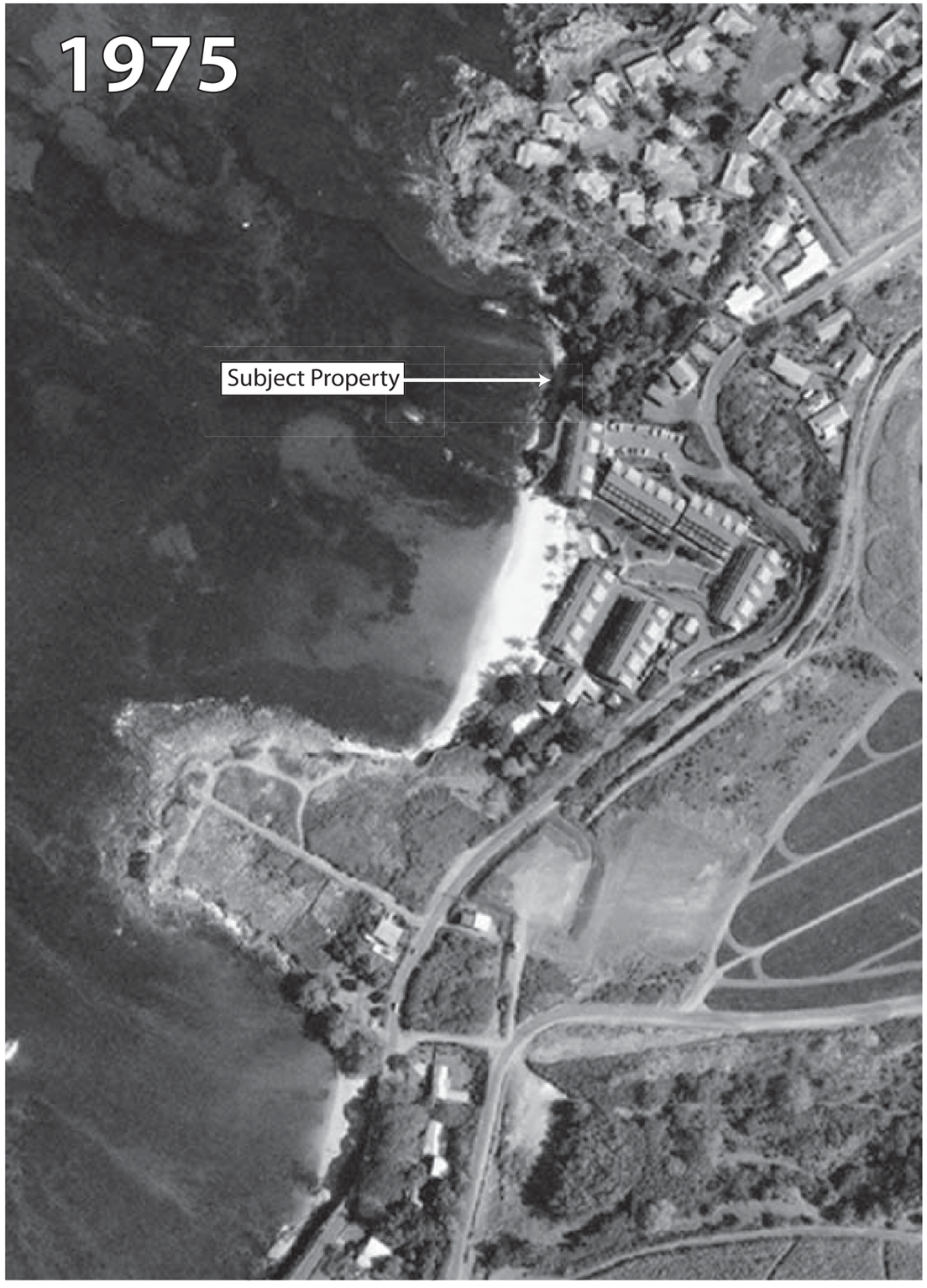
CHRIS HART & PARTNERS, INC.

Figure 12.1 - 12.3

Historical Shoreline Photographs

11 Hale Malia Place Slope Repair

CHRIS HART & PARTNERS, INC.



11 Hale Malia Place
Shoreline Slope Repair

Historic Shoreline
Mosaic Photos

Courtesy UH-SOEST Coastal Geology Group

CHRIS HART & PARTNERS, INC.

11 Hale Malia Place
Shoreline Slope Repair

Historic Shoreline
Mosaic Photos

Courtesy UH-SOEST Coastal Geology Group

CHRIS HART & PARTNERS, INC.

11 Hale Malia Place
Shoreline Slope Repair

Historic Shoreline
Mosaic Photos

Courtesy UH-SOEST Coastal Geology Group

CHRIS HART & PARTNERS, INC.

Appendix A:
Certified Shoreline Survey Map

Tanaka
ENGINEERS, INC.
CIVIL & STRUCTURAL ENGINEERING • LAND SURVEYING • CONSTRUCTION MANAGEMENT & INSPECTIONAL SERVICES

June 15, 2009

State of Hawaii
Department of Land & Natural Resources
Land Division
P. O. Box 621
Honolulu, HI 96809

Attn: Mr. Ian Hirokawa

Re: Shoreline Certification
Lot 6, Hale Malia Subdivision
(11 Hale Malia Place)
At Lahaina, Maui, Hawaii
TMK: (2) 4-3-03:96

Gentlemen:

Pursuant to our discussion and your letter dated July 14, 2008 and in accordance with the "Shoreline Rules and Regulations" we hereby submit ten (10) prints of the revised shoreline map for certification. Also enclosed are the following items:

1. Filing Fee in sum of $75.00
2. Three (3) sets of photographs showing the shoreline
3. Right of Entry Letter
4. Shoreline Certification Application form

The verification of shoreline is for shoreline setback purposes.

Your usual cooperation is appreciated.

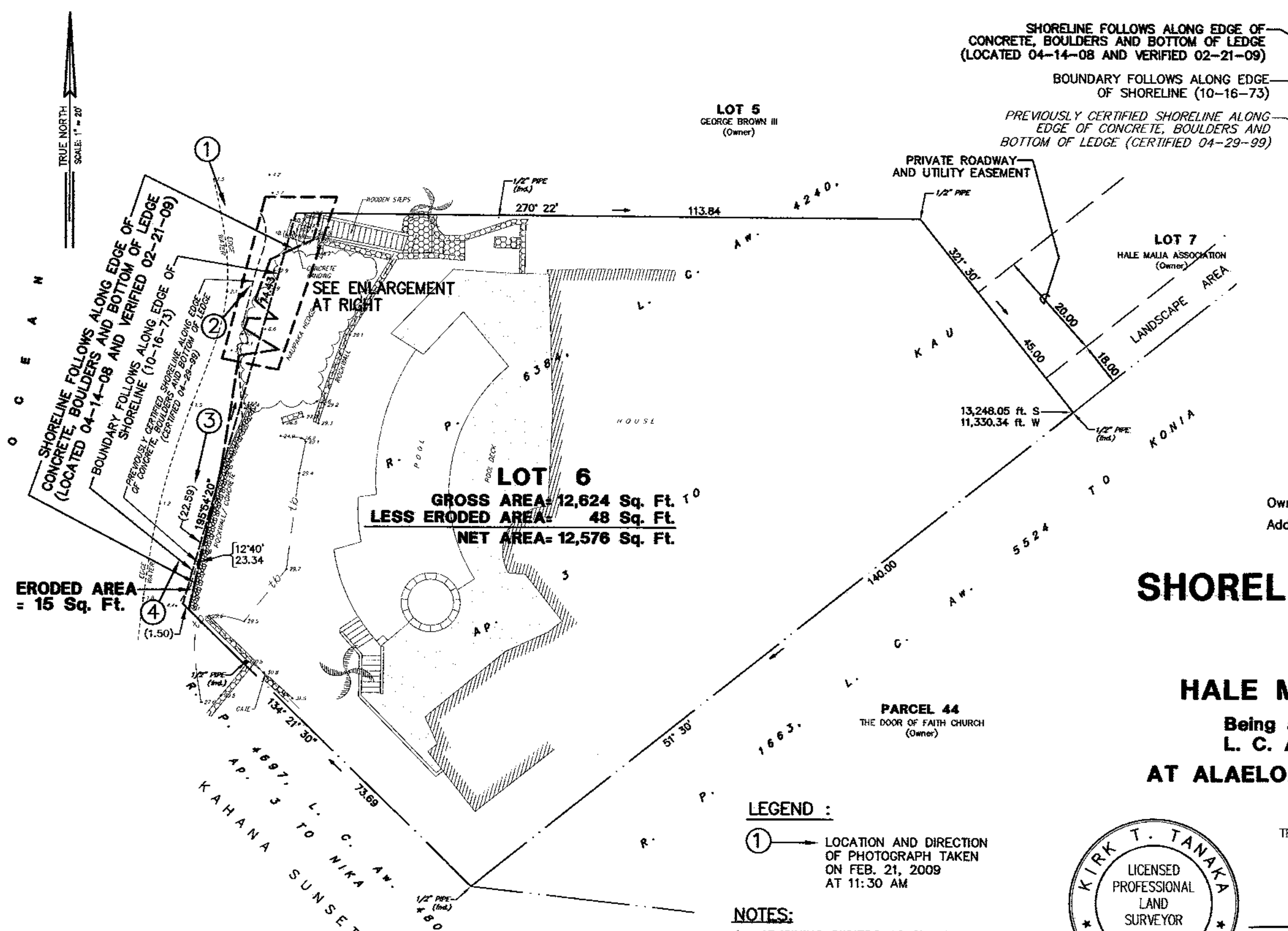
If you have any questions or need additional information, please call us.

Very truly yours,

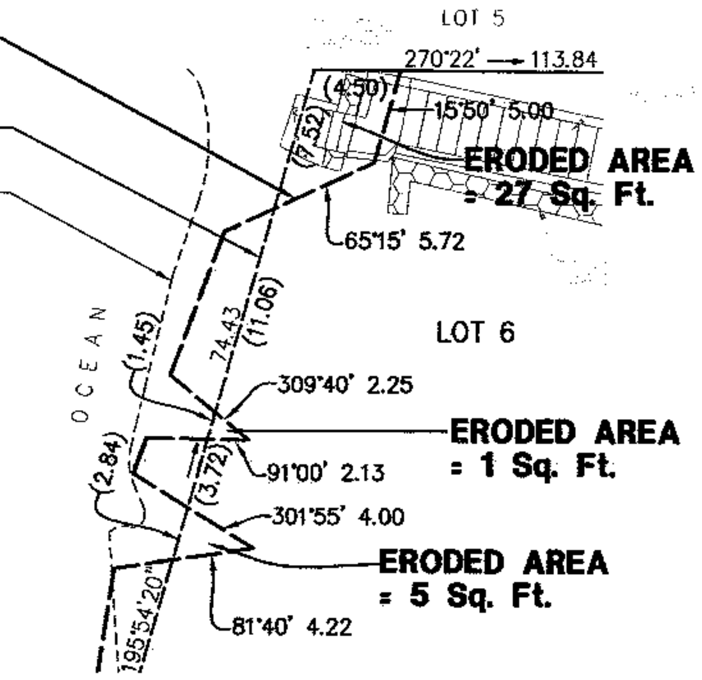
Kirk T. Tanaka, P.E., L.S.
President

sh
Encl.
cc: Ms. Marcia Lucas (via Email)
Mr. John Edwards (via Email)

871 KOLU STREET SUITE 201 • WAILUKU, MAUI, HAWAII 96793-1436 • PHONE (808) 242-6861
FAX (808) 244-7287 • E-MAIL - tanakaeng@hawaiiantel.net



TRUE NORTH
SCALE: 1" = 20'
LOT 5
GEORGE BROWN III
(Owner)
SHORELINE FOLLOWS ALONG EDGE OF CONCRETE, BOULDERS AND BOTTOM OF LEDGE (LOCATED 04-14-08 AND VERIFIED 02-21-09)
BOUNDARY FOLLOWS ALONG EDGE OF SHORELINE (10-16-73)
PREVIOUSLY CERTIFIED SHORELINE ALONG EDGE OF CONCRETE, BOULDERS AND BOTTOM OF LEDGE (CERTIFIED 04-29-99)
PRIVATE ROADWAY AND UTILITY EASEMENT
LOT 7
HALE MALIA ASSOCIATION
(Owner)
LANDSCAPE AREA
SEE ENLARGEMENT AT RIGHT
OCEAN
270° 22'
113.84
321° 30'
45.00
20.00
18.00
13,248.05 ft. S
11,330.34 ft. W
1/2" PIPE (fnd.)
LOT 6
GROSS AREA= 12,624 Sq. Ft.
LESS ERODED AREA= 48 Sq. Ft.
NET AREA= 12,576 Sq. Ft.
HOUSE
POOL
POOL DECK
(22.59)
195°54'20"
12°40'
23.34
ERODED AREA = 15 Sq. Ft.
(1.50)
134° 21' 30"
73.69
140.00
51° 30'
R. P. 6384, L. C. Aw. 4240, Ap. 3 to Kau
R. P. 5524 L. C. Aw. 1663, Ap. 3 to Konia
R. P. 4697, L. C. Aw. 4807, Ap. 3 to Nika
KAHANA SUNSET
PARCEL 44
THE DOOR OF FAITH CHURCH
(Owner)
1
2
3
4



ENLARGEMENT

SCALE: 1 in. = 10 ft.

Owner: MARCIA LUCAS

Address: 11 Hale Malia Place
Lahaina, Maui, Hawaii 96761

SHORELINE SURVEY MAP
OF
LOT 6
HALE MALIA SUBDIVISION

Being a Portion of R. P. 6384, L. C. Aw. 4240, Ap. 3 to Kau

AT ALAELOA, LAHAINA, MAUI, HAWAII

LEGEND :

① → LOCATION AND DIRECTION OF PHOTOGRAPH TAKEN ON FEB. 21, 2009 AT 11:30 AM

NOTES:

1. ADJOINING OWNERS AS SHOWN TAKEN FROM TAX MAP.
2. ALL AZIMUTHS AND RECORD COORDINATES AS SHOWN REFERRED TO GOVERNMENT SURVEY TRIANGULATION STATION "MALO" △.

THIS MAP IS FROM AN ACTUAL SURVEY ON THE GROUND DONE BY ME OR UNDER MY DIRECT SUPERVISION.

KIRK T. TANAKA — LICENSED PROFESSIONAL LAND SURVEYOR — No. 7223-LS — HAWAII, U.S.A.

KIRK T. TANAKA
Licensed Professional Land Surveyor
Certificate No. 7223
License Expires: April 30, 2010

DATE

Revised: FEB. 24, 2009
Revised: SEPT. 01, 2008
MAY 05, 2008

File: "LUCAS.crd" (Layout1)
Z:\2008\08-019\MALIA Shore.dwg : 24-FEB-2009 : Revised BY: JOY E

Tax Map Key (2) 4-3-03: 96

871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII 96793

R. T. TANAKA ENGINEERS, INC.
SURVEYORS – CIVIL & STRUCTURAL ENGINEERS

JOB NO. 08-019

①

②

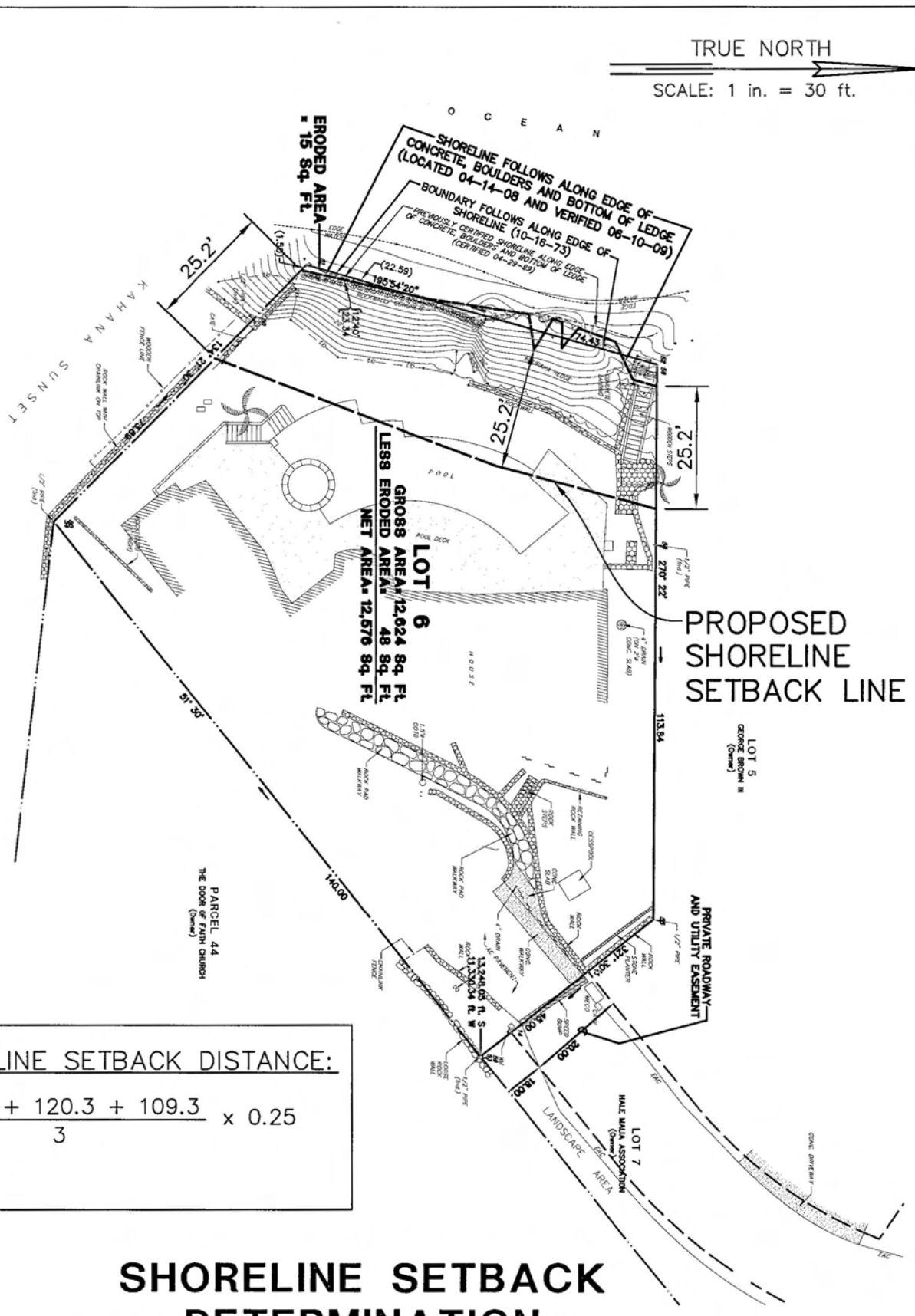
Shoreline Survey
Lot 6, Hale Malia Subdivision
Photographs Taken on February 21, 2009 at 11:30 a.m.

③

④

Shoreline Survey
Lot 6, Hale Malia Subdivision
Photographs Taken on February 21, 2009 at 11:30 a.m.

Appendix B:
Shoreline Setback Determination



SHORELINE SETBACK DISTANCE:

$$= \frac{72.2 + 120.3 + 109.3}{3} \times 0.25$$

$$= 25.2'$$

SHORELINE SETBACK DETERMINATION

LOT 6, HALE MALIA SUBDIVISION

30 0 30 60

GRAPHIC SCALE IN FEET

Tax Map Key: (2) 4-3-03: 96

AUGUST 13, 2009

[fig.2(2)] Z:\DRAW1\2008\08-019\MALIA Shoreline Setback Assessment.dwg 14-AUG-2009 : Revised BY:Nancy

①

②

Shoreline Suvey
Lot 6, Hale Malia Subdivision
Photographs taken on June 10, 2009 at 8:30 a.m.

③

④

Shoreline Suvey
Lot 6, Hale Malia Subdivision
Photographs taken on June 10, 2009 at 8:30 a.m.

Appendix C:
Summary of Early Public and Agency Consultation

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

March 26, 2009

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

Attention: Mr. Jason Medema, Project Planner

Ladies and Gentlemen:

Subject: Early Consultation for Proposed Shoreline Erosion Mitigation and Bank Stabilization

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

Other than the comments from Engineering Division, Division of Aquatic Resources, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to cal my office at 587-0433. Thank you.

Sincerely,

Charlene E Unoki

for Morris M. Atta
Administrator

RECEIVED
MAR 30 2009
CHRIS HART & P
Landscape Arch

cc: Jason

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2009

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
x Land Division – Maui District

FROM: for Morris M. Atta
SUBJECT: Early Consultation for Proposed Shoreline Erosion Mitigation and Bank Stabilization
LOCATION: Napili, Maui, TMK (2) 4-3-3:96
APPLICANT: Chris Hart & Partners Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 25, 2009.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

RECEIVED
LAND DIVISION
2009 MAR -3 P 5:5
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

Attachments

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

Signed:
Date: 3/3/09

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorrisAtta
Ref.: EarlyConsultErosionMitigationNapili
Maui.449

COMMENTS

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

(X) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone C. The Flood Insurance Program does not have any regulations for developments within Flood Zone C.

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

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

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

( ) Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

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

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

( ) Additional Comments: _____

_____

( ) Other: _____

_____

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

Signed: _____
ERIC T. HIRANO, CHIEF ENGINEER

Date: 3/3/09

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 27, 2009

AQUATIC RESOURCES: 06-230

DIRECTOR	
COMM. FISH.	
AQ RES/ENV	
AQ REC	
PLANNER	
STAFF SVCS	
RCUH/UH	
STATISTICS	
AFRC/FED AID	
EDUCATION	
SECRETARY	
OFFICE SVCS	
TECH ASST	
AM	X
Return to:	
No. Copies	
Copies to:	
Due Date:	

SH

MEMORANDUM

TO: ~~DLNR Agencies:~~
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
x Land Division – Maui District

FROM: Morris M. Atta
SUBJECT: Early Consultation for Proposed Shoreline Erosion Mitigation and Bank Stabilization
LOCATION: Napili, Maui, TMK (2) 4-3-3:96
APPLICANT: Chris Hart & Partners Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 25, 2009.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

RECEIVED
LAND DIVISION
2009 MAR 24 A 9:52
DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

Attachments

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

Signed: Francis Oishi
Date: 3-19-09

RECEIVED
MAR 3 2009
AQUATIC RESOURCES

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

AQUATIC RESOURCES: 06-230

DIRECTOR	
COMM. FISH.	
AQ RES/ENV	
AQ REC	
PLANNER	
STAFF SVCS	
RCUH/UH	
STATISTICS	
AFRC/FED AID	
EDUCATION	
SECRETARY	
OFFICE SVCS	
TECH ASST	
AM	X
Return to:	
No. Copies	
Copies to:	
Due Date:	

SH

February 27, 2009

MEMORANDUM

TO: ~~DLNR Agencies:~~
x Div. of Aquatic Resources
__ ~~Div. of Boating~~ & Ocean Recreation
x Engineering Division
__ Div. of Forestry & Wildlife
__ Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
x Land Division – Maui District

FROM: for Morris M. Atta Marlene
SUBJECT: Early Consultation for Proposed Shoreline Erosion Mitigation and Bank Stabilization
LOCATION: Napili, Maui, TMK (2) 4-3-3:96
APPLICANT: Chris Hart & Partners Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 25, 2009.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed: Skippy Hau
Date: 3/16/09

RECEIVED
Maui
MAR 12 2009
Div. of Aquatic Resources

RECEIVED
MAR 3 2009
AQUATIC RESOURCES

DIVISION OF AQUATIC RESOURCES - MAUI
DEPARTMENT OF LAND & NATURAL RESOURCES
130 Mahalani Street
Wailuku, Hawai'i 96793
March 16, 2009

To: Alton Miyasaka, Aquatic Biologist

From: Skippy Hau, Aquatic Biologist

Subject: Early Consultation for Proposed Shoreline Erosion Mitigation and Bank Stabilization, Napili, TMK (2) 4-3-3:96
(DAR 6-2130) March 25, 2009 Deadline

Please describe the structurally engineered retaining system mauka of the certified shoreline. Except for the location of the property no other details were described in the four pages I received. Please describe the repairs that were made and whether the owners intended to make them permanent. Will photos of the shoreline be shown?

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

May 29, 2009

Mr. Morris M. Atta
Administrator
Department of Land and Natural Resources
Land Division
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

ATTN: Mr. Skippy Hau, Aquatic Biologist

Dear Mr. Atta:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 26, 2009 letter regarding the above referenced project. We are pleased to respond to the comments from the Aquatic Resources Division as follows.

Initiation of the project was approved by the County of Maui, Department of Planning under the auspices of an SMA Emergency Permit, due to the imminent risk to public safety as well as loss of private property and harm to the nearshore ecosystem. The permanent structurally engineered retaining system is subject to a HRS 343 Environmental Assessment (EA), as well as a Special Management Area (SMA) Use Permit and Shoreline Setback Variance application, copies of which will be forwarded to your office for review and comment. The EA/SMA/SSV will contain detailed descriptions of the repairs made, including plans showing the structural retaining system and photographs of the shoreline area.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

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

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M. D.
DIRECTOR OF HEALTH

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

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2102

March 12, 2009

Mr. Christopher L. Hart, ASLA
President
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawai`i 96793

Dear Mr. Hart:

Subject: Early Consultation Request for Proposed Shoreline Erosion Mitigation and Bank Stabilization, located on Property situated at 11 Hale Malia Place, Napili, Maui, Hawaii
TMK: (2) 4-3-003:096

Thank you for the opportunity to comment on the Proposed Shoreline Erosion Mitigation and Bank Stabilization. The following comments are offered:

1. The Army Corps of Engineers should be contacted at (808) 438-9258 to identify whether a Federal license or permit is required for this project. Pursuant to Section 401(a)(1) of the Federal Water Pollution Act, a Section 401 Water Quality Certification may be required.

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

3. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46 "Community Noise Control." A noise permit may be required and should be obtained before the commencement of this project.

Cc: Jason
081039

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

Should you have any questions, please call me at 808 984-8230.

Sincerely,

Patti Kitkowski

Patti Kitkowski
Acting District Environmental Health Program Chief

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

May 29, 2009

Ms. Patti Kitkowski
Acting District Environmental Health Program Chief
Maui District Health Office
Department of Health
State of Hawaii
54 High Street
Wailuku, HI 96793-2102

Dear Ms. Kitkowski:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 12, 2009 letter regarding the above referenced project. We are pleased to address your comments as follows:

1. **Army Corps of Engineers Permits.** The Army Corps of Engineers has been contacted with regard to the proposed project. As all work associated with this project is to take place *mauka* of the certified shoreline and outside of navigable waters of the United States, a federal license or permit is not required for this project.

2. **NPDES Permit Coverage.** As the project site is 0.29 acres in area, and therefore does not exceed one (1) acre, a National Pollutant Discharge Elimination System (NPDES) permit is not required for the proposed project.

3. **Noise Permit.** The Applicant is aware that the project is subject to maximum noise levels during the construction phase of the project as set forth in Hawaii Administrative Rules Chapter 11-46, "Community Noise Control."

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039) ✓

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD / CWB

03040PJF.09

March 10, 2009

Mr. Christopher L. Hart, ASLA
President
Landscape Architecture
City and Regional Planning
115 N. Market Street
Wailuku, Hawaii 96793-1717

Dear Mr. Hart:

Subject: Proposed Shoreline Erosion Mitigation and Bank Stabilization
11 Hale Malia Place, Napili, Island of Maui, Hawaii
TMK: (2) 4-3-003:096 (approximately 0.29 acres)

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

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

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

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

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

CC: Jason 08/039

RECEIVED

MAR 12 2009

CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

2. 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:

   a. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations (CFR), Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

   b. 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.

   c. Hydrotesting water.

   d. Construction dewatering effluent.

   A separate NOI form for each type of discharge must be submitted at least 30 calendar 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 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

3. For types of discharges not listed in Item No. 2 above or wastewater discharges into Class 1 or Class AA waters, you may need to obtain an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.

4. 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.

5. The Honolulu Engineer District (HED) of the U.S. Army Corps of Engineers (COE) should be consulted with respect to the Department of Army permitting requirements. Please call (808) 438-9258.

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

7. 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 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.

8. You should specify if any impacted State waters are listed in the Clean Water Act, Section 303(d) list of impaired water bodies in Chapter IV of the *2006 State of Hawaii Water Quality Monitoring and Assessment Report*.

   Any NPDES permit(s) for discharges into these water bodies will incorporate the requirement for the Permittee to develop and implement a facility/project-specific Waste Load Allocation (WLA) implementation and monitoring plan when a Total Maximum Daily Load (TMDL) which specifies WLAs applicable to the Permittee's project is approved by the U.S. Environmental Protection Agency. The Permittee shall incorporate and implement the facility/project-specific WLA implementation and monitoring plan as part of the project's Storm Water Pollution Control Plan or Site-Specific Best Management Practices Plan, as appropriate. The facility/project-specific WLA implementation and monitoring plan shall include Data Quality Objectives (DQO) and Quality Assurance and Quality Control methods. The purpose and goal of DQO process can be found at http://www.hanford.gov/dqo. Information on the DOH WLA Implementation and TMDLs are available on the DOH Environmental Planning Office website at http://hawaii.gov/health/environmental/env-planning/wqm/wqm.html (see *TMDL Technical Reports and Implementation Plans for approved TMDLs are available here for download in pdf format).*

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

Sincerely,

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

JF:np

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

May 29, 2009

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

Dear Mr. Wong:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 10, 2009 letter regarding the above referenced project. We are pleased to address your comments as follows:

1. **Standard DOH Comments.** We note your recommendation that the standard DOH comments, available on the DOH website, be reviewed as the proposed project continues to move forward. The link to the standard comments has been made available to the Applicant.

2. **Impacts to State Waters.** The proposed project will be undertaken with specific consideration of the DOH Antidegradation Policy (HAR 11-54-1.1), as well as other applicable sections of HAR 11-54 relating to designated uses (HAR 11-54-3) and water quality criteria (HAR 11-54-4 through 8). The proposed project is not anticipated to generate adverse impacts to water quality, and in fact will serve to protect water quality of by preventing erosion of silty clay soils into adjacent nearshore waters.

3. **NPDES Permit Coverage.** As the project site is 0.29 acres in area, and therefore does not exceed one (1) acre, a National Pollutant Discharge Elimination System (NPDES) permit is not required for the proposed project.

4. **Department of Army, Corps of Engineers Permits.** The Honolulu Engineer District of the U.S. Army Corps of Engineers has been consulted with respect to permitting requirements. As the proposed project is *mauka* of the shoreline, it falls outside of Waters of the United States and therefore outside of Department of the Army jurisdiction.

5. **Section 401 Water Quality Certification.** The proposed project does not involve an application for any federal license or permit for discharge into navigable waters, therefore a Section 401 Water Quality Certification (WQC) is not required.

6. **State Water Quality Standards.** The Applicant is aware that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/pr Section 401 WQC are required, must comply with State Water Quality Standards.

7. **Clean Water Act Section 303(d), List of Impaired Waters.** No adjacent and/or potentially impacted waters are listed in the Clean Water Act, Section 303(d) list of impaired water bodies in Chapter IV of the *2006 State of Hawaii Water Quality Monitoring and Assessment Report.*

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
77 Ho'okele Street, Suite 202
Kahului, HI 96732
Phone 808-871-5500
Fax 808-873-6184

March 31, 2009

Mr Christopher L. Hart
Chris Hart & Partners Inc.
115 N. Market St.
Wailuku, HI 96793

Subject: 11 Hale Malia Place, Napili, Maui, Hawaii; TMK: (2) 4-3-003:096

Dear Mr. Hart:

We would like to review the SMA and specific plans when available, as well as schedule a site visit.

Thank you for the opportunity to comment.

Sincerely,

Ranae Ganske-Cerizo
District Conservationist

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

May 29, 2009

Ms. Ranae Ganske-Cerizo
District Conservationist
Natural Resources Conservation Service
77 Ho'okele Street, Suite 202
Kahului, HI 96732

Dear Ms. Ganske-Cerizo:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 31, 2009 letter regarding the above referenced project. We are pleased to address your comments as follows:

The Special Management Area (SMA) Use Permit, as well specific plans for the proposed shoreline erosion mitigation and bank stabilization system, will be included as part of a Draft Environmental Assessment and Shoreline Setback Variance Application, a copy of which will be transmitted to your office for review. We will contact you to discuss possible arrangements for a site visit at that time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039) ✓

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
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 HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
Office of Conservation and Coastal Lands
POST OFFICE BOX 621
HONOLULU, HAWAI'I 96809

DLNR:OCCL:. DE
March 4, 2009

Correspondence: MA-09-164

MAR - 6 2009
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MAR - 9 2009
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

Chris Hart/Jason Medema
Chris Hart and Partners, Inc.
115 N. Market St,
Wailuku, Maui 96793-1717

CC: Jason 08/039

SUBJECT: Erosion Control and Bank Stabilization Early Consultation. 11 Hale Malia Pl, Napili, Maui. TMK (2) 4-3-03:096

The Department of Land and Natural Resources' (DLNR), Office of Conservation and Coastal Lands (OCCL) is in receipt of the February 23, 2009 letter requesting early consultation for erosion control and bank stabilization at the subject property. The letter does not provide any details of the proposed project but our staff has had a chance to review previous planning documents related to the proposed project. Based on the information provided, the OCCL offers the following comments and recommendations.

1. The draft plans should include a copy of a certified shoreline map for reference. Our understanding is the applicant is currently working with the DLNR, Land Division staff of supplying the necessary information (performance bond) in order to process the application for a certified shoreline from the DLNR.
2. Without any project details it is difficult to comment on the details of the plan however past planning documents for this property suggested preference for micro-piles and other forms of geotechnical anchoring systems. These appear to be warranted based on the existing hazard due to bluff failure.
3. The OCCL regulates land uses seaward of the shoreline. Based on the information provided it appears the proposed activities are all landward of the shoreline and the OCCL would therefore not be responsible for regulating any of the proposed activities in this area.
4. It does not appear that stabilization of the subject coastal bluff (weathered basalt and clays) will negatively impact coastal resources or the availability of beach-compatible sediment.
5. Future planning documents should include a section on coastal hazards as they relate to the proposed activities. The discussion might include a description of historical events and any special engineering designed to adapt or accommodate extreme coastal hazards such as hurricane or tsunami inundation.
6. It may be useful to briefly discuss the impact of the proposed activities on lateral public shoreline access at the base of the cliff.

7. We suggest engineering alternatives consider the visual aesthetics of bluff stabilization techniques and attempt to camouflage the engineering measures with the natural environment.

Thank you for the opportunity to comment on this DEA. Should you have any questions, please contact Dolan Eversole of the Office of Conservation and Coastal Lands, at (808) 587-0377.

Sincerely,

Samuel J. Lemmo, ADMINISTRATOR
Office of Conservation and Coastal Lands

CC: Chairperson
Maui Board Member
Maui County Planning Department Jeff Hunt, 250 S High Street, Wailuku 96793
Land Division

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

May 29, 2009

Mr. Samuel J. Lemmo
Administrator
Office of Conservation and Coastal Lands
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Lemmo:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 4, 2009 letter regarding the above referenced project. We are pleased to address your comments as follows:

1. **Certified Shoreline Map.** The draft plans for the proposed structure, to be included as part of the consolidated Environmental Assessment (EA)/ Special Management Area (SMA)/ Shoreline Setback Variance (SSV) Application, will be accompanied by a certified shoreline map for reference. You are correct in noting that the Applicant is currently working with the DLNR Land Division to obtain a performance bond in order to process the application for shoreline certification with the DLNR.

2. **Geotechnical Anchoring Systems.** As you note, the proposed structure will utilize micropiles and other geotechnical anchoring systems to stabilize the bluff. We note from your letter that, in your estimation, such measures are warranted.

3. **OCCL Jurisdiction.** All work is being performed *mauka* of the shoreline and therefore within the jurisdiction of the County of Maui, which is responsible for regulating the proposed activities.

4. **Impact on Beach Resources.** As you note, there is no beach-compatible sediment evident at the project site. The substrate in the backshore area of the subject parcel is composed of silty clay and rough, broken and stony land. The proposed action is therefore not expected to negatively impact coastal resources or the availability of beach quality sand.

5. **Coastal Hazards.** The Draft EA/SMA/SSV Application, a copy of which will be transmitted to your office for review, will include discussion of coastal hazards as they relate to the proposed action.

6. **Impact on lateral public shoreline access.** A paved public shoreline access exists at Hui Road E, approximately 1000 feet south of the project site. The impact of the proposed project on lateral public shoreline access at the base of the cliff will be further discussed within the context of the Draft EA/SMA/SSV Application.

7. **Visual Aesthetics.** The facing of the proposed structure will be designed to blend in with the natural surrounding environment, so as to avoid adverse visual impacts when viewed from the ocean and along the shoreline.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

PHONE (808) 594-1888 FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD09/4202

May 4, 2009

Chris Hart & Partners
115 N. Market Street
Wailuku, Mau'i, 96793-1706

RE: Request for comments on early consultation for proposed shoreline mitigation and permanent bank stabilization, Nāpili, Maui, TMK: 4-3-003:096.

Aloha e Chris Hart,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated February 23, 2009. OHA has reviewed the project and offers the following comments.

From the scant information provided we understand that a permanent feature is being proposed to protect property and prevent potential risk to public safety and damage to the nearshore environment. Naturally, OHA is in support of such things, however, it is a matter of how it is done that potential issues can arise.

Of perennial concern to OHA is the protection of Native Hawaiian resources, which include environmental and cultural components. Specifically regarding this project, such things as effects on littoral processes, access, mitigations and design will most likely be of concern. We look forward to further review of this proposal.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold by phone at (808) 594-0263 or e-mail him at granta@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Administrator

C: Maui CRC

CC: Jason 08/039

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

May 13, 2009

Mr. Clyde W. Namu'o
Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Kapi'olani Blvd. Suite 500.
Honolulu, HI 96813

Dear Mr. Namu'o:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your May 4, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows.

We appreciate your support of the Applicant's efforts to mitigate a risk to public safety and potential damage to the nearshore environment, in addition to mitigating a threat to an existing private residence. We also note your concern regarding potential impacts to Native Hawaiian cultural resources.

A Cultural Impact Assessment (CIA) is currently being prepared to assess the project's potential impacts on Native Hawaiian cultural resources and activities, if any. The CIA will be included in the Draft Environmental Assessment for the proposed action, a copy of which will be transmitted to your office for review and comment.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

08039

cc: Jason

March 2, 2009

Mr.Christopher L. Hart, ASLA
Chris Hart & Partners Inc.
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Hart,

Subject: Early Consultation Request for Proposed Shoreline Erosion Mitigation and Bank Stabilization
11 Hale Malia Place
Napili, Maui, Hawaii
TMK: (2) 4-3-003:096

Thank you for allowing us to comment on the Early Consultation Request for the subject project.

In reviewing our records and the information received, Maui Electric Company (MECO) has no objections to the subject project at this time.

Should you have any questions or concerns, please call me at 871-2340.

Sincerely,

Ray Okazaki
Staff Engineer

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

May 13, 2009

Mr. Ray Okazaki
Staff Engineer
Maui Electric Company
210 West Kamehameha Ave.
P.O. Box 398
Kahului, HI 96733-6898

Dear Mr. Okazaki:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 2, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF THE SUPERINTENDENT

March 31, 2009

Mr. Christopher L. Hart, President
Chris Hart & Partners Inc.
115 N. Market Street
Wailuku, Hawai`i 96793-1717

Dear Mr. Hart:

Subject: Early Consultation Request for Erosion Mitigation at
11 Hale Malia Place, Napili, Maui, TMK 4-3-003:096

The Department of Education (DOE) has reviewed your request for preliminary comments on plans for erosion mitigation and bank stabilization. We do not have any comment or concern about the project.

DOE appreciates the opportunity to offer early comments. If you have any questions, please call Heidi Meeker of the Facilities Development Branch at (808) 377-8301.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS
Lindsey Ball, CAS, Hana/Lahainaluna/Lanai/Molokai Complex Areas

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MAR 31 2009
CHRIS HA[illegible]
Landscape[illegible]
cc: Jason

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

May 13, 2009

Ms. Patricia Hamamoto
Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, HI 96804

Dear Ms. Hamamoto:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 31, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

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

LINDA LINGLE
GOVERNOR

BRENNON T. MORIOKA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRIAN H. SEKIGUCHI
JIRO A. SUMADA

IN REPLY REFER TO:

STP 8.3160

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

March 10, 2009

Mr. Christopher L. Hart, ASLA
President
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Hawaii 96793-1717

Dear Mr. Hart:

Subject: Marcia Lucas Proposed Shoreline Erosion Mitigation and Bank Stabilization
Early Consultation
TMK: 4-3-003: 096

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project.

DOT does not anticipate any adverse, significant impacts to its transportation infrastructure resulting from the proposed project to construct permanent erosion mitigation and bank stabilization measures on a 0.29 acre property located at 11 Hale Malia Place in Napili Maui.

DOT appreciates the opportunity to provide comments. If there are any questions, please contact Mr. David Shimokawa of the Statewide Transportation Planning Office at (808) 587-2356.

Very truly yours,

Francis Paul Keeno

for BRENNON T. MORIOKA, PH.D., P.E.
Director of Transportation

CC: Jusm 08/039

CHRIS HART
& PARTNERS, INC.

Landscape Architecture
City & Regional Planning

May 13, 2009

Mr. Brennon T. Morioka, Ph.D., P.E.
Director of Transportation
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813-5097

Dear Mr. Morioka:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 10, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

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

CHARMAINE TAVARES
Mayor

TAMARA HORCAJO
Director

ZACHARY Z. HELM
Deputy Director

(808) 270-7230
Fax (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

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

March 3, 2009

Christopher L. Hart, ASLA
Chris Hart & Partners Inc.
115 N. Market Street
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed Shoreline Erosion Mitigation and Bank Stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK (2) 4-3-003:096 (approximately 0.29 acres)

Dear Mr. Hart:

We have reviewed subject proposed project and have no comments or objections at this time.

Thank you for the opportunity to comment. Please contact me or Patrick Matsui, Chief of Parks Planning and Development, at 270-7387 if there are any questions.

Sincerely,

TAMARA HORCAJO
Director of Parks and Recreation

xc: Patrick Matsui, Chief of Planning & Development

CC: Jusm 08 1039

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MAR - 9 2009

CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CHRIS HART
& PARTNERS, INC.

Landscape Architecture
City & Regional Planning

May 13, 2009

Ms. Tamara Horcajo
Director
Department of Parks and Recreation
County of Maui
700 Hali'a Nakoa Street, Unit 2
Wailuku, HI 96793

Dear Ms. Horcajo:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 3, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

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

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

CHARMAINE TAVARES
Mayor

LORI TSUHAKO
Director

JO-ANN T. RIDAO
Deputy Director

2200 MAIN STREET • SUITE 546 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165
MAILING ADDRESS: 200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • EMAIL director.hhc@mauicounty.gov

March 4, 2009

Mr. Christopher L. Hart, ASLA
President
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Hart:

SUBJECT: Early Consultation Request for Proposed Shoreline Erosion Mitigation and Bank Stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK (2) 4-2-003:096 (approximately 0.29 acres)

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

Please call Mr. Oshiro of our Housing Division at 270-7355 if you have any questions.

Sincerely,

Lori Tsuhako

LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

xc: Housing Division

CC: Jusm 08/09

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MAR - 6 2009
CHRIS HART & PA...
Landscape Architec...

CHRIS HART
& PARTNERS, INC.

Landscape Architecture
City & Regional Planning

May 13, 2009

Ms. Lori Tsuhako, LSW, ACSW
Director
Department of Housing and Human Concerns
County of Maui
200 South High Street
Wailuku, HI 96793

Dear Ms. Tsuhako:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 4, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

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

LINDA LINGLE
GOVERNOR
STATE OF HAWAI'I

MICAH A. KĀNE
CHAIRMAN
HAWAIIAN HOMES COMMISSION

KAULANA H. PARK
DEPUTY TO THE CHAIRMAN

ROBERT J. HALL
EXECUTIVE ASSISTANT

STATE OF HAWAI'I
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAI'I 96805

March 11, 2009

Chris Hart & Partners Inc.
115 N. Market Street
Wailuku, Maui, Hawai'i 96793-1717

Dear Mr. Hart:

Subject: Early Consultation Request for Proposed Shoreline Erosion Mitigation and Bank Stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawai'i
TMK (2) 4-4-003:096 (approximately 0.29 acres)

Thank you for the opportunity to review the subject proposal. The Department of Hawaiian Home Lands has no comment to offer at this time. If you have any questions, please contact our Planning Office at (808) 620-9480.

Aloha and mahalo,

Micah A. Kane, Chairman
Hawaiian Homes Commission

CC: Jason 08/039

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CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CHRIS HART
& PARTNERS, INC.

Landscape Architecture
City & Regional Planning

May 13, 2009

Mr. Micah A. Kane, Chairman
Hawaiian Homes Commission
Department of Hawaiian Homelands
State of Hawaii
P.O. Box 1879
Honolulu, HI 96805

Dear Mr. Kane:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 11, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

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

POLICE DEPARTMENT
COUNTY OF MAUI

CHARMAINE TAVARES
MAYOR

OUR REFERENCE
YOUR REFERENCE

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

THOMAS M. PHILLIPS
CHIEF OF POLICE

GARY A. YABUTA
DEPUTY CHIEF OF POLICE

March 4, 2009

Mr. Christopher L. Hart, ASLA
President
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, HI 96793

Dear Mr. Hart:

SUBJECT: Early Consultation Request for Proposed Shoreline Erosion Mitigation and Bank Stablization TMK (2) 4-3-003: 096

This is in response to your letter dated February 23, 2009, requesting comments on the above subject.

At this time, we will defer any comments until the Environmental Assessment is produced. We will then review the EA and make any necessary comments. Thank you for giving us the opportunity to comment on this project.

Very truly yours,

AC Wayne T. Ribao

Assistant Chief Wayne T. Ribao
for: Thomas M. Phillips
Chief of Police

c: Jeffrey Hunt, Maui County Dept. of Planning

cc: Jason 08039

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MAR - 9 2009
CHRIS HART & P... Land...

COPY

CONCUR:
AC
3/4/09

TO : **THOMAS PHILLIPS, CHIEF OF POLICE**

VIA : **CHANNELS**

FROM : **RICKY UEDOI, SERGEANT, LAHAINA PATROL DIVISION**

SUBJECT : **EARLY CONSULTATION COMMENTS**

The Police Department has been invited to submit early consultation comments on a proposed Shoreline Erosion Mitigation and Bank Stabilization project at 11 Hale Malia Place in Napili.

The applicant, Marcia Lucas, proposes the construction of permanent erosion mitigation and bank stabilization measures on a 0.29 acre property. This proposed action is necessary to stabilize a section of slope roughly 40 feet in length and 20 feet in height, that collapsed during a heavy storm in 2007. Currently, a single family residence is being threatened, together with potential risk to public safety and damage to the near shore environment.

The proposed project involves the construction of a structurally engineered retaining system mauka of the certified shoreline. The structure will stabilize the entire exposed bank, and prevent further erosion and related damage.

A Special Management Area (SMA) Emergency Permit was approved by the County of Maui, Department of Planning, in May of 2008, allowing the Applicant to expedite construction of the mitigation measures.

In looking over this proposed project, the police department should defer any comments on the proposed project until we can review the Environmental Assessment and then we can adequately provide comments on this project.

Concur
W.S.K.
3-3-09

Respectfully submitted,

Sgt. Ricky C. Uedoi, 1512
Lahaina Patrol Division
March 3, 2009 @ 1120 hours

Concur, will wait for EA.

3/3/09

CHRIS HART
& PARTNERS, INC.

Landscape Architecture
City & Regional Planning

May 13, 2009

Mr. Wayne T. Ribao
Assistant Chief
Police Department
County of Maui
55 Mahalani Street
Wailuku, HI 96793

Dear Mr. Ribao:

RE: Early Consultation Request for proposed shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 4, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File

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

Appendix D:
Summary of Public and Agency Comments on Draft Environmental Assessment

10-233

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

March 22, 2010

Regulatory Branch

File No. POH-2009-085

Kurt F. Wollenhaupt
County of Maui, Department of Planning
250 South Hight Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Wollenhaupt:

This is in response to your letter dated February 12, 2010 requesting a review and comments on the Draft Environmental Assessment for bank stabilization measures completed by Ms. Marcia Lucas on property located at 11 Hale Malia Place, Napili, Maui, Hawaii (TMK: (2)4-3-003:096).

The assessment appears complete with regard to impacts to any waters of the U.S. under our regulatory jurisdiction. The project was reviewed pursuant to Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404). Section 10 requires that a Department of the Army (DA) permit be obtained for certain structures or work in or affecting navigable waters of the United States (U.S.) (33 U.S.C. 403) and Section 404 requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including wetlands (33 U.S.C. 1344). Both Section 10 and Section 404 require that you obtain a DA permit prior to conducting the work. Navigable waters of the U.S. are those waters subject to the ebb and flow of the tide shoreward to the plane of the Mean Higher High Water (MHHW). The Pacific Ocean is a navigable water of the U.S. The project, as constructed, does not require a DA permit as no work has occurred in a water of the United States.

Be advised that any future work, required as a result of a catastrophic failure of the completed wall, which occurs *makai* of the MHHW, will require a DA permit be issued **prior** to the commencement of construction to correct the failure.

We appreciate the opportunity to comment on the draft assessment. If you have questions, please contact Mr. Robert Deroche of my staff at 808-348-2039 (FAX: 808-438-4060 or by email at robert.d.deroche2@usace.army.mil and refer to File No. POH-2009-085 regarding this project.

Sincerely,

for George P. Young, P.E.
Chief, Regulatory Branch

Copy Furnished:

Chris Hart & Partners, Inc., 115 N. Market St., Wailuku, HI 96796-1717
Ms. Marcia Lucas, 2440 Vallejo Street, San Francisco, CA 94123

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

July 1, 2010

Mr. George P Young, P.E., Chief
Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, HI 96858-5440

Dear Mr. Young:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 22, 2010 letter regarding the above referenced project. We note your comment that the assessment appears complete with regard to any waters of the United States under your agency's jurisdiction. We understand from your letter that the project, as constructed, does not require a DA permit, as no work has occurred in a water of the United States.

We acknowledge that any future work required as a result of catastrophic failure of the completed wall, that occurs *makai* of the Mean Higher High Water (MHHW) mark, will require the issuance of a DA permit prior to commencement of construction to correct the failure.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

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

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
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
OFFICE OF CONSERVATION AND COASTAL LANDS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

'10 MAR 11 A7:47

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

REF:OCCL:AB

Correspondence MA-10-170

MAR 11 2010

MEMORANDUM

To: Kurt Wollenhaupt, Staff Planner
County of Maui, Planning Department

From: Sam Lemmo, Administrator
DLNR, Office of Conservation and Coastal Lands

SUBJECT: Draft Environmental Assessment (EA) Review of a Special Management Area (SMA) Use Permit and Shoreline Setback Variance (SSV) for a Shoreline Slope Repair and Seawall, Located at 11 Hale Malia Place, Napili, Maui, TMK: (2) 4-3-003:096

The Department of Land and Natural Resources (DLNR) Office of Conservation and Coastal Lands (OCCL) has reviewed the information provided on the Draft Environmental Assessment (EA) Review of a Special Management Area (SMA) Use Permit and Shoreline Setback Variance (SSV) for a Shoreline Slope Repair and Seawall, Located at 11 Hale Malia Place, Napili, Maui, TMK: (2) 4-3-003:096.

The proposed project involves the installation of a shoreline protection measure which includes a cast-in-place concrete wall, tied against the bluff using micropiles anchored into bedrock. According to the applicant, all work will take place within the area mauka of the certified shoreline within Maui County jurisdiction.

The OCCL previously provided early consultation comments on the subject application in a letter dated March 4, 2009. As the applicant has stated that all work will take place mauka of the certified shoreline, the OCCL has no further comments regarding this application.

Thank you for the opportunity to review this application. Should you have any questions regarding this correspondence, please contact Audrey Barker of OCCL at 587-0377 or audrey.t.barker@hawaii.gov.

c: Chairperson
MDLO

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

July 6, 2010

Mr. Samuel J. Lemmo
Administrator
Office of Conservation and Coastal Lands
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Lemmo:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your comments dated March 11, 2010 regarding the above referenced project. We note your reference to early consultation comments on the subject project that were provided in a letter from your office dated March 4, 2009. We understand from your letter that you have no additional comments to offer at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, Planner, County of Maui, Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039) ✓

LINDA LINGLE
GOVERNOR

RUSS K. SAITO
Comptroller

SANDRA L. YAHIRO
Deputy Comptroller

'10 FEB 19 P1:49

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

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

Response refer to:
Ma-052(10)

February 17, 2010

MEMORANDUM

TO: Jeffrey S. Hunt, AICP, Planning Director
Department of Planning, County of Maui

ATTN: Kurt F. Wollenhaupt, Staff Planner

FROM: Reid K. Siarot, State Land Surveyor
DAGS, Survey Division

SUBJECT: Renovations and Improvements to The Whaler on Kaanapali Beach
Applicant: Board of Directors of the Association of Apartment Owners for The Whaler on Kaanapali Beach
Permit No.: SM1 2009/0019
TMK: 4-4-08: 02

The subject proposal has been reviewed and confirmed that no Government Survey Triangulation Stations or Benchmarks are affected. Survey has no objections to the proposed project.

Should you have any questions, please call me at 586-0390.

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

July 1, 2010

Mr. Reid K. Siarot
State Land Surveyor
Department of Accounting and General Services
Land Survey Division
State of Hawaii
P.O. Box 119
Honolulu, HI 96810-0119

Dear Mr. Siarot:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your February 17, 2010 letter regarding the above referenced project. We understand from your letter that there are no State Survey Triangulation Stations or Benchmarks affected by the project, and that your Division has no objections to the project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

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www.chpmaui.com

AGENCY NAME	UH Sea Grant	PHONE	808-463-3868

NO COMMENT			
Signed:		Dated:	
Print Name:		Title:	

COMMENT/RECOMMENDATION BOX			
As an after the fact EA + SMA application, I defer to comments made by Sea Grant and DLNR OCCL prior to construction of seawall.			
Signed:		Dated:	4/26/2010
Print Name:	Tara L Miller	Title:	Coastal Hazards Specialist

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

July 1, 2010

Ms. Tara L. Miller
Coastal Hazards Specialist
UH Sea Grant Program
c/o County of Maui, Department of Planning
Current Planning Division
2200 Main St.
One Main Plaza Building, Suite 619
Wailuku, HI 96793

Dear Ms. Miller:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your comments dated April 26, 2010 regarding the above referenced project. The project construction was originally approved by the Maui County Planning Department in May of 2008, pursuant to a Special Management Area (SMA) Emergency Permit. Representatives of UH Sea Grant Program and DLNR-OCCL were consulted as part of the SMA Emergency Permit Application process.

Please note that the subject HRS 343 Environmental Assessment, SMA Use Permit, and Shoreline Setback Variance Application are being submitted as a condition of approval for the SMA Emergency Permit. Therefore, the aforementioned development permits for the project do not represent an after-the-fact application.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

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

cc. Mr. James Buika, County of Maui, Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

From: Paul Haake
To: Kurt Wollenhaupt
Date: 3/5/2010 4:10 PM
Subject: 11 Hale Malia Place SSV 2009/0005

Date : March 5, 2010

To : Kurt Wollenhaupt, Staff Planner

Project : EA & SMA Regarding Permit and Shoreline Setback Variance
SM1 2009/0018, EA 2009/0008, SSV 20090005
TMK (2) 4-3-003:096
11 Hale Malia Place, Napili, HI 96761

Kurt,

Thank you for the opportunity to comment on this subject. At this time, our office does not have any comments or objections regarding this project.

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

Sincerely,

Paul Haake
Captain, Fire Prevention Bureau
313 Manea Place
Wailuku, HI 96793

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

July 1, 2010

Mr. Paul Haake
Captain
Fire Prevention Bureau
County of Maui
313 Manea Place
Wailuku, Maui, Hawaii 96793

Dear Mr. Haake:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your comments dated March 5, 2010 regarding the above referenced project. We understand that you have no further comments or objections to this project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

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

CHARMAINE TAVARES
Mayor

CHERYL K. OKUMA, Esq.
Director

GREGG KRESGE
Deputy Director

TRACY TAKAMINE, P.E.
Solid Waste Division

DAVID TAYLOR, P.E.
Wastewater Reclamation
Division

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

April 12, 2010

MEMO TO: JEFF HUNT, PLANNING DIRECTOR

FROM: CHERYL K. OKUMA, DIRECTOR OF ENVIRONMENTAL MANAGEMENT

Cheryl K. Okuma
Digitally signed by Cheryl K. Okuma
DN: cn=Cheryl K. Okuma, o=Depart. of Environmental Management, ou=Director, email=cheryl.okuma@mauicounty.gov, c=US
Date: 2010.04.12 14:00:22 -10'00'

SUBJECT: **MS. MARCIA LUCAS, 11 HALE MALIA PLACE**
SHORELINE EROSION MITIGATION
SM1 2009/0018, EA 2009/0008, SSV 2009/0005
TMK (2) 4-3-003:096, NAPILI, LAHAINA

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:

   a. None.

2. Wastewater Reclamation Division (WWRD) comments:

   a. None

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

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

July 1, 2010

Ms. Cheryl Okuma, Esq.
Director of Environmental Management
Department of Environmental Management
2200 Main Street, Suite 175
Wailuku, Maui, Hawaii 96793

Dear Ms. Okuma:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your April 12, 2010 letter regarding the above referenced project. We understand from your letter that the Solid Waste Division and the Wastewater Reclamation Division have no comments on the project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

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

K. Wollenhaupt

CHARMAINE TAVARES
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director

RALPH M. NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT SERVICES ADMINISTRATION
250 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

March 3, 2010

MEMO TO: JEFFREY S. HUNT, A.I.C.P., PLANNING DIRECTOR

FROM: MILTON M ARAKAWA, A.I.C.P, DIRECTOR OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT IN SUPPORT OF A SPECIAL MANAGEMENT AREA USE PERMIT AND SHORELINE SETBACK VARIANCE FOR SHORELINE SLOPE REPAIR AND SEAWALL TMK: (2) 4-3-003:096 SM1 2009/0018; EA 2009/008; SSV 2009/005

We reviewed the subject application and have no comments at this time.

If you have any questions regarding this memorandum, please call Michael Miyamoto at 270-7845.

MMA:MM:jc
S:\LUCA\CZM\Draft Comments\43003096_11_Malia_Place_sm1_ea_ssv_jc.wpd

c Highways Division
Engineering Division

RECEIVED
COUNTY OF MAUI
DEPT OF PLANNING
'10 MAR -5 A9:40

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

July 1, 2010

Mr. Milton Arakawa, AICP
Director of Public Works
Development Services Administration
250 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Arakawa:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your March 3, 2010 letter regarding the above referenced project. We understand from your letter that your Department has no comments on the project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

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

TRANSMITTED TO YOU ARE THE FOLLOWING:
√ Application(s)

THESE ARE TRANSMITTED AS CHECKED BELOW:
√ For your Comment and Recommendation

Please identify any comments you would like the Department of Planning to propose as conditions of project approval. Please also provide any previous comments, letters, etc. pertinent to this application. Submit your comments directly to me by March 25, 2010. A comment box is also provided to assist you. If no comment, please sign the "No Comment" box and fax to (808) 270-1775.

Thank you for your time and assistance. For additional clarification, please contact me via email at kurt.wollenhaupt@mauicounty.gov or by phone at (808) 270-1789.

Sincerely,

KURT F. WOLLENHAUPT, Staff Planner

Proj. Name:	HaleMalia Place Shoreline setback variance for a shoreline slope repair and seawall	
Permit no.	SM1 20090018	
TMK	(2) 4-3-003:096	

COMMENT/RECOMMENDATION BOX

1. Please inform the applicant that the property is located in the special flood hazard area V & X zone. Please submit a flood delineation of the subject site to determine whether a special flood development permit and other applicable certification maybe required.

2. That all other required State and County permits be obtained from the appropriate public agency.

Commenting Agency:	ZAED	Phone:	2707139	Date:	3/12/2010
Signed:		Email address:	avelina.cabais@mauicounty.gov		
Print Name:	Avelina Cabais	Title:	Land Use and Building Plans Examiner		

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

July 1, 2010

Mr. Francis Cerizo
Zoning Administration and Enforcement Division
Department of Planning
County of Maui
250 South High Street
Wailuku, Maui, Hawaii 96793

ATTN: Ms. Avelina Cabais, Land Use and Building Plans Examiner

Dear Mr. Cerizo:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your comments dated March 1, 2010 regarding the above referenced project. We are pleased to address your comments as follows.

1. According to the attached Flood Hazard Assessment Report by the State of Hawaii, the subject property is located within the special flood hazard area Zone X. Zone X represents areas determined to be outside of the 0.2% annual chance floodplain, and a Special Flood Hazard Area Development Permit is therefore not required for the subject development.

2. The Applicant notes that all other required State and County permits must be obtained from the appropriate agencies.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

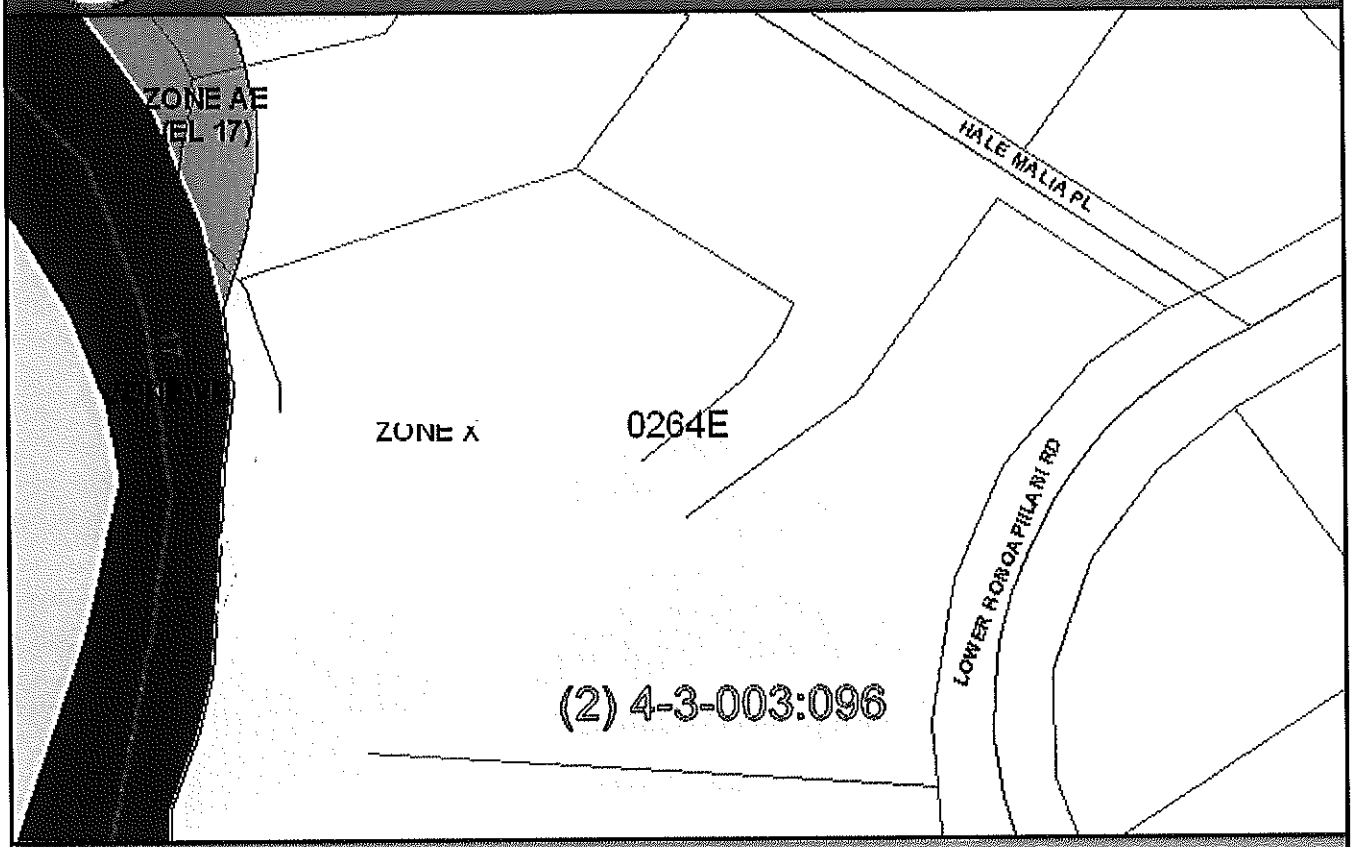
Matthew M. Slepin
Senior Associate • Planner

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

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard 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 requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	MAUI
TMK NO:	(2) 4-3-003:096
PARCEL ADDRESS:	11 HALE MALIA PL
FIRM INDEX DATE:	SEPTEMBER 25, 2009
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	1500030264E
PANEL EFFECTIVE DATE:	SEPTEMBER 25, 2009

PARCEL DATA FROM:	APRIL 2009
IMAGERY DATA FROM:	MAY 2005

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
County of Maui	
Francis Cerizo, CFM	(808) 270-7771
State NFIP Coordinator	
Carol Tyau-Beam	(808) 587-0267

CHARMAINE TAVARES
Mayor

JEFFREY K. ENG
Director

ERIC H. YAMASHIGE, P.E., L.S.
Deputy Director

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

April 5, 2010

Mr. Kurt F. Wollenhaupt, Staff Planner
Department of Planning
County of Maui
250 South High Street
Wailuku HI 96793

Re: TMK: (2) 4-3-003:096
SM1 2009/0018
Project Name: Shoreline Slope Repair & Seawall at 11 Hale Malia Place

Dear Mr. Wollenhaupt:

Thank you for the opportunity to comment on this Draft Environmental Assessment (DEA).

Source Availability and Consumption
The EA should identify sources and potable and/or non-potable demand for construction of the proposed shoreline improvement. The project area is served by the Lahaina system. The main sources of water for this portion of the Lahaina system are wells withdrawing from Launiupoko aquifer, and surface water from Kanaha Stream. New source development projects include upgrades to the Lahaina and Mahinahina Water Treatment Plants, and review of potential sites for groundwater wells and raw water storage is under way. The parcel is served by a 5/8-inch water meter. Average demand for this property is approximately 1,915 gallons per day. The project is not anticipated to generate additional demand on the DWS system. Our comments are directed to protection of water resources.

System Infrastructure
A six-inch waterline running along Hale Malia Place serves the property. There is one DWS fire hydrant approximately 125' from the parcel and one standpipe within 250' of the site.

Conservation
To alleviate demand on the Lahaina system, we recommend that the following conservation measures be specified in the final EA and included in the project implementation:1.
Use Climate-adapted Plants: We recommend using native climate-adapted and salt tolerant plants to

restore the disturbed areas and for all landscaping. The project is located in Plant Zone 5. Native plants adapted to the area conserve water and protect the watershed from degradation due to invasive alien species. Enclosed you will find a copy of our Plant Brochure, "Saving Water in the Yard".

- Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapo-transpiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers. All irrigation should be scheduled between 7 PM and 10 AM, no more than 2 days per week once plants are established.

Pollution Prevention

In order to protect ground and surface water sources, Best Management Practices (BMPs) designed to minimize infiltration and runoff from construction should be implemented during construction. In addition to the required BMPs, the mitigation measures below should be included in the final EA:

- Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the ground. Maintain vehicles and equipment to prevent oil or other fluids from leaking. Concrete trucks and tools used for construction should be rinsed off-site.
- Properly and promptly dispose of all loosened and excavated soil and debris material from drainage structure work.
- Properly install and maintain erosion control barriers such as silt fencing.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date.
- Stabilize denuded areas by sodding or planting as soon as possible. Replanting should include soil amendments, mulch and temporary irrigation. Use high seeding rates to ensure rapid stand establishment.
- Minimize paved areas that increase runoff and prevent water from seeping into the ground.
- Keep run-off on site.
- No construction or toxic materials or debris should be placed where it may enter the ocean.
- Construction debris and sediment should be removed from construction areas each day that construction occurs to prevent the accumulation of sediment and other debris which may be discharged into coastal waters. Debris should be disposed of outside the coastal zone.

Should you have any questions, please contact our Water Resources and Planning Division at 808-244-8550.

Sincerely,

Jeffrey K. Eng, Director
mlb
cc: applicant, engineering division

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

July 1, 2010

Mr. Jeffrey K. Eng
Director
Department of Water Supply
200 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Eng:

RE: Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your April 5, 2010 letter regarding the above referenced project. We are pleased to address your comments as follows.

1. **Source Availability and Consumption.** The Applicant notes your clarifying remarks concerning the main sources of water for the system as well as new source development projects in the project area. The applicant confirms the Department's expectation that the project will not generate additional demand.

2. **System Infrastructure.** The Applicant notes from your letter that the property is served by a 6-inch DWS waterline running along Hale Malia Place, and also that one DWS fire hydrant is located approximately 125 feet from the parcel and a standpipe is located within 250 feet of the site.

3. **Conservation.** The project will utilize climate-adapted plants in all landscape plantings. The project will have rain sensors on all automated irrigation.

4. **Pollution prevention.** Best Management Practices (BMPs), such as those described in your letter, were implemented during construction of the wall in order to minimize infiltration and runoff from construction.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

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

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, County of Maui Department of Planning
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

Appendix E:
Response to Comments
from Maui Planning Commission
on Draft Environmental Assessment

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

August 19, 2010

Ms. Kathleen Ross Aoki
Planning Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Maui, Hawaii 96793

ATTN: Mr. James Buika, Coastal Resources Planner

Dear Ms. Aoki:

RE: Maui Planning Commission Comments on the Draft Environmental Assessment (DEA) for shoreline erosion mitigation and bank stabilization, located on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii, TMK: (2) 4-2-003:096 (approx. 0.29 acres).

Thank you for your letter dated March 31, 2010 regarding the above referenced project, attached as Exhibit "A." We are pleased to address the comments provided by the Maui Planning Commission at its February 23, 2010 meeting as follows.

1. **SHPD and Burial Council Review of Draft EA.** The State Historic Preservation Division (SHPD) was consulted during the Early Consultation phase of the EA process. A copy of the Draft EA was provided to SHPD as part of the agency review and comment component of the Draft EA.

   A copy of the Draft EA was also provided to the Maui/Lanai Islands Burial Council (MLIBC) for review, and the project was discussed by the MLIBC during its regular meetings on March 25, 2010 and April 29, 2010. The MLIBC had no comments on the Draft EA.

2. **History of Structures Located on the Subject Property.** The original structure on the subject property, a single-family residence, was constructed by a previous landowner circa 1975, at approximately the same time the Hale Malia subdivision was initially created. No information concerning the dimensions or the footprint of the original residence was available from the County of Maui or the previous landowner. A permit for demolition of the original residence was approved by the County of Maui in June of 1999.

   In July of that year, a Building Permit was issued to the previous landowner for construction of the existing dwelling, garage, and lanai. The residence met all relevant development requirements, such as building height, setback, and footprint. The Building

Permit notes that the property's Shoreline Setback was 25 feet, pursuant to the Shoreline Rules for the Maui Planning Commission as they existed at that time. Concurrently with the permit for construction of the residence, a permit was also approved in July of 1999 for construction of a spa as part of the building lanai.

In December of 2003, a Building Permit was approved for conversion of a portion of the lanai consisting of a koi pond into the current swimming pool. The conversion was subject to a Special Management Area (SMA) Assessment. A determination was made by the Planning Director on December 3, 2003, that the improvements represented alterations to an existing, permitted structure, and therefore were exempt from the SMA Rules. The structure was determined to lie outside of the Shoreline Setback Area. Please see Exhibit "B" for copies of all available building permit records attributable to prior developments on the subject parcel.

3. **Historic Beach Conditions.** Please see Exhibit "C" for a series of mosaic slides showing beach conditions over a period of 35 years, from 1975 to present. As indicated by the attached historical mosaic, photographic evidence suggests no significant change in beach conditions at the site over time.

   The beach at the base of the bluff can be characterized as having an ephemeral profile. In essence, this means that sand comes and goes more or less regularly, depending on incident wave conditions. The substrate underlying the subject property is composed of silty clay and does not represent a source of sand for beach replenishment; therefore, the sand for the beach likely comes and goes from nearshore deposits. In light of the foregoing, current prevailing beach conditions likely represent the naturally occurring beach conditions, and the merit of any beach restoration efforts is unclear.

4. **Location of the Built Wall Relative to the Certified Shoreline.** Please see Exhibit "D" for a site and landscape plan showing the location of the State certified shoreline relative to the bank protection wall. This exhibit has been added to the Final EA to replace the previously existing Figure 9, "Concept Landscape Plan."

   The Annual Erosion Hazard Rate (AEHR) map for Keonenui Bay is attached as Exhibit "E," and shows an average AEHR of roughly 0.5 to 0.8 feet at the shoreline fronting the subject property. As discussed in Section II.G of the Draft EA, Section §12-203-4 of the Shoreline Rules for the Maui Planning Commission states:

   "where the shoreline is fixed by (1). artificial structures that are nonconforming or that have been approved by appropriate government agencies and for which engineering drawings exist to locate the interface between the shoreline and the structure; or (2). exposed natural stabilized geographic features such as cliffs and rock formations, the Annual Erosion Hazard Rate shall cease at the interface."

   The subject parcel is fronted by a high cliff, and the shoreline is fixed by an *"artificial structure"* which has *"been approved by appropriate government agencies and for which engineering drawings exist to locate the interface between the shoreline and the structure."* Therefore, the Shoreline Setback is determined as twenty-five percent of the lot's average depth of 100.6 feet as calculated by the Project Surveyor, or 25.2 feet.

5. **Analysis of Removal of Swimming Pool.** The building lanai, of which the pool is a part, was determined to be outside of the Shoreline Setback Area when the existing

residence was constructed in 1999, as well as when the preexisting koi pond was converted into the existing pool in 2003. Due primarily to changes in the shoreline setback calculations, approximately 200 square feet of the lanai now lies within the Shoreline Setback Area and qualifies as a legally nonconforming structure. No other hardened structures are located within the Shoreline Setback Area, aside from the wall that is the subject of this EA.

The slope and wall collapse in 2007 was generally attributable to inundation of the *makai* yard area by heavy rainfall, combined with heavy surf activity at the base of the bluff. According to the project's consulting Geotechnical and Structural Engineer, the swimming pool was not a contributing factor in the collapse of the bluff. A new wall would have been necessary to stabilize and repair the collapsed bluff, and protect the existing habitable structure, regardless of the existence of the pool and lanai structure.

Removing 200 square feet of the pool and lanai structure from the Shoreline Setback Area would have no positive impact on the property or the shoreline area, as it would neither mitigate the threat to the existing habitable structure, nor the threat to public health, safety and welfare created by the collapsing bluff. Therefore, removal of the roughly 200 square feet of hardened structure that legally lies within the Shoreline Setback Area is not a practical alternative for mitigating the threats to the property, the shoreline, or the nearshore environment.

6. Project Timeline Relative to Alleged Burial Cave.

May 30, 2008:	SMA Emergency Permit for Erosion Mitigation and Bank Stabilization approved by Maui County Planning Department.
August 8, 2008:	Building Permit Application Filed.
August, 2008:	Determination by Development Services Administration, Engineering Division, that proposed work is exempt from a grading permit as existing conditions represent an emergency situation.
December 10, 2008:	Revised SMA Emergency Permit Approval and Time Extension.
January, 2009:	SCS Archaeologists contracted to prepare Archaeological Monitoring Plan for the proposed project.
February 4, 2009:	Building Permit Issued.
March 4, 2009:	Archaeological Monitoring Plan, prepared by SCS Archaeologists, submitted to State Historic Preservation Division (SHPD) for review and approval.
March, 2009:	Initiation of ground disturbing activity for wall construction.

April 9, 2009:	Archaeological Monitoring Plan approved by SHPD.
April 13, 2009:	CH&P contacted SCS Archaeologists, notifying them of near completion of excavation for the new wall.
April 14, 2009:	SCS monitor arrived on-site to inspect the progress of the excavation. The entire profile of the face of the bluff was exposed at this time, as construction had not yet commenced. No cultural materials or layers were encountered during the field inspection. Determination by SCS monitor that exposed sediments suggest previous grading and filling episodes and no subsurface sites were disturbed.
April 27, 2009:	Summary report of April 14, 2009 Archaeological Inspection transmitted to SHPD.
May, 2009:	In-progress Cultural Impact Assessment, prepared by Jill Engledow in support of the HRS 343 Environmental Assessment for the wall, reveals possible existence of a cave. Interview with a prior landowner alleges exposure of a burial cave at the site by erosion in the 1980s, and subsequent sealing of the cave with concrete.
May 22, 2009:	Second inspection of site by SCS monitor, to verify presence of a cave. No evidence of a cave, nor any evidence of a concrete seal, was encountered. Findings of the second archaeological inspection communicated verbally by SCS to Hinano Rodrigues of SHPD.
March 25, 2010:	Project presented before Maui/Lanai Islands Burial Council (MLIBC) for comment.
April 16, 2010:	Release forms received by Chris Hart & Partners, Inc., containing statements from all project personnel involved directly with excavation and construction activities, that no potential human remains and/or native Hawaiian artifacts were found.
April 21, 2010:	Phone conversation between representatives of Chris Hart & Partners, Inc. and former property owner Joan McKelvey. Mrs. McKelvey indicated that the alleged burial cave opening was located at approximately 4-6 feet AMSL and 7 feet from the southern boundary of the subject property. Mrs. McKelvey stated that the cave had been sealed over with concrete 40 years prior.

April 21, 2010:	Representatives of Chris Hart & Partners, Inc. and SCS Archaeology visit site to re-survey the shoreline and cliff area for evidence of a cave. No evidence of a cave was found.
April 29, 2010:	Project presented before MLIBC a second time. MLIBC had no comment.

7. **Discussion of Coastal Hazards.** According to the project's consulting Geotechnical and Structural Engineer, the wall is engineered to withstand the level of design forces necessary to minimize the likelihood that an extreme event, including but not limited to a tsunami, would damage the structure. A discussion of coastal hazards that may influence the integrity of the wall during severe storms is included in Section III.A of both the Draft and the Final EA.

8. **Lateral Shoreline Access.** Public access to the shoreline exists at Hui Rd. E, approximately 600 feet south of the subject property, and lateral shoreline access exists from the southern end of Keonenui Bay to the Kahana Sunset Condominium property, which abuts the subject property immediately to the south. Between Kahana Sunset and the subject property, lateral shoreline access is constrained by a naturally occurring rocky outcrop extending approximately 75 feet seaward. Access to the shoreline area beneath the subject property is by stairs and a ladder from the top of the bluff. The wall and slope retaining system does not in any way restrict lateral access along the shoreline beneath the subject property; however, natural circumstances unrelated to the project make lateral public access to the site along the shoreline somewhat impractical. Please see Exhibit "F" for documentation of lateral shoreline access along Keonenui Bay, including photographs of shoreline conditions at the boundary between the subject property and the adjacent Kahana Sunset Condominium.

9. **Contractors' Statements Regarding Burials.** Please see Exhibit "G" for copies of signed statements from all contractors involved with ground-disturbing activities at the site, indicating that no burials or other subsurface cultural features were encountered during excavation for the wall.

10. **Beach Conditions Before and After Wall Construction.** Please see Exhibit "H" for a series of photographs documenting beach conditions at the site prior to and following construction of the wall. Please refer also to Exhibit "C" referenced above, which shows beach conditions in the project vicinity over a period of 35 years, from 1975 to present. **Note:** a previously existing seawall was constructed at the site circa 1980, and was in existence until the collapse of the shoreline bluff in December of 2007.

11. **Effect of the Wall on Adjacent Beaches and Shoreline Properties.** As discussed in Section III.A.2 of the Draft and Final EA, the wall is built on, and fronted by, rocky outcrops. These outcrops function as a naturally hardened shoreline at the base of the bluff, and absorb the primary forces of the waves and currents. The base of the wall is landward of the rock outcrops, which form a vertical cliff at the waterline. The wall is therefore not anticipated to have a significant impact on existing coastal processes, and should not aggravate or contribute to beach erosion, nor generate adverse effects on neighboring shoreline properties.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely Yours,

Matthew M. Slepin
Senior Associate • Planner

cc. Mr. James Buika, Coastal Resources Planner
Mr. John Edwards, AIA, Edwards Design Group, Inc.
Project File (CHP Project No. 08-039)

Exhibit A
Maui Planning Commission Comments on Draft EA

CHARMAINE TAVARES
Mayor

JEFFREY S. HUNT
Director

KATHLEEN ROSS AOKI
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

March 31, 2010

Mr. Jason Medema
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Medema:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA), SHORELINE SETBACK VARIANCE (SSV), AND SPECIAL MANAGEMENT AREA (SMA) USE PERMIT APPLICATION FOR THE SHORELINE SLOPE REPAIR, LOCATED AT 11 HALE MALIA PLACE, LAHAINA, MAUI, HAWAII; TMK: (2) 4-3-003:096 (SM1 2009/0018) (EA 2009/0008) (SSV 2009/0005)

At a regular meeting of February 23, 2010, the Maui Planning Commission reviewed the above-referenced document and provided the following comments:

1. Forward a copy of the Draft EA to the Maui/Lanai Islands Burial Council and the State Historic Preservation Division (SHPD) for review and comment;

2. Prepare a history on structures located on the property including the house and swimming pool, including previous building permits, SMA permits, and dates of permitting and indicate whether or not such structures were located within the Shoreline Setback Area as defined at the time of permitting. Indicate the footprint of the original house and subsequent renovations as information is available;

3. Review the potential for beach restoration and prepare a series of "mosaic" slides showing the condition of the beach over a period of 20 years;

4. Prepare a shoreline map indicating the certified shoreline in relation to the "built" seawall and show all Shoreline Setback Calculations. Show the erosion rate map used for this particular part of the shoreline;

5. Prepare an analysis on the potential impact to the property and to the shoreline of removing the swimming pool and other hardened structures within the Shoreline Setback Area;

6. Provide a timeline on the relationship among the issuance of a building permit, site excavation, preparation of an archaeological monitoring plan, review and approval of the plan by SHPD, excavation work, and field inspections by the archaeological monitor;

7. Provide a discussion of coastal hazards that may influence the integrity of the wall during severe storms;

8. Provide a map and photographs demonstrating lateral shoreline access by the public;

9. Obtain statements from individuals directly involved on-site with excavation for and construction of the seawall as to their knowledge of any potential human remains and/or Hawaiian artifacts that may have been found during excavation and/or construction operations;

10. Provide a series of photographs on the condition of the beach and shoreline before and after the construction of the seawall and the current condition of the beach and shoreline with particular attention given to inclusion of these photographs in Appendix B related to the Shoreline Setback Determination; and

11. Provide a discussion as to the potential effect of the construction of the seawall on adjacent beaches and shoreline properties.

Please provide written responses to the above comments in the Final EA. Should you require further clarification, please contact Staff Planner Kurt Wollenhaupt by email at kurt.wollenhaupt@mauicounty.gov or by telephone at (808) 270-1789.

Sincerely

JEFFREY S. HUNT, AICP
Planning Director

xc: Clayton I. Yoshida, AICP, Planning Program Administrator
Kurt F. Wollenhaupt, Staff Planner
Project File
General File

JSH:KFW:sg
K:\WP_DOCS\PLANNING\SM1\2009\0018_Halemaliaplace\MPCcommentsltr.Doc

Exhibit B
Prior Development Permits on Subject Parcel

ALAN M. ARAKAWA
Mayor

MICHAEL W. FOLEY
Director

WAYNE A. BOTEILHO
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

December 3, 2003

Bas Code
#438197

Ms. Amy Johnson
Pono Pools, Inc.
P. O. Box 302
Kihei, Maui, Hawaii 96753

Dear Ms. Johnson:

RE: Special Management Area Assessment Determination for the Construction of a Swimming Pool at the DiNoto Residence, 11 Hale Malia Place, TMK: 4-3-003: 096, Lahaina, Maui, Hawaii (SMX 2003/0530) (SM5 2003/0442)

The Maui Planning Department (Department) has reviewed the above-referenced application and finds that the project entails "improvements to an existing single-family residence." Further, the potential environmental and ecological effects of the project have been reviewed in accordance with the significance criteria set forth in Section 12-202-12(e) of the Special Management Area Rules for the Maui Planning Commission.

Based upon this review, the Department finds that the project will not have a cumulative impact, or a significant environmental or ecological effect on the Special Management Area within which the project site is located. As such, the project is not a "development," according to Section 205A-22, Hawaii Revised Statutes, and is therefore exempt from the permit procedures of the Special Management Area Rules for the Maui Planning Commission.

Thank you for your cooperation. If additional clarification is required, please contact Matt Niles, Staff Planner, of this office at 270-7735.

Sincerely,

M. Le Foley

MICHAEL W. FOLEY
Planning Director

MWF:MCN:lar
c: Wayne A. Boteilho, Deputy Planning Director
Clayton I. Yoshida, AICP, Planning Program Administrator
Gilbert S. Coloma-Agaran, Director, DPWEM
Aaron H. Shinmoto, PE, Planning Program Administrator (2)
John Nakagawa, Office of Planning, CZM Program
Matt Niles, Staff Planner
DSA (2)
03/SM5 File
03/CZM File
General File
K:\WP_DOCS\PLANNING\SM5\2003\0442_DiNotoPool\exempt.wpd

03/4085

Subj: **DiNoto.Pono Pools.Setback**
Date: 11/12/2003 5:33:17 PM Hawaiian Standard Time
From: tdd@maui.net
To: matthew.niles@co.maui.hi.us
CC: ponopools@aol.com
Sent from the Internet (Details)

'03 NOV 18 P2:40

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

Aloha Matt,

Pono Pools just called and told me that you would like further explanation on how a 25' setback was determined to be applicable at 11 Hale Malia, TMK 4-3-003:096. The 25' setback is prescribed on lots where the average lot depth is less than 100'. Referencing the Maui Planning Commission Shoreline Rules, "Average lot depth means the measurement obtained by adding the lengths of the two sides of a lot which are at or near right angles with the shoreline to the length of a line obtained by drawing a line from a point in the center of the makai side of the lot to a point in the center of the mauka side of the lot and dividing the resulting sum by three". The construction plans submitted to the County from which my building permit was issued shows this average lot depth calculation detail on Page A-1-detail 2, "Determine Shoreline Setback".

To facilitate your review the following are the calculation dimensions on the Permit Set of Plans referenced above.

- The lengths of the two sides of the lot are 113.84' and 73.69'.
- The length of the centerline is 106.64'.
- Adding these three relevant dimensions and dividing by 3 equals 98.05'.

Aloha,

Tom

TO: MATT NILES

03/4794 WMP 11/26

November 21, 2003

'03 NOV 21 P3:41

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

Mr. Francis Cerizo
Civil Engineer
County of Maui Department of Planning
Via Facsimile

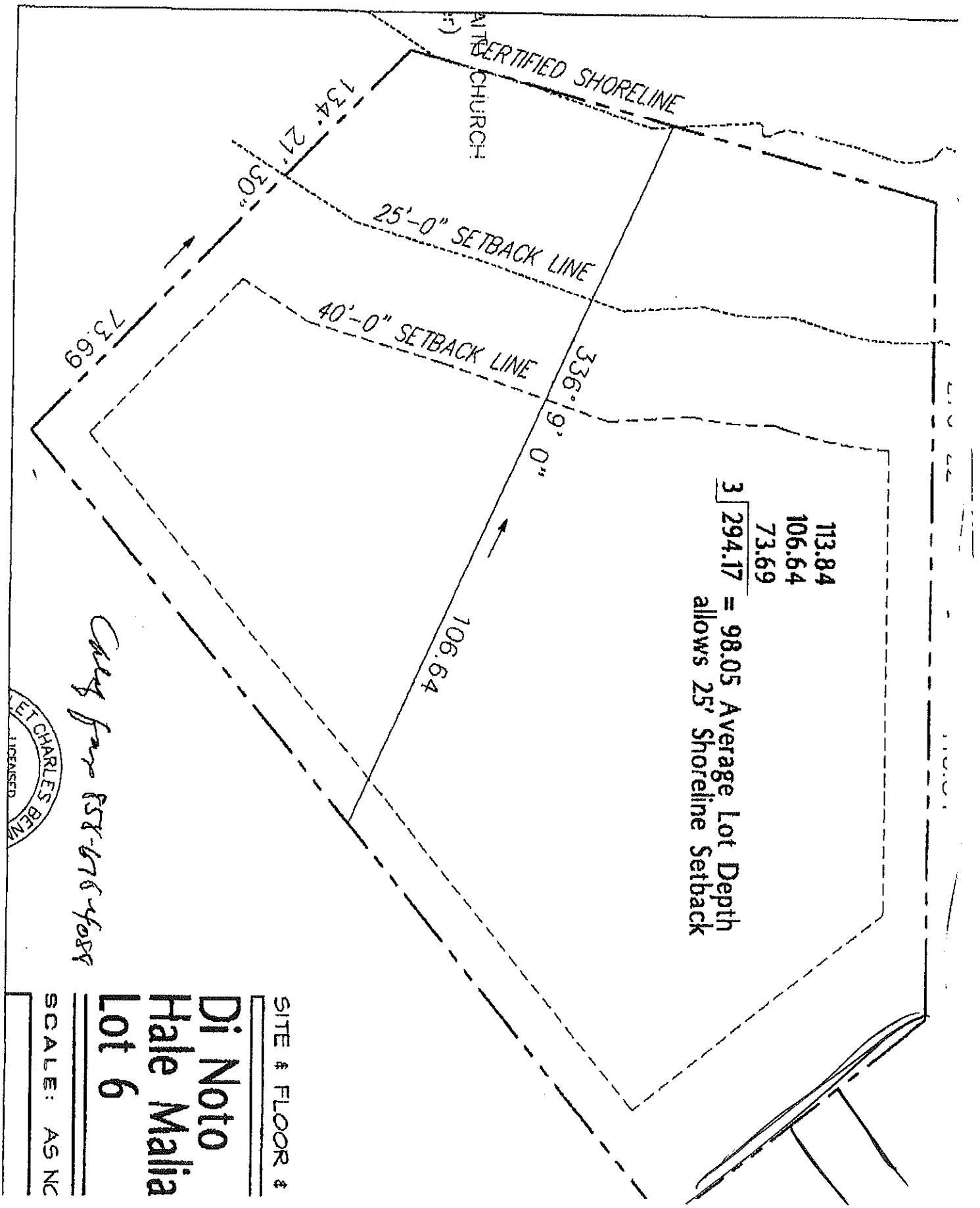
Aloha Francis,

I am currently off island for the Thanksgiving holiday. Accordingly I do not have immediate access to my Permit Set of construction plans for 11 Hale Malia. In order to move my pool permit process forward, I have contacted my architect who has faxed me the A1 - 2 Setback calculation. I can warrant to you that this calculation is an exact duplicate of the "Determine Shoreline Setback" calculation on my stamped set of plans. If required, I can bring the stamped set of plans into your office upon my return.

Thanks Francis. I would appreciate a call after you have reviewed the Setback Determination. My number is 385-3579.

Aloha,

Tom DiNoto


CERTIFIED SHORELINE
CHURCH
134' 27' 30"
25'-0" SETBACK LINE
40'-0" SETBACK LINE
73.69
356' 9' 0"
106.64
113.84
106.64
73.69
3 294.17 = 98.05 Average Lot Depth
allows 25' Shoreline Setback
SITE & FLOOR
Di Noto
Hale Malia
Lot 6
SCALE: AS NC

COUNTY OF MAUI

LAND USE & CODES ADMINISTRATION

DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
250 SOUTH HIGH STREET - WAILUKU, HAWAII 96793
(808) 270-7250

PERMIT NUMBER 2003/2484
DATE ISSUED 12/09/03

Application for Building Permit

INITIAL

[ ] I claim an exemption under HRS §444-2(7) and hereby certify that this structure is for my personal use and not for use or occupancy by the general public. I further certify that such building or structure will not be offered for sale or lease within one year after completion, and have read and understand the Disclosure Statement required by HRS§ 444-2(7).

Falsely claiming an exemption is a violation of §444-2(7) and carries a fine of forty percent (40%) of the total contract price, or other amounts as stipulated in §444-23(c).

[ ] I claim exemption from the provisions of HRS Chapter 464, requiring certification and stamping of plans by a registered architect or structural engineer as permitted under §464-13(b). I further certify that I will record this exemption with the Bureau of Conveyances as required by §464-13(c).

[ ] Approval is granted subject to compliance with the use regulations set forth in HRS Chapter 205 and the Land Use Commission's Rules & Regulations. The owner will provide notice of these use regulations to future owners, heirs and assigns. I acknowledge that I have received from the County of Maui a copy of HRS §205-4.5.

Applicant certifies that he/she has determined if there are any restrictive covenants applicable to the proposed construction on subject property and if so, that the structure herein applied for conforms with said covenants. Applicant acknowledges that County has no responsibility to determine conformance with covenants and hereby agrees to defend and hold County harmless from any and all claims arising out of any alleged breach thereof.

SIGNATURE OF OWNER — DATE 9/3/03

I hereby certify that I am a bona fide contractor licensed in the State of Hawaii.

X SIGNATURE OF CONTRACTOR — DATE 9-03-03

FOR LAND USE & CODES ADMINISTRATION USE ONLY

APPROVALS REQUIRED	AGENCY	SIGNATURE	DATE
	[ ] WATER DEPT.		
	[ ] HEALTH DEPT.		
	[ ] FIRE PREV BUREAU		
	[x] LUCA ENGR		9/5/03
	[x] LUCA BLDG		09/05/03
	[x] PLANNING DEPT.		12/9/03
	[ ] WWRD		

ISSUED BY: A. Howard
ACCEPT. VAL $ 50,000.00
PERMIT FEE $ 414.50
REMARKS: SMS 2003 0442

PROJECT NAME: DIJOTO RESIDENCE
CONSTRUCTION TYPE: V-N
OCCUPANCY GROUP: U-2

APPLICATION NO.	TMK	ZONE	SEC	PLAT	PAR	LOT
TA03/151	(S)		4	33	003	96

DATE RECEIVED: 09/05/03

OWNERSHIP	ZONE	FLOOD ZONE
1	R-3 / Urban SMA	C

APPLICANT: PLEASE FILL IN AREA BELOW (TYPED)

PROJECT ADDRESS (HOUSE NO. AND STREET): 11 HALE MALIA PLACE
PROJECT ADDRESS (TOWN AND DISTRICT): LAHAINA HI
LEGAL OWNER (FULL NAME): THOMAS DIJOTO
MAILING ADDRESS (INCLUDE ZIP CODE): 11 HALE MALIA PLACE LAHAINA
LESSEE/TENANT (1):
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (2):
MAILING ADDRESS (INCLUDE ZIP CODE):

PLAN MAKER: HAMLET CHARLES BENNETT — LICENSE NO.: 5844
MAILING ADDRESS (INCLUDE ZIP CODE): 78-6097A MAMALAHOA HWY. HOLUALOA HI 96725
BUILDER: POND POOLS, INC — LICENSE NO.: C23445
MAILING ADDRESS (INCLUDE ZIP CODE): PO BOX 302 KIHEI HI 96753 — TELEPHONE NO.: 879-0552
APPLICANT NAME: ANN JOHNSON
MAILING ADDRESS (INCLUDE ZIP CODE): PO BOX 302 KIHEI HI — TELEPHONE NO.: 957-0552

SIGNATURE OF APPLICANT: Ann Johnson — DATE 9-03-03

NATURE OF WORK (CHECK ALL THAT APPLY)

[ ] NEW BUILDING	[ ] FENCE	[ ] FOUNDATION ONLY
[ ] RETAINING WALL	[ ] SHELL ONLY	[ ] RELOCATION
[ ] ADDITION	[✓] ALTERATION	[ ] RECONSTRUCTION
[ ] MISC. STRUCTURE	[ ] REPAIR	[ ] DEMOLITION
[ ] SITE WORK	[ ] SEA WALL	[✓] SWIMMING POOL

NOW OCCUPIED AS: Spa/Fish Pond — TO BE OCCUPIED AS: Spa/Swimming Pool
DIMENSIONS — WALLS
PARTITIONS — FOUNDATION
FLOORS — ROOF
CEILING — BASEMENT FLOOR

[ ] SEWER / [ ] INDIVIDUAL WASTEWATER SYSTEM — ROOF OVERHANG — ESTIMATED VALUE OF WORK: 50,000.00
NO. OF UNITS — NO. OF STORIES — FLOOR AREA — LOT AREA: 12,624 sf

DISTANCE TO NEAREST INTERIOR LOT BOUNDRY (FEET): RIGHT: LEFT: REAR: FRONT: — NEAREST BLDG.

REMARKS: Converting fish pond to Swimming pool; Pool Equipment room

Rev. 8/99

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COUNTY OF MAUI

LAND USE & CODES ADMINISTRATION
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
250 SOUTH HIGH STREET
WAILUKU, HAWAII 96793

PERMIT NUMBER: 99/1271
DATE ISSUED: 7/21/99

Application for Building Permit

INITIAL

☐ I claim an exemption under Sec. 444-2(7) of the HRS and hereby certify that this structure is for my personal use and not for use or occupancy by the general public. I further certify that such building or structure will not be offered for sale or lease within one year after completion.

Falsely claiming an exemption is a violation of Sec. 444-2(7) and carries a fine of forty percent (40%) of the total contract price, or other amounts as stipulated in Sec. 444-23(c).

☐ I claim exemption from the provisions of Chapter 484 HRS, requiring certification and stamping of plans by a registered architect or structural engineer as permitted under Sec. 46413 (b). I further certify that I will record this exemption with the Bureau of Conveyances as required by Sec. 464-13 (c).

☐ Approval is granted subject to compliance with the use regulations set forth in Chapter 205, HRS and the Land Use Commission's Rules & Regulations. The owner will provide notice of these use regulations to future owners, heirs and assigns. I acknowledge that I have received from the County of Maui a copy of Sec. 205-4.5HRS.

Applicant certifies that he/she has determined if there are any restrictive covenants applicable to the proposed construction on subject property and if so, that the structure herein applied for conforms with said covenants. Applicant acknowledges that County has no responsibility to determine conformance with covenants and hereby agrees to defend and hold County harmless from any and all claims arising out of any alleged breach thereof.

Christopher M. Clever 6-8-99
SIGNATURE OF OWNER DATE

I hereby certify that I am a bona fide contractor licensed in the State of Hawaii.

X Christopher M. Clever 6-8-99
SIGNATURE OF CONTRACTOR DATE

FOR LAND USE & CODES ADMINISTRATION USE ONLY

APPROVALS REQUIRED

AGENCY	SIGNATURE	DATE
☐ DEPT. OF WATER		
☐ DEPT. OF HEALTH		
☐ FIRE MARSHALL		
☐ ENGIN., LUCA		6/21/99
☒ BUILDING, LUCA	D. Hartley	7/19/99
☒ PLANNING DEPT.		7/02/99

ISSUED BY: D. Hartley
ACCEPT. VAL: $ 7,000.00
PERMIT FEE: $ 90.00

REMARKS: No grading to be done for applicant (less than 5000 ft² - less than 7 cubic yds) Etc. 6/21/99
start date: 7/21/99

PROJECT NAME: DI NOTO THOMAS FAMILY TRUST
CONSTRUCTION TYPE: V-N
OCCUPANCY GROUP:

APPLICATION NO.	TMK(s) ZONE	SEC	PLAT	PAR	LOT
99/1165	4	3	3	96	

DATE RECEIVED: 6/10/99

OWNERSHIP: | ZONE: R-3 | FLOOD ZONE: C

APPLICANT: PLEASE FILL IN AREA BELOW (TYPED)

PROJECT ADDRESS (HOUSE NO. AND STREET): 11 Hale Malia Place
PROJECT ADDRESS (TOWN AND DISTRICT): Lahaina
LEGAL OWNER (FULL NAME): DI NOTO THOMAS FAMILY TRUST
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (I):
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (II):
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (III):
MAILING ADDRESS (INCLUDE ZIP CODE):

Should historic sites such as walls, platforms, mounds, or unmarked burials or remains such as artifacts, shell, bone, concentration 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 and/or landowner shall contact the State Historic Preservation Division (243-5169), which will assess the significance of the find and recommend and appropriate mitigation measure, if necessary.

NATURE OF WORK (CHECK ALL THAT APPLY)

[ ] NEW BUILDING	[ ] FENCE	[ ] FOUNDATION ONLY
[ ] RETAINING WALL	[ ] SHELL ONLY	[ ] RELOCATION
[ ] ADDITION	[ ] ALTERATION	[ ] RECONSTRUCTION
[ ] MISC. STRUCTURE	[ ] REPAIR	[ ] DEMOLITION
[ ] SITE WORK	[ ] SEA WALL	[X] SWIMMING POOL

NOW OCCUPIED AS:
TO BE OCCUPIED AS: Spa
DIMENSIONS:
WALLS: concrete
PARTITIONS:
FOUNDATION: concrete
FLOORS:
ROOF:
CEILING:
BASEMENT FLOOR:
[X] SEWER [ ] INDIVIDUAL WASTEWATER SYSTEM
ROOF OVERHANG:
ESTIMATED VALUE OF WORK: 7,000
NO. OF UNITS:
NO. OF STORIES:
FLOOR AREA:
LOT AREA:
DISTANCE TO NEAREST INTERIOR LOT BOUNDRY (FEET)
RIGHT: LEFT: REAR: FRONT:
NEAREST BLDG.
REMARKS:

PLAN MAKER: Hamlet C. Bennett — LICENSE NO.: AR-5844
MAILING ADDRESS (INCLUDE ZIP CODE): — TELEPHONE NO.:
BUILDER: Clever Construction — LICENSE NO.: BC-18106
MAILING ADDRESS (INCLUDE ZIP CODE): 73-5577 Kauhola Street Bay 9, Kailua-Kona 96740 — TELEPHONE NO.:
APPLICANT NAME: Christopher Clever — TELEPHONE NO.: 329-5196 Ext 1
SIGNATURE OF APPLICANT: Christopher M. Clever — DATE: 6-8-99

...PROJECT. A COPY OF THIS ... FURTHER APPROVALS ... ON OF THIS ... BE SENT TO ... WATER SUPPLY FOR THEIR INFORMATION.

Rev. 8/93

OFFICE COPY 7/19/99 AN

COUNTY OF MAUI

LAND USE & CODES ADMINISTRATION
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
250 SOUTH HIGH STREET
WAILUKU, HAWAII 96793

PERMIT NUMBER: 99/1270
DATE ISSUED: 7/21/99

Application for Building Permit

INITIAL

☐ I claim an exemption under Sec. 444-2(7) of the HRS and hereby certify that this structure is for my personal use and not for use or occupancy by the general public. I further certify that such building or structure will not be offered for sale or lease within one year after completion.

Falsely claiming an exemption is a violation of Sec. 444-2(7) and carries a fine of forty percent (40%) of the total contract price, or other amounts as stipulated in Sec. 444-23(c).

☐ I claim exemption from the provisions of Chapter 484 HRS, requiring certification and stamping of plans by a registered architect or structural engineer as permitted under Sec. 46413 (b). I further certify that I will record this exemption with the Bureau of Conveyances as required by Sec. 464-13 (c).

☐ Approval is granted subject to compliance with the use regulations set forth in Chapter 205, HRS and the Land Use Commission's Rules & Regulations. The owner will provide notice of these use regulations to future owners, heirs and assigns. I acknowledge that I have received from the County of Maui a copy of Sec. 205-4.5HRS.

Applicant certifies that he/she has determined if there are any restrictive covenants applicable to the proposed construction on subject property and if so, that the structure herein applied for conforms with said covenants. Applicant acknowledges that County has no responsibility to determine conformance with covenants and hereby agrees to defend and hold County harmless from any and all claims arising out of any alleged breach thereof.

Christopher M. Clever 6-8-99
SIGNATURE OF OWNER DATE

I hereby certify that I am a bona fide contractor licensed in the State of Hawaii.

X Christopher M Clever 6-8-99
SIGNATURE OF CONTRACTOR DATE

FOR LAND USE & CODES ADMINISTRATION USE ONLY

APPROVALS REQUIRED

AGENCY	SIGNATURE	DATE
☐ DEPT. OF WATER		
☐ DEPT. OF HEALTH		
☐ FIRE MARSHALL		
☑ ENGIN., LUCA		6-24-99
☑ BUILDING, LUCA		7/19/99
☑ PLANNING DEPT.		7/02/99

ISSUED BY: D. Hall

ACCEPT. VAL $ 1,000,000.00
PERMIT FEE $ 3,539.50

REMARKS: No grading to be done per applicant (Grading Section has 2 letters on file)
private road.
Proposed 25' shoreline setback line meets the requirements of Shoreline Rules/Regs of the Planning Commission
7/02/99
Grad date: 7/21/99

PROJECT NAME: DI NOTO THOMAS FAMILY TRUST
CONSTRUCTION TYPE: V-N

APPLICATION NO.	TMK(S)	ZONE	SEC	PLAT	PAR	LOT
99/11104		4	3	3	96	

DATE RECEIVED: 6/10/99

OCCUPANCY GROUP: R-3

OWNERSHIP	ZONE	FLOOD ZONE
	R-3 IMU	C IMU

APPLICANT: PLEASE FILL IN AREA BELOW (TYPED)

PROJECT ADDRESS (HOUSE NO. AND STREET): 11 Hale Malia Place
PROJECT ADDRESS (TOWN AND DISTRICT): Lahaina
LEGAL OWNER (FULL NAME): DI NOTO THOMAS FAMILY TRUST
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/AGENT (IF ANY) (INCLUDE ZIP CODE):

NATURE OF WORK (CHECK ALL THAT APPLY)

[X] NEW BUILDING	[ ] FENCE	[ ] FOUNDATION ONLY
[ ] RETAINING WALL	[ ] SHELL ONLY	[ ] RELOCATION
[ ] ADDITION	[ ] ALTERATION	[ ] RECONSTRUCTION
[ ] MISC. STRUCTURE	[ ] REPAIR	[ ] DEMOLITION
[ ] SITE WORK	[ ] SEA WALL	[ ] SWIMMING POOL

NOW OCCUPIED AS:
TO BE OCCUPIED AS: Dwelling/garage/lanai
DIMENSIONS:
WALLS: 2x4 studs
PARTITIONS: 2x4 studs/gyp brd
FOUNDATION: concrete/post & pier
FLOORS: concrete/plywood
ROOF: monier tile
CEILING:
BASEMENT FLOOR:

[X] SEWER [ ] INDIVIDUAL WASTEWATER SYSTEM
ROOF OVERHANG:
ESTIMATED VALUE OF WORK: 1,000,000.00
NO. OF UNITS: 1
NO. OF STORIES: 2
FLOOR AREA: 604-360
LOT AREA: 12,624

PLAN MAKER: Hamlet C. Bennett
LICENSE NO.: AR-5844
MAILING ADDRESS (INCLUDE ZIP CODE): 78-6697A MAMALAHOA HWY Holualoa 96725
TELEPHONE NO.:
BUILDER: Clever Construction
LICENSE NO.: BC-18106
MAILING ADDRESS (INCLUDE ZIP CODE): 73-5577 Kauhola Street Bay 9, Kailua-Kona 96740
TELEPHONE NO.:
APPLICANT NAME: Christopher Clever
TELEPHONE NO.: 329-5196 Ext 1
SIGNATURE OF APPLICANT: Christopher M Clever
DATE: 6-8-99

DISTANCE TO NEAREST INTERIOR LOT BOUNDRY (FEET)
RIGHT: 6' LEFT: 610' REAR: FRONT: 15'
NEAREST BLDG.:

REMARKS:
Existing dwelling to be demolished on separate permit.

IF ANY HISTORIC SITES SUCH AS WALLS, PLATFORMS, PAVEMENTS, OR MOUNDS, OR REMAINS SUCH AS ARTIFACTS, OVERBURDEN OF SHELL OR CHARCOAL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL IMMEDIATELY IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DISTURBANCE. THE CONTRACTOR AND/OR LANDOWNER SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (243-5169), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AND APPROPRIATE MITIGATION MEASURE, IF NECESSARY.

A COPY OF THIS PERMIT WILL BE SENT TO [illegible] FOR THEIR INFORMATION.

Rev. 8/93

OFFICE COPY 7/19/99 AN (25)

COUNTY OF MAUI

LAND USE & CODES ADMINISTRATION

DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
250 SOUTH HIGH STREET
WAILUKU, HAWAII 96793

PERMIT NUMBER: 99/0958
DATE ISSUED: 6/10/99

Application for Building Permit

INITIAL

☐ I claim an exemption under Sec. 444-2(7) of the HRS and hereby certify that this structure is for my personal use and not for use or occupancy by the general public. I further certify that such building or structure will not be offered for sale or lease within one year after completion.

Falsely claiming an exemption is a violation of Sec. 444-2(7) and carries a fine of forty percent (40%) of the total contract price, or other amounts as stipulated in Sec. 444-23(c).

☐ I claim exemption from the provisions of Chapter 484 HRS, requiring certification and stamping of plans by a registered architect or structural engineer as permitted under Sec. 46413 (b). I further certify that I will record this exemption with the Bureau of Conveyances as required by Sec. 464-13 (c).

☐ Approval is granted subject to compliance with the use regulations set forth in Chapter 205, HRS and the Land Use Commission's Rules & Regulations. The owner will provide notice of these use regulations to future owners, heirs and assigns. I acknowledge that I have received from the County of Maui a copy of Sec. 205-4.5HRS.

Applicant certifies that he/she has determined if there are any restrictive covenants applicable to the proposed construction on subject property and if so, that the structure herein applied for conforms with said covenants. Applicant acknowledges that County has no responsibility to determine conformance with covenants and hereby agrees to defend and hold County harmless from any and all claims arising out of any alleged breach thereof.

* Christopher M. Clever 6-8-99
SIGNATURE OF OWNER — DATE

I hereby certify that I am a bona fide contractor licensed in the State of Hawaii.

(x) Christopher M. Clever 6-8-99
SIGNATURE OF CONTRACTOR — DATE

FOR LAND USE & CODES ADMINISTRATION USE ONLY

APPROVALS REQUIRED

AGENCY	SIGNATURE	DATE
☐ DEPT. OF WATER		
☐ DEPT. OF HEALTH		
☐ FIRE MARSHALL		
☐ ENGIN., LUCA		
☒ BUILDING, LUCA	D. Ahlee	6/8/99
☐ PLANNING DEPT.		

ISSUED BY: D. Ahlee
ACCEPT. VAL: $ 15,000.00
PERMIT FEE: $ 162.00
REMARKS:

PROJECT NAME: Di Noto Thomas Family Trust
CONSTRUCTION TYPE: V-N

APPLICATION NO.	TMK	ZONE	SEC	PLAT	PAR	LOT
99/1160	(1) 4	3	3	96		

DATE RECEIVED: 6/10/99
OCCUPANCY GROUP:
OWNERSHIP | ZONE | FLOOD ZONE

APPLICANT: PLEASE FILL IN AREA BELOW (TYPED)

PROJECT ADDRESS (HOUSE NO. AND STREET): 11 Hale Maka Place
PROJECT ADDRESS (TOWN AND DISTRICT): Lahaina
LEGAL OWNER (FULL NAME): Di Noto Thomas Family Trust
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (1):
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (2):
MAILING ADDRESS (INCLUDE ZIP CODE):
LESSEE/TENANT (3):
MAILING ADDRESS (INCLUDE ZIP CODE):

Should historic sites such as walls, platforms, pavements, or mounds, or remains such as artifacts, burials, concentration 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 and/or landowner shall immediately contact the State Historic Preservation Division (243-5169), which will assess the significance of the find and recommend and appropriate mitigation measure, if necessary.

NATURE OF WORK (CHECK ALL THAT APPLY)

[ ] NEW BUILDING	[ ] FENCE	[ ] FOUNDATION ONLY
[ ] RETAINING WALL	[ ] SHELL ONLY	[ ] RELOCATION
[ ] ADDITION	[ ] ALTERATION	[ ] RECONSTRUCTION
[ ] MISC. STRUCTURE	[ ] REPAIR	[X] DEMOLITION
[ ] SITE WORK	[ ] SEA WALL	[ ] SWIMMING POOL

NOW OCCUPIED AS	TO BE OCCUPIED AS
Dwelling	Demolish Dwelling
DIMENSIONS	WALLS
PARTITIONS	FOUNDATION
FLOORS	ROOF
CEILING	BASEMENT FLOOR

[X] SEWER [ ] INDIVIDUAL WASTEWATER SYSTEM
ROOF OVERHANG:
ESTIMATED VALUE OF WORK: 15,000
NO. OF UNITS: 1
NO. OF STORIES: 2
FLOOR AREA:
LOT AREA:

PLAN MAKER: MC Plans — LICENSE NO.:
MAILING ADDRESS (INCLUDE ZIP CODE): — TELEPHONE NO.:
BUILDER: Clever Construction — LICENSE NO.: BC-18106
MAILING ADDRESS (INCLUDE ZIP CODE): 73-5577 Kauhola St. Bay 9, Kailua-Kona 96740 — TELEPHONE NO.:
APPLICANT NAME: Christopher Clever — TELEPHONE NO.: 808-329-5196 Ext. 1
SIGNATURE OF APPLICANT: * Christopher M. Clever — DATE: 6-8-99

DISTANCE TO NEAREST INTERIOR LOT BOUNDRY (FEET): RIGHT: LEFT: REAR: FRONT:
NEAREST BLDG.:
REMARKS: Demolish dwelling built around 1975.

Rev. 8/93

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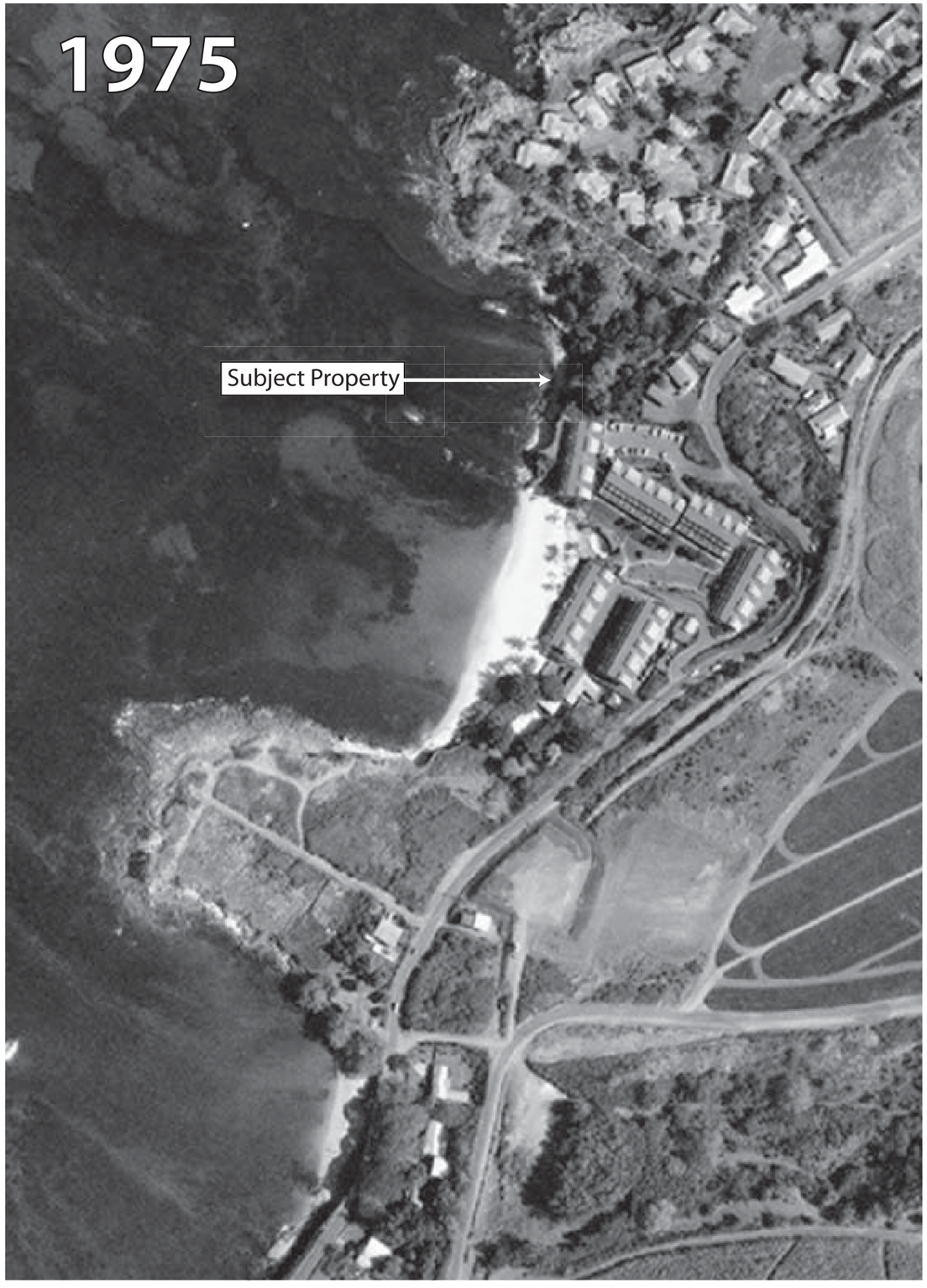
Exhibit C
Historical Shoreline Conditions



11 Hale Malia Place
Shoreline Slope Repair

Historic Shoreline
Mosaic Photos

Courtesy UH-SOEST Coastal Geology Group

CHRIS HART & PARTNERS, INC.

11 Hale Malia Place
Shoreline Slope Repair

Historic Shoreline
Mosaic Photos

Courtesy UH-SOEST Coastal Geology Group

CHRIS HART & PARTNERS, INC.

11 Hale Malia Place
Shoreline Slope Repair

Historic Shoreline
Mosaic Photos

Courtesy UH-SOEST Coastal Geology Group

CHRIS HART & PARTNERS, INC.

Exhibit D
Landscape Site Plan
Showing State
Certified Shoreline

PLANT PALETTE

TREES

- PLUMERIA
- JATROPHA
- ARECA PALM
- PIGMY DATE PALM
- MACARTHUR PALM

SHRUBS

- GOLDEN DURANTA
- ELDORADO 'YELLOW-VEIN'
- RED GINGER
- GREEN TI
- GARDENIA
- BAMBOO
- CROTON

GROUNDCOVER

- LAUAE FERN
- HEMIGRAPHIS
- BACOPA

NOTES:

- ONLY BEACH QUALITY SAND & COMPOST TO BE USED IN SHORELINE SETBACK

- ALL PLANTING WILL BE WATERED BY AN AUTOMATIC IRRIGATION SYSTEM

CHRIS HART & PARTNERS
LANDSCAPE ARCHITECTURE AND PLANNING

Preliminary Landscape Plan

LUCAS RESIDENCE

11 HALE MALIA PLACE, MAUI, HI

BAR SCALE
0 4 8 16 32

SCALE: 1/8"=1'-0"
PROJECT: 09-039
DATE: 10/20/09
REV. DATE: 5/20/09

Exhibit E
Alaeloa Annual Erosion Hazard Rate (AEHR) Map

Alaeloa, Maui, Hawaii

Smoothed Erosion Rates

Scale 1:3000

100 0 100 200 300 400 Meters

300 0 300 600 900 1200 Feet

Alaeloa

Maui

0 10mi

0 10km

N

AEHRs (ft/yr)

Nanalu Bay

Kapalua Bay

Annual Erosion Hazard Rates (ft/yr)

Napili Bay

Honokeana Beach

AEHRs (ft/yr)

Alaeloa Beach

AEHRs (ft/yr)

Kenenui Beach

Haukoe Point

Subject Property

The Alaeloa study area extends from Haukoe Point in the south to Namalu Bay in the north. This area is a series of bays and coves with small white sand and cobble pocket beaches interspersed. Offshore is basaltic hard bottom and sand.

As a whole, the area has experienced moderate to high erosion since 1912 with an average AEHR of -0.9 ft/yr. Keonenui Beach (transects 1 - 14) is partially backed by a revetment constructed prior to 1960 to protect private property. The beach has experienced moderate erosion over time with an average AEHR of -1.0 ft/yr. To the north, Alaeloa Beach (transects 17 and 18) occupies a small cove and has experienced moderate erosion with an average AEHR of -1.0 ft/yr. Honokeana Bay (transects 25 - 28) is comprised primarily of cobble beach. It has experienced moderate erosion with an average AEHR of -0.8 ft/yr. Napili Bay (transects 32 - 47) has experienced moderate erosion over time with an average AEHR of -0.8 ft/yr. Kapalua Bay (transects 53 - 62) has experienced moderate erosion since 1912 with an average AEHR of -1.2 ft/yr.

Trends identified in this study generally agree with those found by Sea Engineering, 1991*. At Kapalua Bay, Sea Engineering found this beach to be relatively stable. Rate differences may be attributed to methodology, specifically this study's inclusion of the 1912 and 1960 T-sheet shorelines.

Average beach width, the average horizontal distance from the vegetation line to the low water mark, within the Alaeloa area has decreased 38% between 1949 and 1997. At Keonenui Beach, average beach width has decreased 43% between 1949 and 1997, while average beach width at Alaeloa Beach has decreased 42% for the same time period. Average beach width at both Honokeana and Napili Bays has decreased 33% between 1949 and 1997. Average beach width at Kapalua Bay has decreased 44% between 1949 and 1997.

* Makai Ocean Engineering and Sea Engineering, 1991. Aerial Photograph Analysis of Coastal Erosion on the Islands of Kauai, Molokai, Lanai, Maui and Hawaii. State of Hawaii Office of Planning Coastal Zone Management Program.

HISTORICAL SHORELINES

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

Historical beach positions, color coded by year, are determined using ortho-rectified and georeferenced aerial photographs and National Ocean Survey (NOS) topographic survey charts. The low water mark is used as the historical shoreline, or shoreline change reference feature (SCRF).

For situations in which there is coastal armoring or rocky shoreline seaward of any vegetation, the vegetation line is drawn along the seaward side of the rock or armoring. If there is no sandy beach in these areas, both the vegetation line and the SCRF are delineated along the mean high water line.

Movement of the SCRF is used to calculate erosion rates along shore-normal transects spaced every 20 m (66 ft) along the shoreline. The 1987 SCRF is not used in the calculation of the AEHR, however it provides a gauge of seasonal uncertainty.

EROSION RATES

Annual Erosion Hazard Rates (AEHR)

Erosion rates are measured every 20 m along the shoreline. These sites are denoted by yellow shore normal transects. The Annual Erosion Hazard Rate (red), is a spatially smoothed center weighted average of calculated erosion rates. Five contiguous transects are incorporated in the smoothing process. The transects are weighted: 1-3-5-3-1 with the smoothed rate assigned to the center transect. The AEHRs are shown on the shore-parallel histogram graph. Colored bars on the graph correspond to shore-normal transects; approximately every fifth transect and bar are numbered. Where necessary, some transects have been purposely deleted during data processing; as a result, transect numbering is not consecutive everywhere. Where complete beach loss has occurred, erosion rate calculations apply only to the time period when a beach existed.

AEHRs for the Alaeloa area were calculated using all data available between 1912 and 1997. Despite some scatter, shorelines between 1912 and 1997 show a reasonably consistent trend and are used to calculate AEHRs for this area.

Published under Contract No. G0605.

Produced for the County of Maui by:
Coastal Geology Group
Department of Geology and Geophysics
School of Ocean and Earth Science and Technology
University of Hawaii at Manoa
1680 East - West Road
Honolulu, Hawaii 96822

741300m E UTM coordinates
156°40'40" W latitude/longitude coordinates

741300m E 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 743100m E
156°40'40" W 30" 20" 10" 156°40' W 156°39'50" W
2324400m N 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 221900 m N
21°00'10" N 50" 40" 30" 20" 10" 20°59' N

Exhibit F
Photographic Documentation of Lateral Shoreline Access

1-2. Lateral Shoreline Access along Keonenui Bay, facing south from rocky outcrop at Kahana Sunset Condominium

11 Hale Malia Place Shoreline Slope Repair	CHRIS HART & PARTNERS, INC.
Lateral Shoreline Access Fronting Keonenui Bay	

3. Facing south along Keonenui Bay from rocky outcrop at Kahana Sunset Condominium

4-5. Facing north toward rocky outcrop separating Kahana Sunset from subject property

11 Hale Malia Place
Shoreline Slope Repair

Lateral Shoreline Access
Fronting Keonenui Bay

CHRIS HART & PARTNERS, INC.

Exhibit G
Signed Contractor Release Forms

TRANSMITTAL COVERSHEET

EDWARDS DESIGN GROUP, INC.
Architecture & Interior Design
1357 Kapiolani Blvd. Suite 1120 Honolulu, Hawaii 96814 (808) 951-5926 / FAX (808) 951-6519

PROJECT: 11 HALE MALIA PLACE
DATE: 4.16.10
TO: CHRIS HART & PARTNERS, INC.
ADDRESS: 115 N. MARKET STREET
WAILUKU, MAUI, HI 96793-1706
PHONE NO: 808-242-1955
ATTENTION: JASON MEDEMA
FROM: JOHN EDWARDS

We are sending you the following documents:

X attached under separate cover by hand

Copies	Description
1	L.O.TRANSMITTAL, PACIFIC GROUND SYSTEMS: RELEASE FORMS (ORIGINALS)

X as requested for your records **X** for your use for review and comment

Remarks:

PACIFIC GROUND SYSTEMS, LLC.

1824 Democrat Street
Honolulu, Hawaii 96819
Phone # (808) 845-2772 / Fax # (808) 845-2552

Letter of Transmittal

To: Edwards Design Group, Inc.
1357 Kapiolani Blvd, Ste 1120
Honolulu, HI 96814

Date: April 14, 2009

Attention: John Edwards

Subject: Marcia Lucas - 11 Hale Malia Pl, Lahiana, Maui

Transmitted herewith are:

- ☐ Letter/Memorandum
- ☐ Specifications and Plans
- ☐ Change Order Proposals
- ☐ Drawings/Submittals
- ☐ Other _____

Copies	Date	No.	Description
5 ea			Contractor Release Form

These are transmitted as checked below:

- ☐ for approval
- ☐ for correction
- ☐ for your information
- ☒ as required
- ☐ approved
- ☐ approved as noted
- ☐ disapproved
- ☐ resubmit
- ☐ for your action

Remarks:

Kris Salas

To Whom It May Concern:

I was directly involved on-site with excavation and construction activities related to the placement of a structurally engineered shoreline retaining system at the site of a collapsed bluff and seawall located at 11 Hale Malia Place, Lahaina, Maui, HI, TMK (2) 4-3-003:096, which took place between March, 2009 and November, 2009. At no time during the excavation and construction operations did I encounter any human remains or Native Hawaiian cultural artifacts, nor any sub-surface features which would suggest the presence of human remains or Native Hawaiian cultural artifacts.

DANIEL E ORTIZ

Name (Please Print)

Signature

4/13/10

Date

To Whom It May Concern:

I was directly involved on-site with excavation and construction activities related to the placement of a structurally engineered shoreline retaining system at the site of a collapsed bluff and seawall located at 11 Hale Malia Place, Lahaina, Maui, HI, TMK (2) 4-3-003:096, which took place between March, 2009 and November, 2009. At no time during the excavation and construction operations did I encounter any human remains or Native Hawaiian cultural artifacts, nor any sub-surface features which would suggest the presence of human remains or Native Hawaiian cultural artifacts.

Harry Kinoshita

Name (Please Print)

Harry Kinoshita 4/13/10

Signature Date

To Whom It May Concern:

I was directly involved on-site with excavation and construction activities related to the placement of a structurally engineered shoreline retaining system at the site of a collapsed bluff and seawall located at 11 Hale Malia Place, Lahaina, Maui, HI, TMK (2) 4-3-003:096, which took place between March, 2009 and November, 2009. At no time during the excavation and construction operations did I encounter any human remains or Native Hawaiian cultural artifacts, nor any sub-surface features which would suggest the presence of human remains or Native Hawaiian cultural artifacts.

Carter Boerner

Name (Please Print)

Carter Boerner 4-13-10

Signature Date

To Whom It May Concern:

I was directly involved on-site with excavation and construction activities related to the placement of a structurally engineered shoreline retaining system at the site of a collapsed bluff and seawall located at 11 Hale Malia Place, Lahaina, Maui, HI, TMK (2) 4-3-003:096, which took place between March, 2009 and November, 2009. At no time during the excavation and construction operations did I encounter any human remains or Native Hawaiian cultural artifacts, nor any sub-surface features which would suggest the presence of human remains or Native Hawaiian cultural artifacts.

PAUL R WEBER, P.E.

Name (Please Print)

Signature

13 APR 10

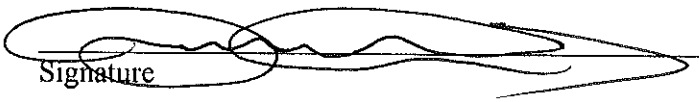
Date

To Whom It May Concern:

I was directly involved on-site with excavation and construction activities related to the placement of a structurally engineered shoreline retaining system at the site of a collapsed bluff and seawall located at 11 Hale Malia Place, Lahaina, Maui, HI, TMK (2) 4-3-003:096, which took place between March, 2009 and November, 2009. At no time during the excavation and construction operations did I encounter any human remains or Native Hawaiian cultural artifacts, nor any sub-surface features which would suggest the presence of human remains or Native Hawaiian cultural artifacts.

DAVID P. WEBER

Name (Please Print)



Signature

4/13/10

Date

Exhibit H
Pre- and Post-Construction Shoreline Conditions

1. View along shoreline facing south, March 20, 2008

2. View along shoreline facing north from southern property boundary, January 15, 2009

2. Completed wall and adjacent shoreline area, October 18, 2009

4. View of shoreline area and wall, facing north from Kahana Sunset property, April 29, 2010

11 Hale Malia Place
Shoreline Slope Repair

Shoreline Conditions
Pre- and Post-Construction

CHRIS HART & PARTNERS, INC.

Appendix F:
SMA Emergency Permit

CHARMAINE TAVARES
Mayor

JEFFREY S. HUNT
Director

KATHLEEN ROSS AOKI
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

December 10, 2008

Mr. Jason Madema
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Madema:

SUBJECT: **SPECIAL MANAGEMENT AREA (SMA) AND SHORELINE SETBACK ASSESSMENTS - FOR EMERGENCY MITIGATION MEASURES AT 11 HALE MALIA PLACE NAPILI, ISLAND OF MAUI, HAWAII, TMK: (2) 4-3-003:096 (SMX 2008/0219) (SM3 2008/0004) (SSA 2008/0020) (EAE 2008/0026)**

This following is a brief chronological synopsis regarding your SMA Emergency Use Permit application and approvals.

A. The application was received on April 8, 2008;

B. Site visits were conducted on February 28, 2008;

C. A Special Management Area Emergency Permit was issued by the Director on May 30, 2008;

D. The applicant requested a time extension in late summer of 2008;

E. The Department of Planning (Department) revised condition no. 11 in light of the applicant's request for a time extension;

F. The applicant requested that conditions no. 12 and no. 13 be revised to reflect a financial security rather than an environmental performance bond;

G. The Department presented the application, approvals, time extension and language revisions to the Maui Planning Commission (Commission) during the Director's Report at their regular meeting on November 17, 2008; and

H. The Commission adopted the Director's Report at the aforementioned meeting after receiving comments from Department Staff.

Based on the above, and in accordance with the SMA Rules for the Commission, Sections 12-202-12 and 12-202-14, a revised determination has been made relative to the above project that:

A. The project is immediately necessary to stabilize an embankment which failed, in part, due to drainage at the site during inclement weather;

B. The project is immediately necessary to protect a habitable structure which is located less than 20 feet from the shoreline from potential damage;

C. The site consists of a 25 feet high bluff along 75 feet of ocean frontage, 40 feet of which has experienced a "slump" or failure of the soils and CRM seawall at it's base;

D. The proposed action is to correct a slope failure, and is not clearly and explicitly related to shoreline and/or beach erosion;

E. The project is a development with an estimated valuation of $309,507.00, according to a November 3, 2008 memo;

F. The project is located within the shoreline area and is subject to the Shoreline Rules of Maui County, 12-203; and

G. The SMA Rules (12-202 et. seq.) and the Shoreline Rules (12-203 et. seq.) mandate that certain conditions are included and adhered to in any emergency permit for work within the Shoreline Setback and SMA.

In light of the above determinations, you are hereby granted a SMA Emergency Permit for "Alternative #2: Concrete Wall," as described on Page 5 of the SMA Emergency Permit application subject to the following conditions:

1. That Alternative #3 shall not be implemented in light of the signed Structural Observation Report's various recommendations.

2. That the five (5) "General" actions described on Page 7 of the application shall be fully implemented.

3. That the existing drainage in the overhang area shall be removed, redirected and that an appropriate diffuse drainage system be installed.

4. That such drainage system shall be reviewed by the Department, shall meet all government regulations, and shall also be approved by a licensed engineer.

5. That all requirements of the DLNR-OCCL be adhered to, including submission of a shoreline survey for certification, recognizing that a performance bond may be required to allow processing of the shoreline certification application as stated in the DLNR-OCCL letter of April 8, 2008.

6. That a building, grading and/or retaining wall permit be obtained, if required by County code, rules and/or ordinance.

7. That appropriate measures shall be taken during construction to mitigate the short-term impacts of the project relative to soil erosion from wind, water and construction wastewater.

8. That a community noise permit will be obtained, if required.

9. That all sprinklers, irrigation lines, gas lines, tiki torches, and similar structures be removed and relocated outside the minimum shoreline setback area of 25 feet.

10. That the face of the repair structure shall be textured and colored to match and/or blend in with the natural surrounding environment so as to not create visual blight and reduce adverse visual impacts when viewed from the ocean and along the shoreline.

11. That all repairs and actions are temporary in nature and the applicant will obtain all necessary government approvals no later than **December 7, 2009.** Should approvals not be granted, the repairs shall be removed within 180 calendar days of the date of the decision at the applicant's expense.

12. That the applicant shall provide the County of Maui financial security in the amount of **$309,507.24**, approved by the Department and payable to the County of Maui, guaranteeing completion of the proposed structures in accordance with the engineering/construction plans submitted to and reviewed by the Department of Public Works and the subsequent removal of said structures (if required by these conditions), together with the applicant's improvements bond in a form acceptable to the Department.

13. That should the temporary improvements at the site not be removed or permitted within a timely manner, the County of Maui may, at its sole discretion and/or upon recommendation of the Director of Planning, remove such improvements at the landowners expense and/or exercise the County's right to use the financial security described in condition no. 12 above.

14. That a complete application for a SMA Use Permit, Shoreline Setback Variance, and Environmental Assessment in support of the variance and SMA Major permit be submitted to the Department prior to the expiration of this permit. Said documents shall be competent and fully documented including all necessary studies such as a Soils Analysis and Report as recommended by the Structural Observation Report (Appendix A within the SMA Emergency application), a Drainage Report, and an Engineering Report for the proposed temporary and long-term structural repairs.

15. That the applicant, its successors and permitted assigns shall exercise reasonable due care as to third parties with respect to all areas affected by subject SMA Use Permit and shall procure at its own cost and expense, and shall maintain during the entire period of this SMA Use Permit, a policy or policies of comprehensive liability insurance in the minimum amount of ONE MILLION AND NO/100 DOLLARS ($1,000,000.00) naming the County of Maui as an additional named insured, insuring and defending the applicant and County of Maui against any and all claims or demands for property damage, personal injury and/or death arising out of this permit, including but not limited to: (1) claims from any accident in connection with the permitted use, or occasioned by any act or nuisance made or suffered in connection with the permitted use in the exercise by the applicant of said rights; and (2) all actions, suits, damages and claims by whomsoever brought or made by reason of the non-observance or non-performance of any of the terms and conditions of this permit. A copy of a policy naming County of Maui as an additional named insured shall be submitted to the Department within ninety (90) calendar days from the date of transmittal of the decision and order.

16. That the applicant, its successors, and permitted assigns shall defend, indemnify, and hold the County of Maui harmless from and against any and all loss, liability, claim or demand arising out of damages to said structures or activities from coastal natural hazards, storm runoff, and/or coastal erosion.

17. That the construction of all additional erosion-control or shoreline hardening structures or activities, with the exception of beach or dune nourishment activities, and landscape planting and hand irrigation, shall be prohibited throughout the life of the temporary structural repair until the final structural repair is fully permitted.

18. That the requirements above shall run with the land and shall be set forth in a unilateral agreement recorded by the applicant with the bureau of conveyances or land court prior to the date of approval of all structures or activities. A copy of the recorded unilateral agreement shall be filed with the Planning Director and the Director of Public Works.

19. That full compliance with all applicable government requirements shall be rendered.

20. That the applicant shall submit to the Department a detailed report addressing its compliance with the conditions established with the subject SMA Use Permit.

Thank you for your cooperation. If additional clarification is required, please contact Coastal Resources Planner Thorne Abbott at thorne.abbott@mauicounty.gov or at 270-7520.

Sincerely,

JEFFREY S. HUNT, AICP
Planning Director

xc: Kathleen R. Aoki, Deputy Planning Director
Aaron H. Shinmoto, PE, Planning Program Administrator (2)
Thorne E. Abbott, Coastal Resources Planner
Sam Lemmo, DLNR-OCCL
Dolan Eversole, DLNR-OCCL
Daniel Ornellas, DLNR Land Division, Maui
Zoe Norcross-Nu'u, SeaGrant
08/SM3 File
General File

JSH:TEA:bv
K:\WP_DOCS\PLANNING\SM3\2008\0004_HaleMaliaSlump\Revised Conditions-Approval.wpd

Application for Special Management Area Emergency Permit

Proposed Slope and Seawall Repairs at

11 Hale Malia Place

TMK (2) 4-3-003:096
Napili, Maui, Hawaii

April, 2008

Prepared for:
Ms. Marcia Lucas
2440 Vallejo St.
San Francisco, CA 94123
415/775-1220

Prepared by:
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Maui, Hawaii 96793
808/242-1955

APPLICATION FOR SMA EMERGENCY PERMIT

Proposed Slope and Seawall Repairs

11 Hale Malia Place
TMK (2) 4-3-003:096
Napili, Maui, Hawaii

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4. SMA EMERGENCY PERMIT APPLICATION

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1. APPLICATION FORM

COUNTY OF MAUI
DEPARTMENT OF PLANNING
250 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

APPLICATION TYPE: **MAUI PLANNING COMMISSION**
SPECIAL MANAGEMENT AREA EMERGENCY PERMIT APPLICATION

DATE: April 5, 2008

PROJECT NAME: 11 Hale Malia Place Emergency Slope Repair

PROPOSED DEVELOPMENT: Emergency repair measures to mitigate hazards associated with catastrophic failure of a shoreline bluff and seawall structure

TAX MAP KEY NO.: (2) 4-3-003:096 **CPR/HPR NO.:** _____ **LOT SIZE:** 0.29 acres (12,623.69 sq. ft.)

PROPERTY ADDRESS: 11 Hale Malia Place, Lahaina, HI 96761

OWNER: Ms. Marcia Lucas PHONE: (B) (415) 775-1220 (H) _____

ADDRESS: 2440 Vallejo St.

CITY: San Francisco STATE: CA ZIP CODE: 94123

OWNER SIGNATURE: Please see attached Letter of Authorization

APPLICANT: Same as Owner

ADDRESS: Please see above

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE (B): _____ (H): _____ FAX: _____

APPLICANT SIGNATURE: Please see attached Letter of Authorization

AGENT NAME: Chris Hart & Partners, Inc.

ADDRESS: 115 N. Market Street

CITY: Wailuku STATE: HI ZIP CODE: 96793

PHONE (B): 242-1955 (H): _____ FAX: 242-1956

EXISTING USE OF PROPERTY: Single-family Residence

CURRENT STATE LAND USE DISTRICT BOUNDARY DESIGNATION: Urban

COMMUNITY PLAN DESIGNATION: SF Single Family Residential ZONING DESIGNATION: R-3 Residential

OTHER SPECIAL DESIGNATIONS: Special Management Area (SMA)

2. OWNERSHIP DOCUMENTS

R-513 STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
FEB 04, 2005 08:01 AM
Doc No(s) 2005-023360

/s/ CARL T. WATANABE
REGISTRAR OF CONVEYANCES

CONVEYANCE TAX: $6950.00

20 1/1 Z6

LAND COURT SYSTEM REGULAR SYSTEM

After Recordation, Return By Mail To:
Marcia Lucas, Trustee
11 Hale Malia
Lahaina, Hawaii 96761

Escrow No. 1200517-CS

FNTIC 1200517

TMK (2) 4-3-003-096

WARRANTY DEED

This WARRANTY DEED made this 27th day of January, 2005, by and between THOMAS D. Di NOTO, Trustee of the Thomas Di Noto Family Trust dated November 11, 1993, as amended April 25, 1996, IN TRUST, with powers to sell, lease, convey, mortgage, and other powers more fully set forth therein, and THOMAS D. Di NOTO and LAURIE J. Di NOTO, Trustees under the Thomas and Laurie Di Noto Family Trust dated April 25, 1996, IN TRUST, with powers to sell, lease, convey, mortgage, and other powers more fully set forth therein, all of whose address is 11 Hale Malia, Lahaina, Hawaii 96761, hereinafter called the "GRANTOR", and MARCIA LUCAS, Trustee of "The Marcia Lucas Living Trust" dated February 8, 1991, as restated in its entirety on April 24, 1996, and as thereafter further amended, IN

TRUST, with powers to sell, lease, convey, mortgage, and other powers more fully set forth therein, whose address is 11 Hale Malia, Lahaina, Hawaii 96761, hereinafter called the "GRANTEE",

WITNESSETH:

That the Grantor, for and in consideration of the sum of TEN DOLLARS ($10.00) and other valuable consideration, paid to the Grantor by the Grantee, the receipt whereof is hereby acknowledged, does hereby grant, bargain, sell and convey unto the Grantee, her successors and assigns, forever, the property described in Exhibit "A" attached hereto and made a part hereof (the "Property").

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.

TO HAVE AND TO HOLD the same, together with all buildings, improvements, rights, easements, privileges and appurtenances thereon and thereunto belonging or appertaining or held and enjoyed therewith, unto the Grantee, her successors and assigns, forever.

AND the Grantor hereby covenants with the Grantee that the Grantor is lawfully seised in fee simple of the Property, and has good right and lawful authority to sell and convey the same; that the same is free and clear of all encumbrances, except the reservations and encumbrances shown in said attached Exhibit "A", if any, and that the

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

The term "Grantor" and the term "Grantee", wherever used herein, shall include the Grantor, the Grantee and their respective heirs, devisees, personal representatives, successors and assigns; the term "Grantor" and the term "Grantee" shall include, if appropriate, the plural and in such case shall inure to the benefit of or bind, as the case may be, the Grantors and Grantees jointly and severally. The use of any gender shall include all genders. Whenever any words are used in the singular, they shall be construed as though they were also used in the plural in all cases where they would so apply, and vice versa.

IN WITNESS WHEREOF, the Grantor has executed this instrument the day and year first above written.

THOMAS D. Di NOTO

Trustee of the Thomas Di Noto Family Trust dated November 11, 1993, as amended April 25, 1996

THOMAS D. DiNOTO

LAURIE J. DiNOTO

Trustees under the Thomas and Laurie Di Noto Family Trust dated April 25, 1996

Approved as
to form

William F. Crockett

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this 27 day of January, 2005, before me personally appeared THOMAS D. Di NOTO, Trustee of the Thomas Di Noto Family Trust dated November 11, 1993, as amended April 25, 1996, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed, as such trustee.

Signature

Connie Stevenson
Print Name
Notary Public, State of Hawaii
My commission expires: 12-4-2005

CONNIE STEVENSON
NOTARY PUBLIC
STATE OF HAWAII

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this 27 day of January, 2005, before me personally appeared THOMAS D. Di NOTO, Trustee under the Thomas and Laurie Di Noto Family Trust dated April 25, 1996, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed, as such trustee.

Signature

Connie Stevenson
Print Name
Notary Public, State of Hawaii
My commission expires: 12-4-2005

CONNIE STEVENSON
NOTARY PUBLIC
STATE OF HAWAII

STATE OF CA.)
) SS.
COUNTY OF)
SAN DIEGO

On this 21st day of JANUARY, 2005, before me personally appeared LAURIE J. Di NOTO, Trustee under the Thomas and Laurie Di Noto Family Trust dated April 25, 1996, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed, as such trustee.

Signature

Melanie Halley
Print Name

Notary Public, State of ~~Hawaii~~ CALIFORNIA.
My commission expires: Dec. 23, 2007

EXHIBIT "A"

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Grant No. 6384, Land Commission Award No. 4240, Apana 3 to Kau) situate at Alaeloa, Lahaina, Island and County of Maui, State of Hawaii, being LOT 6 of the "HALE MALIA SUBDIVISION", described as follows:

Beginning at the northeasterly corner of this parcel of land, being also the southeasterly corner of LOT 7, the coordinates of said point of beginning referred to Government Survey Triangulation Station "MALO" being 13,248.05 feet South and 11,330.34 feet West and thence running by azimuths measured clockwise from true South:

1.	51°	30'		140.00	feet along Royal Patent Grant No. 1663, Land Commission Award No. 5524 to L. Konia
2.	134°	21'	30"	73.69	feet along Royal Patent Grant No. 4697, Land Commission Award No. 4807, Apana 2 to Nike
3.	195°	54'	20"	74.43	feet
4.	270°	22'		113.84	feet along Lot 5 and along remainder of Royal Patent Grant No. 6384, Land Commission Award No. 4240, Apana 3 to Kau
5.	321°	30'		45.00	feet along same and along Lot to the point of beginning and containing an area of 12,624 square feet, more or less.

TOGETHER WITH a perpetual non-exclusive beach access foot-path easement appurtenant to the parcel of land more particularly described above for access to the beach, containing an area of 553 square feet, more or less, the centerline of which is described as follows:

Beginning at the easterly end of this easement, on the easterly side of Lot 6, the coordinates of said point of beginning referred to Government Survey

Triangulation Station "MALO" being 13,212.29 feet South and 11,443.13 feet West and thence running by azimuths measured clockwise from true South:

1.	174°	46'	30"	68.14	feet through Lot 5 to the easterly side of Lot 4
2.	129°	51'		70.00	feet through Lot 4 to the beach.

TOGETHER ALSO WITH all easements, rights, and appurtenances more fully set forth in the Declaration of Covenants, Conditions and Restrictions for Hale Malia Subdivision dated July 12, 1974, recorded in the Bureau of Conveyances of the State of Hawaii in Liber 10062 at Page 357, as amended.

Being the property conveyed as follows:

1. To Thomas D. Di Noto, Trustee of the Thomas Di Noto Family Trust dated November 11, 1993, as amended April 25, 1996, by Warranty Deed dated November 11, 1998, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 98-171644.

2. To Thomas D. Di Noto and Laurie J. Di Noto, Trustees under the Thomas and Laurie Di Noto Family Trust dated April 25, 1996, by Deed dated April 6, 2002, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 2002-099371 (as to an undivided 1/3 interest).

SUBJECT, HOWEVER, to the following:

1. Reservation in favor of the State of Hawaii of all mineral and metallic mines.

2. Covenants, conditions and restrictions as set forth in Declaration dated July 12, 1974, recorded in the Bureau of Conveyances of the State of Hawaii in Liber 10062 at Page 357, as amended by instrument recorded in said Bureau of Conveyances in Liber 10405 at Page 355. Said Declaration is further amended by instrument recorded as Document No. 94-173525, which instrument also rescinds in its entirety said Amendment recorded in Liber 10405 at Page 355.

3. The property covered in above Declaration of Covenants, Conditions and Restrictions for Hale Malia Subdivision, as amended, is subject to the following:

a. Easement Agreement dated July 23, 1974, recorded in Liber 10098 at Page 461, in favor of the Board of Water Supply of the County of Maui.

b. Easement recorded in Liber 10101 at Page 544, in favor of Maui Electric Company, Limited, a Hawaii corporation, and Hawaiian Telephone Company, a Hawaii corporation (nka Verizon Hawaii Inc.)

4. Hold-Harmless Agreement by and between Thomas Di Noto and County of Maui, dated October 23, 2000, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 2000-166175.

5. Any facts, rights, interests, or claims which may exist or arise by reason of the following facts disclosed by survey map and letter dated January 11, 2005, prepared by Arthur P. Valencia, Licensed Professional Land Surveyor, Certificate No. 10026:

(a) End portion of rock wall of this lot along the southeast boundary line at the easterly corner is inside lot 7 (roadway lot) by 0.78 feet or 9.36 inches.

(b) End portion of rock wall of this lot along the southeast boundary line at the easterly corner is into T.M.K.: (2) 4-3-03:044 by 0.69 feet or 8.28 inches.

(c) Portion of same rock wall on the opposite end is inside T.M.K.: (2) 4-3-03:044 by 2.66 feet forming a triangle with a length of 10 feet and covering an area of +/- 14 square feet.

(d) Concrete rock masonry pavement and portion of wooden stairs at the northwest corner of this lot is inside State of Hawaii property by 5.0 feet covering an area of +/- 15 square feet.

NOTE: The following "de minimus structure position discrepancy" as defined in Chapter 669 of the Hawaii Revised Statutes, as amended, as shown on the survey map and letter dated January 11, 2005, prepared by Arthur P. Valencia, Licensed Professional Land Surveyor, Certificate No. 10026:

(a) Portion of wooden deck and rock wall of this lot at the northwest corner is inside lot 5 by 0.50 feet and 0.42 feet.

3. LETTER OF AUTHORIZATION

Copy

February 25, 2008

Mr. Jeffrey S. Hunt, Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Maui, Hawaii 96793

AND

Other Governmental Officials

Re: Application for a Special Management Area (SMA) Emergency Permit, SMA Use Permit, and Shoreline Setback Variance on property situated at 11 Hale Malia Place, Napili, Maui, Hawaii; TMK Parcel No. (2) 4-3-003:096.

Dear Mr. Hunt and Other Government Officials:

We are the owners of the fee interest in TMK Parcel No. (2) 4-3-003:096. This letter authorizes Chris Hart & Partners, Inc., to apply for a Special Management Area (SMA) Emergency Permit, a SMA Use Permit, a Shoreline Setback Variance, and all other land use and other permits and approvals required for the proposed action, which includes stabilization measures and repair work associated with mitigating damage from a catastrophic seawall failure on property situated at 11 Hale Malia Place in Napili, Maui, Hawaii; TMK Parcel No. (2) 4-3-003:096.

Very truly yours,

Ms. Marcia Lucas

Cc. Mr. Christopher L. Hart, Chris Hart & Partners, Inc.

Subscribed and sworn to before me this

_____day of _____, 2008

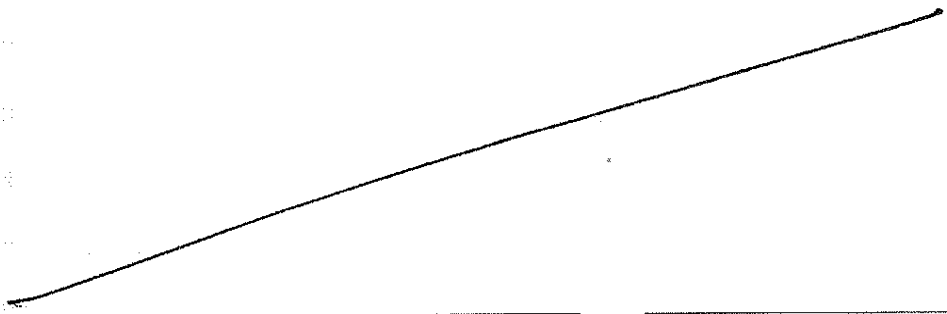
_____
Notary Public, Second Judicial Circuit
State of Hawaii

My commission expires: _____

SEE ATTACHED
CALIFORNIA JURAT

CALIFORNIA JURAT WITH AFFIANT STATEMENT

☐ See Attached Document (Notary to cross out lines 1–6 below)
☐ See Statement Below (Lines 1–5 to be completed only by document signer[s], *not* Notary)



Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

State of California

County of San Francisco

Subscribed and sworn to (or affirmed) before me on this

6 (Date) day of March (Month), 20____ (Year), by

(1) Marcia Lucas (Name of Signer),

proved to me on the basis of satisfactory evidence to be the person who appeared before me (.) (,)

(and

(2)_____ (Name of Signer),

proved to me on the basis of satisfactory evidence to be the person who appeared before me.)

CHRISTOPHER MARK FIORINI
COMM. #1790074
NOTARY PUBLIC • CALIFORNIA
San Francisco County
Commission Expires JAN. 29,2012

Signature Christopher Mark Fiorini
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Further Description of Any Attached Document

Title or Type of Document:_____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

RIGHT THUMBPRINT OF SIGNER #1	RIGHT THUMBPRINT OF SIGNER #2
Top of thumb here	Top of thumb here

4. SMA EMERGENCY PERMIT APPLICATION

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FIGURES

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Figure No. 2	Parcel Location Map
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APPENDICES

Appendix A:	Structural Observation Report
Appendix B:	Engineer's Submittal
Appendix C:	1999 Site Plan

LIST OF REQUIRED SUBMITTALS

Special Management Area Emergency Permit Application.

See: Section 1 at the beginning of the SMA Emergency Permit Application.

1. Evidence that the applicant is the owner or lessee of record of the real property.

See: Section 2 at the beginning of the SMA Emergency Permit Application: "Ownership Documents."

2. A notarized letter of authorization from the legal owner if the applicant is not the owner and evidence that the authorization is from the legal owner.

See: Section 3 at the beginning of the SMA Emergency Permit Application: "Letter of Authorization."

3. A written description of the proposed action, including but not limited to, the length, width, height, depth, and type of materials for any proposed action.

See: Section II.C of the SMA Emergency Permit Application and Appendix B, "Engineer's Submittal."

4. A written statement of the emergency or imminent and substantial harm to the public health, safety, or welfare.

See: Section II.B of the SMA Emergency Permit Application and Appendix A, "Structural Observation Report."

5. Photographs or VHS format video tape identifying the emergency at the affected area and shoreline property boundaries.

See: Figure No. 7 and Appendix A, "Structural Observation Report."

6. Any other relevant information requested by the director.

See: Appendix C, "1999 Site Plan"

7. Non-refundable filing fee payable to the County of Maui, Director of Finance.

A filing fee in the amount of $110 is submitted with this application.

I. PROJECT INFORMATION

A. PREFACE

The subject property is located in Napili, Maui, on Hale Malia Place at Tax Map Key (2) 4-3-003:096 (**See**: Figures No. 1-3). This Special Management Area (SMA) Emergency Permit application is being filed on behalf of Ms. Marcia Lucas, owner of the above-referenced parcel, to support the construction of emergency repairs to a slope and seawall that experienced catastrophic failure as a result of severe storm activity.

B. PROJECT PROFILE

Proposed Project:	Emergency repairs to mitigate hazards associated with catastrophic failure of a shoreline bluff and seawall
Lot Size:	0.29 acres (12,623.29 square feet)
Existing Land Use:	Single Family Residence
Tax Map Key:	(2) 2-6-005:002 (**See**: Figure No. 1)
Address:	11 Hale Malia Place Napili, Maui, Hawaii
Access:	Hale Malia Place

C. LAND USE DESIGNATIONS

State Land Use Boundary Designation:	Urban (**See**: Figure No. 4, "State Land Use Map")
West Maui Community Plan:	SF Single Family Residential (**See**: Figure No. 5, "Community Plan Map")
Maui County Zoning:	R-3 Residential (**See**: Figure No. 6, "County Zoning Map")
Special Designations:	Special Management Area (SMA)

D. IDENTIFICATION OF THE OWNER & APPLICANT

Land Owner:	Ms. Marcia Lucas
Address:	2440 Vallejo St. San Francisco, CA 94123
Phone:	Voice: (415) 775-1220
Contact:	Ms. Marcia Lucas

II. SPECIAL MANAGEMENT AREA EMERGENCY PERMIT APPLICATION

A. RELATIONSHIP TO SMA EMERGENCY PERMIT CRITERIA

According to the Rules of the Maui Planning Commission,

"The Director shall issue a special management area emergency permit where:

1. *The Director finds criteria set forth in HRS sections 205A-22 and 205A-30, as amended, have been met;*

   "Special management area emergency permit" means an action by the authority authorizing development in cases of emergency requiring immediate action to prevent substantial physical harm to persons or property or to allow the reconstruction of structures damaged by natural hazards to their original form; provided that such structures were previously found to be in compliance with requirements of the Federal Flood Insurance Program."

As detailed below, the proposed action is considered to be an "emergency requiring immediate action to prevent substantial physical harm to persons or property." If unmitigated, the collapse of a shoreline bluff and seawall at the subject property poses an imminent threat to a residential structure, along with potential damage to the nearshore environment and coastal waters associated with siltation from continued erosion of the bluff.

B. DESCRIPTION OF THE SUBJECT PROPERTY

The subject parcel, TMK No. (2) 4-3-003:096, is located in Napili, approximately 1.5 miles south of the resort community of Kapalua, in an area of residential development situated makai of Lower Honoopiilani Rd. (**See**: Figures No. 1, "TMK Map;" No. 2, "Regional Location Map;" and No. 3, "Aerial Location Map"). Existing structures on the parcel include a single-family home and swimming pool/spa. A shoreline bluff previously hardened by a seawall fronts the property. The bluff frontage is approximately 75 feet and the height of the bluff is approximately 25 feet above sea level.

C. PURPOSE OF THE REQUEST

On December 5, 2007, inundation from heavy rainfall and high surf associated with severe storm activity resulted in catastrophic failure of a section of the slope and seawall roughly 40 feet in length and 15 to 20 feet in height (**See**: Appendix A, "Structural Observation Report"). As a result, the edge of the swimming pool is now set back approximately 10 feet from the edge of the bluff. The residential structure is approximately 25 feet from the edge of the bluff (**See**: Figure No. 7, "Site Photographs," and Appendix A, "Structural Observation Report"). The intent of the applicant is to construct emergency repairs to the failed slope and seawall, which pose imminent danger to the residential structure, as well as the nearshore environment, in the event of further collapse. On Monday, February 25, 2008, Jason Medema of Chris Hart & Partners, Inc. met with Coastal Geologists Dolan Eversole and Zoe Norcross-Nu'u of the Department of Land and Natural Resources (DLNR), and Thorne Abbott, Coastal Resources Planner, County of Maui, at the project site in order to evaluate the damage. Based upon the site visit, and as advised by Mr. Eversole and Mr. Abbott, the Applicant is submitting the attached information to request an SMA Emergency Permit in support of the proposed repairs.

D. PROPOSED ACTION

The proposed course of action for mitigation involves implementing emergency shoreline protection measures while pursuing the requisite environmental permits with the County of Maui to install permanent shoreline protection. In the long term, it is anticipated that the permits necessary to implement permanent shoreline protection will include a SMA Use Permit and a Shoreline Setback Variance. A Shoreline Setback Variance in turn triggers a requirement for an Environmental Assessment (EA) under Chapter 343, Hawaii Revised Statutes (HRS). The proposed near-term emergency protection measures described in this Special Management Area (SMA) Emergency Permit are intended to be incorporated into the permanent shoreline protection measures.

Meta Engineering of Honolulu, Hawaii has been retained to design and install both the near-term and permanent shoreline protection structures. Appendix B, "Engineer's Submittal," illustrates three (3) design alternatives for near-term slope protection, each of which is designed to be incorporated into the permanent mitigation measures that will be subject to the approval of SMA/Shoreline Setback Variance Applications and acceptance of the EA by the County of Maui, Department of Planning. The preferred

alternative, a cast-in-place concrete wall, offers the greatest amount of protection for the site, the greatest potential for recovery of lost yard area at the top of the bluff, and the greatest structural longevity.

All three (3) alternatives include complete removal of the remaining portions of seawall that did not collapse during the December 5, 2007 slope failure. The three (3) alternatives, and the advantages and disadvantages of each, are discussed below.

1. Alternative #1: Gunite

This alternative involves injection grouting at the base of the bluff and the installation of concrete grade beams along the top of the bluff to provide support. Ground anchors and micropiles will be anchored into bedrock to stabilize the bank. The face of the bank will then be sprayed with a Gunite (sprayed concrete) finish.

Advantages:

- Shorter construction time
- Least expensive alternative
- Moderate support of pool surcharge (this alternative leaves the least amount of yard area between the pool and the edge of the bluff).
- Good longevity

Disadvantages:

- Limited Drainage (weepholes only)
- Minimum restoration of yard area
- Maximum transition at Adjacent Property Line (Kahana Sunset)
- Creates a "pocket" along the coastline, as gunite surface follows contour of collapsed bluff face.

Aesthetic Value:

- Medium. Sloped exposed concrete face resembles gray lava from ocean view, but creates a visible pocket along the coastline.

2. Alternative #2: Concrete Wall (PREFERRED ALTERNATIVE)

This alternative involves injection grouting at the base of the bluff and the installation of concrete grade beams along the top and bottom of the bluff to provide support. Concrete wing walls will be installed perpendicular to the bluff at the lot boundary with adjacent properties, and integrated into the main wall. Ground anchors and micropiles will be anchored into bedrock to stabilize the bank. A concrete wall will be cast in place. Fill material will be placed behind the wall to regain some of the lost yard area at the top of the bluff.

Advantages:

- Continuous structural retaining wall system (main wall integrated with wing wall at property line)
- Most drainage fill (high-drainage fill material (supplements use of weepholes at base of structure)
- Maximum restoration of yard area
- Most pool protection
- Minimum transition at adjacent property lines
- Good Longevity

Disadvantages:

- Longer Construction Time
- More Expensive Alternative

Aesthetic Value:

- Medium (vertical concrete wall can be faced with texture, stone, vegetation or other type of treatment)

3. Alternative #3: Gabion Baskets or Dura-Block

This alternative incorporates the installation of concrete grade beams along the top and bottom of the bluff to provide support, as well as micropiles and ground anchors secured into bedrock to stabilize the bank. Gabion baskets (caged riprap) or Dura-Block (dry-stacked masonry block) will be used to construct wing walls at the property line

and a main wall along the face of the bluff. Fill material will be placed behind the wall to regain some of the lost yard area at the top of the bluff.

Advantages:

- Shorter construction time
- Moderate cost

Disadvantages:

- Laborious
- Not structural (veneer)
- Two systems: one for main wall, another for wing walls at property line
- Medium drainage fill
- Medium restoration of yard area
- Medium transition at lot line with adjacent properties
- Creates medium "pocket" along coastline
- Shorter longevity (15-20 years)

Aesthetic Value:

- Medium (sloped wall, can be covered with vegetation)

In addition to the alternatives discussed above, which address repairs to the failed portion of the slope, the proposed action will include structural reinforcement of the existing swimming pool using micropiles to underpin the foundation wall of the pool structure (**See**: Exhibit B, "Engineer's Submittal"). If compromised, the pool could affect the stability of the residential structure. The proposed structural reinforcement of the pool will mitigate any load-bearing effects of the pool on the stability of the yard area at the top of the bluff.

Prior to and during the construction of the slope repairs, a safety plan will be implemented to prevent injury to individuals moving along the shoreline beneath the bluff and through the yard area at the top of the bluff. The safety plan will include measures such as the following:

Property Line:

- Reinforced Concrete Wing Wall under Existing Rock Overhang

General:

- Install warning sign on beach at property line under rock overhang.
- Use of grade beams to stabilize and support access to yard area at top of bluff.
- Cap off tiki torch gas line currently protruding from bluff.
- Redirect flow from storm drain pipe currently protruding from bluff.
- Remove manmade debris from beach.

It is anticipated that all work will take place within the area *mauka* of the certified shoreline, which lies within Maui County jurisdiction. A site plan showing the location of the previously certified shoreline is attached for your use (**See**: Exhibit C, "1999 Site Plan"). A new shoreline survey is being conducted at this time, which will be forwarded to the DLNR for review and certification upon completion. The certified shoreline survey will be provided to the County of Maui, Department of Planning.

II. FINDINGS AND CONCLUSIONS

This application is for a Special Management Area Emergency Permit to repair a failed slope and seawall on a 0.29-acre parcel at Napili, Maui, Hawaii, Tax Map Key (2) 4-3-003:096. Pursuant to 205A-22, HRS, the proposed action meets the criteria for an SMA Emergency Permit as a response to an "*emergency requiring immediate action to prevent substantial physical harm to persons or property.*"

The proposed repairs are not anticipated to result in a cumulative impact or a significant environmental or ecological effect to surrounding properties, near shore waters, natural resources, and/or archaeological and historic resources on the site or in the immediate area. Since the proposed project only involves the repair of a failed slope and seawall, public infrastructure and services including roadways, sewer and water systems, medical facilities, police and fire protection, parks, and schools, are adequate to serve the property. The proposed action will not impact public view corridors and will not produce significant adverse impacts upon the visual character of the site and its immediate environs.

Based on the foregoing analysis and conclusion, the proposed action is not anticipated to result in a cumulative impact or a significant environmental or ecological effect on the Special Management Area. The proposed project involves an action to correct a deteriorating condition with regard to an imminently threatened residential structure, and will also mitigate potential degradation of the nearshore environment. Immediate action is therefore warranted.

5. FIGURES

BACK TO 2-4-3

BACK TO 2-4

BACK TO 2-0

Subject Property

Figure 1

TMK Map
11 Hale Malia Place Seawall Repair

CHRIS HART & PARTNERS, INC.

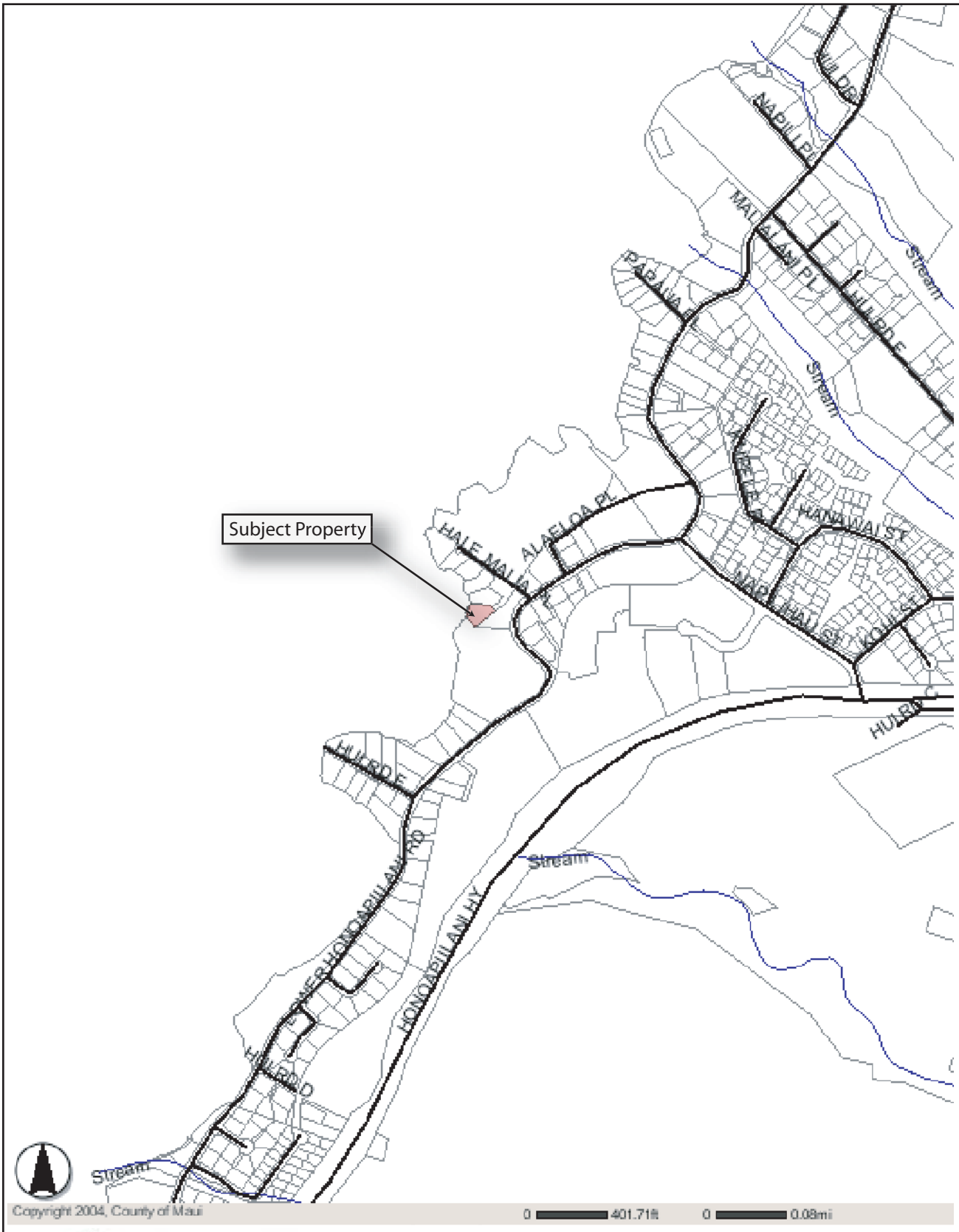


Figure 2

Parcel Location Map

11 Hale Malia Place
Seawall Repair

CHRIS HART & PARTNERS, INC.

Figure 3

Aerial Location Map

11 Hale Malia Place
Seawall Repair

CHRIS HART & PARTNERS, INC.

Agricultural

Conservation

Rural

Urban

Figure 4

State Land Use Map

11 Hale Malia Place
Seawall Repair

CHRIS HART & PARTNERS, INC.

Figure 5

Community Plan Map

11 Hale Malia Place
Emergency Seawall Repair

CHRIS HART & PARTNERS, INC.

R-3 Residential District

Figure 6

County Zoning Map	
11 Hale Malia Place Emergency Seawall Repair	CHRIS HART & PARTNERS, INC.

1. View of slope failure from above, facing south

2. View from below, facing south from northwest corner of subject parcel at shoreline

3. View from above, showing top of failed slope and edge of pool

4. View from below, facing north from southwest corner of subject parcel at shoreline

Figure 7

Site Photographs	CHRIS HART & PARTNERS, INC.
11 Hale Malia Place Seawall Repair	

6. APPENDICES

APPENDIX A:
Structural Observation Report

Arnold T. Okubo and Associates, Inc.
CONSULTING STRUCTURAL ENGINEERS

Doc. 2008-67

STRUCTURAL OBSERVATION REPORT:

DATE: February 2, 2008

TIME: 9:00 A.M.

WEATHER: Rain and Cloudy

LOCATION: 11 Hale Malia Place
Lahaina, Maui

PURPOSE: To visually examine and evaluate the slippage of a shoreland bluff and make recommendations on the repair and stabilization of the bluff.

GENERAL SITE DESCRIPTION:

The shoreland bluff fronts an existing residential property. The bluff frontage is approximately 75'. A swimming pool is setback approximately 10'-15' away from the edge of the shoreland bluff. The height of the bluff is approximately 25 feet above sea level.

OBSERVATION:

The shoreland bluff's top of bank is approximately elevation +25.00 above Mean Low Low Sea Level Elevation 0.00. Approximately 40 feet length and 15'-20' height of the shoreland bluff had slipped. There is a CRM seawall at the bottom of the bluff's shoreline that has partially failed due to the overburden caused by the additional soil due to the shoreland bluff slippage from above.
From the review of an existing topographic survey plan, it seems that the failed shoreland bluff area was apparently approximately 7'-8' lower than the adjacent area, but was filled up to 8' to meet the adjacent finish grade. The previous vertical slope of the shoreland bluff was approximately 1H to 3V.

RECOMMENDATIONS:

The existing shoreland bluff's embankment slope, in the writer's opinion, is too steep to install a retaining wall or terraced retaining wall structure and the work area has limited access to the rear of the property.

It is the writer's opinion and recommendation that the installation of an earth retention tieback system consisting of earth anchors together with a micro-piles supporting system can be used to stabilize of the shoreland bluff. After the slope stabilization has been completed, the exposed slope should be gunited or provided with some kind of erosion protection measures. The landscape architect could recommend some erosion protection measures that will have aesthetic values.

A soils investigation shall be conducted before any final design is selected. The above recommendation is a conceptual design and may be subject to revision or change after a soils investigation has been completed. The soils investigation recommendations shall govern the final design concept.

The bottom of the shoreline bluff has a CRM seawall that was damaged, too, and it is recommended the seawall to be repaired to prevent erosion at the shoreline.

Attached is a conceptual sketch of a possible scheme for the shoreland slope stabilization. The final design shall be worked out with a soils engineer and a contractor who specialize in slope stabilization such as the use of earth anchors and micro-piles for earth retention. The final design of the slope stabilization shall be in accordance with the final recommendations of the soil investigation report.

A new topographic survey shall be obtain to delineate the existing conditions and define the area that has the soil slippage and the area to be stabilized. Also, need to get the shoreline setback located.

The construction company that could provide the design and soil stabilization work is as follows:

Mr. Paul R. Weber (Licensed Civil Engineer)
Pacific Ground Systems, Inc.
1824 Democrat Street
Honolulu, Hawaii 96819
Tel: (808) 845-2772
Fax: (808) 845-2552

Mr. Weber has both extensive engineering design and construction experience working to stabilize earth embankment and steep slopes. I am confident that Mr. Weber and Pacific Ground Systems, Inc. can do the design and actual construction work.

Please contact Mr. Charlie Biegel of Island Geotechnical Engineering (Maui) to conduct a soils investigation for the project, Telephone: (808) 243-9355, Cell: (808) 385-7625. I believe Pacific Ground Systems, Inc. would required some soils criteria to design the earth anchors and micropiles.

Jason Medema of Chris Hart & Partners of Wailuku, Maui, Telephone No.: (808) 270-1564, would be able to do the landscape design and environmental permitting with the Federal, State, and County agencies.

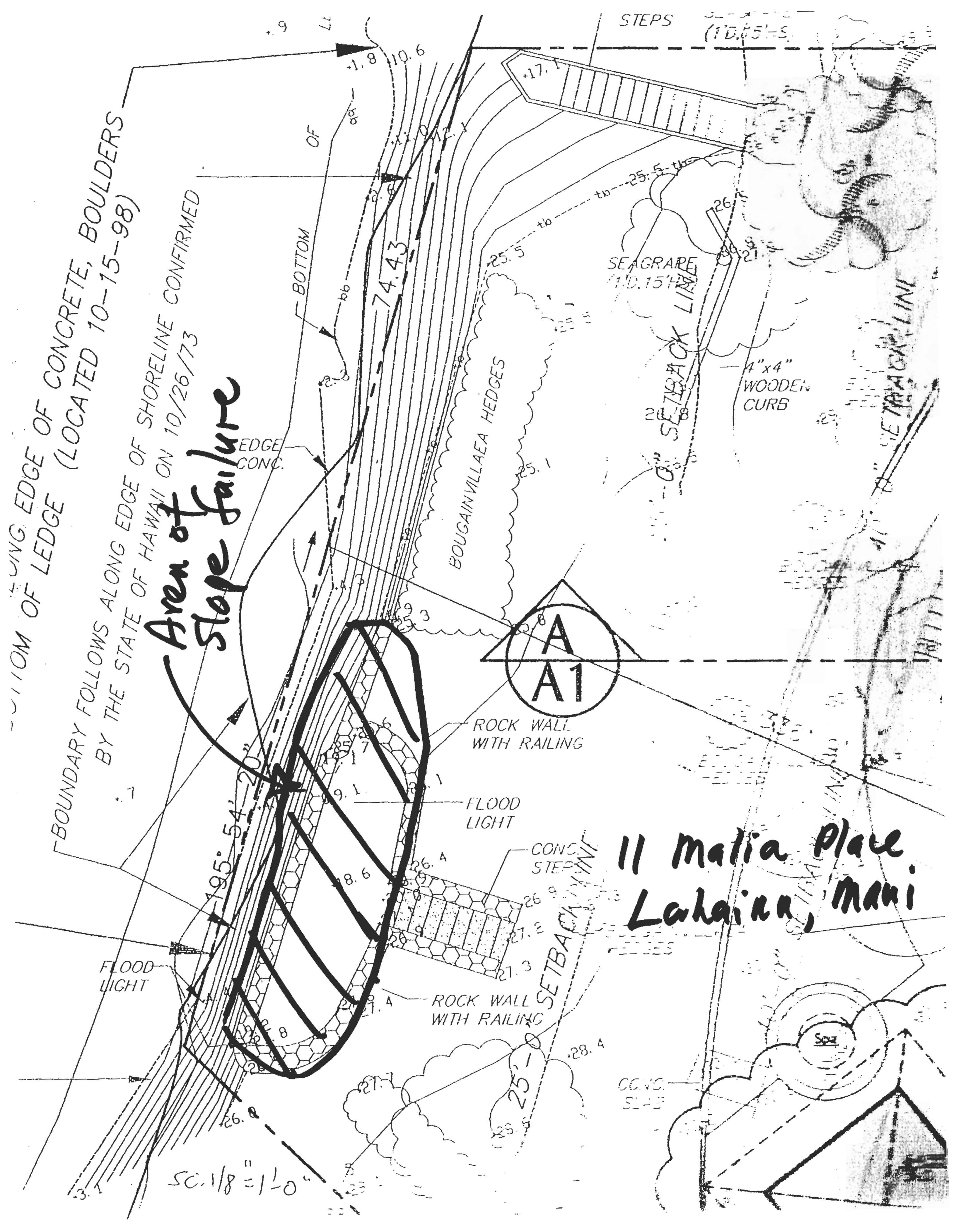
John Edwards of Edwards Design Group, Inc, Telephone No.: (808) 951-5926, would do the overall coordination for the slope stabilization project.

Structural consultation and review if requested could be done by Arnold T. Okubo & Associates, Inc.

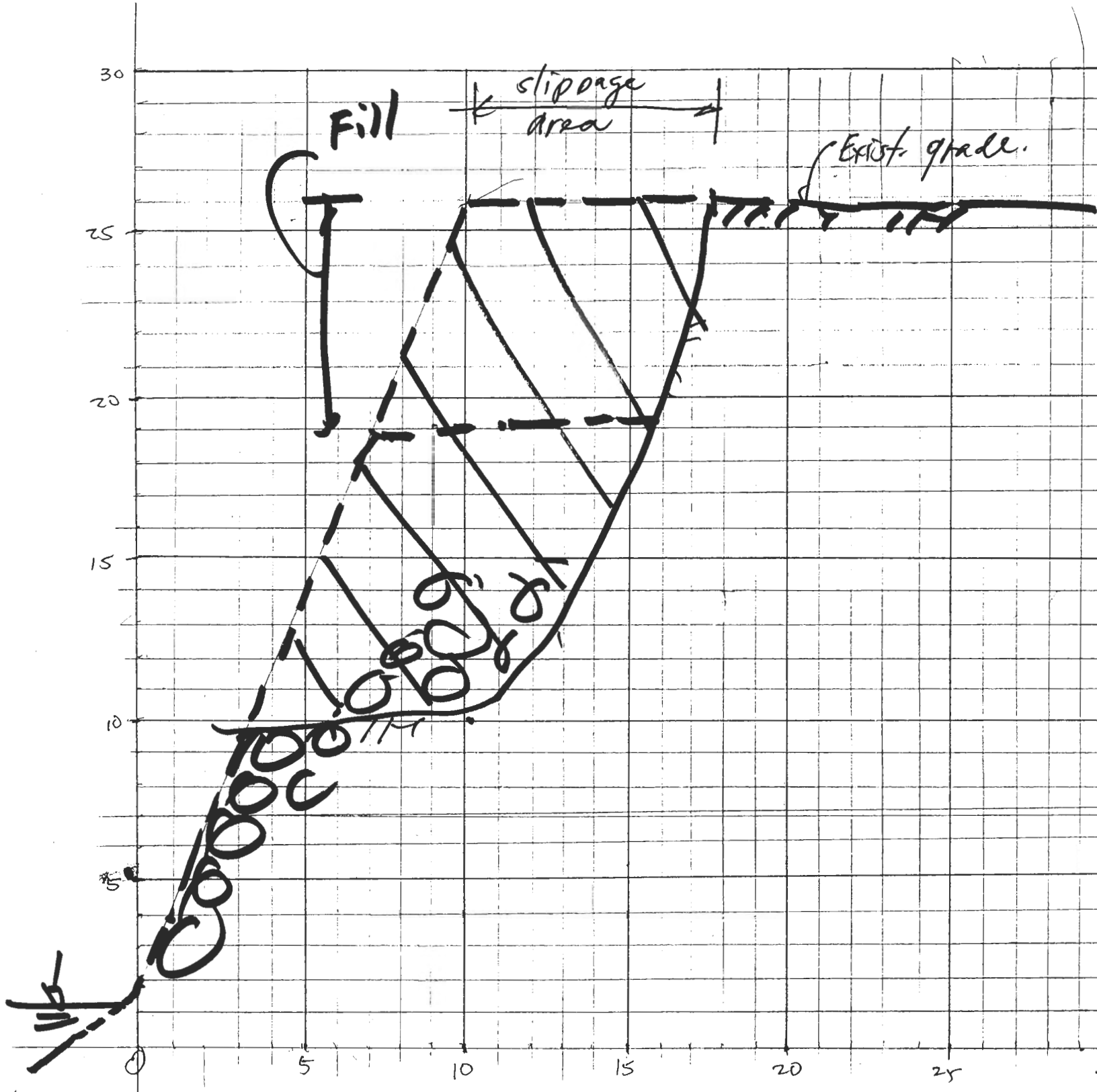
Note: see photographs attached

OBSERVED BY:

Arnold T. Okubo, P.E

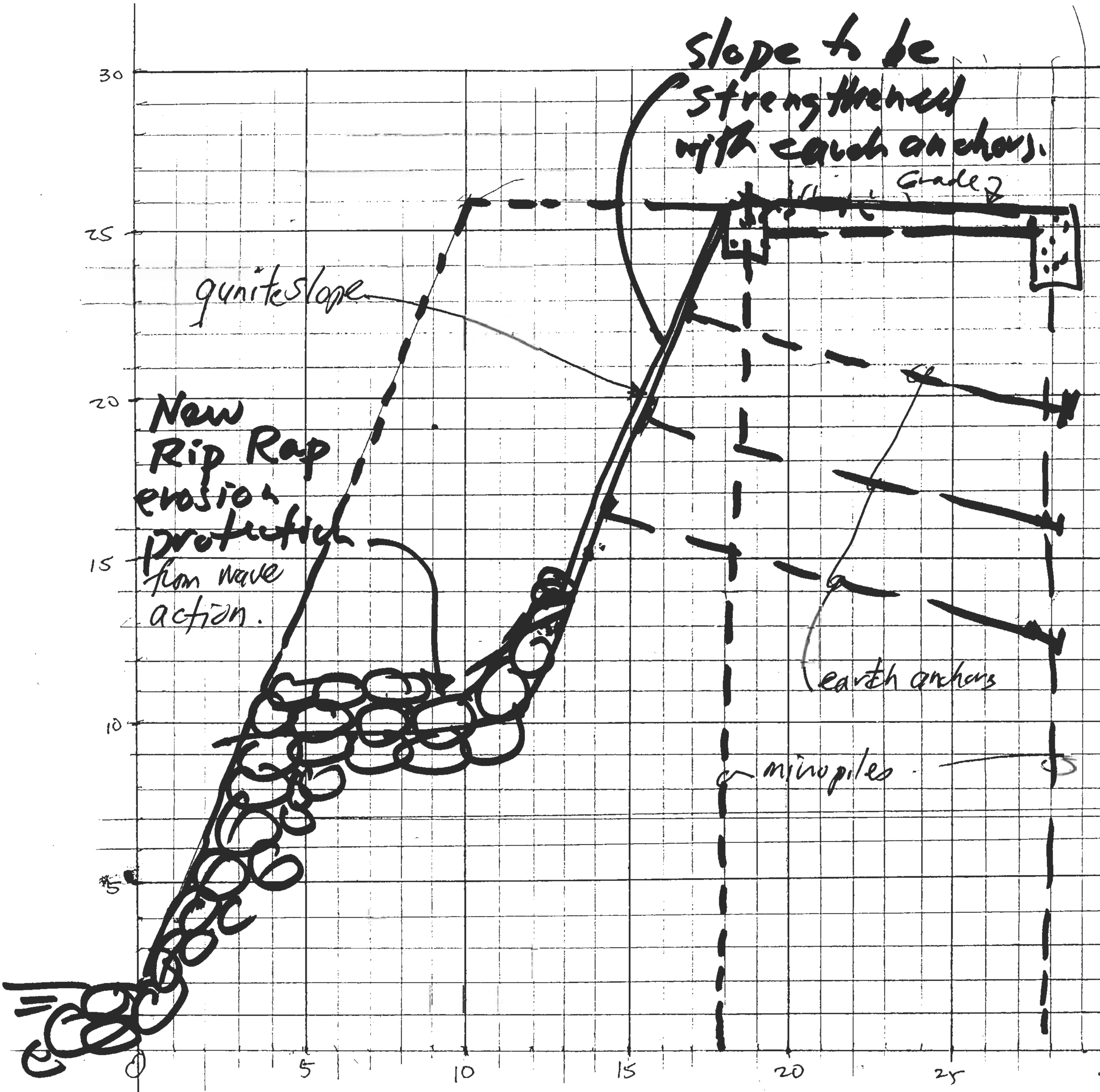


BOTTOM OF LEDGE
EDGE OF CONCRETE, BOULDERS
(LOCATED 10-15-98)
BOUNDARY FOLLOWS ALONG EDGE OF SHORELINE CONFIRMED
BY THE STATE OF HAWAII ON 10/26/73
BOTTOM
EDGE CONC.
74.43
195° 54' 20"
STEPS
SEAGRAPE
BOUGAINVILLAEA HEDGES
4"x4" WOODEN CURB
SETBACK LINE
ROCK WALL WITH RAILING
FLOOD LIGHT
CONC. STEPS
ROCK WALL WITH RAILING
FLOOD LIGHT
CONC. SLAB
Spa
A
A1
25'-0"
Area of Slope failure
11 Malia Place
Lahaina, Maui
SC. 1/8" = 1'-0"



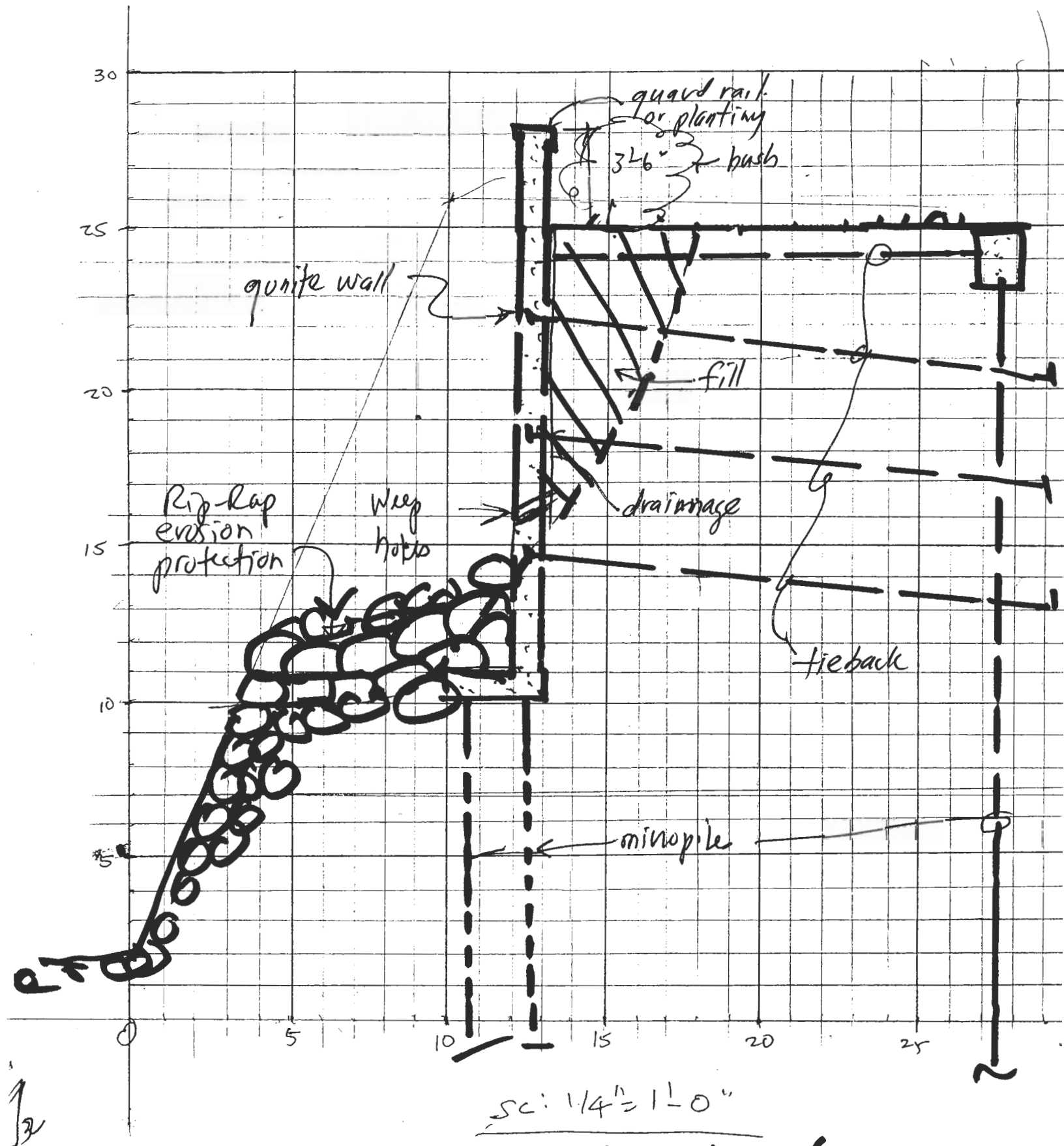
Sc: 1/4" = 1'-0"

Approximate soil slippage Area



sc: 1/4" = 1'-0"

① slope stabilization



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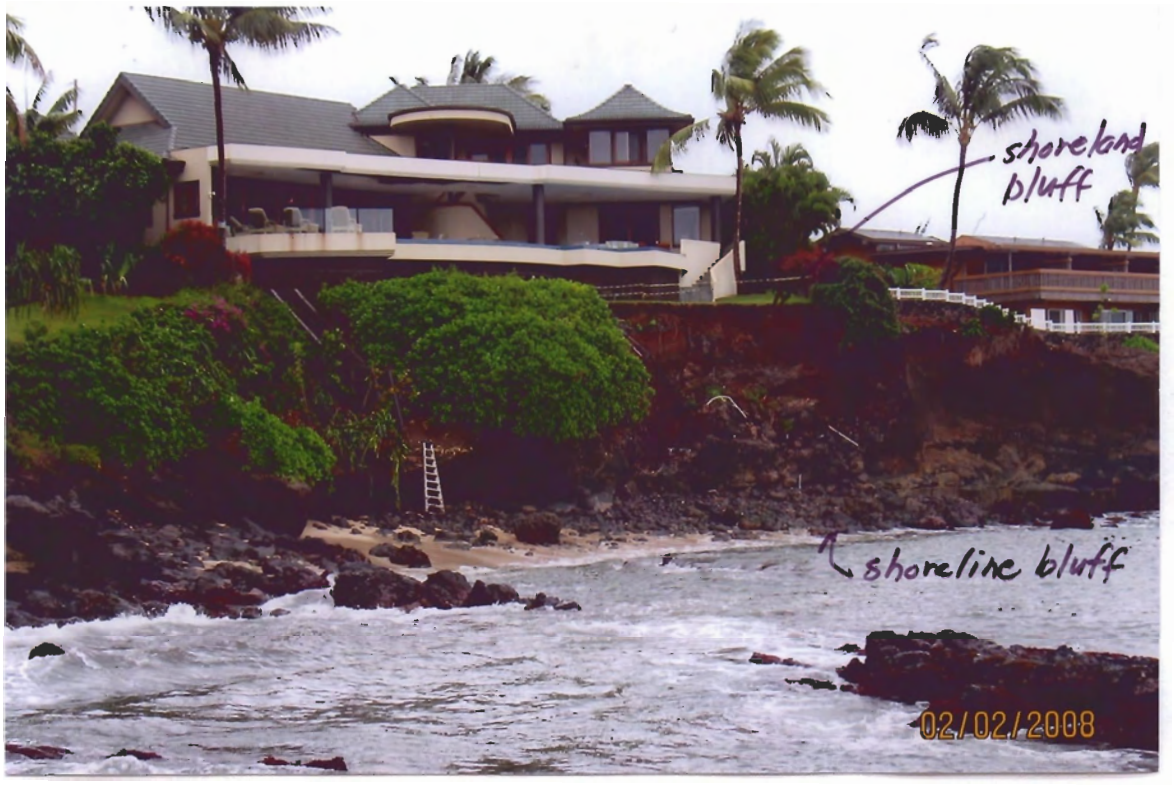
(2) slope stabilization



1 Elevation View -
11 Hale Malia Place, Lahaina, Maui

2 Elevation View of Soil Slippage Area

3 Shoreland Bluff Top of Bank

4 Shoreland Bluff Top of Bank

5 Top View

6

Elevation/Side View
of Slope Failure

7 Close Up View of Slope Failure

8 Seawall at Shoreline

APPENDIX B:
Engineer's Submittal

FACSIMILE COVERSHEET

EDWARDS DESIGN GROUP, INC.
Architecture & Interior Design
1357 Kapiolani Blvd. Suite 1120 Honolulu, Hawaii 96814 (808) 951-5926 / **FAX (808) 951-6519**

PROJECT:	11 HALE MALIA PLACE
DATE:	3-18-08
TO:	CHRIS HART & PARTNERS
	META ENGINEERING
	PACIFIC GROUND SYSTEMS
	MARCIA LUCAS
FAX NO:	----
ATTENTION:	**JASON MEDEMA**
	PAUL WEBER
	DAVID WEBER
	ARNOLD OKUBO
	MARCIA LUCAS
FROM:	JOHN EDWARDS

NO. OF PAGES: (Including header): **8**

If you did not receive all pages, please telephone or telecopy immediately.

Attached/Memo:

3 SCENERIOS--META ENGINEERING LATEST DRAFT (3-14-08)

For review and comment.

I ADDED SOME "CLOUDED" REVISIONS/QUESTIONS--

1. Add "pg. 1A" designation to Swimming Pool Section
2. Add "pg. 5" and "Plan View" designation to Plan View. Notate what is shown and verify extent.

Marcia, do you prefer a rock wall or open metal railing on Yard edge?

Email to follow from our meeting (PGS/META/EDG) regarding Pros & Cons.

Please call me if you have any questions.

Thanks,

John

Prepared for

Pacific Ground systems

March 14, 2008

Emergency Slope Protection
March 14, 2008

ENGINEER'S SUBMITTAL
FOR
Emergency Slope Protection
For the Lucas Shore Line

Ka'anapali, Maui

BY

Meta Engineering
P.O. Box 4606
Honolulu HI 96812
Tel 808 394 1420 Fax 808 394 1430
Mail: paul@metaengr.com

PAUL R. WEBER
LICENSED PROFESSIONAL ENGINEER
NO. 9668-C
HAWAII, U.S.A.

Exp 4-30-10

This work has been prepared by me or under my supervision and construction of the project will be under my observation

Paul R. Weber, P.E.

PAUL R. WEBER, P.E.
P.O. Box 4606
Honolulu, HI 96812
TEL (808) 394-1420 FAX (808) 394-1430

PROJECT NAME:	JOB NO.	PAGE:
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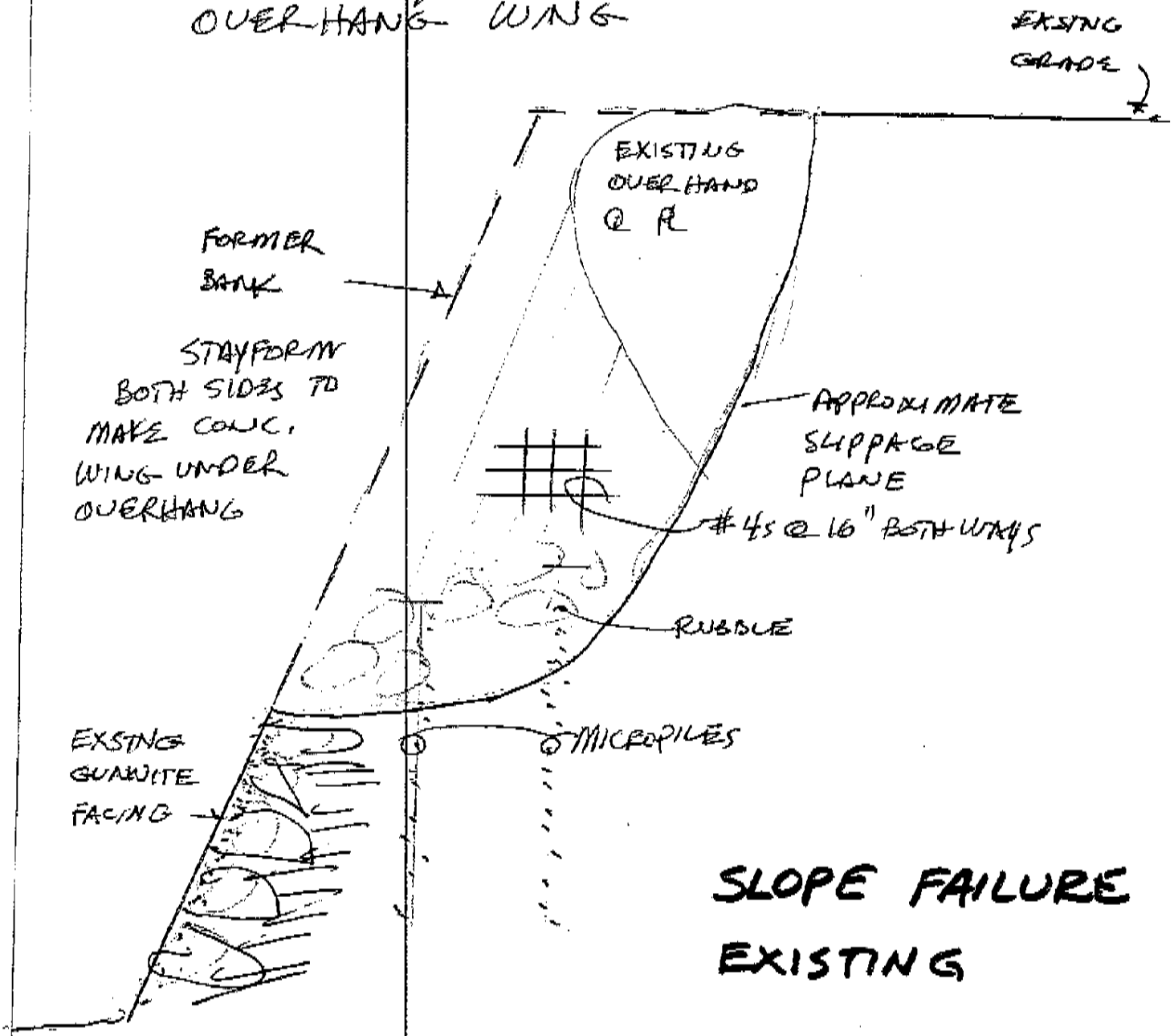
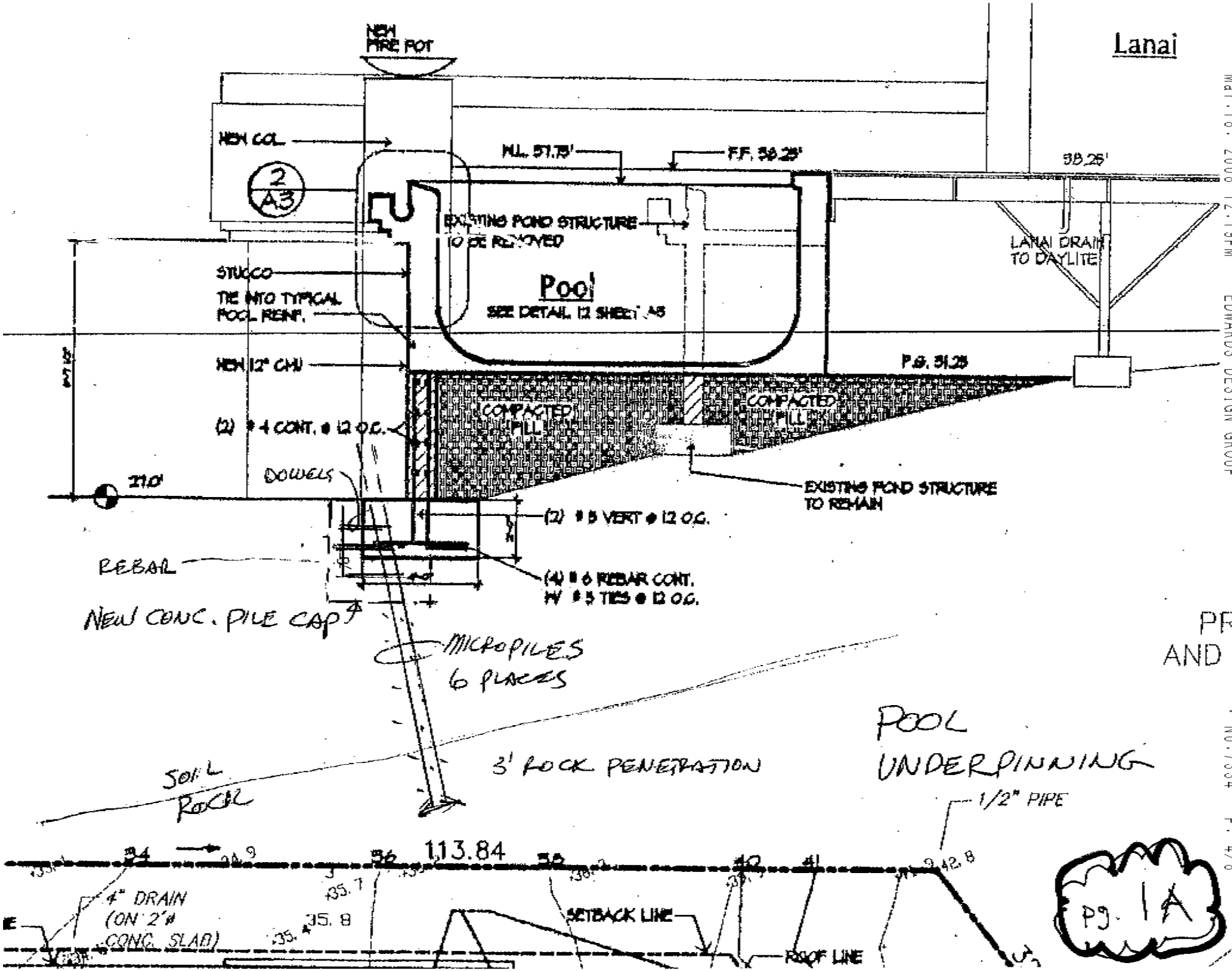
CALCULATED BY: PRW	CHECKED BY:	DATE: 05 MAR 08

TEMPORARY SUPPORT
OVERHANG WING



SLOPE FAILURE
EXISTING



PF
AND

Mar. 18. 2008 12:19PM EDWARDS DESIGN GROUP No. 7334 P. 4/8

PAUL R. WEBER, P.E.
P.O. Box 4606
Honolulu, HI 96812
TEL (808) 394-1420 FAX (808) 394-1430

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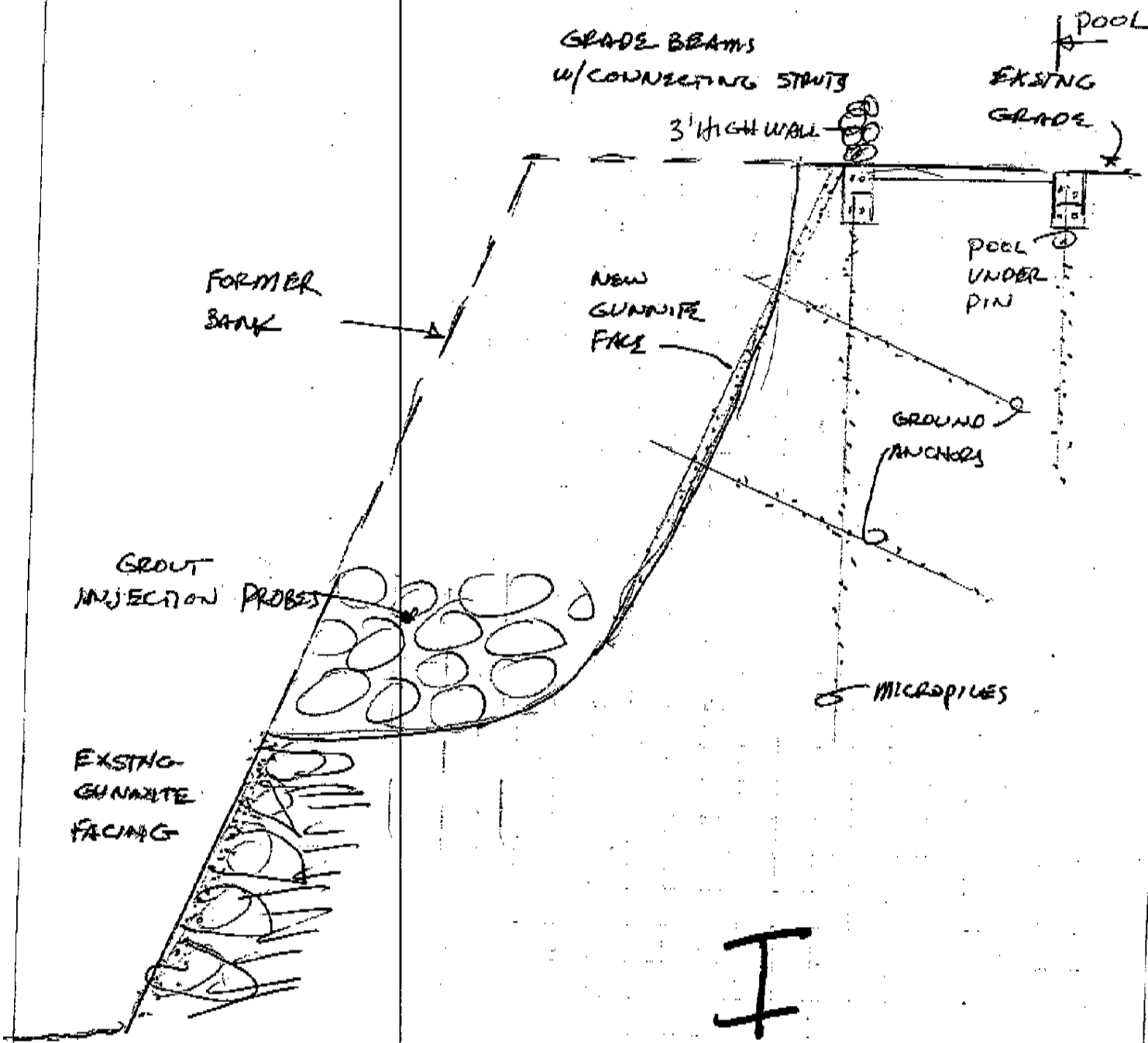

PAUL R. WEBER, P.E.
P.O. Box 4605
Honolulu, HI 96812
TEL (808) 394-1420 FAX (808) 394-1430

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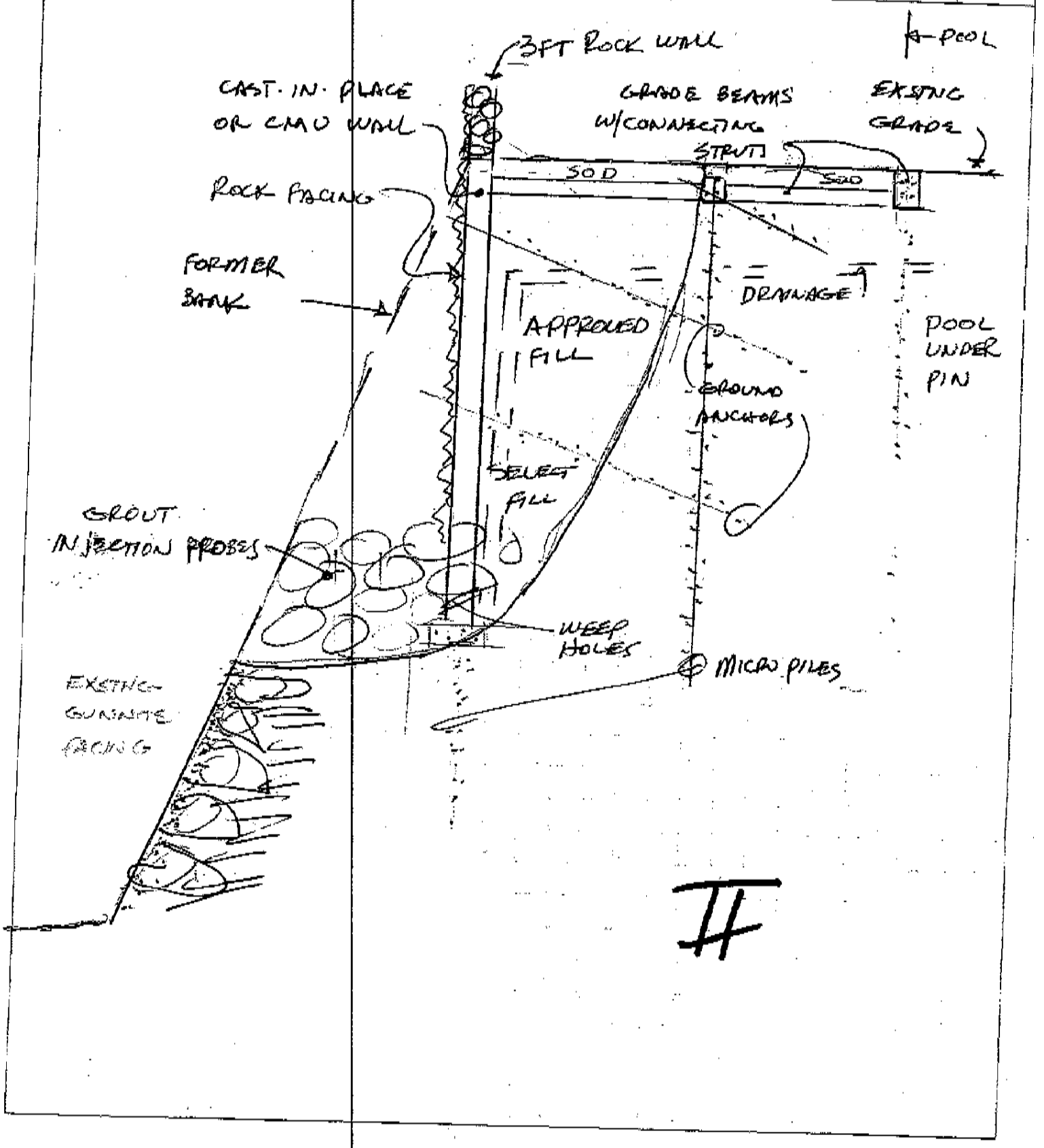

PAUL R. WEBER, P.E.
P.O. Box 4605
Honolulu, HI 96812
TEL (808) 394-1420 FAX (808) 394-1430

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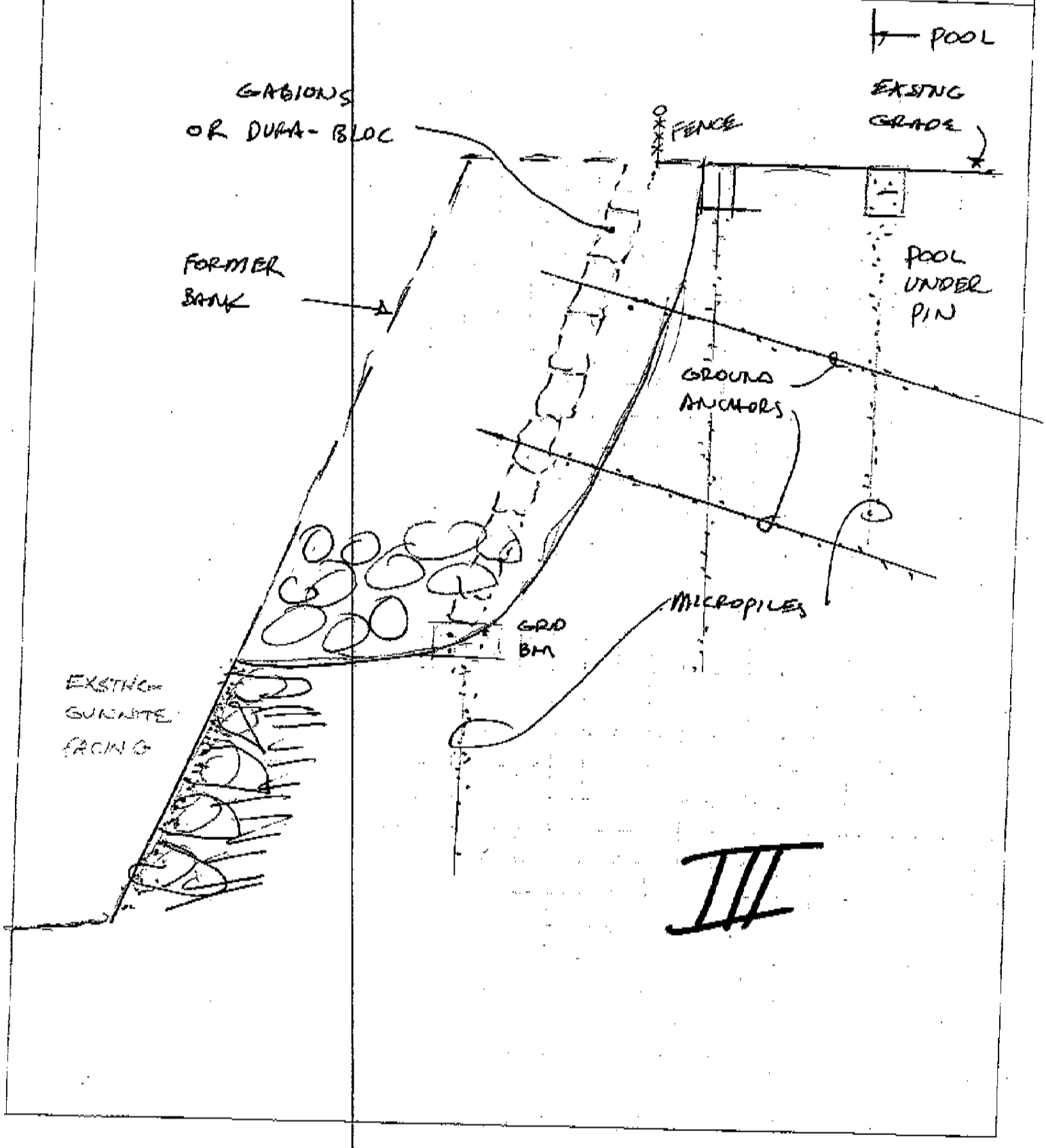
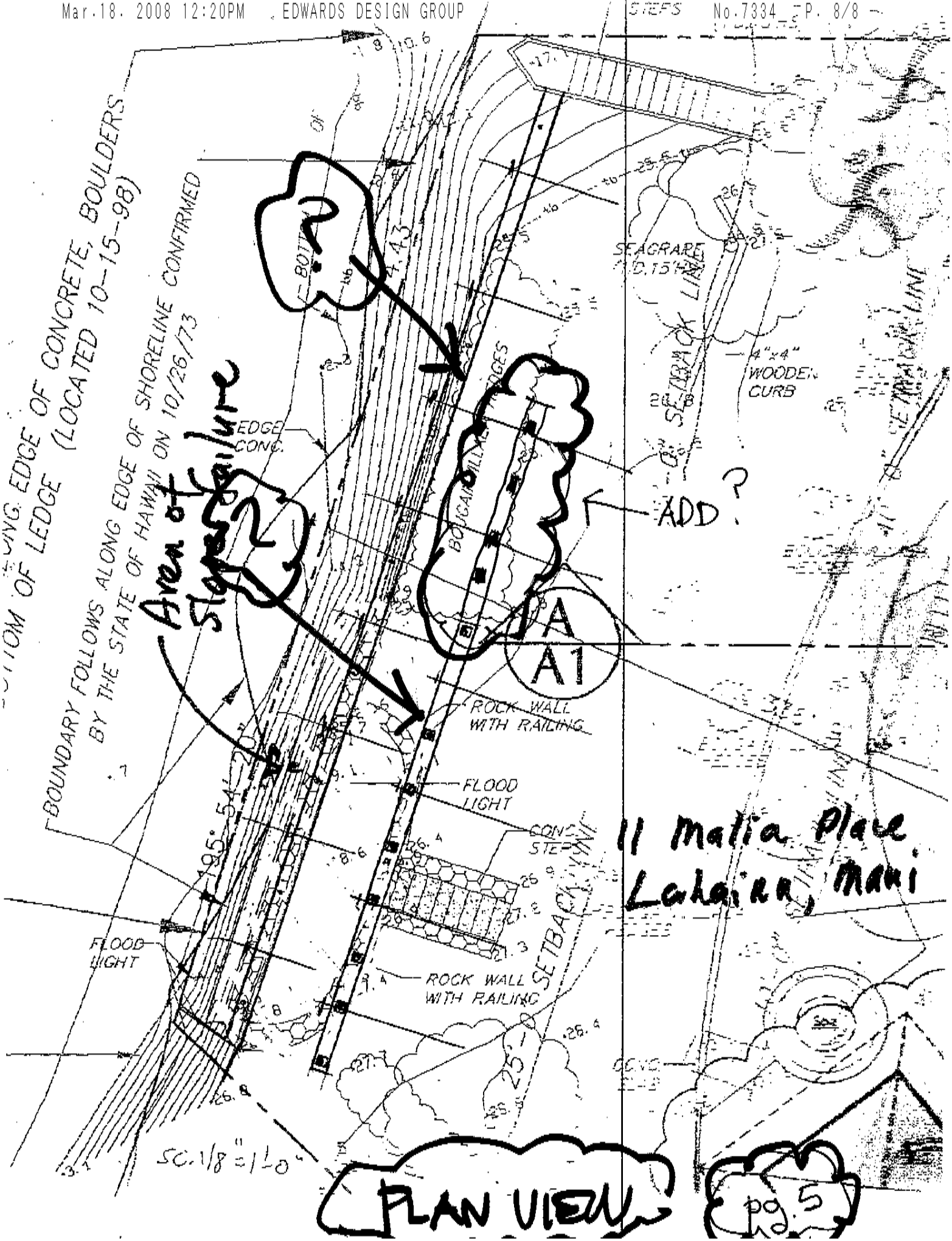
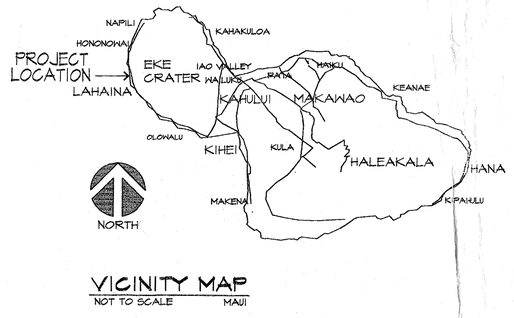


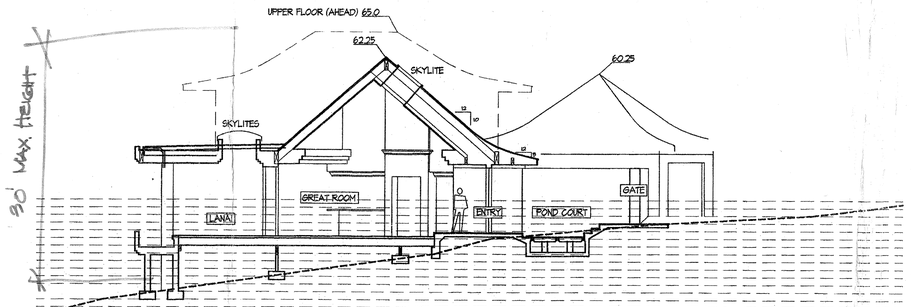

BOUNDARY FOLLOWS ALONG EDGE OF SHORELINE CONFIRMED BY THE STATE OF HAWAII ON 10/26/73
EDGE CONC.
ROCK WALL WITH RAILING
FLOOD LIGHT
SETBACK LINE
4"x4" WOODEN CURB
SEAGRAPE
ADD?
Area of slope failure
11 Malia Place Lahaina, Maui
SC. 1/8" = 1'-0"
PLAN VIEW
pg. 5

APPENDIX C:
1999 Site Plan



VICINITY MAP
NOT TO SCALE MAUI

MAX. HEIGHT OF DWELLING LIMITED TO 30 FEET FROM RIDGE TO FINISH OR NATURAL GRADE WHICHEVER IS LOWER.



A/A1 Cross Section
SCALE: 1/8"= 1'-0"

938365

Project Data

T.M.K. 4 - 3 - 003: 096, (Lot 6)
11 Hale Malia Place
Lahaina, Maui, Hawaii

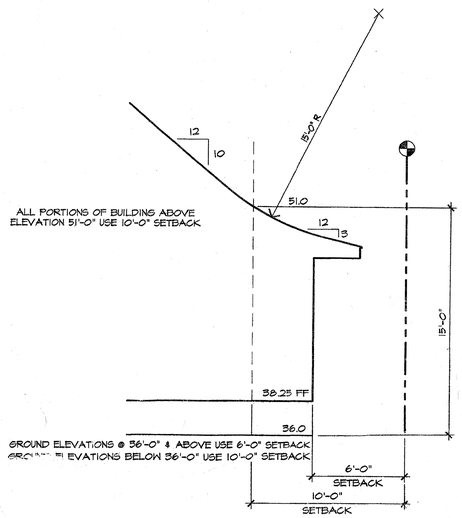
Lot Area :	12,624 sf

Area Calculations

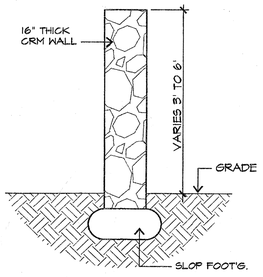
Main Interior Living:	3003 sf
Upper Floor	713 sf
Total Interior Living	3716 sf
Covered Lanai:	1640 sf
Entry, Pond Court & Atrium:	524 sf
Garage & Storage:	556 sf

Sheet Index

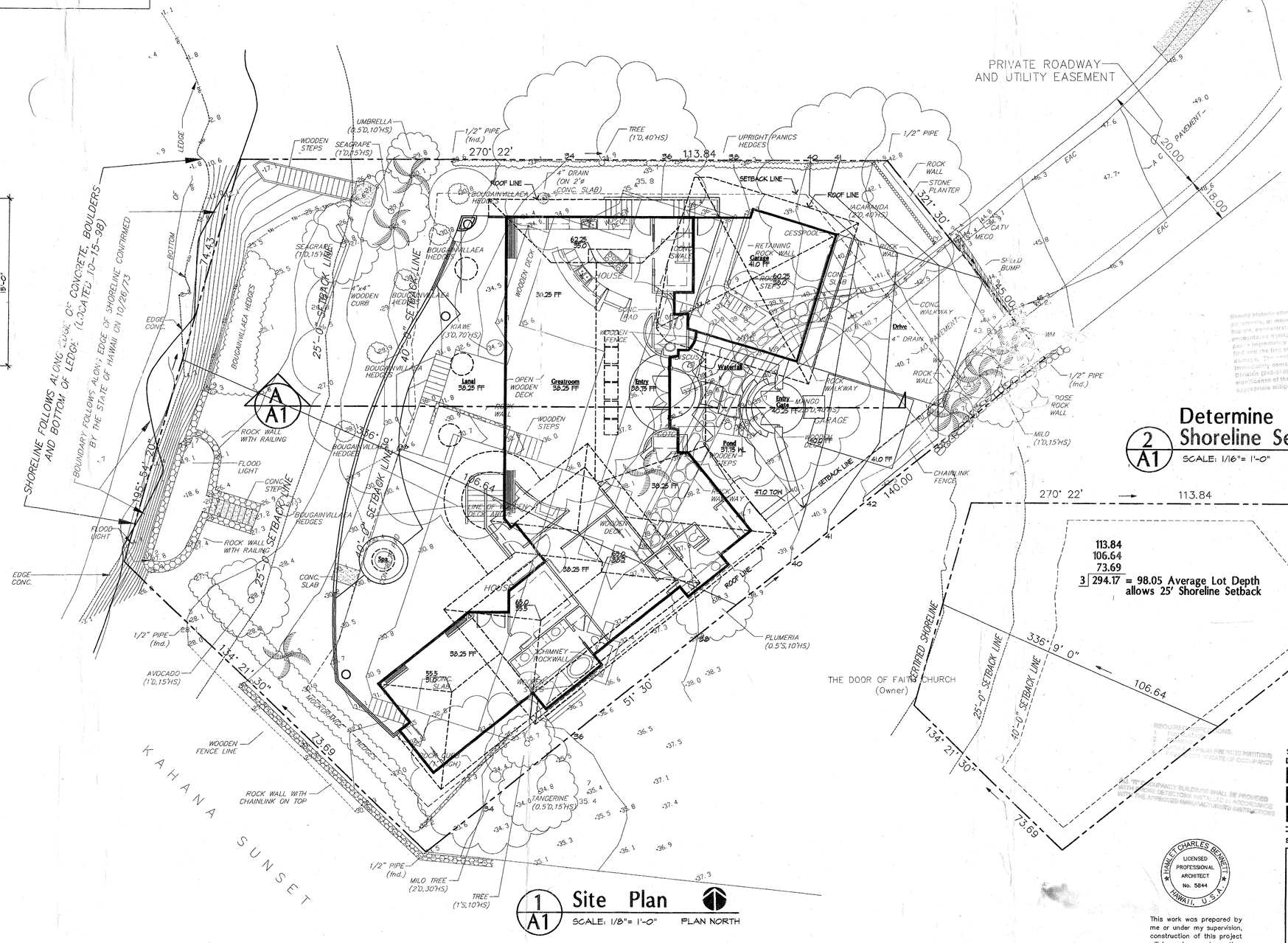
Sht.	Description
A1	Site Plan & Cross Section
A2	Floor Plans
A3	Exterior Elevations
A4	Interior Elevations
A5	Interior Elevations
A6	Reflected Ceiling Plan
A7	Cabinet Details
A8	Door & Window Details
S1	Building Sections
S2	Foundation & Framing Plan
S3	Roof Framing Plan
S4	Structural Details
S5	Structural Details
S6	Structural Details
M1	Air Condtionion Plan
E1	Electrical: Power Plan
E2	Electrical: Lighting Plan
E1	Schedules & Diagrams



B/A1 Setback Section
SCALE: 1/4"= 1'-0"



C/A1 CRM Fence Wall
SCALE: 1/4"= 1'-0"



1/A1 Site Plan
SCALE: 1/8"= 1'-0" PLAN NORTH

2/A1 Determine Shoreline Setback
SCALE: 1/16"= 1'-0"

113.84
106.64
73.69
3 | 294.17 = 98.05 Average Lot Depth
allows 25' Shoreline Setback

Should historic sites such as walls, platforms, pavements, or mounds, or remains such as artifacts, pit deposits, or concentration of shell or charcoal be found on the property, all work shall immediately cease. The contractor and/or landowner shall immediately contact the County Historic Preservation Division (243-5169), which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

SITE & FLOOR & SCHEM. SECTION

Di Noto
Hale Malia
Lot 6

PAGE A1 OF 8

SCALE: AS NOTED

HAMLET CHARLES BENNETT
LICENSED PROFESSIONAL ARCHITECT
No. 5844
HAWAII, U.S.A.

This work was prepared by me or under my supervision, construction of this project will be under my observation.

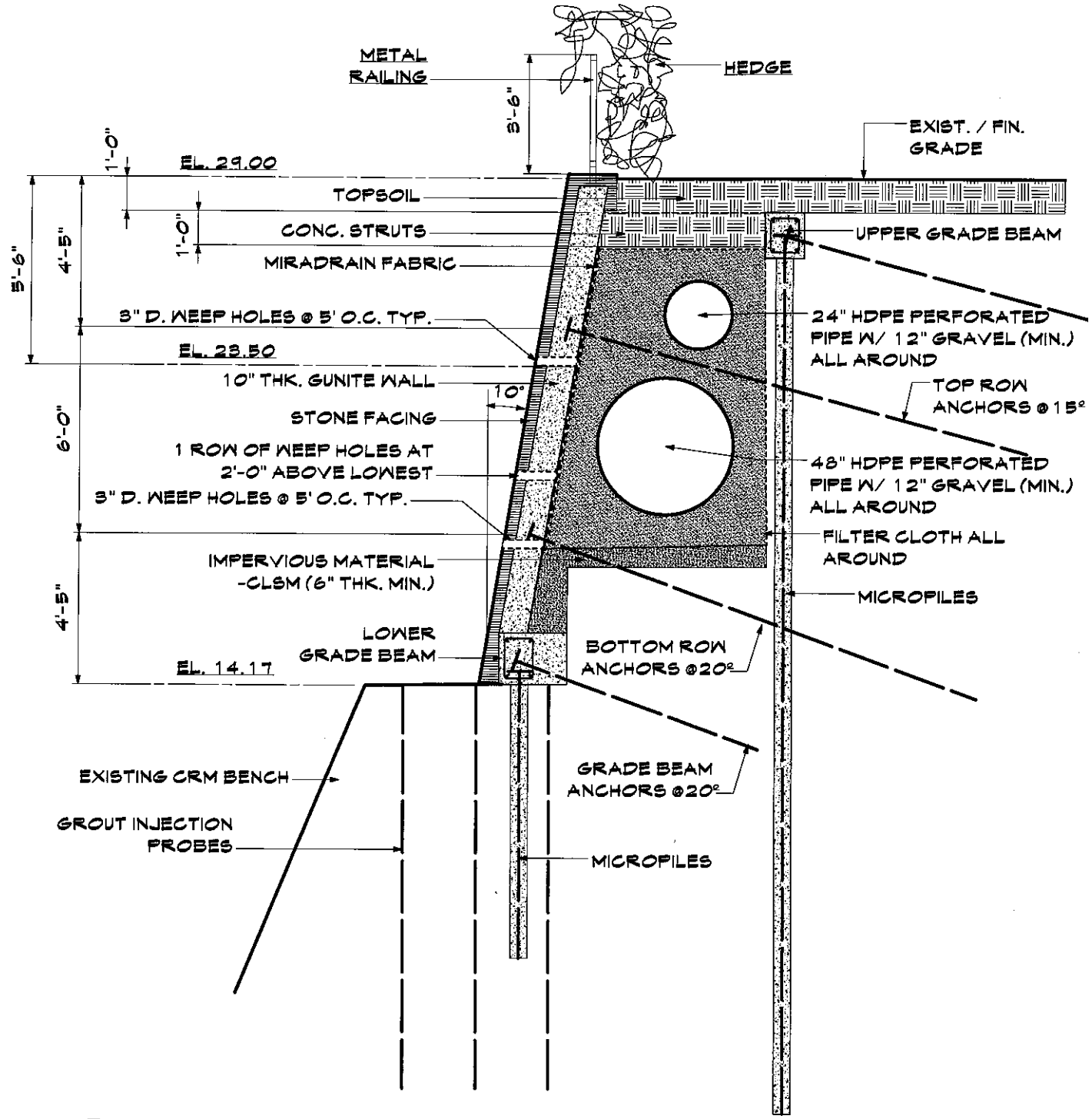
Signature

HAMLET CHARLES BENNETT
ARCHITECT
78-6697A MAMALAHOA HWY
HOLUALOA HAWAII 96725
TELEPHONE 808 322 3375

DATE: JUNE 27, 1999

FINAL PLAN (6-28-99)

Appendix G:
Wall and Drainage System Drawings

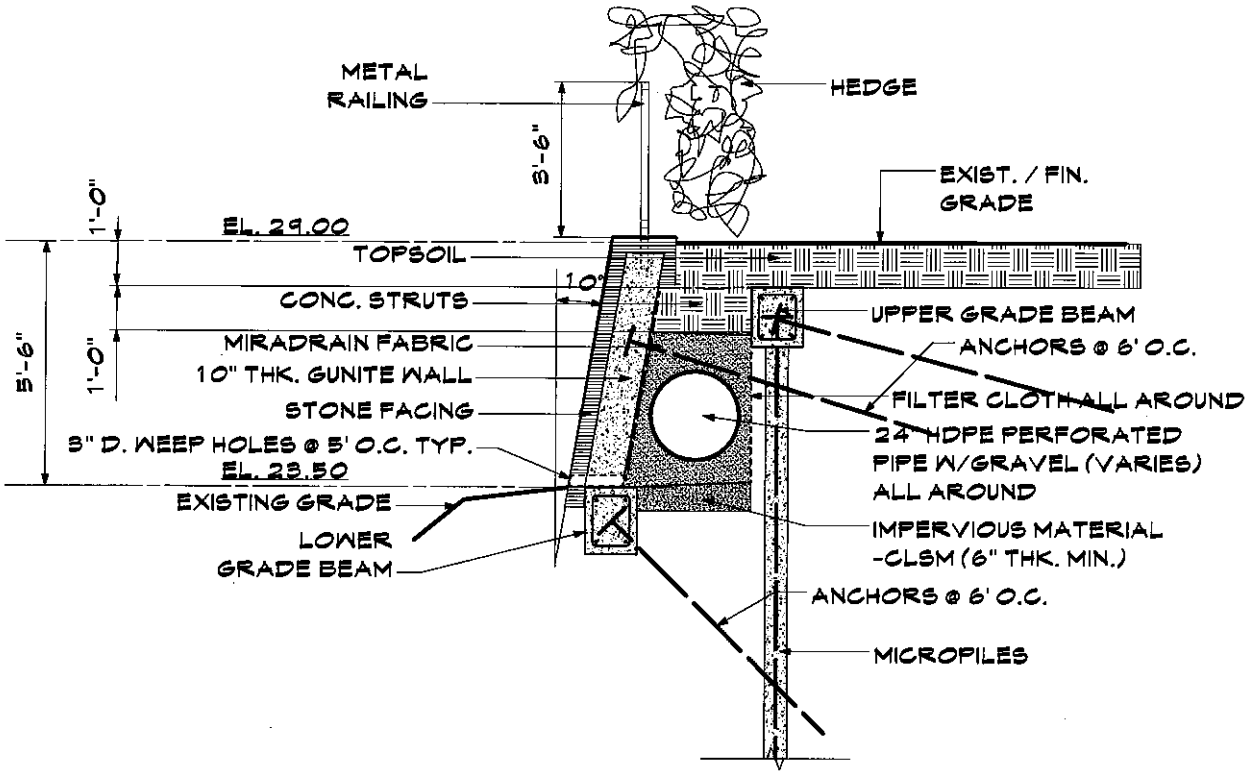


SK SEAWALL SCHEMATIC SECTION A

SCALE: 1/4" = 1'0"

11 HALE MALIA PLACE

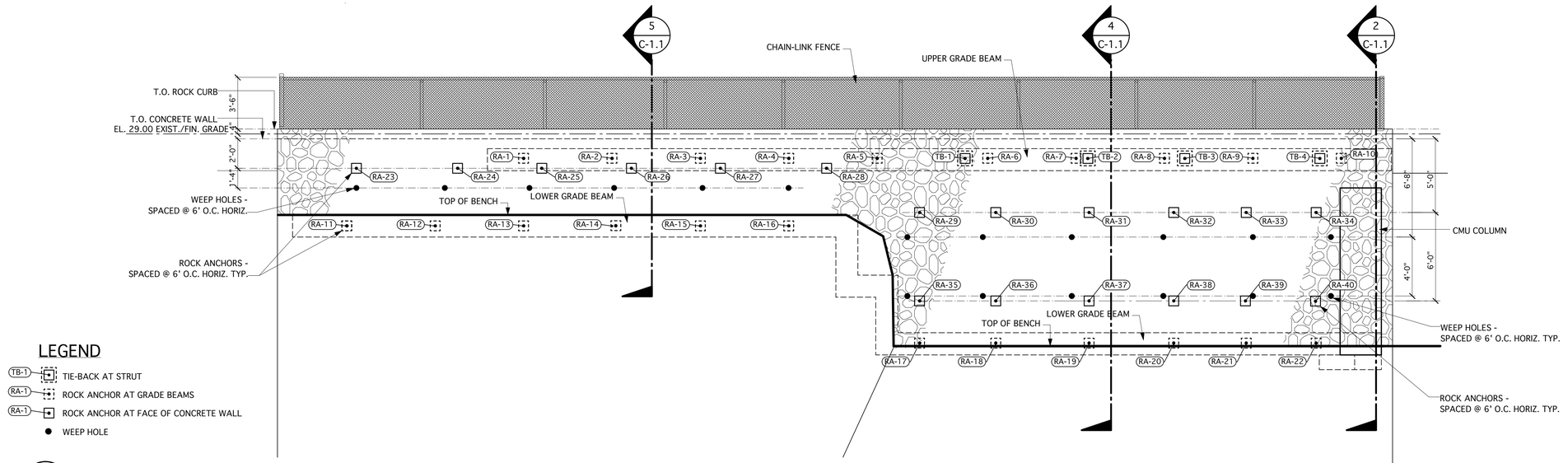
5/05/09



SK **SEAWALL SCHEMATIC SECTION B**

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

11 HALE MALIA PLACE **5/05/09**

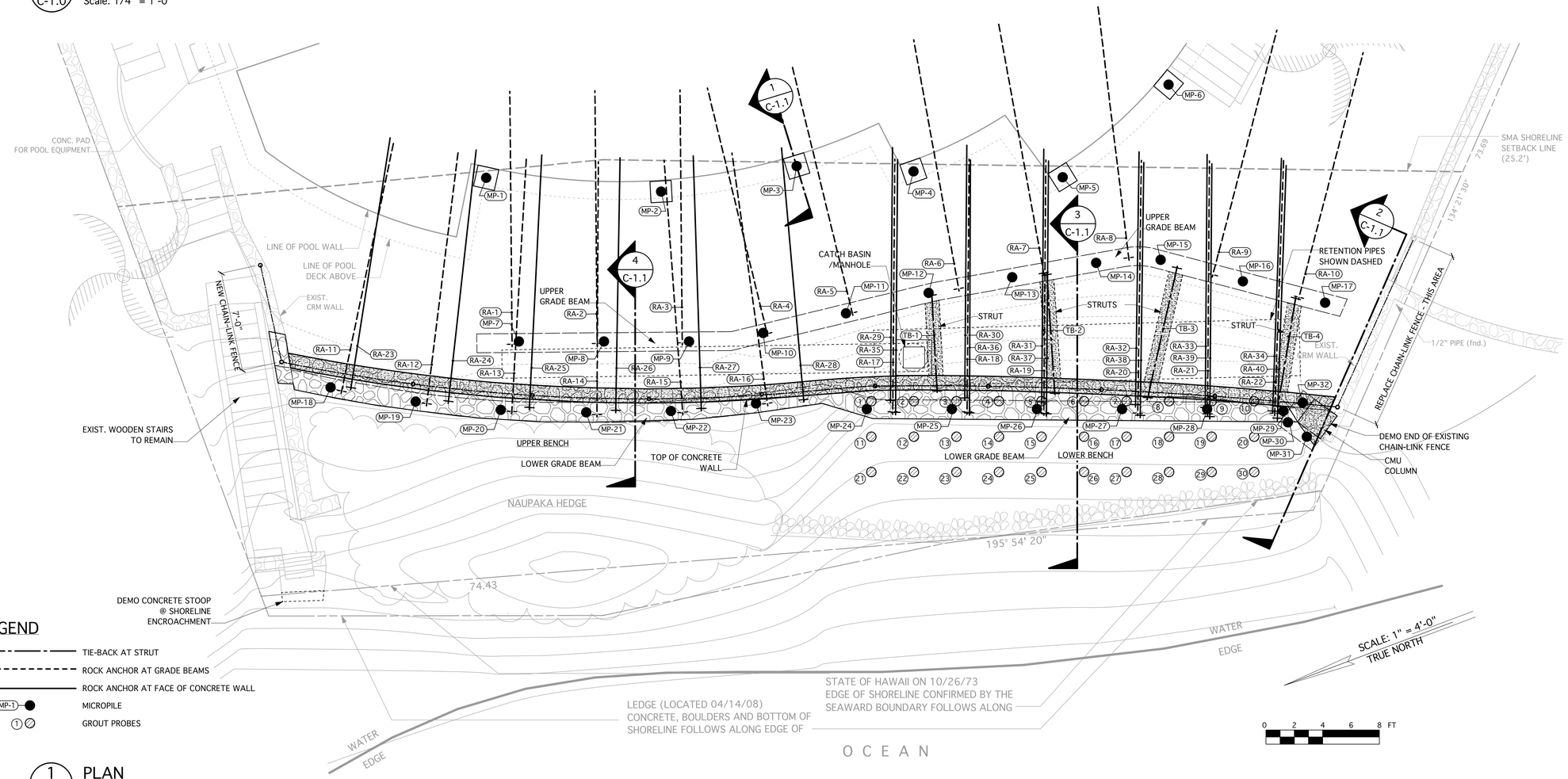


LEGEND

- TB-1 — TIE-BACK AT STRUT
- RA-1 — ROCK ANCHOR AT GRADE BEAMS
- RA-1 — ROCK ANCHOR AT FACE OF CONCRETE WALL
- WEEP HOLE

2 C-1.0 MAKAI ELEVATION

Scale: 1/4" = 1'-0"



LEGEND

- TB-1 — TIE-BACK AT STRUT
- RA-1 — ROCK ANCHOR AT GRADE BEAMS
- RA-1 — ROCK ANCHOR AT FACE OF CONCRETE WALL
- MP-1 — MICROPILE
- 1 — GROUT PROBES

1 C-1.0 PLAN

Scale: 1/4" = 1'-0"

DATE: 31 AUG 09
DESIGN BY: PRW
DRAWN BY: JE
JOB NO: 1113GD01
FILE NAME: LUCAS

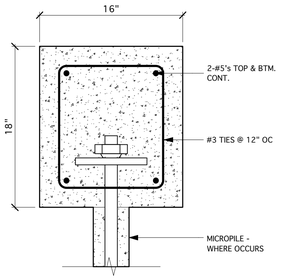
REV 2 31 AUG 09

LUCAS RESIDENCE
11 HALE MALIA PLACE
LAHAINA, MAUI,
BANK PROTECTION

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

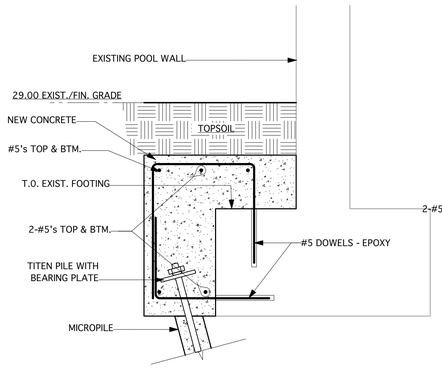
META ENGINEERING
PAUL R. WEBER, P.E.
PO BOX 4606 HONOLULU, HI 96812
TEL 808-394-1420 FAX 808-394-1430

C-1.0
DRAFT



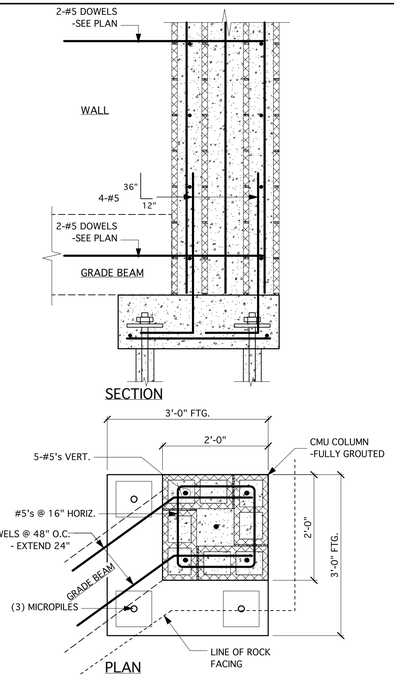
5 C-1.1 GRADE BEAM DETAIL

Scale: 1 1/2" = 1' 0"



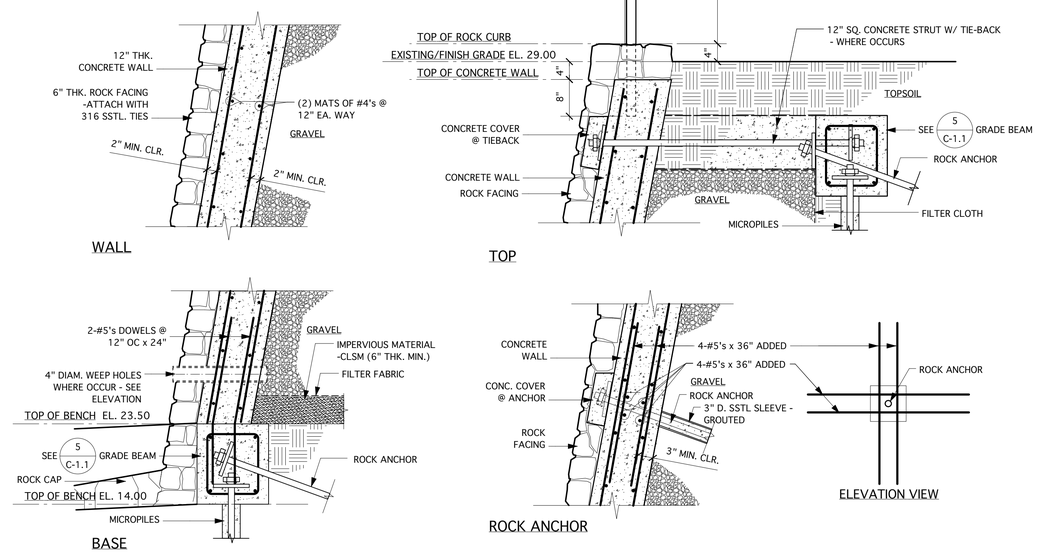
6 C-1.1 MICROPILE CAP DETAIL

Scale: 3/4" = 1'-0"



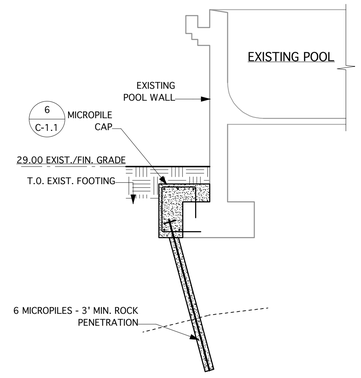
7 C-1.1 CMU COLUMN DETAIL

Scale: 3/4" = 1'-0"



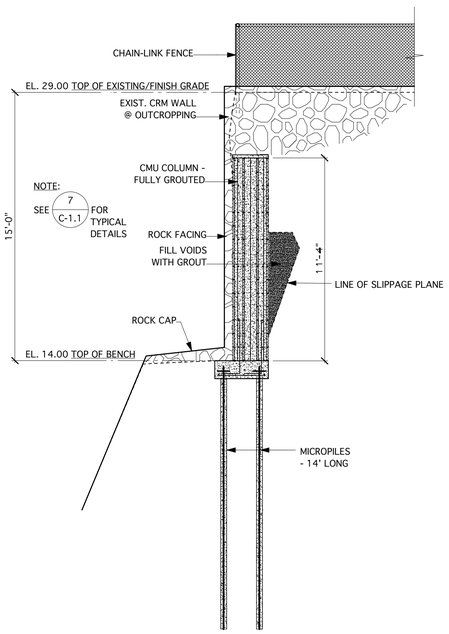
8 C-1.1 TYPICAL WALL DETAILS

Scale: 3/4" = 1'-0"



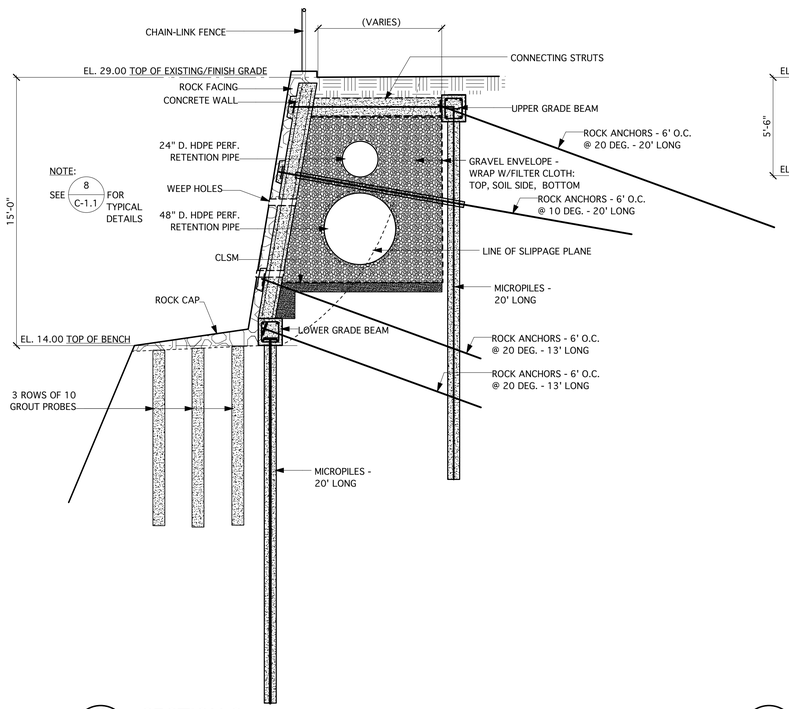
1 C-1.1 SECTION 1

Scale: 1/4" = 1'-0"



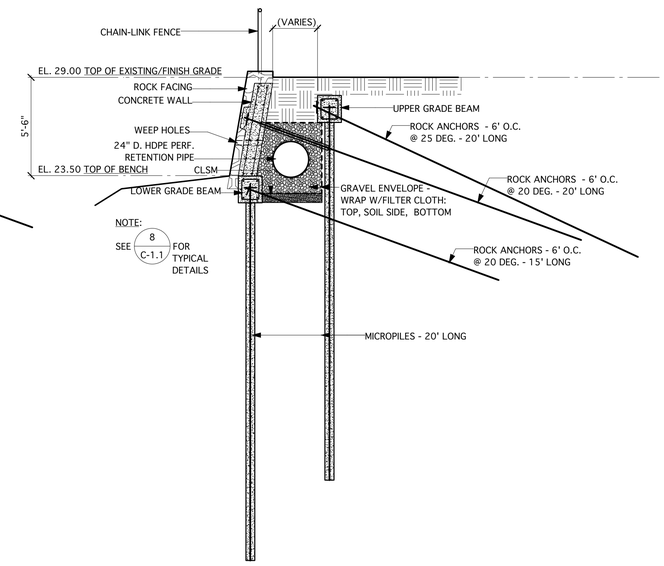
2 C-1.1 SECTION 2

SCALE: 1/4" = 1' 0"



3 C-1.1 SECTION 3

SCALE: 1/4" = 1' 0"



4 C-1.1 SECTION 4

SCALE: 1/4" = 1' 0"

DATE: 31 AUG 09
DESIGN BY: PRW
DRAWN BY: JE
JOB NO: 1113GD01
FILE NAME: LUCAS

REV	2
	31 AUG 09

LUCAS RESIDENCE
11 HALE MALIA PLACE
LAHAINA, MAUI,
BANK PROTECTION

META ENGINEERING
PAUL R. WEBER, P.E.
PO BOX 4606 HONOLULU, HI 96812
TEL 808-394-1420 FAX 808-394-1430

C-1.1
DRAFT

CONSTRUCTION PLANS
FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

TAX MAP KEY (2) 4-3-03: 96

PREPARED FOR: Ms. MARCIA LUCAS
11 HALE MALIA PLACE
LAHAINA, HAWAII 96761

PREPARED BY: R. T. TANAKA ENGINEERS, INC.
871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII 96793

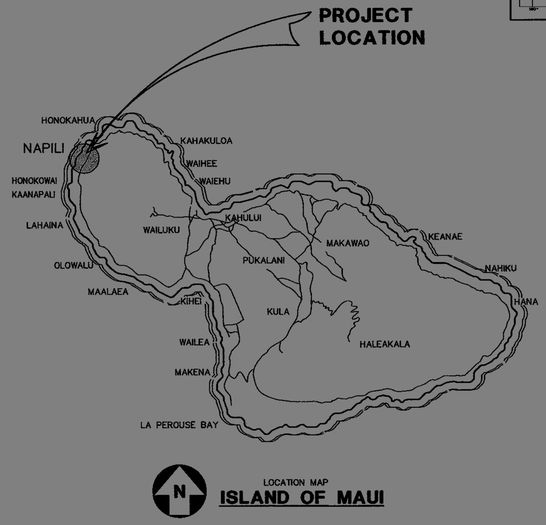
AS-BUILT (Record Drawing)

DATE August 06, 2009

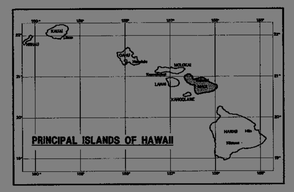
This Drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assure its accuracy of this As-Built drawing or for any errors or omissions which may have been incorporated into it as a result.

LUCAS RESIDENCE DRAINAGE IMPROVEMENTS

VICINITY MAP
NOT TO SCALE



LOCATION MAP
ISLAND OF MAUI



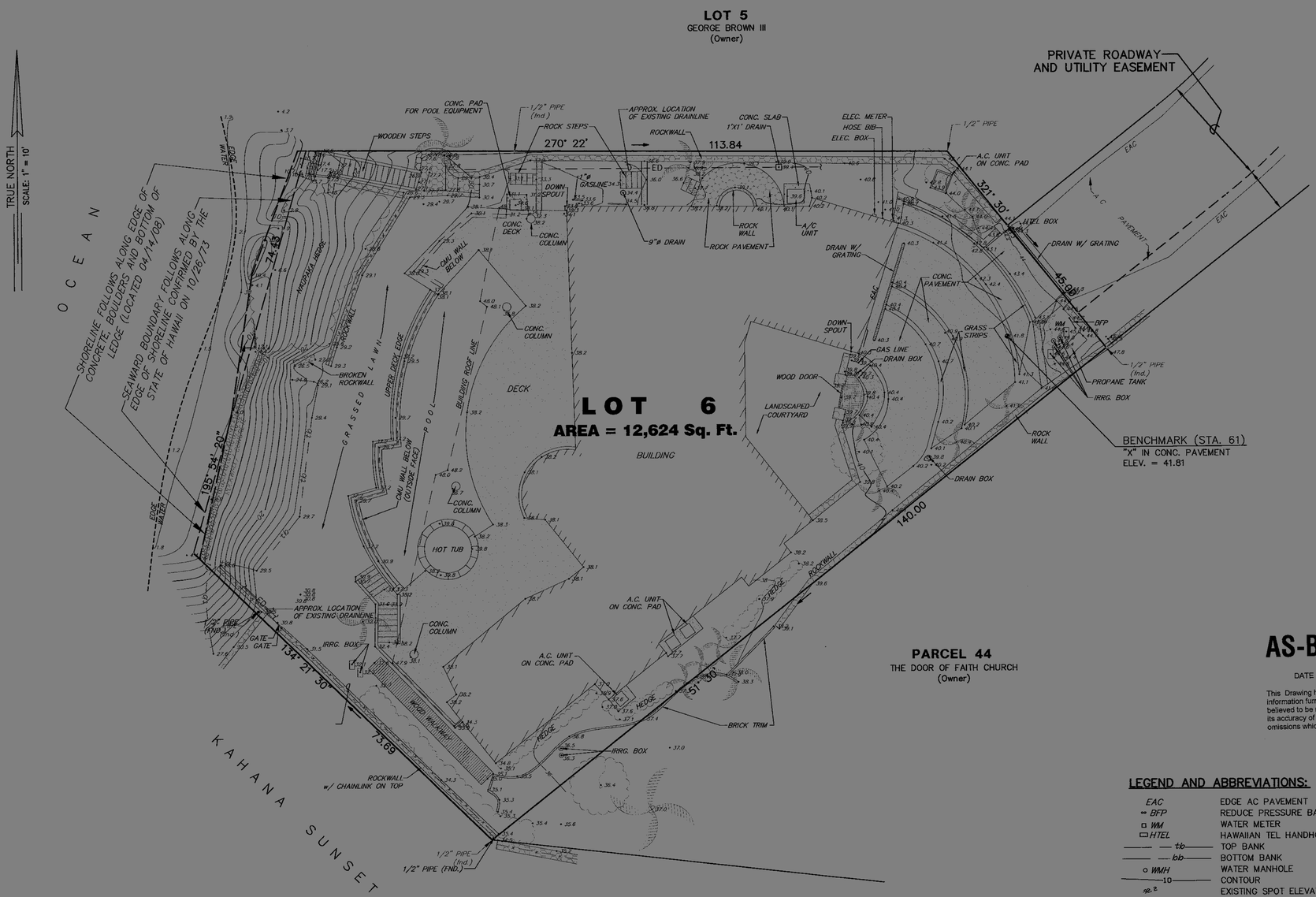
INDEX TO DRAWINGS:

SHEET NO.	DRAWING NO.	DESCRIPTION
1	T-1	TITLE SHEET
2	C-1	EXISTING TOPOGRAPHY
3	C-2	GENERAL CONSTRUCTION NOTES AND BMP PLAN
4	C-3	DRAINAGE PLAN
5	C-4	MISCELLANEOUS DETAILS

Date: SEPT. 03, 2008
JOB No.: 08-019

SHEET
T-1
OF 5 SHEETS.

F.B.# 630 Title: LUCAS.crd DRAWN BY: J.E.
Z:\2008\08-019\LUCAS-TITLE.dwg 24-SEP-2008 Revised BY:R.J.M



PARCEL 44
THE DOOR OF FAITH CHURCH
(Owner)

EXISTING TOPOGRAPHY

SCALE: 1"=10'

10 5 0 10 20
GRAPHIC SCALE IN FEET

AS-BUILT (Record Drawing)

DATE August 06, 2009

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LEGEND AND ABBREVIATIONS:

EAC	EDGE AC PAVEMENT
BFP	REDUCE PRESSURE BACKFLOW PREVENTER
WM	WATER METER
HTEL	HAWAIIAN TEL HANDHOLE
——— tb ———	TOP BANK
——— bb ———	BOTTOM BANK
WMH	WATER MANHOLE
———10———	CONTOUR
×E.E	EXISTING SPOT ELEVATION
	COCONUT TREE

NOTES FOR TOPOGRAPHIC FEATURES:

1. ELEVATION DATUM = MEAN SEA LEVEL
2. 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. UNDERGROUND UTILITIES SHOWN HEREON ARE FOR INFORMATION ONLY, HAVING BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES, BUT FROM OTHERS NOT CONNECTED WITH THIS COMPANY. THEREFORE, NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.

Tanaka ENGINEERS, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

871 KOLU STREET
SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

EXISTING TOPOGRAPHY

KIRK T. TANAKA
LICENSED PROFESSIONAL ENGINEER
No. 6646-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

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

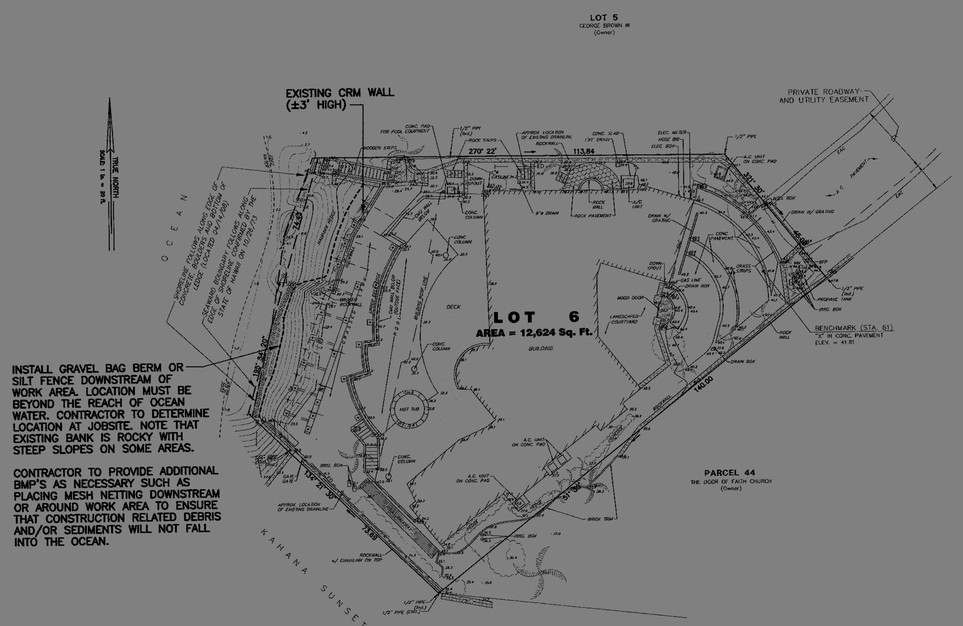
DATE :

REVISIONS:

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.J.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.: 08-019

SHEET
C-1
OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" J.E./R.J.M./N.D.
Z:\2008\08-019\LUCAS-EXTOPO.dwg 24-SEP-2008 Revised BY:R.J.M

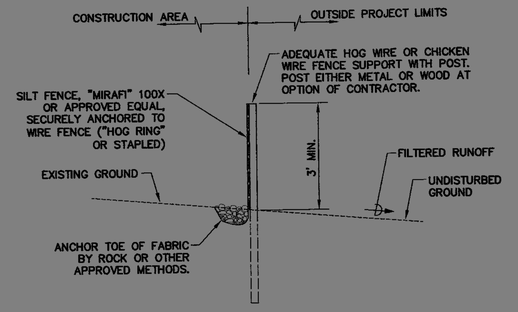


BMP PLAN

SCALE: 1"=20'

20 10 0 20 40

GRAPHIC SCALE IN FEET



TYPICAL INSTALLATION - SILT FENCE

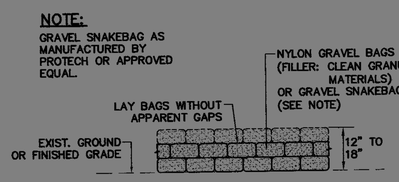
NOT TO SCALE

MAINTENANCE NOTES:

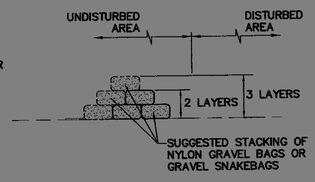
1. SILT FENCES OR FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON THE SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

NOTE:

GRAVEL SNAKEBAG AS MANUFACTURED BY PROTECH OR APPROVED EQUAL.



ELEVATION



SECTION

PLACEMENT OF TEMPORARY GRAVEL BAG BERM

NOT TO SCALE

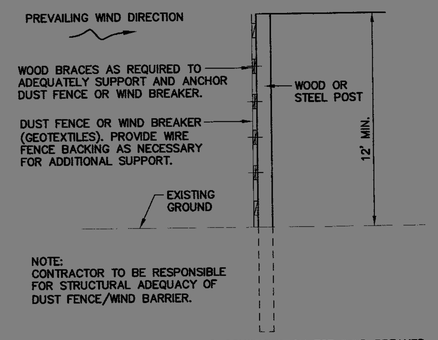
GRADING NOTES:

1. CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE DEVELOPMENT SERVICES ADMINISTRATION TWO (2) WEEKS PRIOR TO COMMENCEMENT OF ANY GRADING OR GRUBBING.
2. CONTRACTOR SHALL BE REQUIRED TO SUBMIT A SATISFACTORY GRADING WORK METHOD TO MINIMIZE DUST POLLUTION BEFORE A GRADING PERMIT IS ISSUED.
3. ALL GRADING OPERATIONS SHALL CONFORM WITH APPLICABLE PROVISIONS OF THE "WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS" CONTAINED IN THE STATE OF HAWAII PUBLIC HEALTH REGULATIONS, STATE DEPT. OF HEALTH ON WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS AND THE COUNTY GRADING ORDINANCE.
4. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE AT ALL TIMES, INCLUDING WEEKEND AND HOLIDAYS. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATION OF THE STATE DEPARTMENT OF HEALTH AND GRADING ORDINANCE.
5. THE CONTRACTOR SHALL REMOVE ALL SILTS AND DEBRIS RESULTING FROM HIS WORK. THE COST INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE DIRECTOR OF DPWEM (COUNTY OF MAUI) SHALL BE PAYABLE BY THE CONTRACTOR.
6. CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT AN APPROPRIATE SITE. THE CONTRACTOR SHALL INFORM THE DIRECTOR OF DPWEM OF THE LOCATION OF THE DISPOSAL SITES. THE DISPOSAL SITE SHALL ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
7. APPROXIMATE:

EXCAVATION	= _____	C. Y.	FOR GRADING PERMIT
EMBANKMENT	= _____	C. Y.	PURPOSES
AREA	= _____	ACRES	ONLY

UTILITY LINES, PIPES, SERVICES AND APPURTENANCES:

1. THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE AND WERE DETERMINED FROM AVAILABLE PLANS WITHIN THE PROJECT AREA. THEREFORE, THE LOCATION AND/OR DEPTH OF THESE UTILITIES ARE NOT GUARANTEED BY THE CONSULTANTS NOR BY THE OWNER. THE CONTRACTOR SHALL VERIFY THESE INFORMATION BY TONING, HANDDIGGING, ETC. PRIOR TO STARTING EXCAVATION WORK. IN ADDITION, THE CONTRACTOR SHALL CONTACT AND COORDINATE WORK INVOLVING OR AFFECTING THE EXISTING UTILITIES WITH THE PROPER AUTHORITIES, BOTH PUBLIC AND PRIVATE, TO MINIMIZE DAMAGES AND DISRUPTION TO SERVICE. THE CONTRACTOR SHALL SEE TO IT THAT HIS WORKMEN OR OPERATORS SHALL BE APPRISED OF THE UTILITIES EXISTENCE AND LOCATION.
2. ANY UTILITIES, WHETHER SHOWN OR NOT ON THE CONTRACT PLANS, THAT THE CONTRACTOR ENCOUNTERS DURING THE PROGRESS OF THE WORK, SUCH AS TELEPHONE DUCTS, ELECTRIC DUCTS, WATER LINES, SEWER LINES, ELECTRIC LINES, GAS LINES AND DRAINAGE PIPES, SHALL NOT BE DISTURBED OR DAMAGED UNLESS OTHERWISE INSTRUCTED IN THE PLANS AND SPECIFICATIONS. IN THE EVENT THE UTILITIES ARE DAMAGED OR DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD LIABLE FOR THE DAMAGED OR DISTURBED UTILITIES. THE CONTRACTOR SHALL REPAIR THE DAMAGED OR DISTURBED UTILITIES TO THE EXISTING CONDITIONS AT NO COST TO THE OWNER. ANY DAMAGE CLAIMS DUE TO THE DISRUPTION OF SERVICE CAUSED BY THE UTILITIES BEING DAMAGED SHALL BE PAID BY THE CONTRACTOR WHO SHALL SAVE HARMLESS THE OWNER AND CONSULTANTS FROM ALL SUITS, ACTIONS OR CLAIMS OF ANY CHARACTER BROUGHT ON ACCOUNT OF SUCH DAMAGES.
3. THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES PRIOR TO START OF CONSTRUCTION TO COORDINATE THE WORK TO BE DONE BY THE UTILITY'S OWN FORCES IN ORDER THAT THESE WORKS MAY PROCEED IN A REASONABLE MANNER AND WILL NOT DELAY THE PROGRESS OF THE CONSTRUCTION. ALSO, TO OBTAIN FROM THEM ANY INFORMATION PERTAINING TO EXISTING UTILITIES THAT WILL EITHER SUPPLEMENT THE INFORMATION SHOWN ON THE PLANS OR WILL CORRECT ANY SUCH INFORMATION THAT MAY BE IN ERROR.
4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL STRUCTURES, UTILITIES, ETC., PRIOR TO START OF ANY WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ANY CHANGES SHALL BE MADE IN ACCORDANCE WITH HIS INSTRUCTIONS. STARTING WORK ON THE PARTICULAR ACITIVITY SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR AGREES THAT THE EXISTING LOCATION ARE ESSENTIALLY CORRECT AS SHOWN.



NOTE:
CONTRACTOR TO BE RESPONSIBLE FOR STRUCTURAL ADEQUACY OF DUST FENCE/WIND BARRIER.

MATERIALS AND CONSTRUCTION FOR WIND BREAKER AND DUST FENCE TO BE IN ACCORDANCE WITH NORMAL CONSTRUCTION PRACTICES.

TYPICAL INSTALLATION DUST FENCE/ WIND BREAKER

NOT TO SCALE

NOTE:
CONTRACTOR TO DETERMINE IN THE FIELD THE EXACT LOCATION OF DUST FENCE AND WIND BREAKER TO PROVIDE MAXIMUM PROTECTION.

AS-BUILT (Record Drawing)

DATE August 06, 2009

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SOIL EROSION AND DUST CONTROL NOTES:

A. PERMITTEE NOTES TO CONTROL DRAINAGE AND SOIL EROSION:

1. CONTROL DUST BY MEANS OF WATER TRUCKS OR BY INSTALLING TEMPORARY SPRINKLER SYSTEMS OR BOTH IF NECESSARY.
2. GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY AND FOR THE WEEKEND AND HOLIDAYS.
3. ALL EXPOSED AREAS SHALL BE PAVED, GRASSED, OR PERMANENTLY LANDSCAPED AS SOON AS FINISHED GRADING IS COMPLETED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR THE WATER NECESSARY FOR DUST CONTROL AND IRRIGATION PURPOSES.
5. CONTRACTOR TO CONSTRUCT TEMPORARY DIVERSION DITCHES OR SWALES AWAY FROM GRADED AREAS TO NATURAL GROUND OR DRAINAGEWAYS DURING CONSTRUCTION.
6. CONTRACTOR SHALL SUBMIT A SATISFACTORY SOIL EROSION CONTROL PLAN TO MINIMIZE SOIL EROSION PRIOR TO AN ISSUANCE OF A GRADING PERMIT. EROSION CONTROL MEASURES SHALL BE IN COMPLIANCE WITH SECTION 20.08.035 OF THE MAUI COUNTY CODE (ORD. NO. 2684). SEE ALSO GRADING NOTES NO. 2.
7. THE FOLLOWING ADDITIONAL MEASURES SHALL BE TAKEN TO CONTROL SOIL EROSION DURING THE SITE DEVELOPMENT PERIOD:
   a. MINIMIZE TIME OF CONSTRUCTION.
   b. RETAIN EXISTING GROUND COVER UNTIL LATEST DATE TO COMPLETE CONSTRUCTION.
   c. EARLY CONSTRUCTION OF DRAINAGE CONTROL FEATURES.
   d. USE TEMPORARY AREA SPRINKLERS IN NON-ACTIVE CONSTRUCTION AREAS WHEN GROUND COVER IS REMOVED.
   e. STATION WATER TRUCK(S) ON SITE DURING CONSTRUCTION PERIOD TO PROVIDE FOR IMMEDIATE SPRINKLING, AS NEEDED, IN ACTIVE CONSTRUCTION ZONES (WEEKENDS AND HOLIDAYS INCLUDED).
   f. ALL GRADED AREAS, UNLESS TO PAVED, SHALL BE PROVIDED WITH SOIL EROSION CONTROL MATTING AND BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.
   g. INSTALLATION OF SILT AND DUST CONTROL FENCE. SILT FENCE CAN BE AUGMENTED BY PROVIDING CRUSHED ROCK BERMS WRAPPED IN GEOTECH FABRIC.
8. THE CONTRACTOR IS THE SOLE PARTY RESPONSIBLE FOR THE ADEQUACY OF ALL TEMPORARY CONTROL MEASURES TO PROTECT THE WORK FROM THE EFFECTS OF DUST AND EROSION. HE SHALL BE RESPONSIBLE FOR RESPONDING TO COMPLAINTS FROM NEIGHBORING PROPERTIES AND WILL PROVIDE ADDITIONAL MITIGATION MEASURES AS NECESSARY AT NO ADDITIONAL COST TO OWNER.
9. OIL OR PETROLEUM-BASED PRODUCTS SHALL NOT BE USED FOR DUST CONTROL.
10. STORM WATER CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO CONSTRUCTION AND SHALL REMAIN OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD OR UNTIL PERMANENT CONTROLS ARE IN PLACE.
11. DISCHARGES ASSOCIATED WITH THE OPERATION AND MAINTENANCE OF EQUIPMENT SHALL BE FIELD MONITORED BY THE CONTRACTOR. ANY MECHANICAL AND HYDRAULICS FLUID LEAKAGE SHALL BE REPAIRED AS SOON AS IT IS IDENTIFIED AND LOCATED. LEAKAGE OF MECHANICAL FLUIDS SHALL BE CONTAINED, PROPERLY DISPOSED AND NOT ALLOWED TO IMPACT THE OCEAN.
12. PRIOR TO ISSUANCE OF THE GRADING PERMIT, THE CONTRACTOR SHALL MEET WITH THE DEVELOPMENT SERVICES ADMINISTRATION AND PROVIDE INFORMATION ON THE SOURCE OF WATER FOR DUST CONTROL, AND JUSTIFY THE NUMBER OF WATER TRUCKS TO BE USED FOR THE CLEARING, GRUBBING AND LOADING OPERATIONS.
13. IF THE CONTRACTOR IS NOT ABLE TO SATISFACTORILY CONTROL DUST EMISSIONS FROM THE PROJECT SITE, ALL CONSTRUCTION WORK SHALL CEASE EXCEPT FOR WATERING AND OTHER STABILIZATION EFFORTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATELY CLEANING THE ROADWAY OF MUD OR SILT TRACKED FROM THE PROJECT SITE.

B. RECOMMENDED GENERAL SCHEDULE FOR IMPLEMENTING BMP'S:

1. CONSTRUCT TEMPORARY GRAVEL ACCESS ON EXISTING ACCESS EASEMENT 1.
2. ERECT SILT AND DUST FENCE.
3. CONSTRUCT DRAINAGE BASIN AND OTHER TEMPORARY SILTING PONDS WHERE FEASIBLE.
4. CONSTRUCT TEMPORARY DRAINAGE SWALES AND BERMS TO DIRECT STORM RUNOFF AWAY FROM GRADED AREAS TO NATURAL DRAINAGEWAYS OR GROUND OR TO DRAINAGE BASIN AND TEMPORARY SILTATION PONDS.
5. INSTALL DRAINAGE FACILITIES. PROVIDE SEDIMENT BARRIERS ON NEW GDI's.
6. GRADE PROJECT AREA AS PLANNED.
7. GRASS GRADED AREAS UNLESS TO BE PAVED. PROVIDE BIODEGRADABLE SOIL EROSION CONTROL MATTING AS REQUIRED.

C. NOTES FOR BMP's:

THE CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE "CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP's) FOR THE COUNTY TO MAUI" MAY 2001 (STD. BMP's) TO EXTENT POSSIBLE DURING THE DEVELOPMENT OF THIS PROJECT. CONTROL OF EROSION, SEDIMENT AND CONSTRUCTION WASTE MANAGEMENT WILL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE FOLLOWING SECTIONS OF THE STANDARD BMP's.

SECTION 6.10 SEEDING
SECTION 6.30 MATS, NETS AND BLANKETS
SECTION 6.31 MULCHING
SECTION 6.32 PRESERVATION OF EXISTING VEGETATION
SECTION 6.33 PROTECTION OF STOCKPILES
SECTION 6.62 SEDIMENT FENCE (SILT FENCE)
SECTION 6.70 DUST CONTROL
SECTION 6.71 GOOD NEIGHBOR BARRIERS
SECTION 6.91 SOLID WASTE MANAGEMENT
SECTION 6.92 CONCRETE WASTE MANAGEMENT
SECTION 6.93 VEHICLE FUEL AND MAINTENANCE MANAGEMENT

NOTE REGARDING DISCOVERIES OF ARCHAEOLOGICAL INTEREST:

SHOULD HISTORIC SITES SUCH AS WALLS, PLATFORMS, PAVEMENTS AND MOUNDS, OR REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATION OF CHARCOAL OR SHELLS ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DAMAGE. THE CONTRACTOR AND/OR LANDOWNER SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (243-5169, MAUI OR 692-8023, OAHU), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AN APPROPRIATE MITIGATION MEASURE, IF NECESSARY.

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PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

CONSTRUCTION NOTES & BMP PLAN

KIRK T. TANAKA
LICENSED PROFESSIONAL ENGINEER
No. 6646-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

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

DATE : _____

REVISIONS:

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.: 08-019

SHEET
C-2
OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" DRAWN BY : J.E.
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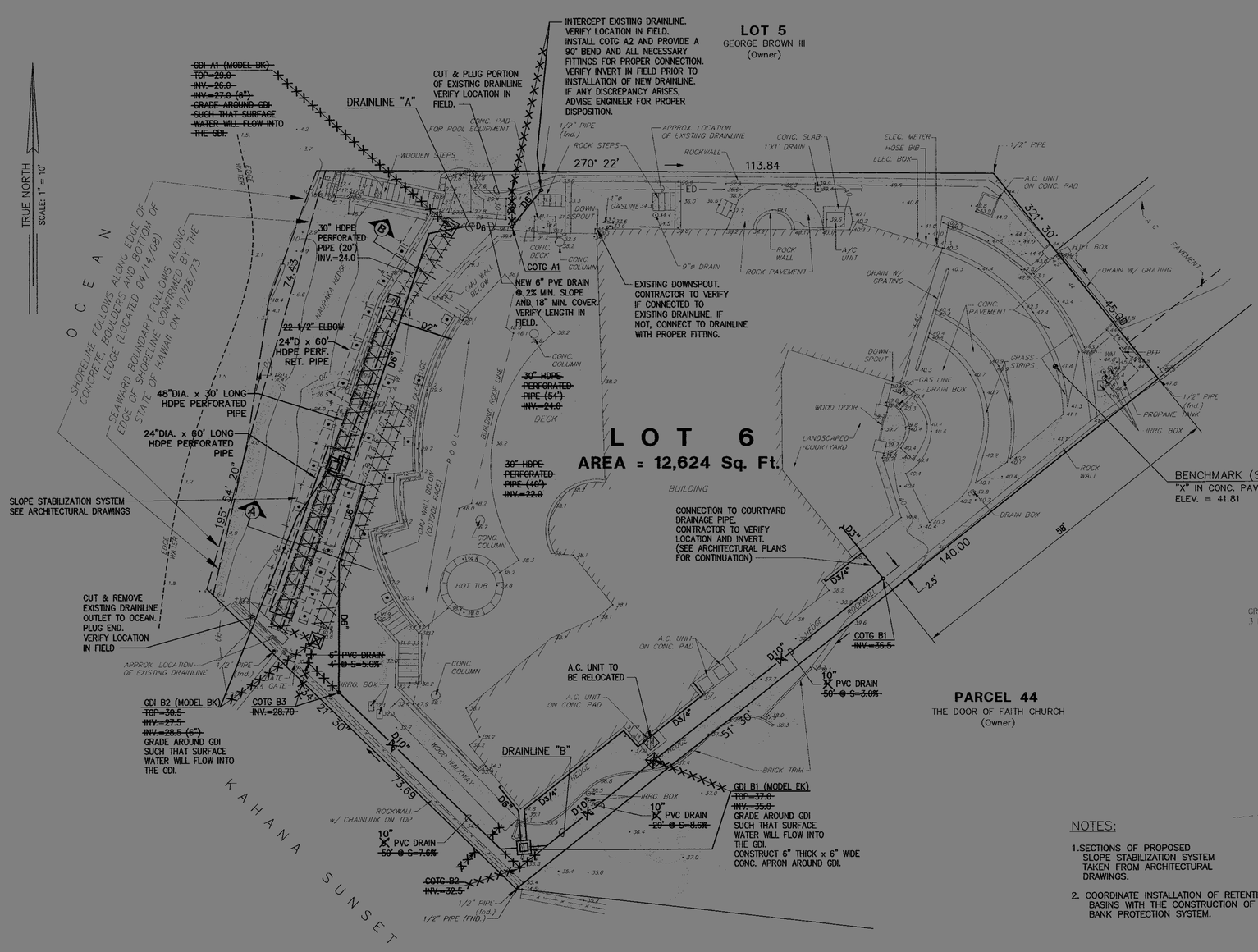


DRAINAGE PLAN

SCALE: 1"=10'

10 5 0 10 20

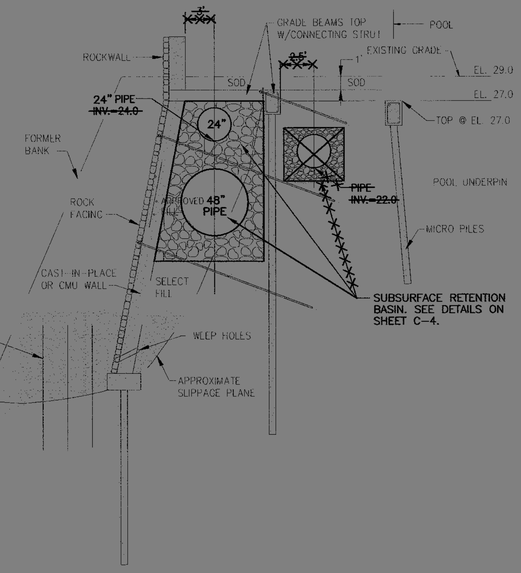
GRAPHIC SCALE IN FEET

NOTES:

1. GDI'S:
   PRE-CAST CONCRETE DROP INLET W/STANDARD FRAME AND GRATE AS MANUFACTURED BY SANTA ROSA CAST PRODUCTS CO.
   MODEL EK: 12"x12" INLET OPENING
   MODEL BK: 16"x16" INLET OPENING
2. CONNECTION OF HOUSE DOWNSPOUTS/HOUSE PERIMETER DRAIN
   CONTRACTOR TO CONNECT EXISTING (UNLESS REMOVED) AND NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLET (IF OCCURRING) TO NEW DRAINLINES. PROVIDE PROPER FITTINGS AND ADAPTERS AS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLETS. VERIFY LOCATION OF EXISTING DOWNSPOUTS AT JOBSITE.

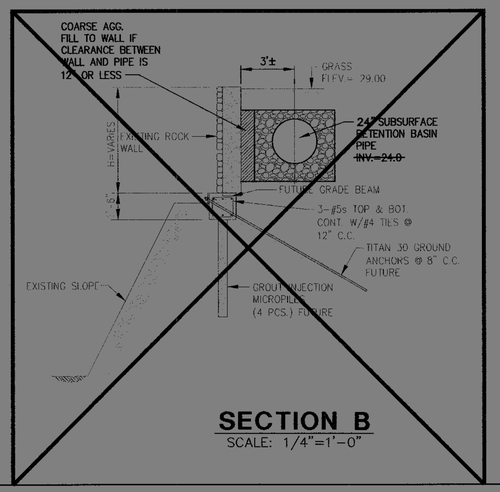
NOTES:

1. SECTIONS OF PROPOSED SLOPE STABILIZATION SYSTEM TAKEN FROM ARCHITECTURAL DRAWINGS.
2. COORDINATE INSTALLATION OF RETENTION BASINS WITH THE CONSTRUCTION OF THE BANK PROTECTION SYSTEM.



SECTION A

SCALE: 3/16"=1'-0"



SECTION B

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

AS-BUILT (Record Drawing)

DATE 08-06-09

This Drawing has been prepared, in part, base upon information furnished by others. While this information is believed to be reliable, the Design Professional can not assure its accuracy of this As-Built drawing or for any errors or omission which may have been incorporated into it as a result.

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CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

DRAINAGE PLAN

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DATE :

REVISIONS:

08-06-09 "AS-BUILT" PLANS

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.J.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.:08-019

SHEET C-3 OF 5 SHEETS

F.B.# 930 "File: LUCAS.crc" J.E./R.J.M./N.D.
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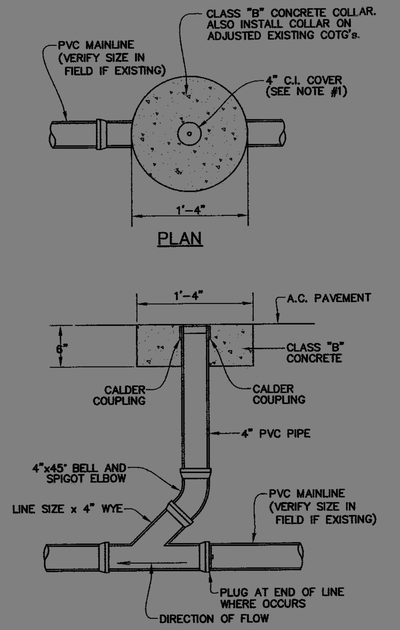
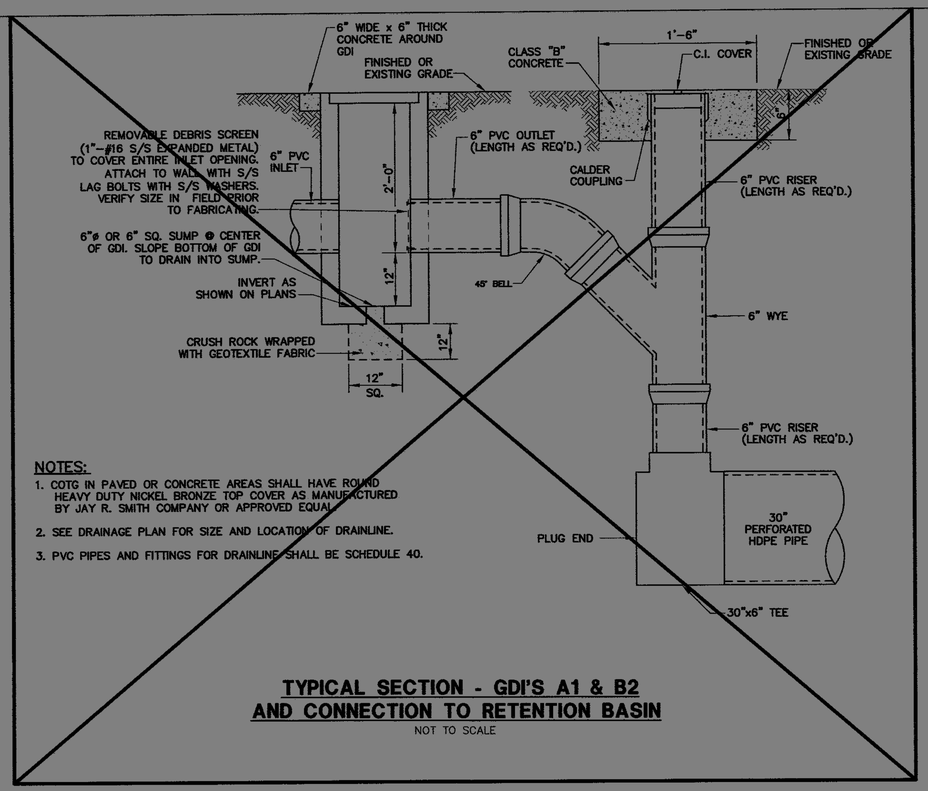


DETAIL - CLEANOUT TO GRADE (COTG)

NOT TO SCALE

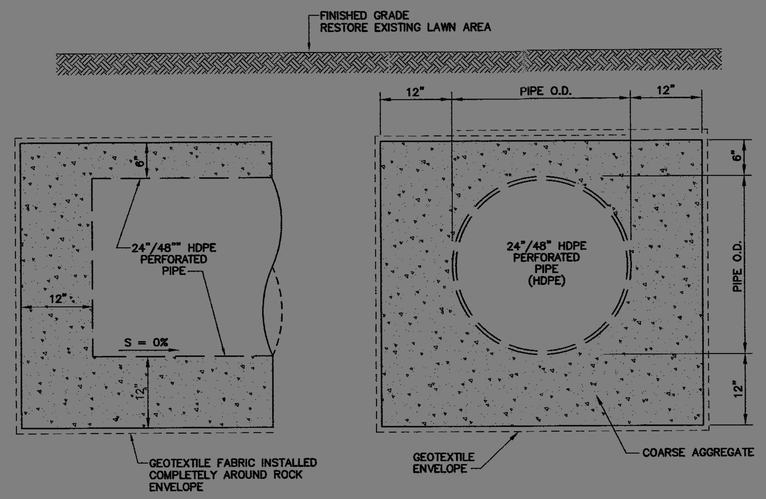


NOTES:

1. COTG IN PAVED OR CONCRETE AREAS SHALL HAVE ROUND HEAVY DUTY NICKEL BRONZE TOP COVER AS MANUFACTURED BY JAY R. SMITH COMPANY OR APPROVED EQUAL.
2. SEE DRAINAGE PLAN FOR SIZE AND LOCATION OF DRAINLINE.
3. PVC PIPES AND FITTINGS FOR DRAINLINE SHALL BE SCHEDULE 40.

TYPICAL SECTION - GDI'S A1 & B2 AND CONNECTION TO RETENTION BASIN

NOT TO SCALE



TYPICAL END SECTION

TYPICAL SECTION

NOTES:

1. CONTRACTOR TO SUBMIT LAYOUT AND MATERIALS LIST TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. PROVIDE ALL HDPE FITTINGS AS NECESSARY.
2. A. HDPE PERFORATED PIPE: HANCOR SURE-LOK PIPE OR APPROVED EQUAL CONFORMING TO AASHTO M294 TYPE S.
   B. ROCK ENVELOPE: CONFORMING TO SUBSECTION 703.04(A)-COARSE AGGREGATE FOR PERMEABLE BASE, OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION", 2005 (HAWAII STANDARD SPECIFICATIONS).
   C. GEOTEXTILE ENVELOPE: CONFORMING TO SUBSECTION 716.03-GEOTEXTILES FOR UNDERDRAIN APPLICATIONS, OF THE HAWAII STANDARD SPECIFICATIONS.

DETAIL - SUBSURFACE RETENTION BASIN

NOT TO SCALE

AS-BUILT (Record Drawing)

DATE 08-06-09

This Drawing has been prepared, in part, base upon information furnished by others. While this information is believed to be reliable, the Design Professional can not assure its accuracy of this As-Built drawing or for any errors or omission which may have been incorporated into it as a result.

Tanaka ENGINEERS, INC.
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CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

MISCELLANEOUS DETAILS

KIRK T. TANAKA
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REVISIONS:

08-06-09 "AS-BUILT" PLANS

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SHEET
C-4
OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" DRAWN BY : J.E.
Z:\DRAWT\2008\08-019\ASBUILT_LUCAS-BMP.dwg 10-AUG-2009 : Revised BY:Nancy

Appendix H:
Drainage Report

DRAINAGE REPORT AND BEST MANAGEMENT PRACTICES

FOR

LUCAS RESIDENCE

LOT 6, HALE MALIA SUBDIVISION

ALAELOA, NAPILI, MAUI, HAWAII

TAX MAP KEY: (2) 4-3-03:96

PREPARED FOR:

MS. MARCIA LUCAS
11 HALE MALIA PLACE
LAHAINA, HAWAII - 96761

PREPARED BY:

Tanaka
ENGINEERS, INC.
CIVIL ENGINEERING ● LAND SURVEYING ● CONSTRUCTION MANAGEMENT & INSPECTIONAL SERVICES

871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII - 96793
JOB 08-019

SEPTEMBER 2008
Revised: SEPTEMBER 18, 2009

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I. PURPOSE:

The purpose of this report is to investigate the drainage conditions at the existing residential lot. This report will present a brief description of the existing conditions and provide required drainage improvements to prevent runoff discharge into the shoreline in compliance with the requirements of the SMA Emergency Use Permit issued for the slope stabilization of the shoreline bluff fronting the property. It will also include proposed measures to control soil erosion during site construction.

II. PROPOSED PROJECT:

The proposed site improvements are essentially the installation of a drainage system consisting of subsurface drainage retention basins and appurtenant grated drain inlets and underground drain pipes. The drainage improvements are to be installed in conjunction with the construction of the slope stabilization system for the existing shoreline bluff fronting the property. The site work also includes re-landscaping portions of the open spaces of the property.

The planned drainage improvements is shown in Figure 6.

III. LOCATION:

The project site is located in Alaeloa, Napili, Maui, Hawaii. It is about 1½ miles north of Kapalua Airport and is particularly situated on the makai side of Lower Honoapiilani Road. Refer to Figures 1 and 2.

IV. EXISTING SOILS:

The U.S. Department of Agriculture Soil Conservation Service's Soils Survey of the Island of Kauai, Oahu, Maui, Molokai and Lanai [2], classifies the soils within the project site as Kahana Silty Clay (KbC) (Figure 3). KbC is characterized as having moderately rapid permeability, slow to medium runoff and slight to moderate erosion hazard.

KbC belongs to Kahana soil series that consist of well-drained soils on uplands on the island of Maui that were developed in material weathered from basic igneous rock.

V. FLOODING HAZARD:

The site is located within Panel 15003-0138B (June 1, 1981), of the Flood Insurance Rate Map for the County of Maui [5]. The site falls in Zone C where minimal flooding is expected. Refer to Figure 4.

VI. TOPOGRAPHY:

The existing topography of the project site is shown on Figure 5. The lot essentially contains a residence pool, landscape and grassed lawns. The ocean frontage of the residential property consists of rocky shoreline and a rocky and vegetated bluff about 20 feet high.

VII. EXISTING DRAINAGE CONDITIONS:

Generally, storm runoff generated by the residential property discharges into the shoreline fronting the property either by sheet flow or by existing drain

pipe outlets. The roof runoff and driveway are collected by the existing drainage system(s) that conveys the runoff to the shoreline bluff via underground pipes. The landscaped areas along the sides of the residence and the grassed (lawn) area behind the building drain into the shoreline bluff by surface flow.

This Report's drainage calculations indicate that the existing residence and grassed/landscaped areas can generate 1.0 and 1.1 cubic feet per second (cfs) for 10-year and 50-year storm, respectively.

VIII. STORM RUNOFF QUANTITIES:

Hydrologic calculations are given in Appendix A - Drainage Calculations.

Briefly, the existing residence is anticipated to generate the following 1-hour storm runoff:

10-year Storm:

Peak Rate = 1.0 cfs

Volume = 702 cf

50-year Storm:

Peak Rate = 1.1 cfs

Volume = 791 cf

The 50-year volume will be the minimum quantity to be retained onsite in order to prevent adverse effect of a 50-year intensity storm on the shoreline slope and near shore waters.

IX. DRAINAGE PLAN:

The planned drainage system is laid out in Figure 6. The main feature of the proposed system is the installation of subsurface retention basins that is sized to retain the 50-year, 1-hour storm runoff volume that will be generated by the existing residence. Storing the anticipated runoff volume will mitigate significant adverse drainage effects by the 50-year intensity storm on the shoreline.

The proposed subsurface retention basins will consist of perforated pipes enveloped in crushed rocks (refer to Appendix “A” for typical sections). It will consist 30 feet of combined 48" and 24" and 30 feet of single 24" perforated pipes. The cumulative capacity of the proposed basins is about 933 cf which is greater than the expected 50-year, 1-hour storm volume of 791 cf resulting in a reduction of about 142 cf.

Aside from the subsurface retention basins, the drainage system will also include grated drain inlets and drainage pipes. Lawn runoff will be collected by the grated drain inlets while the PVC drain pipes will collect and convey roof runoff to the retention basins.

Existing drainage pipe outlets that directly discharge into the shoreline bluff will be removed and/or intercepted to empty into the retention basin.

X. OPERATION AND MAINTENANCE PLAN:

The operation and maintenance of the onsite drainage system will be handled by the Owner. The recommended operation and maintenance activities will include, but not limited to:

A. Inspection of the drainage facilities annually and after major storms. Repair damages, if any. Remove debris, if any, at grated drain inlets to permit unimpeded flow.

B. Periodic inspection of the drainage system. Remove debris and sediment build-up, as required, specifically inside grated drain inlets upstream of the subsurface retention basins.

C. Preventing grass and landscape cuttings from entering the drainage system.

D. Maintaining healthy growth of grass lawns and landscaping to prevent soil erosion; thereby, reducing sediments that might enter the drainage system.

XI. GRADING AND BEST MANAGEMENT PRACTICES:

The lot is already developed, hence, massive site grading is not expected. Grading work will essentially involve the excavation for the subsurface retention basins and backfilling portion of the shoreline bluff for slope restoration and stabilization that are allowed under the SMA Emergency Use Permit.

Requirements for the temporary control of soil erosion and dust during construction are shown on Figure 7. Some of the requirements are as follows:

1. Control dust by sprinkling the exposed areas.
2. Graded areas shall be thoroughly watered (but not overwatered to cause water runoff to the shoreline) after construction activity has ceased for the day and for weekends and holidays.

3. All exposed areas shall be paved, grassed, or permanently landscaped as soon as finished grading is completed.

4. Divert storm runoff away from graded areas to natural ground during construction by means of gravel bag berms or other approved methods.

5. Minimize time of construction.

6. Only clear areas that are needed for new improvements.

7. Early construction of drainage control features.

8. Excavation of pit for proposed subsurface retention basins prior to grading. Use pit as temporary sediment catchment during construction.

9. Installation of dust control fence surrounding the project area.

10. Installation of silt fence, gravel bag berms or other approved sediment trapping devices at the downstream side of the grading area and sediment pit.

11. Temporary control measures shall be in place and functional prior to construction and shall remain operational throughout the construction period or until permanent controls are in place.

The Contractor will also be required to submit a satisfactory soil erosion control plan to minimize soil erosion prior to an issuance of a grubbing and grading permit. Best Management Practices shall be in compliance with Section 20.08.035 of the Maui County Code (Ord. No. 2684) and "Construction Best Management Practices (BMPs) for the County of Maui" of the Department of Public Works & Waste Management, May 2001.

X. REFERENCES:

1. Rules for the Design of Storm Drainage Facilities in the County of Maui, Title MC-15, Department of Public Works and Waste Management, County of Maui, Chapter 4, adopted April 14, 1995.

2. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, prepared by U. S. Department of Agriculture, Soil Conservation Service, August 1972.

3. Erosion and Sediment Control Guide for Hawaii, prepared by U. S. Department of Agriculture, Soil Conservation Service, March 1981.

4. Rainfall-Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43, U. S. Department of Commerce, Weather Bureau, 1962.

5. Flood Insurance Rate Maps for the County of Maui, June 1981.

APPENDIX A

DRAINAGE CALCULATIONS

I. Reference: Rules for the Design of Storm Drainage Facilities in the County of Maui, 1995

II. Recurrence Interval:

A. 10-Year, 1-Hour:

1-Hr. Rainfall Value = 2.4"

B. 50-Year, 1-Hour: for design of retention basin

1-Hr. Rainfall Value = 2.7"

III. Runoff Quantity:

A. Runoff Discharge Rate & Volume:

1. Methodology:

Rational Method, Q = CIA

Where Q = Flow rate in cubic feet per second (cfs)

C = Runoff Coefficient

I = Rainfall intensity in inches per hour for a duration equal to the time of concentration

A = Drainage Area in Acres

Calculations employing this method were performed on computer using hydrologic software “Hydraflow Hydrographs 2004" by Intelisolve.

2. Runoff Coefficient, C:

Lawn Area = 0.07 Ac. (C = 0.22)

Roof, Concrete, etc. = 0.17 Ac. (C -0.95)

$$\text{Weighted C} = \frac{0.07 \times 0.22 + 0.17 \times 0.95}{0.24}$$

$$= \frac{0.177}{0.24}$$

$$= 0.74$$

3. Time of Concentration, Tc:

Length of Flow = 105 ft. (Longest)

Average Slope = 5%

T_c = 8 min. (Poor Grass)

4. Runoff Peak Rate and Volume (1-Hour Rainfall):

(See Hydrology Plots)

10–Year Storm:

Q_{Peak} = 1.0 cfs

Volume = 702 cf

50–Year Storm:

Q_{Peak} = 1.1 cfs

Volume = 791 cf (Minimum volume to be retained onsite to prevent drainage adverse effect on the seashore)

IV. Subsurface Retention Basin:

In accordance with the County Drainage Standards, the subsurface retention basins shall have a cumulative storage capacity to at least equal to the anticipated

50-year storm volume increase generated by developments with areas less than 100 acres. However, in compliance with the requirements of the SMA Emergency Use Permit, the total calculated 50-year runoff volume generated by the existing residence will be retained onsite.

Typical sections of the proposed retention basin is shown on the attached drawing while the location is schematically shown on Figure 6. In keeping with the County Drainage Standards, the storage capacity of the retention basins were determined without taking into account the soil percolation and that only 50% of the void volume of the rock envelope will be included.

Proposed basin capacity versus volume is as follows:

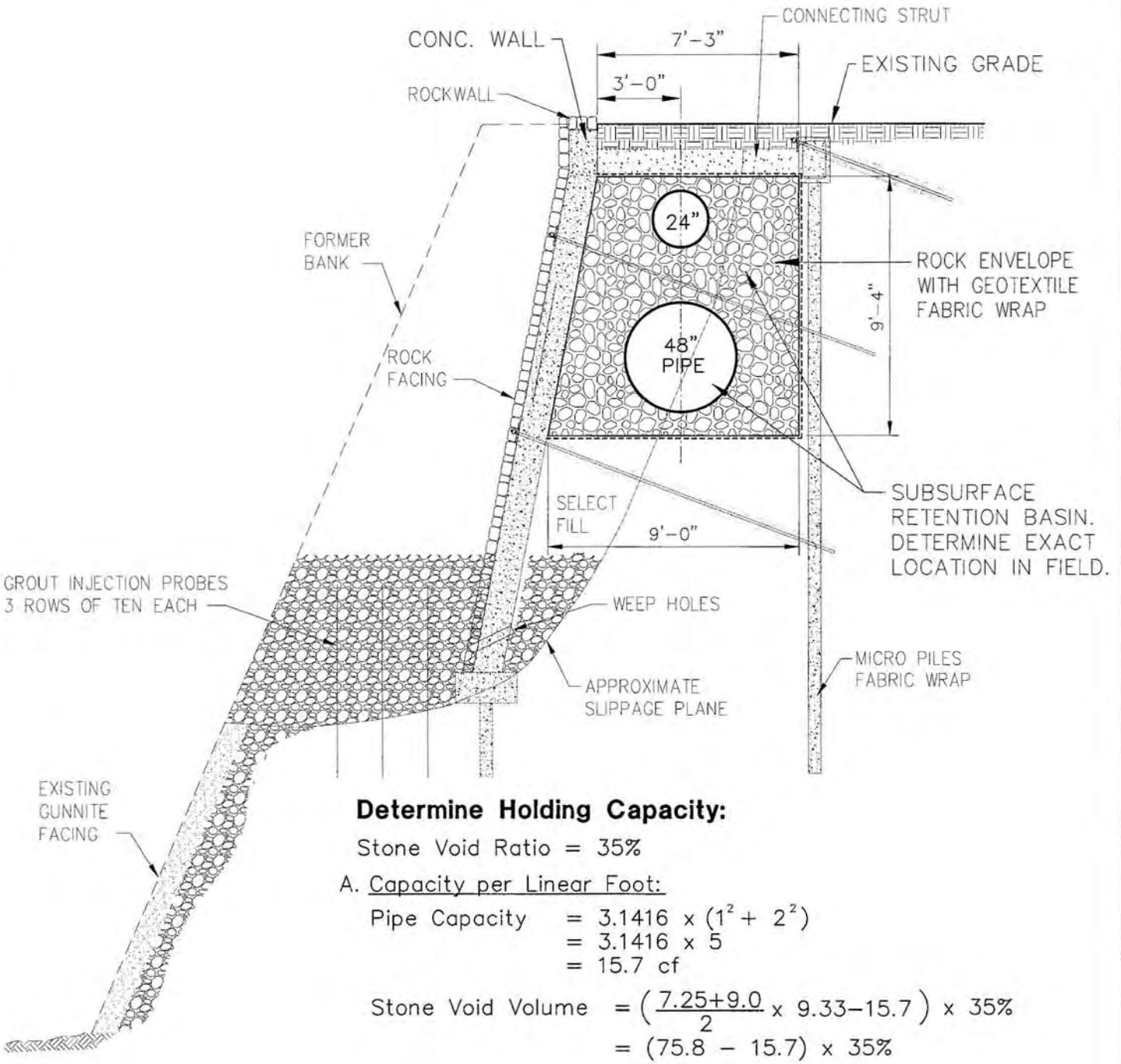
Proposed Basin:

Capacity = 786 (Section A) + 147 (Section B)

= 933 cf

V_{50} = 791 cf

Extra Cap. = 142 cf



Determine Holding Capacity:

Stone Void Ratio = 35%

A. Capacity per Linear Foot:

Pipe Capacity = $3.1416 \times (1^2 + 2^2)$
= 3.1416×5
= 15.7 cf

Stone Void Volume = $\left(\frac{7.25+9.0}{2} \times 9.33 - 15.7\right) \times 35\%$
= $(75.8 - 15.7) \times 35\%$
= 21.0 cf

Effective Stone Capacity = $21.0 \times 50\%$
= 10.5 cf

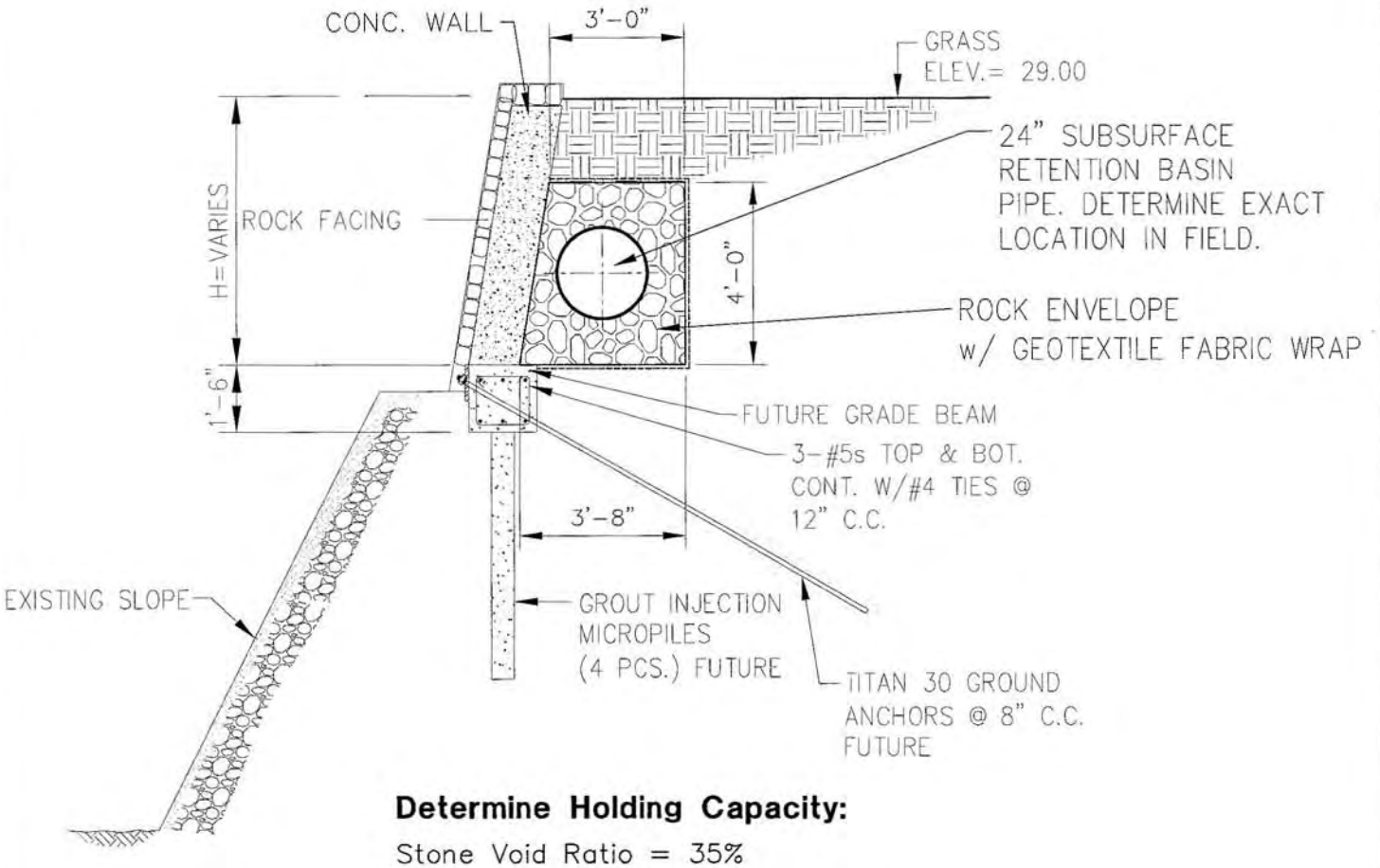
Capacity/LF = 15.7 + 10.5
= 26.2 cf

B. Total Capacity:

Total Capacity = 26.2 x Length
= 26.2 x 30
= 786 cf

SECTION A

SCALE: 3/16"=1'-0"



Determine Holding Capacity:

Stone Void Ratio = 35%

A. Capacity per Linear Foot:

Pipe Capacity = $3.1416 \times R^2$
= 3.1416×1.00^2
= 3.1 cf

Stone Void Volume = $\left(\frac{3.0 + 3.7}{2} \times 4.0 - 3.1\right) \times 35\%$
= $(13.4 - 3.1) \times 35\%$
= 3.6 cf

Effective Stone Capacity = $3.6 \times 50\%$
= 1.8 cf

Capacity/LF = 3.1 + 1.8
= 4.9 cf

B. Total Capacity:

Total Capacity = 4.9 x Length
= 4.9 x 30'
= 147 cf

SECTION B

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

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

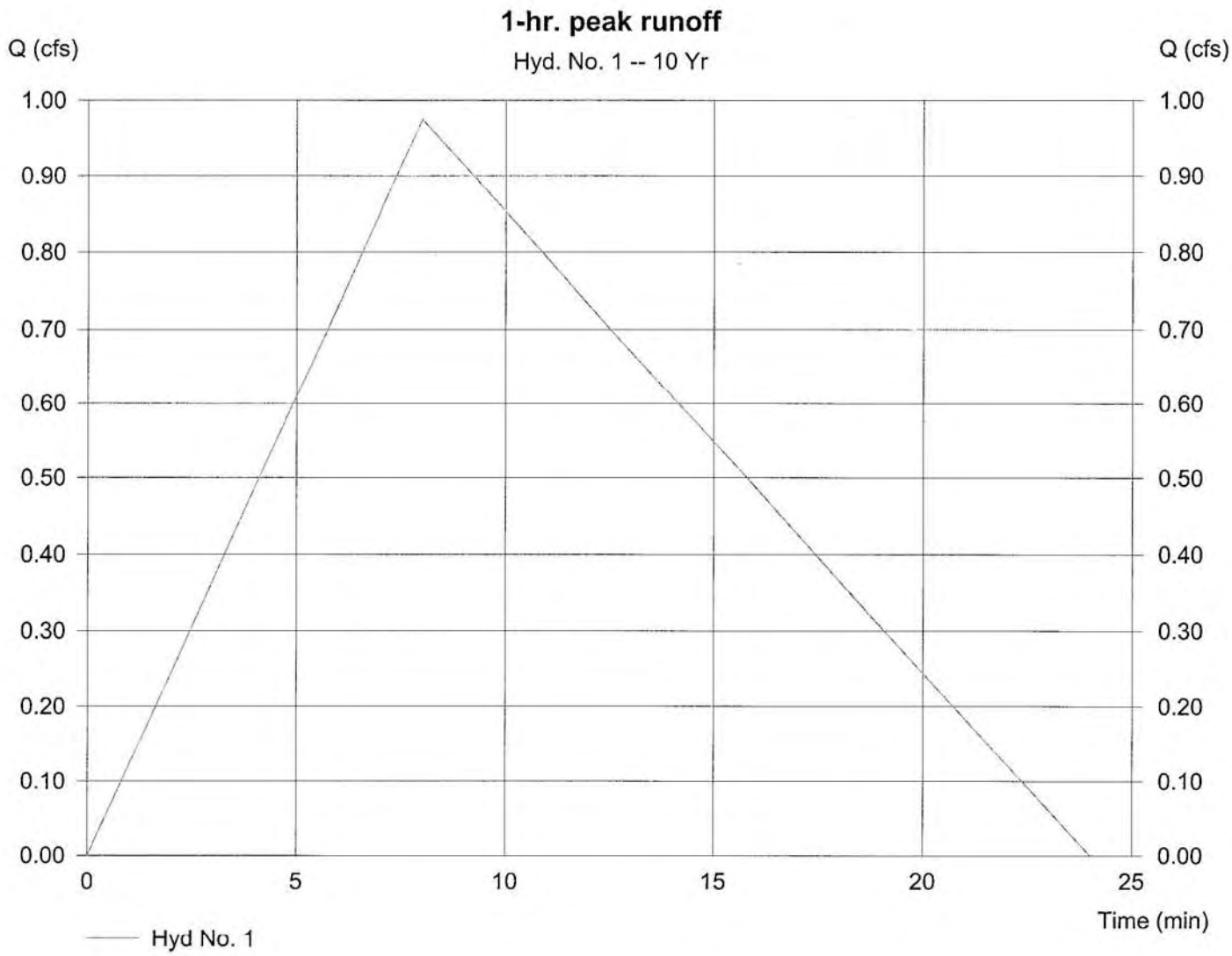
Tuesday, Sep 16 2008, 12:30 PM

Hyd. No. 1

1-hr. peak runoff

Hydrograph type	= Rational	Peak discharge	= 0.97 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 0.240 ac	Runoff coeff.	= 0.74
Intensity	= 5.489 in/hr	Tc by User	= 8.00 min
IDF Curve	= Lucas 08-019.IDF	Asc/Rec limb fact	= 1/2

Hydrograph Volume = 702 cuft



Hydrograph Plot

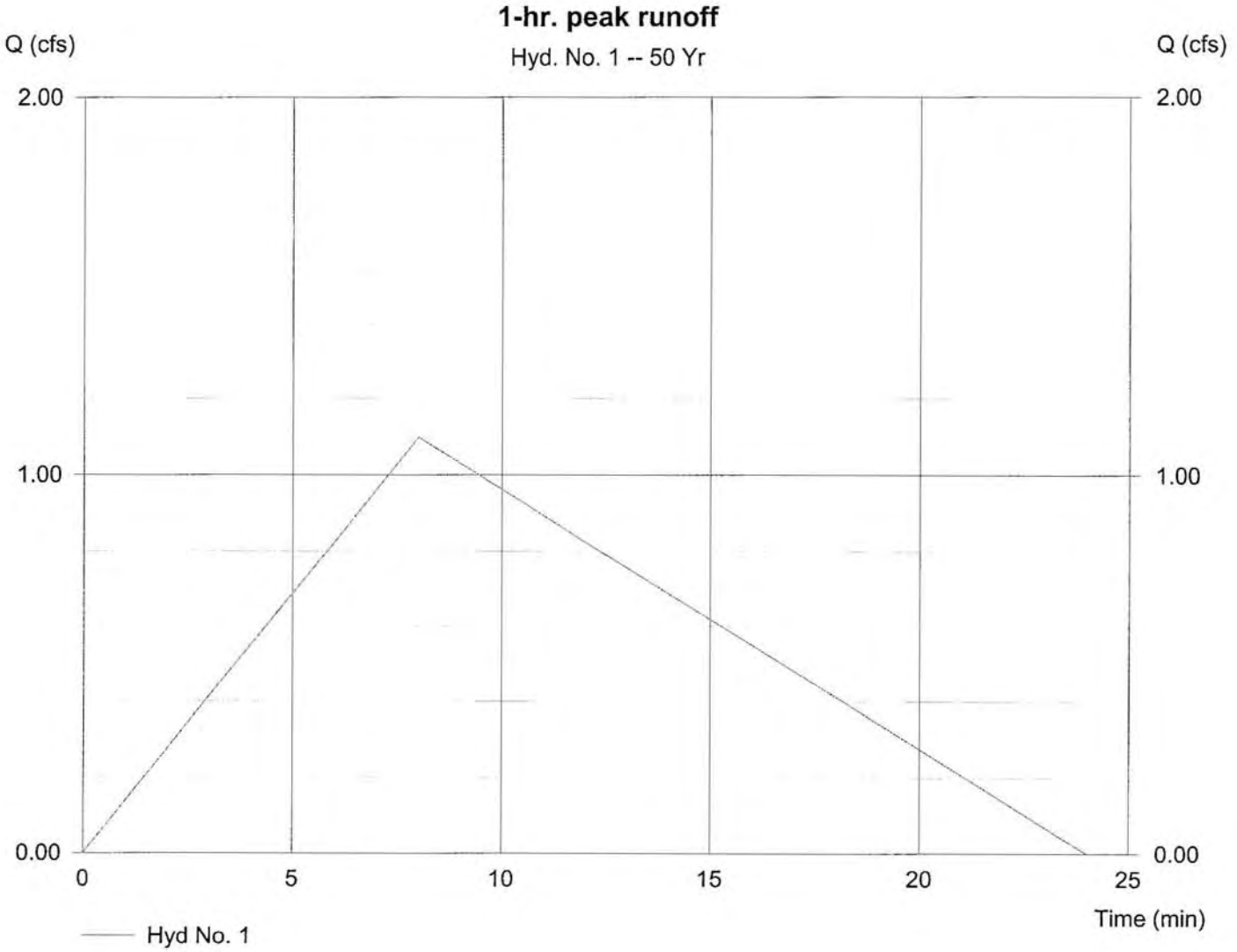
Hydraflow Hydrographs by Intelisolve | Tuesday, Sep 16 2008, 12:30 PM

Hyd. No. 1

1-hr. peak runoff

Hydrograph type	= Rational	Peak discharge	= 1.10 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 0.240 ac	Runoff coeff.	= 0.74
Intensity	= 6.186 in/hr	Tc by User	= 8.00 min
IDF Curve	= Lucas 08-019.IDF	Asc/Rec limb fact	= 1/2

Hydrograph Volume = 791 cuft



Hydraflow IDF Report

Return Period (Yrs)	Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	--------
2	0.0000	0.0000	0.0000	--------
3	0.0000	0.0000	0.0000	--------
5	0.0000	0.0000	0.0000	--------
10	32.7922	10.0000	0.6184	--------
25	0.0000	0.0000	0.0000	--------
50	40.7916	11.2000	0.6383	--------
100	0.0000	0.0000	0.0000	--------

H:\Lucas 08-019.IDF

Intensity = B / (Tc + D)^E

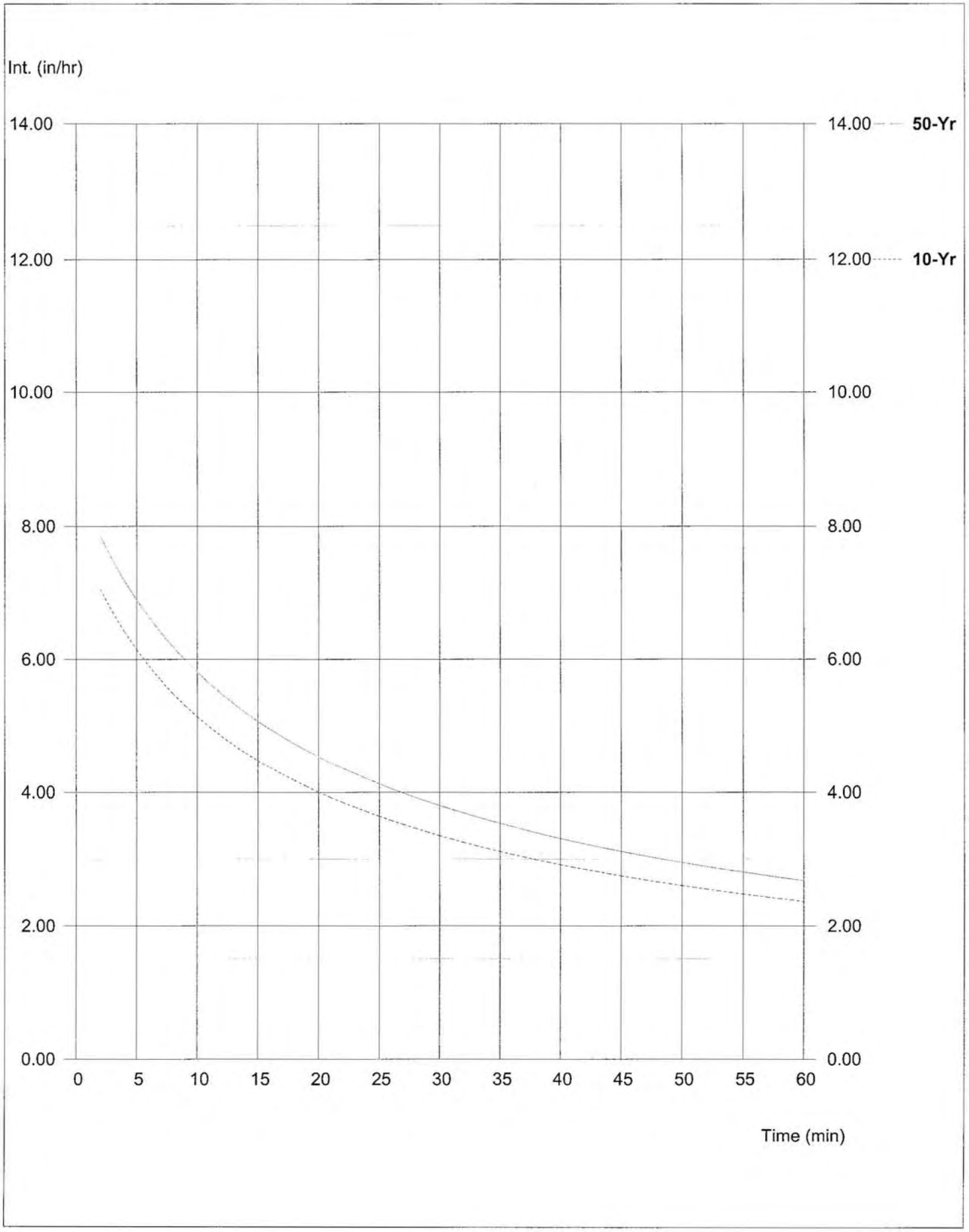
Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	6.14	5.14	4.48	4.00	3.64	3.35	3.11	2.92	2.75	2.61	2.48	2.37
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	6.90	5.81	5.07	4.54	4.13	3.80	3.53	3.31	3.12	2.95	2.81	2.68
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Tc = time in minutes

6.14 TAKEN FROM PLATE 2

Hydrograph IDF Curves

IDF file: Lucas 08-019.IDF



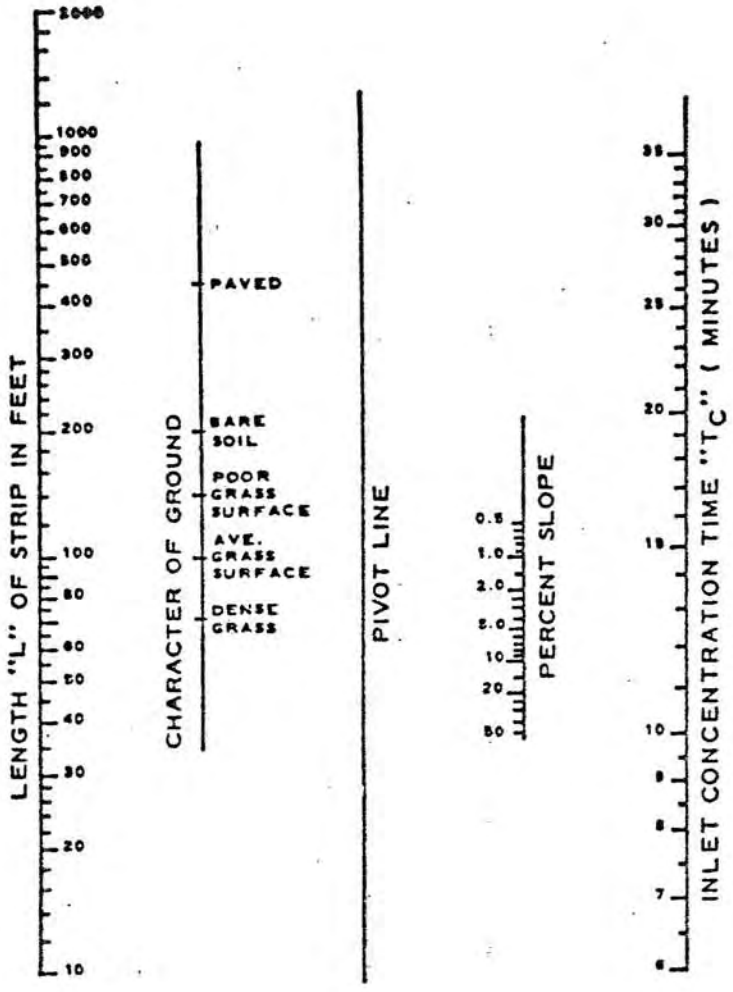
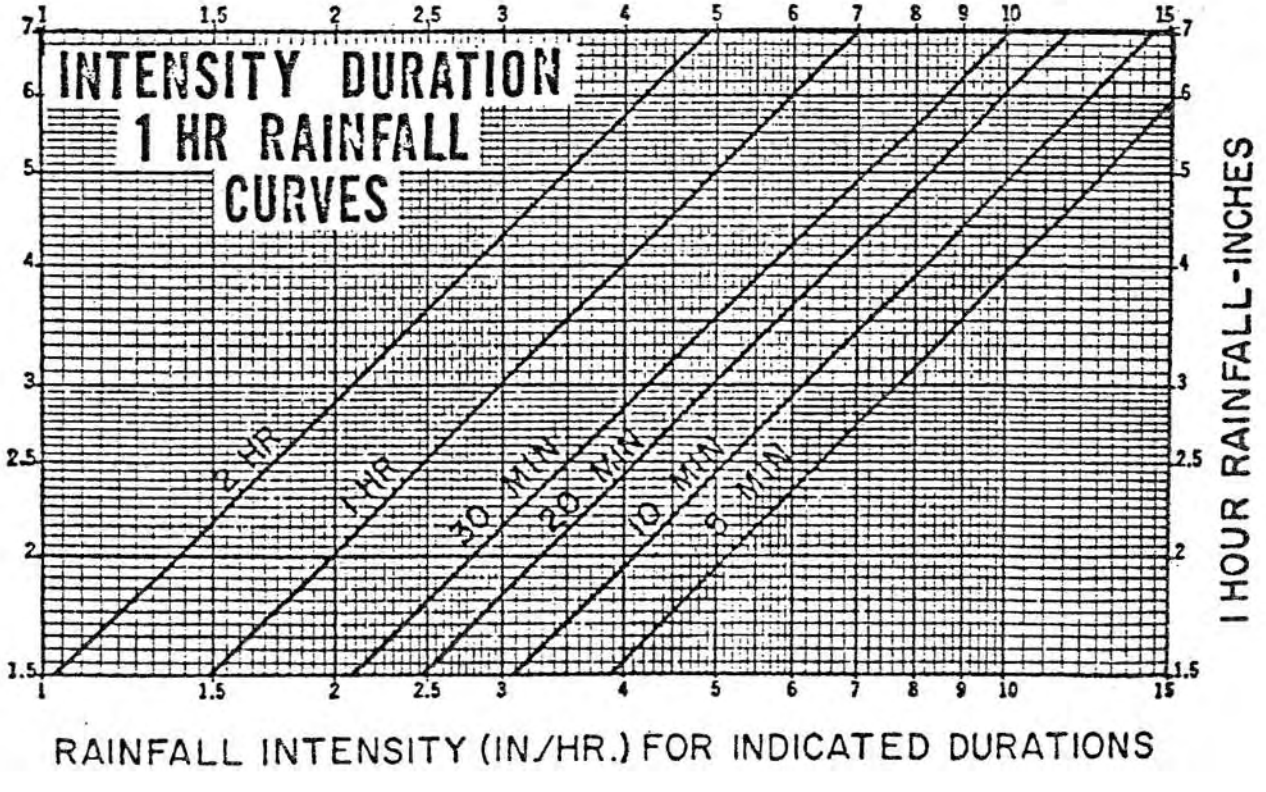


Plate 1

Overland Flow Chart

Plate 2



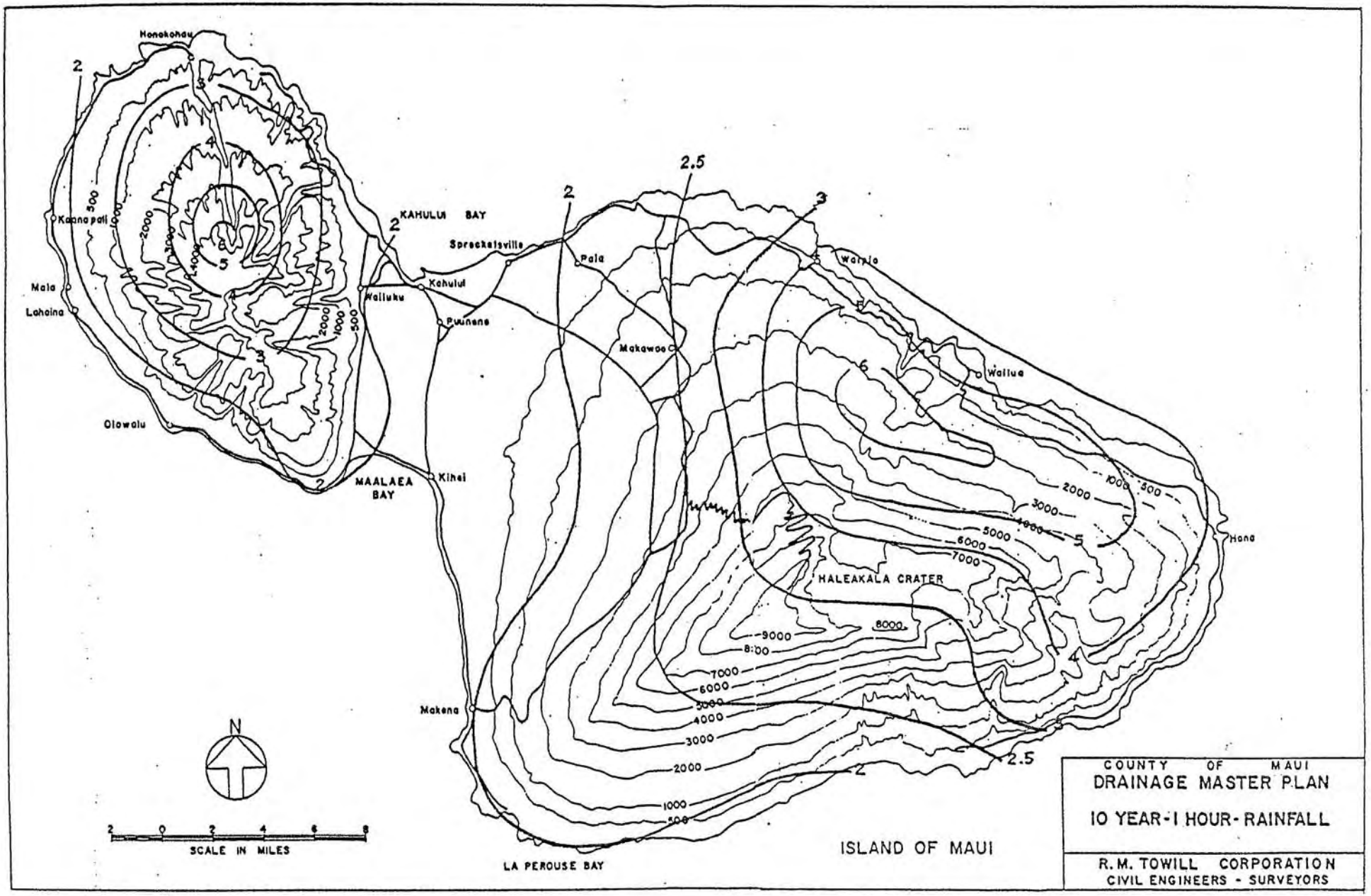

Honokohau
Kaanapali
Mala
Lahaina
Olowalu
KAHULUI BAY
Spreckelsville
Pala
Kahului
Wailuku
Puunene
Makawao
Waiale
Waiiue
MAALAEA BAY
Kihei
Makena
HALEAKALA CRATER
Hana
LA PEROUSE BAY
ISLAND OF MAUI
SCALE IN MILES
COUNTY OF MAUI
DRAINAGE MASTER PLAN
10 YEAR-1 HOUR-RAINFALL
R. M. TOWILL CORPORATION
CIVIL ENGINEERS - SURVEYORS

Plate 3

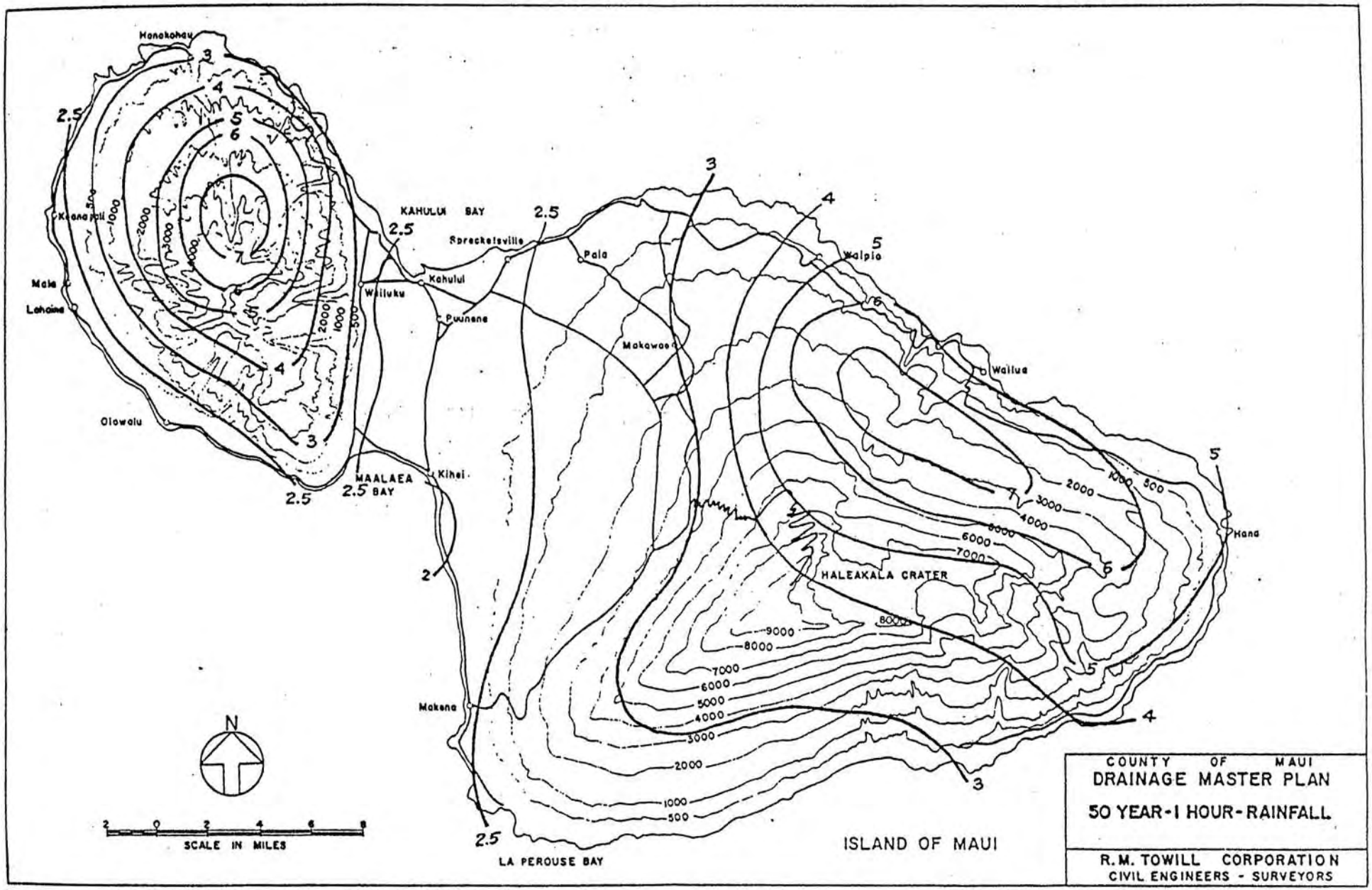
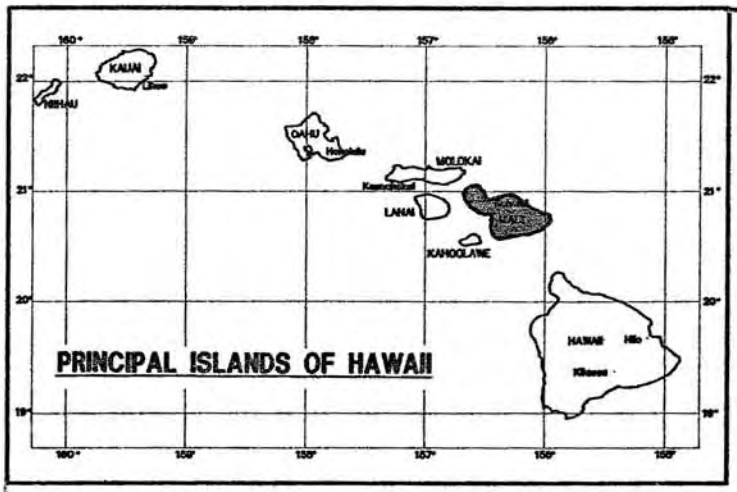

Honokohau
Kaanapali
Mala
Lahaina
Olowalu
KAHULUI BAY
Spreckelsville
Paia
Kahului
Wailuku
Puunene
Makawao
Waiplo
Wailua
Hana
MAALAEA BAY
Kihei
HALEAKALA CRATER
Makena
LA PEROUSE BAY
ISLAND OF MAUI
N
SCALE IN MILES
COUNTY OF MAUI
DRAINAGE MASTER PLAN
50 YEAR-1 HOUR-RAINFALL
R.M. TOWILL CORPORATION
CIVIL ENGINEERS - SURVEYORS

Plate 4



PROJECT LOCATION

HONOKAHUA
NAPILI
KAHAKULOA
WAIHEE
WAIEHU
HONOKOWAI
KAANAPALI
LAHAINA
WAILUKU
KAHULUI
MAKAWAO
KEANAE
OLOWALU
PUKALANI
NAHIKU
MAALAEA
KIHEI
KULA
HANA
WAILEA
HALEAKALA
MAKENA
LA PEROUSE BAY

N

LOCATION MAP
ISLAND OF MAUI

FIGURE 1

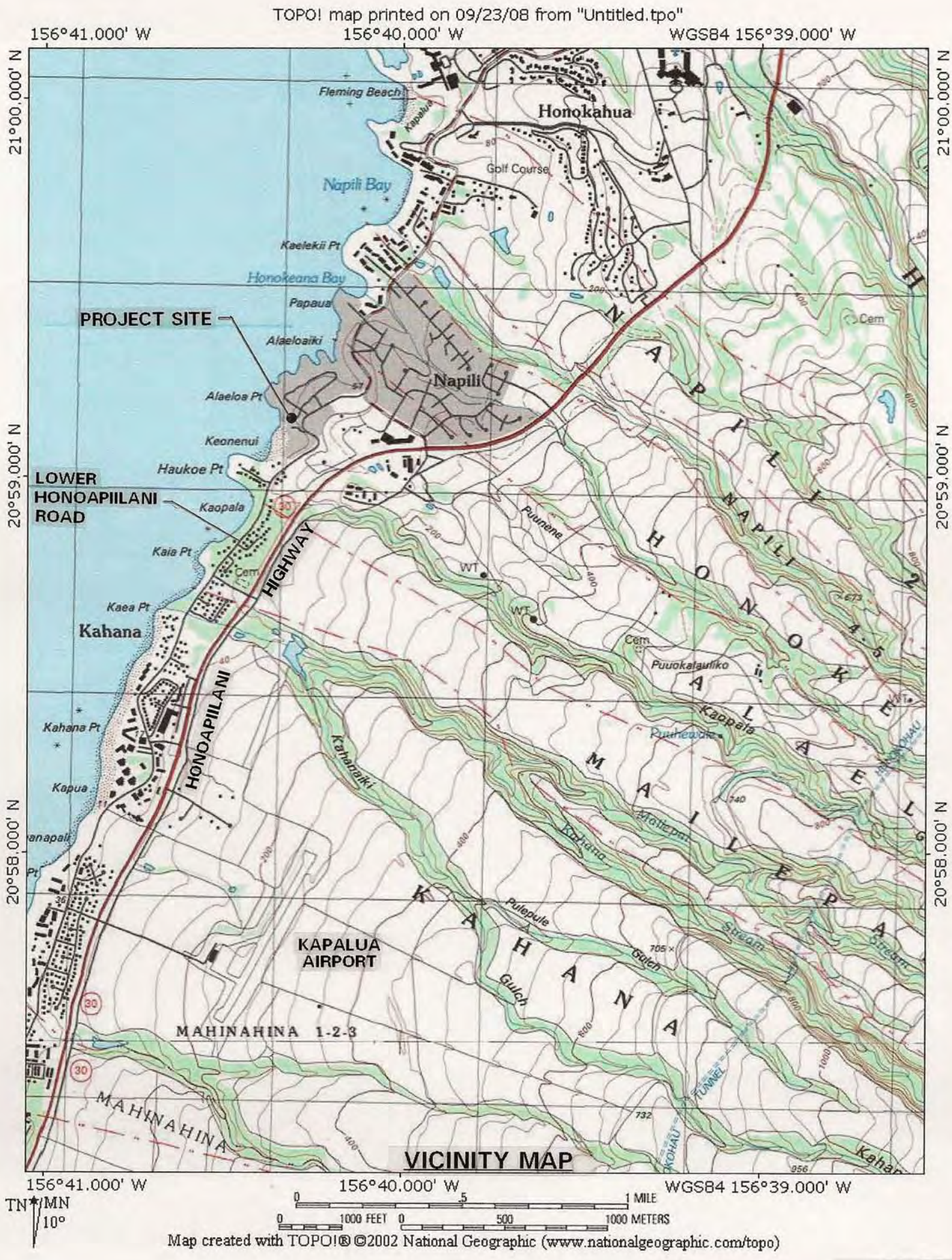
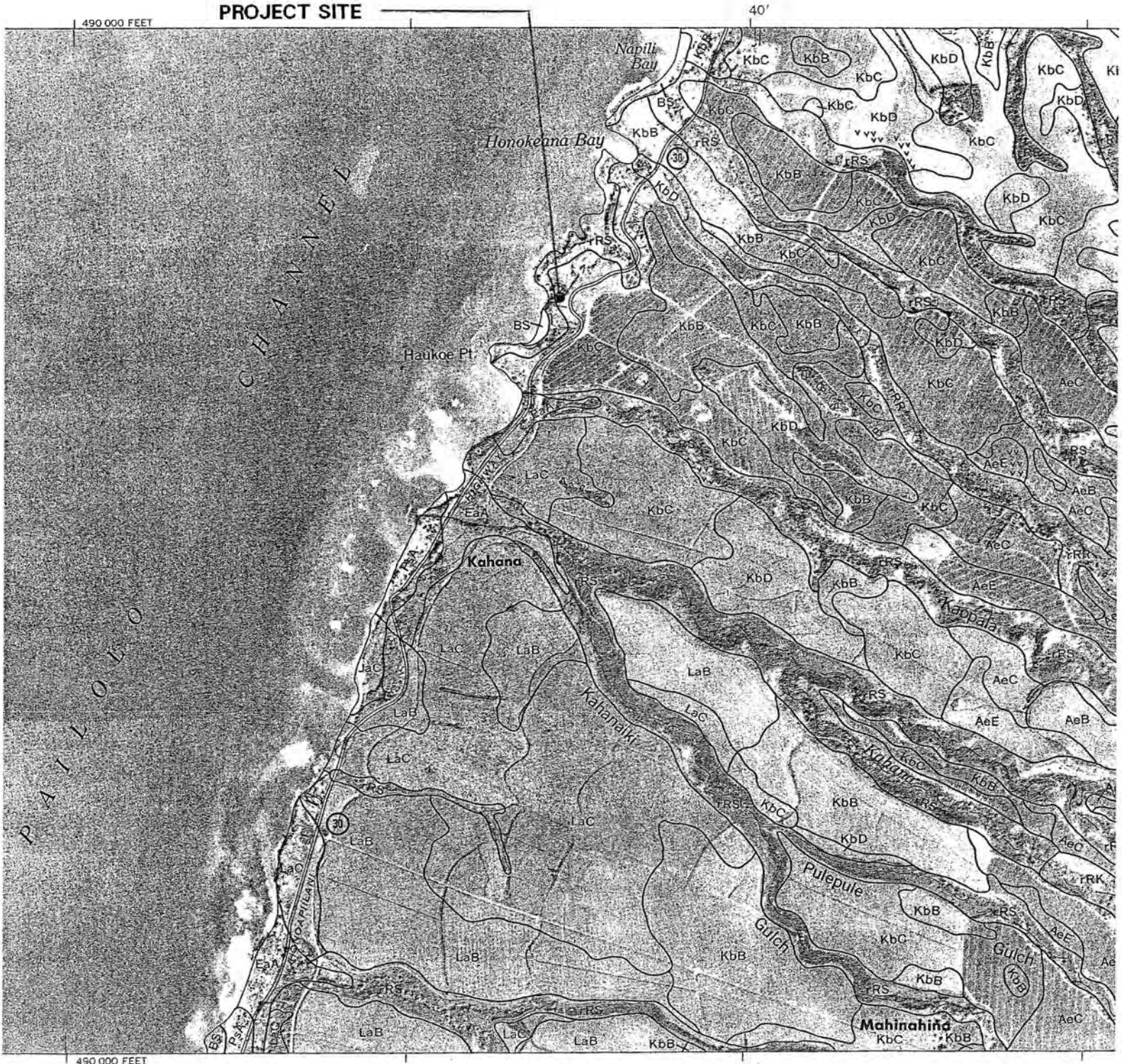

TOPO! map printed on 09/23/08 from "Untitled.tpo"
156°41.000' W
156°40.000' W
WGS84 156°39.000' W
21°00.000' N
20°59.000' N
20°58.000' N
Fleming Beach
Honokahua
Golf Course
Napili Bay
Kaelekii Pt
Honokeana Bay
Papaua
PROJECT SITE
Alaeloaiki
Napili
Alaeloa Pt
Keonenui
Haukoe Pt
LOWER HONOAPIILANI ROAD
Kaopala
Kaia Pt
Cem
HIGHWAY
Kaea Pt
Kahana
HONOAPIILANI
Kahana Pt
Kapua
KAPALUA AIRPORT
MAHINAHINA 1-2-3
MAHINAHINA
VICINITY MAP
TN
MN
10°
0
.5
1 MILE
1000 FEET
500
1000 METERS
Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)

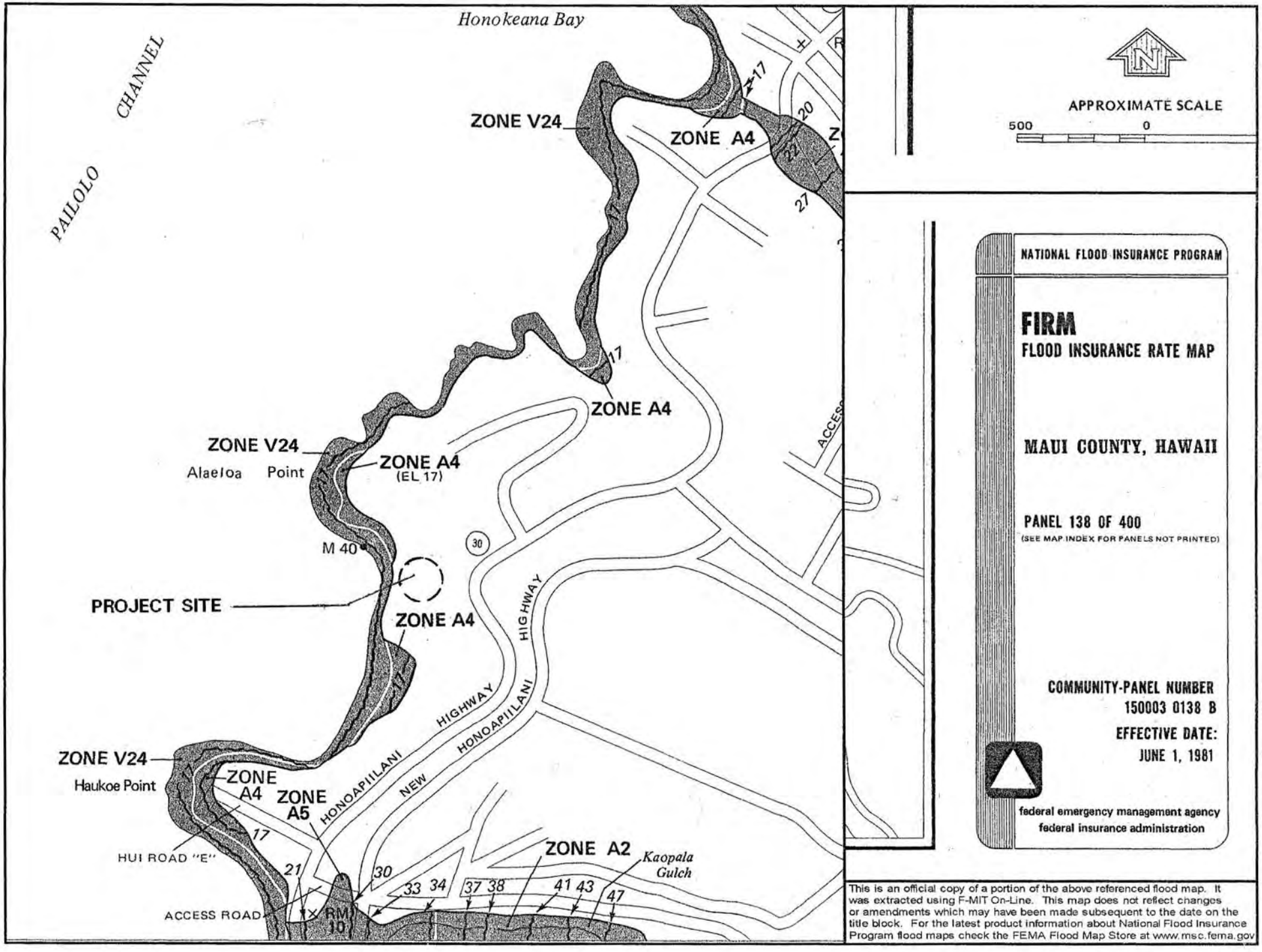
FIGURE 2



SOILS MAP

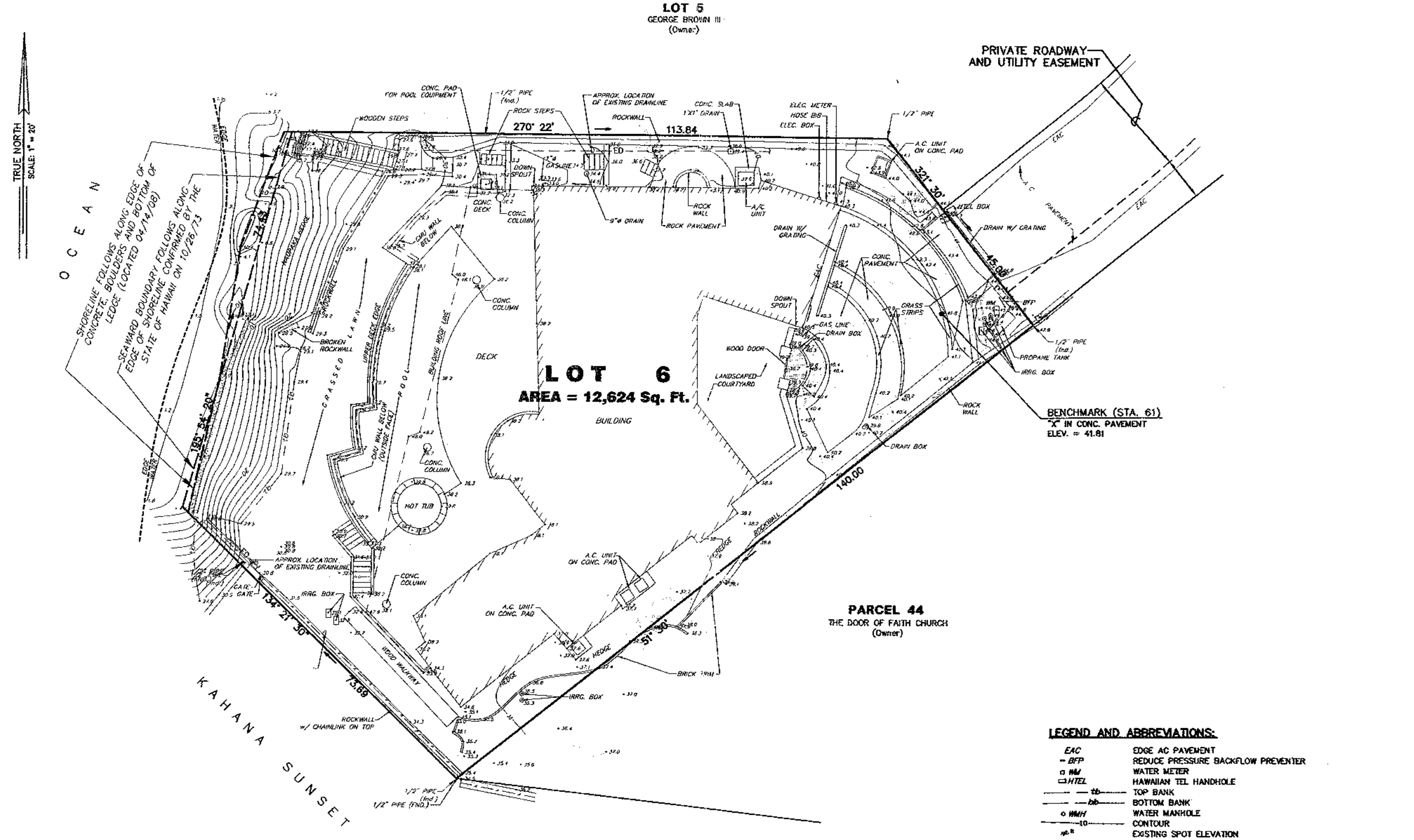
Scale: 1 in. = 2,000 ft.

FIGURE 3



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

FIGURE 4



EXISTING TOPOGRAPHY

SCALE: 1"=20'

10 5 0 10 20

GRAPHIC SCALE IN FEET

LEGEND AND ABBREVIATIONS:

EAC	EDGE AC PAVEMENT
BFP	REDUCE PRESSURE BACKFLOW PREVENTER
WM	WATER METER
HTEL	HAWAIIAN TEL HANDHOLE
tb	TOP BANK
bb	BOTTOM BANK
WMH	WATER MANHOLE
10	CONTOUR
	EXISTING SPOT ELEVATION
	COCONUT TREE

NOTES FOR TOPOGRAPHIC FEATURES:

1. ELEVATION DATUM = MEAN SEA LEVEL.
2. 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. UNDERGROUND UTILITIES SHOWN HEREON ARE FOR INFORMATION ONLY, HAVING BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES, BUT FROM OTHERS NOT CONNECTED WITH THIS COMPANY. THEREFORE, NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.

Tanaka ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS

871 KOLU STREET SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

EXISTING TOPOGRAPHY

KIRK T. TANAKA
LICENSED PROFESSIONAL ENGINEER No. 6648-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

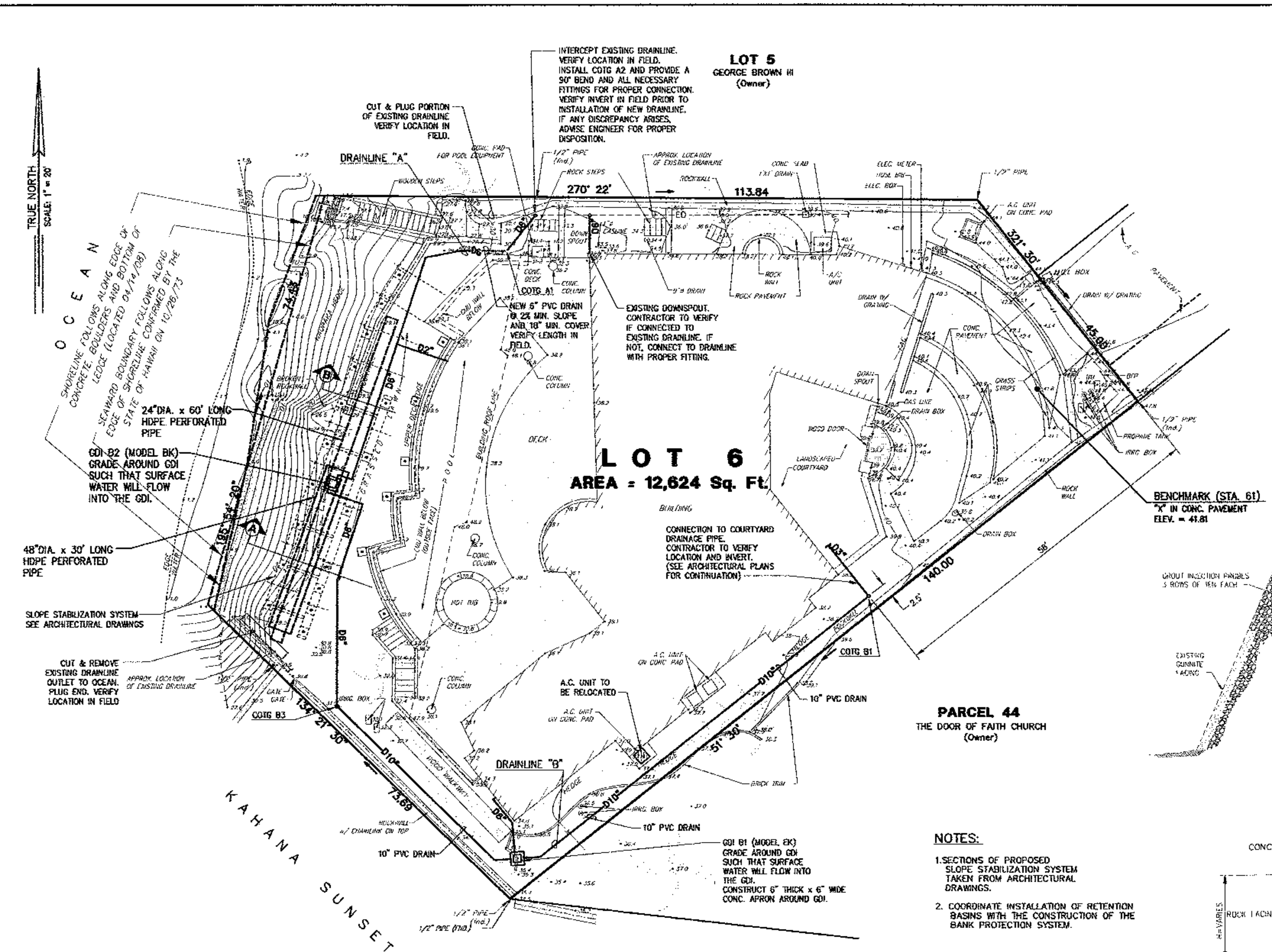
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

DATE :

REVISIONS:

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.J.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.:08-019

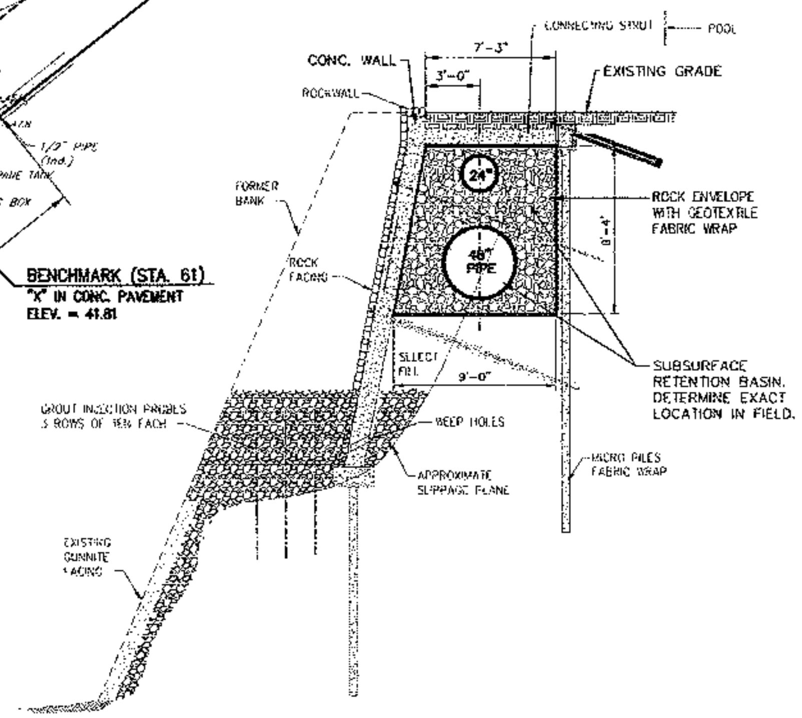
FIGURE 5



DRAINAGE PLAN

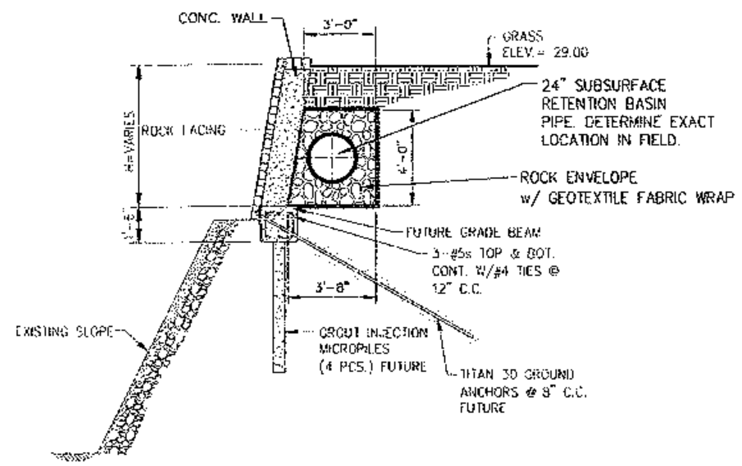
SCALE: 1"=20'

20 10 0 20 40
GRAPHIC SCALE IN FEET



SECTION A

SCALE: 3/32"=1'-0"



SECTION B

SCALE: 1/8"=1'-0"

NOTES:

1. SECTIONS OF PROPOSED SLOPE STABILIZATION SYSTEM TAKEN FROM ARCHITECTURAL DRAWINGS.
2. COORDINATE INSTALLATION OF RETENTION BASINS WITH THE CONSTRUCTION OF THE BANK PROTECTION SYSTEM.

NOTES:

1. UGDI'S:

PRE-CAST CONCRETE DROP INLET W/STANDARD FRAME AND GRATE AS MANUFACTURED BY SANTA ROSA CAST PRODUCTS CO.

MODEL EK: 12"x12" INLET OPENING
MODEL BK: 16"x16" INLET OPENING

2. CONNECTION OF HOUSE DOWNSPOUTS/HOUSE PERIMETER DRAIN

CONTRACTOR TO CONNECT EXISTING (UNLESS REMOVED) AND NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLET (IF OCCURRING) TO NEW DRAINLINES. PROVIDE PROPER FITTINGS AND ADAPTERS AS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLETS. VERIFY LOCATION OF EXISTING DOWNSPOUTS AT JOBSITE.

Tanaka ENGINEERS, INC.
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WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

DRAINAGE PLAN

KIRK T. TANAKA
LICENSED PROFESSIONAL ENGINEER
No. 8646-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

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

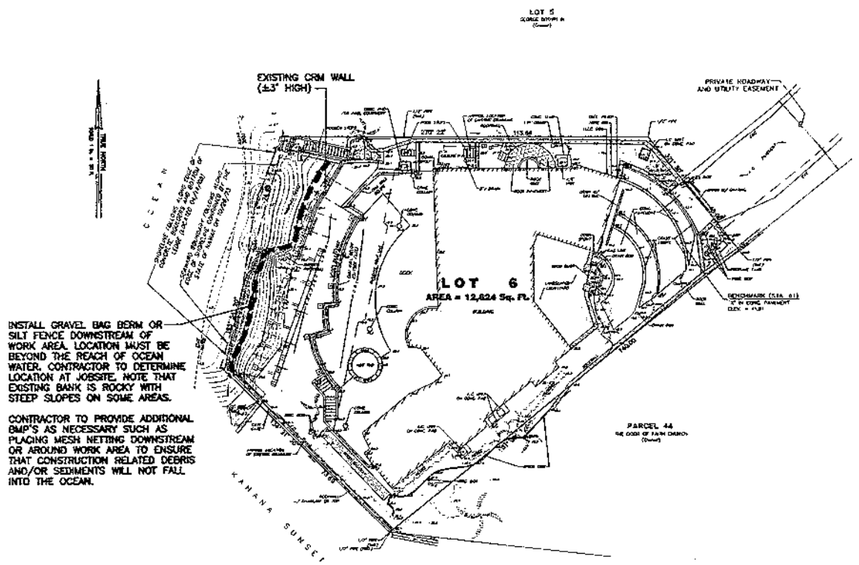
DATE :

REVISIONS:

09-18-09 REVISE DRAINAGE PLAN & SECTION

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: J.E.
DATE: SEPT. 18, 2009
JOB No.:08-019

FIGURE 6

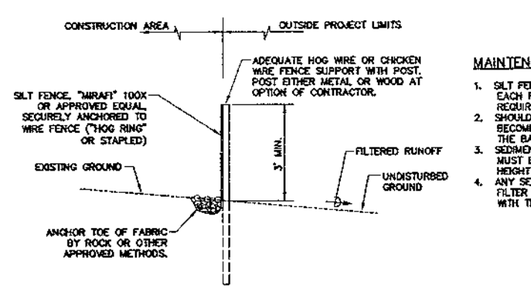


BMP PLAN

SCALE: 1"=20'

20 10 0 20 40

GRAPHIC SCALE IN FEET



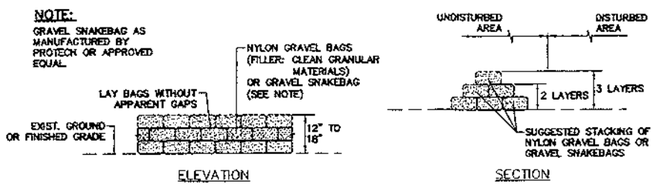
MAINTENANCE NOTES:

1. SILT FENCES OR FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON THE SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

TYPICAL INSTALLATION - SILT FENCE

NOT TO SCALE

NOTE:
GRAVEL SNAKEBAG AS MANUFACTURED BY PROTECH OR APPROVED EQUAL.



PLACEMENT OF TEMPORARY GRAVEL BAG BERM

NOT TO SCALE

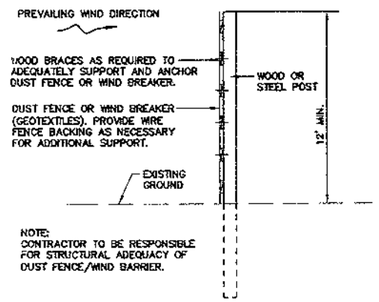
GRADING NOTES:

1. CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE DEVELOPMENT SERVICES ADMINISTRATION TWO (2) WEEKS PRIOR TO COMMENCEMENT OF ANY GRADING OR GRUBBING.
2. CONTRACTOR SHALL BE REQUIRED TO SUBMIT A SATISFACTORY GRADING WORK METHOD TO MINIMIZE DUST POLLUTION BEFORE A GRADING PERMIT IS ISSUED.
3. ALL GRADING OPERATIONS SHALL CONFORM WITH APPLICABLE PROVISIONS OF THE "WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS" CONTAINED IN THE STATE OF HAWAII PUBLIC HEALTH REGULATIONS, STATE DEPT. OF HEALTH ON WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS AND THE COUNTY GRADING ORDINANCE.
4. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE AT ALL TIMES, INCLUDING WEEKEND AND HOLIDAYS. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATION OF THE STATE DEPARTMENT OF HEALTH AND GRADING ORDINANCE.
5. THE CONTRACTOR SHALL REMOVE ALL SILTS AND DEBRIS RESULTING FROM HIS WORK. THE COST INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE DIRECTOR OF DPWEM (COUNTY OF MAUI) SHALL BE PAYABLE BY THE CONTRACTOR.
6. CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT AN APPROPRIATE SITE. THE CONTRACTOR SHALL INFORM THE DIRECTOR OF DPWEM OF THE LOCATION OF THE DISPOSAL SITES. THE DISPOSAL SITE SHALL ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
7. APPROXIMATE:

EXCAVATION =	C. Y.	FOR GRADING PERMIT
EMBANKMENT =	C. Y.	PURPOSES
AREA =	ACRES	ONLY

UTILITY LINES, PIPES, SERVICES AND APPURTENANCES:

1. THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE AND WERE DETERMINED FROM AVAILABLE PLANS WITHIN THE PROJECT AREA. THEREFORE, THE LOCATION AND/OR DEPTH OF THESE UTILITIES ARE NOT GUARANTEED BY THE CONSULTANTS NOR BY THE OWNER. THE CONTRACTOR SHALL VERIFY THESE INFORMATION BY TONING, HANDDIGGING, ETC. PRIOR TO STARTING EXCAVATION WORK. IN ADDITION, THE CONTRACTOR SHALL CONTACT AND COORDINATE WORK INVOLVING OR AFFECTING THE EXISTING UTILITIES WITH THE PROPER AUTHORITIES, BOTH PUBLIC AND PRIVATE, TO MINIMIZE DAMAGES AND DISRUPTION TO SERVICE. THE CONTRACTOR SHALL SEE TO IT THAT HIS WORKMEN OR OPERATORS SHALL BE APPRISED OF THE UTILITIES EXISTENCE AND LOCATION.
2. ANY UTILITIES, WHETHER SHOWN OR NOT ON THE CONTRACT PLANS, THAT THE CONTRACTOR ENCOUNTERS DURING THE PROGRESS OF THE WORK, SUCH AS TELEPHONE DUCTS, ELECTRIC DUCTS, WATER LINES, SEWER LINES, ELECTRIC LINES, GAS LINES AND DRAINAGE PIPES, SHALL NOT BE DISTURBED OR DAMAGED UNLESS OTHERWISE INSTRUCTED IN THE PLANS AND SPECIFICATIONS. IN THE EVENT THE UTILITIES ARE DAMAGED OR DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD LIABLE FOR THE DAMAGED OR DISTURBED UTILITIES. THE CONTRACTOR SHALL REPAIR THE DAMAGED OR DISTURBED UTILITIES TO THE EXISTING CONDITIONS AT NO COST TO THE OWNER. ANY DAMAGE CLAIMS DUE TO THE DISRUPTION OF SERVICE CAUSED BY THE UTILITIES BEING DAMAGED SHALL BE PAID BY THE CONTRACTOR WHO SHALL SAVE HARMLESS THE OWNER AND CONSULTANTS FROM ALL SUITS, ACTIONS OR CLAIMS OF ANY CHARACTER BROUGHT ON ACCOUNT OF SUCH DAMAGES.
3. THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES PRIOR TO START OF CONSTRUCTION TO COORDINATE THE WORK TO BE DONE BY THE UTILITY'S OWN FORCES IN ORDER THAT THESE WORKS MAY PROCEED IN A REASONABLE MANNER AND WILL NOT DELAY THE PROGRESS OF THE CONSTRUCTION. ALSO, TO OBTAIN FROM THEM ANY INFORMATION PERTAINING TO EXISTING UTILITIES THAT WILL EITHER SUPPLEMENT THE INFORMATION SHOWN ON THE PLANS OR WILL CORRECT ANY SUCH INFORMATION THAT MAY BE IN ERROR.
4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL STRUCTURES, UTILITIES, ETC., PRIOR TO START OF ANY WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ANY CHANGES SHALL BE MADE IN ACCORDANCE WITH HIS INSTRUCTIONS, STARTING WORK ON THE PARTICULAR ACTIVITY SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR AGREES THAT THE EXISTING LOCATION ARE ESSENTIALLY CORRECT AS SHOWN.



MATERIALS AND CONSTRUCTION FOR WIND BREAKER AND DUST FENCE TO BE IN ACCORDANCE WITH NORMAL CONSTRUCTION PRACTICES.

TYPICAL INSTALLATION DUST FENCE/ WIND BREAKER

NOT TO SCALE

NOTE:
CONTRACTOR TO DETERMINE IN THE FIELD THE EXACT LOCATION OF DUST FENCE AND WIND BREAKER TO PROVIDE MAXIMUM PROTECTION.

SOIL EROSION AND DUST CONTROL NOTES:

A. PERMITTEE NOTES TO CONTROL DRAINAGE AND SOIL EROSION:

1. CONTROL DUST BY MEANS OF WATER TRUCKS OR BY INSTALLING TEMPORARY SPRINKLER SYSTEMS OR BOTH IF NECESSARY.
2. GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY AND FOR THE WEEKEND AND HOLIDAYS.
3. ALL EXPOSED AREAS SHALL BE PAVED, GRASSED, OR PERMANENTLY LANDSCAPED AS SOON AS FINISHED GRADING IS COMPLETED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR THE WATER NECESSARY FOR DUST CONTROL AND IRRIGATION PURPOSES.
5. CONTRACTOR TO CONSTRUCT TEMPORARY DIVERSION DITCHES OR SWALES AWAY FROM GRADED AREAS TO NATURAL GROUND OR DRAINAGEWAYS DURING CONSTRUCTION.
6. CONTRACTOR SHALL SUBMIT A SATISFACTORY SOIL EROSION CONTROL PLAN TO MINIMIZE SOIL EROSION PRIOR TO AN ISSUANCE OF A GRADING PERMIT. EROSION CONTROL MEASURES SHALL BE IN COMPLIANCE WITH SECTION 20.08.035 OF THE MAUI COUNTY CODE (ORD. NO. 2684). SEE ALSO GRADING NOTES NO. 2.
7. THE FOLLOWING ADDITIONAL MEASURES SHALL BE TAKEN TO CONTROL SOIL EROSION DURING THE SITE DEVELOPMENT PERIOD:
   a. MINIMIZE TIME OF CONSTRUCTION.
   b. RETAIN EXISTING GROUND COVER UNTIL LATEST DATE TO COMPLETE CONSTRUCTION.
   c. EARLY CONSTRUCTION OF DRAINAGE CONTROL FEATURES.
   d. USE TEMPORARY AREA SPRINKLERS IN NON-ACTIVE CONSTRUCTION AREAS WHEN GROUND COVER IS REMOVED.
   e. STATION WATER TRUCK(S) ON SITE DURING CONSTRUCTION PERIOD TO PROVIDE FOR IMMEDIATE SPRINKLING, AS NEEDED, IN ACTIVE CONSTRUCTION ZONES (WEEKENDS AND HOLIDAYS INCLUDED).
   f. ALL GRADED AREAS, UNLESS TO PAVED, SHALL BE PROVIDED WITH SOIL EROSION CONTROL MATTING AND BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.
   g. INSTALLATION OF SILT AND DUST CONTROL FENCE. SILT FENCE CAN BE AUGMENTED BY PROVIDING CRUSHED ROCK BERMS WRAPPED IN GEOTECH FABRIC.
8. THE CONTRACTOR IS THE SOLE PARTY RESPONSIBLE FOR THE ADEQUACY OF ALL TEMPORARY CONTROL MEASURES TO PROTECT THE WORK FROM THE EFFECTS OF DUST AND EROSION. HE SHALL BE RESPONSIBLE FOR RESPONDING TO COMPLAINTS FROM NEIGHBORING PROPERTIES AND WILL PROVIDE ADDITIONAL MITIGATION MEASURES AS NECESSARY AT NO ADDITIONAL COST TO OWNER.
9. OIL OR PETROLEUM-BASED PRODUCTS SHALL NOT BE USED FOR DUST CONTROL.
10. STORM WATER CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO CONSTRUCTION AND SHALL REMAIN OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD OR UNTIL PERMANENT CONTROLS ARE IN PLACE.
11. DISCHARGES ASSOCIATED WITH THE OPERATION AND MAINTENANCE OF EQUIPMENT SHALL BE FIELD MONITORED BY THE CONTRACTOR. ANY MECHANICAL AND HYDRAULICS FLUID LEAKAGE SHALL BE REPAIRED AS SOON AS IT IS IDENTIFIED AND LOCATED. LEAKAGE OF MECHANICAL FLUIDS SHALL BE CONTAINED, PROPERLY DISPOSED AND NOT ALLOWED TO IMPACT THE OCEAM.
12. PRIOR TO ISSUANCE OF THE GRADING PERMIT, THE CONTRACTOR SHALL MEET WITH THE DEVELOPMENT SERVICES ADMINISTRATION AND PROVIDE INFORMATION ON THE SOURCE OF WATER FOR DUST CONTROL, AND JUSTIFY THE NUMBER OF WATER TRUCKS TO BE USED FOR THE CLEARING, GRUBBING AND LOADING OPERATIONS.
13. IF THE CONTRACTOR IS NOT ABLE TO SATISFACTORILY CONTROL DUST EMISSIONS FROM THE PROJECT SITE, ALL CONSTRUCTION WORK SHALL CEASE EXCEPT FOR WATERING AND OTHER STABILIZATION EFFORTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATELY CLEANING THE ROADWAY OF MUD OR SILT TRACKED FROM THE PROJECT SITE.

B. RECOMMENDED GENERAL SCHEDULE FOR IMPLEMENTING BMP's:

1. CONSTRUCT TEMPORARY GRAVEL ACCESS ON EXISTING ACCESS EASEMENT 1.
2. ERECT SILT AND DUST FENCE.
3. CONSTRUCT DRAINAGE BASIN AND OTHER TEMPORARY SILTING PONDS WHERE FEASIBLE.
4. CONSTRUCT TEMPORARY DRAINAGE SWALES AND BERMS TO DIRECT STORM RUNOFF AWAY FROM GRADED AREAS TO NATURAL DRAINAGEWAYS OR GROUND OR TO DRAINAGE BASIN AND TEMPORARY SILTATION PONDS.
5. INSTALL DRAINAGE FACILITIES. PROVIDE SEDIMENT BARRIERS ON NEW GDI's.
6. GRADE PROJECT AREA AS PLANNED.
7. GRASS GRADED AREAS UNLESS TO BE PAVED. PROVIDE BIODEGRADABLE SOIL EROSION CONTROL MATTING AS REQUIRED.

C. NOTES FOR BMP's:

THE CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE "CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP's) FOR THE COUNTY TO MAUI" MAY 2001 (STD. BMP's) TO EXTENT POSSIBLE DURING THE DEVELOPMENT OF THIS PROJECT. CONTROL OF EROSION, SEDIMENT AND CONSTRUCTION WASTE MANAGEMENT WILL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE FOLLOWING SECTIONS OF THE STANDARD BMP's.

SECTION 6.10 SEEDING
SECTION 6.30 MATS, NETS AND BLANKETS
SECTION 6.31 MULCHING
SECTION 6.32 PRESERVATION OF EXISTING VEGETATION
SECTION 6.33 PROTECTION OF STOCKPILES
SECTION 6.62 SEDIMENT FENCE (SILT FENCE)
SECTION 6.70 DUST CONTROL
SECTION 6.71 GOOD NEIGHBOR BARRIERS
SECTION 6.91 SOLID WASTE MANAGEMENT
SECTION 6.92 CONCRETE WASTE MANAGEMENT
SECTION 6.93 VEHICLE FUEL AND MAINTENANCE MANAGEMENT

NOTE REGARDING DISCOVERIES OF ARCHAEOLOGICAL INTEREST:

SHOULD HISTORIC SITES SUCH AS WALLS, PLATFORMS, PAVEMENTS AND MOUNDS, OR REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATION OF CHARCOAL OR SHELLS ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DAMAGE. THE CONTRACTOR AND/OR LANDOWNER SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (243-5169, MAUI OR 692-8023, OAHU), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AN APPROPRIATE MITIGATION MEASURE, IF NECESSARY.

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871 KOLU STREET SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

CONSTRUCTION NOTES & BMP PLAN

KIRK T. TANAKA
LICENSED PROFESSIONAL ENGINEER
No. 6646-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

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

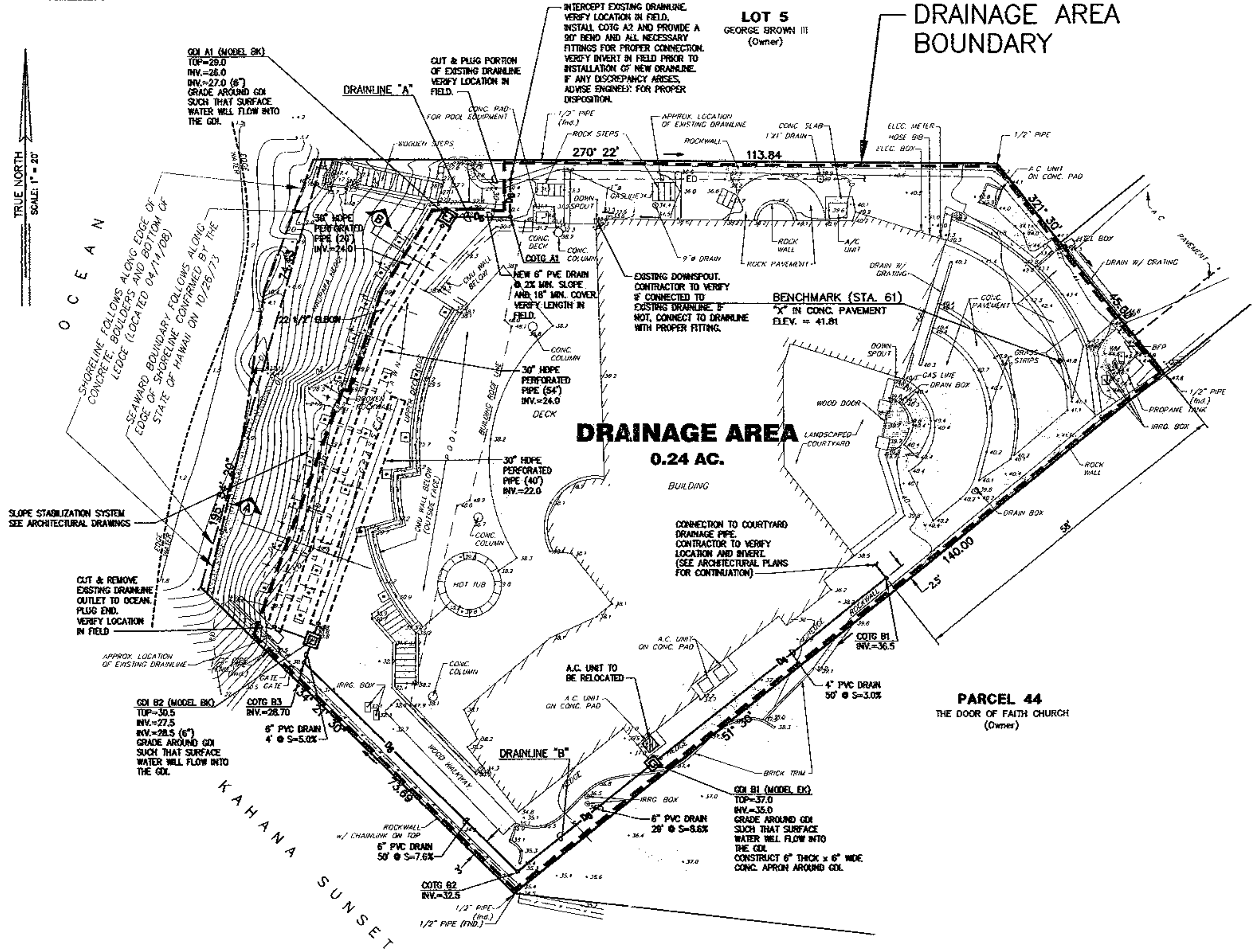
DATE : _____

REVISIONS:

T.M.K.:	(2)4-3-03: 96
SCALE:	AS NOTED
DESIGNED BY:	R.H.
CHECKED BY:	K.T.
DRAWN BY:	R.M./J.E./N.D.
DATE:	SEPT. 08, 2008
JOB No.:	08-019

FIGURE 7

F.B.# 900 "2w LUCAS.crd" DRAWN BY : J.E.
Z:\2008\08-019\WORK\BMP.dwg 24-SEP-2008 Revised 9/25/08



HYDROLOGY MAP

SCALE: 1"=20'

10 5 0 10 20

GRAPHIC SCALE IN FEET

NOTES:

1. GDI'S:
   PRE-CAST CONCRETE DROP INLET W/STANDARD FRAME AND GRATE AS MANUFACTURED BY SANTA ROSA CAST PRODUCTS CO.
   MODEL EK: 12"x12" INLET OPENING
   MODEL BK: 18"x18" INLET OPENING

2. CONNECTION OF HOUSE DOWNSPOUTS/HOUSE PERIMETER DRAIN
   CONTRACTOR TO CONNECT EXISTING (UNLESS REMOVED) AND NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLET (IF OCCURRING) TO NEW DRAINLINES. PROVIDE PROPER FITTINGS AND ADAPTERS AS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLETS. VERIFY LOCATION OF EXISTING DOWNSPOUTS AT JOBSITE.

Tanaka ENGINEERS, INC.

CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS

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PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 8, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

HYDROLOGY MAP

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DATE :

REVISIONS:

T.M.K.:(2)4-3-03: 98
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.J.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.: 08-019

FIGURE 8

CONSTRUCTION PLANS
FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

TAX MAP KEY (2) 4-3-03: 96

PREPARED FOR: Ms. MARCIA LUCAS
11 HALE MALIA PLACE
LAHAINA, HAWAII 96761

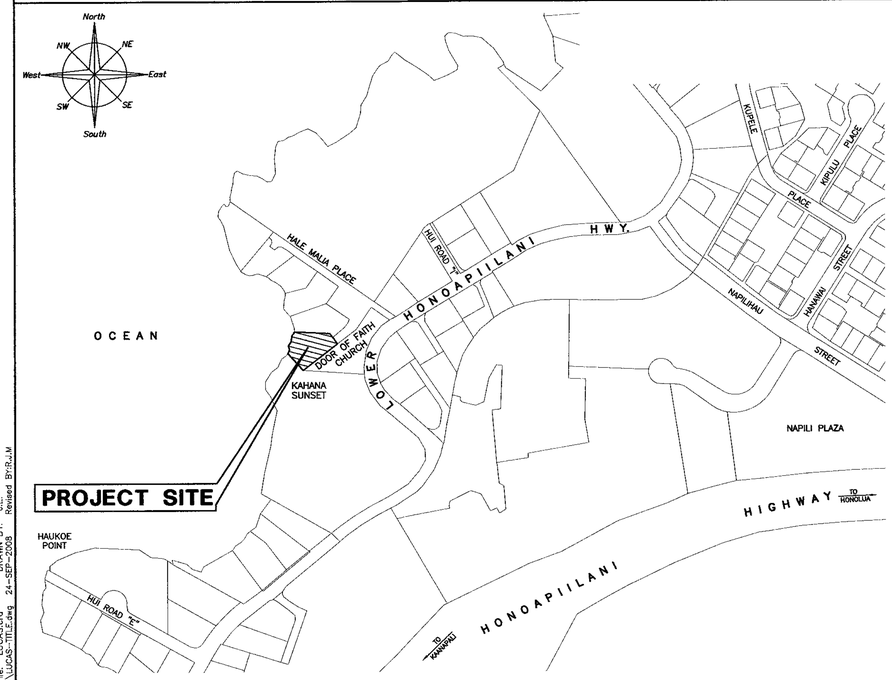
PREPARED BY: R. T. TANAKA ENGINEERS, INC.
871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII 96793

LUCAS RESIDENCE
DRAINAGE IMPROVEMENTS

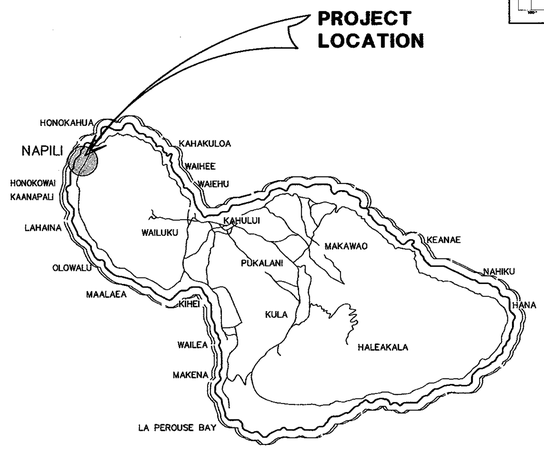
AS-BUILT (Record Drawing)

DATE August 06 2009

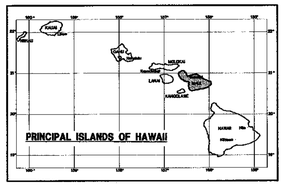
This Drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assure its accuracy of this As-Built drawing or for any errors or omissions which may have been incorporated into it as a result.



VICINITY MAP
NOT TO SCALE



LOCATION MAP
ISLAND OF MAUI



INDEX TO DRAWINGS:

SHEET NO.	DRAWING NO.	DESCRIPTION
1	T-1	TITLE SHEET
2	C-1	EXISTING TOPOGRAPHY
3	C-2	GENERAL CONSTRUCTION NOTES AND BMP PLAN
4	C-3	DRAINAGE PLAN
5	C-4	MISCELLANEOUS DETAILS

Date: SEPT. 03, 2008
JOB No.: 08-019
SHEET **T-1**
OF 5 SHEETS.

F.B. # 830
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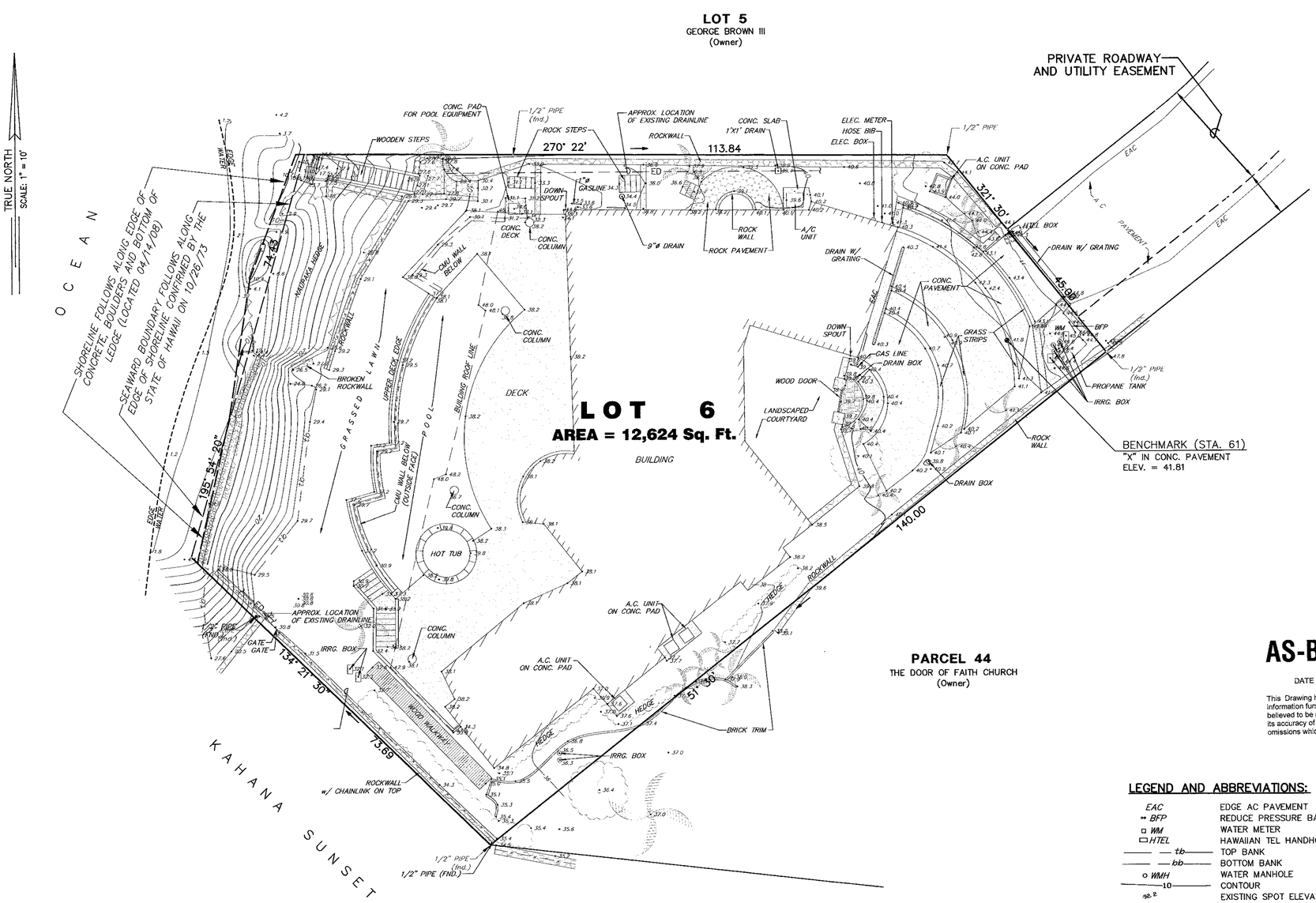
DRAWN BY: J.E.
24-SEP-2008 Revised BY:R.J.M



EXISTING TOPOGRAPHY

SCALE: 1"=10'

10 5 0 10 20

GRAPHIC SCALE IN FEET

AS-BUILT (Record Drawing)

DATE August 06, 2009

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LEGEND AND ABBREVIATIONS:

EAC	EDGE AC PAVEMENT
BFP	REDUCE PRESSURE BACKFLOW PREVENTER
WM	WATER METER
HTEL	HAWAIIAN TEL HANDHOLE
— — tb —	TOP BANK
— — bb —	BOTTOM BANK
WMH	WATER MANHOLE
10	CONTOUR
sp.2	EXISTING SPOT ELEVATION
	COCONUT TREE

NOTES FOR TOPOGRAPHIC FEATURES:

1. ELEVATION DATUM = MEAN SEA LEVEL.
2. 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. UNDERGROUND UTILITIES SHOWN HEREON ARE FOR INFORMATION ONLY, HAVING BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES, BUT FROM OTHERS NOT CONNECTED WITH THIS COMPANY. THEREFORE, NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.

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LAND SURVEYORS

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SUITE 201
WAILUKU, MAUI, HAWAII
PHONE No.: 242-6861

CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

EXISTING TOPOGRAPHY

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T.M.K.:(2)4-3-03: 96
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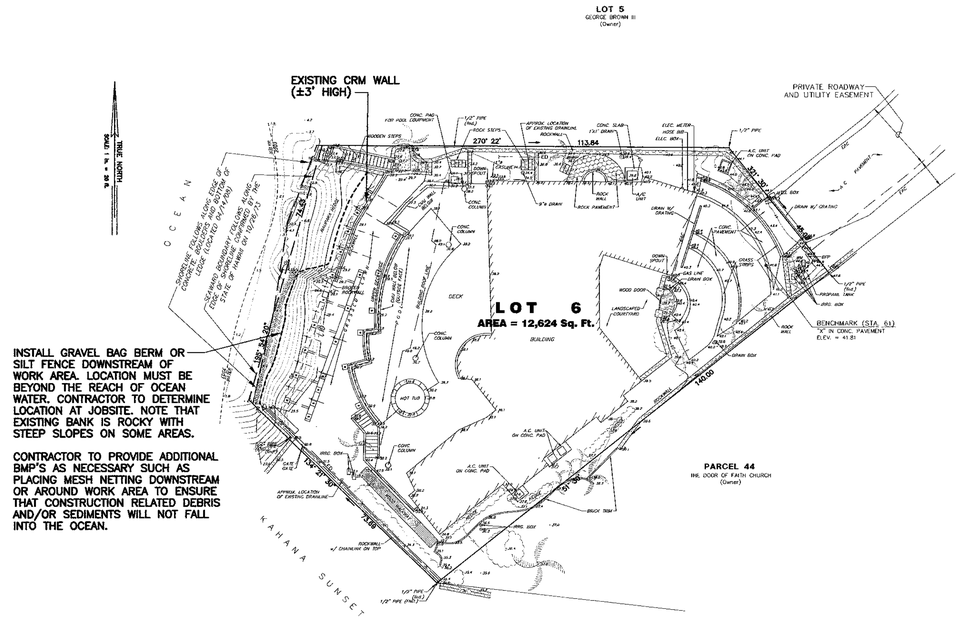
DRAWN BY: R.J.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.: 08-019

SHEET C-1 OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" J.E./R.J.M./N.D.
Z:\2008\08-019\LUCAS-EXTOPO.dwg 24-SEP-2008 Revised BY:R.J.M

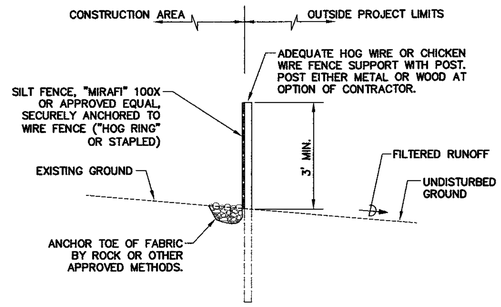


BMP PLAN

SCALE: 1"=20'

20 10 0 20 40

GRAPHIC SCALE IN FEET



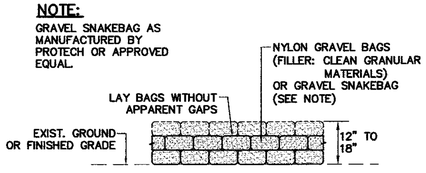
MAINTENANCE NOTES:

1. SILT FENCES OR FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON THE SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

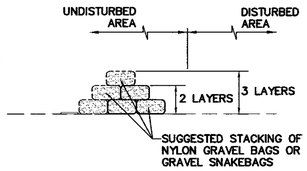
TYPICAL INSTALLATION - SILT FENCE

NOT TO SCALE

NOTE:
GRAVEL SNAKEBAG AS MANUFACTURED BY PROTECH OR APPROVED EQUAL.



ELEVATION



SECTION

PLACEMENT OF TEMPORARY GRAVEL BAG BERM

NOT TO SCALE

AS-BUILT (Record Drawing)

DATE August 06, 2009

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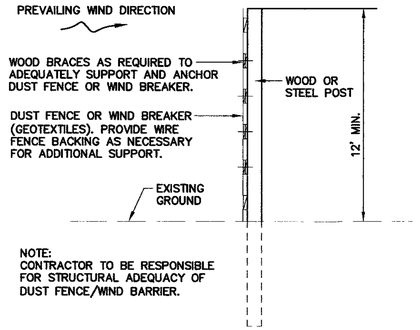
GRADING NOTES:

1. CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE DEVELOPMENT SERVICES ADMINISTRATION TWO (2) WEEKS PRIOR TO COMMENCEMENT OF ANY GRADING OR GRUBBING.
2. CONTRACTOR SHALL BE REQUIRED TO SUBMIT A SATISFACTORY GRADING WORK METHOD TO MINIMIZE DUST POLLUTION BEFORE A GRADING PERMIT IS ISSUED.
3. ALL GRADING OPERATIONS SHALL CONFORM WITH APPLICABLE PROVISIONS OF THE "WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS" CONTAINED IN THE STATE OF HAWAII PUBLIC HEALTH REGULATIONS, STATE DEPT. OF HEALTH ON WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS AND THE COUNTY GRADING ORDINANCE.
4. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE AT ALL TIMES, INCLUDING WEEKEND AND HOLIDAYS. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATION OF THE STATE DEPARTMENT OF HEALTH AND GRADING ORDINANCE.
5. THE CONTRACTOR SHALL REMOVE ALL SILTS AND DEBRIS RESULTING FROM HIS WORK. THE COST INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE DIRECTOR OF DPWEM (COUNTY OF MAUI) SHALL BE PAYABLE BY THE CONTRACTOR.
6. CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT AN APPROPRIATE SITE. THE CONTRACTOR SHALL INFORM THE DIRECTOR OF DPWEM OF THE LOCATION OF THE DISPOSAL SITES. THE DISPOSAL SITE SHALL ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
7. APPROXIMATE:
   EXCAVATION = _____C. Y.
   EMBANKMENT = _____C. Y.
   AREA = _____ACRES
   FOR GRADING PERMIT PURPOSES ONLY

UTILITY LINES, PIPES, SERVICES AND APPURTENANCES:

1. THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE AND WERE DETERMINED FROM AVAILABLE PLANS WITHIN THE PROJECT AREA. THEREFORE, THE LOCATION AND/OR DEPTH OF THESE UTILITIES ARE NOT GUARANTEED BY THE CONSULTANTS NOR BY THE OWNER. THE CONTRACTOR SHALL VERIFY THESE INFORMATION BY TONING, HANDDIGGING, ETC. PRIOR TO STARTING EXCAVATION WORK. IN ADDITION, THE CONTRACTOR SHALL CONTACT AND COORDINATE WORK INVOLVING OR AFFECTING THE EXISTING UTILITIES WITH THE PROPER AUTHORITIES, BOTH PUBLIC AND PRIVATE, TO MINIMIZE DAMAGES AND DISRUPTION TO SERVICE. THE CONTRACTOR SHALL SEE TO IT THAT HIS WORKMEN OR OPERATORS SHALL BE APPRISED OF THE UTILITIES EXISTENCE AND LOCATION.
2. ANY UTILITIES, WHETHER SHOWN OR NOT ON THE CONTRACT PLANS, THAT THE CONTRACTOR ENCOUNTERS DURING THE PROGRESS OF THE WORK, SUCH AS TELEPHONE DUCTS, ELECTRIC DUCTS, WATER LINES, SEWER LINES, ELECTRIC LINES, GAS LINES AND DRAINAGE PIPES, SHALL NOT BE DISTURBED OR DAMAGED UNLESS OTHERWISE INSTRUCTED IN THE PLANS AND SPECIFICATIONS. IN THE EVENT THE UTILITIES ARE DAMAGED OR DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD LIABLE FOR THE DAMAGED OR DISTURBED UTILITIES. THE CONTRACTOR SHALL REPAIR THE DAMAGED OR DISTURBED UTILITIES TO THE EXISTING CONDITIONS AT NO COST TO THE OWNER. ANY DAMAGE CLAIMS DUE TO THE DISRUPTION OF SERVICE CAUSED BY THE UTILITIES BEING DAMAGED SHALL BE PAID BY THE CONTRACTOR WHO SHALL SAVE HARMLESS THE OWNER AND CONSULTANTS FROM ALL SUITS, ACTIONS OR CLAIMS OF ANY CHARACTER BROUGHT ON ACCOUNT OF SUCH DAMAGES.
3. THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES PRIOR TO START OF CONSTRUCTION TO COORDINATE THE WORK TO BE DONE BY THE UTILITY'S OWN FORCES IN ORDER THAT THESE WORKS MAY PROCEED IN A REASONABLE MANNER AND WILL NOT DELAY THE PROGRESS OF THE CONSTRUCTION. ALSO, TO OBTAIN FROM THEM ANY INFORMATION PERTAINING TO EXISTING UTILITIES THAT WILL EITHER SUPPLEMENT THE INFORMATION SHOWN ON THE PLANS OR WILL CORRECT ANY SUCH INFORMATION THAT MAY BE IN ERROR.
4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL STRUCTURES, UTILITIES, ETC., PRIOR TO START OF ANY WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ANY CHANGES SHALL BE MADE IN ACCORDANCE WITH HIS INSTRUCTIONS. STARTING WORK ON THE PARTICULAR ACTIVITY SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR AGREES THAT THE EXISTING LOCATION ARE ESSENTIALLY CORRECT AS SHOWN.



MATERIALS AND CONSTRUCTION FOR WIND BREAKER AND DUST FENCE TO BE IN ACCORDANCE WITH NORMAL CONSTRUCTION PRACTICES.

TYPICAL INSTALLATION DUST FENCE/ WIND BREAKER

NOT TO SCALE

NOTE:
CONTRACTOR TO DETERMINE IN THE FIELD THE EXACT LOCATION OF DUST FENCE AND WIND BREAKER TO PROVIDE MAXIMUM PROTECTION.

SOIL EROSION AND DUST CONTROL NOTES:

A. PERMITTEE NOTES TO CONTROL DRAINAGE AND SOIL EROSION:

1. CONTROL DUST BY MEANS OF WATER TRUCKS OR BY INSTALLING TEMPORARY SPRINKLER SYSTEMS OR BOTH IF NECESSARY.
2. GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY AND FOR THE WEEKEND AND HOLIDAYS.
3. ALL EXPOSED AREAS SHALL BE PAVED, GRASSED, OR PERMANENTLY LANDSCAPED AS SOON AS FINISHED GRADING IS COMPLETED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR THE WATER NECESSARY FOR DUST CONTROL AND IRRIGATION PURPOSES.
5. CONTRACTOR TO CONSTRUCT TEMPORARY DIVERSION DITCHES OR SWALES AWAY FROM GRADED AREAS TO NATURAL GROUND OR DRAINAGEWAYS DURING CONSTRUCTION.
6. CONTRACTOR SHALL SUBMIT A SATISFACTORY SOIL EROSION CONTROL PLAN TO MINIMIZE SOIL EROSION PRIOR TO AN ISSUANCE OF A GRADING PERMIT. EROSION CONTROL MEASURES SHALL BE IN COMPLIANCE WITH SECTION 20.08.035 OF THE MAUI COUNTY CODE (ORD. NO. 2684). SEE ALSO GRADING NOTES NO. 2.
7. THE FOLLOWING ADDITIONAL MEASURES SHALL BE TAKEN TO CONTROL SOIL EROSION DURING THE SITE DEVELOPMENT PERIOD:
   a. MINIMIZE TIME OF CONSTRUCTION.
   b. RETAIN EXISTING GROUND COVER UNTIL LATEST DATE TO COMPLETE CONSTRUCTION.
   c. EARLY CONSTRUCTION OF DRAINAGE CONTROL FEATURES.
   d. USE TEMPORARY AREA SPRINKLERS IN NON-ACTIVE CONSTRUCTION AREAS WHEN GROUND COVER IS REMOVED.
   e. STATION WATER TRUCK(S) ON SITE DURING CONSTRUCTION PERIOD TO PROVIDE FOR IMMEDIATE SPRINKLING, AS NEEDED, IN ACTIVE CONSTRUCTION ZONES (WEEKENDS AND HOLIDAYS INCLUDED).
   f. ALL GRADED AREAS, UNLESS TO PAVED, SHALL BE PROVIDED WITH SOIL EROSION CONTROL MATTING AND BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.
   g. INSTALLATION OF SILT AND DUST CONTROL FENCE. SILT FENCE CAN BE AUGMENTED BY PROVIDING CRUSHED ROCK BERMS WRAPPED IN GEOTECH FABRIC.
8. THE CONTRACTOR IS THE SOLE PARTY RESPONSIBLE FOR THE ADEQUACY OF ALL TEMPORARY CONTROL MEASURES TO PROTECT THE WORK FROM THE EFFECTS OF DUST AND EROSION. HE SHALL BE RESPONSIBLE FOR RESPONDING TO COMPLAINTS FROM NEIGHBORING PROPERTIES AND WILL PROVIDE ADDITIONAL MITIGATION MEASURES AS NECESSARY AT NO ADDITIONAL COST TO OWNER.
9. OIL OR PETROLEUM-BASED PRODUCTS SHALL NOT BE USED FOR DUST CONTROL.
10. STORM WATER CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO CONSTRUCTION AND SHALL REMAIN OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD OR UNTIL PERMANENT CONTROLS ARE IN PLACE.
11. DISCHARGES ASSOCIATED WITH THE OPERATION AND MAINTENANCE OF EQUIPMENT SHALL BE FIELD MONITORED BY THE CONTRACTOR. ANY MECHANICAL AND HYDRAULICS FLUID LEAKAGE SHALL BE REPAIRED AS SOON AS IT IS IDENTIFIED AND LOCATED. LEAKAGE OF MECHANICAL FLUIDS SHALL BE CONTAINED, PROPERLY DISPOSED AND NOT ALLOWED TO IMPACT THE OCEAN.
12. PRIOR TO ISSUANCE OF THE GRADING PERMIT, THE CONTRACTOR SHALL MEET WITH THE DEVELOPMENT SERVICES ADMINISTRATION AND PROVIDE INFORMATION ON THE SOURCE OF WATER FOR DUST CONTROL, AND JUSTIFY THE NUMBER OF WATER TRUCKS TO BE USED FOR THE CLEARING, GRUBBING AND LOADING OPERATIONS.
13. IF THE CONTRACTOR IS NOT ABLE TO SATISFACTORILY CONTROL DUST EMISSIONS FROM THE PROJECT SITE, ALL CONSTRUCTION WORK SHALL CEASE EXCEPT FOR WATERING AND OTHER STABILIZATION EFFORTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATELY CLEANING THE ROADWAY OF MUD OR SILT TRACKED FROM THE PROJECT SITE.

B. RECOMMENDED GENERAL SCHEDULE FOR IMPLEMENTING BMP's:

1. CONSTRUCT TEMPORARY GRAVEL ACCESS ON EXISTING ACCESS EASEMENT 1.
2. ERECT SILT AND DUST FENCE.
3. CONSTRUCT DRAINAGE BASIN AND OTHER TEMPORARY SILTING PONDS WHERE FEASIBLE.
4. CONSTRUCT TEMPORARY DRAINAGE SWALES AND BERMS TO DIRECT STORM RUNOFF AWAY FROM GRADED AREAS TO NATURAL DRAINAGEWAYS OR GROUND OR TO DRAINAGE BASIN AND TEMPORARY SILTATION PONDS.
5. INSTALL DRAINAGE FACILITIES. PROVIDE SEDIMENT BARRIERS ON NEW GDI's.
6. GRADE PROJECT AREA AS PLANNED.
7. GRASS GRADED AREAS UNLESS TO BE PAVED. PROVIDE BIODEGRADABLE SOIL EROSION CONTROL MATTING AS REQUIRED.

C. NOTES FOR BMP's:

THE CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE "CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP's) FOR THE COUNTY TO MAUI" MAY 2001 (STD. BMP's) TO EXTENT POSSIBLE DURING THE DEVELOPMENT OF THIS PROJECT. CONTROL OF EROSION, SEDIMENT AND CONSTRUCTION WASTE MANAGEMENT WILL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE FOLLOWING SECTIONS OF THE STANDARD BMP's.

SECTION 6.10 SEEDING
SECTION 6.30 MATS, NETS AND BLANKETS
SECTION 6.31 MULCHING
SECTION 6.32 PRESERVATION OF EXISTING VEGETATION
SECTION 6.33 PROTECTION OF STOCKPILES
SECTION 6.62 SEDIMENT FENCE (SILT FENCE)
SECTION 6.70 DUST CONTROL
SECTION 6.71 GOOD NEIGHBOR BARRIERS
SECTION 6.91 SOLID WASTE MANAGEMENT
SECTION 6.92 CONCRETE WASTE MANAGEMENT
SECTION 6.93 VEHICLE FUEL AND MAINTENANCE MANAGEMENT

NOTE REGARDING DISCOVERIES OF ARCHAEOLOGICAL INTEREST:

SHOULD HISTORIC SITES SUCH AS WALLS, PLATFORMS, PAVEMENTS AND MOUNDS, OR REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATION OF CHARCOAL OR SHELLS ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DAMAGE. THE CONTRACTOR AND/OR LANDOWNER SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (243-5169, MAUI OR 692-8023, OAHU), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AN APPROPRIATE MITIGATION MEASURE, IF NECESSARY.

Tanaka ENGINEERS, INC.
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CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

CONSTRUCTION NOTES & BMP PLAN

KIRK T. TANAKA
LICENSED PROFESSIONAL ENGINEER
No. 6646-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

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

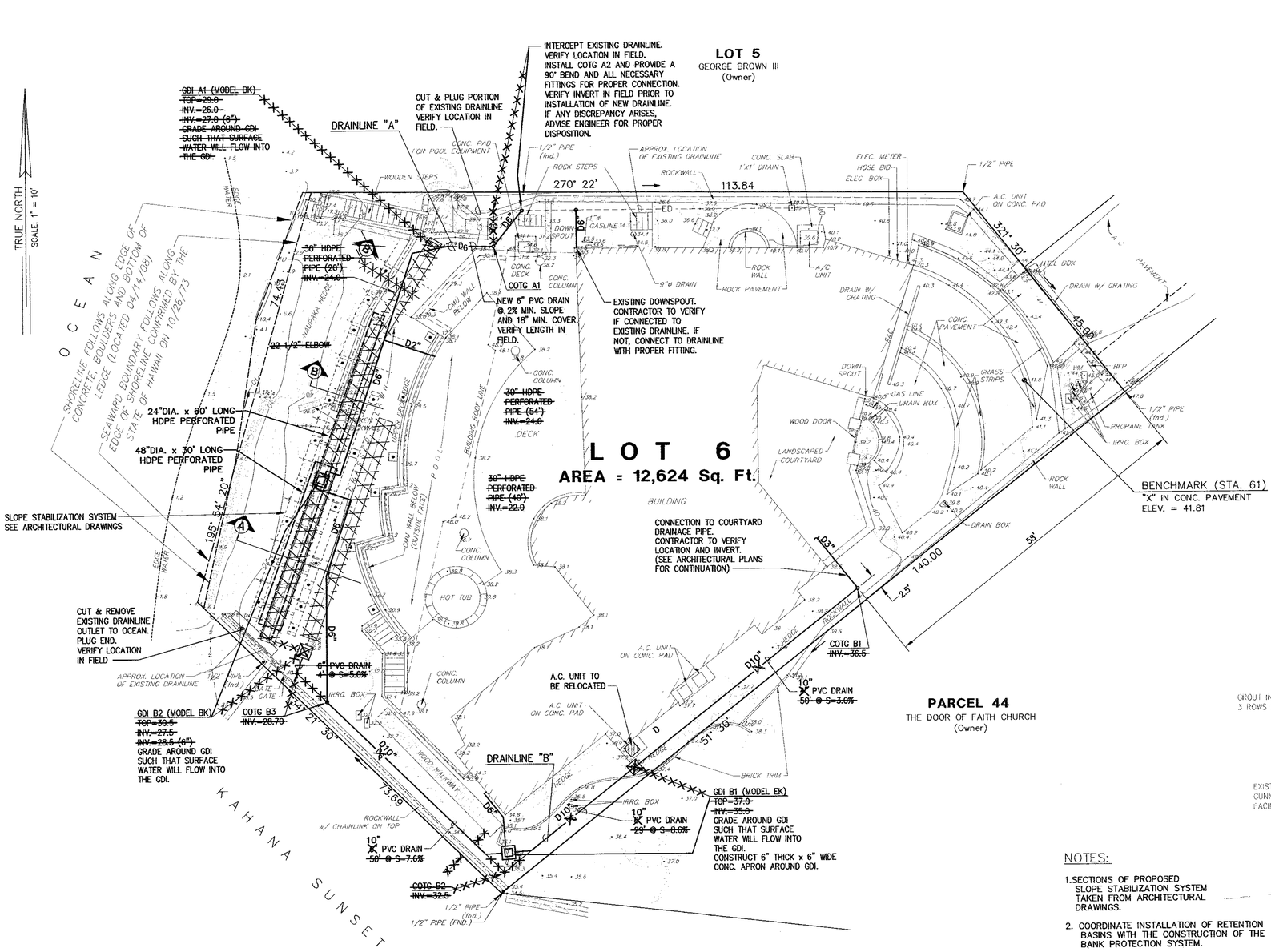
DATE : _____

REVISIONS:

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.:08-019

SHEET C-2 OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" DRAWN BY : J.E.
Z:\2008\08-019\LUCAS-BMP.dwg 24-SEP-2008 Revised BY:R.M.



DRAINAGE PLAN

SCALE: 1"=10'

10 5 0 10 20

GRAPHIC SCALE IN FEET

NOTES:

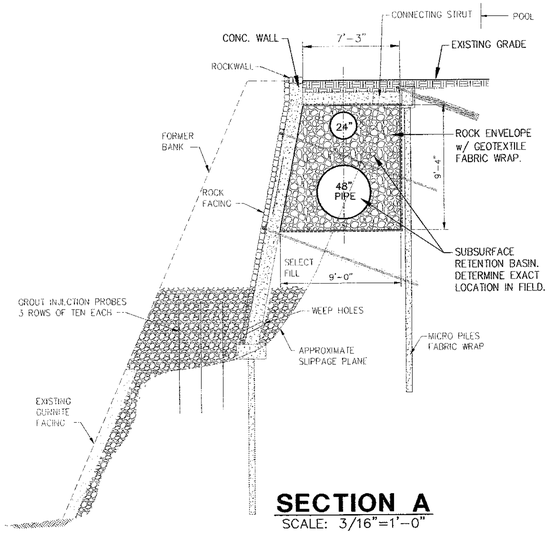
1. GDI'S:
   PRE-CAST CONCRETE DROP INLET W/STANDARD FRAME AND GRATE AS MANUFACTURED BY SANTA ROSA CAST PRODUCTS CO.
   MODEL EK: 12"x12" INLET OPENING
   MODEL BK: 16"x16" INLET OPENING

2. CONNECTION OF HOUSE DOWNSPOUTS/HOUSE PERIMETER DRAIN
   CONTRACTOR TO CONNECT EXISTING (UNLESS REMOVED) AND NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLET (IF OCCURRING) TO NEW DRAINLINES. PROVIDE PROPER FITTINGS AND ADAPTERS AS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW DOWNSPOUTS AND HOUSE PERIMETER DRAIN OUTLETS. VERIFY LOCATION OF EXISTING DOWNSPOUTS AT JOBSITE.

AS-BUILT (Record Drawing)

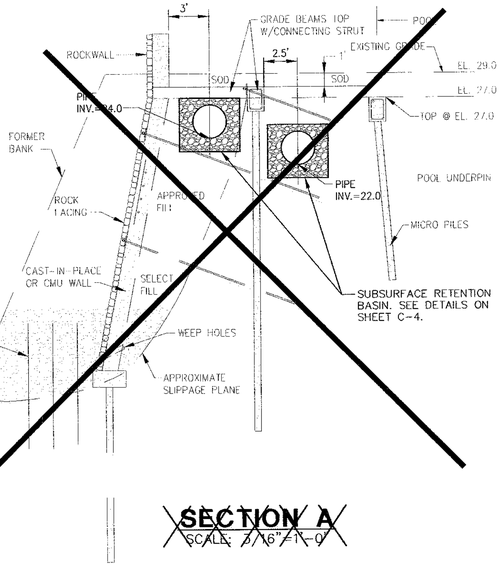
DATE 08-06-09

This Drawing has been prepared, in part, base upon information furnished by others. While this information is believed to be reliable, the Design Professional can not assure its accuracy of this As-Built drawing or for any errors or omission which may have been incorporated into it as a result.



SECTION A

SCALE: 3/16"=1'-0"

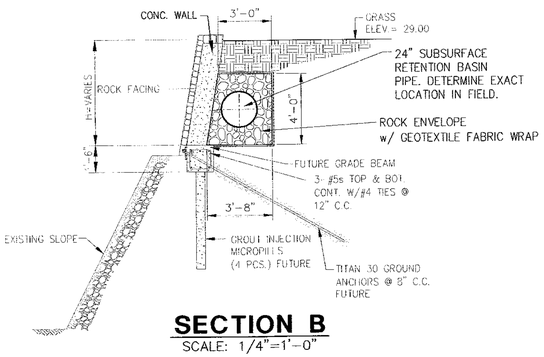


SECTION A

SCALE: 3/16"=1'-0"

NOTES:

1. SECTIONS OF PROPOSED SLOPE STABILIZATION SYSTEM TAKEN FROM ARCHITECTURAL DRAWINGS.
2. COORDINATE INSTALLATION OF RETENTION BASINS WITH THE CONSTRUCTION OF THE BANK PROTECTION SYSTEM.



SECTION B

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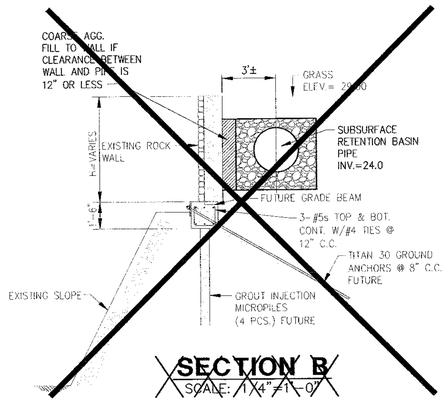

SECTION B

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

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CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

DRAINAGE PLAN

KIRK T. TANAKA
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No. 6646-C
HAWAII, U.S.A.
LICENSE EXPIRES: 04-30-10

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DATE :

REVISIONS:

08-06-09 "AS-BUILT" PLANS

T.M.K.:(2)4-3-03: 96
SCALE: AS NOTED
DESIGNED BY: R.H.
CHECKED BY: K.T.
DRAWN BY: R.J.M./J.E./N.D.
DATE: SEPT. 08, 2008
JOB No.:08-019

SHEET
C-3
OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" J.E./R.J.M./N.D.
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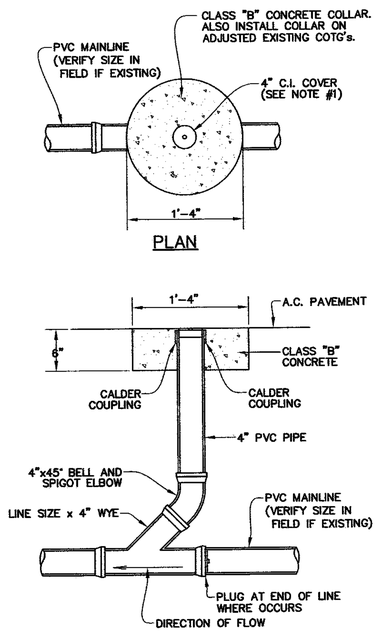
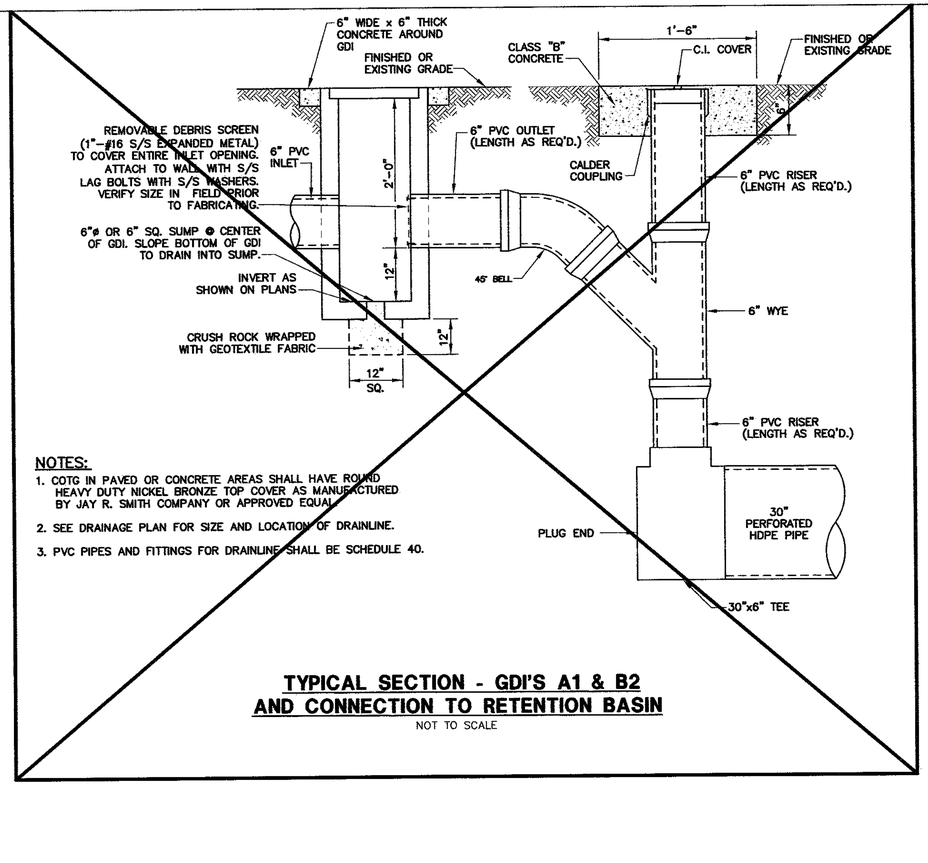


DETAIL - CLEANOUT TO GRADE (COTG)

NOT TO SCALE

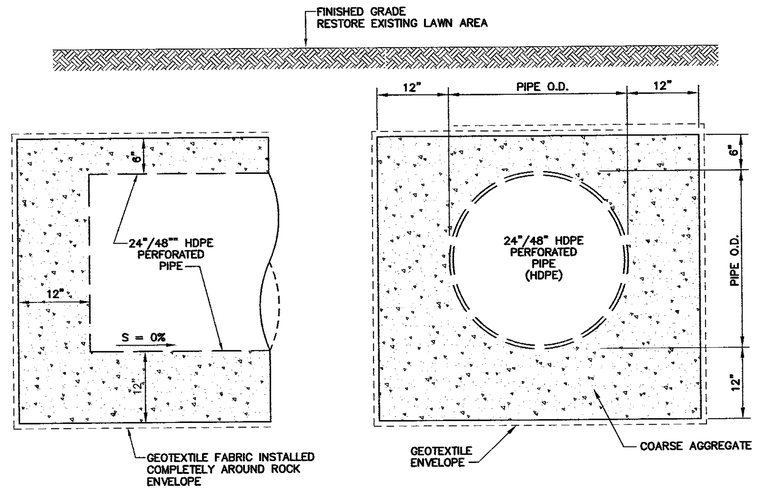


NOTES:

1. COTG IN PAVED OR CONCRETE AREAS SHALL HAVE ROUND HEAVY DUTY NICKEL BRONZE TOP COVER AS MANUFACTURED BY JAY R. SMITH COMPANY OR APPROVED EQUAL.
2. SEE DRAINAGE PLAN FOR SIZE AND LOCATION OF DRAINLINE.
3. PVC PIPES AND FITTINGS FOR DRAINLINE SHALL BE SCHEDULE 40.

TYPICAL SECTION - GDI'S A1 & B2 AND CONNECTION TO RETENTION BASIN

NOT TO SCALE



NOTES:

1. CONTRACTOR TO SUBMIT LAYOUT AND MATERIALS LIST TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. PROVIDE ALL HDPE FITTINGS AS NECESSARY.
2. A. HDPE PERFORATED PIPE: HANCOR SURE-LOK PIPE OR APPROVED EQUAL CONFORMING TO AASHTO M294 TYPE S.
   B. ROCK ENVELOPE: CONFORMING TO SUBSECTION 703.04(A)-COARSE AGGREGATE FOR PERMEABLE BASE, OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION", 2005 (HAWAII STANDARD SPECIFICATIONS).
   C. GEOTEXTILE ENVELOPE: CONFORMING TO SUBSECTION 716.03-GEOTEXTILES FOR UNDERDRAIN APPLICATIONS, OF THE HAWAII STANDARD SPECIFICATIONS.

DETAIL - SUBSURFACE RETENTION BASIN

NOT TO SCALE

AS-BUILT (Record Drawing)

DATE 08-06-09

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CONSTRUCTION PLANS FOR
LUCAS RESIDENCE DRAINAGE IMPROVEMENTS
LOT 6, HALE MALIA SUBDIVISION
AT ALAELOA, MAUI, HAWAII

MISCELLANEOUS DETAILS

KIRK T. TANAKA
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HAWAII, U.S.A.

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SHEET
C-4
OF 5 SHEETS

F.B.# 930 "File: LUCAS.crd" DRAWN BY : J.E.
Z:\DRAWI\2008\08-019\ASBUILT_LUCAS-BMP.dwg 13-AUG-2009 : Revised By:Nancy

Appendix I:
Archaeological Monitoring Documents

SCS Project Number 1027-AMP-1

AN ARCHAEOLOGICAL MONITORING PLAN FOR 0.29 ACRE PARCEL OF LAND IN NĀPILI, `ALAELOA AHUPUA`A LAHAINA DISTRICT, MAUI ISLAND, HAWAI`I [TMK: (2) 4-3-003:096]

Prepared by:
David B. Chaffee, B.A.
and
Michael F. Dega, Ph.D.

March 2009

Prepared for:
Mr. John Edwards, AIA
Edwards Design Group, Inc.
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SCIENTIFIC CONSULTANT SERVICES Inc.

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INTRODUCTION

Scientific Consultant Services, Inc. (SCS) has prepared this Archaeological Monitoring Plan (AMP) for Edwards Design Group, Inc, and their client Ms. Marcia Lucas (landowner), in advance of coastal hazard mitigation measures at 11 Hale Malia Place, `Alaeloa Ahupua`a, Lahaina District, Maui Island, Hawai`i [TMK: (2) 4-3-003:096] (Figures 1 and 2).

The project area is located along Nāpili Bay, an area approximately 1.5 miles south of the resort community of Kapalua. This AMP is being prepared in conjunction with the issuance of a HRS 343 Environmental Assessment (EA), Special Management Area Use Permit (SMA), and Shoreline Setback Variance (SSV) due to the catastrophic failure of a section of the property slope and a preexisting seawall roughly 40 feet in length and 15 to 20 feet in height damaged by heavy rainfall and high surf in December of 2007. Appendix A is included to show photographs of the existing damage and the reason for these permitting processes. Photographs courtesy of Chris Hart & Partners.

This Monitoring Plan will ensure that if human remains are identified during subsurface work, appropriate and lawful protocol concerning the Inadvertant Discovery of Human Remains (pursuent to §13-300-40a, b, c, HAR) is followed. Archaeological Monitoring "shall entail the archaeological observation of, and possibly intervention with, on-going activities which may adversely affect historic properties" (§13-279-4, HAR). Thus, Monitoring will also ensure that significant cultural resources, if identified on the property, are documented through profiles and plan view maps, possibly sampled through excavation of exposed features, and evaluated for their historical significance. As will be made aware to the construction team, the archaeological Monitor has the authority to halt any ground disturbing activities during this project in the immediate area of a find in order to appropriately carry out the provisions of this plan.

This AMP will require the approval of the State Historic Preservation Division (SHPD) prior to any land altering activit ies on the parcel. The following text provides more detailed information on the reasons for monitoring, potential site types to be encountered during excavation, monitoring conventions and methodology for both field and laboratory work, and discusses curation and reporting of cultural material recovered.

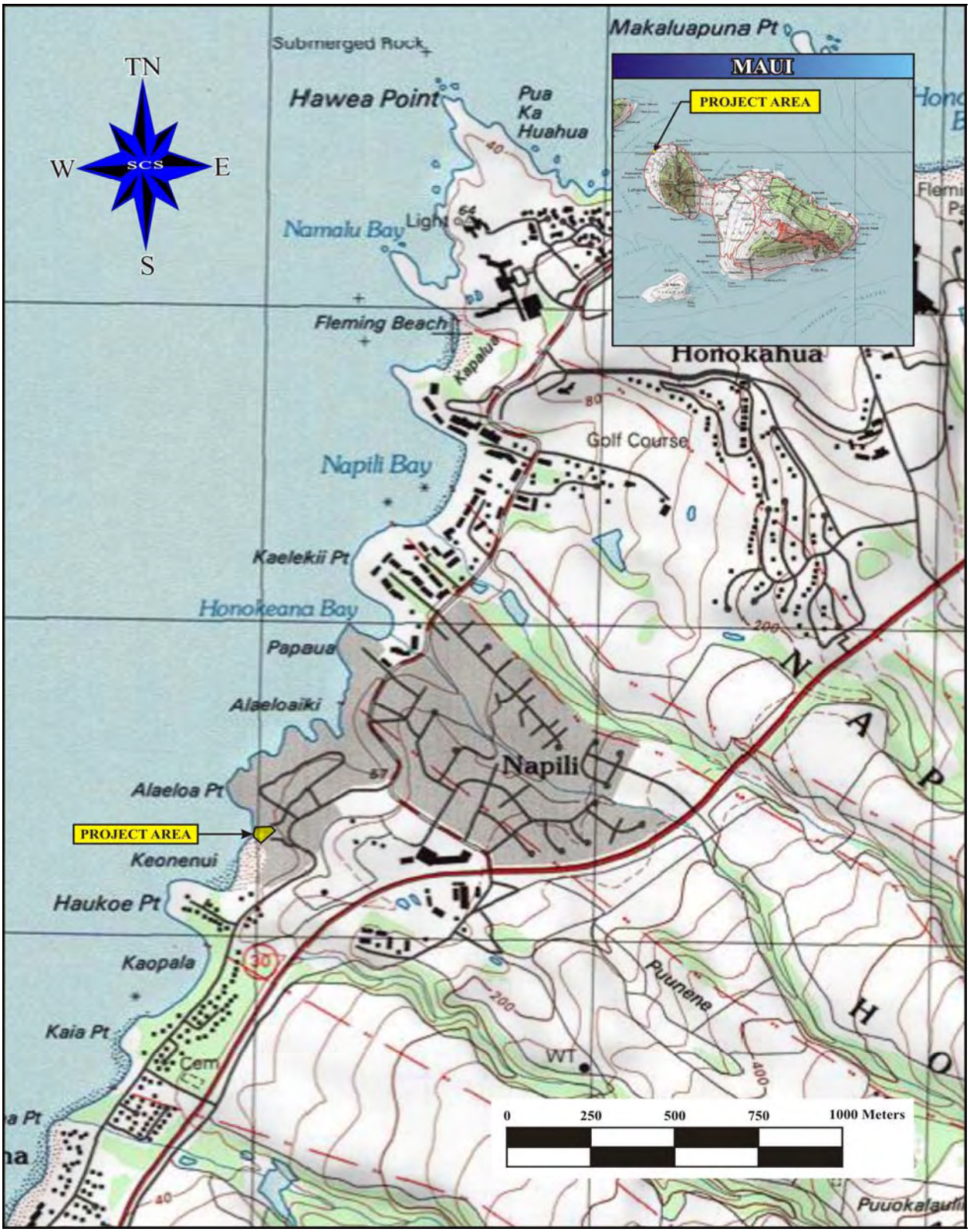

Figure 1: USGS Quadrangle Map Showing Project Area Location.

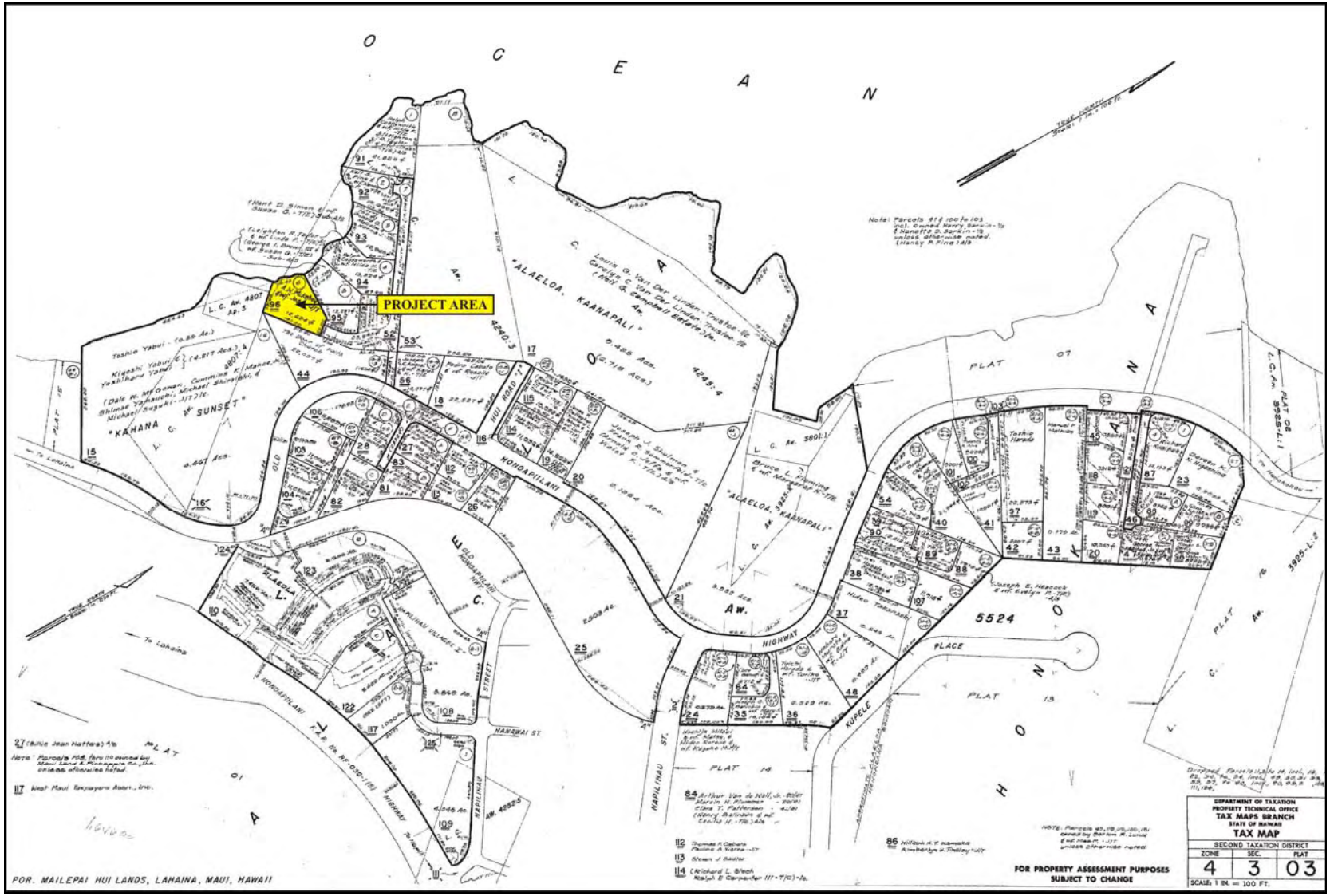

Figure 2: Tax Map Key [TMK] Showing Project Area Location (TMK: (2) 4-3-02: 25, 30, 58, 59, 104 and 105).

ENVIRONMENTAL SETTING

The project area, comprising 0.29 acres in Coastal Nāpili, `Alaeloa Ahupua`a, Lahaina District, Maui Island (see Figure 1). Napili is situated on the northwestern shore of Maui. The project area is beachfront property along the Nāpili Bay.

In general, the terrain slopes moderately down from the Lower Honoapiilani Road (east), at approximately 25 m (80 ft) above mean sea level (amsl), to the seashore *pali* (west), at approximately 3–12 m (10–40 ft) amsl. Much of the project area consists of a current residence located on the parcel.

CLIMATE AND VEGETATION

Coastal Nāpili, in general, is classified as a '*Kiawe* and Lowland Shrubs' vegetation zone, and common, local plants include: *kiawe* (*Prosopis pallida*), *koa haole* (*Leucaena glauca*), finger grass, and *pili* grass, (the latter is a native species) (Armstrong 1983). In traditional times, *i.e.*, before the historic-era introduction of *kiawe* and *koa haole*, the project area was probably covered with indigenous grasses (Kirch 1973a). Today, vegetation in the project area includes beach *naupaka* (*Scaevola taccada*), coconut palm (*Cocus nucifera*), beach heliotrope (*Heliotropium* sp.), plumeria (*Plumeria acuminate*), *wiliwili* (*Erythrina sandwicensis*), yellow hibiscus (Family, *Malvaceae*), and bougainvillea (*Bougainvillea spectabilis*) as well as various other introduced tropical flowering plants and extensive grassy lawns.

The project area receives an average amount of precipitation, compared with other settled parts of Maui and the Hawaiian Islands, in general. According to Armstrong (1983), mean annual rainfall in the Nāpili area is approximately 76 cm (30 in.). Giambelluca *et al.* (1986) report *median* annual rainfall for the area of approximately 100 cm (40 in.). Part of the discrepancy between these rainfall data is probably due to the steeply increasing precipitation gradient east and southeast of the project area, as one moves up into the relatively wet flanks of West Maui. Regardless of which of these (30 or 40 in.) numbers is more typical of the local rainfall, a tremendous amount of through-flowing water from the West Maui uplands would have been available in traditional times in the Honokahua Stream and the (smaller, but much closer) Napili Stream.

SOILS

According to Foote *et al.* (1972), soils in the project area are classified as beaches (BS), Kahana silty clay (KbB) and rough broken stony land (rRS). Beaches (BS) consist mainly of light-colored sands derived from coral and seashells; occur as sandy, gravelly, or cobbly areas.

They are washed and rewashed by ocean waves. Kahana silty clay, with 3 to 7 percent slopes (KbB) has slow runoff and the erosion hazard is slight. This soil could be used for sugarcane, pineapple, and homesites. Rough broken and stony land (rRS) consists of very steep, stony gulches. The local relief is generally between 25 and 500 feet. Runoff is rapid, and geologic erosion is active. Elevations range from nearly sea level to 3,000 feet. This soil material is generally less than 20 inches deep over saprolite or bedrock, with about 3 to 25 percent of the surface covered with stones, and few rock outcrops.

Due to the presence of these sandy deposits throughout the project area, and, due to the well-documented presence of traditional Native Hawaiian burials and other archaeological resources in the general Nāpili area, future construction related ground altering activities must be subjected to appropriate Archaeological Monitoring.

PREVIOUS ARCHAEOLOGY AND POTENTIAL SITE TYPES TO BE ENCOUNTERED

The primary reason for Archaeological Monitoring, given the geographic and historic context of the project area, is the potential for the inadvertent discovery of Native Hawaiian burials and, to a lesser extent, other cultural resources, particularly traditional sites and features. This issue is particularly sensitive for the current parcel, given its proximity to the Honokahua Burial Site (State Site 50-50-01-1342), located approximately 1.0 km, or 0.6 miles, to the east-northeast. This burial site is one of the largest Native Hawaiian burial grounds documented within the state. The current project area is also sensitive because it consists of both beach sands and Kahana silty clay (noted for being historic locations of pineapple and sugarcane cultivation, and homesites) in a coastal/near-coastal setting. Coastal geomorphological and sedimentary conditions always require special attention in Hawai`i because they frequently yield unmarked, traditional Native Hawaiian burials (*cf.* Kirch 1985). Two burial features, containing at least three individuals, have been documented in Archaeological Monitoring (Fredericksen 2001) on a nearby land parcel (*i.e.* the Coconut Grove condominiums at TMK: (2) 4-2-004:026).

The first archaeological survey done on Maui was conducted by Winslow Walker in 1930. Walker (1931) focused on monumental sites, mostly coastal *heiau*, during his early survey of Maui. He noted four sites in the general project area. Walker's sites consisted of a destroyed *heiau* at Kahana point (Site 50-50-01-12), a *heiau* that was washed away at Mailepai Point (Site 50-50-01-13), and a destroyed *heiau* named Hihiho, the latter which was located along a country road near Kalaeokaea Point (Site 50-50-01-14). Another *heiau* was located on the bluff between Alaeloa Point and Papaua Point (Site 50-50-01-15) (Walker 1931).

A fair number of archaeological investigations have been conducted over the years in Napili in Lahaina District, Maui, resulting almost unanimously in the documentation of both pre-contact and historic deposits. The majority of these cultural deposits were identified as burials, habitation plots, or refuse pits. Classes of artifacts midden found in association with these features included coral abraders, basalt flakes, volcanic glass debitage, and marine shell debris.

North of the project area, remnants of a pre-historic *ala loa* (trail) have been recorded. Traditional accounts attribute the construction of this trail to chief Kiha-a-Pi'ilani during the early 1500s (Sterling 1998). In 1973 the Bishop Museum conducted archaeological research at Hawea Point. A site complex (Site 50-50-01-1346) comprised of eight features was identified and recorded. This site was interpreted to be a temporary Hawaiian settlement for marine exploitation and was dated to *c*. A.D. 1500 (Kirch 1973a) (Figure 3). Additional sites were located and recorded by Kirch (1973a), including a cave shelter on the cliff face of Hawae Point (Site 50-50-01-1347) and a stone terrace platform, which was located on a promontory overlooking Oneloa Bay (Site 50-50-01-1348). During this survey the Honokahua Burial Site (Site 50-50-01-1342) was first recorded. Several additional sites were located by Kirch at Fleming Beach Park along Honokahua Stream; these included a house site, terrace, enclosure, and midden deposits (Site 50-50-01-1345).

Archaeological work conducted by Griffin and Lovelace (1977) in conjunction with the realignment of Honoapi`ilani Road was concentrated in the gulches of Honokowai, Mahinahina, Kahana, Mailepai, and Alaeloa. The survey resulted in the identification of four sites, a buried midden deposit, a trail segment, a stone wall, and three retaining wall segments. It was concluded that this site represented a prehistoric, repetitively occupied, temporary habitation site (Griffin and Lovelace 1977). In Kahana, work conducted in conjunction with U.S. Department of Agriculture's Soil Conservation Service to create a desilting basin resulted in the identification of a prehistoric inland agricultural area that had been reused during historic times for commercial sugarcane and pineapple cultivation (Walker and Rosendahl 1985).

North of the project area, multiple studies in conjunction with the development of the Ritz Carlton Kapalua Resort have resulted in the identification of eight sites and the expansion of the Honokahua Burial Area (Site 50-50-01-1342) (Figure 4). Interim results reported the site as a multi-component burial site with over one thousand prehistoric burials. Radiocarbon analysis by Donham (1989) suggests that the site was used from as early as A.D. 600.

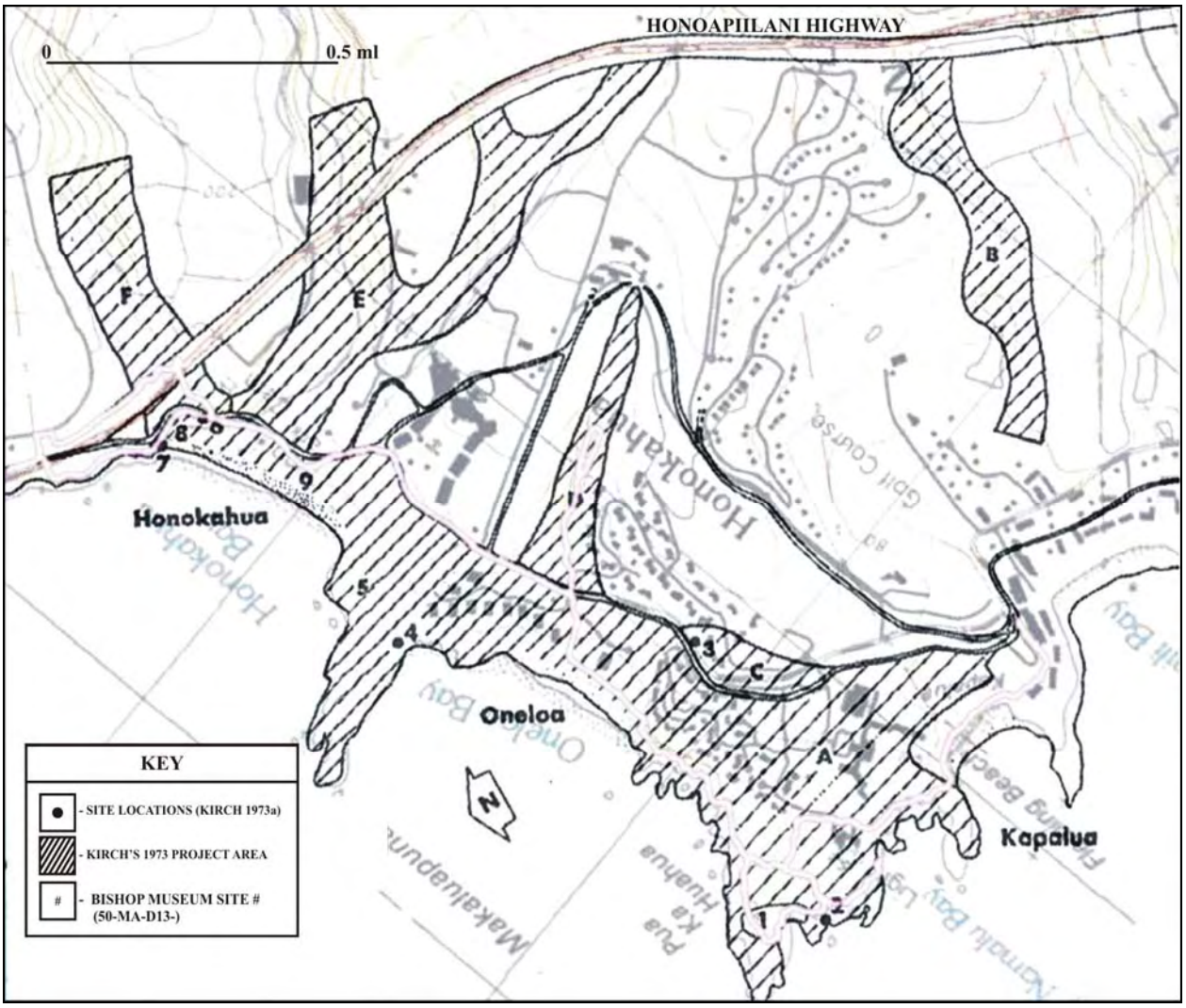

Figure 3: Honolua Development Area Surveyed by Kirch (1973a), with Identified Sites.

An Inventory Survey was conducted to the north of the current project area in January 2005 (Monahan 2005) (see Figure 4). Subsurface excavations (20 backhoe trenches) led to the identification of one significant site (SIHP No. 50-50-01-5565), a buried cultural layer located in sandy deposits between 80 to 150 cm (31.5–59.1 in.) below the ground surface, on the prominent rocky point just north of Kapalua Bay Beach. This site consists of charcoal-stained sediment, diffuse and concentrated charcoal, fire-cracked rock, and two lithic fragments. A radiocarbon date of 210 ± 60 BP was obtained from this buried layer and when calibrated dates ranging from A.D. 1610 to 1860.

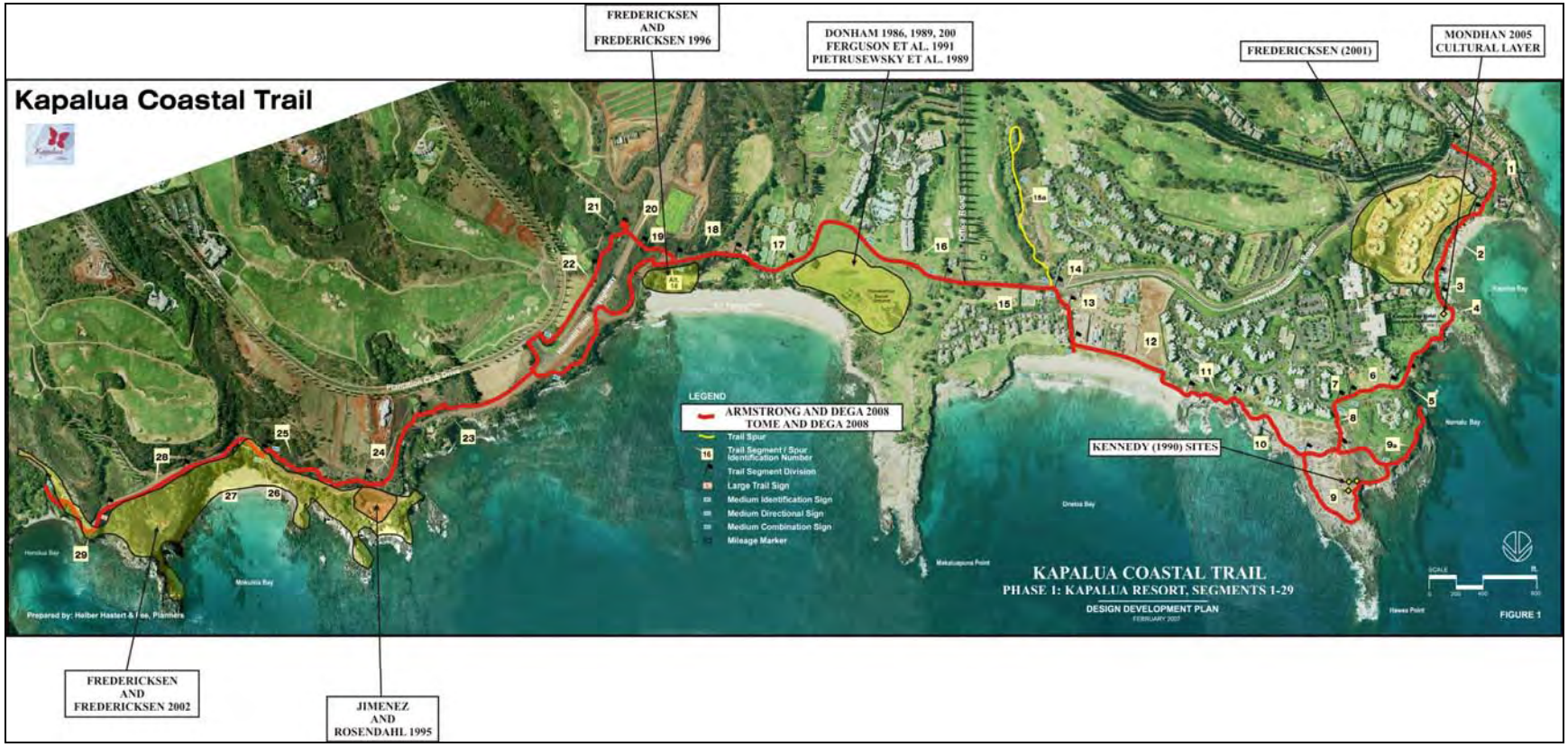

Figure 4: Previous Archaeology in Napili Along the Kapalua Coast Trail.

Kirch (1973a) conducted the first systematic archaeological survey near the project area. Maui Land and Pineapple contracted the B.P. Bishop Museum to conduct the survey in advance of development in the Honolua Development Area. This study extends from Kapalua to Honokahua, and includes mostly seashore and near-shore lands with some (limited) *mauka* uplands.

Kirch documented a total of nine, mostly traditional, archaeological sites in the Honolua Development Area. Most of these were located in and around Honokahua, including the Honokahua Burial Site (Bishop No. D13-9; State Site No. 50-50-01-1342). No sites were documented in the current project area, but no subsurface testing (excavation) was conducted on the subject parcel either. Two nearby sites identified by Kirch included:

- a small, temporary fishing village at TMK: 4-2-04: por. 10 & por. 30 (SIHP No. 50-50-01-1346, Bishop No. D13-1), about 1.2 km (0.75 miles) north of the current project area; the site consisted of eight features, including several small shelters, one *ahu* (stone cairn), and midden (see Figure 3, site 1).

- a stone platform (SIHP No. 50-50-01-1348, Bishop No. D13-3), with an associated low wall, on a promontory 0.85 km, (0.5 miles.) northeast (and upslope) of the eastern boundary of the subject parcel (see Figure 3, site 3).

A total of 4.0 m^2 was excavated at the small, temporary fishing village (SIHP No. 1346) located north of the current project area (Kirch 1973b). Several formal tools were recovered in excavation, including one unfinished bone fishhook, one bone fishhook blank, one shell adze fragment, ten coral abraders, one sea urchin abrader, and three dog tooth ornaments. Midden was recovered from the surface and from excavation, and consisted of marine shells, sea urchins, fish bone, and *kukui* nut shell (*Aleurites moluccana*). One radiocarbon determination of 327 ± 80 B.P. was obtained for a buried *imu* (cooking pit). Calibration yielded three possible calendric dates, indicating a maximum (*i.e.*, conservative) range for occupation of the site of between roughly A.D. 1400 and 1700.

Two additional, brief archaeological surveys/field inspections were conducted at the parcel (TMK: 4-2-04: 30) in which Kirch (1973a, b) documented the small, temporary fishing village and the cliff-face rockshelter. Rosendahl (1988a) did not locate any additional sites, but Kennedy (1990) recorded three additional sites, all stacked-rock features, presumably dating from traditional times (*i.e.*, a low, soil-filled platform, an L-shaped alignment, and a C-shaped structure) (see Figure 3). No excavation was conducted at these sites.

Archaeological Inventory Survey (Fredericksen *et al.* 1994, 1996) and Archaeological Monitoring (Fredericksen 2001) were conducted on the 12.2-acre parcel (TMK: 4-2-04: 26) just north of the current project area (see Figure 4). The survey area was extensively excavated with backhoe trenches and hand-dug units. No significant sites or features were identified in the Inventory Surveys, although one area of buried sand dune deposits was recommended for Monitoring. Three sites were identified:

- Site 50-50-03-4815 was a buried (subsurface) cultural layer, interpreted as a probable habitation site, approximately 15 cm thick, located approximately 1.5 m below the ground surface, containing three traditional artifacts (coral abrader, bone fishhook blank, and utilized basalt flake), shell midden, fire-cracked rock, and a hearth; one radiocarbon date indicated a later pre-Contact occupation (A.D. 1490–1665, 2 Sigma);

- Site –4814 was a historic burial feature containing two individuals, located approximately 1.7–1.9 m below the ground surface, and cutting into and through the cultural layer (-4815); the burial feature consists of a stone-lined crypt, probably topped with a wooden cover; stratigraphic evidence and artifact style (of the nails used to construct the overlying cover) suggest that the burial feature dates from the late 19th to early 20th century;

- Site –5059 consisted of a scatter of fragmentary human remains, representing one or more individuals, in previously disturbed sediments; the author also reports several oral accounts from local informants suggesting that graves were encountered and destroyed during the construction of the Kapalua Bay Hotel in the 1970s (footnotes 6 & 7, Fredericksen 2001).

In sum, Archaeological Monitoring may lead to the identification of existing prehistoric subsurface cultural deposits associated with temporary or permanent habitation areas, human remains (isolated find spots or *in situ*, articulated individuals), and historic remains associated with agriculture in the area. The presence of natural sand deposits in portions of the project area indicates that buried cultural layers and burials may be identified during Monitoring.

MONITORING CONVENTIONS AND METHODOLOGY

This AMP has been prepared in accordance with DLNR/SHPD administrative "Rules Governing Standards for Archaeological Monitoring Studies and Reports" (§ 13-279, DLNR-SHPD 2002). Archaeological Monitors will adhere to the following guidelines during monitoring:

1. A qualified archaeologist intimately familiar with the project area and the results of previous archaeological work conducted in the Napili area will monitor subsurface construction activities on the parcel. One archaeologist will be required per each piece of ground altering machinery in use. No land altering activities will occur on the parcel until this AMP has been accepted by SHPD. There will be one archaeologist on-site for each piece of ground altering machinery being utilized. Monitoring for this project will commence during the destruction and removal of building foundations, footings, and other in-place structures due to the potential for identifying significant cultural deposits beneath these structures.

   If significant deposits or features are identified and additional field personnel are required, the archaeological consultants conducting the Monitoring will notify the contractor or representatives thereof before additional personnel are brought to the site.

2. As per the recommendation of the Maui/Lana`i Island Burial Council, there will be one archaeological monitor per each piece of machinery conducting excavation, or other ground altering activities, within the project area. The coastal location of the subject property and the presence of a beach sand deposit suggest the project area may be a culturally sensitive area.

3. If features or cultural deposits are identified during Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the significant location so that the cultural feature(s) or deposit(s) may be fully evaluated and appropriate treatment of the cultural deposit(s) is conducted. SHPD will be contacted to establish feature significance and potential mitigation procedures. Treatment activities primarily include documenting the feature/deposit through plotting its location on an overall site map, illustrating a plan view map of the feature/deposit, profiling the deposit in three dimensions, photographing the finds-with the exception of human burials, artifact and soil sample collection, and triangulation of the finds. Construction work and/or back-filling of excavation pits or trenches will only continue in the sample location when all documentation has been completed.

4. Control stratigraphy in association with subsurface cultural deposits will be noted and photographed, particularly those containing significant quantities or qualities of cultural materials. If deemed significant by SHPD and the contracting archaeologist, these deposits will be sampled, as determined by the same.

5. In the event that human remains are encountered, all work in the immediate area of the find will cease; the area will be secured from further activity until burial protocol has been completed. The SHPD island archaeologist and SHPD-Burial Sites Program (SHPD Cultural Historian) will both be immediately identified as to the inadvertent discovery of human remains on the property. Notification of the inadvertent discovery will also be made to the Maui-Lanai Island Burial Council by both SHPD Maui staff and the contracting archaeologist. A determination of

6. To ensure that contractors and the construction crew are aware of this Archaeological Monitoring Plan and possible site types to be encountered on the parcel, a brief coordination meeting will be held between the construction team and monitoring archaeologist prior to initiation of the project. The construction crew will also be informed as to the possibility that human burials could be encountered and how they should proceed if they observe such remains.

7. The archaeologist will provide all coordination with the contractor, SHPD, and any other groups involved in the project. The archaeologist will coordinate all Monitoring and sampling activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.

8. As necessary, verbal reports will be made to SHPD and any other agencies as requested.

9. Acceptance of this Archaeological Monitoring Plan will be done in writing by the SHPD within 45-days of receipt. If no written response is forwarded by the SHPD after 45-days, concurrence with this documented shall be accepted and work will proceed, pursuant to 6e-42 HRS, Chapter 13-284 HAR.

LABORATORY ANALYSIS

All samples collected during the project, except human remains, will undergo analysis at the at the laboratory of the archaeological consultants conducting the Monitoring. In the event that human remains are identified and the SHPD-Maui Lanai Island Burial Council authorizes their removal, they will be curated on Maui. Photographs, illustrations, and all notes accumulated during the project will be curated at the laboratory of the archaeological consultants conducting the Monitoring. All retrieved artifact and midden samples will thoroughly cleaned, sorted, and analyzed. Significant artifacts will be photographically recorded, sketched, and classified (qualitative analysis). All metric attributes and weights will be recorded (quantitative analysis). These data will be presented in tabular form within the final monitoring report.

Midden samples will be minimally identified to major "class" (*e.g.*, bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). All data will be clearly recorded on standard laboratory forms that include number and weight (as appropriate) of each constituent category. These counts will also be included in the final report.

Should any samples amenable to dating be collected from a significant cultural deposit, they will be prepared in the laboratory of the archaeological consultants conducting the Monitoring and submitted for specialized radiocarbon analysis. While primary emphasis for dating is placed on charcoal samples, we do not preclude the use of other material such as marine shell or nonhuman bone materials. The archaeological consultants conducting the Monitoring will consult with SHPD and the client if radiocarbon dates are deemed necessary.

All stratigraphic profiles will be drafted for presentation in the final report. Representative plan view sketches showing the location and morphology of identified sites/features/deposits will be compiled and illustrated.

CURATION

If requested by the landowner, archaeological consultants conducting the Monitoring will curate all recovered materials in the laboratory of the archaeological consultants conducting the Monitoring (except human remains) until a permanent, more suitable curation center is identified. The landowner may request to curate all recovered cultural materials once analysis has been completed. Human remains will be stored on-site in a secure location until a Burial Treatment Plan has been prepared and accepted.

REPORTING

An Archaeological Monitoring report documenting the project findings and interpretation, following SHPD guidelines for Archaeological Monitoring reports, will be prepared and submitted within 180 days after the completion of fieldwork. This time line is requested to account for any radiocarbon age determinations (typically 30-45 days) if necessary, the necessary time in preparing the report, and the 45 day deadline from submittal that SHPD allows for review.

If cultural features or deposits are identified during fieldwork, the sites will be evaluated for historical significance and assessed under State and Federal Significance Criteria. The Archaeological Monitoring report will be in draft form until accepted by SHPD and will be submitted to both SHPD and the client.

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APPENDIX A: PHOTOGRAPHS OF THE SEAWALL COLLAPSE

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
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

April 9, 2009

LOG NO: 2009.0307
DOC NO: 0904PC27
Archaeology

Michael F. Dega, Ph.D.
Scientific Consultant Services, Inc.
711 Kapiolani Boulevard, Suite 975
Honolulu, Hawai'i 96813
shpdreply@scshawaii.com

Dear Dr. Dega:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –**
Archaeological Monitoring Plan for a 0.29 Acre Parcel of Land in Napili
'Aleloa Ahupua'a, Lahaina District, Island of Maui, Hawai'i
TMK: (2) 4-3-003:096 por.

Thank you for the opportunity to review this plan, which our staff received on March 4 of 2009 (Chaffee and Dega 2009): *An Archaeological Monitoring Plan for a 0.29 Acre Parcel*...Scientific Consultant Services, Inc.

The plan was proactively prepared at the request of Mr. John Edwards, AIA in association with application for a Special Management Area Emergency Permit to construct a permanent erosion mitigation and bank stabilization retaining system along the oceanfront side of the 12,623.29 square foot subject parcel situated at 11 Hale Malia Place in Napili. The proposed action is necessary to stabilize a section of slope roughly 40 feet in length and 20 feet in height which collapsed during heavy storms in 2007.

As specified in the monitoring plan, there will be one archaeological monitor on site for each piece of ground altering machinery in operation during the proposed project. A coordination meeting with the construction crew and all other pertinent parties to explain monitoring procedures and that the monitoring archaeologist has the authority to halt work in the vicinity of a culturally significant find will be undertaken, and should anything of cultural significance be identified, the SHPD will be consulted for mitigation recommendations. The plan further states that in the event human remains are inadvertently exposed, both the SHPD and Maui/Lana'i Islands Burial Council (MLIBC) will be notified and appropriate burial protocol followed. A report detailing the findings of the monitoring will be prepared and submitted to our office for review within 180 days after the completion of the project.

The plan contains the required information as specified in HAR §13-279-4 regarding the contents of archaeological monitoring plans in general and is acceptable. **However, we request that you make the following correction to the plan text prior to forwarding a copy for archiving:**

1. Page 3: Figure 2 caption is incorrect.

Now that the monitoring plan has been accepted pursuant to HAR §13-279, please send one corrected hardcopy of the current version, clearly marked **FINAL**, along with a copy of this review letter and a text-searchable PDF file on CD to the attention of "**SHPD Library**" at the Kapolei SHPD office.

If you have any questions or comments regarding this letter, please contact the SHPD's Lead Maui Archaeologist, Ms. Patty Conte (Patty.J.Conte@hawaii.gov).

Aloha,

Nancy A. McMahon

Nancy McMahon, Deputy SHPO/State Archaeologist
State Historic Preservation Division

c: Jeff Hunt, Director, Dept. of Planning, FAX (808) 270-7634
Maui CRC, Dept. of Planning, 250 S. High Street, Wailuku, Hawai'i 96793

Ms. Patty J. Conte
SHPD Maui
130 Mahalani Street
Wailuku, HI 96793

April 27, 2009

Re: Archaeological Monitoring for a 0.29 Acre Parcel of Land in Nāpili, `Alaeloa Ahupua`a, Lahaina District, Maui Island, Hawai`i [TMK (2) 4-3-003:096]

Dear Ms. Conte,

At the request of Chris Hart and Partners Inc., Scientific Consultant Services Inc. (SCS) prepared an Archaeological Monitoring Plan for a 0.29 acre parcel of land in Nāpili, `Alaeloa Ahupua`a, District of Lahaina, Maui Island, Hawai`i [TMK (2) 4-3-003:096] (Figures 1-3). The Monitoring Plan was prepared in conjunction with the issuance of a HRS 343 Environmental Assessment (EA), Special Management Area Use Permit (SMA), and Shoreline Setback Variance (SSV) due to the catastrophic failure of a section of the property slope and a preexisting seawall roughly 40 feet in length and 15 to 20 feet in height damaged by heavy rainfall and high surf in December of 2007.

The Monitoring Plan was prepared in March, 2009 and was reviewed and accepted by the SHPD on April 9, 2009 (LOG NO: 2009.0307; DOC NO: 0904PC27). Monitoring was to be conducted by a qualified SCS archaeologist to ensure that any surface and/or subsurface historic deposits would be identified and documented, and that in the event of an inadvertent discovery of human remains, the appropriate and lawful protocol would be followed pursuant to HAR §13-300-40 (a), (b) and (c).

On April 13, 2009, the client contacted SCS notifying them of the near completion of excavation for the new seawall. On April 14, 2009 an SCS monitor (D. Perzinski) arrived on-site to inspect the progress of the excavation. The following represents the post-demolition Field Inspection, as well as comments on the findings.

Field Inspection (David Perzinski, B.A.)

The field inspection took place on April 14, 2009 at the above parcel by SCS archaeologist David Perzinski. The field inspection was conducted to assess the extent of excavation and to provide a brief summary of the results. It was immediately clear upon arrival at the residence that the *makai* portion of the parcel had undergone extensive grading and excavation for the new “emergency” seawall was nearly complete. The client had indeed commenced and completed excavation work without contacting SCS to implement the recommended on-site monitoring per the accepted Archaeological Monitoring Plan.

The property itself involved reconstruction of a seawall that had collapsed during a high surf episode in December 2007 (Figures 4 and 5). The work included removing the remaining portion of the old seawall, excavating for a new seawall and supporting rebar anchors. As of April 14, 2009, the excavation for the new seawall and anchor points was approximately 95% complete with only a small area of bedrock and decomposing bedrock needing to be excavated before installation of the new seawall commenced.

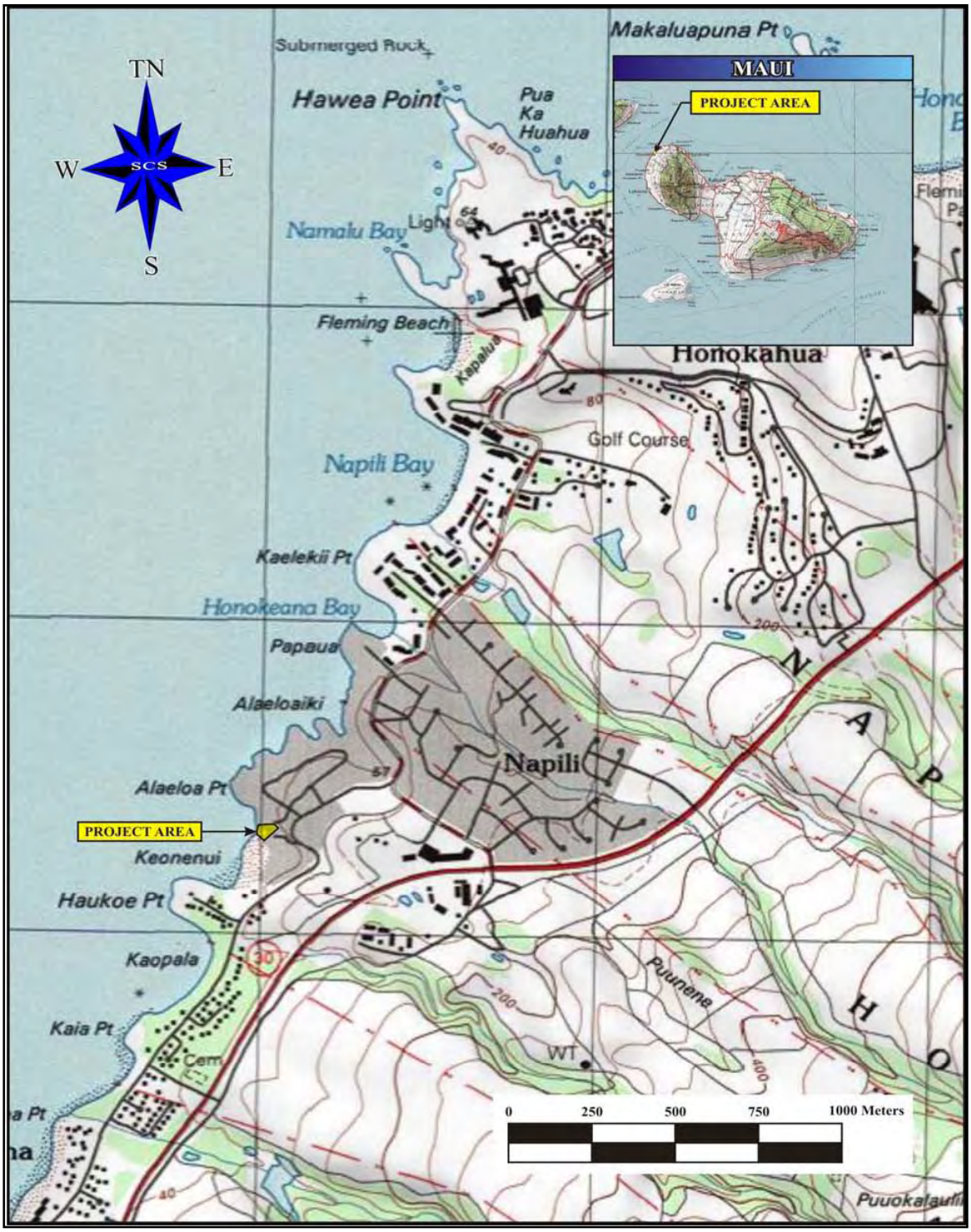

Figure 1: USGS Topographic Map (Napili Quadrangle) Showing Location of Project Area

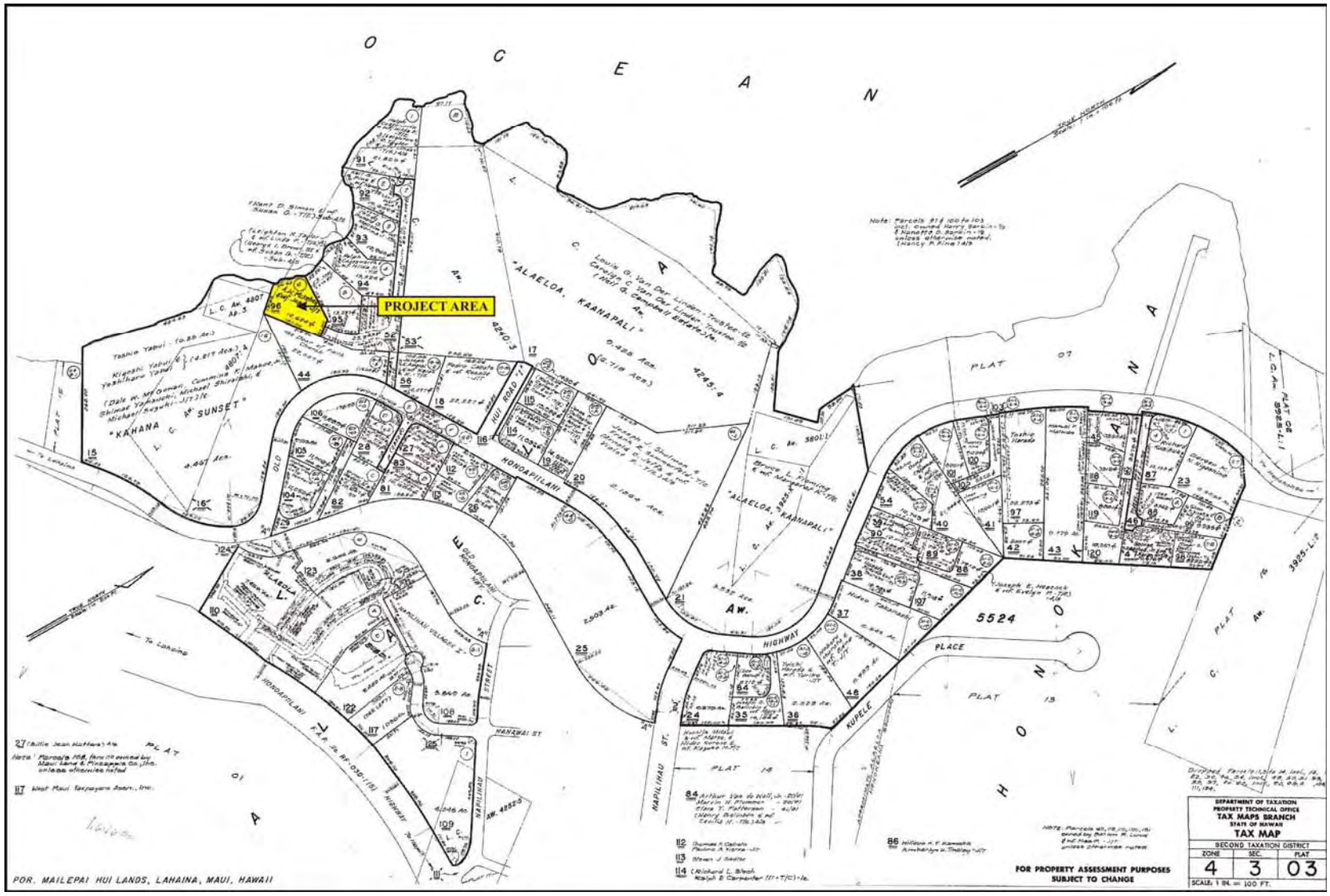

Figure 2: TMK (2) 4-3-03 Showing Location of Project Area

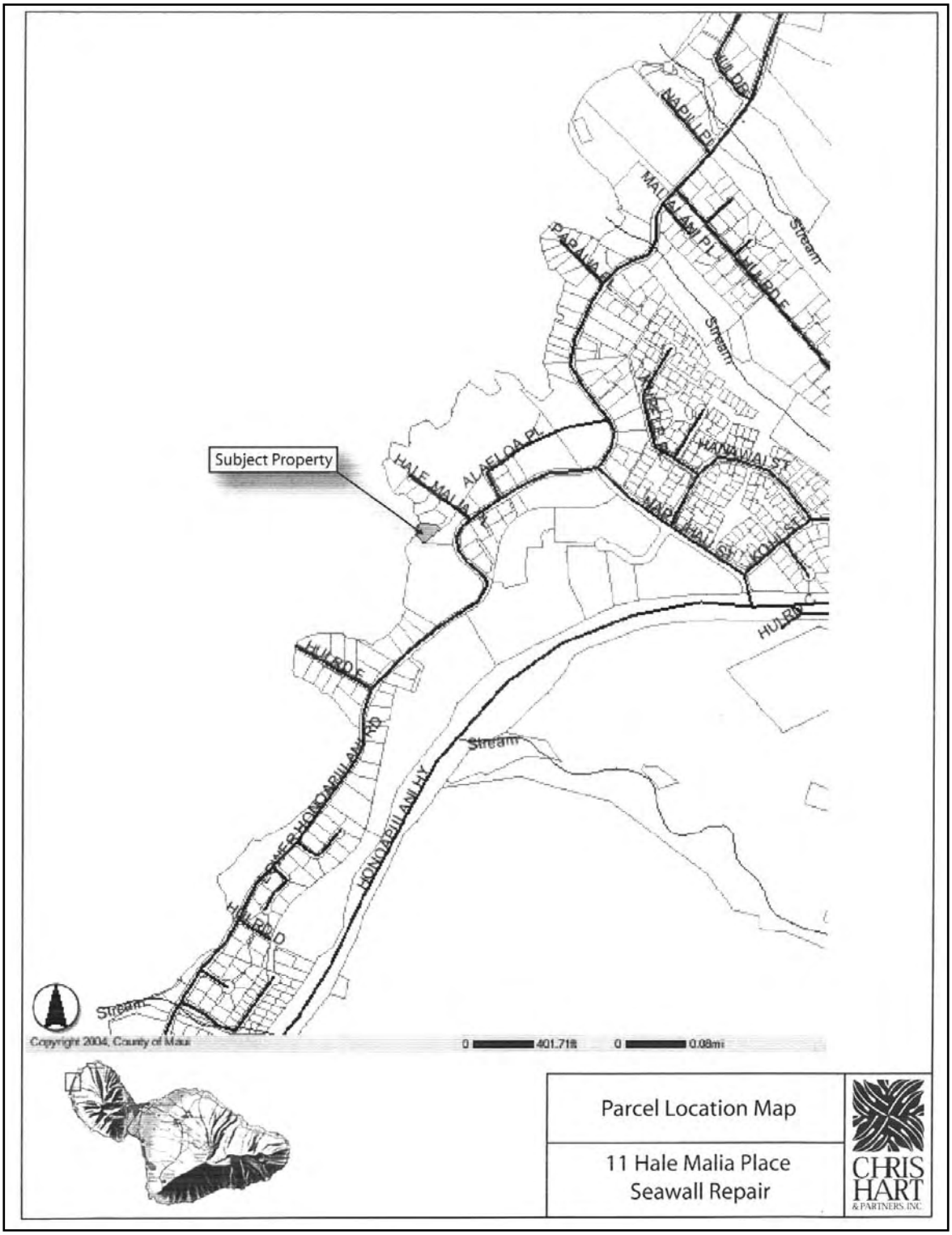

Figure 3: Project Area Map Showing Location of Project Area (courtesy of client)

Figure 4: View East of Collapsed Seawall

Figure 5: View East of Collapsed Seawall

Project Area Description

The property is a pentagon shaped parcel located on the coastline just south of `Alaeloa Point and north of Haukoe Point and covers and area of 0.29-acres (12,624 ft^2). The parcel is bounded on the north and south by residential housing, on the east by Hale Malia Road and to the west by the sea.

Natural Setting

Coastal Nāpili, in general, is classified as a '*Kiawe* and Lowland Shrubs' vegetation zone, and common, local plants include: *kiawe* (*Prosopis pallida*), *koa haole* (*Leucaena glauca*), finger grass, and *pili* grass, (the latter is a native species) (Armstrong 1983). In traditional times, *i.e.*, before the historic-era introduction of *kiawe* and *koa haole*, the project area was probably covered with indigenous grasses (Kirch 1973a). Today, vegetation in the project area includes beach *naupaka* (*Scaevola taccada*), coconut palm (*Cocus nucifera*), beach heliotrope (*Heliotropium* sp.), plumeria (*Plumeria acuminate*), *wiliwili* (*Erythrina sandwicensis*), yellow hibiscus (Family, *Malvaceae*), and bougainvillea (*Bougainvillea spectabilis*) as well as various other introduced tropical flowering plants and extensive grassy lawns.

The project area receives an average amount of precipitation, compared with other settled parts of Maui and the Hawaiian Islands, in general. According to Armstrong (1983), mean annual rainfall in the Nāpili area is approximately 76 cm (30 in.). Giambelluca *et al.* (1986) report *median* annual rainfall for the area of approximately 100 cm (40 in.). Part of the discrepancy between these rainfall data is probably due to the steeply increasing precipitation gradient east and southeast of the project area, as one moves up into the relatively wet flanks of West Maui. Regardless of which of these (30 or 40 in.) numbers is more typical of the local rainfall, a tremendous amount of through-flowing water from the West Maui uplands would have been available in traditional times in the Honokahua Stream and the (smaller, but much closer) Napili Stream.

The topography of the parcel is flat with the *makai* side bounded by a steep cliff. The topsoil of the property consisted of brown (7.5 YR 4/2) silt loam mixed with abundant debris from the current construction. The natural soils in the area are generally classified as Kahana Silty Clay (KbB) (Foote *et al*, 1972) that are derived from igneous rock and deposited as alluvium.

Historic Background

A fair number of archaeological investigations have been conducted over the years in the Napili in Lahaina District, Maui, resulting almost unanimously in the documentation of both pre-contact and historic deposits. The majority of these cultural deposits were identified as burials, habitation plots, or refuse pits. Classes of artifacts midden found in association with these features included coral abraders, basalt flakes, volcanic glass debitage, and marine shell debris.

North of the project area, remnants of a pre-historic *ala loa* (trail) have been recorded. Traditional accounts attribute the construction of this trail to chief Kiha-a-Pi'ilani during the early 1500s (Sterling 1998). In 1973 the Bishop Museum conducted archaeological research at Hawea Point. A site complex (Site 50-50-01-1346) comprised of eight features was identified and recorded. This site was interpreted to be a temporary Hawaiian settlement for marine

exploitation and was dated to *c.* A.D. 1500 (Kirch 1973a). Additional sites were located and recorded by Kirch (1973a), including a cave shelter on the cliff face of Hawae Point (Site 50-50-01-1347) and a stone terrace platform, which was located on a promontory overlooking Oneloa Bay (Site 50-50-01-1348). During this survey the Honokahua Burial Site (Site 50-50-01-1342) was first recorded. Several additional sites were located by Kirch at Fleming Beach Park along Honokahua Stream; these included a house site, terrace, enclosure, and midden deposits (Site 50-50-01-1345).

Archaeological work conducted by Griffin and Lovelace (1977) in conjunction with the realignment of Honoapi`ilani Road was concentrated in the gulches of Honokowai, Mahinahina, Kahana, Mailepai, and Alaeloa. The survey resulted in the identification of four sites, a buried midden deposit, a trail segment, a stone wall, and three retaining wall segments. It was concluded that this site represented a prehistoric, repetitively occupied, temporary habitation site (Griffin and Lovelace 1977). In Kahana, work conducted in conjunction with U.S. Department of Agriculture's Soil Conservation Service to create a desilting basin resulted in the identification of a prehistoric inland agricultural area that had been reused during historic times for commercial sugarcane and pineapple cultivation (Walker and Rosendahl 1985).

Based on previous archaeological work in the area, it was anticipated that pre-Western Contact cultural layers associated with permanent habitation and/or burials could be encountered. This is the main reason that Archaeological Monitoring was recommended by the SHPD. It was noted however that extensive ground altering activities associated with the construction of the residence and surrounding parcels likely altered the natural sediment deposits in this area.

Examination of Project Area

The project area was inspected with a 100% pedestrian survey and documented with photographs and descriptions. Nearly all excavations had been completed at the time of the inspection though the excavated portion of the cliff was exposed and visible for photographic and stratigraphic documentation.

The proposed seawall extends approximately 12 m along the *makai* extent of the parcel along the sea cliff face (Figure 6 and 7). The excavation for the new seawall required removing portions of the collapsed seawall, creating a new platform/footing and inserting anchor rods into the cliff face. Excavation along the cliff face exposed a 4 meter high section of the cliff face. The stratigraphic sequence included the top 1 m (Strata I-IV) consisting of construction debris, disturbed silty clay, concrete fragments and remnants of the old seawall (Figure 8). Stratum V consisted of the naturally occurring Kahana Silty Clay, extending to 3 m below surface, overlying the basalt bedrock. A new foundation footing was created out of the bedrock with metal anchor rods sunk into the bedrock.

In sum, no cultural materials or layers were encountered during the field inspection for construction of a new seawall. The exposed sediments suggest previous grading and filling episodes and no subsurface sites were disturbed.

Figure 6: View South of Excavation for New Seawall

Figure 7: View North of Excavation for New Seawall

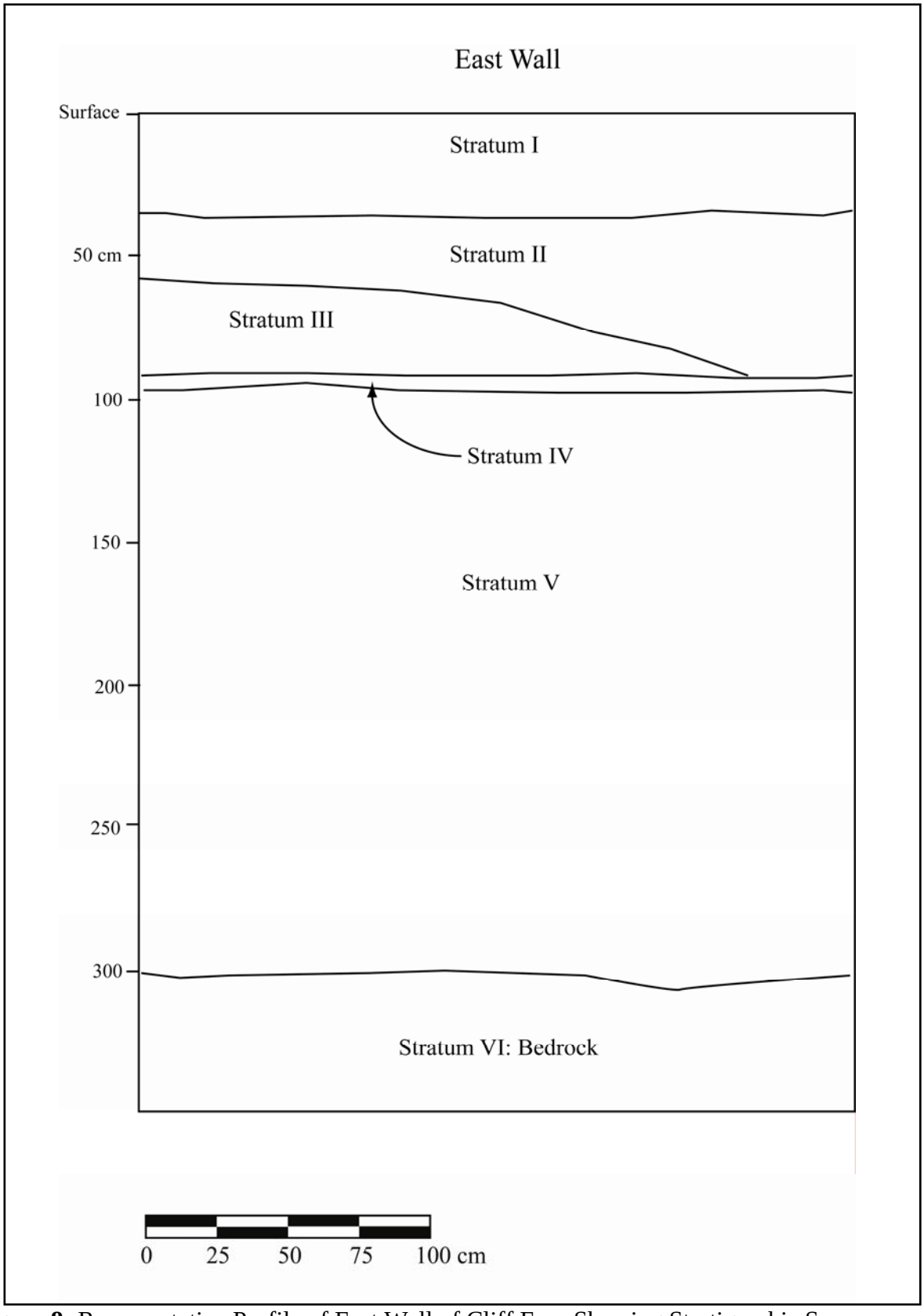

Figure 8: Representative Profile of East Wall of Cliff Face Showing Stratigraphic Sequence

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Appendix J:
Cultural Impact Assessment

Marcia Lucas Residence

Cultural Impact Assessment

for

11 Hale Malia Place
ʻAlaeloa, Maui, Hawaiʻi
TMK (2) 4-3-003:096

by

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July 2009

Prepared for
Ms. Marcia Lucas

Marcia Lucas Residence
Cultural Impact Assessment
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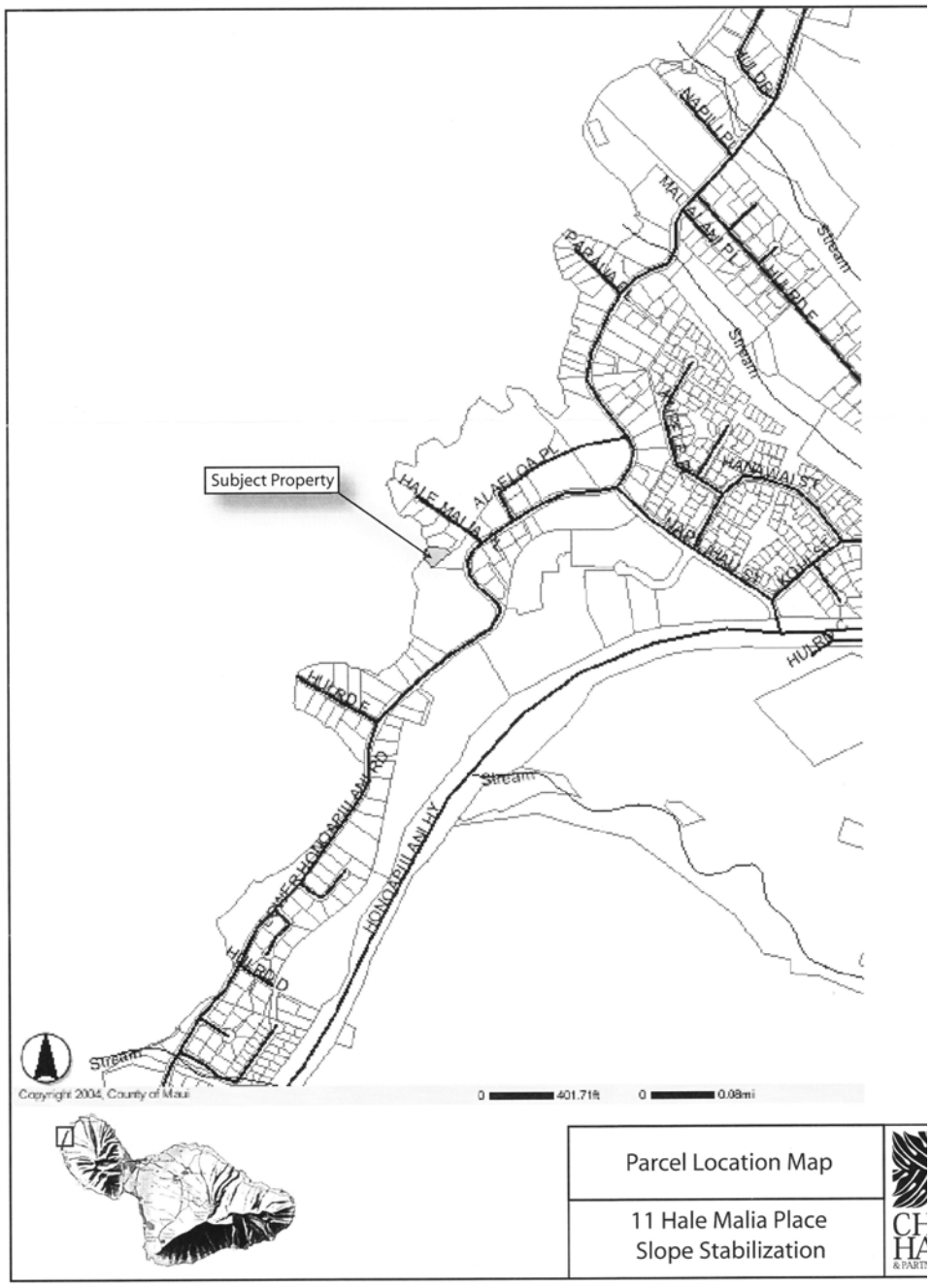

Fig. 1. Lucas Parcel Location Map

Fig. 2. Lucas residence, green rooftops to the left of Kahana Sunset. Engledow photo 4/09

Figure 3. Shoreline seen from Kahana Sunset property. Lucas property is just beyond white fence. Engledow photo 4/09

Figure 4. Crumbling cliff in front of Lucas property. Engledow photo 4/09

Fig. 5. Fishers on Haukoe Point, across the bay from the subject property. Engledow photo 4/09

Fig. 6. West Maui *ahupuaʻa* map, on display at Kapalua Resort's Kukui Room.

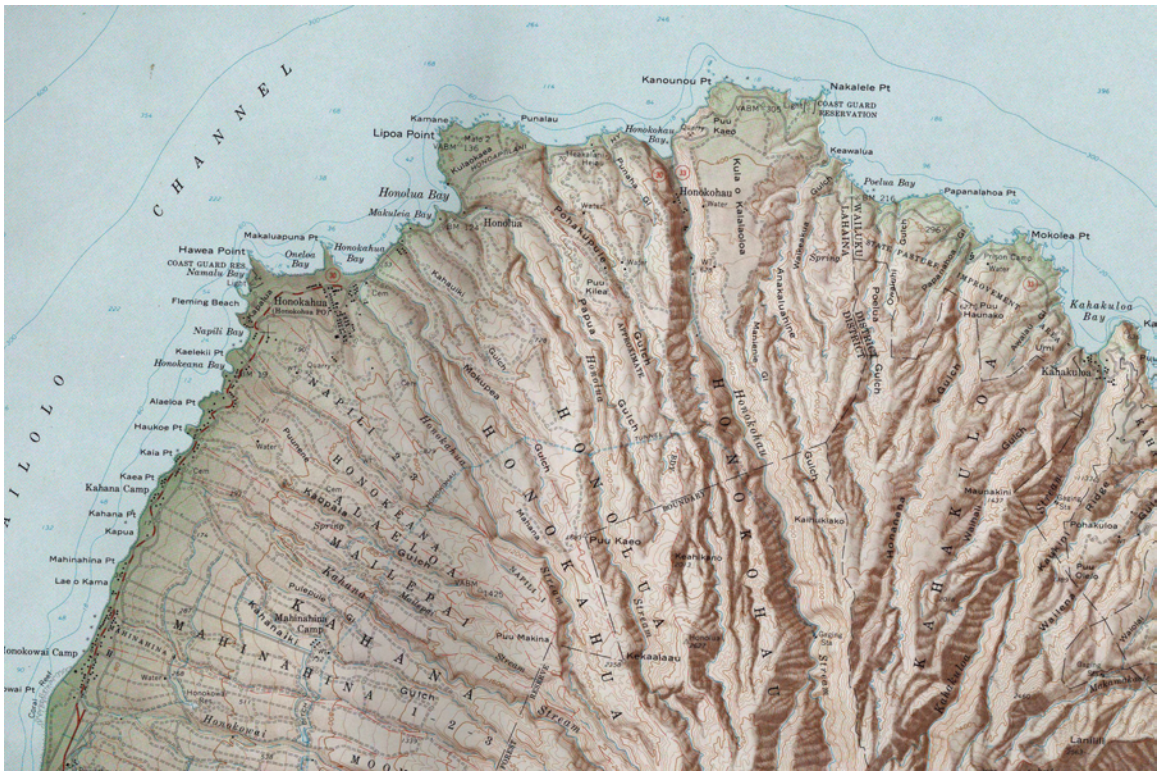

Fig. 7. Portion of U.S. Geological Survey map showing Kaʻanapali District.

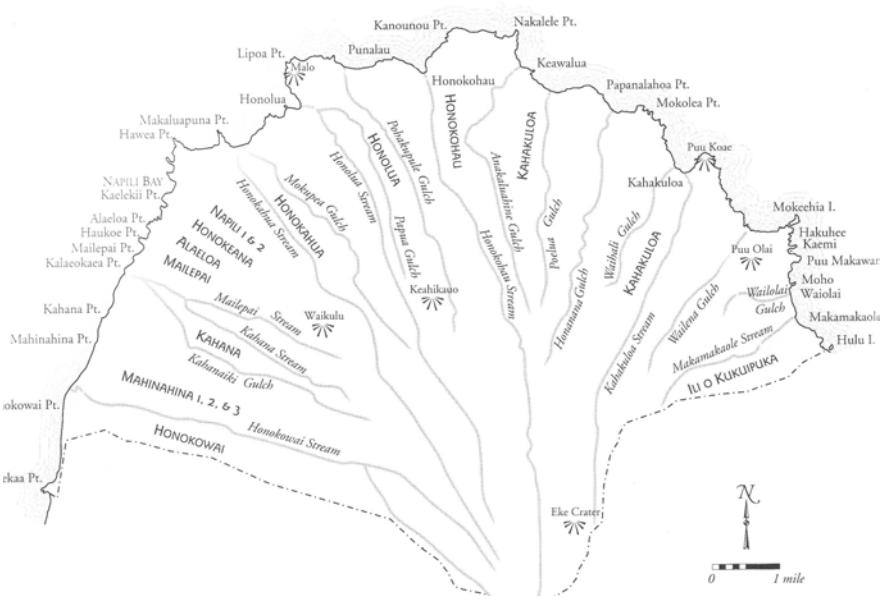

Fig. 8. West Maui *ahupua'a* and water courses. From *Sites of Maui* by Elspeth Sterling.

Fig. 9. Hawaiian Government Survey Map, 1885/1903. Yellow outline indicates grazing land.

Marcia Lucas Residence

Cultural Impact Assessment

I. Introduction

At the request of Chris Hart & Partners, Inc., researcher and writer Jill Engledow prepared this Cultural Impact Assessment of the property owned by Marcia Lucas at 11 Hale Malia Place, TMK (2) 4-3-003:096. This 12,623-square-foot property faces northwest on a cliff overlooking a small bay between Haukoe and Alaeloa Points. It is just north of the Kahana Sunset and flanked on either side by developed residential properties. The proposed action that requires this Cultural Impact Assessment is an application for a Chapter 343 Final Environmental Assessment, a Special Management Area Permit and a Shoreline Setback Variance to allow construction of a structurally engineered Shoreline Erosion Mitigation System. See project location in Figure 1.

The seawall is planned to replace an existing vertical seawall supporting the cliff upon which this property stands. The coastline on this cove has been eroding for some time, and the cliffs surrounding the cove are almost entirely lined with stone revetments.

II. Report Methodology/Resource Materials Reviewed

Sources sited in archival research are listed in the attached bibliography. Additional searches included the Internet and the indexes of a variety of books on Hawaiian culture and history which were searched for the words ʻAlaeloa, Mailepai and Nāpili. A number of commonly used texts about Hawaiian history included no specific references to ʻAlaeloa and very few to the surrounding area. Among the works consulted for these terms without success were:

- *The People of Old, The Works of The People of Old, Tales and Traditions of the People of Old* (all by Samuel M. Kamakau)
- *Nānā I Ke Kumu, Volumes 1* and *II* (Mary Kawena Pukui, E.W. Haertig, and Catherine A. Lee)
- *Hawaiian Antiquities* (David Malo)
- *Ke Alaloa O Maui* (Inez Ashdown)
- *Faith in Paradise* (Maggie Bunson)
- *Sugar Trains Pictorial* (Jesse C. Conde)

- *Sugar Water* (Carol Wilcox)
- *The Index to The Maui News* (Gail Bartholomew)
- *Hawaiian Almanac and Annual, 1875-1878* (Thomas G. Thrum)
- www.ulukau.org, which includes digital copies of old Hawaiian-language newspapers
- The Windley Files of the Lahaina Restoration Foundation
- The archives of Maui Historical Society

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

III. Study Area Description

This site is a small residential parcel overlooking a small bay between ʻAlaeloa and Haukoe Points. The coastline in this area is highly developed. Much of Lower Honoapiʻilani Highway is lined with walls and gates that limit public access to the shoreline. The Lucas residence is one of several private homes on the north side of the bay, which is dominated by the Kahana Sunset condominium. Except for ladders and steps leading down from various residential parcels, the bay's small beach is accessible to pedestrians only through the Kahana Sunset property, but a beach-access path on Hui Road E leads to Haukoe Point at the south end of the bay. This rocky point provides a platform for fishing. (Figure 3) The white sand beach fronting the Kahana Sunset has been called Keonenui, "the big sand," and later Yabui Beach (Young 1980:63) An 1885 Hawaiian Government Survey Map shows the place name "Kaalo" just south of the *ahupuaʻa* name "Alaeloa," but it is not clear what "Kaalo" refers to, and it is not listed in *Place Names of Hawaiʻi.*

While informant Alan Yabui recalls an intermittent stream that ran during Kona storms, a 1913 USGS drainage map reprinted in *Sugar Water* (Figure 7) shows no permanent waterway in this *ahupuaʻa.* Honokōhau Ditch (also known as Honolua Ditch) was completed in 1904 and rebuilt in 1913, but apparently did not tap any sources in the ʻAlaeloa mauka area. The ditch, constructed by Honolua Ranch, supplied water to Pioneer Mill. (Rice 1996:126-130)

IV. Study Area History

The subject property is located within the *ahupuaʻa* of ʻAlaeloa in the district once known as Kāʻanapali, but now known as Lahaina. In the Civil Code of 1859, "the twelve ancient districts of the island of Maui were reduced to four by combining Kaanapali with Lahaina. . ." (King, quoted in Sterling 1998:3). Prior to this time, the district of Lahaina extended to Kekaʻa, in the area that now is the Kāʻanapali Resort. The district of Kāʻanapali extended from Kekaʻa around the north coast of West Maui, past Kahakuloa, to near Hulu Island. (Figure 6)

Two Hawaiian proverbs apply to this area of the Kāʻanapali district. *Kāʻanapali wāwae*

ʻulaʻula (red-footed Kāʻanapali) is "a term of derision for the people of Kāʻanapali. The soil there is red, and so the people are said to be recognizable by the red soles of their feet." A second seems to indicate that this was a productive area: *Ka ua leina hua o Kāʻanapali* (the rain of Kāʻanapali that leaps and produces fruit). (Pukui, *ʻŌlelo Noʻeau* 1983:1280, 1581)

This area includes the famous Honoapiʻilani--the bays of Piʻilani, including the major bays of Honokōwai, Honokeana, Honokahua, Honolua and Honokōhau. ʻAlaeloa is just south of Honokeana. This name for the bays refers to the chief Piʻilani, who controlled all of Maui Nui in the 15th century. While Piʻilani is remembered for the peace and prosperity he brought to his kingdom, his sons, Lono-a-Piʻilani and Kiha-a-Piʻilani, fought each other, and succeeding generations fought battles in this West Maui neighborhood, some of which are described below.

Rich with fish, fed by streams that watered *loʻi kalo* in their valleys, the bays drew admiring attention in the song *Molokaʻi Nui A Hina.* This song about Molokaʻi, whose people view West Maui from across the channel, begins with the line *Ua nani nā hono a Piʻilani:* How beautiful are the bays of Piʻilani. These lovely bays are a symbol of Maui in other songs as well, such as *Maui Nani* by Johanna Koana Wilcox and *Lei Lokelani* by Charles E. King. Although the small coves of ʻAlaeloa are not listed among the famous bays, they are certainly junior members of the family, tucked between Honokōwai and Honokeana.

The name ʻAlaeloa translates as "distant mudhen," according to Pukui, but some contemporary informants related the word "*ʻalae"* to the area's red dirt. According to the *Hawaiian Dictionary, ʻalaea* is "the water-soluble collodial ocherous earth used for coloring salt, for medicine, for dye and formerly in the purification ceremony called *hiʻuwai."* (Pukui and Elbert 1974:16) Silla Kaina, cultural resources coordinator for Kapalua Land Company, grew up in Honolua, and remembers her grandmother (from Hāna) collecting red dirt from ʻAlaeloa cliffs which she boiled to make an iron-rich tea. Ms. Kaina says the dirt from this *ahupuaʻa* is redder than that in other *ahupuaʻa.*

W.M. Walker, in his notes on *Archaeology of Maui*, describes a *heiau* "on bluff at south side of rocky cove between ʻAlaeloa and Papaua Points." He says this simple structure is a "small rectangular enclosure measuring 50 x 66 ft. . . . Use unknown. Several people thought it was a cattle pen." (Walker, Maui Historical Society. See Figure)

Handy, in *Hawaiian Planter*, says that:

> On the south side of western Maui the flat coastal plain all the way from Kihei and Maalaea to Honokahua, in old Hawaiian times, must have supported many fishing settlements and isolated fishermen's houses, where sweet potatoes were grown in a sandy soil or red *lepo* near the shore. For fishing, this coast is the most favorable on Maui, and although a considerable amount of taro was grown, I think it reasonable to suppose that the large fishing population which presumably inhabited this leeward

> coast ate more sweet potatoes than taro with their fish. (Handy, quoted in Sterling 1998:17)

A 1985 archaeological study agrees with this opinion, finding few signs of irrigated *lo‘i kalo* in the area near the subject parcel. The study, titled “Testing of Cultural Remains Associated with the Kahana Desilting Basin,” says:

> An examination of the L.C.A. documents for the various *ahupua‘a* of the general area, and field inspection of the gulch area immediately *mauka* of the project area strongly suggest that irrigation systems were not in use at Kahana. . . indeed for the three *ahupua‘a* north of here, only two L.C.A. parcels with *lo‘i* were recorded, and both were very small, presumably springfed, systems several miles inland . . . thus the Kahana settlement pattern in A.D. 1848 consisted of houselots, and at least one small fishpond, extending several miles inland along the banks of Kahana Stream. No houselots were claimed beyond a few hundred feet inland. This pattern also appears to hold for at least the next three *ahupua‘a* to the north of Kahana--Mailepai, ‘Alaeloa and Honokeana. (Walker and Rosendahl 1985:A-3)

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

> [*Alapainui, on his return from Oahu, hears of the uprising of Kauhiaimokuakama against his brother Kamehamehanui. Kamehamehanui is defeated in Lahaina and flees with Alapainui to Hawaii.]*
>
> In the following year, say 1738, Alapainui returned to Maui with a large fleet, well-equipped, accompanied by Kamehamehanui. With headquarters at Lahaina, his forces extended from Ukumehame to Honokowai. . .
>
> [Kauhi sends to Peleioholani, moi of Oahu, for help] . . . which that restless and warlike prince accepted, and landing his fleet at Kekaha, encamped his soldiers about Honolua and Honokahua.
>
> It is said that Alapai proceeded with great severity against the adherents of Kauhi in Lahaina, destroying their taro patches and breaking down the watercourses out of the Kauaula, Kanaha, and Mahoma *[Kahoma]* valleys.
>
> *[Alapai reaches Lahaina before Peleioholani can get there from Oahu, and Kauhi retreats to the uplands and ravines behind Lahaina. Peleioholani lands and attacks Alapainui's forces in the hopes that he can form a junction with Kauhi's forces.]*

> To this effect Peleioholani advanced to Honokowai where he found a detachment of Alapai's army, which he overthrew and drove back with great loss to Keawawa. Here they rallied upon the main body of the Hawaii troops. The next morning Alapai had moved up his whole force, and a grand battle was fought between the Oahu and Hawaii armies. The fortune of the battle swayed back-and-forth from Honokowai to near into Lahaina . . . (Fornander, quoted in Sterling 1998:19)

Kamakau also describes this battle in *Ruling Chiefs.* He says that Alapa‘i, in addition to drying up the streams in the Lahaina area, also "kept close watch over the brooks of Olowalu, Ukumehame, Wailuku and Honokowai." The hardest fighting, he says, "even compared with that at Napili and at Honokahua in Ka‘anapali," took place at Pu‘unēnē. (Kamakau 1961:74) It seems likely that, rather than the better-known Pu‘unēnē on the Central Maui isthmus, this refers to Pu‘unēnē *mauka* of ‘Alaeloa, which can be seen on a U.S. Geological Survey map (Figure 6).

More than a century later, when Western contact had greatly changed Hawaiian society, ‘Alaeloa as well as other ‘*āina* across the islands began a transition that eventually led to the resort/residential neighborhood it is today.

The subject property is part of Land Commission Award 4240 and Royal Patent No. 6384 to a claimant named Kau. The Māhele Database available through the website Waihona ‘Āina lists four ‘*āpana* (piece, section) in this award. In his Land Commission petition in 1848, Kau asks for one *kihapai* (a cultivated garden or small farm) at Honokeana and one at ‘Alaeloa. R.P. No. 6384 was not awarded until 1873, although claim number 04240 was filed with the Land Commission by Kau in January 1848. The patent awards four *‘āpana* in ‘Alaeloanui, ‘Alaeloaiki and Honokeana *ahupua‘a* to Kau. The parcel on which the subject property is located and several contiguous lots are shown in the County Property Tax Office Field Book for this TMK as L.C.A. 4240:3, indicating that these parcels were *‘Āpana* 3. The Royal Patent document says *‘Āpana* 3 included a house lot and an open field in the area identified as ‘Alaeloanui, and the L.C.A. document identifies it as being "in the *ili* of Kamani."

Kau "received these lands from his ancestors in the days of Kamehameha I and his title has never been disputed,"" witness Kaaukea told the commission. In another comment the same witness says, "land was from Kau's parents at the time of Kamehameha I, no objections."

Kau is not mentioned in Kame‘eleihiwa's lists of *ali‘i* who received *Māhele l*ands or in Barrere's *The King's Mahele.* His neighbor, however, is better known. Before the *Māhele*, ‘Alaeloa was part of a large piece of land controlled by Laura Kanaholo Konia (c. 1807-1857). Laura Konia held 22 *‘āina* prior to the Māhele, almost all on Maui in the Kā‘anapali district. She relinquished half to the king and was left with eleven, of which eight were on Maui. ‘Alaeloa was among them. With neighboring lands of Mahinahina, Nāpili, Mailepai and a portion of Honokeana, it became part of Land Commission Award 5524 and later Royal Patent 1663. (Kame‘eleihiwa 1992:228, 246)

When Laura Konia died in 1857, her daughter Bernice Pauahi inherited this land. Documents on file in the state Bureau of Conveyances show that, in June 1860, Bernice Pauahi and Charles Bishop deeded this land to a number of individuals. This was the *Hui ʻĀina o Mailepai,* an early example of a system Native Hawaiians established in order to maintain their traditional lifestyle, with residents of an *ahupuaʻa* having access to the resources of a much larger area than the small homestead of a *kuleana* lot. (Stauffer 2004:2)

The Mailepai Hui had 106 owners (Watson, *Honolulu Star-Bulletin* 12/14/1932), and apparently wrapped around the smaller parcels owned by Kau. It is interesting to speculate about his status in that community and how much and in what way he interacted with his neighbors in the Hui next door.

Though detailed, comprehensive population figures are not available for Hawaiʻi in the 1800s, some figures survived for Honokowai. While these may not have included ʻAlaeloa, they do give a glimpse of the population and lifestyle of the area. The mission census of 1832 found 490 individuals living in Honokowai. (Schmitt 1973:38) An 1878 Kingdom of Hawaiʻi census of Honokowai also survives. A total of 242 individuals lived in 32 *hale* visited by the enumerator, all but a couple listed as "native." Most were engaged in agriculture, either on their own *kuleana* or as plantation workers. (Kingdom census, Kahului Library)

The Mailepai Hui lands and much of this West Maui coast line were acquired in the late 1800s and early 1900s by Henry P. Baldwin and his companies, Honolua Ranch and later Baldwin Packers, the petitioner in the 1931 Mailepai Hui partition. This partition ended the hui and parceled out pieces to various owners, primarily Baldwin Packers. Henry Perrine Baldwin acquired most of the company's land (when it was known as Honolua Ranch) by the end of the 19th century through a series of land grants and purchases. (Cameron et. al 1987:7) Originally used for grazing, the ranch gradually switched over to planting various crops in the early 20th century. (Figure 8) A map in the book *Plantation Days* shows plantings of aloe vera, mangoes, avocados and lychees *mauka* of the subject property, across the road that would become Lower Honoapiʻilani Highway and railroad tracks that transported pineapple to the company's Lahaina cannery in the early 1900s. (Figure 9)(Cameron et al. 1987:5)

Pineapple was planted by manager David T. Fleming, hired by Baldwin in 1911 to oversee Honolua Ranch. Fleming, who experimented with many crops in addition to pineapple, also owned assorted parcels of land along this coast, including some in the neighborhood of the subject parcel. His granddaughter, Ginger Gannon, said he had a beach house at ʻAlaeloa. In 1932, Fleming planted 10 acres of aloe (apparently the field depicted in Figure 9), which he attempted to develop as a marketable product. Though he was before his time, and the project was never commercially successful, Ginger Gannon recalls that "We always had creams and salves" made by her grandfather, and "they worked!" Possibly this field was the source for the aloe vera plants which are ubiquitous in home gardens all over Maui. Over the years, the ranch (renamed Baldwin Packers in

1924) gradually replaced its grazing land with pineapple plantings, which totaled 3,500 acres when *Plantation Days* was written in 1987. Baldwin Packers merged with Maui Pineapple Company in 1962, and the Honolua area which was its headquarters became the Kapalua Resort, while the land south of Honolua, including the Mailepai Hui land, was developed as a residential and resort neighborhood.

V. Oral Interviews

Methodology, Procedures, and Interviewee Biographical/Organizational Information

In addition to personal contact with individuals listed below, letters briefly outlining the development plans along with a map of the project site were sent to organizations whose jurisdiction includes knowledge of the area, asking for input on this report. A letter was sent to the Lahaina Hawaiian Civic Club. A legal ad in The Maui News requested information from anyone with knowledge of cultural practices around this parcel; no replies were received.

The Napili Canoe Club, which is headquartered in Kā‘anapali at Hanaka‘ō‘ō Beach, does paddle along the shore as far north as this cove. Contacted by phone on May 11, 2009, club president Jeanne Gonzalez declined to comment, saying that the club does not take an official stand on anything political because it is a 501(c)3 organization, and they view anything having to do with development issues as political.

Several individuals were interviewed, two of whom actually lived in ‘Alaeloa. Others lived in the general area and were able to talk about the lifestyle of this part of West Maui a generation ago.

One set of interviews were originally done for a Cultural Impact Assessment for a nearby property, across the bay from the Lucas parcel; the information obtained from these informants applies equally to the Lucas parcel. These interviews, with Gwen Lutey, Frances Kalua and Alan Yabui, are summarized below.

Joan McKelvey

Mrs. Joan McKelvey lived on the subject property from 1976 to 2000 in one of the first houses built around the bay in contemporary times. When they got the property, Mrs. McKelvey said, it was “sort of a wooded area,” though they knew there had been some sort of post-contact dwelling there because there were steps going down to the beach. Next door lived George I. Brown, and on the north point was a beach house owned by Leighton Taylor. Mrs. McKelvey says the area was an old fishing village, and the McKelveys found artifacts such as broken poi pounders and bone fishhooks.

The McKelveys built the sea wall directly beneath their lot after part of the cliff fell in sometime in the 1980s. “We heard this great thud” and her husband, A.W. “Mac” McKelvey, went out to see what was happening. He backed away from the cliff just in time to avoid injury when another large chunk collapsed. The family tried to shore up

what was left of the cliff by building the sea wall, and also sealed a cave that was exposed by the erosion. The cave had been a small opening just above sea level before the cliff collapsed, but when the collapse opened it up, the McKelveys discovered that it went far back under their property. The family discovered there were bones in the cave, which they assumed were human remains. Mrs. McKelvey did not go into the cave herself, but does not believe that there were any grave goods or artifacts in the cave. She does not know how many remains were there. The family thought it best simply to seal up the cave with concrete so the bones would never be disturbed. The couple did not tell anyone what they had found. House guests sometimes would swear that there were ghosts in the house, but the McKelveys replied that, if there were ghosts, they were friendly.

Erosion has been an ongoing problem. Concrete and stone steps stood intact but separated from the cliff below the home of George Brown, perhaps washed away from the cliff by a tsunami. Mrs. McKelvey believes there was also a cave on the Brown property, but she is not sure what he did with it. The McKelveys had steps down to the beach that were wiped out by Hurricane Iwa.

Originally there was a sandy beach directly below this property, but Mrs. McKelvey said one neighbor built a sea wall and that took away the beach under their property.
The owners of these cliff-side properties belonged to the Hale Malia Association. They gated their community because "we were getting some unsavory characters down there," Mrs. McKelvey said, but anyone who called and asked for access to the bay for fishing was welcome. One neighbor in particular, the Fines, had a lot of local and Tongan friends who came down to fish.

The Lahaina Yacht Club used to have a picnic day once a month on the beach, sometimes accessing the beach through the McKelveys' property. Mrs. McKelvey does not remember what kind of fish people caught in the bay, but says that sometimes local ladies would come to take seaweed, and there were turtles in the bay.

For years, there was no lock on the McKelveys' door and no fence between them and the Kahana Sunset, which was built after their home was. Then the McKelveys began to find wallets in the bushes. They realized that thieves were going after tourists by using their property, and decided there should be a fence between them and the condominium.

Philomen Sadang

Philomen Sadang, age 66, was interviewed by telephone June 12, 2009. He and his family have been fishing in the cove fronting the subject property for as long as he can remember. Mr. Sadang lives down the coast in what he calls "the last fishing village" on the west side, between two condos, the Kahana Reef and the Kahana Outrigger. "I've seen this land go from chicken coops and pig pens to concrete and steel," he said. Mr. Sadang said he knows the subject property well, and is aware of the problem with the crumbling sea wall there. He says the damage is a result of rising ocean levels that are "eating up the land" on the west side. He said that directly in front of the subject property is "a very active fish house" where he often fishes, and his only concern about the

proposed project is the potential for runoff that might damage this fish population. He said he wonders what kinds of chemicals the builders will use. He doesn't want to say the project should not be done, because the cliff needs to be stabilized, but care should be taken that there is no runoff into the ocean during construction. Mr. Sadang said he has never seen the burial cave that Mrs. McKelvey described, but speculated that possibly it has been covered by the rising ocean levels and is therefore no longer visible.

Gwen Lutey and Frances Kalua

Two women who formerly lived in the Nāpili area shared memories of the lifestyle they enjoyed during their youth. Gwen Lutey and Frances Kalua were interviewed in an informal meeting at the Hale Mahaolu Eono senior housing in Lahaina March 31, 2009. The interview was conducted during research for a Cultural Impact Assessment for a property on the other side of this cove. Also present was historical author Katherine Smith.

Frances Kalua lived in Nāpili. Her family had lived in the area for generations. Her grandfather, August Reimann, had a little ranch, with a windmill to draw water from a well for the animals. [August Reimann and other family members are listed in the Mailepai partition document and in census documents of the area from 1900.] Ms. Kalua does not recalls hearing that there used to be a fishing village in the area, and no one talked much about it. In her childhood, her aunt was the *kilo i‘a,* watching from above Honolua Bay to find schools of fish. This aunt was adept at making throw nets. People would lay net and share the fish they caught. There was also plenty of the *limu* known as *lipe‘e*. The shellfish known as *pipipi* were big and plentiful. They were boiled and then picked out of their shells with a pin, a process Ms. Kalua said was tedious but worth it because the *pipipi* were tasty. Another shellfish, the *kupe‘e*, lived in the sand and could be found only on starry nights, and people went down to the beach to catch sand crabs as well. Her aunt delivered mail in the area, and picked up goods from Lahaina for anyone in the neighborhood who asked, dropping them off when she delivered the mail.

Gwen Amaral Lutey grew up on Nāpili Bay. Like Ms. Kalua, she remembered a rural, traditional cooperative lifestyle, in which families lived off the land. They raised chickens, pigs and ducks and shared with others. Her grandmother made 300 loaves of bread at a time and the family worked together to make and sell the bread. David Fleming loved fishing, and set up a commercial operation to catch the large schools of *akule* in Honolua Bay, where the best fishing was. Some of the fish were divided among families, who would take them home to eat or dry.

Native plants were used to some extent. *Noni* was easily available, and Ms. Kalua and her brothers used to ride horses to collect *ko‘oko‘olau* and pick mountain apples. Both Ms. Kalua and Mrs. Lutey recalled seeing *akualele* [defined in Pukui's *Hawaiian Dictionary* as meteors] during the day and night.

Both women praised David Fleming, saying that he sold parcels in the lower portion of Mailepai Hui to local families for $500. “He never forgot the people,” Mrs. Lutey said.

Asked about potential cultural impacts of the proposed project (across the bay from the Lucas project), Ms. Kalua commented that she believes putting a stone retaining wall along the cliff desecrates the area.

Alan Yabui

Mr. Alan Yabui, interviewed April 13, 2009, by telephone, spent some of his childhood living at the site of the present Kahana Sunset. This interview also was originally conducted for a Cultural Impact Assessment on a neighboring property. Mr. Yabui reviewed and offered some additions to an e-mailed summary of the phone conversation, and his additions are included in the summary below. Mr. Yabui is now a resident of Bothell, Washington, where he teaches classes in Hawaiian history, inter-cultural communication and history of the Japanese internment camps. He and his wife visit Maui often.

Mr. Yabui's grandfather, Yoshimatsu Yabui, was the Lahaina Cannery supervisor, and his son Yoshihara Yabui (Alan's father) also worked as a cannery supervisor. Yoshimatsu Yabui was a good friend of D.T. Fleming, who often visited the Yabui family home to relax with his friend under a *hau* tree. Because this home was on the site of the current Kahana Sunset, Keonenui Beach is often called Yabui Beach. Mr. Fleming also gave his friend a piece of land (less than an acre) in exchange for Mr. Yabui allowing Baldwin Packers to remove some sand from the dunes on his property in order to make a concrete floor for an expansion at the Lahaina Cannery in the space now occupied by the ABC Store and the *mauka* space with several stores, a restaurant, and Starbucks.

Mr. Yabui said his grandfather brought this property in 1939 from a Chinese merchant in Lahaina who had decided to go back to China. The Mailepai Hui partition document includes Allotment 16 to Ah Cheen of Lahaina, with a boundary description that seems to match that of the Yabui property. Mr. Yabui said he remembers that the name began with the letter "C." Mr. Yabui thinks there must have been a Hawaiian village there at one time--rocks that his grandfather dug up, now used in the walls around the Kahana Sunset, were weathered when his grandfather found them, so they might have come from that village. Some of the rocks were dark-blue basalt, adze-quality stone. His grandfather planted ti plants and mango trees that are still growing on the Kahana Sunset property. His grandfather also had poi pounders and *ʻulu maika* stones, but Mr. Yabui is not sure whether his grandfather found these artifacts or whether David Fleming gave them to him.

The tsunami of April 1, 1946, turned a neighbor's home near Yoshimatsu Yabui's family home on the Lahaina shoreline (now the parking lot near the entrance to Lahaina Lʻau) upside down, so Mr. Yabui's grandfather bought the house structure and moved it to Alaeloa and fixed it up over the next four years.

Alan's mother contracted TB in 1943 was sent to Kula Sanatorium (before penicillin, to recover) and he was raised by his grandparents and lived with them after the April 1,

1946, tidal wave in a house in "Cannery Camp," now the location of the Lahaina Lū'au. Later, after 1946, his grandparents moved to another house in "Cannery Camp," which is now the site of the main performance stage at Lahaina Lū'au. His grandfather retired in 1950 and at age 10 he moved to the site that is now Kahana Sunset. He lived there until he left for college at age 18.

One well-known neighbor was Maui hula teacher Emma Sharpe and her husband, David. [Mrs. Sharpe's mother, Annie Farden, is mentioned in the Mailepai Hui partition document.] David Sharpe used a World War II-era landing boat to spread fishing nets with Hawaiian residents in the Kahana area. Mr. Yabui and his father helped in a hukilau-type fishing event near Kahana Sunset.

Mr. Yabui said there was a stream that ran intermittently; a dip in the road crossing the stream bed, that flowed when heavy Kona rain came onshore from the ocean side. He used to go up into the valley above his home, walking on the pineapple field roads, where some native plants still grew. In those days, however, "Hawaiian culture was submerged," he said, and there was little discussion or practice of native cultural matters.

VII. Confidential information withheld; Conflicts in information or data

No confidential information was withheld. There were no conflicts in information or data within the reports consulted for this Cultural Impact Assessment.

VIII. Conclusion

After making site inspections, interviewing knowledgeable people of the area and conducting documentary research on the subject property and the area around it, it appears that, providing proper care is taken in the construction process, the proposed action does not interfere with any known Hawaiian or non-Hawaiian gathering, practices, protocols or access.

Because this section of coastline has long been developed, with little provision made for beach access when it was built up decades ago, there is essentially no public access to this beach area except from the sea. Philomen Sadang, a member of a longtime west-side fishing family, does fish in the waters off the subject property, and expressed no opposition to the project except for concern that runoff be carefully controlled to avoid damaging sea life. Other than one negative opinion from Frances Kalua, armoring of the cliff below the property does not seem to be a cultural issue with anyone interviewed for this report. It is instead an environmental issue, and decisions about the impact of that action are more properly addressed by experts on the health of the shoreline. It may be that stabilizing the cliff will actually increase the protection of shoreline waters by preventing erosion from washing soil into the ocean.

Former resident Joan McKelvey reported that there may be a burial cave in the cliff below the property, where the wall stabilization project will take place. A follow-up visit

from an archaeologist failed to locate this cave, as did examination from the ocean by the writer of this Cultural Impact Assessment, and Mr. Sadang said he has never observed the cave during his fishing expeditions. Possibly the work done to cover it up when the cave was first exposed has successfully camouflaged it, or it may have been submerged by rising sea levels, as Mr. Sadang suggested. Whatever the explanation, it would seem that the cave has been successfully protected and is best left untouched.

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Appendices

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII, } ss.
County of Maui.

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

Information Wanted for Cultural Impact Assessment

of which the annexed is a true and correct printed notice, was published 2 times in THE MAUI NEWS, aforesaid, commencing on the 17th day of May, 2009, and ending on the 19th day of May, 2009, (both days inclusive), to-wit: on

May 17, 19, 2009

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

This 1 page Information Wanted, dated May 17, 19, 2009, was subscribed and sworn to before me this 19th day of May, 2009, in the Second Circuit of the State of Hawaii, by Rhonda M. Kurohara

Notary Public, Second Judicial Circuit, State of Hawaii
LEILA ANN L. LEONG
My commission expires 11-23-11

LEILA ANN L. LEONG NOTARY PUBLIC No. 03-691 STATE OF HAWAII

Information Wanted for Cultural Impact Assessment

Maui Island Press requests information on cultural resources or activities on or near this parcel in Napili, Maui: TMK (2) 4-3-003:096 Please contact MIP within 30 days at (808) 242-5459
(MN: May 17, 19, 2009)

Ad published in The Maui New seeking information on subject parcel.

Royal Patents Documents

Royal Patent Number(RP)	**6384**	LCA Number:	**04240**
Patentee:	**Kau**	Book::	**24**
Island	**Maui**	Page	**139**
District:	**Kaanapali**	TMK	**2-4-3-01, 03**
Ahupua'a	**Alaeloanui**	Miscellaneous	

Ili

No. 6384, Kau, Alaeloanui, Alaeloaiki & Honokeana Ahupuaa, District of Kaanapali, Island of Maui, Volume 24, pps. 139-140 [RP Reel 13, 00115-00116.tif]

[Great Seal]

HELU 6384

PALAPALA SILA NUI
A KE ALII, MAMULI O KA OLELO A KA POE HOONA KULEANA.

NO KA MEA, ua hooholo na Luna Hoona i ua kumu kuleana aina i ka olelo, he kuleana oiaio ko Kau, Kuleana Helu 4240 ma ke Ano Alodio iloko o kahi i oleloia malalo

Nolaila, ma keia Palapala Sila Nui, ke hoike aku nei o ~~Kamehameha V~~, Lunalilo, ke Alii nui a ke Akua i kona lokomaikai i hoonoho ai maluna o ko Hawaii Pae Aina, i na kamaka a pau, i keia la nono iho, a no kona mau hope alii ua haawi aku oia ma ke Ano Alodio ia Kau, i kela wahi a pau loa ma Kaanapali Alaeloanui ma ka mokupuni o Maui, penei na mokuna.

Apana 1. Kula uwala.
E hoomaka ma ke kihi Hema Komohana, a e holo
Akau 37 3/4° Hikina 1.61 kaulahao ma ko Kaleiopu aina
Akau 34° Hikina 4.20 kaulahao ma ka Pali
Akau 85° Hikina 3.58 kaulahao ma ka Pali
Hema 13 3/4° Komohana 2.98 kaulahao ma ko Manuwai
Akau 89 1/2° Komohana 1.57 kaulahao ma ko Kapali
Hema 37 3/4° Komohana 3.48 kaulahao ma ko Kapali
Akau 78° Komohana 2.16 kaulahao ma ko Kapali a hiki i kahi i hoomakai.
Ili 1 3/4 Eka.

Apana 2. Alaeloaiki. Kula Uwala.
E hoomaka ma ke kihi Akau Komohana, a e holo

Hema 46 1/2° Komohana 2.03 kaulahao ma ko Kaaukea
Hema 47 1/2° Hikina 7.47 kaulahao ma ko Konohiki
Akau 25 3/4° Hikina 2.52 kaulahao ma ko Kaaukea
Akau 49 1/4° Komohana 6.44 kaulahao ma ko Konohiki a hiki i ke kihi mua.
Ili 1 57/100 Eka.

Apana 3. Pahale & Kula. Alaeloanui.
E hoomaka ma ke kihi Hema, a e holo
Akau 43° Hikina 3.33 kaulahao ma ka Pohaku
Akau 25 1/2° Hikina 6.00 kaulahao ma ka Pohaku i Kaleiopu
Akau 80° Komohana 7.06 kaulahao ma ko Kaleiopu
Hema 28° Komohana 4.25 kaulahao ma Kahakai
Hema 39 1/2° Hikina 6.86 kaulahao ma Kahakai a hiki i kahi i hoomakai.
Ili 4 73/100 Eka.

Apana 4. Kula ma Honokeana.
E hoomaka ma ke kihi Hema Komohana, a e holo
Hema 38° Hikina 5.61 kaulahao ma ko Konohiki
Hema 27° Hikina 3.71 kaulahao ma ko Konohiki
Akau 57 1/2° Hikina 4.42 kaulahao ma ko Konohiki
Akau 29 1/2° Komohana 5.74 kaulahao ma ko Konohiki
Akau 36 1/4° Komohana 4.84 kaulahao ma ko Konohiki
Hema 40 1/4° Komohana 4.60 kaulahao ma ko Konohiki a hiki i kahi i hoomakai
Ili 4 36/100 Eka.

[Page 140]

Maloko o keia mau Apana -- 12 41/100 -- Eka a oi iki aku, a emi iki mai paha.
Ua koe nae i ke aupuni na mine minerela a me na metela a pau.

No Kau ua aina la i haawiia ma ke Ano Alodio a no kona mau hooilina, a me kona waihona; ua pili nae ku auhau a ka Poe Ahaolelo e kau like ai ma na aina alodio i kela manawa i keia manawa.

A I MEA E IKEA AI, ua kau wau i ko"u inoa, a me ka Sila Nui o ko Hawaii Pae Aina ma Honolulu i keia la 17 o June 1873

By the King, Lunalilo R. [Rex]
The Minister of the Interior, Edwin O. Hall

[Royal Land Patent No. 6384, Kau, Alaeloanui, Alaeloaiki & Honokeana Ahupuaa, District of Kaanapali, Island of Maui, 4 apana, 12.41 Acres, 1873]

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