Chapter 343
Hawai`i Revised Statutes (HRS)

Draft Environmental Assessment

Dean / Riley Single Family Residence
Lot # 45-A Olowalu, Maui, Hawai`i

TMK: (2) 4-8-03:45

Approving Agency:

State of Hawai`i
Department of Land and Natural Resources
Office of Conservation and Coastal Lands (OCCL)

Applicants

Warren and Susan Dean Jr.
James and Jeanne Riley

December 2008

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EXECUTIVE SUMMARY

Project Name:	Proposed Dean / Riley Single Family Residence
Type of Document:	Draft Environmental Assessment
Legal Authority:	Chapter 343, Hawai`i Revised Statutes
Agency Determination:	Anticipated Finding of No Significant Impact (FONSI)
Applicable Environmental Assessment Review "Trigger":	Use of State Conservation District Lands
Location:	TMK: (2) 4-8-03: 45 Olowalu, Maui, Hawai`i
Applicant / Owners:	James and Jeanne Riley 590 Old Stable Road Spreckelsville, Hawai`i 96779 Phone: 808-877-4202 Warren and Susan Dean 10491 Easter Hill Drive Santa Ana, California 92705
Accepting Authority:	State of Hawai`i Department of Land and Natural Resources Office of Conservation and Coastal Lands PO Box 621 1151 Punchbowl Street Honolulu, Hawai`i 96813
Consultant:	Rory Frampton, Land Use Planner 340 Napoko Place Kula, Hawaii 96790

Project Summary:

James and Jeanne Riley and Warren and Susan Dean Jr., are proposing to construct a single-story, single-family residence on land they own in Olowalu, Maui, Hawaii. Construction of the residence will also involve clearing and grubbing of non-native trees, grass, and shrubbery; installation of water, wastewater and drainage systems; off-site driveway improvements and utility connections; and, re-landscaping to restore a portion of the property with native plants.

Project Summary (continued):	The property is located within the State Land Use "Conservation" district, "Limited" subzone, and in the County of Maui's Special Management Area (SMA). The applicant is processing this Environmental Assessment (EA) to accompany a Conservation District Use Permit (CDUP) application with the State of Hawaii, Department of Land and Natural Resources. A CDUP is required to construct a single-family residence in a "Conservation" district.

I. PROJECT OVERVIEW

A. Project Location, Current Land Use and Ownership

James and Jeanne Riley and Warren and Susan Dean Jr., propose to construct a single-story, single-family residential home in Olowalu, Maui, Hawaii. The subject property is approximately 0.803 acres or 34,978 sq. ft. in size and is identified by TMK: (2) 4-8-03: 45. (The parcel is also identified as Lot #45-A of the Olowalu Makai-Hikina Subdivision.)

The subject property is located in Olowalu, Maui, Hawai`i approximately six miles south–southeast of Lahaina in the vicinity of Olowalu town and the Olowalu wharf. Access to the lot is provided from Honoapi`ilani Highway, a two-way State-owned roadway via an existing access easement across Lot #84-A which separates the subject property from the highway. [see Exhibits 1, 2 and 3]

Lot #45-A is located approximately 400 linear feet makai of Honoapi`ilani Highway. The subject parcel is currently undeveloped and vacant; it is in close proximity to the water but is not oceanfront. Separating Lot #45-A from the ocean is a strip of land approximately 60-feet wide. This strip is a part of Land Grant #4973 to Walter M. Gifford and further identified as Easement "E". [see Exhibit 4]

The parcel is classified as "Conservation" by the State Land Use Commission and "Agricultural" and "Open Space" by the West Maui Community Plan. [See Exhibit 3] The site is also located within the Special Management Area (SMA) of the County of Maui.

The property is owned by Warren and Susan Dean Jr. and James and Jeanne Riley (hereafter referred to as the "applicant").

B. Project Description

The applicant proposes to construct a single-story, single-family residence of approximately 3,331 square feet on the subject property. Related sitework includes grading and driveway improvements; installation of wastewater, water and drainage systems and re-landscaping and restoration of a portion of the lot in native plants. Off-site work will include a private driveway installation and connection to existing utility systems (electrical, cable, telephone, and water). In order to minimize disturbance of the land, only the portion of the lot specifically used for the residence, driveway, walkways and a small yard area surrounding the residence will be permanently altered. It is the intent of the owner to have the remainder of the lot remain in a more naturalized state. [See Exhibits 7-11]

Construction of the residence requires State and County approvals including compliance with County SMA requirements. Construction of a single-family residence is not defined as a "development" according to the Coastal Zone Management Act (HRS 205A) and the Maui Planning Commission rules, therefore an SMA exemption determination is anticipated.

The project site is located within the State "Conservation – Limited Subzone". A single-family residence is an identified land use within the Limited subzone and a Conservation District Use Permit approval from the Board of Land and Natural Resources is required to allow construction of the single-family residence.

C. Chapter 343, Hawai`i Revised Statutes Requirement

Proposed action in the State Conservation District is a trigger for an environmental analysis pursuant to Chapter 343, Hawaii Revised Statutes (HRS). This draft environmental assessment is prepared to analyze and evaluate environmental impacts related to this project including, but not limited to use of State or County lands for connection to utility systems, roadways and other infrastructure related to the project development.

D. Implementation Time Frame

Construction of the applicant's single-family residence will commence upon receiving a Conservation District Use Permit, SMA authorization and approval of construction plans. It is anticipated that the timeline for securing permits and approvals will be approximately 12 months with construction to follow taking approximately (8) months. Based on this timeline project completion is estimated to be about mid-2010.

- **Time Frames:** Anticipated time frames to complete the construction of a single-family residence would be:

    - Permitting: 12 months – December 2008 – December 2009
    - Construction: 8 months - January 2010 - August 2010

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

A. PHYSICAL SETTING

1. Existing and Surrounding Land Use

a. Existing Conditions

The subject property is currently vacant and undeveloped. It is located in Olowalu, Maui, Hawai`i in the vicinity of Olowalu Town and Olowalu Wharf approximately 6 miles from Lahaina and 15 miles from Wailuku. The parcel is approximately 400-linear feet makai of Honoapi`ilani Highway. Separating the parcel from the ocean is a narrow strip of land approximately 60-feet wide.

Lands immediately abutting the property are currently free of structures. Two similar sized vacant parcels, Lots 46-A and 47-A, exist to the east. Lot #84-A is a 28-acre parcel which abuts the property to the north and is currently planted as a landscape nursery. Other surrounding land uses in close proximity to the subject property include the Olowalu General Store / Chez Paul Restaurant to the northwest, Camp Olowalu (formerly Camp Pecusa) to the east; and the former Olowalu Plantation Manager's House and various single family residences to the west. [See Exhibits 1 and 2]

Beginning in about the 1860s, Olowalu grew into a thriving plantation village including schools, churches, plantation camps and stores to support the residents. Olowalu Wharf, the Olowalu Plantation Manager's House and three former plantation residences (west of the subject property) are existing features which are representative of the plantation days in Olowalu. An Olowalu Sugar Plantation map from the early 1900s appears to indicate partial sugar cane planting encompassing the northwest portion of the subject parcel.

b. Potential Impacts and Mitigation Measures

The applicant proposes the construction of a single-family residence and related improvements. Existing single family residences exist to the west of the property and similar proposals for single-family residences have been recently initiated for the two properties to the east. As such, the proposed use is compatible with existing and proposed single-family uses in the surrounding vicinity.

2. Climate

a. Existing Conditions

The climate in Olowalu is relatively uniform year round generally attributed to the island's tropical latitude and surrounding ocean waters. There are variations in climate in the different regions largely based on local terrain.

Winds are typically out of the northeast which occur approximately 50 percent of the time in the winter and approximately 90 percent of the time during the summer.

Average temperatures range with lows in the low 60's and highs in the high 80's (Fahrenheit degrees) with rainfall ranging from approximately two to nine inches per year.

b. Potential Impacts and Mitigation Measures

The proposed construction is for a single-family residence and as such, impacts generated by the project are not expected to have an adverse impact on the local climate conditions.

3. Soils and Topography

a. Existing Conditions

Soils at the project site are classified as Jaucas Sand, 0-15 percent slopes. These soils belong to the Jaucas Soil Series which consist of excessively drained calcareous soils that occurs as narrow strips on coastal plains adjacent to the ocean. It is characterized by rapid permeability, very slow to slow runoff, slight water erosion hazard and severe wind erosion where the vegetation is removed.

Most of the area surrounding the subject property was formerly used for sugar cultivation and has been fallow in recent years. Olowalu is on the southwestern slopes of the West Maui Mountains ranging from sea level to approximately the 400 feet above sea level. The topography of the project site is generally flat to slightly sloping towards the ocean at approximately 2% mauka to makai. The elevation above mean sea level of the subject property ranges between three to six feet. [See Exhibit 6]

b. Potential Impacts and Mitigation Measures

Minor grading for the construction of a single-family residence is anticipated and will comply with applicable requirements of Chapter 20.08, Soil Erosion and Sedimentation of the Maui County Code. The rapid permeability of the

soils combined with the construction of a runoff retention basin, will reduce the potential for runoff generated from the property to directly enter nearshore waters (see Section II.C.4, Drainage.) No significant impacts to the existing topography or surrounding area are expected based on the scope of the proposed project.

4. Flood and Tsunami Hazards

a. Existing Conditions

The subject property is located in a flood plain identified on the FEMA flood maps as Zone A-4, which are areas of 100 year flooding due to tsunami wave run up (with no velocity.) The predicted base flood elevation across the property is 5 feet above sea level. [See Exhibits 6 and 15]

b. Potential Impacts and Mitigation Measures

The project will be developed in accordance with Chapter 19.62, Flood Hazard Areas, Maui County Code. The ground floor elevation of the home will have to be above the base flood elevation of five feet. As the A-4 flood zone does not extend mauka of the boundaries of the subject property, there would be zero effect on any mauka property. The Topographic Survey Map with Flood Zone information completed by Tanaka Engineering is attached as Exhibit 6 and described further in Appendix A – Preliminary Drainage Report.

5. Flora and Fauna

a. Existing Conditions

In May 2006, Robert W. Hobdy conducted a Biological Resources Survey of the subject property. According to his report, approximately 80% of this parcel is densely forested primarily with kiawe (Prosopis pallida) tree and the understory ground layer of mostly “a robust form of manienie grass (Cynodon dactylon).” [See Appendix B] The survey further finds only 11 species of plants on the property, all non-native and describes the property as “remarkable only for its lack of diversity of plant species”. The nearby coastline / boulder beach was also described as “depauperate” (lacking species found in similar habitats). The findings conclude there is little of biological concern due to the non-native and weedy nature of the vegetation on the subject parcel.

While it was noted by the report that fauna surveys are seldom comprehensive due to the short windows of observation and seasonal nature of animal activities, the report did conclude that it was not likely that a more extensive survey would have yielded any rare or sensitive species in the subject study area. Moderate birdlife diversity was observed in this normally dry area and

eight species of non-native birds were seen taking advantage of the seasonal food supply made available by the supply of non-native grass and plant seeds.

b. Potential Impacts and Mitigation Measures

The Biological Resources Survey for Olowalu Lot 45-A completed by Mr. Robert W. Hobdy (May 2006) notes the absence of any rare, threatened, or endangered species or habitat. Mr. Hobdy reports, "Not a single native plant was found. As a result no federally listed Endangered or Threatened species (USFWS, 1999) occur here and there are no special habitats of any kind".

The report's discussion regarding the fauna survey states "All of the mammal, bird and insect species observed were common, non-native species that pose no environmental concerns. No Federally Endangered or Threatened species were found."

Based on the results and "no recommendations deemed necessary" of the survey conducted for the subject property, no significant adverse impacts to flora or fauna in the area are anticipated due to the proposed construction. In order to further enhance the area and minimize impact, the landscaping plan proposes to re-introduce native Hawaiian and drought resistant plantings to replace invasive species in the areas immediately surrounding the residence and as feasible, keep the outer areas of the property in its' existing naturalized state. [See Exhibit 11]

6. Archaeological Resources

a. Existing Conditions

The subject parcel was included as part of an overall Archaeological Inventory Survey prepared by Xamanek Researches which covered approximately 73 acres of Olowalu properties on the makai side of Honoapi`ilani Highway. A subsequent Archaeological Mitigation & Preservation Plan, based on Xamanek Researches' "Inventory Survey" was prepared by Olowalu Elua Associates LLC. [See as Appendix C]. Both the "Inventory Survey" and the "Preservation Plan" were submitted to and accepted by the State of Hawai`i's State Historic Preservation Division (SHPD). [See Appendix D]

The January 28, 2000 "Inventory Survey" fieldwork identified eight previously unrecorded sites within the larger study area. None of the State numbered sites identified in the survey are located on, near, or within 300 feet of the subject property.

The Inventory Survey noted two natural conditions of interest. The first is the presence of sand deposits along the eastern portion of the Inventory Survey's study area. The existence of the sand deposits as well as the proximity to the shoreline led to a recommendation for archaeological monitoring during earthwork activities for the eastern portion of the Inventory Survey study area, which includes the proposed project site.

The second condition was the presence of "Gley Soils" which were found during subsurface testing. These soils are high in organic content and were interpreted to be former marsh deposits. There is a potential that stream-fed, coastal, lagoonal marsh lands could have been used for fishponds and could yield paleo-environmental information on Hawaiian history. This condition is noted as occurring on the southwest corner of the property and occupies an area of approximately 1,000 square feet.

b. Potential Impacts and Mitigation Measures

The Archaeological Inventory Survey and Cultural Assessment indicate that no significant historic sites or cultural resources exist on the subject property.

Due to the presence of sub-surface sand deposits in the area and the property's proximity to the coastline, archaeological monitoring will be required in accordance with the approved Archaeological Monitoring Plan. All work in the immediate vicinity will stop and the State of Hawaii, Department of Land and Natural Resources, Historic Preservation Division (DLNR/SHPD) and the Office of Hawaiian Affairs (OHA) will be contacted should any human skeletal remains or significant cultural deposits be encountered.

A portion of the site encompasses an area thought to contain subsurface gley soils. This area is inside a section of the property that is designated Open Space on the West Maui Community Plan and will not be disturbed during construction. An orange construction fence will be set up along the line separating the Community Plan's Open Space from the Community Plan's Agricultural designations. This construction fence will shield both the land designated Open Space and the area noted as "Gley Soils" from construction activity. In accordance with the approved Archaeological Mitigation & Preservation Plan, interpretive signage will be placed in the vicinity of these sub-surface soil deposits.

7. <u>Cultural Assessment</u>

a. Existing Conditions

A Cultural Impact Assessment was prepared for the subject property and is included as Appendix E.

Historical records, stories and chants appear to indicate that pre and post contact Olowalu Valley was the largest and deepest valley on the southwest side of Maui and with its permanent stream, was a thriving village with the resources from the mountain to the ocean supporting the population. Numerous important trails extending from the coast to mountains linked the areas for both social and economic reasons. One of the more famous trails

crossed from I`ao Valley to Olowalu linking the westside and central communities of the island.

According to the Cultural Impact Assessment report, there were 88 claims for land in Olowalu during the Mahele. The project area incorporates LCA 5620 which was awarded to Kehele (Kahele) along with five other parcels. According to Mopua who testified for Kehele, there were two lots along the coast, both of which were houselots. Mopua stated that Kehele received these lands from Maka in 1824 (including the subject property LCA 05620, Mahele Database 2006) "and his title is without dispute". The original award, Royal Patent 5477, Land Commission Award 5620, Apana 4 to Kahele, describes the parcel as *"Pahale na "Kaunukukahi"*. "Pahale" per the Hawaiian Dictionary (Pukui / Elbert's; Honolulu, U Hawaii Press, 1986) is defined as: pā hale. n. House lot, yard, fence.

Thus, based on available records, the subject parcel is a Land Commission Award historically used as a house lot.

The Olowalu Company was organized in 1881 and Olowalu grew into a thriving plantation village including schools, churches, plantation camps and stores to support the residents. The Olowalu Wharf and the Olowalu Plantation Manager's House (west of the subject property) are representative of the plantation days in Olowalu. An Olowalu Sugar Plantation map from 1881 appears to indicate partial sugar cane planting encompassing the northwest portion of the subject parcel.

b. Potential Impacts and Mitigation Measures

Interviews with individuals who might be familiar with cultural practices and features associated with the project area indicated that there were no known cultural activities associated with the subject property or vicinity but interviewees mentioned that using ocean resources for food sources such as net-fishing, gathering limu, loli (sea cucumber), sea urchin, he`e (octopus), crabs, lobster, and torch fishing are conducted along the beach and in the bay.

Based on records available, the subject parcel appears to have been used as a houselot until at least 1881 and eventually became a part of the subsequent sugar plantations. The property is currently vacant and undeveloped, is not considered to be shoreline property and is not currently used as public beach access. There is vacant land on each side of the lot and public beach access to the shoreline is accommodated by government beach reserves from both the west and south. Access to the shoreline fronting the property will not be affected by the proposed project and cultural practices are not expected to be adversely affected.

8. Air Quality

a. Existing Conditions

Olowalu is a rural agricultural community. Strong winds can disturb the soil and cause dirt and dirt particles to become airborne. This is not the normal condition and only occurs during strong winds. Honoapi`ilani Highway, a major state highway, runs through Olowalu. The presence of this highway with a vehicle count approaching twenty thousand per day may have some effect on ambient air quality.

b. Potential Impacts and Mitigation Measures

Other than during construction, a single-family residence will have minimal impact on air quality.

During construction, Best Management Practices, as described in Section II.C.4 Drainage and in Appendix A, will be employed to minimize potential air quality impacts. Measures such as water wagons running on the graded part of the property on any day that heavy equipment are operating on the property and installation of a temporary sprinkler system around the perimeter of the graded area of the property to assist in dust control during the construction period will be taken to mitigate these potential impacts where possible.

As the proposed project is limited to the construction of a single-family residence, no significant long-term adverse impacts to air quality is anticipated as a result of this project.

9. Noise

a. Existing Conditions

The subject parcel is currently undeveloped and vacant; is in close proximity to the water but is not oceanfront. Separating Lot #45-A from the ocean is a strip of land approximately 60-feet wide. Honoapi`ilani Highway, a major state highway runs through Olowalu approximately 400 feet mauka of the property. Vehicular traffic from the highway and environmental conditions (wind, ocean, rain etc.) are the primary sources of noise affecting the subject property.

b. Potential Impacts and Mitigation Measures

Other than during construction, a single family residence will create minimal long-term impacts to ambient noise levels. At present, there is only one residence within five hundred feet in any direction. That neighbor shall be consulted regarding any inconveniences arising from noise generated during

construction. All construction work will be performed during normal daylight working hours.

As the proposed project is limited to the construction of a single-family residence, no significant long-term adverse impacts to noise quality is anticipated as a result of this project.

10. Scenic and Ocean Space Resources

a. Existing Conditions

The subject parcel is currently undeveloped and vacant and is in close proximity to the water but is not oceanfront. Separating Lot #45-A from the ocean is a strip of land approximately 60-feet wide. The property provides views of the Pacific Ocean and the islands of Lana`i and Kahoolawe. Mauka views from the property include Olowalu Valley and the West Maui Mountains.

Approximately 400-feet mauka of the property is Honoapi`ilani Highway, a major state highway that runs through Olowalu. The area between the existing Highway and the subject property includes opiuma scrub trees along the highway; a landscape nursery growing various palm trees as well as kiawe trees at the edge of the subject property. As such, there are no existing views towards the ocean from the highway. See Exhibit 16 which includes photographs of the project site and views from the highway toward the ocean.

b. Potential Impacts and Mitigation Measures

The proposed residence has been designed to complement the new residences being constructed in Olowalu. The architectural style of the home is “Hawaiian Country” featuring a split-pitch hip roof, wood siding, rock accents at the base and slab on grade construction and is being designed to blend into the Olowalu community and neighboring properties. Landscaping will be used to set the home into its natural surroundings. Due to the current vegetation and landscaping of the area between the subject property and the highway, existing view planes are not expected to be impacted. Once complete, the proposed single-story, single-family residence will not be visible from the nearest public road. As such, obstruction of view or sight planes is not anticipated and the proposed project is not expected to adversely affect the scenic and open space resources of the Olowalu area.

11. Shoreline Access

a. Existing Conditions

Based on records available, the subject parcel appears to have been used as a houselot until at least 1881 and eventually became a part of the subsequent

sugar plantation. Although the property is currently vacant and undeveloped, it does not abut the shoreline and is not currently used by the public to access the shoreline. Lateral public access along the shoreline in the project vicinity is accommodated by government beach reserves to the east and west.

b. Potential Impacts and Mitigation Measures

The subject property does not abut the shoreline and lateral public access along the shoreline fronting the property will not be affected by the proposed project. As such, shoreline access for recreational or cultural activity is not expected to be adversely affected by the proposed project.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population and Economy

a. Existing Conditions

The resident population in the West Maui region has shown a substantial increase over the last two decades. Olowalu is a growing region on Maui's west side. New residences have been constructed both makai and mauka sides of Honoapi`ilani Highway. The 1970's rapid development of the visitor industry attracted many new residents to West Maui region. In the Lahaina District (the island's third largest population area) the population increased from 14,574 in 1990 to 17,967 in 2000 representing a 23% change.

Maui's economy is very dependent on the visitor industry and West Maui is one of the State's major resort destination areas, however, there is no resort or significant visitor destinations in the vicinity of the project area.

b. Potential Impacts and Mitigation Measures

The proposed action is limited to the construction of one single-family residence and will have a very slight positive effect on both the economy and the social welfare of the community and state. The construction of the home and the purchase of construction materials will generate jobs and goods and services revenues. The completed residence will generate additional tax revenue to the County. However, given the limited scope, the proposed project will not significantly impact the population or economy of the area.

C. INFRASTRUCTURE / PUBLIC SERVICES

1. Roadways

a. Existing Conditions

Honoapi`ilani Highway runs through Olowalu. This is a major state highway connecting all of West Maui to Central/South Maui. Off of Honoapi`ilani Highway is Olowalu Village Road, a private road that services the properties on the makai side of Honoapi`ilani Highway. Left turn storage and right turn deceleration lanes are provided on the Highway for access to the Olowalu Village Road. Access to the subject property is via an existing easement (Access Easement B) across the approximately 28-acre Lot #84 that is currently planted as a landscape nursery. Access Easement B running parallel to the highway is approximately forty (40) feet wide and approximately twenty-four (24) feet wide running mauka / makai. [See Exhibit 3]

b. Potential Impacts and Mitigation Measures

Based on the limited scope of the project, there will be minimal impact to existing roadways.

2. Water

a. Existing Conditions

Both potable and non-potable water will be provided to the parcel by Olowalu Water Company, a public, PUC regulated water company. Water mains exist on the makai side of Honoapi`ilani Hwy. Water service will be brought in along the access easement. [See Exhibit 5]

b. Potential Impacts and Mitigation Measures

Adequate water service, including fire flow protection, is available to service the proposed single family dwelling and no significant impact is anticipated to water services.

3. Wastewater

a. Existing Conditions

There are no existing public wasterwater collection or treatment facilities serving the Olowalu area. An individual wastewater system (IWS) will be developed on site and will include septic tank and leach field.

b. Potential Impacts and Mitigation Measures

The IWS will be designed by an engineer licensed in the State of Hawai`i in accordance with the rules of the State Department of Health. Due to the proximity to ocean waters, the system will incorporate aerobic treatment of the leachate in order to lesson potential impacts to subsurface or nearshore water quality.

4. Drainage

a. Existing Conditions

A Preliminary Drainage Report was prepared by Tanaka Engineering and is included as Appendix A. There are no man-made drainage facilities at the site or immediate vicinity. At present, surface runoff from the site generally flows in a southwesterly direction to discharge into the shoreline area. The existing 10-year, one hour runoff rate is calculated to be 0.9 cubic feet per second (cfs).

b. Potential Impacts and Mitigation Measures

The proposed project is anticipated to increase the existing 10-year runoff rate of 0.9 cfs to 2.0 cfs and the existing 50-year runoff volume from 2,144 cf to 3,928 cf, an increase of about 1.1 cfs and 1,784 cf, respectively. The increase in runoff is due to the introduction of impervious surfaces.

The proposed drainage plan will involve impounding the expected runoff volume increase as a result of the project. This will be attained by the construction of a retention basin which will be sized to contain the 50-year runoff volume increase. The basin will be open cut and grass lined and is shown in Exhibit 12.

During construction on the site, site grading will be in conformance with the applicable requirements of Chapter 20.08, Soil Erosion and Sedimentation of the Maui County Code. Grading and Best Management Practices (BMPs) will be utilized in order to control soil erosion and drainage runoff during construction. These measures will include control of dust by means of water trucks or temporary sprinklers, and early construction and installation of temporary and permanent drainage control features. [See Exhibit 12 and Appendix A]

With the incorporation of the BMPs and installation of the retention basin, the proposed project is not anticipated to have significant adverse impacts. The proposed retention pond will have excess capacity resulting in a decrease of runoff from the property of approximately 25 percent. The basin will also have the effect of reducing the potential for sediments contained in the runoff from entering near shore waters.

5. Solid Waste Disposal

a. Existing Conditions

The project area is not currently serviced by the County's refuse collection service.

b. Potential Impacts and Mitigation Measures

During land clearing and construction activities, green waste will be disposed of at the County's green waste recycling center and construction waste will be disposed of at the Ma'alaea Construction and Demolition Waste Landfill. Refuse disposal from the single family residence will be handled by a private refuse collection company.

III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS

A. State Land Use Districts

The subject property is classified as "Conservation", "Limited" subzone. Land uses in the Conservation District are regulated by Chapter 13-5 of the Hawai`i Administrative Rules under the jurisdiction of the Department of Land and Natural Resources. A single-family residence is an identified land use in the "Limited" subzone. Approval of this use will require a board permit.

B. Conservation District Use Analysis

The subject project will require a Conservation District Use Permit from the Board of Land and Natural Resources, in accordance with Chapter 13-5 Hawai`i Administrative Rules. Chapter 13-5 establishes the following criteria for evaluating proposed land uses.

1. <u>The Proposed Land Use is Consistent With the Purpose of the Conservation District:</u>

   The proposed project is consistent with the purpose of the Conservation District in that the proposed project will not have a significant impact on the natural resources of the State. The proposed project area is located along a narrow strip of Conservation classified land which runs along the shoreline. The project area is not within or near significant land based natural resource systems, such as watersheds or wetlands. Potential impacts to coastal resources will be mitigated through implementation of drainage and erosion control measures which are documented in this assessment.

2. <u>The Proposed Land Use is Consistent With the Objectives of the Subzone of the Land on Which the Use Will Occur:</u>

   The objective of the "Limited" subzone classification is "to limit uses where natural conditions suggest constraint on human activities". Typically these areas will include steep slopes or areas susceptible to erosion or flood hazard. Single Family Residences that are located in a designated flood area are an identified use in the Limited subzone (L-6), provided that applicable county flood control regulations are complied with. The project area is located in an area of coastal flooding and the base flood elevation is determined to be 5-feet above sea level. Pursuant to the County of Maui's Flood Control ordinance, the project has been designed so that the finish floor will be at 6.5-feet above sea level. All other applicable requirements of the flood control ordinance will be adhered to.

3. The Proposed Land Use Complies With Provisions and Guidelines Contained in Chapter 205A, HRS, Entitled "Coastal Zone Management", Where Applicable:

   Chapter 205A, HRS, is intended to regulate "development" within the Special Management Areas of the state in order to minimize impacts to the resources of the Coastal Zone. Single-family residences are considered exempt from the definition of development, provided that there is no significant environmental or ecological effect on a special management area. Based on the analysis and findings within this Environmental Assessment, it is anticipated that a finding of no significant impact will be made and that the proposed single family residence will not be considered development pursuant to Chapter 205A and an SMA exemption determination will be made by the County of Maui.

4. The Proposed Land Use Will Not Cause Substantial Adverse Impact to Existing Natural Resources Within the Surrounding Area.

   As noted, the project location is not located near significant land based natural resource areas. Best Management Practices, such as drainage and erosion controls will be implemented to ensure that potential adverse impacts to coastal related natural resources are appropriately mitigated. With the incorporation of the mitigation measures identified within this document, the proposed land use is not anticipated to have substantial adverse impact to existing natural resources within the area.

5. The Proposed Land Use, Including Buildings, Structures, and Facilities Shall be Compatible With the Locality and Surrounding Areas, Appropriate to Physical Conditions and Capabilities of the Specific Parcel or Parcels.

   The proposed residential use is consistent with the historic land use patterns in the Olowalu area. Olowalu was a village in pre-contact times as well as during the plantation era. The proposed use is also consistent with existing residential uses in the nearby vicinity, to the east and west of the Plantation Manager's house.

   The relatively flat topography of the parcel is conducive to residential use. Historic use of the parcel as a home site is an indication of the appropriateness of the site for residential use. The proposed floor area of the structure, including covered lanais, is approximately 4,060 s.f, which represents approximately 12% of the parcel size, allowing for over 80% of the parcel to be landscaped or to remain in a natural state.

6. The Existing Physical and Environmental Aspects of the Land, Such as Natural Beauty and Open Space Characteristics, Will be Preserved or Improved Upon, Whichever is Applicable.

   The physical and environmental aspects of the site are similar to flat, nearshore

coastal lowlands which extend from Ukumehame to the Olowalu Landfill, and, as such, the site does not contain unique features either topographically or geologically. Natural or existing vegetation consists of non-native plants and the biological report concluded there is little of biological concern due to the non-native and weedy nature of the vegetation on the subject parcel. In order to further enhance the area and minimize impact, the landscaping plan proposes to reintroduce native Hawaiian and drought resistant plantings to replace invasive species in the areas immediately surrounding the residence and as feasible, keep the outer areas of the property in its' existing naturalized state.

7. Subdivision of Land Will Not be Used to Increase the Intensity of Land Uses Within the Conservation District.

   The proposed action will not result in a subdivision of land.

8. The Proposed Land Use Will Not be Materially Detrimental to the Public Health, Safety and Welfare.

   With the incorporation of an appropriately designed and operated individual wastewater system, combined with the other BMPs identified within this assessment, the proposed residential land use will not result in materially detrimental impacts to public health, safety and welfare.

C. Relationship to Maui County General Plan and West Maui Community Plan

1. Maui County General Plan

   Maui County's General Plan consists of an overall policy document (General Plan) as well as nine community plans which consists of policies and objectives as well as land use maps.

   The West Maui Community Plan's land use map designates the property as Agricultural and Open Space. The Open Space designation occurs on approximately 2,600 s.f. or 8% of the property, near the southeastern corner, while the Agricultural designation covers approximately 92% of the property, including the proposed residential dwelling site.

   The West Maui Community Plan's provides for the following definition of land use within the Agricultural category:

   > *"This use indicates areas for agricultural activity which would be in keeping with the economic base of the County and the requirements and procedures of Chapter 205, H.R.S, as amended."*

   The reference to the requirements to Chapter 205, HRS, is notable since, Section

205-4.5(B) allows for the construction of single family dwellings on lots which existed prior to June 4, 1976.

No construction activity will occur in the section of the property designated as Open Space. This Open Space designation occurs on the southwest corner of the property. Orange construction fencing will be set up along this line to ensure that no construction occurs within this Open Space area.

2. Maui County Zoning

Prior to the enactment of the State Land Use Law, the subject parcel was zoned Apartment A-3 by the County of Maui. The property was subsequently classified Conservation under the State Land Use law, thus, rendering the County Zoning null and void, since the County has not been provided zoning powers within the Conservation District.

3. Special Management Area Objectives and Policies

The subject property is located within the County of Maui's SMA and proposed actions are evaluated per Hawaii Revised Statutes, Chapter 205A, and the County of Maui's Planning Commission's Rules and Regulations. It is anticipated that the proposed project, construction of a single-family home, will qualify as an exempt action as this use is not defined as a "development" per Maui County Planning Commission's SMA rules. The applicant will file for an SMA exemption for the construction of a single-family residence.

The following is an analysis of the project in relation to the Goals, Objectives and Policies within Chapter 205A:

A. Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

1. Improve coordination and funding of coastal recreational planning and management; and

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

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

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

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

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

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

f. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

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

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

Response: The proposed project does not abut the shoreline and will not impact the ability of the public to access the shoreline. Long term plans for coastal recreational areas are identified in the West Maui Community Plan; however, these lands are located to the east of the project area. Best Management Practices have been identified to mitigate the potential negative effects from runoff, both during and after the construction phase.

B. Historic Resources

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

Policies:

1. Identify and analyze significant archaeological resources;

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

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

Response: The project area was included as part of an Archaeological Inventory Survey as well as an Archaeological Mitigation & Preservation Plan, both of which were approved by SHPD. No Sites were found on the property and archaeological monitoring will be conducted during construction in order to identify any subsurface features which may exist at the site.

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:

1. Identify valued scenic resources in the coastal zone management area

2. 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;

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

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

Response: As previously discussed, there are no significant public view corridors which will be impacted by the project and the project has been designed to minimize grading and disturbance to natural landforms.

D. Coastal Ecosystems

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

Policies:

1. Improve the technical basis for natural resource management;

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

3. 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

4. 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.

Response: Best Management Practices will be implemented in order to minimize potential impacts to coastal ecosystems during construction. An on site retention basin is proposed to reduce storm runoff and to decrease the chance for sediments within the runoff to reach near shore waters. Lastly, an individual wastewater treatment system, with aerobic processing, will be utilized to dispose of wastewater effluent.

E. Economic Uses

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

Policies:

1. Concentrate coastal dependent development in appropriate areas;

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

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

   a. Use of presently designated locations is not feasible;

   b. Adverse environmental effects are minimized; and

   c. The development is important to the State's economy.

Response: The project is limited to the construction of one single family residence and as such will have a minimal impact on the State's economy.

F. Coastal Hazards

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

Policies:

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

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

3. Ensure that developments comply with requirements of the Federal Flood Insurance Program;

4. Prevent coastal flooding from inland projects; and

5. Develop a coastal point and nonpoint source pollution control program.

Response: Flood Insurance Rate Maps for the area indicate the potential for flooding due to wave run up (with no velocity) due to tsunami. The predicted base flood elevation is 5 feet above sea level, which is relatively low as compared to other locations on Maui and throughout the State. The proposed residence will be designed and constructed in compliance with the requirements of the Federal Flood Insurance Program, as implemented through the County of Maui's Flood Hazard Area Ordinance, Chapter 19.62, Maui County Code. At a minimum this will require that the finish floor elevation of the structure be above the predicted base flood elevation. Accordingly, the proposed finish floor elevation is 6.5 feet above sea level.

According to an analysis by the University of Hawaii, the shoreline location fronting the project area has been relatively stable with an estimated Annual Erosion Hazard Rate of 0.0 ft per year. [See Exhibit 14] The relative stable shoreline combined with the structure being located a minimum of 91 feet from the certified shoreline should minimize concerns related to impacts from shoreline erosion.

The applicant acknowledges and is aware of the risks associated with developing along or near the coast due to potential exposure to high winds and associated marine flooding from storm events such as Kona storms and hurricanes or high surf. The applicant feels that slab on grade construction, with the finish floor constructed above the predicted base flood level, provides for a preferable form of protection from these extreme events.

G. Managing Development

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

Policies:

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

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

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

Response: The preparation and processing of this Environmental Assessment and subsequent public and agency review processes associated with the requested Conservation District Use Permit will allow for opportunities for public and agency participation early in the planning and review process of the proposed project.

H. Public Participation

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

Policies:

1. Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

2. 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

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

Response: The applicant will participate to the extent required in any public awareness or education efforts established by the State or County.

I. Beach Protection

Objective: Protect beaches for public use and recreation.

Policies:

1. Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion.

2. 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

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

Response: The proposed structure is in an area which is considered to have a relatively stable shoreline and will be located approximately 91 feet from the shoreline, well inland of the 40 foot shoreline setback established by the County of Maui.

J. Marine Resources

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

Policies:

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

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

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

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

5. Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities related to and impact upon ocean and coastal resources; and

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

Response: The proposed project will not involve the direct use or development of marine or coastal resources and Best Management Practices will be implemented to minimize potential adverse effects to coastal resources during the short and long term.

K. Special Management Area

Objective: In addition to the foregoing objectives and policies, SMA permit review criteria pursuant to Act 224 (2005) provide that:

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

    a. Directly illuminates the shoreline and ocean water; or

    b. Is directed to travel across property boundaries toward the shoreline and ocean waters.

Response: The proposed project's lighting will be designed so as to not allow artificial light to directly illuminate shoreline and ocean water or to be directed across property boundaries toward the shoreline and ocean waters.

IV. ALTERNATIVES ANALYSIS

The subject parcel was originally created as a Land Commission Award based on use as a Pahale or “house lot”. Thus, the proposed construction of a single-family residence on the property would re-establish a historic use of property.

The size of the subject parcel, approximately .5 acre, limits other potential uses such as large scale agriculture or higher density or more intense uses such as multi-family or resort related use.

Prior to the enactment of Chapter 13-5 Hawaii Administrative Rules and the creation of the Conservation zones, the County of Maui zoned the property for a higher use as Apartment A-3. Thus, for a period of time, the mid-1950’s to the early 1960’s, the County of Maui through their zoning code, felt the highest and best use of the subject parcel was for an apartment building. This use is not being proposed as it is not the use that the applicant desires.

V. SIGNIFICANCE EVALUATION

The following "Significance Criteria", Section 12 of the Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", are used to determine the significance of a project's impacts and whether an Environmental Impact Statement is required:

A. Involves an Irrevocable Commitment To Loss Or Destruction Of Any Natural Or Cultural Resource

Studies undertaken by the applicant to assess the potential environmental impact of the proposed action indicate that no significant natural or cultural resources exist on the subject property.

B. Curtails the Range of Beneficial Uses of the Environment

The proposed project is limited in scope to the construction of one single-family dwelling and will re-establish residential use of the property. The use will not curtail the range of beneficial uses of the environment.

C. Conflicts With The State's Long-Term Environmental Policies or Goals or Guidelines as Expressed in Chapter 344, HRS, And Any Revisions There of and Amendments Thereto, Court Decisions, or Executive Orders

The project does not conflict with the State's long-term environmental policies, goals, and guidelines.

D. Substantially Affects the Economic or Social Welfare of the Community or State

Based on the limited scope of the project, the economic or social welfare of the community or state will not be substantially affected.

E. Substantially Affects Public Health

The construction of a single-family residence will not have a long-term negative effect on public health. There will be long-term positive effects on the health and well being of the family or families occupying the home.

F. Involves Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities

The construction and resulting occupancy of a single-family residence involves the relocation of one family or four individuals to the Olowalu area. The project should not cause any substantial ripple or secondary impacts on public services such as police, fire and medical services or adversely impact educational, recreational and solid waste parameters in the area.

G. Involves a Substantial Degradation of Environmental Quality

This environmental assessment and the accompanying technical studies have shown that there will be no substantial degradation of environmental quality

H. Is Individually Limited But Cumulatively has a Considerable Cumulative Effect Upon the Environment or Involve a Commitment for Larger Actions

The proposed development is a single stand alone action and will have no cumulative effect on the environment.

I. Substantially Affects a Rare, Threatened or Endangered Species or its Habitat

The Biological Resources Survey for Olowalu Lot 45-A completed by Mr. Robert W. Hobdy notes the absence of any rare, threatened, or endangered species or habitat. Mr. Hobdy reports, "Not a single native plant was found. As a result no federally listed Endangered or Threatened species (USFWS, 1999) occur here and there are no special habitats of any kind".

The report's discussion regarding the fauna survey states "All of the mammal, bird and insect species observed were common, non-native species that pose no environmental concerns. No Federally Endangered or Threatened species were found."

J. Detrimentally affects Air or Water Quality or Ambient Noise Levels

Short-term impacts to air quality and ambient noise levels during construction may occur and measures to minimize and mitigate potential impacts will be implemented. Detrimental, long-term affects to air or water quality, or ambient noise levels by the subject project are not anticipated.

K. Affects or is Likely to Suffer Damage by Being Located in an Environmentally Sensitive Area, Such as Flood Plain, Tsunami Zone, Erosion-Prone Area, Geologically Hazardous Land, Estuary, Fresh Water or Coastal Water

The subject parcel is located in a flood zone, however, the project will be designed and constructed to comply with county regulations regarding construction in an flood hazard area. No impacts to surrounding properties are anticipated.

L. Substantially Affects Scenic Views and View Plains Identified in County or State Plans or Studies

There are no scenic views or view plains identified by the County which would be impacted by the proposed project.

M. Requires Substantial Energy Consumption

The proposed single family residence will not consume excessive amounts of energy. The applicant will install a solar water system to make the project more energy efficient.

VI. FINDINGS AND CONCLUSIONS

Based on the analysis contained in this assessment, it is anticipated that a Finding of No Significant Impact (FONSI) will be made upon completion of the public and agency review and comment period, resulting in the acceptance of a Final Environmental Assessment by the Department of Land and Natural Resources.

VII. LIST OF PERMITS & APPROVALS

i. State Conservation District Use Permit (CDUP)
    1. Department of Land and Natural Resources – Board Permit
    2. Environmental Assessment (OCCL – Accepting Agency)

ii. County of Maui - Special Management Area (SMA)
    1. Determination of Exempt Status for Single Family Residence – Planning Department

iii. Individual Wastewater System Permit
    1. State Department of Health

Coordination with the appropriate administering agencies will be conducted during the HRS, Chapter 343 EA process.

VIII. AGENCIES / ORGANIZATIONS CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT AND RESPONSES RECEIVED *(see Appendix F)*

State	
Mr. Herbert Matsubayashi, Program Chief **State of Hawaii, Department of Health** **District Environmental Health** 54 High Street Wailuku, Hawai`i 96793	Ms. Melanie Chinen, Administrator **State of Hawaii, Department of Land and Natural Resources** **State Historic Preservation Division** 601 Kamokila Blvd., Room 555 Kapolei, Hawai`i 96707
Mr. Peter Young, Chairperson **State of Hawaii, Department of Land and Natural Resources** PO Box 621 Honolulu, Hawai`i 96809	Mr. Samuel Lemmo, Administrator **State of Hawaii, Department of Land and Natural Resources** **Office of Conservation & Coastal Lands** PO Box 621 Honolulu, Hawai`i 96809
County of Maui	
Carl Kaupololo, Chief **County of Maui** **Department of Fire and Public Safety** 200 Dairy Road Kahului, Hawai`i 96732	Mr. Francis Cerizo, Planner **County of Maui** **Department of Planning** 250 South High Street Wailuku, Hawai`i 96793
Mr. Jeffery Hunt, Planner **County of Maui** **Department of Planning** 250 South High Street Wailuku, Hawai`i 96793	Mr. Milton Arakawa, Director **County of Maui** **Department of Public Works & Environmental Management** 200 South High Street Wailuku, Hawai`i 96793
Ms. Zoe Norcross-Nu`u Sea Grant Extension Agent 310 Kaahumanu Avenue Kahului, Hawai`i 96732	
Private	
Dr. and Ms. James Bendon Paia, Hawai`i 96779	Mr. & Ms. James & Katherine Berman Cheshire, CT 06410
Private - continued	

Camp Olowalu 800 Olowalu Village Road Lahaina, Hawai`i 96761	Ms. Theresa Daly Lahaina, Hawai`i 96761
Mr. & Ms. Joshua & Danae Dean Lahaina, Hawai`i 96761	Fujii Family HM Fujii Ltd. Lahaina, Hawai`i 96761
Hawaiian Telecom 60 South Church Street Wailuku, Hawai`i 96793	Mr. & Ms. Kenneth & Gail Laird Napa Valley, CA 94558
Mr. & Ms. Peter & Debbie Martin Paia, Hawai`i 96779	Mr. Neal Shinyama, Manager – Engineering Maui Electric Company, Ltd. PO Box 398 Kahului, Hawai`i 96732
Mr. Michael Moore Lahaina, Hawai`i 96761	Olowalu Ekolu, LLC 2073 Wells Street, Ste. 101 Wailuku, Hawai`i 96793
Olowalu Elua Associates, LLC 33 Lono Avenue, Suite 450 Kahului, Hawai`i 96732	Olowalu Makai-Komohana HOA c/o Certified Management, Inc. 270 Hookahi Street, Suite 201 Wailuku, Hawai`i 96793
Mr. & Ms. Doug & Donna Poseley Lahaina, Hawai`i 96761	

VI. REFERENCES

Coastal Geology Group, Hawaii Coastal Erosion Website, County of Maui, Maui Shoreline Study Erosion Maps, Hekili Point, Maui, Hawaii; Coastal Geology Group, 2007

County of Maui, The General Plan of the County of Maui 1990 Updated, 1990

County of Maui, West Maui Community Plan, February 1996

Federal Emergency Management Agency, Flood Insurance Rate Map. Community Panel 15003 0229M, Effective Date: June 1, 1981

Maly, Kepa and Maly, Onaona. He Wahi Mo`olelo No Kaua`ula A Me Kekāhi Āina O Lahaina I Maui *(A Collection of Traditions and Historical Accounts of Kaua`ula and Other Lands of Lahaina, Maui)*. Hilo, Kumu Pono Associates LLC, 2007

Pukui, Mary Kawena and Elbert, Samuel H. Elbert. Hawaiian Dictionary. Honolulu, U of Hawaii P, 1986

EXHIBITS

EXHIBITS

December 2008

EXHIBIT 1
LOCATION /AERIAL MAP
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

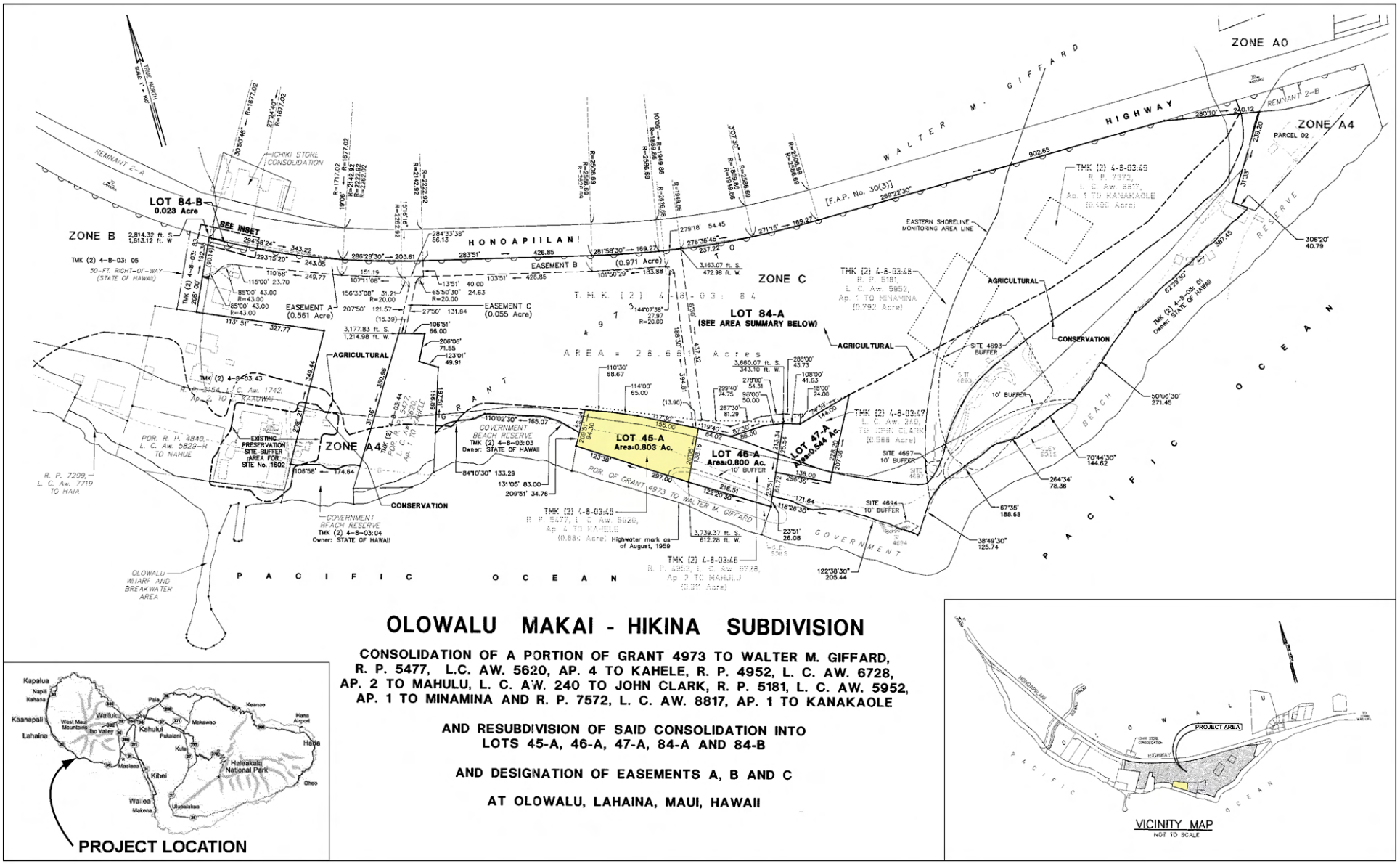


EXHIBIT 2
PROJECT LOCATION MAP

DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

December 2008

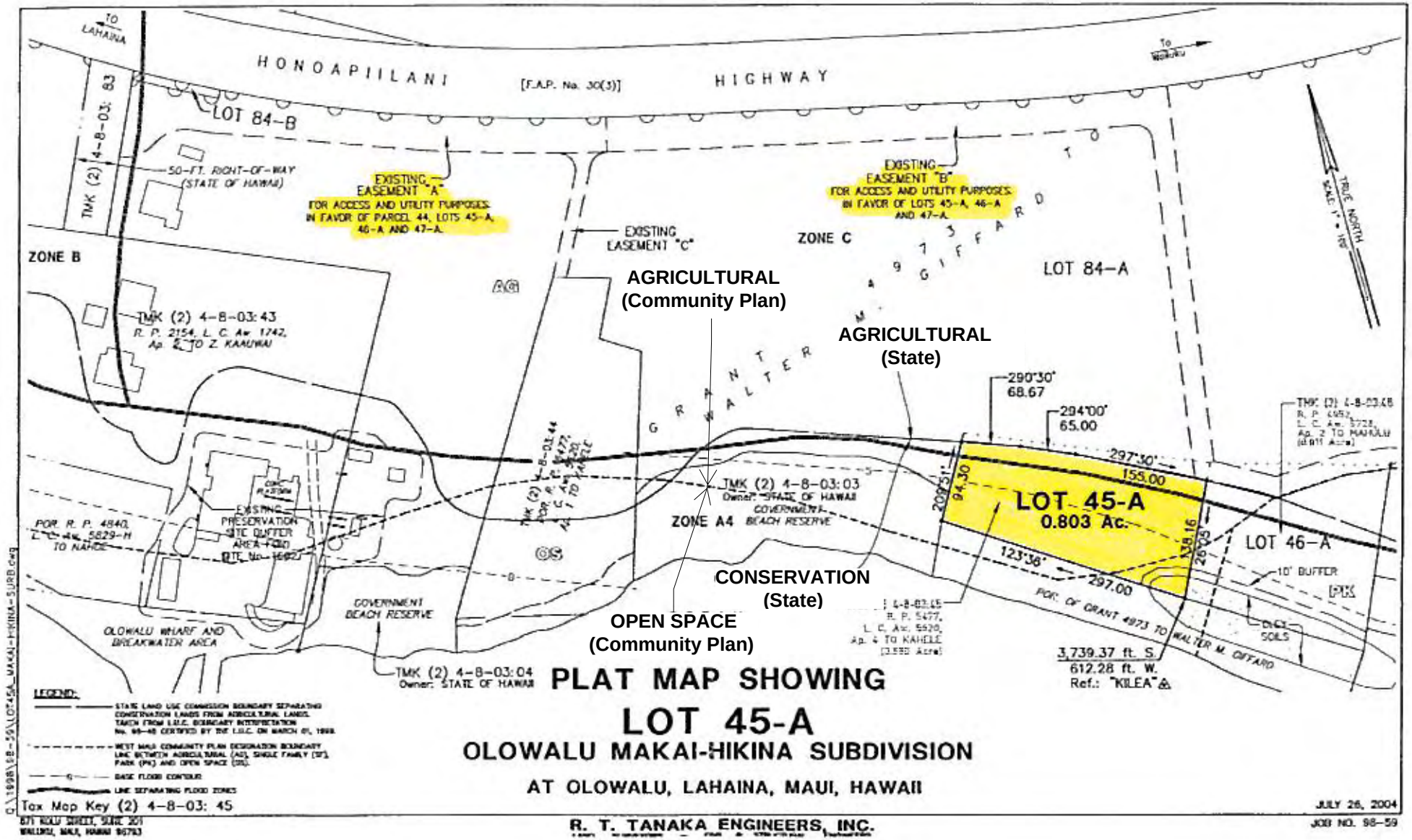
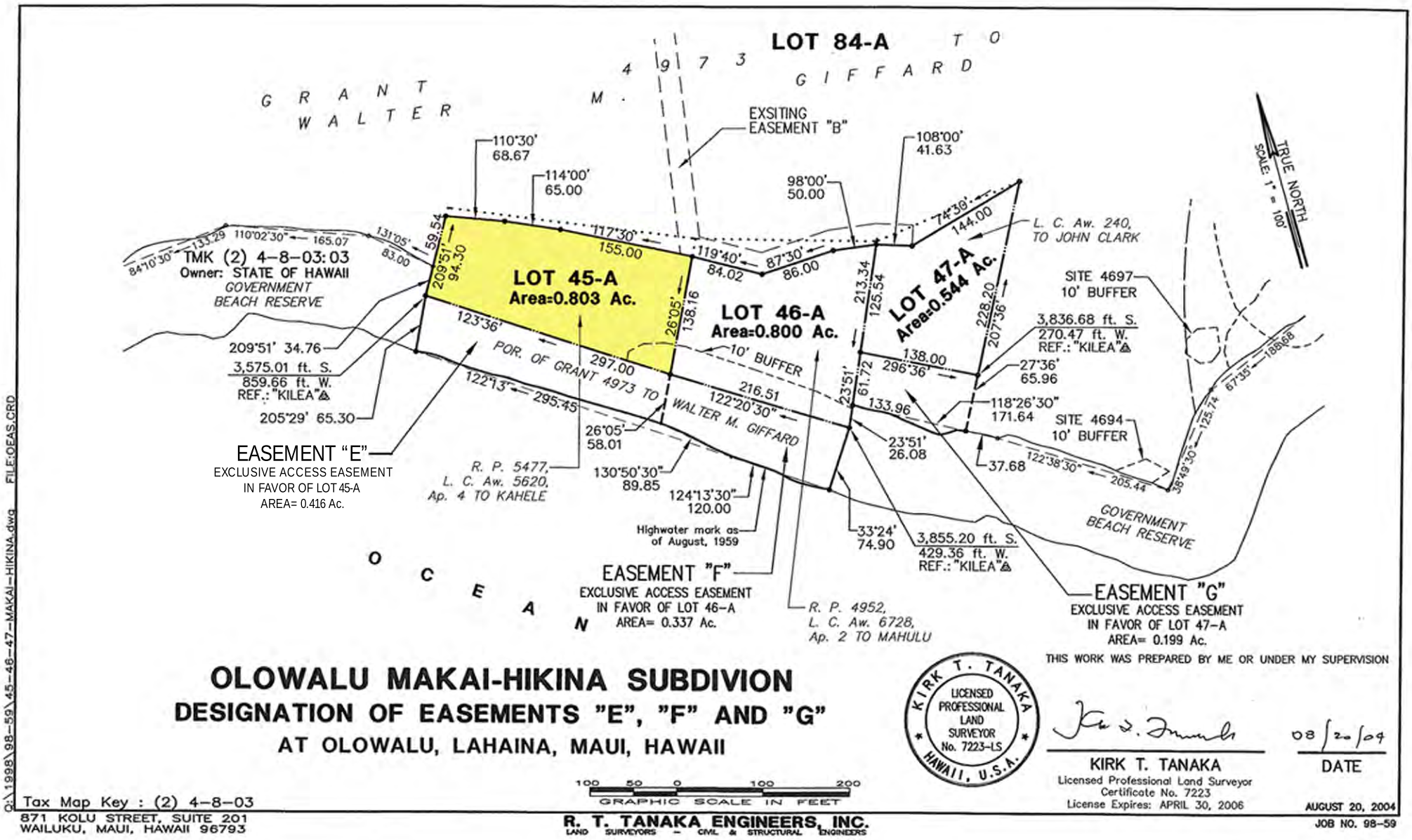


EXHIBIT 3

EXISTING ACCESS / PLAT MAP LOT 45-A

DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

DECEMBER 2008



OLOWALU MAKAI-HIKINA SUBDIVION
DESIGNATION OF EASEMENTS "E", "F" AND "G"
AT OLOWALU, LAHAINA, MAUI, HAWAII

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

KIRK T. TANAKA
Licensed Professional Land Surveyor
Certificate No. 7223
License Expires: APRIL 30, 2006

08/20/04
DATE

AUGUST 20, 2004
JOB NO. 98-59

Tax Map Key : (2) 4-8-03

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

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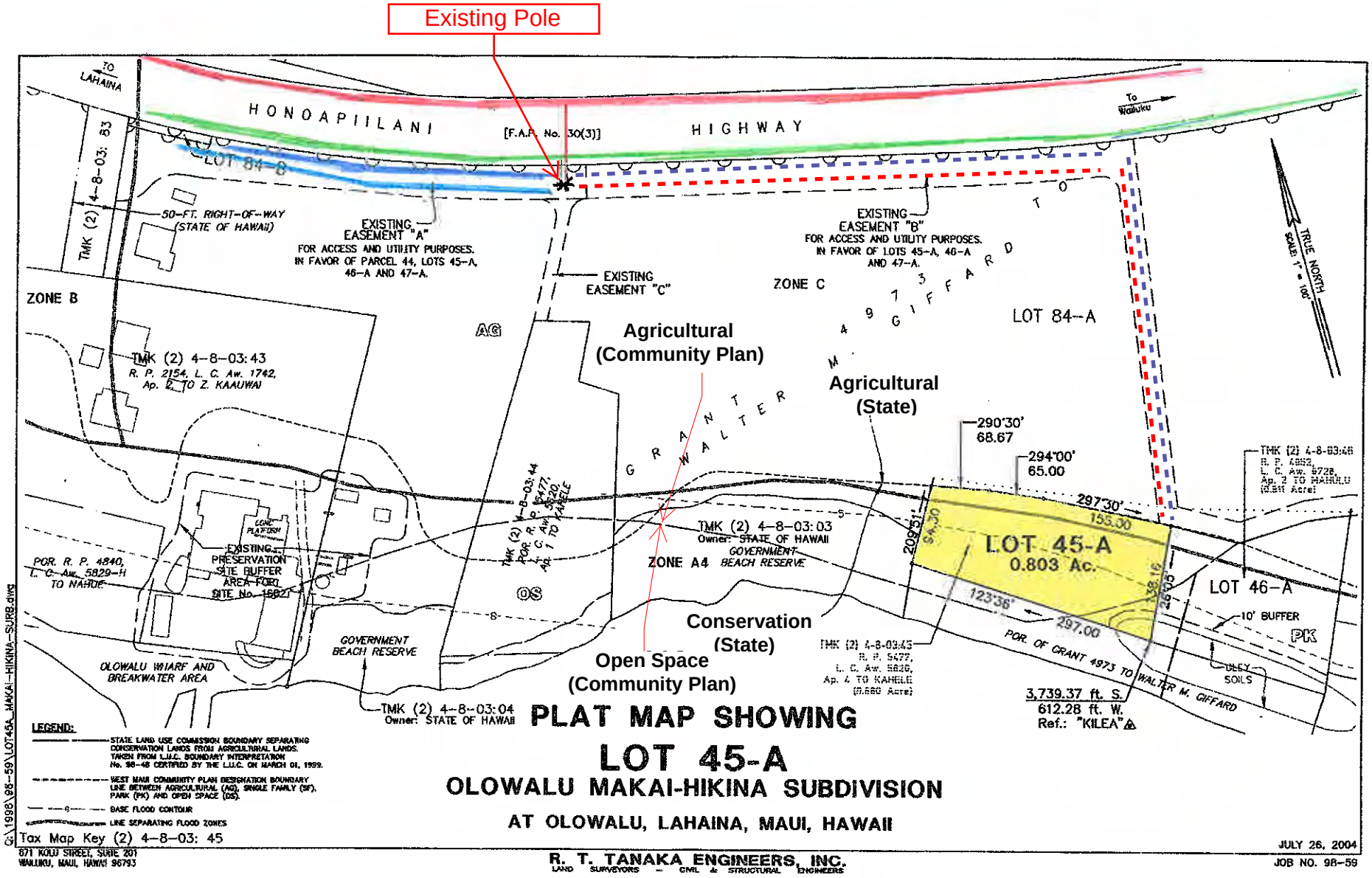
EXHIBIT 4
MAKAI EASEMENTS MAP
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

DECEMBER 2008



DECEMBER 2008

Existing Electrical
Proposed Electrical
Telephone & Cable TV

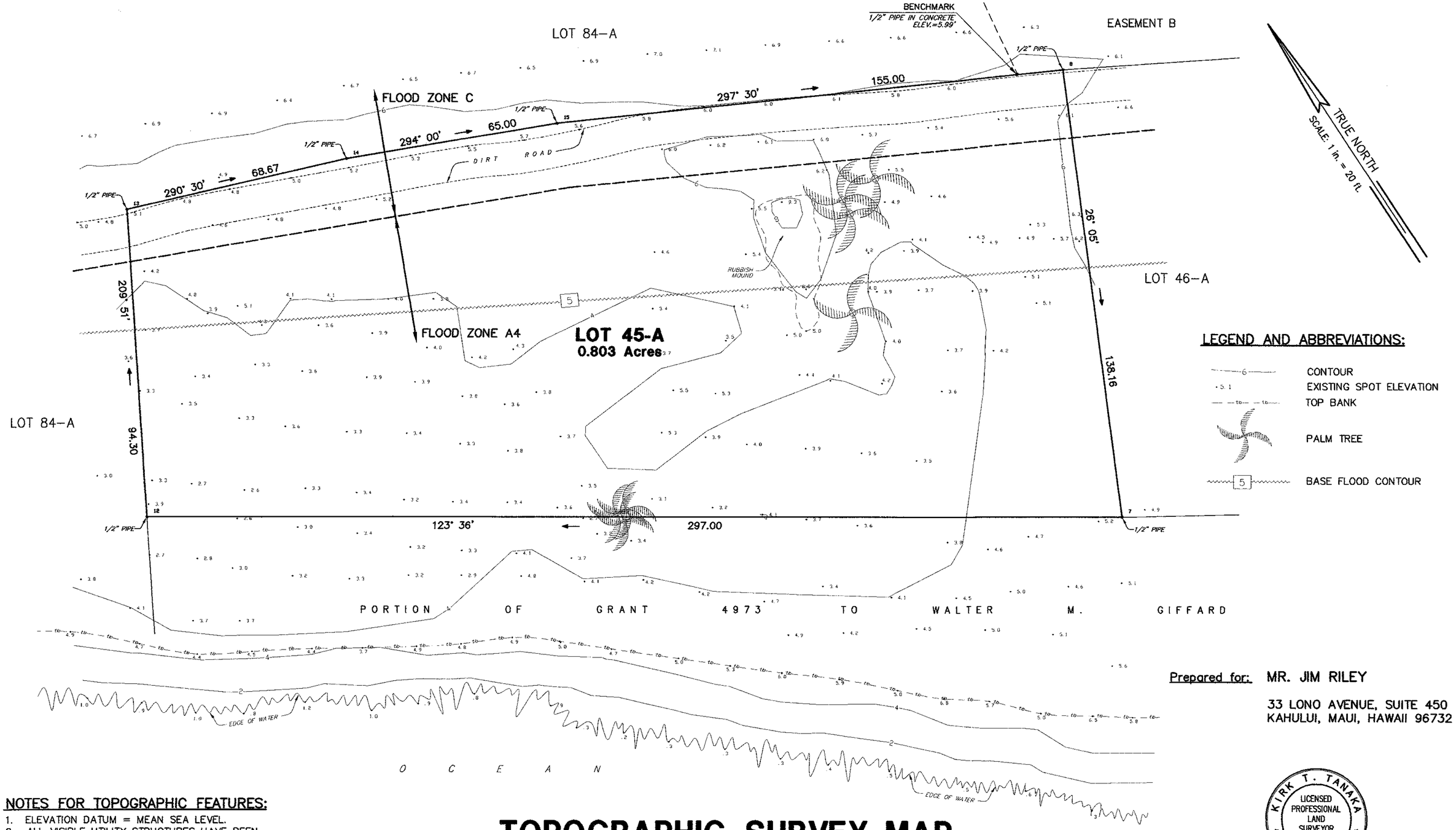
Existing Telephone & Cable TV

Existing Potable Water
Proposed Potable & Non-Potable Water

Existing Non-Potable Water

(6" Mains Available)

EXHIBIT 5
EXISTING UTILITIES MAP
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE



LEGEND AND ABBREVIATIONS:

- CONTOUR
- EXISTING SPOT ELEVATION
- TOP BANK
- PALM TREE
- BASE FLOOD CONTOUR

Prepared for: MR. JIM RILEY

33 LONO AVENUE, SUITE 450
KAHULUI, MAUI, HAWAII 96732

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.
3. THE FLOOD ZONE INFORMATION SHOWN IS INTERPOLATED FROM THE FLOOD INSURANCE RATE MAP PANEL 150003 0229B DATED JUNE 1, 1981.

TOPOGRAPHIC SURVEY MAP
OF
LOT 45-A, OLOWALU MAKAI-HIKINA SUBDIVISION
BEING A PORTION OF R.P. 5477, L.C. AW. 5620, AP. 4 TO KAHELE AT OLOWALU, LAHAINA, MAUI, HAWAII

20 10 0 20 40
GRAPHIC SCALE IN FEET

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

KIRK T. TANAKA
Licensed Professional Land Surveyor
Certificate No. 7223
License Expires: APRIL 30, 2008

05/25/06
DATE

Revised: MAY 25, 2006
MAY 15, 2006

Tax Map Key (2) 4-8-03 : 45

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

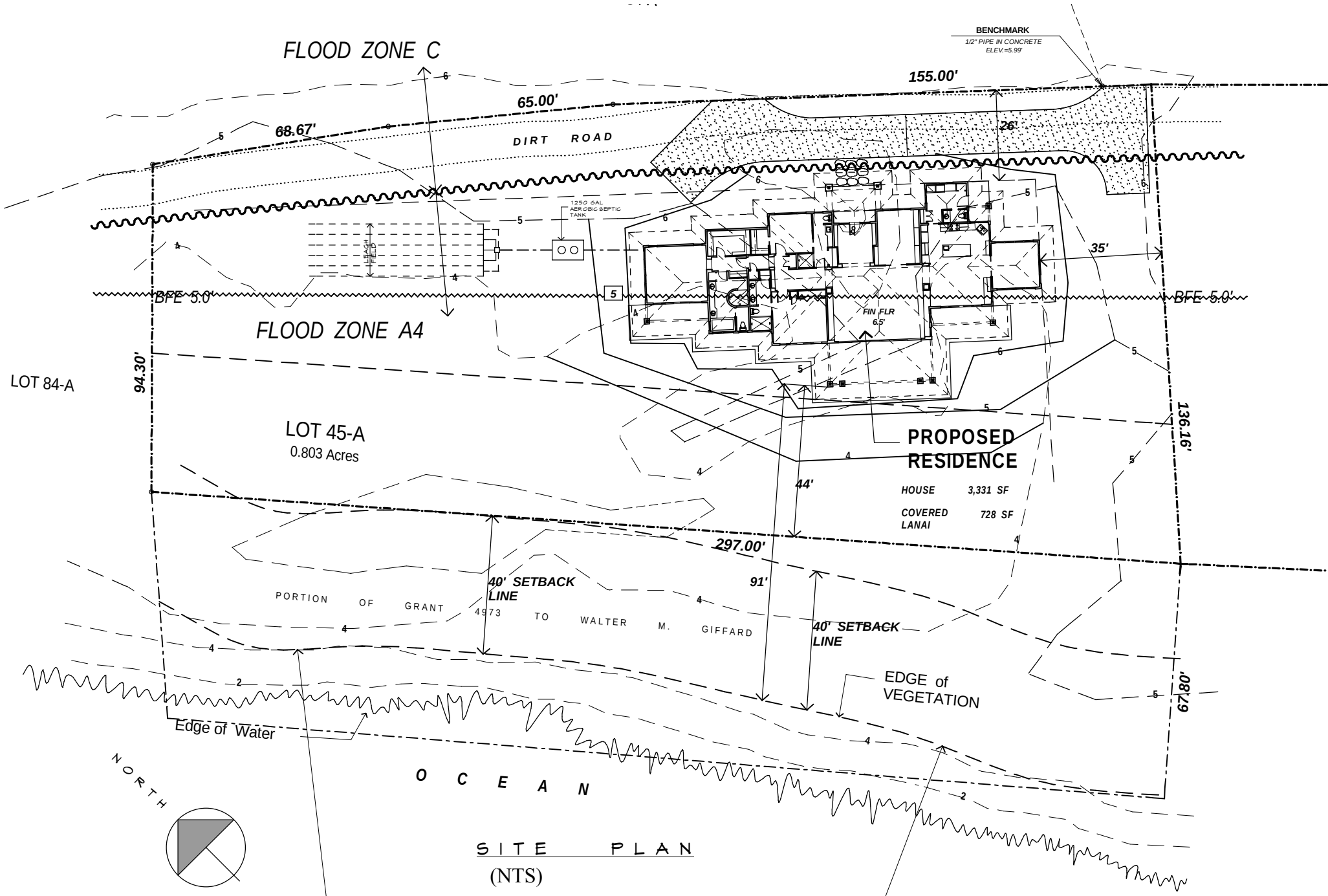
R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

JOB NO. 06-026

Q:\2006\06-026\JRILEY.DWG

December 2008

EXHIBIT 6
TOPOGRAPHIC SURVEY MAP
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE



SITE PLAN

(NTS)

(LOCATED OCT 1, 2008)

SHORELINE FOLLOWS ALONG VEGETATION LINE

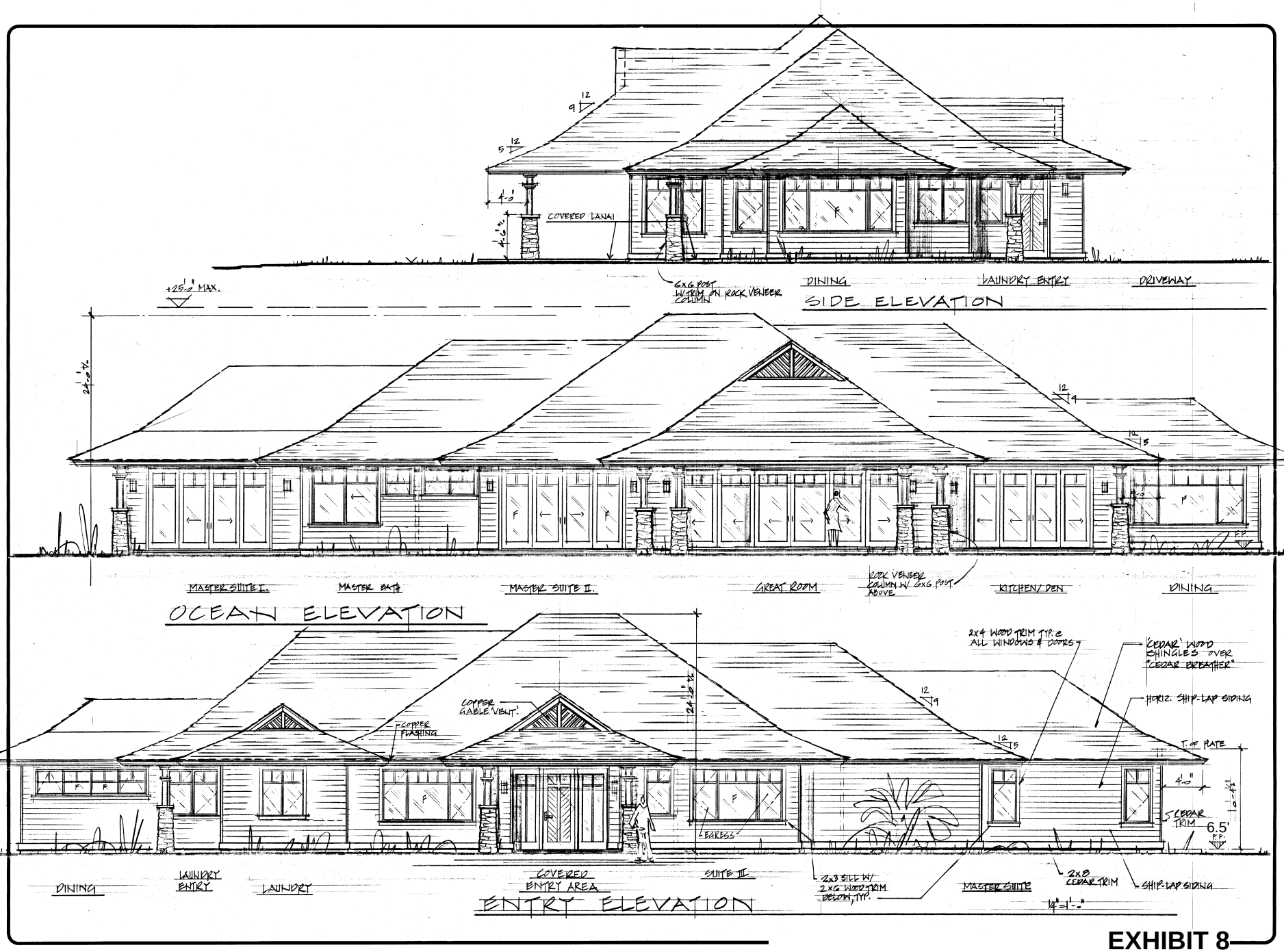
December 2008

EXHIBIT 7

RESIDENCE SITE PLAN

DEAN / RILEY OLOWALU LOT 45-A

SINGLE FAMILY RESIDENCE



REVISION	BY
1-21-2008	XX

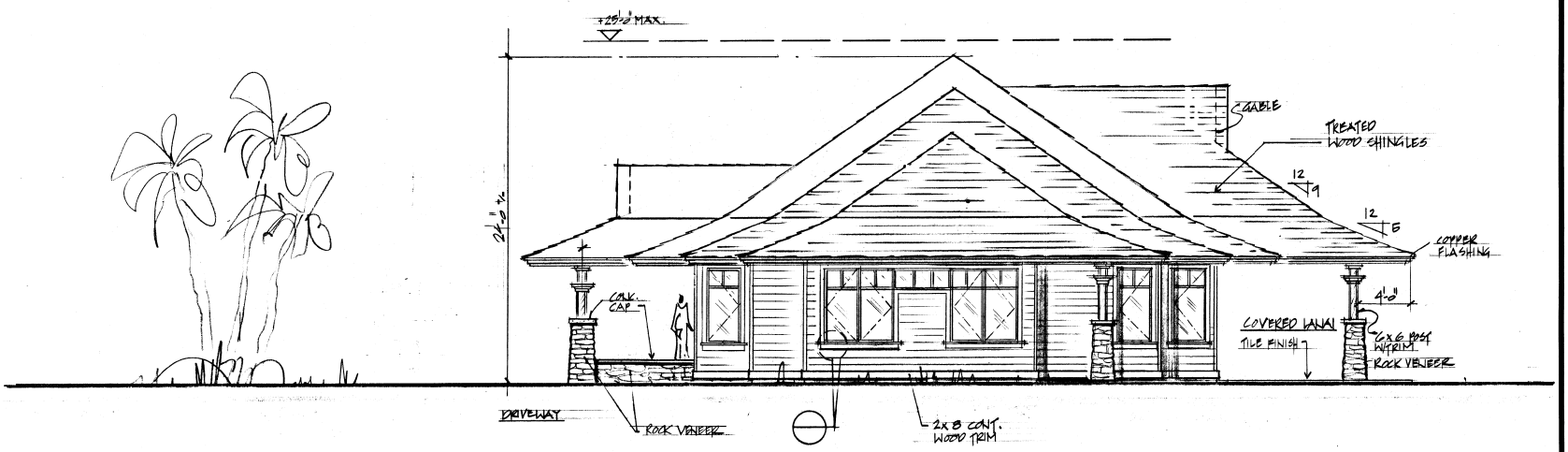
DATE 9-14-2007
SCALE AS NOTED
JOB NO.
SHEET A-
OF SHEETS

EXHIBIT 8

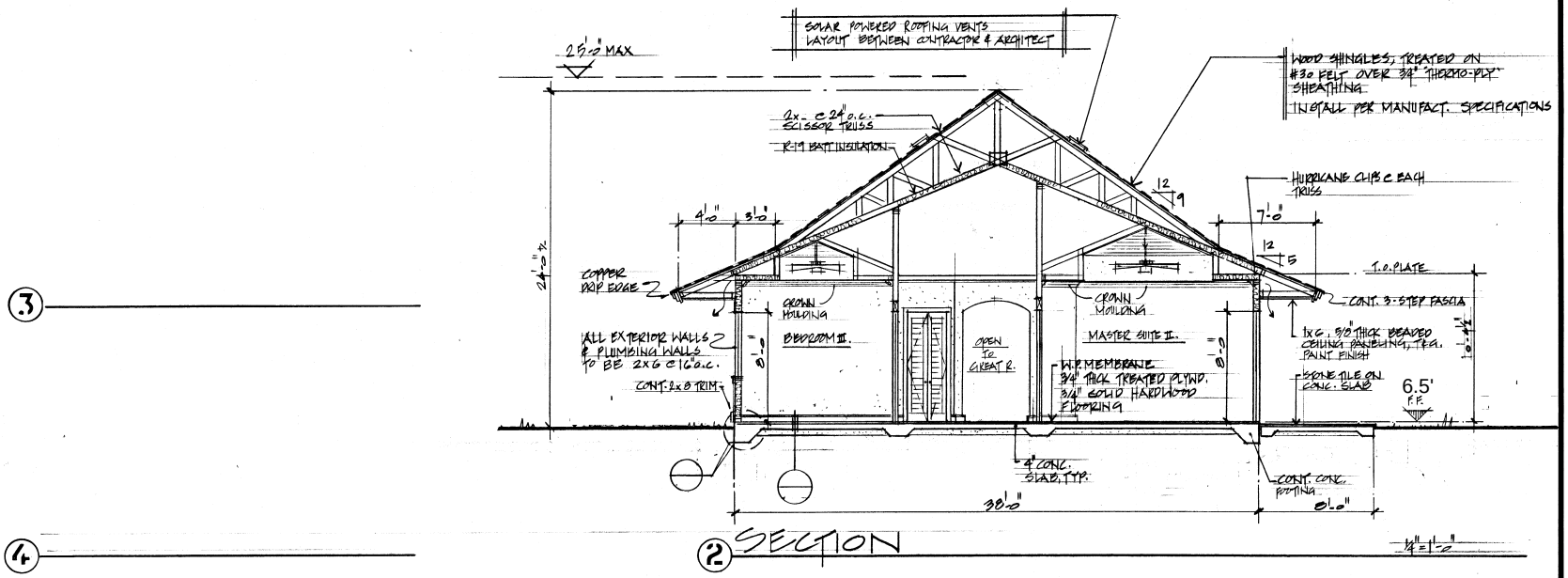
December 2008

SIDE / OCEAN / ENTRY ELEVATIONS

DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE



1 SIDE ELEVATION 1/4"=1'-0"



2 SECTION 1/4"=1'-0"

REVISIONS	BY
9-29-2008	XX

DATE 9-14-2007
SCALE 1/4"=1'-0"
JOB NO.
SHEET
OF SHEETS

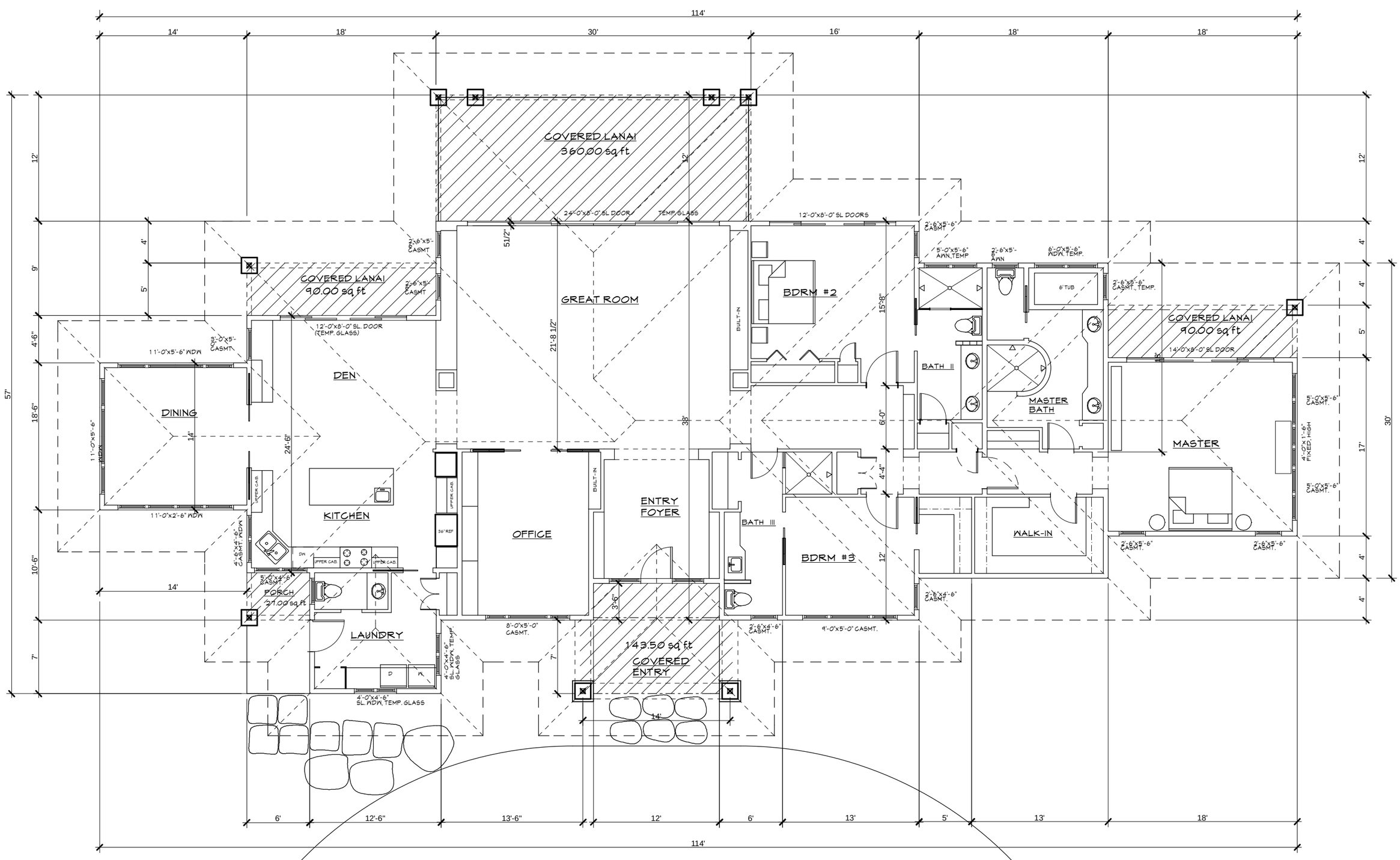
EXHIBIT 9

SIDE ELEVATION/SECTION

DEAN / RILEY OLOWALU LOT 45-A

SINGLE FAMILY RESIDENCE

December 2008



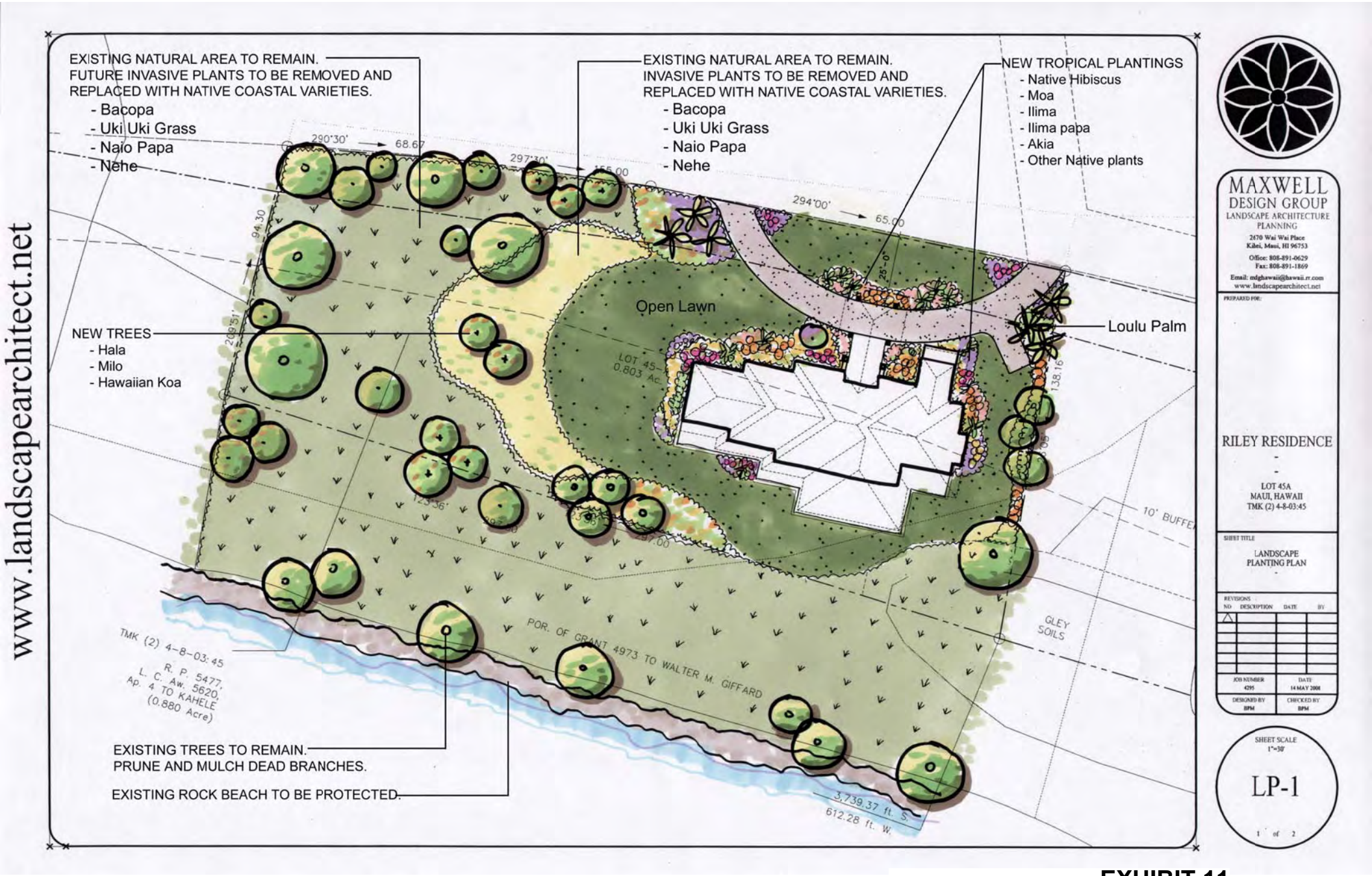
FLOOR PLAN

(NTS)

HOUSE	3,330.50 sq ft
M D A	3,500.00 sq ft
COVERED LANAIS	728.00 sq ft

December 2008

EXHIBIT 10
RESIDENCE FLOOR PLAN
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE



www.landscapearchitect.net

MAXWELL
DESIGN GROUP
LANDSCAPE ARCHITECTURE
PLANNING
2670 Wai Wai Place
Kihei, Maui, HI 96753
Office: 808-891-0629
Fax: 808-891-1869
Email: mdghawaii@hawaii.rr.com
www.landscapearchitect.net

PREPARED FOR:

RILEY RESIDENCE

LOT 45A
MAUI, HAWAII
TMK (2) 4-8-03:45

SHEET TITLE
LANDSCAPE
PLANTING PLAN

REVISIONS NO	DESCRIPTION	DATE	BY

JOB NUMBER	DATE
4295	14 MAY 2008
DESIGNED BY	CHECKED BY
BPM	BPM

SHEET SCALE
1"=30'

LP-1

1 of 2

EXHIBIT 11
LANDSCAPE PLAN
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

DECEMBER 2008

www.landscapearchitect.net


Akia


Hala


Native White Hibiscus


Hawaiian Koa


Bacopa


Ilie'e


Ilima


Akia


Naio papa


Uki uki Grass


Milo


Loulu Palm

MAXWELL
DESIGN GROUP
LANDSCAPE ARCHITECTURE
PLANNING

RILEY RESIDENCE

LOT 45A
MAUI, HAWAII
TMK (2) 4-8-43:45

LANDSCAPE
PLANTING PICTUS

LP-2

2 of 2

EXHIBIT 11A

LANDSCAPE PLAN - NATIVE PLANT PHOTOS

DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

DECEMBER 2008

CONSTRUCT TEMPORARY SWALE UPGRADE OF GRADING AREA TO DIVERT RUNOFF AWAY FROM GRADED AREA.

PROPOSED CONCRETE DRIVEWAY

BENCHMARK
1/2" PIPE IN CONCRETE
ELEV.=5.99'

EASEMENT B

TRUE NORTH
SCALE: 1 in. = 30 ft.

LOT 84-A

1/2" PIPE

297° 30'

155.00

65.00

294° 00'

68.67

296° 30'

DIRT ROAD

APPROXIMATE FLOOD ZONE BOUNDARY

26° 05'

PROPOSED RESIDENCE

FFE = 6.5'

ZONE C
ZONE A4

209.51'

LOT 46-A

CONSTRUCT TEMPORARY SWALE

138.16'

LOT 84-A

CONCEPTUAL LOCATION OF RETENTION BASIN POND. DISCHARGE ROOF WATERS TO POND VIA UNDERGROUND PIPES. DIRECT LAWN WATERS TO POND TO EXTENT POSSIBLE.

94.30'

INSTALL SILT FENCE DOWNGRADE OF GRADING AREA TO FILTER RUNOFF FROM GRADED AREA.

123° 36'

297.00'

1/2" PIPE

1/2" PIPE

GRASSED SWALE TO RETENTION POND

PROPOSED RETENTION POND COULD BE USED AS SEDIMENTATION BASIN DURING CONSTRUCTION. EXCAVATE PIT PRIOR TO GRADING OPERATIONS AND DIRECT GRADING AREA RUNOFF TO PIT DURING CONSTRUCTION.

EDGE OF WATER

O C E A N

EDGE OF WATER

LEGEND AND ABBREVIATIONS:

- 6 — EXISTING CONTOUR
- + 5.1 EXISTING SPOT ELEVATION
- — tb — TOP BANK
- PALM TREE
- 5 BASE FLOOD CONTOUR
- 4 NEW GROUND CONTOUR
- FFE FINISHED FLOOR ELEVATION

Tax Map Key (2) 4-8-03 : 45

CONCEPTUAL GRADING, DRAINAGE AND BEST MANAGEMENT PRACTICES PLAN

30 15 0 30 60
GRAPHIC SCALE IN FEET

DATE: NOVEMBER 24, 2008

FIGURE 6

JOB NO. 06-26

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

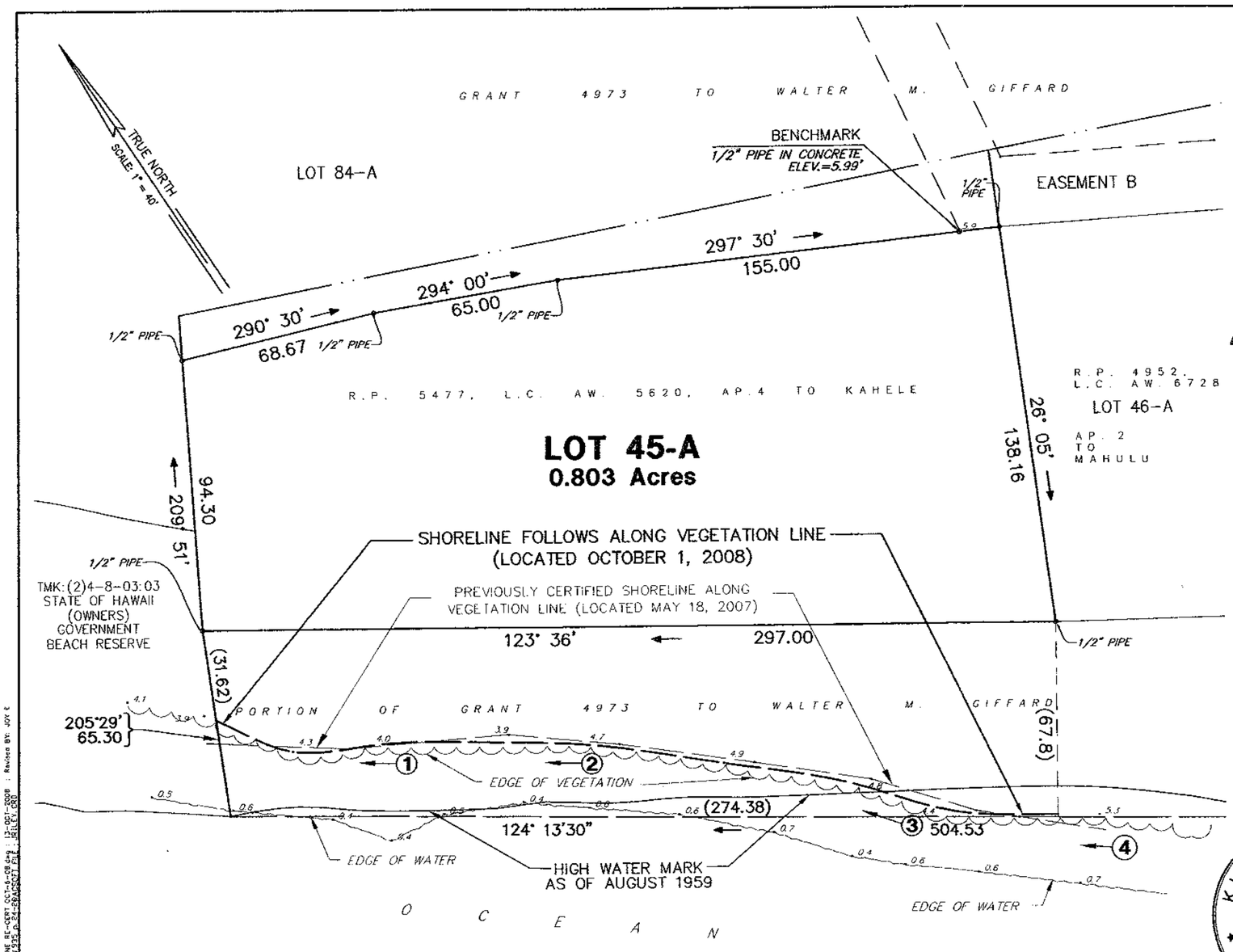
Z:\2006\06-026\RILEY_REPORTS\RILEY EXIST TOPO.dwg ; Date: 24-NOV-2008
RANGE BY: JOYCE \ F.B. No. # 528/284-28 \ PACSOFT.LF ; RILEY.cal

December 2008

EXHIBIT 12

CONCEPTUAL GRADING/DRAINAGE

DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE



LEGEND:

① LOCATION AND DIRECTION OF PHOTOGRAPH TAKEN ON OCTOBER 1, 2008 AT 1:20 PM.

·5.2 EXISTING SPOT ELEVATION

SHORELINE SURVEY MAP

OF

A PORTION OF GRANT 4973 TO WALTER M. GIFFARD FRONTING LOT 45-A, OLOWALU MAKAI-HIKINA SUBDIVISION

AT OLOWALU, LAHAINA, MAUI, HAWAII

OWNERS: LOT 45-A
JAMES RILEY, ETAL.
590 OLD STABLE ROAD
PAIA, HAWAII – 96779

GRANT 4973
OLOWALU ELUA ASSOCIATES
33 LONO AVENUE, SUITE 450
KAHULUI, HAWAII – 96732

THIS WORK WAS PREPARED BY ME OR UNDER MY 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

10/10/08
DATE

OCTOBER 06, 2008

Tax Map Key (2) 4-8-03 : 05 (PORTION)

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

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

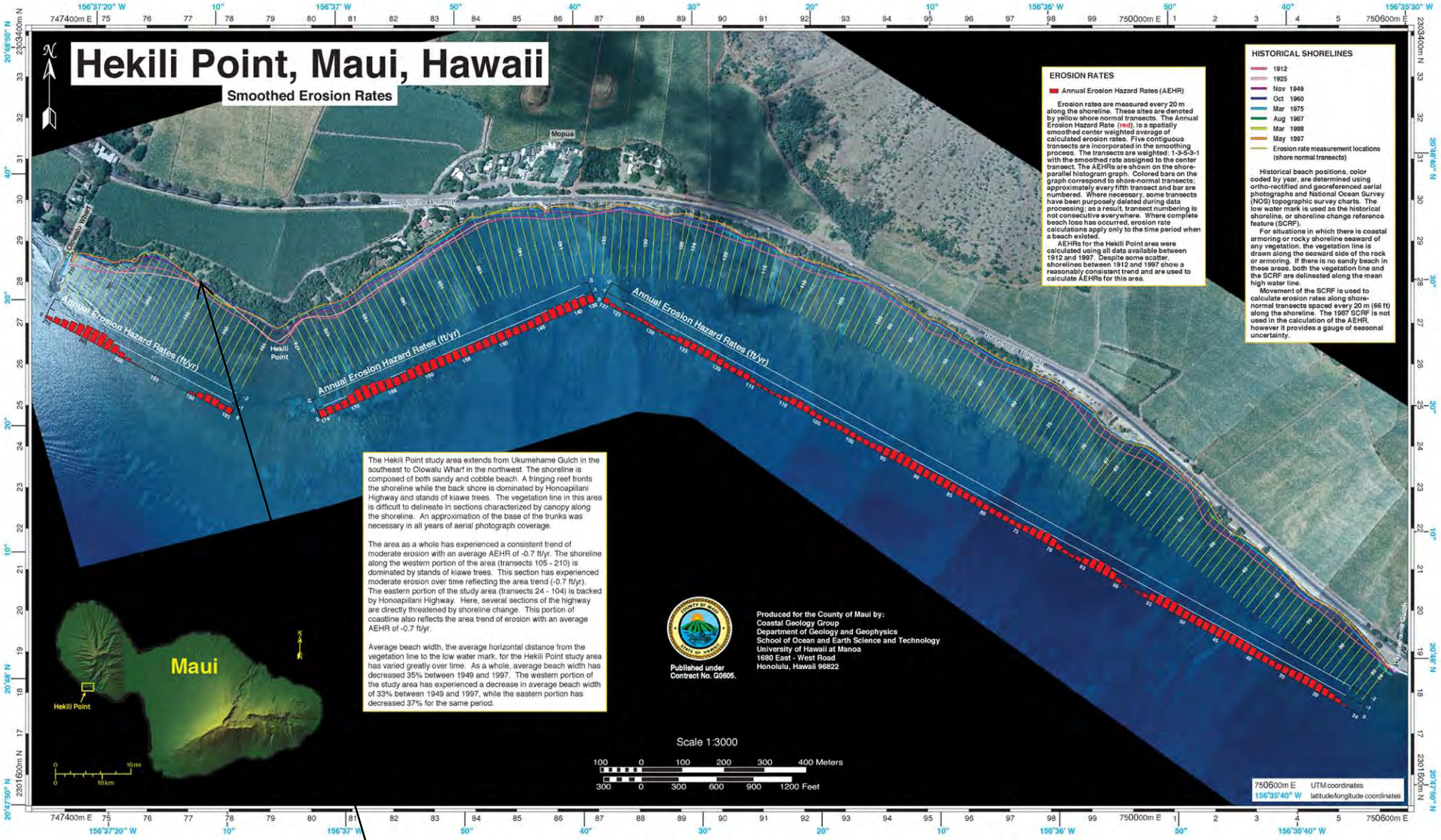
JOB NO. 06-026

December 2008

EXHIBIT 13

SHORELINE SURVEY MAP

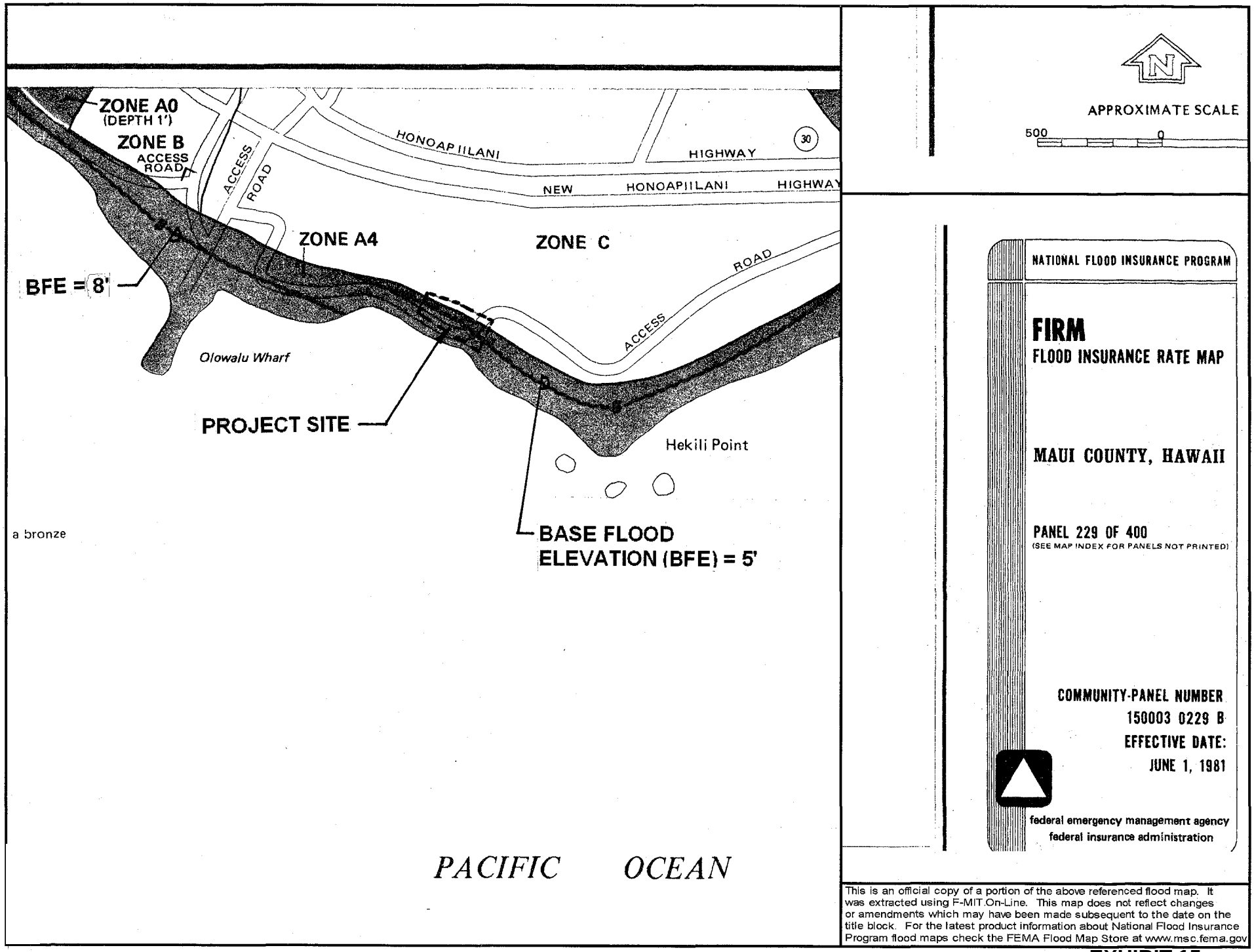
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE



Project Site
Approximate Annual Erosion Hazard Rate = 0 ft. / year

EXHIBIT 14
EROSION RATE MAP - HEKILI POINT
DEAN / RILEY OLOWALU LOT 45-A
SINGLE FAMILY RESIDENCE

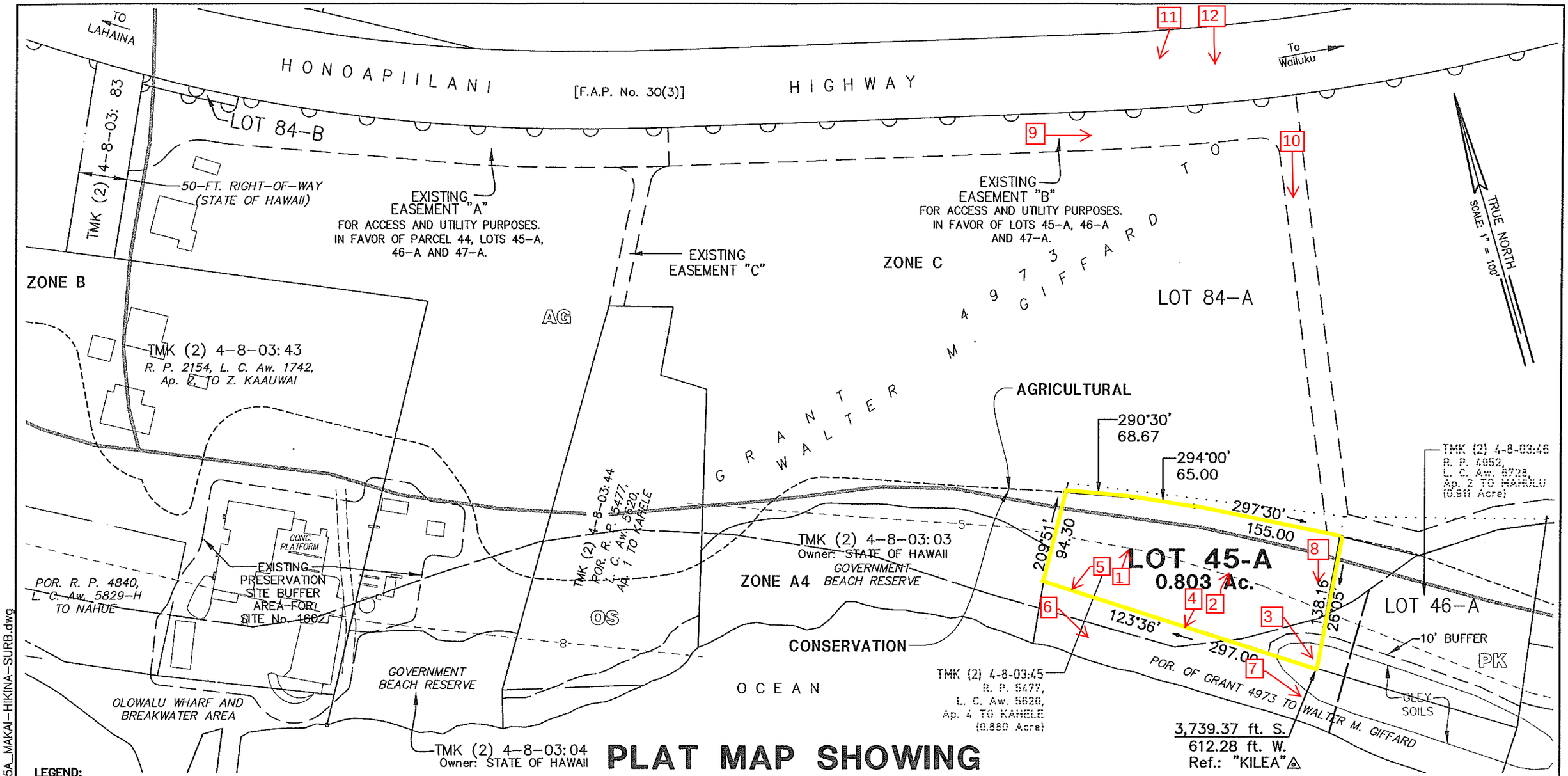
December 2008



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

December 2008

EXHIBIT 15
FLOOD INSURANCE RATE MAP
DEAN / RILEY OLOWALU LOT 45-A



LEGEND:

- STATE LAND USE COMMISSION BOUNDARY SEPARATING CONSERVATION LANDS FROM AGRICULTURAL LANDS. TAKEN FROM L.U.C. BOUNDARY INTERPRETATION No. 98-48 CERTIFIED BY THE L.U.C. ON MARCH 01, 1999.
- WEST MAUI COMMUNITY PLAN DESIGNATION BOUNDARY LINE BETWEEN AGRICULTURAL (AG), SINGLE FAMILY (SF), PARK (PK) AND OPEN SPACE (OS).
- 8 BASE FLOOD CONTOUR
- LINE SEPARATING FLOOD ZONES

PLAT MAP SHOWING

LOT 45-A

OLOWALU MAKAI-HIKINA SUBDIVISION

AT OLOWALU, LAHAINA, MAUI, HAWAII

Tax Map Key (2) 4-8-03: 45

JULY 26, 2004

Q:\1998\98-59\LOT45A_MAKAI-HIKINA-SURB.dwg

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS — CIVIL & STRUCTURAL ENGINEERS

JOB NO. 98-59

EXHIBIT 16

SITE PHOTOS KEY

DEAN / RILEY LOT 45-A

SINGLE FAMILY RESIDENCE

December 2008

Photo 1: Mauka View Across Property

Photo 2: Mauka View Across Property

Photo 3: View Toward Ocean

Photo 4: View Toward Ocean

Photo 5: View Toward Ocean & Olowalu Wharf

Photo 6: View Along Shoreline

Photo 7: View Along Shoreline

Photo 8: Makai View Across Property

Photo 9: Westerly View of Access Easement

Photo 10: Makai View of Access Easement

Photo 11: Makai View from Honoapi`ilani Highway

Photo 12: Makai View from Honoapi`ilani Highway

APPENDIX A

PRELIMINARY DRAINAGE REPORT

PRELIMINARY DRAINAGE REPORT

FOR

PROPOSED RESIDENCE

LOT 45-A

OLOWALU MAKAI-HIKINA SUBDIVISION

LAHAINA, MAUI, HAWAII

TAX MAP KEY: (2) 4-8-03:45

PREPARED FOR:

MR. JIM RILEY
33 LONO AVENUE, SUITE 450
KAHULUI, HI 96732

PREPARED BY:

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

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

JOB 06-026

NOVEMBER 2008
REVISED: DECEMBER 1, 2008

TABLE OF CONTENTS

I. INTRODUCTION:

The purpose of this report is to provide a brief description of the existing drainage conditions at the project site and vicinity. It will also provide a brief summary of probable drainage system improvements to support the project. It will also define the requirements for grading and Best Management Practices to control soil erosion during construction.

II. PROJECT DESCRIPTION:

The proposed project entails the construction of a 1-story, 4-bedroom residence occupying a land area of about 4,060 square feet.

Related site work generally includes grading, driveway improvements, water, wastewater flow disposal and drainage systems.

This Report will focus on the development of conceptual drainage system to handle the 50-year, 1-hour runoff volume increase that is expected to be generated by the proposed project.

III. LOCATION:

The project site is located in Olowalu, a small community that lies along the shores of West Maui Mountains. It is particularly situated along the seashore about 600 feet south of Honoapiilani Highway. Refer to Figures 1 and 2.

IV. BASIS OF STUDY:

The preliminary Drainage Study, in general, is based on the requirements, formulas, charts and tables of the Rules of the Design of Storm Drainage

Facilities of the County of Maui [1] hereinafter referred to as County Drainage Standards.

V. EXISTING SOILS AND TOPOGRAPHY:

Soils at the project site are classified as Jaucas Sand, 0 to 15 percent slopes (JaC) [2]. See Figure 3.

JaC belongs to Jaucas Soil Series which consist of excessively drained, calcareous soils that occurs as narrow strips on coastal plains adjacent to the ocean. It is characterized by rapid permeability, very slow to slow runoff, slight water erosion hazard and severe wind erosion hazard where the vegetation is removed.

The existing topography of the project parcel is shown on Figure 5. The site is currently vacant. The ground is nearly flat and is generally sloping down in a southwesterly direction towards the ocean at about plus or minus two (2) percent. The ground elevation ranges from 3 to 6 feet above mean sea level.

VI. FLOODING HAZARD:

The site is located within Flood Zones “C” and A4 as plotted on Panel 15003-0229B of the Flood Insurance Rate Map for the County of Maui. Refer to Figure 4.

Zone “C” where the potential of flooding is minimal occupies a narrow strip of the southern portion of the lot. The remainder of the property falls under Zone “A4" which are areas of 100-year flooding. The established base flood elevation across the lot is 5 feet. The development of the property will therefore be in

conformance with the applicable requirements of Chapter 19.62, Flood Hazard Areas, of the Maui County Code.

VII. EXISTING DRAINAGE CONDITIONS:

At present, surface runoff from the site generally flows in a southwesterly direction to discharge into the shoreline area. There is no man-made drainage facilities at the site or immediate vicinity.

VIII. STORM RUNOFF QUANTITIES:

Hydrologic calculations are given in Exhibit A - Preliminary Drainage Calculations. Based on the County Drainage Standards, the 10-year, 1-hour storm is used for surface runoff rates while the 50-year, 1-hour duration is used for the design of retention basin.

Based on the preliminary drainage calculations, the proposed project is anticipated to increase the existing 10-year runoff rate of 0.9 cfs to 2.0 cfs and the existing 50-year runoff volume of 2,144 cf to 3,928 cf, an increase of about 1.1 cfs and 1,784 cf, respectively. The runoff increases are due mainly to the introduction of impervious surfaces.

IX. CONCEPTUAL DRAINAGE PLAN:

The proposed drainage plan is primarily to impound onsite the expected runoff volume increase as a result of the proposed project. This will be attained by the construction of a retention basin which will be sized at a minimum to contain the 50-year runoff volume increase. The basin could be open-cut

grassed-lined or subsurface (perforated pipes with rock envelope buried underground) depending on the available space within the site. Preliminarily, an open-cut retention pond is proposed and schematically laid out on Figure 6. A conceptual plan and section of the proposed drainage pond are shown in Exhibit A.

X. GRADING REQUIREMENTS:

The site will be graded to properly receive the proposed improvements. Site grading will be in conformance with the applicable requirements of Chapter 20.08, Soil Erosion and Sedimentation of the Maui County Code. A grading and grubbing permit must be obtained from the Development Services Administration prior to grading and grubbing work. Along with the Grading and Best Management Practices (BMPs) plans, the following are to be submitted for grading permit application:

1. Copy of SMA permit. All construction related conditions of the SMA permit shall be included in the grading plans.
2. Limits of shoreline setback area as determined by the Department of Planning. The importation and placement of soil within the shoreline area is prohibited.

XI. BEST MANAGEMENT PRACTICES:

A conceptual plan to control soil erosion and drainage runoff during construction is shown on Figure 6. Final requirements for the temporary controls

will be outlined and shown on the design construction plans. Some of the requirements will be as follows:

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 weekends and holidays.
3. All exposed areas shall be paved, grassed, or permanently landscaped as soon as finished grading is completed.
4. Storm runoff will be diverted away from graded areas to natural and/or existing drainageways during construction by means of sand bag berms or lined temporary swales.
5. Time of construction will be minimized.
6. Only areas that are needed for new improvements will be cleared.
7. Early construction of drainage control features.
8. Construction of drainage pond prior to mass grading of project site. Drainage pond will be temporarily utilized as sediment catchment during construction. Storm runoff from construction area will be diverted to the pond.
9. Installation of silt fence, gravel bag berms or other approved sediment trapping devices at the downstream side of the grading area.
10. 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 by the Development Services Administration. 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.

XII. CONCLUSION:

The proposed project will increase the existing storm runoff mainly due to addition of impervious surfaces such as concrete slabs and roofs. Despite the increase of runoff, the proposed residential development is not anticipated to have adverse significant drainage effects on adjacent and downstream properties. The proposed retention pond will have a capacity of 2,131 cf, which is 447 cf greater than the volume increase of 1,784 cf; resulting in a decrease of runoff to downstream properties by about 25 percent. The proposed retention pond will also have the effect of reducing the potential for sediments contained in the runoff from entering the nearby seashore.

XIII. 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.

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. Flood Insurance Rate Maps for the County of Maui, June 1981.

4. Rainfall-Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43, U. S. Department of Commerce, Weather Bureau, 1962.

5. Erosion and Sediment Control Guide for Hawaii, prepared by U. S. Department of Agriculture, Soil Conservation Service, March 1981.

6. Construction Best Management Practices (BMPs) for the County of Maui, Dept. of Public Works and Waste Management, County of Maui, May 2001.

EXHIBIT A

PRELIMINARY DRAINAGE CALCULATIONS
PROPOSED RESIDENCE
LOT 45-A
OLOWALU MAKAI-HIKINA SUBDIVISION
TMK: (2) 4-8-03:45
NOVEMBER 2008

GENERAL

I. Reference: Rules for the Design of Storm Drainage Facilities in the County of Maui, November 12, 1995

II. Hydrologic Criteria:

A. 10-Year, 1-Hour: for surface flow runoff rate

1-Hr. Rainfall Value = 2.0"

B. 50-Year, 1-Hour: for storm runoff volumes

1-Hr. Rainfall Value = 2.5"

III. Runoff Quantity:

A. Methodology:

1. 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

= 0.803 Ac.

Hydrologic calculations employing this method were performed on computer using hydrologic software "Hydraflow Hydrographs 2004" by Intelisolve. The Standard Rational Method is used to calculate runoff

peak discharges while the Modified Rational Method is employed to determine runoff volumes.

B. Runoff Coefficient, C:

C Values:

Existing = 0.30 (Unimproved)

Developed = 0.55 (Residential)

C. Time of Concentration, TC:

Length = 125 ft.

Slope = 2.2%

Tc = 14 min. (Existing - Ave. Grass)

= 8 min. (Developed - Bare Soil, to account for paved and grassed areas)

D. Runoff Discharge:

Refer to attached Hydrograph Calculations. The proposed project is anticipated to increase the storm runoff as follows:

10-Year Storm Runoff Peak Rate:

Existing = 0.9 cfs (Hyd. No. 1)

Developed = 2.0 cfs (Hyd. No. 2)

Increase = 1.1 cfs

50-Year Storm Runoff Volume:

Existing = 2,144 cf (Hyd. No. 3)

Developed = 3,928 cf (Hyd. No. 4)

Increase = 1,784 cf (Min. Volume to be retained onsite in order not to increase existing runoff volume)

IV. RETENTION BASIN:

Following the applicable guidelines of the Storm Drainage Standards, the proposed subsurface retention basins will be designed to contain, at least, the 1-hour, 50-year runoff volume increase generated by areas less than 100 acres. Furthermore, capacity of the basins will be calculated without taking into account the volume that percolates into the ground and if subsurface perforated pipes are used, only 50% of void volume of the crushed rock envelopes will be included.

An open retention pond is proposed since there is ample space to place the pond. The proposed pond has bottom dimension of 50' long x 25' wide, 2' deep with 2:1 side slopes. The storage capacity of the pond is about 2,231 cf at 1.5' deep before overflow begins; therefore, the proposed pond can detain the 50 year, 1-hour runoff volume anticipated to be generated by the proposed residential project.

The Pond Report, plan and section is attached in this Exhibit.

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	52.7884	15.7000	0.7683	--------
25	0.0000	0.0000	0.0000	--------
50	32.9258	9.5000	0.6097	--------
100	0.0000	0.0000	0.0000	--------

C:\Program Files\Hydraflow\Hydrographs 2004\Riley 06026.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	5.15	4.36	3.80	3.39	3.06	2.80	2.59	2.41	2.25	2.12	2.00	1.90
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	6.45	5.38	4.68	4.18	3.80	3.50	3.25	3.05	2.88	2.73	2.60	2.48
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

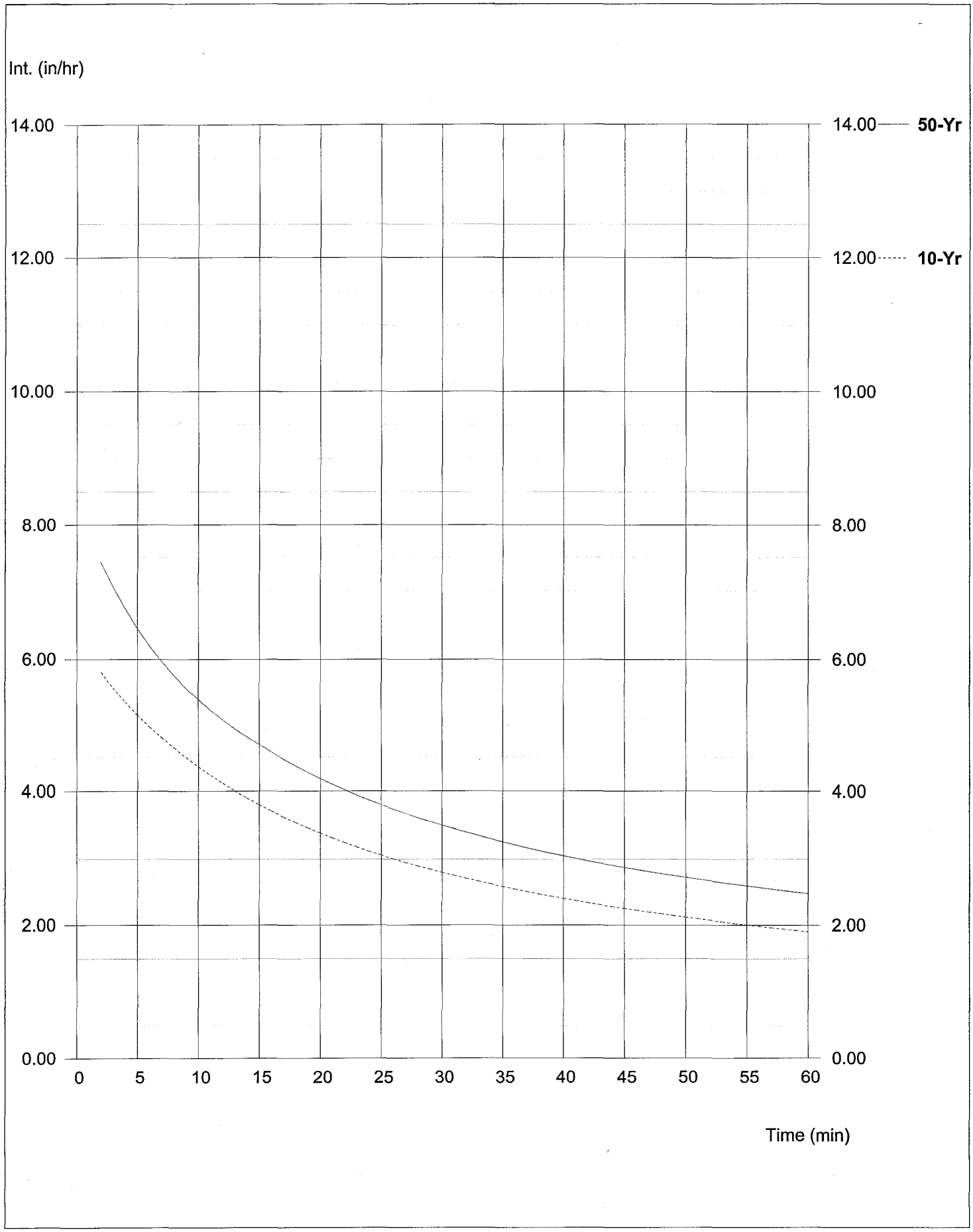
Tc = time in minutes

$I_{10} = 2.0"$

$I_{50} = 2.5"$

Hydrograph IDF Curves

IDF file: Riley 06026.IDF



Hydrograph Plot

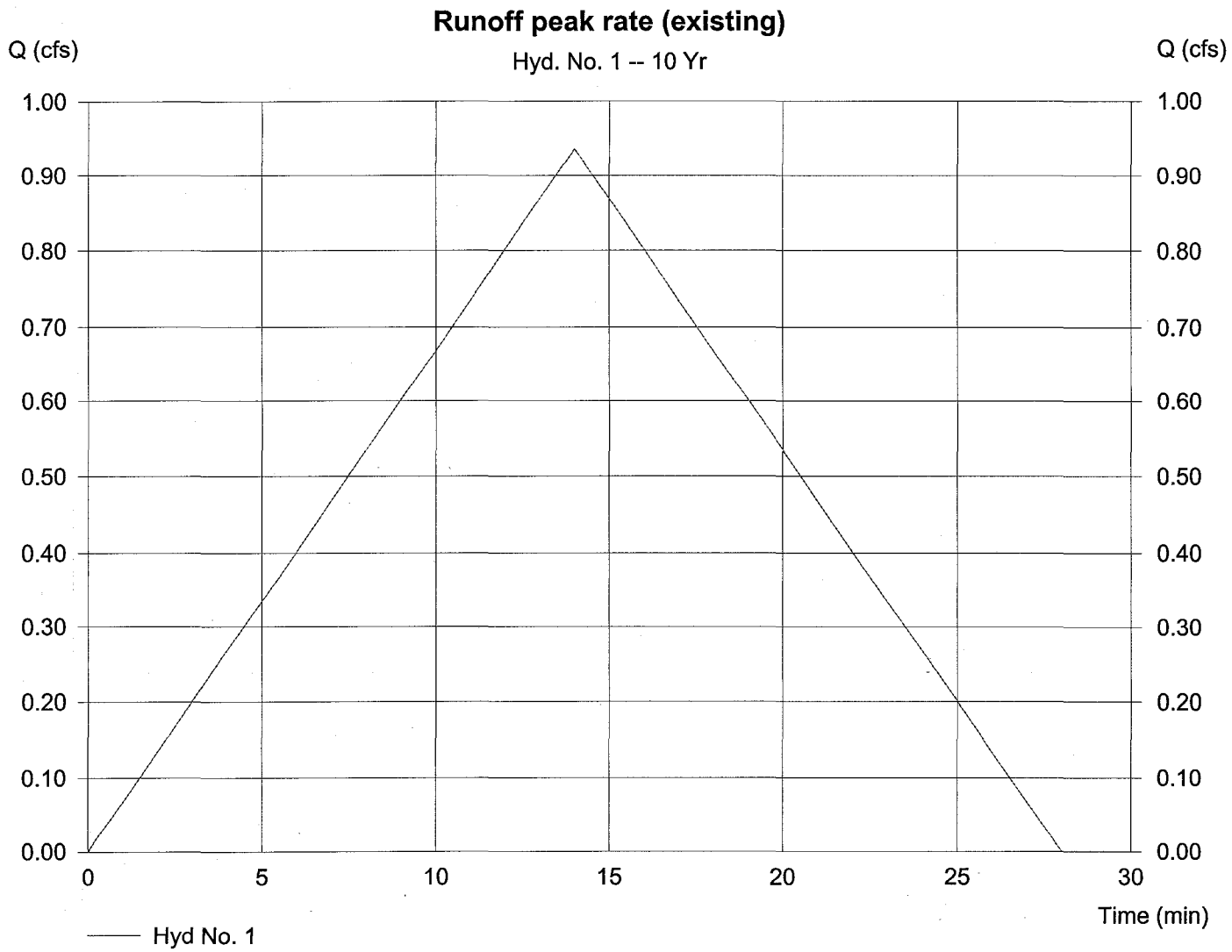
Hydraflow Hydrographs by Intelisolve | Thursday, Nov 20 2008, 3:9 PM

Hyd. No. 1

Runoff peak rate (existing)

Hydrograph type	= Rational	Peak discharge	= 0.94 cfs ←
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 0.800 ac	Runoff coeff.	= 0.3
Intensity	= 3.899 in/hr	Tc by User	= 14.00 min
IDF Curve	= Riley 06026.IDF	Asc/Rec limb fact	= 1/1

Hydrograph Volume = 786 cuft



Hydrograph Plot

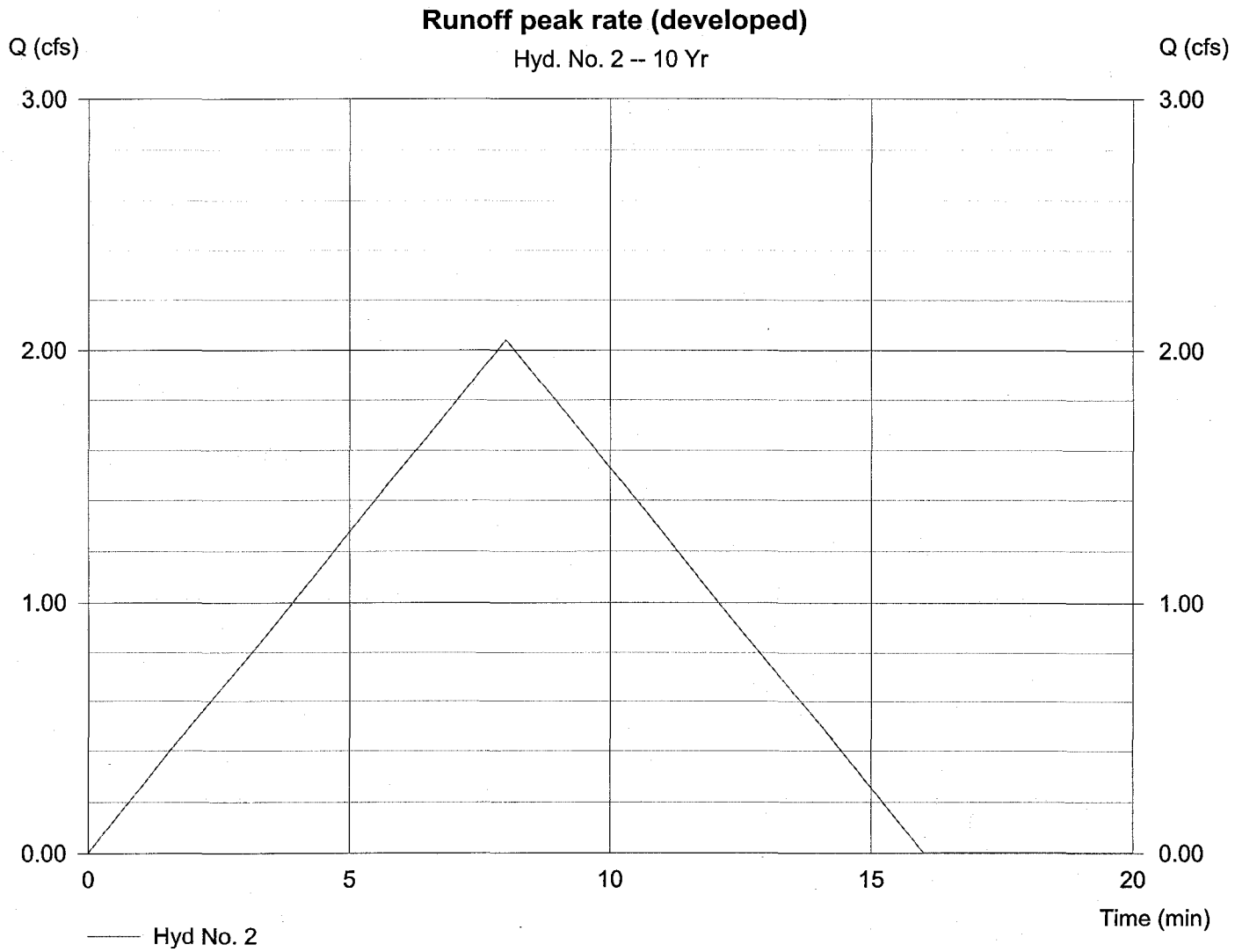
Hydraflow Hydrographs by Intelisolve | Thursday, Nov 20 2008, 3:9 PM

Hyd. No. 2

Runoff peak rate (developed)

Hydrograph type	= Rational	Peak discharge	= 2.04 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 0.800 ac	Runoff coeff.	= 0.55
Intensity	= 4.637 in/hr	Tc by User	= 8.00 min
IDF Curve	= Riley 06026.IDF	Asc/Rec limb fact	= 1/1

Hydrograph Volume = 979 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

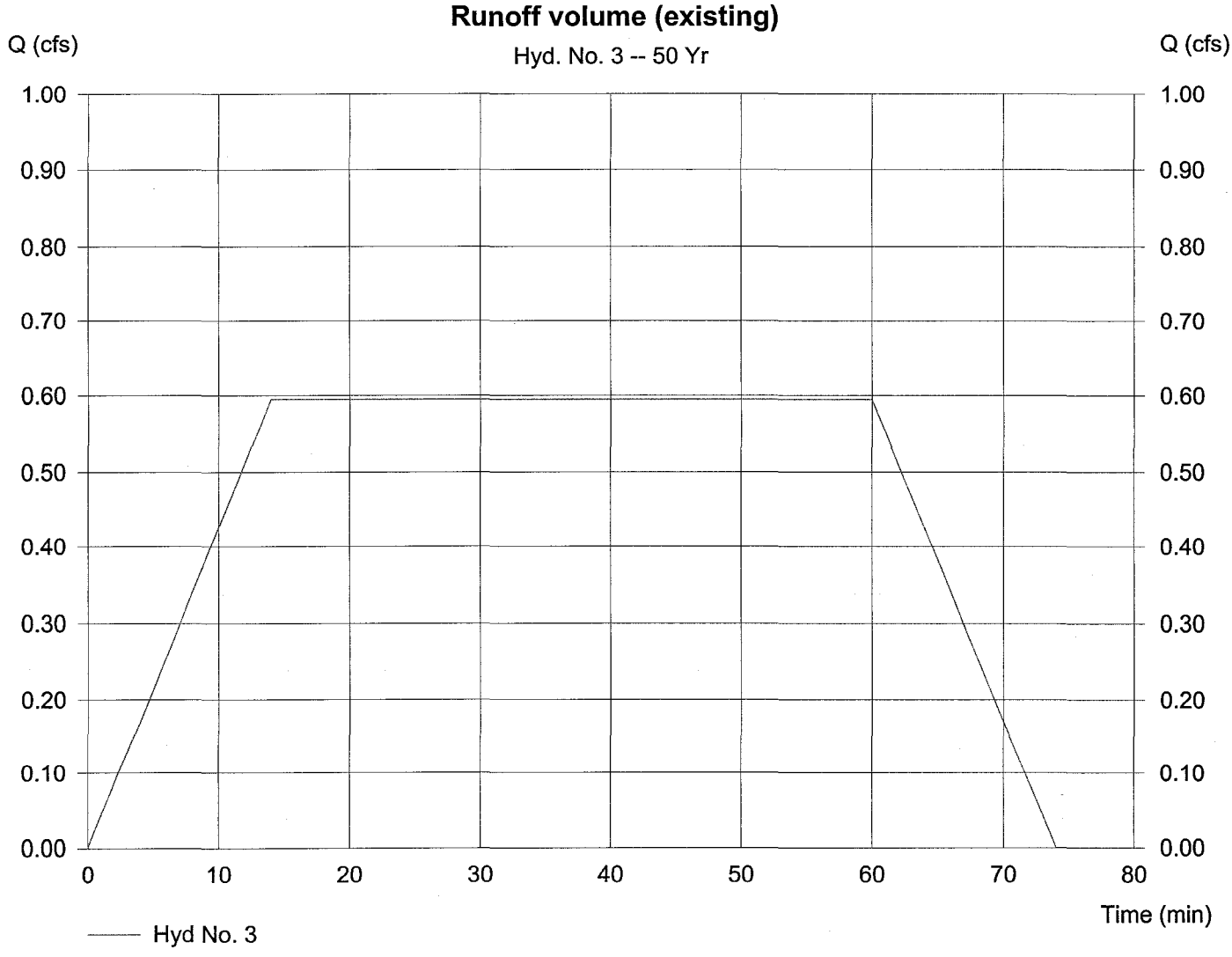
Thursday, Nov 20 2008, 3:17 PM

Hyd. No. 3

Runoff volume (existing)

Hydrograph type	= Mod. Rational	Peak discharge	= 0.59 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 0.800 ac	Runoff coeff.	= 0.3
Intensity	= 2.479 in/hr	Tc by User	= 14.00 min
IDF Curve	= Riley 06026.IDF	Storm duration	= 4.29 x Tc

Hydrograph Volume = 2,144 cuft



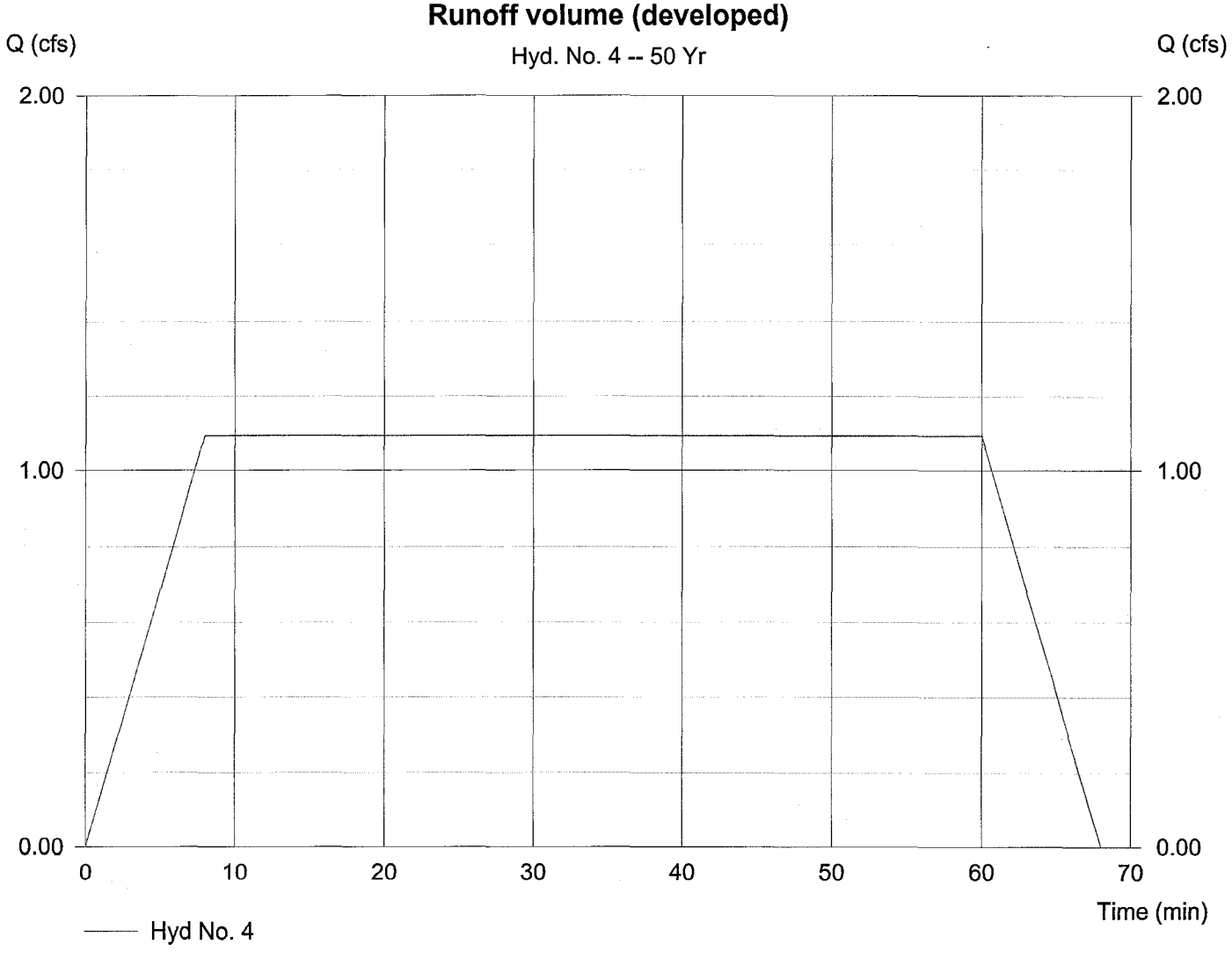
Hydrograph Plot

Hyd. No. 4

Runoff volume (developed)

Hydrograph type	= Mod. Rational	Peak discharge	= 1.09 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 0.800 ac	Runoff coeff.	= 0.55
Intensity	= 2.480 in/hr	Tc by User	= 8.00 min
IDF Curve	= Riley 06026.IDF	Storm duration	= 7.5 x Tc

Hydrograph Volume = 3,928 cuft



Pond Report

Hydraflow Hydrographs by Intelisolve — Friday, Nov 21 2008, 9:3 AM

Pond No. 1 - Riley Pond

Pond Data

Bottom LxW = 50.0 x 25.0 ft Side slope = 2.0:1 Bottom elev. = 1.50 ft Depth = 2.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1.50	1,250	0	0
0.10	1.60	1,280	127	127
0.20	1.70	1,311	130	256
0.30	1.80	1,341	133	389
0.40	1.90	1,373	136	524
0.50	2.00	1,404	139	663
0.60	2.10	1,436	142	805
0.70	2.20	1,468	145	950
0.80	2.30	1,500	148	1,099
0.90	2.40	1,533	152	1,250
1.00	2.50	1,566	155	1,405
1.10	2.60	1,599	158	1,564
1.20	2.70	1,633	162	1,725
1.30	2.80	1,667	165	1,890
1.40	2.90	1,701	168	2,059
1.50	3.00	1,736	172	2,231
1.60	3.10	1,771	175	2,406
1.70	3.20	1,806	179	2,585
1.80	3.30	1,842	182	2,767
1.90	3.40	1,878	186	2,953
2.00	3.50	1,914	190	3,143

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .000	.000	.000	.000
Orif. Coeff.	= 0.00	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.00	0.00	0.00	0.00
Crest El. (ft)	= 3.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

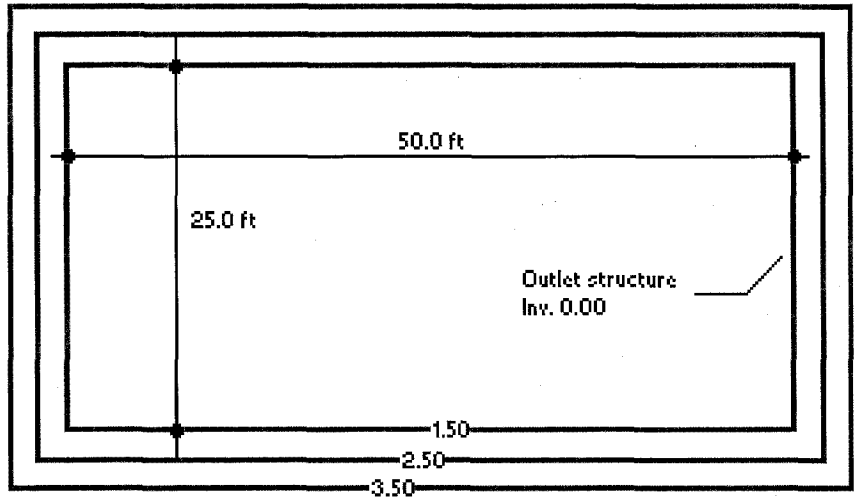
Exfiltration = 0.000 in/hr (Wet area) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0	1.50	---	---	---	---	0.00	---	---	---	---	0.00
0.10	127	1.60	---	---	---	---	0.00	---	---	---	---	0.00
0.20	256	1.70	---	---	---	---	0.00	---	---	---	---	0.00
0.30	389	1.80	---	---	---	---	0.00	---	---	---	---	0.00
0.40	524	1.90	---	---	---	---	0.00	---	---	---	---	0.00
0.50	663	2.00	---	---	---	---	0.00	---	---	---	---	0.00
0.60	805	2.10	---	---	---	---	0.00	---	---	---	---	0.00
0.70	950	2.20	---	---	---	---	0.00	---	---	---	---	0.00
0.80	1,099	2.30	---	---	---	---	0.00	---	---	---	---	0.00
0.90	1,250	2.40	---	---	---	---	0.00	---	---	---	---	0.00
1.00	1,405	2.50	---	---	---	---	0.00	---	---	---	---	0.00
1.10	1,564	2.60	---	---	---	---	0.00	---	---	---	---	0.00
1.20	1,725	2.70	---	---	---	---	0.00	---	---	---	---	0.00
1.30	1,890	2.80	---	---	---	---	0.00	---	---	---	---	0.00
1.40	2,059	2.90	---	---	---	---	0.00	---	---	---	---	0.00
1.50	2,231	3.00	---	---	---	---	0.00	---	---	---	---	0.00
1.60	2,406	3.10	---	---	---	---	0.53	---	---	---	---	0.53
1.70	2,585	3.20	---	---	---	---	1.49	---	---	---	---	1.49
1.80	2,767	3.30	---	---	---	---	2.74	---	---	---	---	2.74
1.90	2,953	3.40	---	---	---	---	4.21	---	---	---	---	4.21
2.00	3,143	3.50	---	---	---	---	5.89	---	---	---	---	5.89

Riley Pond

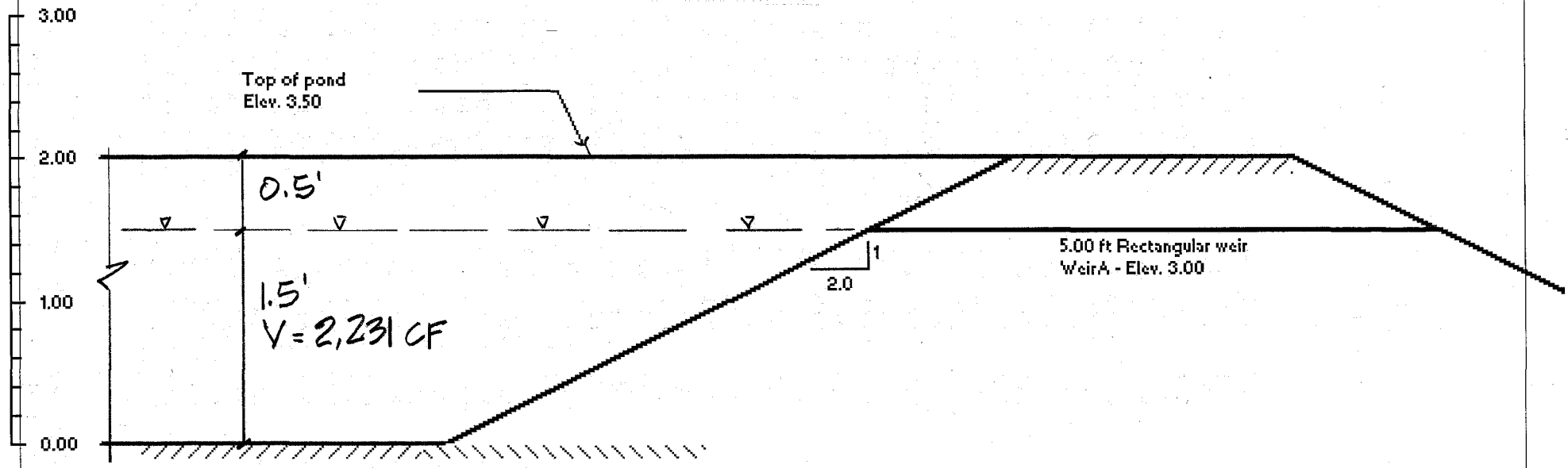


Plan View

NTS

Schematic only. Not for construction.

Riley Pond



$V_{INC.}$ = 1784 CF

EXTRA STORAGE = 2,231 - 1784

= 447 CF

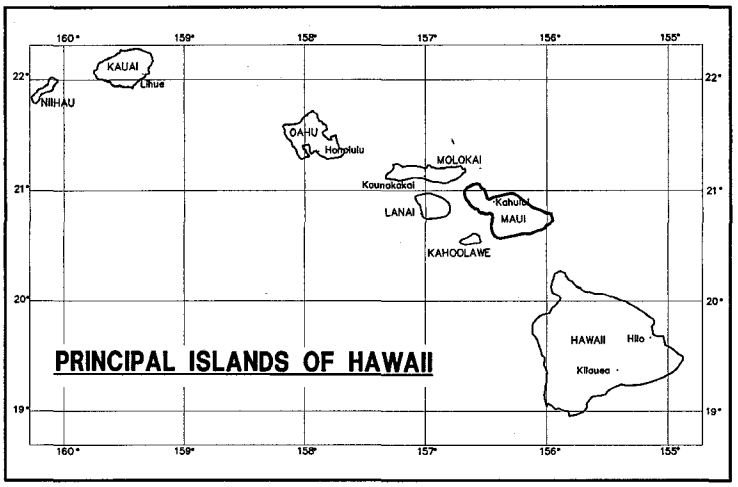
% REDUCTION = 447 / 1784

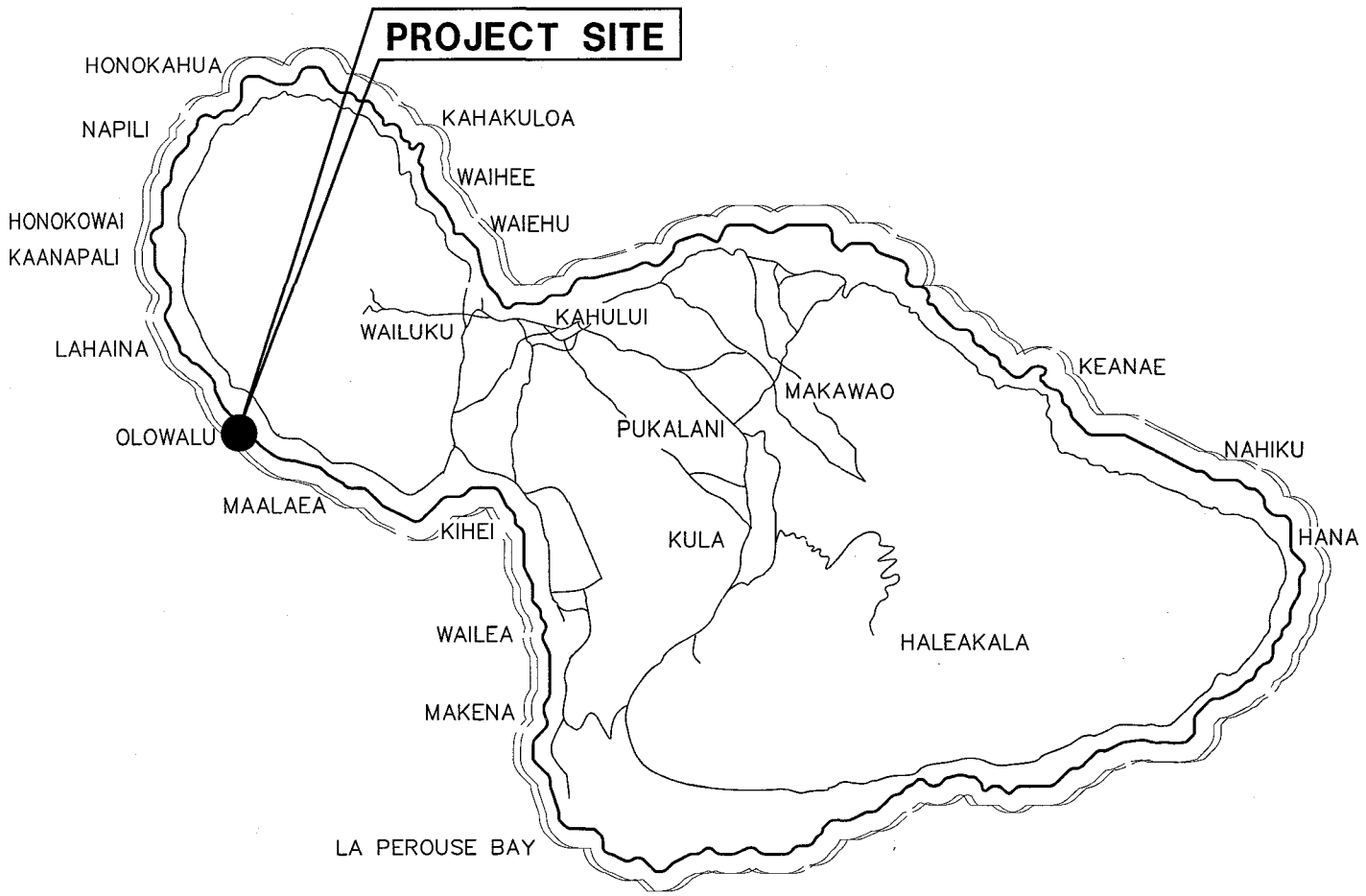
= 25%

Section

NTS

Schematic only. Not for construction.





N

LOCATION MAP

ISLAND OF MAUI

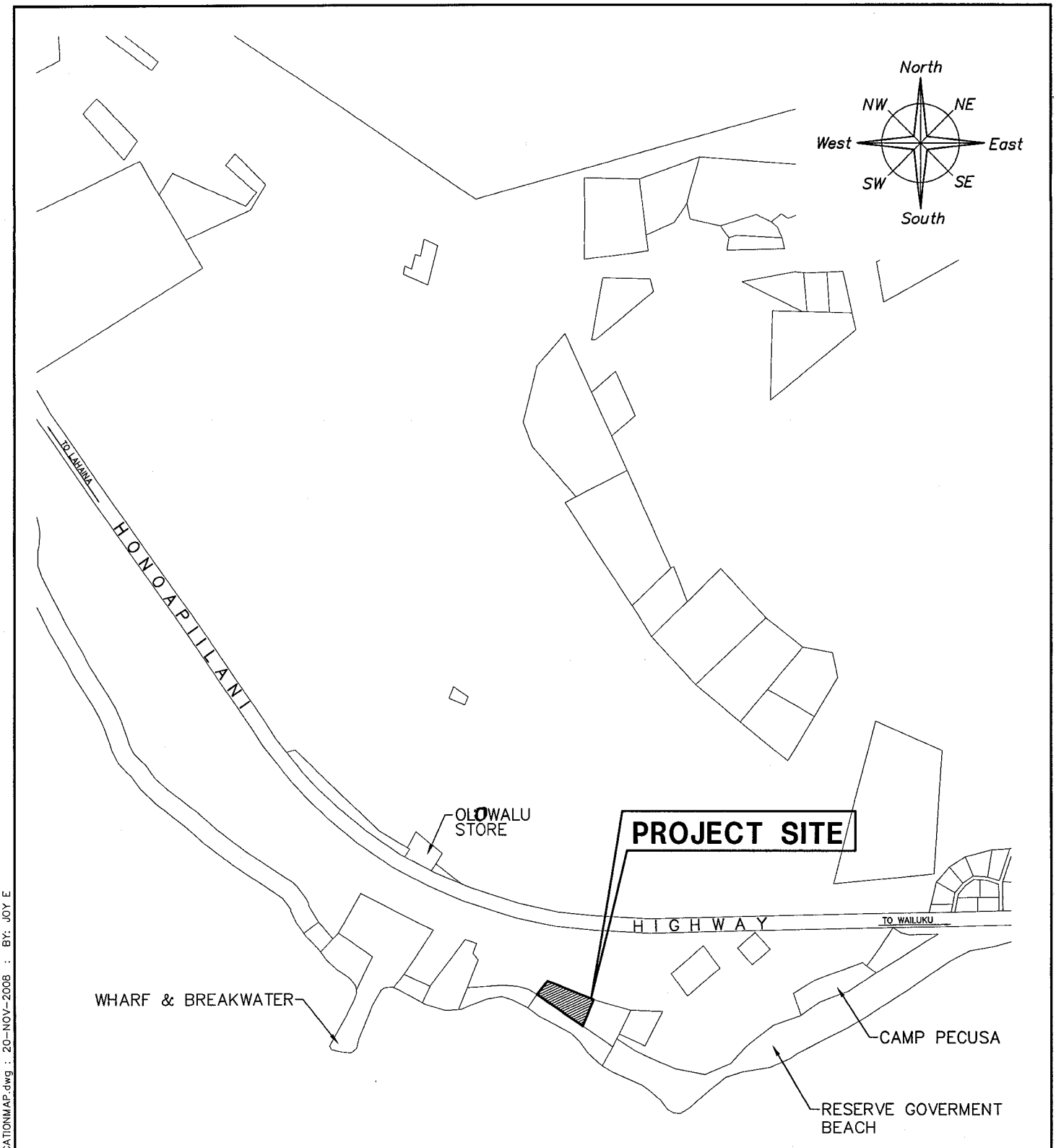
Tax Map Key (2) 4-8-03: 045

FIGURE 1

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

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

JOB NO. 06-026



VICINITY MAP

NOT TO SCALE

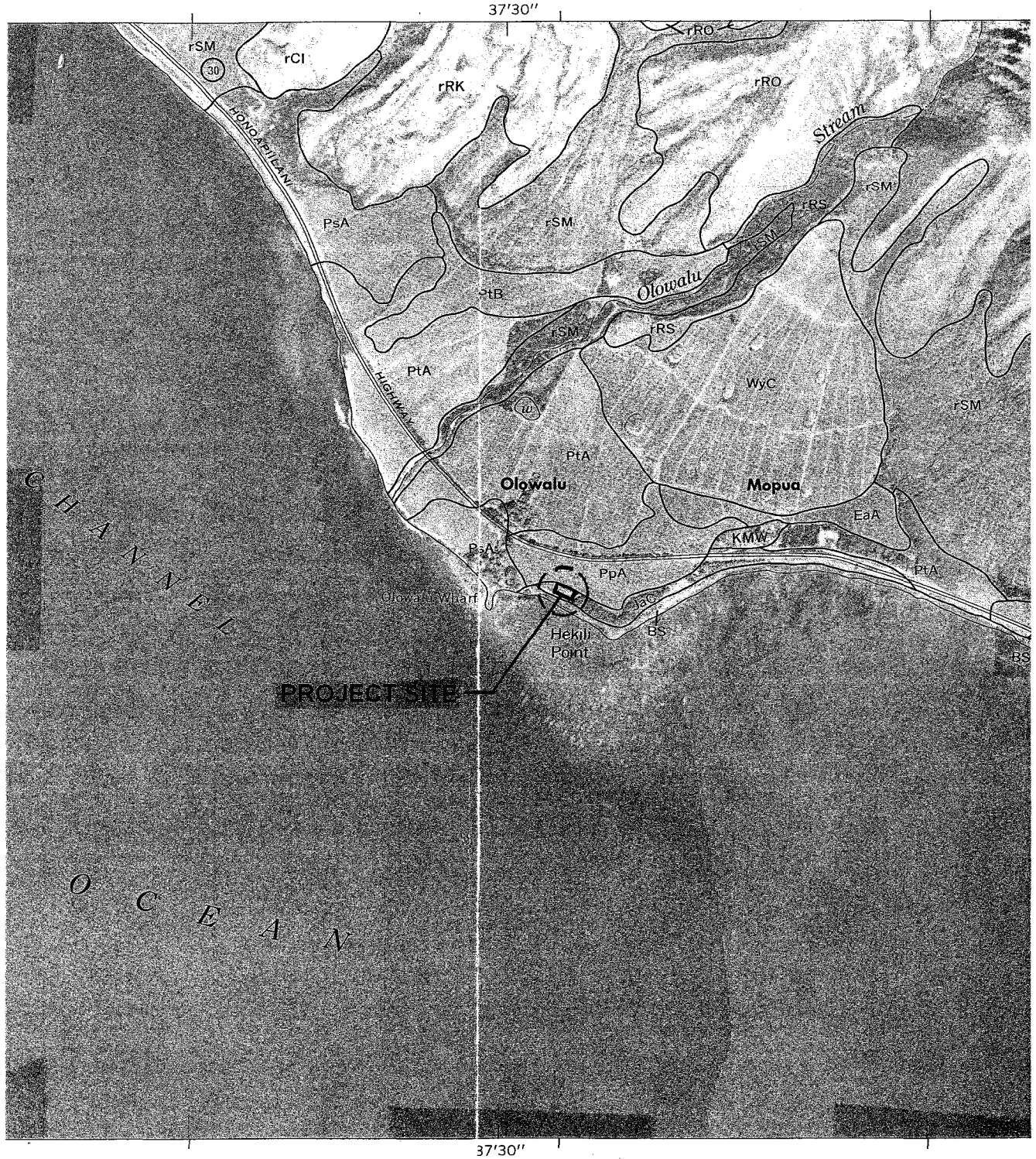
Tax Map Key (2) 4-8-03 : 45

FIGURE 2
NOVEMBER 20, 2008

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

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

JOB NO. : 06-26



SOILS MAP

Scale: 1" = 2,000'

FIGURE 3

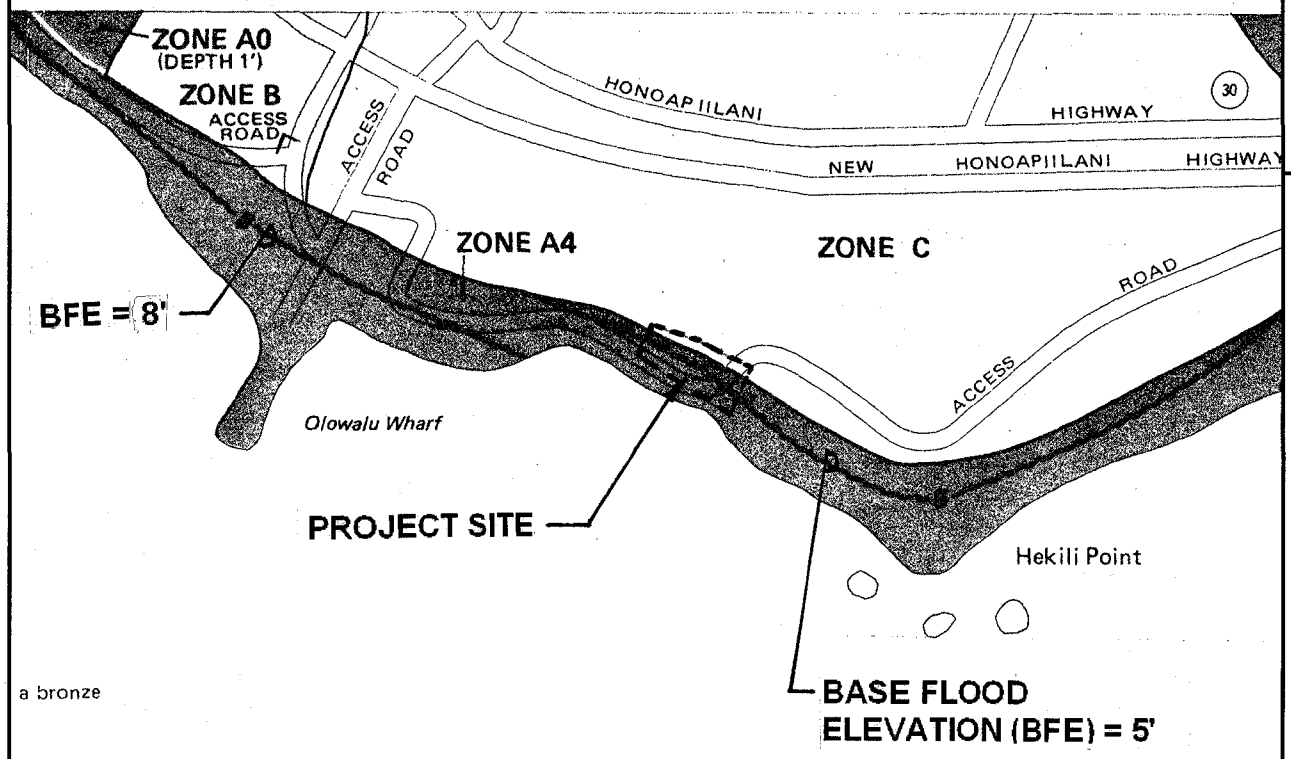


FIGURE 4

N

APPROXIMATE SCALE

500 0

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

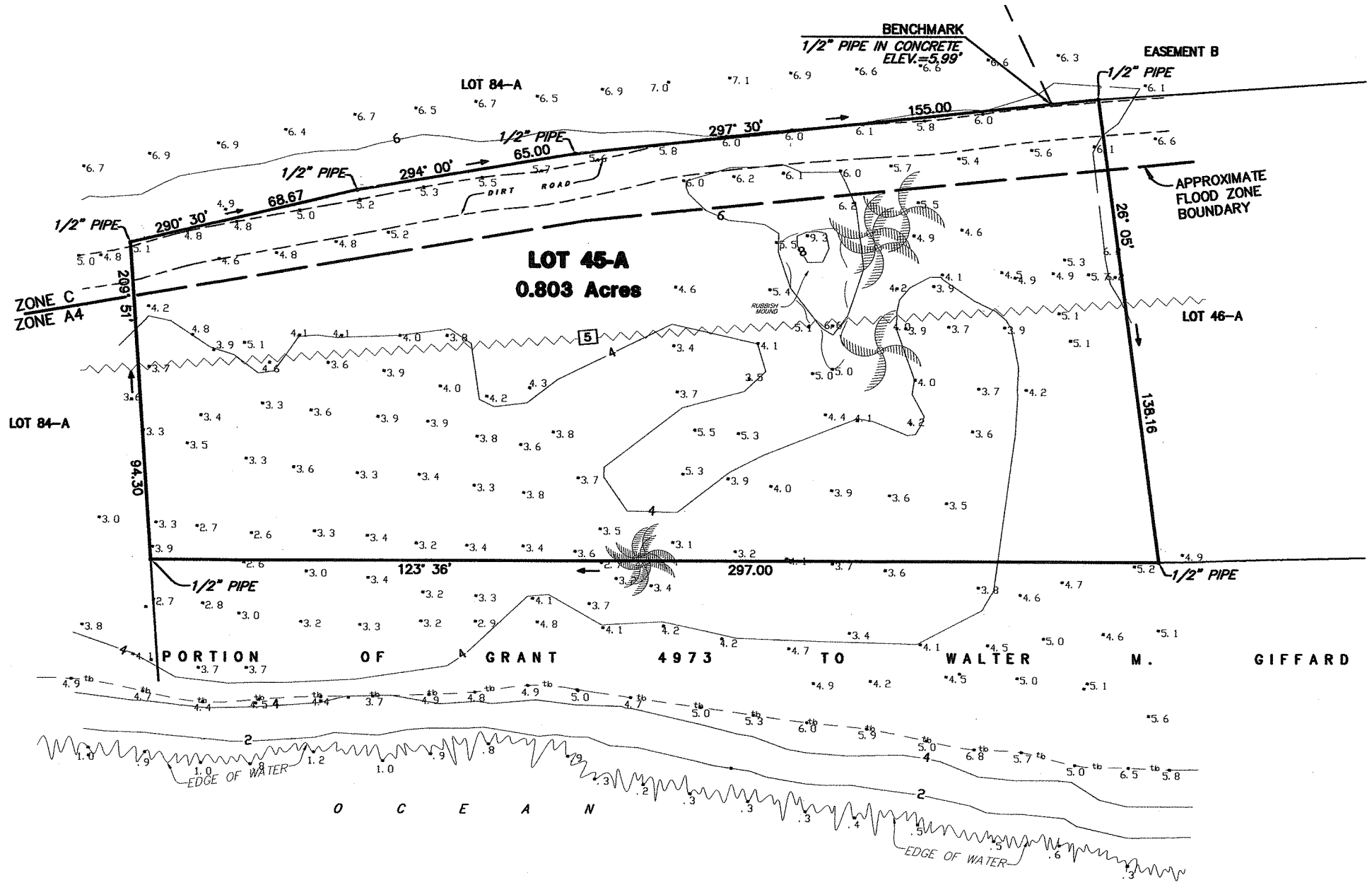
FLOOD INSURANCE RATE MAP

MAUI COUNTY, HAWAII

PANEL 229 OF 400
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
150003 0229 B
EFFECTIVE DATE:
JUNE 1, 1981

federal emergency management agency
federal insurance administration



LEGEND AND ABBREVIATIONS:

- 6 — EXISTING CONTOUR
- 5.1 — EXISTING SPOT ELEVATION
- tb — TOP BANK
- PALM TREE
- 5 — BASE FLOOD CONTOUR

TOPOGRAPHIC SURVEY MAP
OF
LOT 45-A, OLOWALU MAKAI-HIKINA SUBDIVISION
BEING A PORTION OF R.P. 5477, L.C. AW. 5620, AP. 4 TO KAHELE
AT OLOWALU, LAHAINA, MAUI, HAWAII

40 20 0 40 80
GRAPHIC SCALE IN FEET

Tax Map Key (2) 4-8-03 : 45

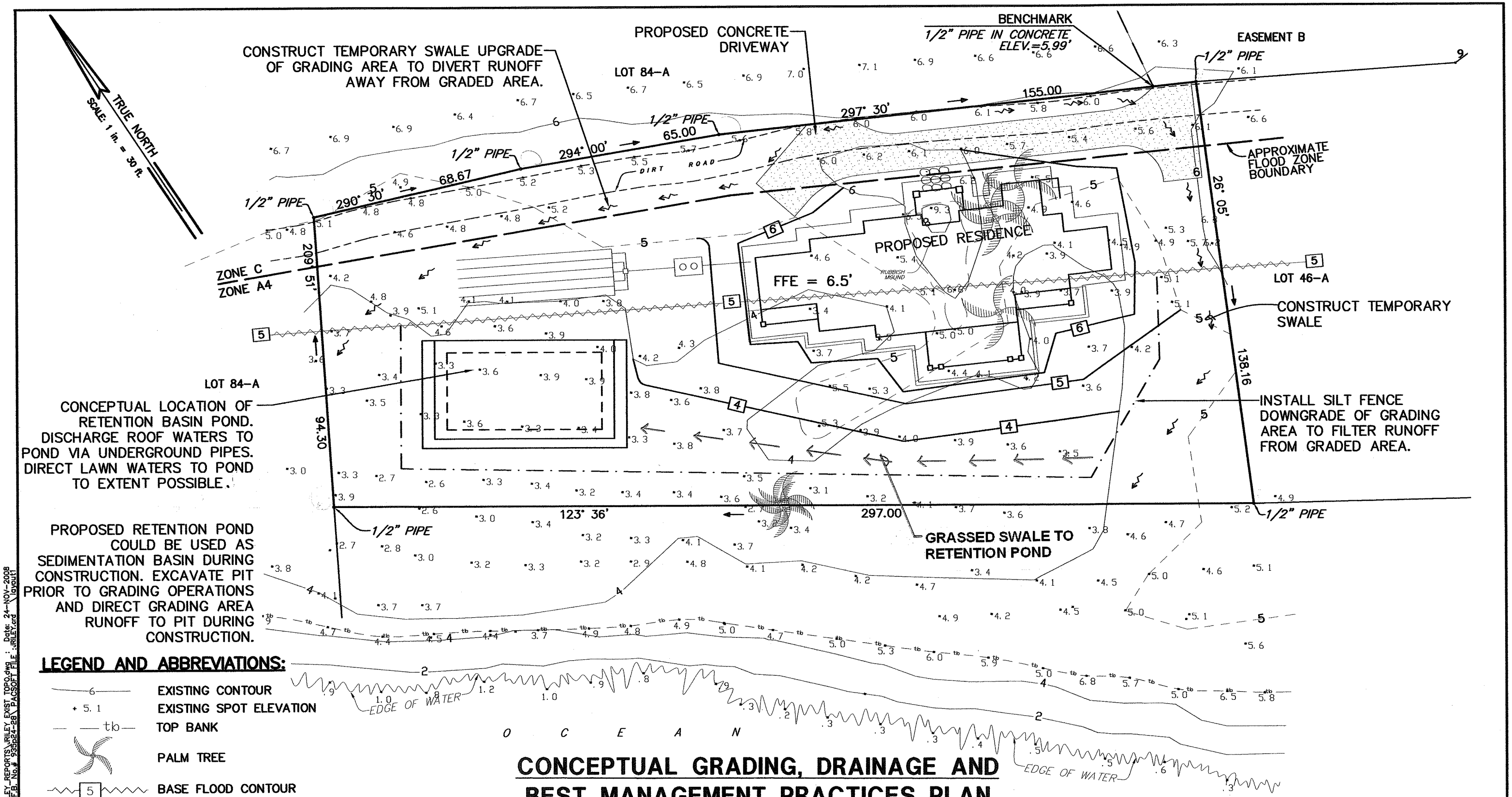
FIGURE 5

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

JOB NO.06-26

Z:\2006\06-026\WRILEY_REPORTS\WRILEY EXIST TOPO.dwg : Date: 21-NOV-2006
DRAWN BY: JOY. E. \ F.B. No.# 939p24-28 \ PACSOFT FILE :WRILEY.crd \layout1



PROPOSED RETENTION POND COULD BE USED AS SEDIMENTATION BASIN DURING CONSTRUCTION. EXCAVATE PIT PRIOR TO GRADING OPERATIONS AND DIRECT GRADING AREA RUNOFF TO PIT DURING CONSTRUCTION.

LEGEND AND ABBREVIATIONS:

- 6 — EXISTING CONTOUR
- + 5.1 — EXISTING SPOT ELEVATION
- — tb — TOP BANK
- PALM TREE
- 5 — BASE FLOOD CONTOUR
- 4 — NEW GROUND CONTOUR
- FFE — FINISHED FLOOR ELEVATION

Tax Map Key (2) 4-8-03 : 45

CONCEPTUAL GRADING, DRAINAGE AND BEST MANAGEMENT PRACTICES PLAN

30 15 0 30 60

GRAPHIC SCALE IN FEET

DATE: NOVEMBER 24, 2008

FIGURE 6

JOB NO. 06-26

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS — CIVIL & STRUCTURAL ENGINEERS

APPENDIX B

Biological Resources Survey

BIOLOGICAL RESOURCES SURVEY

for

OLOWALU LOT 45A

OLOWALU , MAUI, HAWAII

by

ROBERT W. HOBDY
ENVIRONMENTAL CONSULTANT
Kokomo, Maui
May 2006

Prepared for:
Mr. & Mrs. James Riley and
Mr. & Mrs. Warren Dean

BIOLOGICAL RESOURCES SURVEY
Olowalu Lot 45A Project

INTRODUCTION

This project lies on 0.8 acres of land (TMK (2) 4-8-03:45) in Olowalu, West Maui. It is a rectangular shaped parcel bounded by a coastal strip of land on the southwest, by agricultural land on the northeast, and by forested land on the northwest and southeast. About 80% of the seaward side of this parcel lies within the Conservation District, while the mauka 20% lies within the Agricultural District.

SITE DESCRIPTION

This entire parcel is nearly level, ranging in elevation from only about 6 ft. to 9 ft. above sea level. A narrow dirt roadway passes along the top of the property, but the remainder of the property is densely forested. Soils are of the Pulehu Silt Loam (PpA) which are well-drained, neutral, and dark brown, developed from alluvial deposits of igneous rock (Foote et al, 1972). Rainfall averages 12 in. to 15 in. per year with the bulk falling between November and March (Armstrong, 1983).

BIOLOGICAL HISTORY

In pre-contact times this area would have been a dry native shrubland with a few scattered trees. A good diversity of species would have been present, but with a preponderance of grasses such as pili (Heteropogon contortus), kalamalō (Eragrostis spp.) and kakonakona (Panicum spp.). Also present would have been shrubs such as 'a'ali'i (Dodonaea viscosa) and naio (Myoporum sandwicense) and trees such as wiliwili (Erythrina sandwicensis) and 'ohe makai (Reynoldsia sandwicensis).

The Olowalu area came into sugar cane production during the 1860's and this use continued for over 100 years. During this time the land was repeatedly cleared, plowed, cultivated, burned and harvested. As a result the original flora and fauna have long since disappeared. Since the demise of sugar in West Maui in 1999, the agricultural lands adjacent to this parcel have been utilized for minor farming pursuits. The subject parcel is currently densely forested with non-native trees and weeds.

SURVEY OBJECTIVES

This report summarizes the findings of a flora and fauna survey of the Olowalu Lot 45A parcel that was conducted in May, 2006. The objectives of the survey were to:

1. Document what plant, bird and mammal species occur on the property or may likely occur in the existing habitat.
2. Document the status and abundance of each species.
3. Determine the presence or likely occurrence of any native flora and fauna, particularly any that are Federally listed as Threatened or Endangered. If such occur, identify what features of the habitat may be essential for these species.
4. Determine if the project area contains any special habitats which if lost or altered might result in a significant negative impact on the flora and fauna in this part of the island.
5. Note which aspects of the proposed development pose significant concerns for plants or for wildlife and recommend measures that would mitigate or avoid these problems.

BOTANICAL SURVEY REPORT

SURVEY METHODS

A walk-through botanical survey method was used on this 0.8 acre parcel. All parts were intensively surveyed. Notes were made on plant species, distribution and abundance as well as terrain and substrate.

DESCRIPTION OF THE VEGETATION

About 80% of this parcel is densely forested with the exception of a cleared dirt roadway along the upper edge. By far the most abundant tree type is kiawe (Prosopis pallida). The understory is also almost a monotypic ground layer of a robust form of manienie grass (Cynodon dactylon). Other species include a small grove of California Washingtonia Palms (Washingtonia filifera) and scattered individuals of koa haole (Leucaena leucocephala). Only 11 species of plants were found on this property, and none of these were native species.

DISCUSSION AND RECOMMENDATIONS

This property is remarkable only for its lack of diversity of plant species. Only four species made up about 98% of the vegetation here. Not a single native plant was found. As a result no Federally listed Endangered or Threatened species (USFWS, 1999) occur here and there are no special habitats of any kind. The nearby coastline is also depauperate vegetation-wise. A boulder beach grades directly into the above described habitat. Not a single native species was found here either.

Because of the non-native and weedy nature of the vegetation on the subject parcel and its surroundings, there is little of botanical concern and the proposed project is not expected to have a significant negative impact on the botanical resources in this part of West Maui.

It is recommended that native dryland and coastal plants be incorporated into the landscape design for this project. These plants would thrive here once the kiawe and koa haole are removed and the manienie grass is mowed, and would lend a special accent to the project.

PLANT SPECIES LIST

Following is a checklist of all those vascular plant species inventoried during the field studies. Plant families are arranged alphabetically within two groups: Monocots and Dicots. Taxonomy and nomenclature of the flowering plants are in accordance with Wagner et al. (1999) and Staples and Herbst (2005. For each species, the following information is provided:

1. Scientific name with author citation
2. Common English or Hawaiian name.
3. Bio-geographical status. The following symbols are used:
   endemic = native only to the Hawaiian Islands; not naturally occurring anywhere else in the world.
   indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).
   Polynesian introduction = plants introduced to Hawai'i in the course of Polynesian migrations and prior to western contact.
   non-native = all those plants brought to the islands intentionally or accidentally after western contact.
4. Abundance of each species within the project area:
   abundant = forming a major part of the vegetation within the project area.
   common = widely scattered throughout the area or locally abundant within a portion of it.
   uncommon = scattered sparsely throughout the area or occurring in a few small patches.
   rare = only a few isolated individuals within the project area.

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
MONOCOTS			
ARECACEAE (Palm Family)			
Washingtonia filifera (Andre) S. Watson	California washingtonia	non-native	common
POACEAE (Grass Family)			
Cenchrus ciliaris L.	buffelgrass	non-native	rare
Chloris barbata (L.) Sw.	swollen fingergrass	non-native	rare
Cynodon dactylon (L.) Pers.	*manienie*	non-native	abundant
DICOTS			
ASTERACEAE (Sunflower Family)			
Pluchea carolinensis (Jacq.) G. Don	sourbush	non-native	uncommon
Pluchea indica (L.) Less	Indian fleabane	non-native	uncommon
FABACEAE (Pea Family)			
Acacia farnesiana (L.) Willd.	klu	non-native	rare
Desmanthus pernambucanus (L.) Thellung	slender mimosa	non-native	rare
Leucaena leucocephala (Lam.) deWit	*koa haole*	non-native	common
Pithecellobium dulce (Roxb.) Benth.	*'opiuma*	non-native	uncommon
Prosopis pallida (Humb.&Bonpl.Ex.Willd.) Kunth	*kiawe*	non-native	abundant

FAUNA SURVEY REPORT

SURVEY METHODS

A walk-through survey method was conducted in conjunction with the botanical survey. All parts of the project area were covered. Field observations were made with the aid of binoculars and by listening to vocalizations. Notes were made on species abundance, activities and location as well as observations of trails, tracks, scat and signs of feeding. In addition an evening visit was made to the area to record crepuscular activities and vocalizations and to see if there was any evidence of occurrence of the Hawaiian hoary bat (*Lasiurus cinereus semotus*) in the area.

RESULTS

MAMMALS

Just two species of mammals were observed during two site visits. Taxonomy and nomenclature follow Tomich (1986).

Domestic dog (*Canis familiaris*) – Two dogs that were pets were seen with their owner on the agricultural road along the upper edge of the property.

European house mouse (*Mus domesticus*) – One mouse was seen in the grass within the property. Mice feed on seeds, fruits and herbaceous vegetation and are widespread and common.

Deep grass prevented good visibility of other ground dwelling mammals but one might reasonably expect to encounter rats (*Rattus rattus*), cats (*Felis domesticus*) and mongoose (*Herepestes auropunctatus*) in this area. Rats also feed on seeds, fruits and herbaceous vegetation, and cats and mongoose feed on rodents and birds. No sign of axis deer (*Axis axis*) or other large herbivores was seen.

A special effort was made to look for the native Hawaiian hoary bat by making an evening survey of the area. When present in an area these bats can be easily identified as they forage for insects, their distinctive flight patterns clearly visible in the glow of twilight. No evidence of such activity was observed though visibility was good and flying insects were seen.

BIRDS

There was moderate birdlife diversity in this normally dry area. An ample supply of grass and herbaceous plant seeds as well as insects were available. Eight species of non-native birds were seen, most taking advantage of this seasonal food supply. Taxonomy and nomenclature follow American Ornithologists' Union (2005).

Common myna (*Acridotheres tristis*) – Mynas were common throughout the property feeding in pairs in the trees.

Northern cardinal (*Cardinalis cardinalis)* - Several individuals were seen and heard calling from trees throughout the property.

Japanese white-eye (*Zosterops japonica*) – Several white-eyes were seen feeding in the kiawe trees and making their high pitched calls.

Zebra dove (*Geopelia striata*) – A few of these small doves were heard from the trees.

Gray francolin (*Francolinus pondicerianus*) – A few of these francolins could be heard calling from the fringes of the forest.

House sparrow (*Passer domesticus)* – A few sparrows were seen feeding in the kiawe trees.

Spotted dove (*Streptopelia chinensis*) – One of these large doves was seen flying between treetops.

Red-crested cardinal (*Paroaria coronata*) – One of these brilliant red-crested cardinals was seen and heard in a kiawe tree.

A few other non-native birds might occur in this area and some common migratory species would be seen during the winter months. This area and its habitat, however, are not suitable for any of Hawaii's native forest birds that dwell in the higher mountains.

INSECTS

While insects in general were not tallied, they were abundant throughout the area and fueled the bird activity observed. One native insect, Blackburn's sphinx moth (*Manduca blackburni*), has been put on the Federal Endangered Species List (USFWS 2000) and this designation requires special focus to ascertain if it is present. None were found.

Blackburn's sphinx moth occurs on Maui although it has not been found in this area. Its native host plants are species of 'Aiea (*Nothocestrum).* A non-native alternative host plant is tree tobacco (*Nicotiana glauca*). There are no 'aiea on or near the project area nor were any tree tobacco plants found anywhere on the property. No Blackburn's sphinx moths or their larvae were observed.

DISCUSSION

Fauna surveys are seldom comprehensive due to the short windows of observation, the seasonal nature of animal activities and the usually unpredictable nature of their daily movements. A few additional non-native and migratory bird species might be recorded if the survey had been more extensive and at different times of the year, but it is not likely that it would have turned up any rare or sensitive species.

All of the mammal, bird and insect species observed were common, non-native species that pose no environmental concerns. No Federally Endangered or Threatened species were found. As a result of these findings the proposed changes are not expected to create any significant negative impacts on the fauna resources in this part of West Maui.

No recommendations are deemed necessary or appropriate regarding the fauna resources on this property.

ANIMAL SPECIES LIST

Following is a checklist of the animal species inventoried during the field work. Animal species are arranged in descending abundance within two groups: Mammals and Birds. For each species the following information is provided:

1. Common name
2. Scientific name
3. Bio-geographical status. The following symbols are used:

    endemic = native only to Hawaii; not naturally occurring anywhere else in the world.
    indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).
    non-native = all those animals brought to Hawaii intentionally or accidentally after western contact.
    migratory = spending a portion of the year in Hawaii and a portion elsewhere. In Hawaii the migratory birds are usually in the overwintering/non-breeding phase of their life cycle.

4. Abundance of each species within the project area:

    abundant = many flocks or individuals seen throughout the area at all times of day.
    common = a few flocks or well scattered individuals throughout the area.
    uncommon = only one flock or several individuals seen within the project area.
    rare = only one or two seen within the project area.

Literature Cited

American Ornithologists' Union 2005. Check-list of North American Birds. 6th edition. American Ornithologists' Union. Washington D.C.

Armstrong, R. W. (ed.) 1983. Atlas of Hawaii. (2nd. ed.) University of Hawaii Press.

Foote, D.E. , E.L. Hill, S. Nakamura, and F. Stephens. 1972. Soil survey of the islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. U.S. Dept. of Agriculture, Soil Conservation Service. Washington, D.C.

Staples, G.W., D.R. Herbst. 2005. A Tropical Garden Flora-Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press.

Tomich, P.Q. 1986. Mammals in Hawaii. Bishop Museum Press, Honolulu.

U.S. Fish and Wildlife Service. 1999. Endangered and threatened wildlife and Plants. 50 CFR 17.11 & 17.12

U.S. Fish and Wildlife Service. 2000. Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for Blackburn's Sphinx Moth from Hawaii. Federal Register 65(21): 4770-4779.

Wagner, W. L., D.R. Herbst, and S. H. Sohmer. 1999. Manual of the Flowering Plants of Hawai'i. Univ. of Hawai'i Press and Bishop Museum Press. Honolulu.

COMMON NAME	SCIENTIFIC NAME	STATUS	ABUNDANCE
MAMMALS			
Domestic dog	*Canis familiaris*	non-native	rare
European house mouse	*Mus domesticus*	non-native	rare
BIRDS			
Common myna	*Acridotheres tristis*	non-native	common
Northern cardinal	*Cardinalis cardinalis*	non-native	common
Japanese white-eye	*Zosterops japonica*	non-native	common
Zebra dove	*Geopelia striata*	non-native	uncommon
Gray francolin	*Francolinus pondicerianus*	non-native	uncommon
House sparrow	*Passer domesticus*	non-native	uncommon
Spotted dove	*Streptopelia chinensis*	non-native	uncommon
Red-crested cardinal	*Paroaria coronata*	non-native	rare

APPENDIX C

Archaeological Mitigation & Preservation Plan

Olowalu Elua Associates, LLC

ARCHAEOLOGICAL MITIGATION & PRESERVATION PLAN

Makai Portion (Phase 1)
Olowalu Ahupua'a, Lahaina District, Maui Island
TMK 4-8-3:1, 3, 4, 5, 6, 33, 41-49, 83 & 84

May 2001

Prepared by:

OLOWALU ELUA ASSOCIATES, LLC

173 Ho'ohana Street, Suite 201

Kahului, Hawai'i 96732

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INTRODUCTION

Olowalu Elua Associates, LLC purchased 734 acres in the ahupua'a of Olowalu in 1998. Because the Honoapiilani Highway bisects the property, separate inventory surveys were conducted for the makai lands (73 acres) and the mauka lands (661 acres). The makai lands consisted of Parcel 5 and nine kuleana (Parcels 41 through 49).

This Preservation Plan describes background research and archaeological work performed on the property, identification of sites to be preserved with descriptions, locations of buffer zones, short- and long-term preservation plans, and maps and drawings relating to the sites.

BACKGROUND RESEARCH SUMMARY

Xamanek Researches conducted an archaeological inventory survey of the 73-acre makai portion of the Olowalu ahupua'a. It was also decided to conduct an inventory survey on the adjoining parcels owned by the State of Hawaii as Government Beach Reserves (TMK: 4-8-03:1, 3, 4 & 6). The fieldwork was conducted in late 1998 and early 1999 and consisted of an intensive pedestrian survey, extensive backhoe trenching along shoreline areas, and limited subsurface testing.

During the fieldwork, eight previously unrecorded sites were identified within the study area. The features comprised the following formal types: a precontact burial ground (Site #4693); a probable precontact wall remnant (Site #4694); a probable post-contact sea wall (Site #4695); a remnant of the Old Government Road which followed the route of the traditional Pi'ilani coastal trail (Site #4696); a probable early post-contact subsurface habitation deposit (Site #4697); a late precontact subsurface habitation deposit (Site #4698) and gley soils. The ruins of the Olowalu Sugar Mill (Site #1602) also lie within the study area.

It is noted that Site #4695 (probable post-contact sea wall) and portions of Site #4696 (remnant of Old Government Road) lie within the state-owned Beach Reserve. Also, Site #4694 (probable precontact wall remnant) lies predominantly within the state-owned Beach Reserve. Only a small portion of the wall (approximately five feet, or less than ten percent of the entire wall segment) lies on property owned by Olowalu Elua Associates, LLC. The two gley soils sites are located on both the state-owned Beach Reserve and property owned by Olowalu Elua Associates, LLC. Olowalu Elua Associates, LLC will propose mitigation only for sites or parts of sites lying on lands it owns.

All of the sites identified were assessed as significant under Criterion "d." The Olowalu Sugar Mill site is also deemed significant under Criterion "a," and the burial ground (Site #4693) also qualifies for significance under Criterion "e" (for its traditional cultural value).

The Maui/Lana'i Islands Burial Council accepted the Preservation Plan for Site #4693 (burial ground) at its August 26, 1999 meeting.

ARCHAEOLOGICAL WORK

The basic purpose of the inventory survey was to identify (to discover and locate on available maps) all sites and features of potential archaeological significance present within the specified area. An inventory survey is extensive rather than intensive in scope, and conducted to determine the presence or absence of archaeological resources within a specified project area. This level of survey indicates both the nature and variety of archaeological remains present, and the distribution and density of such remains. It permits a significance assessment of the archaeological resources and facilitates formulation of recommendations and estimates for any subsequent mitigation work as might be necessary or appropriate.

The inventory survey was carried out in accordance with the standards for inventory-level surveys recommended by the DLNR-HRD. The significance of all archaeological remains identified within the project area were assessed in terms of criteria outlined in the Rules Governing procedures for Historic Preservation Review (DLNR 1996;Chap275).

SIGNIFICANCE EVALUATIONS

Pursuant to DLNR (1996) Chapter 275-6 (d), the initial significance assessments provided herein are final, due to concurrence from the DLNR having been obtained. The project has been evaluated under the state rules and regulations governing cultural resource management. Consequently, sites identified and located during this survey have been assessed for significance based on criteria outlined in the Rules Governing Procedures for Historic Preservation Review (DLNR 1996:Chap 275). According to these rules, a site must possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria:

1.) Criterion "a". Be associated with events that have made an important contribution to the broad patterns of our history.

2.) Criterion "b". Be associated with the lives of persons important in our past.

3.) Criterion "c". Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;

4.) Criterion "d". Have yielded, or is likely to yield, information important for research on prehistory or history.

5.) Criterion "e". Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

6.) "nls" Site is determined as no longer significant.

Table 1 shows the sites designated for preservation and the significance evaluation attributed to it.

Table 1

SIHP SITE #50-50-08	SIGNIFICANCE CRITERION	COMPONENT FEATURES	STATUS	CONDITION F=Fair; P=Poor; G=Good	AGE	PROPOSED MITIGATION
4693	D & E	Burials	Altered	G-P	Indigenous	**Preservation** as per the Preservation Plan for Site 4693 accepted by the Maui/Lana'i Islands Burial Council at its August 26, 1999 meeting.
						Preservation Site Buffer, Short- and Long-Term Preservation as per the Preservation Plan for Site 4693 accepted by the Maui/Lana'i Islands Burial Council at its August 26, 1999 meeting.
4694	D	Wall Structure	Altered	F	Historic	**No Mitigation** - Located in State Beach Reserve.
4694 **(OEA Land)**	D	Wall Structure	Altered	F	Historic	**Preservation.**
						Preservation Site Buffer. Ten (10) feet.
						Short-Term Preservation: N/A
						Long-Term Preservation: Signage (see Appendix C)
4695	D	Sea Wall	Altered	F-P	Historic	**No mitigation** (located in State Beach Reserve); no longer significant.
4696	D	Old Gov't. Rd.	Altered	P	Historic	**NLS** (no longer significant).
4697	D	Subsurface Cultural Deposit	Altered	F-P	Historic	***Preservation**
						Preservation Site Buffer: Ten (10) feet.
						Short-Term Preservation: N/A
						Long-Term Preservation: Signage (see Appendix C).

*Sites 4697, 4698, 1602 and Gley oils are intended to be preserved; however, landowners may elect to conduct data recovery in the future, at which time SHPD will be notified and an amended Archaeological Monitoring and Preservation Plan will be submitted for review and approval.

Table 1

SIHP SITE #50-50-08	SIGNIFICANCE CRITERION	COMPONENT FEATURES	STATUS	CONDITION F=Fair; P=Poor; G=Good	AGE	PROPOSED MITIGATION
4698	D	Subsurface Cultural Deposit	Altered	F	Indigenous	***Preservation**
						Preservation Site Buffer: None (currently used as beach access).
						Short-Term Preservation: N/A
						Long-Term Preservation: Signage (see Appendix C).
1602	A & D	Olowalu Mill Complex	Altered	F	Historic	***Preservation**
						Preservation Site Buffer: Thirty (30) feet.
						Short-Term Preservation: N/A
						Long-Term Preservation: Signage (see Appendix C).
Gley Soils **(State Land)**	D	Subsurface Deposit	Unaltered	G	Historic & Indigenous	**No mitigation** (located in State Beach Reserve)
Gley Soils **(OEA Land outside of Site #4693 Burial Area)**	D	Subsurface Deposit	Unaltered	G	Historic & Indigenous	***Preservation**
						Preservation Site Buffer: Ten (10) feet from site.
						Short-Term Preservation: N/A
						Long-Term Preservation: Signage (see Appendix C).

*Sites 4697, 4698, 1602 and Gley oils are intended to be preserved; however, landowners may elect to conduct data recovery in the future, at which time SHPD will be notified and an amended Archaeological Monitoring and Preservation Plan will be submitted for review and approval.

IDENTIFICATION OF SITES WITH DESCRIPTIONS

1. 4693

SITE TYPE: Cultural (Burials) CONDITION: Extensively impacted by sugar cultivation.

INTEGRITY: Portions Altered PROBABLE AGE: Precontact

FUNCTIONAL INTERPRETATION: Burial Grounds

DESCRIPTION: This site lies near Hekili Point, within c. 50 meters of the existing coastline. It is interpreted as a probable precontact burial ground.

On November 13, 1998, human remains were located by Mark Donham and Erik Fredericksen. On the previous day, an informant who wished to remain anonymous indicated that there was an area where he recalled seeing "bones" in the past. Careful inspection along the makai berm of the cane access road yielded three cranium fragments and one femur shaft fragment. Subsequent inspection of the area yielded a surface scatter of previously disturbed human skeletal materials. Following consultation with Maui/Lana'i Islands Burial Council members, it was decided to conduct subsurface testing to determine the presence of burials.

A series of backhoe trenches were then placed in the vicinity of the surface scatter in order to assess subsurface conditions. Two backhoe trenches exposed *in situ* human remains. In addition, a single back-blade pass along the road located a heavily impacted *in situ* burial. Given the presence of these burials, mechanical testing was halted in the immediate area. Manual investigation was undertaken on the burial in the road and on the other located remains. Subsequent investigation yielded three additional finds of human skeletal remains.

2. 4694

SITE TYPE: L-Shaped Wall CONDITION: Fair

INTEGRITY: Unaltered PROBABLE AGE: Historic

FUNCTIONAL INTERPRETATION: Habitation

DESCRIPTION: This site is located on Hekili Point. It rests c. 3-4-feet AMSL and lies within 20 m. of the existing high-water mark in the beach reserve. The site consists of an L-shaped wall of waterworn basalt cobbles and a few small boulders. In addition, several coral cobbles were noted in the structure wall.

This structure ranges from 30 to 60 cm. In height and is up to 1.2 meters wide. It is c. 10 meters E-W by c. 9.5 meters N-S on the west leg. The northern portion of this leg appears to have been impacted by past bulldozing activities likely associated with the nearby abandoned sugarcane field. The eastern end of the site did not appear to have been mechanically damaged. The overall labor expenditure for the construction of this structure was moderate to high, and its overall condition is fair. However, a portion of this structure appears to have been impacted in the past fifty years. No post-contact material culture remains were noted in the structure of the site. However, a 4" x 4" timber was apparently placed in the rock structure in

modern times. The dimensions (3.5" x 3.5") of the post and its generally good condition suggest it was put there in recent times.

A total of three test units were utilized to investigate subsurface conditions. No subsurface features were encountered in any of the one-meter square test units.

3. 4695

SITE TYPE: Post-Contact Sea Wall CONDITION: Fair-Poor

INTEGRITY: Altered PROBABLE AGE: Historic

FUNCTIONAL INTERPRETATION: Associated with Roadway (Site 4696)

DESCRIPTION: Site 4695 lies in the Beach Reserve of the western portion of the project area. It appears to have been built in post-contact times, and is tentatively identified as a shoreline erosion wall that may have been associated with Site 4696. The site is in generally fair condition.

4. 4696

SITE TYPE: Old Government Road CONDITION: Poor

INTEGRITY: Altered PROBABLE AGE: Historic

FUNCTIONAL INTERPRETATION: Roadway

DESCRIPTION: Site 4696 lies partially in the Beach Reserve and partially in lands owned by OEA along the western portion of the project area. It is in poor condition and is part of the Old Government Road. This government road was probably built in the mid-1800s, and followed the route of the traditional trail that encircled the island of Maui.

5. 4697

SITE TYPE: Subsurface Cultural Deposit CONDITION: Fair

INTEGRITY: Altered PROBABLE AGE: Historic

FUNCTIONAL INTERPRETATION: Possible Historic Habitation / Agricultural Site

DESCRIPTION: This is a subsurface site, which lies in the abandoned sugar cane field to the west of Site 4693 (burial ground). Site 4697 was encountered during the excavation of the 30-meter long BT 23. Portions of a dog skeleton were located near the 15.5-meter point of the long trench. Subsequently, charcoal flecking and a few pieces of marine shell were noted in the profile of BT 23. Two 1-meter square test units were utilized in order to evaluate subsurface conditions near the 17-meter mark in BT 23.

6. 4698

SITE TYPE: Subsurface Cultural Deposit CONDITION: Fair

INTEGRITY: Unaltered PROBABLE AGE: Indigenous

FUNCTIONAL INTERPRETATION: Habitation

DESCRIPTION: This site was located during backhoe testing near the ruins of the former Olowalu Mill (Site 1602). Backhoe Trench 59 was excavated just to the east of the landscaped area of the former manager's home. This backhoe trench lies within c. 25 m. of the existing shoreline. Charcoal flecking and scattered marine shellfish remains were noted in the profile and subsequently, a 1-meter square test unit was excavated to further investigate subsurface conditions.

7. 1602

SITE TYPE: Historic Structure CONDITION: Ruins

INTEGRITY: Unaltered PROBABLE AGE: Historic

FUNCTIONAL INTERPRETATION: Sugar Mill

DESCRIPTION: The ruins of the Olowalu Sugar Mill lie on the makai side of Honoapi'ilani Highway, approximately 20 meters from the shore. The Olowalu mill was probably constructed in the 1870's. A photograph is reproduced in *Maui Remembers* [Bartholomew (Ainsworth) and Bailey, 1994, p. 45], and is one of the few in existence. It shows the iron pole, which still remains, that was probably used to guide cables or ropes to boats tied to the pier. It may be part of a type of loading system that was used in the sugar industry at other mills.

A rough sketch map was included in the short data form completed during the 1974 statewide inventory of historic places. A map of the ruins, as they are today, was prepared by Mark Donham for the recent inventory survey. The buildings associated with the Mill include the manager's house, which was probably built around 1910. There are three other dwellings that were the residences of other managerial personnel connected with the plantation. These lie mauka between the remnants of the mill foundation and the highway. On the ocean side of the mill is the remnant of a boat-landing ramp and pier, which was used to load sugar onto cargo ships that would transfer it to market. A longer, more substantial breakwater or jetty, located on the Lahaina side of the ramp, extends c. 50 meters into the ocean, perpendicular to the shoreline. This creates a relatively calm basin leading up to the boat ramp.

The foundations of the mill are overgrown with alien vegetation. A large opiuma tree is growing between two brick walls at the makai end of a large cement slab. This may have been a boiler area, where sorghum was reduced to sugar in the refinement process. Other areas are completely covered with kiawe and opiuma trees and debris. The stable area is located on the east side of the site. Around the turn of the century, mules were kept for working in the fields and hauling cars along the railroad tracks.

Preservation Area: See map depicting preservation area on the following page.

APPENDIX A

MITIGATION RECOMMENDATIONS

Preservation Site Buffers: All buffers constitute part of the site and shall be measured from the extremities of its physical features.

Short Term Protection Measures:

For any sites where construction may occur within one hundred feet (100'), temporary fencing will be placed along the buffer edge where construction may occur. Prior to any land alteration, and once the fences are in place, SHPD will be contacted to verify in writing that interim protection measures are in place. Regarding Site #4693 (burial ground), the perimeter is currently lined with boulders and the preservation plan included the planting of a native hedge around the perimeter. It is not anticipated that temporary fencing would be necessary for this site.

Verbal and written notice will be given to all construction crews. The notice will include (i) the location of the site (ii) a description of the designated buffer zone and (iii) avoidance instructions and an emphasis of the caution needed when working near these sites.

Long Term Preservation Measures:

- **Boundary Markers:**

For sites where boundary markers will be placed, the markers will consist of stone monuments 2-foot high by approximately 1-foot in diameter. They will be placed at the outer edge of the buffer zones.

Site #4693: No boundary marker would be necessary given the existence of boulders and a future hedge around the perimeter.

Site #4694: Boundary markers will be placed as noted above.

Site #4697: Boundary markers will be placed as noted above.

Site #4698: No boundary markers will be placed but it will be noted and located on the interpretive signage for Site #1602, to which Site #4698 is immediately adjacent

Site #1602: No boundary markers will be placed given the size and breadth of the preservation area; however, interpretative signage will include a plot map of the preservation area.

8. Gley Soils

SITE TYPE: Gley Soils CONDITION: Unimpacted

INTEGRITY: Unaltered PROBABLE AGE: Pre & Post-contact

FUNCTIONAL INTERPRETATION: Organic Deposits

These gley soil deposits were high in organic content. It appears plausible that a coastal berm of the previously noted marine sand partially dammed the Olowalu stream flow sometime in the past 2000 to 5000 years, when the sea level was higher than at the present time. Direct evidence of such a berm and then resultant organic deposits that would have formed behind it were exposed during backhoe trenching. No attempt was made to date the deposits, as this was beyond the scope of the inventory survey.

TO LAHAINA

HONOAPIILANI HIGHWAY

OLOWALU MAKAI PROPERTY

CONSERVATION BOUNDARY INTERPRETATION LINE

AGRICULTURAL

CONSERVATION

CONCRETE PLATFORM (MAIN BLDG.)

PLATFORM

CONCRETE SLAB

CONCRETE STRUCTURE (COMPARTMENTED)

TRUE NORTH
SCALE: 1" = 100'

OCEAN

OCEAN

EXHIBIT MAP SHOWING
PRESERVATION SITE BUFFER AREA FOR RUINS OF OLOWALU SUGAR MILL (SITE No. 1602) ON THE OLOWALU MAKAI PROPERTY AT OLOWALU, LAHAINA, MAUI, HAWAII

100 50 0 100 200
GRAPHIC SCALE IN FEET

Tax Map Key (2) 4-8-03: 05(PORTION), 43

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS — CIVIL & STRUCTURAL ENGINEERS

JANUARY 22, 2001
JOB NO. 98-59

1998\98-59\OEMSTEXHIBIT.DWG

APPENDIX B

Monitoring Plan for Eastern Shoreline Areas

Scope of Monitoring:

During the inventory survey phase, sand deposits were found next to the Beach Reserve along the eastern end of the study area. As such, archaeological monitoring of earth altering activities is recommended in the near-shore area. The location of the monitoring area is shown on the map at the end of this *Archaeological Preservation Plan* (Exhibit "A:").

Activities which would require monitoring include the following:

A. Significant subsurface intrusion resulting from activities related to subdivision improvements.

    1. Trenching.
    2. Road work.
    3. Grading.
    4. Landscape work.

B. Significant subsurface intrusion resulting from activities relating to the development of a private residence or related improvements.

    1. Trenching for footings.
    2. Trenching for foundation.
    3. Trenching for utilities below two feet (2') from grade.
    4. Grading below two feet (2') from grade.

Activities which would not require monitoring include the following:

1. Removal of debris.
2. Trimming of trees.
3. Fill of material where the existing grade is not cut..
4. Residential landscaping activities including (a) installation of sprinkler systems; and (b) installation of trees, shrubs and other landscaping materials.
5. Agricultural activities.

In the event of any proposed earth altering activity that requires monitoring, a meeting will be held with an archaeologist, the contractor, and the landowner of the proposed improvement before any work is performed. At this meeting, actual on-site time and specific actions to be followed in the event of inadvertent discoveries will be discussed and agreed upon by the landowner, The archaeologist and the contractor. Additional meetings may be

called if either the archaeologist or contractor believes other relevant information should be disseminated.

Monitoring Methodology:

There is a possibility that significant cultural materials may be inadvertently discovered during earthmoving activities. Since human burials and skeletal materials have been found on the subject parcel and in this area, inadvertent discovery of additional human remains in the monitoring area remains a possibility.

Close cooperation between the archaeologist and landowner is important to a successful monitoring program. Topics for discussion should include, but not necessarily be limited to, the following:

1) The contractor will be responsible for ensuring that each monitor is aware of scheduling plans and that a monitor is present at all earth-moving activities designated for monitoring.

2) Both the archaeologist and the contractor are responsible for ensuring that on-site work is halted in an area of significant findings and to protect the find from any further damage (i.e., fencing, protective covering, etc.) until mitigation of the finds are recommended by the SHPD and the Maui/Lana'i Islands Burial Council.

3) In the event of the discovery of human remains, work shall cease in the immediate find area. The monitoring archaeologist will be responsible for notifying the Historic Preservation Division Burials Program (UPDBP), which, in consultation with the Maui/Lana'i Islands Burial Council, will determine the appropriate mitigation measures. The notification will include providing accurate information regarding the context and composition of the find.

4) The archaeologist will work in compliance with Hawaii Revised Statutes Chapter 6E (Procedures Relating to Inadvertent Discoveries).

5) The archaeologist will have authority to close down construction activities in areas where potentially significant discoveries have been made until they have been properly evaluated. Construction activity may continue in unaffected project areas.

6) Field procedures to be followed for documentation of discovered cultural features or human skeletal remains include: (a) standard field methods including recording of profiles showing stratigraphy, cultural layers, etc.; (b) mapping, photographing of finds other than human remains; and (d) excavation of cultural materials and/or exposed features.

7) The SHPD Maui Archaeologist will be notified and consulted regarding treatment of identified features considered to be of significance under S13-279-2 (definitions), such as cultural layers, artifact or midden concentrations, structural remains, etc.

8) The contractor should take into account the need to mechanically excavate at a speed slow enough to allow reasonable visual inspection of the work. The

monitoring archaeologist must make a "best effort" to search for potential archaeological materials (artifacts, features, midden, skeletal materials, etc.).

9) Significant archaeological discoveries, if they occur, should be protected and identified by construction "caution" tape, fencing, or other reasonable means, until mitigation is decided upon by SHPD.

10) In most instances, one monitor will perform monitoring fieldwork. Tasks will include initial observation of surface activities associated with the removal of the existing vegetation and placement of a sand buffer over the preservation area.

Field methods utilized will include photographic recording (where appropriate), artifact excavation (recovery and recording), profile documentation of cultural layers and stratigraphy, excavation and recording of exposed features, and mapping of all pertinent features on an appropriate site map. A daily log (field notes) of activities and findings will also be kept. Gathered information will be utilized in the preparation of the monitoring report to be submitted to the SHPD.

In the event human skeletal materials are inadvertently discovered, notification of SHPD (HPDBP) and/or Maui/Lana'i Islands Burial Council will be made, and appropriate mitigation determined (Note: photographs of human skeletal materials will not be taken).

A supervisory archaeologist will regularly visit the monitoring site, or as often as is necessitated by the nature of the activities and archaeological findings. If significant discoveries are made, appropriate mitigation measures will be negotiated with SHPD.

Any cultural materials, other than human remains recovered from the monitoring project, will be curated by the monitoring organization until analysis is completed and then turned over to the appropriate parties. Long-term curation arrangements of such materials shall be approved by the SHPD.

When fieldwork for the required archaeological monitoring project has been completed, preparation and publication of a draft monitoring report will be undertaken. Within 180 days of completion of fieldwork, the draft report will be submitted to the State Historic Preservation Division for comment and approval. Approved final changes and corrections will result in the final monitoring report for the project.

- **Public Access:**

Site #4693: The Preservation Plan approved by the Maui/Lana'i Islands Burial Council designated daylight hours, seven days per week, for access purposes. Any request for use of the site for cultural practices during a different access time would be accommodated by the landowner.

Site #4694: Access from Beach Reserve – no limitations.

Sites #4697 & 4698: N/A (subsurface deposits).

Site #1602: The access hours for the mill area will be daylight hours, seven days a week.

- **Maintenance Measures:**

Except as noted below, all sites will be maintained in "as-is" condition by the landowner or its assign. This will include the removal of any trash from all sites.

Site #4693: Maintenance of the native hedge around the perimeter and the native groundcover within the preservation area is the responsibility of the landowner or its assigns. The intent is that the native hedge will eventually make an impenetrable barrier except for designated entrances, but until such time, the landowner will maintain the placement of the existing boulders around the perimeter.

Site #1602: Within the mill itself are several kiawe and opiuma trees that continue to damage the mill structure. The current plan is to cut these trees at ground level and plant native plants, but in an area and of a type that would not damage the mill structure.

- **Signage:** See Appendix C.

Preservation Commitment:

Olowalu Elua Associates, LLC (OEA) or its assigns is the responsible party for implementation of the Preservation Plan. Should OEA wish to assign any site-specific maintenance responsibility to a homeowners association or a Hawaiian organization, SHPD will be consulted to ensure that these groups are briefed as to their stewardship responsibility.

APPENDIX C

TEXT FOR SIGNAGE

The Preservation Plan to include the signage for this site was approved by the Maui/Lana'i Islands Burial Council at its August 26, 2000 meeting. The approved signage is as follows:

Color of Sign (a brown background with black lettering):

Heading of Sign:

Site 50-50-08-4693

Hawaiian Cultural Area

Olowalu *ahupua'a*

Lahaina District

Island of Maui, Hawaii

The Site 4693 preservation area surrounds an important traditional Hawaiian cultural area. Please respect this area and do not enter except for traditional cultural reasons.

DAMAGE TO THIS SITE IS PUNISHABLE UNDER CHAPTER 6E-11, HAWAII REVISED STATUTES

Historic Site 4694
Olowalu Ahupua'a
Lahaina Moku, Maui

Habitation Site

In pre-European times, Olowalu had permanent houses located along the shoreline, scattered up along Olowalu Stream, and in the distant upper valley. When the land system was converted to private lands in the late-1840's, several house ots (kuleana) were awarded to commoner families in this area.

Given the fact that shorelines were considered prime habitation areas, and given the discovery of material cultural remains, this site is a probable pre-contact wall remnant enclosing a habitation area.

DAMAGE TO THIS SITE IS PUNISHABLE UNDER CHAPTER 6E-11, HAWAII REVISED STATUTES

Historic Site 4697
Olowalu Ahupua'a
Lahaina Moku, Maui

Possible Historic Habitation/Agricultural Site

Historic maps indicate that prior to the late-1800's, Olowalu Stream entered the ocean just west of this immediate area. Either side of the stream would be considered a desirable area for habitation or ocean resource activity.

This is a sub-surface site that yielded post-contact material (such as bottle glass and ceramic shard). However, radiocarbon dating indicated a 1695 AD to 1950 AD bracket, which falls into the late pre-contact or early post-contact period.

DAMAGE TO THIS SITE IS PUNISHABLE UNDER CHAPTER 6E-11, HAWAII REVISED STATUTES

Historic Site 4698
Olowalu Ahupua'a
Lahaina Moku, Maui

Habitation Site

Based on traditional settlement patterns, one would expect permanent occupation near the shoreline. For the indigenous Hawaiians, ocean resources were an important food source as was the cultivation of land crops such as kalo (taro) and uala (sweet potato).

Given its proximity to the ocean, this site is considered a permanent habitation site. A charcoal sample intercept data fell at 1665 AD. This site is also located within a kuleana (awarding of fee title to land during the late-1840"s called the "Great Mahele"), where the awardee also had lands up in the valley. This would have provided the family both ocean and valley resources.

DAMAGE TO THIS SITE IS PUNISHABLE UNDER CHAPTER 6E-11, HAWAII REVISED STATUTES

Historic Site 1602
Olowalu Ahupua'a
Lahaina Moku, Maui

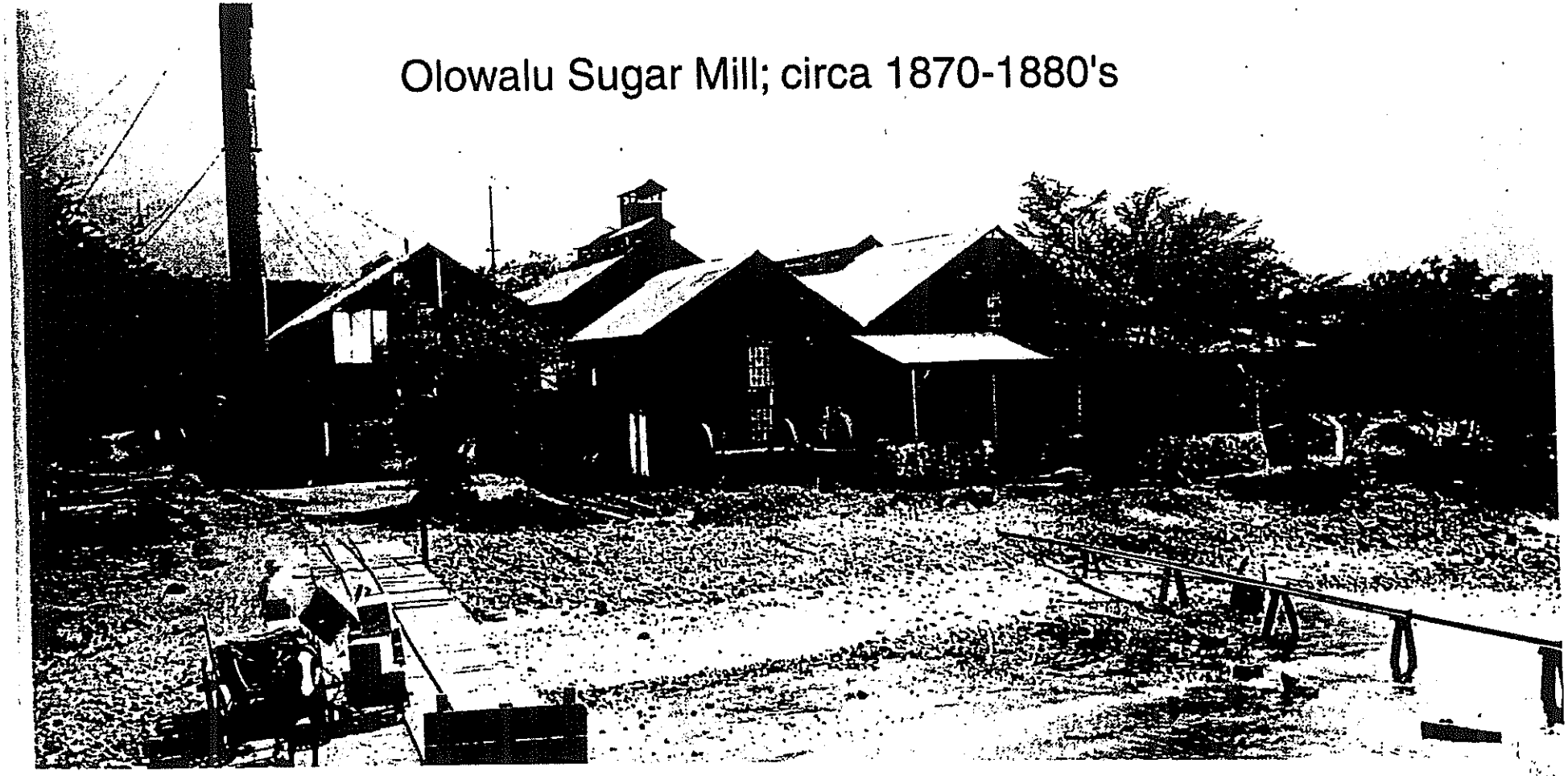
Sugar Mill Ruins

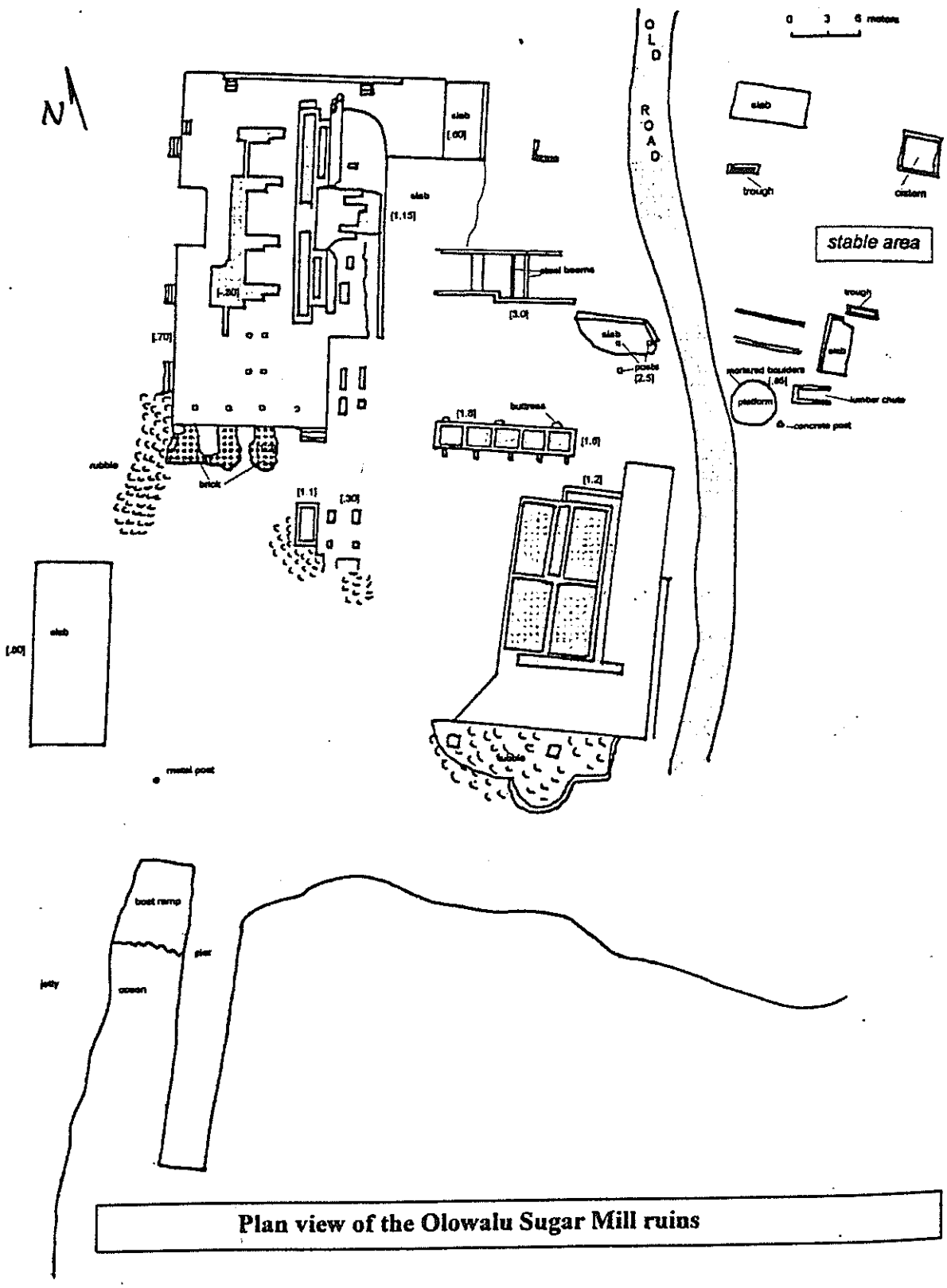
The first record of sugar cultivation in Olowalu was in 1864. It began as an enterprise of Kamehameha V along with Ferdinand W. Hutchinson and James Magee. The first mill on this site was built sometime in the 1870's. The mill was dismantled in 1933 and sent to the Philippines to be rebuilt there after Olowalu Sugar Company was sold to Pioneer Mill Company in 1931. Aside from the ruins of the Olowalu Sugar Mill, associated improvements include the boat loading ramp and pier, the wharf, the former plantation manager's house, and the three smaller plantation cane houses. Cultivated sugar cane was brought to the mill by mule driven wagons at first and then 24 gauge train cars. The processed sugar was then loaded on longboats docked at the pier and then to awaiting ships anchored off shore.

[PLEASE SEE THE PHOTO AND PLOT MAP ON FOLLOWING PAGES. THESE WILL BE INCLUDED ON THE SIGN, JUST BELOW THE ABOVE TEXT.]

DAMAGE TO THIS SITE IS PUNISHABLE UNDER CHAPTER 6E-11, HAWAII REVISED STATUTES

Olowalu Sugar Mill; circa 1870-1880's





Plan view of the Olowalu Sugar Mill ruins

Gley Soils
Olowalu Ahupua'a
Lahaina Moku, Maui

This site consists of subsurface gley soils. This marsh condition could be from the buildup of surface water runoff against a natural shoreline berm, or the remnants of lo'i (taro fields). Although the land commission awards in the area were awarded for "houselot" purposes, it would be assumed that most families could have several small lo'i on their shoreline property.

DAMAGE TO THIS SITE IS PUNISHABLE UNDER CHAPTER 6E-11, HAWAII REVISED STATUTES

EXHIBIT "A"

MAP SHOWING EASTERN SHORELINE MONITORING AREA

[PLEASE SEE MAP ON FOLLOWING PAGE]

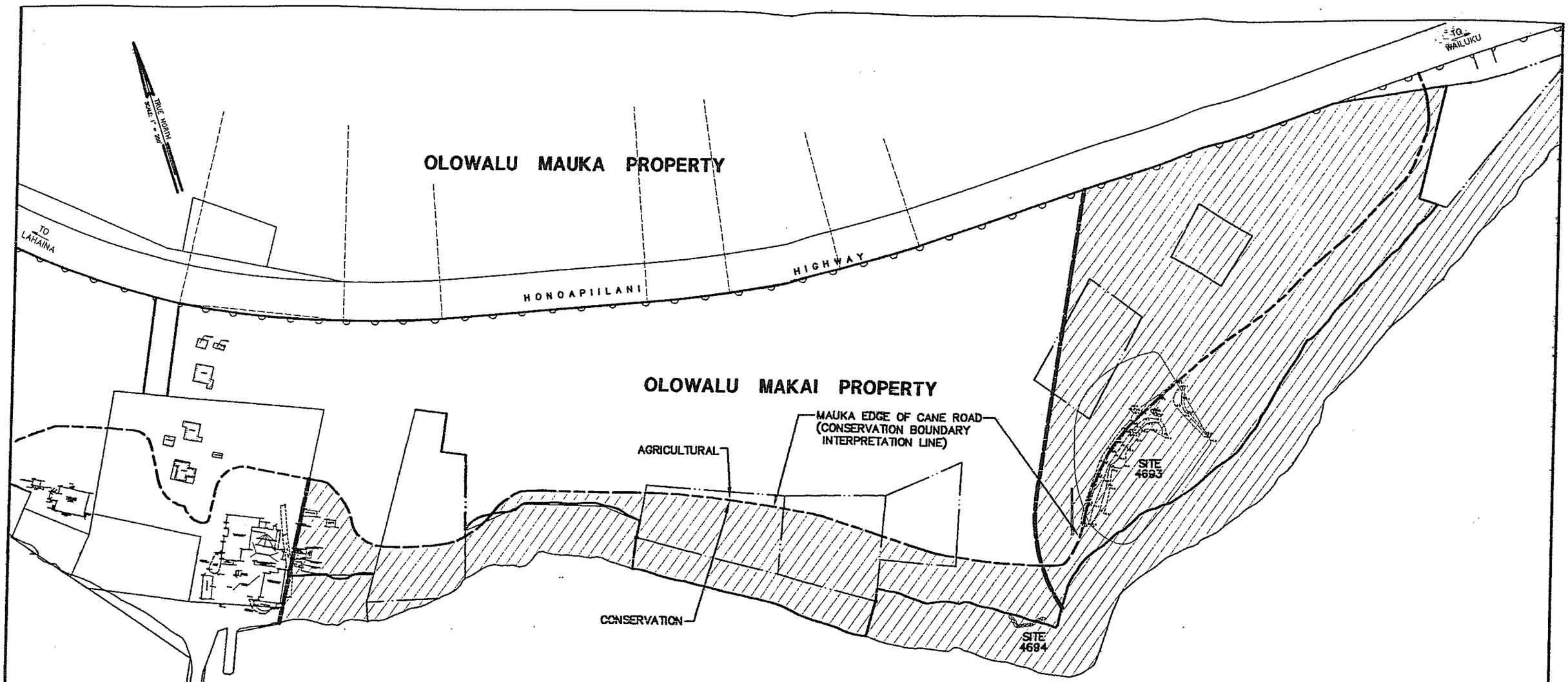


EXHIBIT MAP

SHOWING
EASTERN SHORELINE MONITORING AREA

AT OLOWALU, LAHAINA, MAUI, HAWAII

Tax Map Key (2) 4-8-03: 41-49, 84

1998\98-59\OEMSTEXHIBIT2.DWG

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

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

JANUARY 22, 2001
JOB NO. 98-59


(Site #4693)
(clay soils)
(Site #4697)
Site #4694)
Hekili Point
(clay soils)
Sugar Mill
Complex
(Site #1602)
(Site #4695)
Site #4696)
Olowalu Makai Lands
Archaeological Sites
Study Area
Preservation Sites
No Longer Significant Sites
April 2000

APPENDIX D

SHPD ACCEPTANCE LETTERS:

- **Final – Dated June 4, 2001**
- **Conditional - Dated April 16, 2001**

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

June 4, 2001

Mr. Robert Horcajo
Olowalu Elua Associates LLC
173 Ho Ohana Street, Suite 201
Kahului, Hawaii 96732

LOG NO: 27621
DOC NO: 0105MK20

Dear Mr. Horcajo:

Subject: ***Historic Preservation Review of the Revised Archaeological Mitigation and Preservation Plan Olowalu Makai Lands***
Olowalu Ahupua'a, Lahaina District, Maui

Thank you for the opportunity to review this revised plan which was sent to our office on 4 May 2001.

You have now addressed the concerns in our initial review (Log No. 27285, Doc. No. 0103MK08).
The plan is now acceptable. If you have any questions, please contact Dr. Melissa Kirkendall at 243-5169.

Aloha,

Nathan Napoka

for *DON HIBBARD, Administrator*
State Historic Preservation Division

MK:amk

c. *John Min, Director, Department of Planning, County of Maui, FAX 270-7634*
Bert Ratte, County of Maui, Land Use and Codes, FAX 270-7972
Glen Ueno, County of Maui, Land Use and Codes, FAX 270-7972

RECEIVED
BY | DATE
6/9/01

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

April 16, 2001

Mr. Robert Horcajo
Olowalu Elua Associates, LLC
173 Ho'ohana Street, Suite 201
Kahului, Hawai'i 96732

RECEIVED
DATE 5/2/01

LOG NO: 27285
DOC NO: 0103MK08

Dear Mr. Horcajo,

SUBJECT: Review of Archaeological Mitigation and Preservation Plan the Makai Portion Olowalu Ahupua'a, Lahaina District, Maui TMK 4-8-3:1, 3, 4, 5, 6, 33, 41-49, 83 &84

Thank you for the opportunity to review this combined mitigation and preservation plan which our staff received on January 25, 2001 (Olowalu Elua Associates, LLC, 2001, *Archaeological Mitigation & Preservation Plan, Makai Portion (Phase I) Olowalu Ahupua'a, Lahaina District, Maui Island, TMK 4-8-3:1,3,4,5,6,33,41-49,83&84)*...Olowalu Elua Associates, LLC ms.

The preservation plan includes six sites recommended for in-place preservation -- Site 4693, consisting of burials and a subsurface archaeological deposit outside of the burial area (burials covered under a separate preservation plan), Site 4694 (a wall structure on the subject parcel and on State Beach Reserve Land), Site 4697 (subsurface archaeological deposit), Site 4698 (subsurface archaeological deposit) and Site 1602 (the Olowalu Mill Complex), and the gleyed soils.

Interim protection of the sites will be provided by placement of temporary fencing along the buffer edge where construction may occur. This will be in place for any sites where construction will occur within one hundred feet (100'). Construction supervisors will be notified as to the nature and location of the site through written and verbal notice. This is acceptable, but the plan needs minor revision to include a statement saying that once the fences are in place our Division will be contacted, and our Division will then verify in writing that the interim protection measures are in place.

Long term preservation will consist of boundary markers along the outer edge of the buffer zones. Buffer zones vary on each site (10 feet for Sites 4694, 4697, and 4693, 30 feet for Site 1602). This is acceptable.

Public Access for Site 4694 is along Beach Reserve access, and has no limitations. Access to Site 1602, the mill area, will be during daylight hours seven days a week. Access issues are not applicable for Sites 4697, and 4698, subsurface deposits. This part of the plan is acceptable.

Maintenance measures are applicable for Site 4693 (detailed in burial treatment plan) and 1602 (flush cut trees, native plants in an area that will not damage the structure). All maintenance is the responsibility of Olowalu Elua Associates, LLC.

Signage as indicated in the preservation plan consists of the State Site Number, the ahupua'a, moku, and island, and function. A brief description/explanation of each site is also included on each sign. Signs conclude with citation of appropriate statutes. The heading and text of some signs do need revision. Please see the attachment.

Archaeological monitoring will be conducted on the Eastern shoreline sand areas in case subsurface historic sites are found, allowing for their identification, documentation and appropriate treatment. The monitoring plan is acceptable.

Please make the minor revisions to the preservation plan. You can replacement pages if you wish. As always, if you disagree with our comments or have any questions, please contact our review staff as soon as possible to resolve these concerns. Should you have questions, please contact Dr. Melissa Kirkendall (Maui/Lana'i SHPD 243-5169).

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

MK:jen

Attachment

c: John Min, Director, Department of Planning, County of Maui, FAX 270-7634
Bert Ratte, County of Maui, Land Use and Codes, FAX 270-7972
Glen Ueno, County of Maui, Land Use and Codes, FAX 270-7972

APPENDIX E

CULTURAL IMPACT ASSESSMENT

SCS Project Number 704-CIA-1

A CULTURAL IMPACT ASSESSMENT OF APPROXIMATELY 0.8 ACRES OF LAND IN OLOWALU AHUPUA`A, WAILUKU DISTRICT, MAUI, HAWAI`I [TMK: 4-8-003:45A]

Prepared by:
Leann McGerty, B.A.
and
Robert L. Spear, Ph.D.
July 2006

Prepared for:
Mr. and Mrs. Jim Riley
and
Mr. and Mrs. Warren Dean

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

Scientific Consultant Services, Inc. (SCS) has been contracted by Frampton and Ward, LLC, to conduct a Cultural Impact Assessment on approximately 0.8-acres of land in Olowalu Ahupua`a, Wailuku District, Maui TMK: 4-8-003:45A (Figures 1and 2). According to information provided by the owners, a single family home is proposed for construction on this parcel of conservation land.

The Constitution of the State of Hawai`i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of native Hawaiians. Article XII, Section 7 requires the State to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua`a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778" (2000). Beginning in 1850 with the establishment of Hawai`i Revised Statutes (HRS) 7-1, native Hawaiians were given access rights to undeveloped private property and waterways in order to gather specific natural resources for customary uses. In 1992, the State of Hawai`i Supreme Court, reaffirmed HRS 7-1 and expanded it to include, "native Hawaiian rights…may extend beyond the ahupua`a in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner" (Pele Defense Fund v. Paty, 73 Haw.578, 1992).

Act 50, enacted by the Legislature of the State of Hawai`i (2000) with House Bill 2895, relating to Environmental Impact Statements, proposes that:

> …there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawaii's culture, and traditional and customary rights…[H.B. NO. 2895].

Act 50 requires state agencies and other developers to assess the effects of proposed land use or shore line developments on the "cultural practices of the community and State" as part of the HRS Chapter 343 environmental review process (2001). Its purpose has broadened, "to promote and protect cultural beliefs, practices and resources of native Hawaiians [and] other

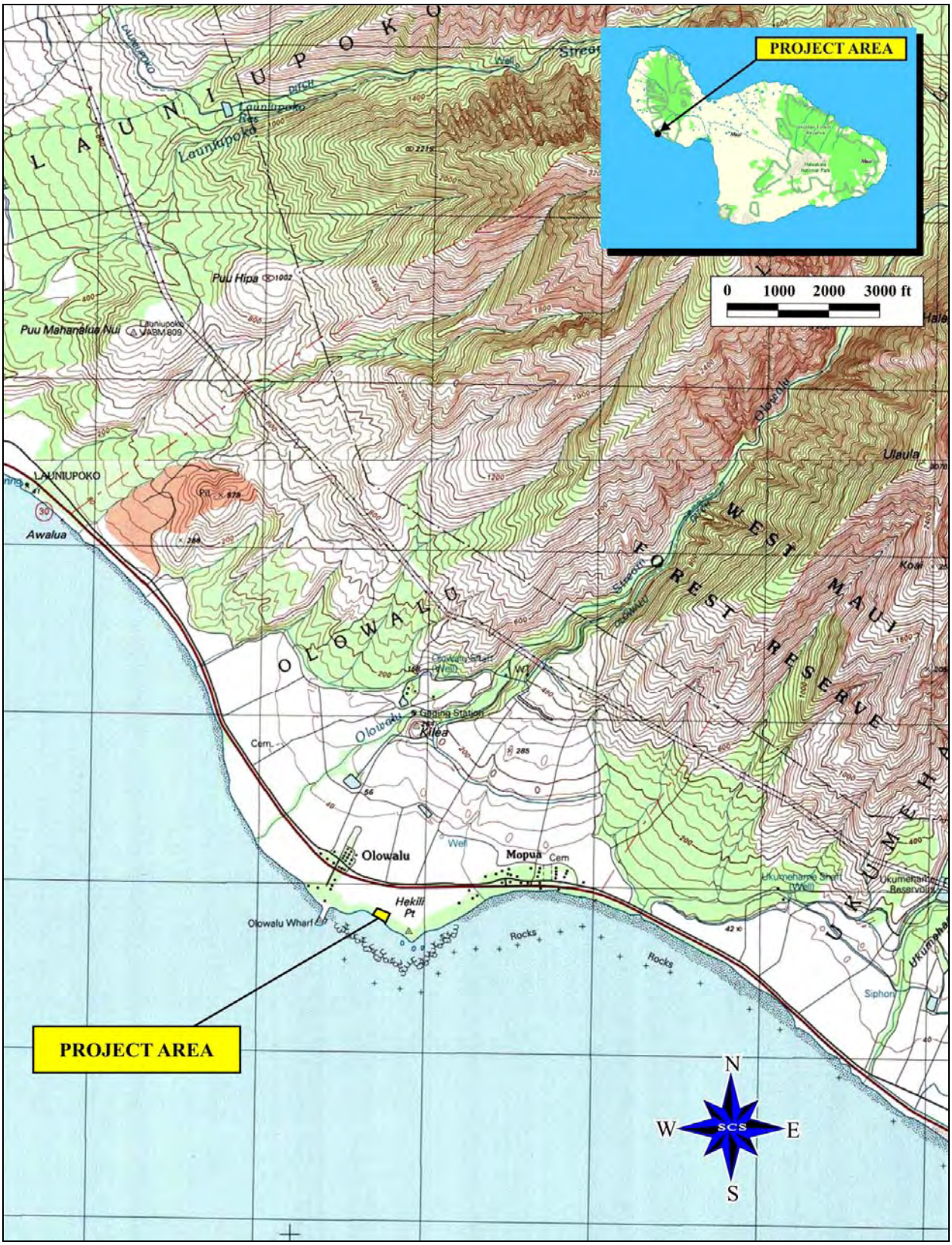


Figure 1: USGS Olowalu Quadrangle Map Showing Project Area.

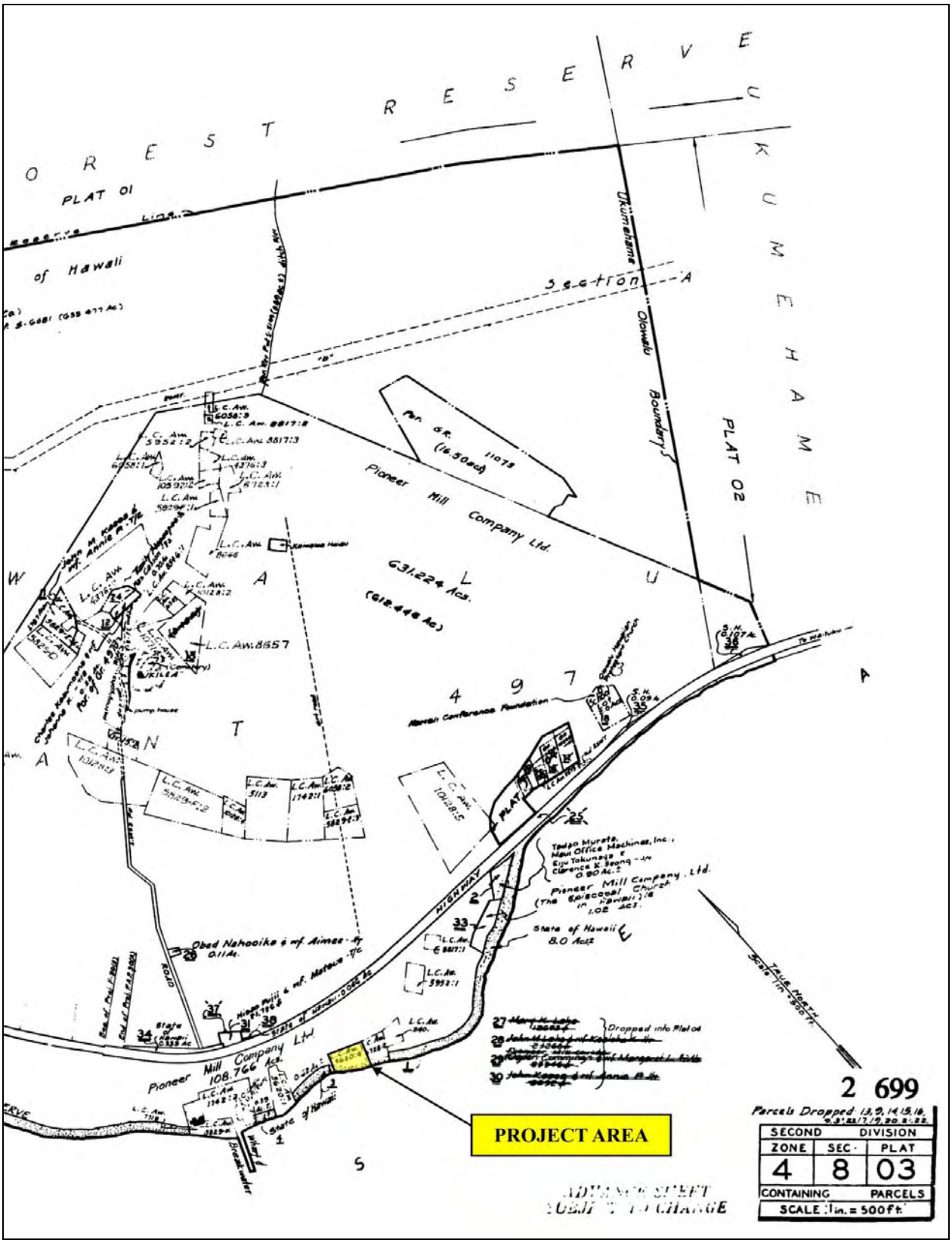


Figure 2: Tax Map Key [TMK] Showing Project Area.

ethnic groups. Cultural resources include a broad range of often overlapping categories, including places behaviors, values, beliefs, objects, records, stories, etc. (H.B. 2895, Act 40, 2000).

Act 50 also amended the definition of 'significant effect' to be re-defined as "the sum of effects on the quality of the environment including actions that are…contrary to the State's environmental policies…or adversely affect the economic welfare, social welfare, or cultural practices of the community and State" (H.B. 2895, Act 50, 2000). Thus, not only are native Hawaiian cultural resources evaluated, but those of other ethnic groups as well.

Act 50 requires that an assessment of cultural practices be included in the Environmental Assessments and the Environmental Impact Statements, and to be taken into consideration during the planning process. The concept of geographical expansion is recognized by using, as an example, "the broad geographical area, e.g. district or *ahupua`a*" (OEQC 1997). It was decided that the process should identify 'anthropological' cultural practices, rather than 'social' cultural practices. For example, *limu* (edible seaweed) gathering would be considered an anthropological cultural practice, while a modern-day marathon would be considered a social cultural practice.

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 1997):

> The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both manmade and natural which support such cultural beliefs.

This Cultural Impact Assessment involves evaluating the probability of impacts on identified cultural resources, including values, rights, beliefs, objects, records, and stories occurring within the project area and its vicinity (H.B. 2895, Act 50, 2000).

METHODOLOGY

This Cultural Impact Assessment was prepared in accordance with the methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997). In outlining the "Cultural Impact Assessment Methodology", the OEQC states: that "…information

may be obtained through scoping, community meetings, ethnographic interviews and oral histories…" (1997).

This report contains archival and documentary research, as well as communication with organizations having knowledge of the project area, its cultural resources, and its practices and beliefs. This Cultural Impact Assessment was prepared in accordance with the methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997). The assessment concerning cultural impacts should address, but not be limited to, the following matters:

(1) a discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints of limitations which might have affected the quality of the information obtained;

(2) a description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken;

(3) ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained;

(4) biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or being interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area;

(5) a discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken, as well as the particular perspective of the authors, if appropriate, any opposing views, and any other relevant constraints, limitations or biases;

(6) a discussion concerning the cultural resources, practices and beliefs identified, and for the resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site;

(7) a discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project;

(8) an explanation of confidential information that has been withheld from public disclosure in the assessment;

(9) a discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs;

(10) an analysis of the potential effect of any proposed physical alteration on cultural resources, practices, or beliefs; the potential of the proposed action to isolate cultural resources, practices, or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place, and;

(11) the inclusion of bibliography of references, and attached records of interviews which were allowed to be disclosed.

Based on the inclusion of the above information, assessments of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps and land records such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts; and previous archaeological project reports.

INTERVIEW METHODOLOGY

When appropriate, interviews are conducted in accordance with Federal and State laws and guidelines. Individuals and/or groups who have knowledge of traditional practices and beliefs associated with a project area or who know of historical properties within a project area are sought for consultation. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share their relevant information. Often people are recommended for their expertise or can be located by visiting the area. Organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs, historical societies, Island Trail clubs, and Planning Commissions are invited to contribute their input and suggest further avenues of inquiry, as well as specific individuals to interview.

Personal interviews are taped and then transcribed. These draft transcripts are returned to each of the participants for their review and comments. After corrections are made, each individual signs a release form, making the information available for this study. Key topics discussed with the interviewees vary from project to project, but usually include: personal association to the *ahupua*`a; land use in the project's vicinity; knowledge of traditional trails, gathering areas, water sources, religious sites; place names and their meanings; stories that were handed down concerning special places or events in the project area; or any evidence of previous activities identified while in the project vicinity.

In this case, letters, briefly outlining the development plans along with maps of the project area, were sent to organizations whose jurisdiction includes knowledge of the area with an invitation for consultation. Consultation was sought from the Maui Office of Hawaiian Affairs, Community Resource Coordinator, Maui; the Office of Hawaiian Affairs, O`ahu; Cultural Resource Planner for the Maui Planning Department; the Central Maui Civic Club; and the Cultural Historian with the State Historic Preservation Division, Maui Office (SHPD). In addition, seven individuals familiar with Olowalu Ahupua`a were contacted by phone for an informal interview concerning the possibility of cultural activities within the project area.

Based on the responses, an assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

PROJECT AREA AND VICINITY

The project area is located on the *makai* side of Honoapi`ilani Highway and about 2000 feet (ca. 607 m) north of Olowalu Store. It is situated on the beach with the Pacific Ocean as its western boundary. To the east is the main highway and there is open land to the north and south.

CULTURAL AND HISTORICAL CONTEXT

The island of Maui ranks second in size of the eight main islands in the Hawaiian Archipelago. Pu`u Kukui, forming the west end of the island (1,215 m amsl), is composed of large, heavily eroded amphitheater valleys that contain well-developed, permanent stream systems that water fertile agricultural lands extending to the coast. The deep valleys of West Maui and their associated coastal regions have been witness to many battles in ancient times and were coveted productive landscapes.

PAST POLITICAL BOUNDARIES

Traditionally, the division of Maui's lands into districts (*moku*) and sub-districts was performed by a *kahuna* (priest, expert) named Kalaiha`ōhia, during the time of the *Ali`i* Kaka`alaneo (Beckwith 1940:383; Fornander places Kaka`alaneo at the end of the 15th century or the beginning of the 16th century [Fornander 1919-20, Vol. 6:248]). Land was considered the property of the king or *ali`i `ai moku* (the *ali`i* who eats the island/district), which he held in trust for the gods. The title of *ai`i `ai moku* ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The *maka`āinana* (commoners) worked the individual plots of land.

In general, several terms, such as *moku, ahupua`a, `ili* or *`ili`* ā*ina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua`a*) which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupua`a* were therefore, able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua`a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *`ili `āina*, or *`ili*, were smaller land divisions and were next to importance to the *ahupua`a.* They were administered by the chief who controlled the *ahupua`a* in which it was located (*ibid*: 33; Lucas 1995:40). The *mo`o`āina* were narrow strips of land within an *`ili*. The land holding of a tenant or *hoa `āina* residing in an *ahupua`a* was called a *kuleana* (Lucas 1995:61). The project area is located in the *ahupua`a* of Olowalu, meaning literally "many hills" (Pukui *et al*. 1974:170).

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua`a*. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys, such as Olowalu, provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinaruma*) and *mai`a* (banana, *Musa* sp.), were also grown and, where appropriate, such crops as *`uala* (sweet potato, *Ipomoea batatas*) were cultivated. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985). Agricultural development on the leeward side of Maui was likely to have begun early in what is known as the Expansion Period (A.D. 1200-1400, Kirch 1985).

***WAHI PANI* (LEGENDARY PLACES)**

Scattered amongst the agricultural and habitation sites were other places of cultural significance to the *kama`āina* (those familiar with the area) of the district. Information concerning only a few has been retained. Three *heiau* were recorded in Olowalu Ahupua`a in the 1920s (Thrum 1908, 1916, 1917; Walker 1930, Sterling 1998). Petroglyphs were inscribed and are still visible on the bare stone sides of a hill about a mile in from the highway past the present Olowalu Store. The figures are of several types, including those of dogs, women, children, letters from the English alphabet, having been drawn during different periods. It was suggested by one *kama`āina* (John Ka`aea Fujishiro, pers. Comm; McGerty and Spear 2005) that

this area had functioned as a rest stop before attempting the crossing of the Olowalu mountains to `Īao Valley. As Olowalu is the largest and deepest valley on the southwest side of Maui, Handy recorded in the 1930s:

> …[Olowalu] used to support extensive terraced cultivation. The lower ranges of terraces have been completely obliterated by canefields; by just where the sugar cane ends and the valley begins there is a little spot where five Hawaiian families, all of them intermarried, raise several varieties of taro in flourishing wet patches. Some of it is sold, but most is pounded by hand for the family poi. There are said to be abandoned terraces far up in Olowalu [1940: 103].

Indeed, in the valley, Walker recorded old taro patches and house sites, a lookout site, and a traditional *`auwai* still in use by the sugar plantation to bring water from the valley to the cane fields as the plantation did with the old *`auwai* in Ukumehame Ahupua`a, next door (Walker 1930; McGerty and Spear 2005).

Trails extended from the coast to the mountains, linking the two for both economic and social reasons. A trail known as the *alanui* or "King's trail" built by Kihapi`ilani, extended along the coast passing through all the major communities between Lāhainā and Mākena. A path along Kealaloa ridge leads to the summit of Pu`u Kukui, the headwaters of many streams, and continues beyond. The Lahaina Pali Trail, constructed in 1841, provided access to other parts of the island, including Wailuku (Tomonari Tuggle 1991, 1995). The most famous of the trails is that used to cross from `Īao Valley to Olowalu and was used by the surviving warriors and *ali`i* (Kalola, Keopolani, Kalanikupule, etc) of Maui to escape the forces of Kamehameha in the battle of *Kepaniwai* in the 1790s (Kamakau 1961).

Historically, Olowalu is known for the Olowalu Massacre perpetrated by Capt. Simon Metcalf of the ship *Eleanora* in 1790 (*ibid*.). Instead of seeking out and punishing those natives guilty of a crime, Metcalf chose to retaliate on the innocent inhabitants of Olowalu Village. Placing all his ship's guns on the starboard side of the ship, Metcalf encouraged the natives to come in their canoes to trade at which time he fired on them, slaughtering men, women and children (Kuykendall 1980, Vol. I).

Most of the *ahupua`a* on the southern coast have been overshadowed by the famous roadstead and village of Lāhainā which served as the capitol of the Hawaiian Kingdom after the conquest of Kamehameha until 1855. The ethnographic and historic literature, often our only link to the past, reveals that the lands around Lāhainā were rich agricultural areas irrigated by

aqueducts originating in well-watered valleys with permanent occupation predominately on the coast. Handy and Handy have stated the space cultivated by the natives of Lāhainā (district) at about "…three leagues [9 miles] in length, and one in its greatest breadth. Beyond this all is dry and barren; everything recalls the image of desolation" (1972:593). Crops cultivated included coconut, breadfruit, paper mulberry, banana, taro, sweet potato, sugar cane, and gourds.

Olowalu Valley, with its permanent stream, was one of the sources along with Ukumehame, Launiupoko, and Kaua`ula, providing agricultural opportunities for the growing leeward population. Handy and Handy reported:

> Southeastward along the coast from the *ali`i* settlement [Lāhainā] were a number of areas where dispersed populations grew taro, sweet potato, breadfruit and coconut on the slopes below and in the sides of valleys which had streams with constant flow. All this area, like that around and above Lahaina, is now sugar-cane land…[1972].

THE GREAT MĀHELE

In the 1840s, traditional land tenure shifted drastically with the introduction of private land ownership based on western law. While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kame`eleihiwa 1992:169-70, 176; Kelly 1983:45, 1998:4; Daws 1968:111; Kuykendall 1938 Vol. I: 145). The Great Māhele of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were made available and private ownership was instituted, the *maka`āinana*, if they had been made aware of the procedures, were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, *`okipū* (on O`ahu), stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kame`eleihiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take possession of the property (Chinen 1961:16).

There were 88 claims for land in Olowalu during the Māhele (Waihona `Aina Database 2006). The project area incorporated LCA 05620 awarded to Kehele (or Kahele) along with five other parcels (Appendix A). According to Mopua who testified for Kehele, there were two lots on the coast, both of which were houselots. Lot #6 is located in the *`ili* of Kaluaaha and is

incorrectly numbered as (LCA) 5620:1 on TMK: 4-8-03. Lot #5 is incorrectly numbered (LCA) 5620:4 and is the project area. Mopua stated that Kehele received these lands from Maka in 1824, "and his title is without dispute" (LCA 05620, Mahele Database 2006).

Sugar was to be the economic future of Hawai`i and as early as 1828, two Chinese brothers, Ahung and Atai, of Honolulu's Hungtai Company arrived in Wailuku to explore the possibility of setting up one of its earliest sugar mills. Atai soon created a plant that processed sugar cane cultivated by Hawaiians, named the Hungtai Sugar Works (Dorrance and Morgan 2000:15–16). Ahung later joined Kamehameha III's sugar producing enterprise, although by 1844 both operations had ceased. The Wailuku Sugar Company was the next to follow, in 1862, and would expand sugar production over the next 126 years of its existence—4,450 acres by 1939. The Olowalu Company was organized in 1881 on lands given up by the West Maui Plantation. A small company, it produced a maximum of 2, 969 tons of sugar in 1931 (Dorrance and Morgan 2000:64). At this time, it was purchased by the Pioneer Mill and became a part of their acreage. A Map of Olowalu Sugar Plantation recorded in 1881, shows cane lands slowly creeping towards and around the *kuleana* that are still in the possession of the awardees: John Clark LCA 240, Z. Kaauwai LCA 1742, Nahue Wahine LCA 5829, Minamina LCA 5952, Haia LCA 7719, and Kehele (Kahele) LCA 5620 (Figure 3). At some point in time, all the LCAs, including the project area became a part of the sugar lands belonging to the Pioneer Mill Company Ltd.

SUMMARY

The "level of effort undertaken" (OEQC 1997) has not been officially defined and is left up to the investigator. A good faith effort can mean contacting agencies by letter, interviewing people who may be affected by the project or who know its history, research identifying sensitive areas and previous land use, holding meetings in which the public is invited to testify, notifying the community through the media, and other appropriate strategies based on the type of project being proposed and its impact potential. Sending inquiring letters to organizations concerning development of a piece of property that has already been totally impacted by previous activity and is located in an already developed industrial area may be a "good faith effort". However, when many factors need to be considered, such as in coastal or mountain development, a good faith effort would undoubtedly mean an entirely different level of research activity.

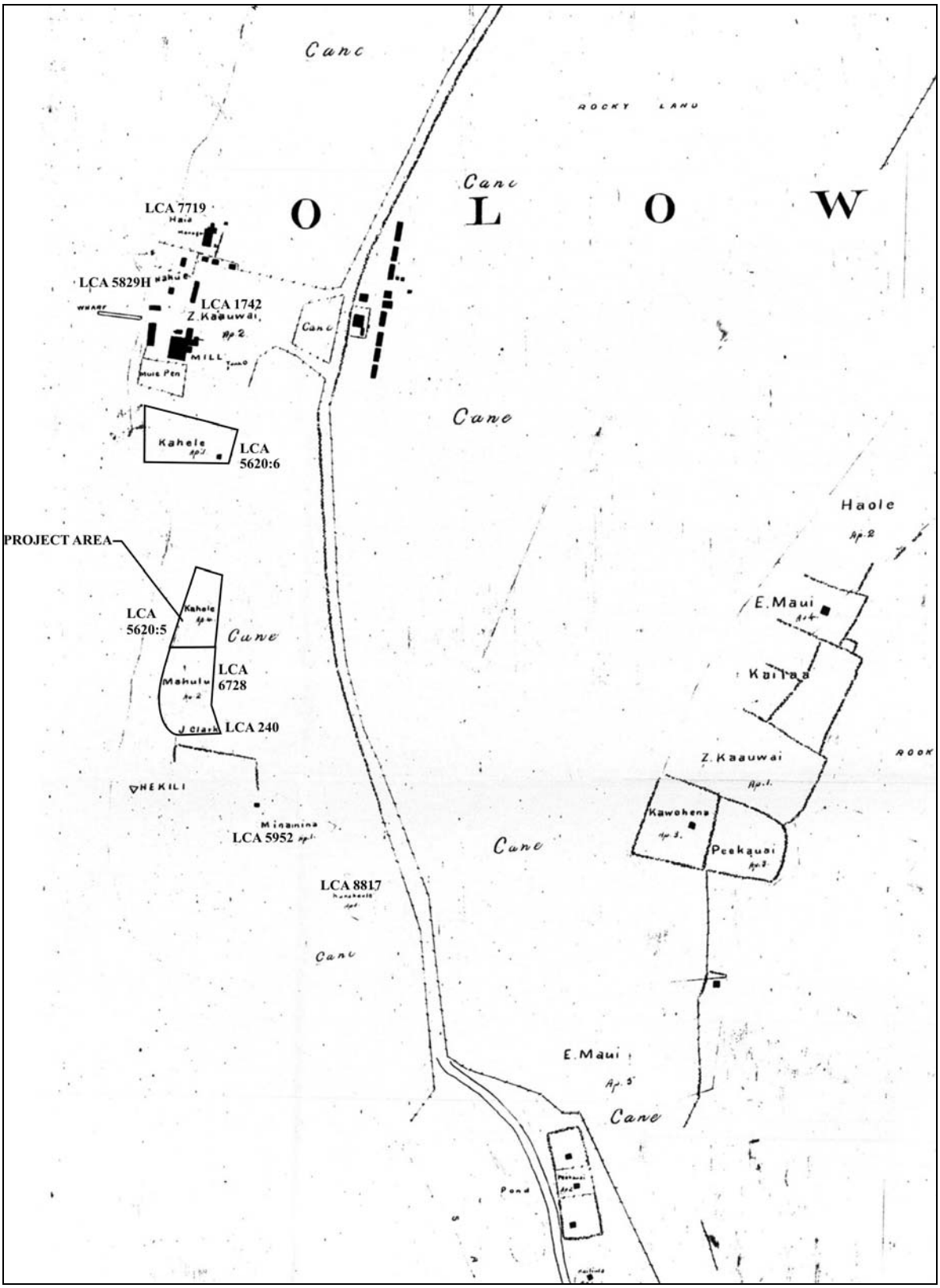


Figure 3: Map of Olowalu Sugar Plantation Maui, November 1881 (County of Maui Department of Planning).

INTERVIEWS

As suggested in the "Guidelines for Accessing Cultural Impacts" (OEQC 1997), CIAs incorporating personal interviews should include ethnographic and oral history interview procedures, circumstances attending the interviews, as well as the results of the consultation. It is also permissible to include organizations with individuals familiar with cultural practices and features associated with the project area.

In the case of the present parcel which was a house lot at least until 1881 and then a part of the Pioneer Mill sugar lands, letters of inquiry were sent to organizations whose expertise would include the project area. Consultation was sought from the Maui Office of Hawaiian Affairs, Community Resource Coordinator, Maui; the Office of Hawaiian Affairs, O`ahu; Cultural Resource Planner for the Maui Planning Department; the Central Maui Civic Club; and the Cultural Historian with the SHPD, Maui office. Six individuals familiar with Olowalu were contacted by phone. Three individuals did not respond to our request, one preferred to not be cited, but two others, Wally Fujii and Adeline Rodrigues, were willing to be interviewed. In addition, Hinano Rodrigues, Cultural Historian for SHPD and also a resident of Olowalu contributed his knowledge.

Wally Fujii is the owner of Olowalu Store and the retired principle of Baldwin High School. He was born in Olowalu in 1936. To his knowledge there were no cultural activities associated with the project area or its vicinity except fishing. Presently, access is easy for those who want to fish off the rocky beach (pers. comm Wally Fujii, July 7, 2006).

Addie Rodrigues was raised in Olowalu and has spent most of her life here. Her family comes from the Olowalu/Ukumehame area, extending back before the Māhele. She did not know of any cultural activities associated with the specific project area, but mentioned how the ocean resources have long been included as a food source. Activities such as net-fishing, gathering *limu* and hard-back crabs have continued from generation to generation and are very much alive today. Because of this, her concern was for access to the beach and ocean resources to continue.

Hinano Rodrigues, a resident of Olowalu and the Cultural Historian for SHPD, Maui Office, reiterated what Addie had reported. In addition, he included gathering *loli* (sea cucumber), *hā`uke`uke* and *hā`ue`ue* (sea urchin), fishing for *he`e* (octopus), lobster, and *lamalama* or torch fishing. All are activities that are still conducted along the beach and in the bay. Again, the concern was for easy access to allow these activities to continue.

Archival research included historical and cultural source materials that were used extensively and can be found listed in the References Cited portion of the report. Such scholars as Beckwith, Chinen, Kame`eleihiwa, Fornander, Kuykendall, Kelly, Handy and Handy, Puku`i and Elbert, Thrum, and Walker have contributed, and continue to contribute, to our knowledge and understanding of Hawai`i, past and present. The works of these, and other authors, were consulted and incorporated in the report where appropriate. Land use document research was supplied by the Waihona `Aina 2004 Database.

Analysis of the potential effect of the project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place is a requirement of the OEQC (No. 10, 1997). The project area has not been used for traditional cultural purposes within recent times except for the coastal section that continues to provide ocean resources to people of the district. Based on historical research and those responses received from the Maui Office of Hawaiian Affairs, Community Resource Coordinator, Maui; the Office of Hawaiian Affairs, O`ahu; the Cultural Resource Planner for the Maui Planning Department; the Central Maui Civic Club; and the Cultural Historian for SHPD, it is reasonable to conclude that Hawaiian rights related to gathering, access or other customary activities within the project parcel will not be affected and there will be no direct adverse effect upon cultural practices or beliefs. However, as always with oceanfront development, the issue of access of the community to marine resources is prominent. The project is for a single family home and at this point in time there is vacant land on each side of the lot. It would seem for the present coastal access is insured for resource gathering, fishing and other activities customarily enjoyed by the local population.

CULTURAL ASSESSMENT

Based on organizational response and archival research, it is reasonable to conclude that, pursuant to Act 50, the exercise of native Hawaiian rights, or any ethnic group, related to gathering, access, or other customary activities, will not be affected by development activities on Parcel 45-A. However, this land parcel was owned by the same individual from at least 1824 to 1881 and there is the possibility of family members having been buried on the site or in the vicinity during the 57 years of occupation. Beach internments were a common occurrence in Hawai`i, because of the easy burial conditions provided by the sand. In addition, it was

generally not necessary to hide the bones of the *maka`āinana* for fear of desecration from enemies, as was the case with the *ali`i.*

In the unlikely event that human remains are encountered, all work in the immediate area should cease. The State Historic Preservation Division island archaeologist (M. Kirkendall) and State Historic Preservation Division Burial Sites Program (located in Kapolei, O`ahu) should both be immediately notified about the inadvertent discovery of human remains on the property. Only the State Historic Preservation Division has the authority to approve the removal of human remains, which is typically conducted in consultation with the appropriate burial council members.

Because there were no specific cultural activities identified within the project area parcel, there are no adverse effects.

REFERENCES CITED

Beckwith, Martha

1940 *Hawaiian Mythology*. University of Hawai`i Press: Honolulu.

Chinen, Jon

1961 *Original Land Titles in Hawaii.* Copyright 1961 Jon Jitsuzo Chinen. Library of Congress Catalogue Card No. 61-17314.

Daws, G.

1968 *Shoal of Time: History of the Hawaiian Islands.* University of Hawai`i Press. Honolulu.

Dorrance, William H. and Francis S. Morgan

2000 *Sugar Islands, Story of Sugar in Hawai`i*. Mutual Publishing. Honolulu.

Fornander, Abraham

1969 *An Account of the Polynesian Race, Its Origins and Migrations*. Vol. 1 to 3. Charles E. Tuttle Co. Inc.: Jutland.

1919 *Hawaiian Antiquities and Folklore*. Vol. 6. Bishop Museum Press: Honolulu.

Handy, E.S. Craighill

1940 *The Hawaiian Planter.* Bishop Museum Press. Honolulu.

Handy, E.S. Craighill and E.G. Handy

1972 Native Planters in Old Hawai`i. *Bishop Museum Bulletin* 233. Honolulu.

Kamakau, Samuel

1961 *Ruling Chiefs of Hawaii*. The Kamehameha Schools Press. Honolulu.

Kame`eleihiwa, Lilikalā

1992 *Native Land and Foreign Desires: Pehea La E Pono Ai?* Bishop Museum Press. Honolulu.

Kelly, Marion

1983 *Nā Māla o Kona: Gardens of Kona*. Dept. of Anthropology Report Series 83-2. Bishop Museum. Honolulu.

1998 Gunboat Diplomacy, Sandalwood Lust and National Debt. In *Ka Wai Ola o OHA*, Vol. 15, No. 4, April 1998.

Kirch, Patrick
1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawaii Press, Honolulu.

Kirch, Patrick V. and Marshall Sahlins
1992 *Anahulu*. Vol. 1 and 2. University of Chicago Press. Chicago.

Kuykendall, R.S.
1938 *The Hawaiian Kingdom*. Vol. 1. University of Hawai`i Press. Honolulu.

Lucas, Paul F. Nahoa
1995 *A Dictionary of Hawaiian Legal Land-terms*. Native Hawaiian Legal Corporation. University of Hawai`i Committee for the Preservation and Study of Hawaiian Language, Art and Culture.. University of Hawai`i Press.

Lyons, C.J.
1875 Land Matters in Hawaii. *The Islander*, Vol. I. Honolulu.

McGerty, Leann and Robert Spear
2005 *A Cultural Impact Assessment on Approximately 439-acres of land in Ukumehame Ahupua`a, Lahaina District6, Island of Maui, Hawai`i*. Prepared for Pacific Rim Land, Inc.

OEQC (Hawaii State Office of Environmental Quality Control)
1997 "Guidelines for Assessing Cultural Impacts." Adopted by the Environmental Council, November 1997

Pukui, Mary Kawena, Samuel Elbert, Esther Mookini
1974 *Place Names of Hawaii*. University of Hawai`i Press: Honolulu.

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

Thrum, Thomas
1908 Heiaus and Heiau Sites Throughout the Hawaiian Islands. *Hawaiian Almanac and Annual for 1909*. Honolulu

1916 Maui's Heiaus and Heiau Sites Revised. *Hawaiian Almanac and Annual for 1917*. Honolulu.

1917 More Heiau Sites. *Hawaiian Almanac and Annual for 1918*. Honolulu

Tomonari-Tuggle, M. J.
1995 *A Cultural resource Management Plan for the Lahaina Pali Trail*. International Archaeological Research Institute, Inc., Honolulu, HI. On file at SHPD, Kapolei, HI.

Tomonari-Tuggle, M. J., and H. D. Tuggle
1991 *Archaeological Survey of Two Demonstration Trails of the Hawaii StatewideTrail and Access System: Lahaina Pali Trail, Island of Maui; Kaiolohia-Kahue Trail, Island of Lana`i*. International Archaeological Research Institute, Inc., Honolulu, HI. On file at SHPD, Kapolei, HI.

Waihona `Aina Corporation
2006 Mahele Database, www.waihona.com. Kaneohe, HI.

Walker, W.M.
1930 *Archaeology of Maui*. Ms. On file State Historic Preservation Division. Honolulu.

APPENDIX A: LCA DATA

DOCUMENT DELIVERY Change password Log out

Mahele Database Documents
Number: 05620

Claim Number:	**05620**		
Claimant:	**Kehele**		
Other claimant:			
Other name:			
Island:	**Maui**		
District:	**Lahaina**		
Ahupuaa:	**Olowalu**		
Ili:	**Kaluaha, Kaunukukahi, Maomao**		
Apana:	**6**	Awarded:	**1**
Loi:	**5**	FR:	
Plus:	+	NR:	**322v6**
Mala Taro:		FT:	**227v5**

Kula:	1	NT:	**103v5**
House lot:	**2**	RP:	**5477**
Kihapai/Pakanu:		Number of Royal Patents:	**1**
Salt lands:		Koele/Poalima:	**No**
Wauke:		Loko:	**No**
Olona:		Lokoia:	**No**
Noni:		Fishing Rights:	**No**
Hala:		Sea/Shore/Dunes:	**Yes**
Sweet Potatoes:		Auwai/Ditch:	**No**
Irish Potatoes:		Other Edifice:	**No**
Bananas:		Spring/Well:	**No**
Breadfruit:		Pigpen:	**No**
Coconut:		Road/Path:	**Yes**
Coffee:		Burial/Graveyard:	**No**
Oranges:		Wall/Fence:	**No**
Bitter Melon/Gourd:		Stream/Muliwai/River:	**Yes**
Sugar Cane:		Pali:	**Yes**
Tobacco:		Disease:	**No**
Koa/Kou Trees:		Claimant Died:	**No**
Other Plants:		Other Trees:	
Other Mammals:	**No**	Miscellaneous:	**government road**

No. 5620, Kehele
N.R. 322v6

To the Land Commissioners, Greetings: I, Kahele, hereby state my claim for a little lot. Z. Kaauwai knows of it, it was an unused place and I worked on it. It was disputed by the konohiki, who had no right, he did not work on it. I had not right, so said the konohiki, therefore, I present it to you for you to work on it.
KAHELE
Olowalu, Maui
28 January 1848

F.T. 227v7
Cl. 5620, Kahele

Mopua, sworn, I knwo the lands of the claimant. There are 3 pieces in Maomao, One piece of 2 lois in Wailoa, one house lot in "Kaumukukahi, and another in Kaluaaha, all in Olowalu.

No. 1 is a section of kalo land.
No. 2 is a section of kalo land.
No. 3 is a section of kula land.
No. 4 is a section of 3 lois.
No. 5 is a house lot.
No. 6 is a house lot.

The claimant received these lands from Maka in the year 1824 or about, and his title is without dispute.

No. 1 is bounded:
Mauka by the pali of Olowalu
Hana and Makai sides by the creek of Olowalu
Kaanapali by Naea's land.

No. 2 is bounded:

Mauka, Hana and Makai sides by the creek of Olowalu.
Kaanapali by the pali of Olowalu.

No. 3 is bounded:
Mauka by Puolaia
Hana by Kalaipaihala's land
Makai by the Government road
Kaanapali by Niupaipai.

No. 4 is bounded:
Mauka by Kaukama's land
Hana by Maui's land
Makai by the same
Kaanapali by the creek of Olowalu.

No. 5 is bounded:
Mauka by Naea's land
Hana by Mahulu's lot
Makai by the sea shore
Kaanapali by Capt. Saffrey's lot.

No. 6 is bounded:
Mauka by the Alanui Aupuni
Hana by Capt. Saffrey's lot
Makai by the sea shore
Kaanapali by the creek of Olowalu.

N.T. 103-104v5
No. 5620, Kahele

Mopua sworn he has seen 6 sections in these ilis below here in Olowalu. They were

from Maria in 1824, no objections. The boundaries are:

Section 1 - Taro in Maomao.
Mauka by Olowalu pali
Hana and Makai by Olowalu stream
Kaanapali by Naea's land/pali,

Section 2 - Taro in Maomao.
Mauka, Hana and Makai by stream.
Kaanapali by pali.

Section 3 - Pasture in Maomao.
Mauka by Puolaia.
Hana by Kalaipaihala
Makai by Government road
Kaanapali by Niupaipai.

Section 4 - 2 patches in Wailoa.
Mauka by Kaukama's (Female) land
Hana and Makai by E. Maui's land
Kaanapali by Olowalu stream.

Section 5 - House lot at Kaumukukahi.
Mauka by Naea's land
Hana by Mahulu's land
Makai by sea
Kaanapali by Kawaaiki.

Section 6 - House lot at Kaluaaha.
Mauka by Government road
Hana by Kawaaiki
Makai by sea

Kaanapali by Olowalu Stream.

[Award 5620; R.P. 5477; Kaluaha Olowalu; 1 ap.; 1 Ac. 1 rood 10 rods; Kaunukukahi Olowalu; 1 ap.; 3 roods 21 rods; Maomao Olowalu; 1 ap.; 2 roods 5 rods]

APPENDIX F

PRE-CONSULTATION CORRESPONDENCE

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

April 23, 2007

[name]
[business]
[address]
[city], [state] [zipcode]

RE: Early Consultation Request for Dean / Riley Single Family Residence
Lot 45-A, Olowalu Makai-Hikina Subdivision
TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear [name],

Warren and Susan Dean and James and Jeanne Riley (applicant) are in the preliminary stages of applying for a permit to construct a single-family residence on their Lot 45-A in the Olowalu Makai-Hikina Subdivision (refer to Exhibit 1). As the property is designated State Conservation – Limited subzone, a Draft Environmental Assessment (EA) has been requested with the Department of Land and Natural Resources, Office of Conservation and Coastal Lands as the accepting agency. Part of the EA process is early consultation with Federal, State and County agencies, community groups, private individuals and neighbors who may have information that will help in the preparation of the EA or special concerns that they would like to see addressed.

The applicants are the co-owners of this vacant parcel of land located at Olowalu, Maui, Hawaii identified as TMK (2) 4-8-03:45, portion of Royal Patent 5477, Land Commission Award 5620, Apana 4 to Kahele (Olowalu Makai-Hikina Subdivision Lot 45-A – see Exhibit A – Project Location Map). The parcel is approximately 0.803 of an acre (approximately 34, 978 square feet) in size and located approximately 400' makai side of Honoapi`ilani Highway. Separating Lot #45-A from Honoapi`ilani Highway is an old sugar cane field recently planted as a nursery. Access from the highway is provided via Access & Utility Easement B (refer to Exhibit 2). The subject property is in close proximity to the water but not oceanfront. It is separated from the ocean by a narrow strip of land; approximately 60 feet wide identified as a portion of Grant 4973 to Walter M. Giffard and as Easement "E" (exclusive easement for access purposes in favor of Lot 45-A (refer to Exhibit 3) owned by Olowalu Elua Associates LLC.

Dean/Riley is proposing to construct a new single-family residence of approximately 3,319 square feet. The residence will also feature a covered entry of 182 square feet and a stone concrete patio built at grade level of approximately 1,200 square feet of which 432 square feet will be covered. The project will also include; landscaping, a

septic wastewater treatment system, and bringing utilities to Lot #45-A. Access to parcel 45-A is via an existing access easement across Lot #84-A. Utilities, water, electrical, telephone and cable T.V. will also be brought in along this existing easement. The project will be serviced with both potable and non-potable water.

The subject property is located in the Olowalu coastal zone area classified as A-4 in the flood maps. Initial studies suggest that the flood elevation in the vicinity of the proposed residence is 5-feet above mean sea level. This will require fill of approximately 0"-12" inches to bring the floor elevation of the proposed structure above recommended flood elevation. Topographical and flood elevation studies of the subject parcel are being conducted and will be presented in the draft EA.

The subject property was originally created as a Kuleana parcel at the time of the great Mahele in approximately 1849. The original award was R. P. 5477 L. C. Aw. 5620 Ap. 4 to Kahele. The original award was written in Hawaiian and described as "Pahale", translated as house lot. An archeological study of the makai lands at Olowalu was completed by Fredrickson and Fredrickson in 2000 did not identify any sites on or in the vicinity of Lot #45-A. This study and the accompanying preservation plan were accepted by the State of Hawai`i Historic Preservation Division.

Vegetation on the subject lot consists primarily of buffalo grass, palm trees and kiawe trees. A flora and fauna study has been prepared by Mr. Robert Hobdy and will be presented in the EA. Interviews with individuals associated with the project area were also conducted and cultural impact assessment findings will be presented in the draft EA.

Land uses surrounding the subject project include Olowalu Makai – Komohana Subdivision (2-acre agricultural lots), the former Olowalu Plantation Manager's House, the Chez Paul Restaurant, Olowalu General Store, Camp Olowalu (formerly known as Camp Pecusa), Olowalu Village with various existing single-family residences, State Beach Reserves and the previously mentioned oceanfront parcel (Easement "E" - undeveloped) owned by Olowalu Elua Associates LLC.

The subject property is wholly located within Conservation – Limited subzone designated by the State Land Use Commission; Maui County zoning is not applicable. The property is classified Agricultural by the West Maui Community Plan. As the project site is located entirely within the State Land Use Commission "Conservation" district (Limited Subzone) a Board of Land & Natural Resources Approval (BLNR) and Permit are anticipated as a requirement. An Environmental Assessment (EA), pursuant to Chapter 343, Hawaii Revised Statutes is being prepared to document and review the projects environmental impacts and alternatives and a Conservation District Use Application for a Board Permit will be prepared and submitted for BLNR review and determination
The project site is located within the County of Maui, Special Management Area (SMA). An SMA Assessment application for the construction of a single-family residence will be prepared and filed with the County of Maui Planning Department for review and determination.

This pre-consultation letter is being sent to many Federal, State, and County agencies. It will also be sent to community groups, private individuals and neighbors. You are asked to comment about the project if you have concerns you would like to see addressed in the Draft Environmental Assessment. Please respond with your written comments and concerns to the address listed below by May 18, 2007.

Jim Riley
33 Lono Avenue, Suite 450
Kahului, Hawaii

Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

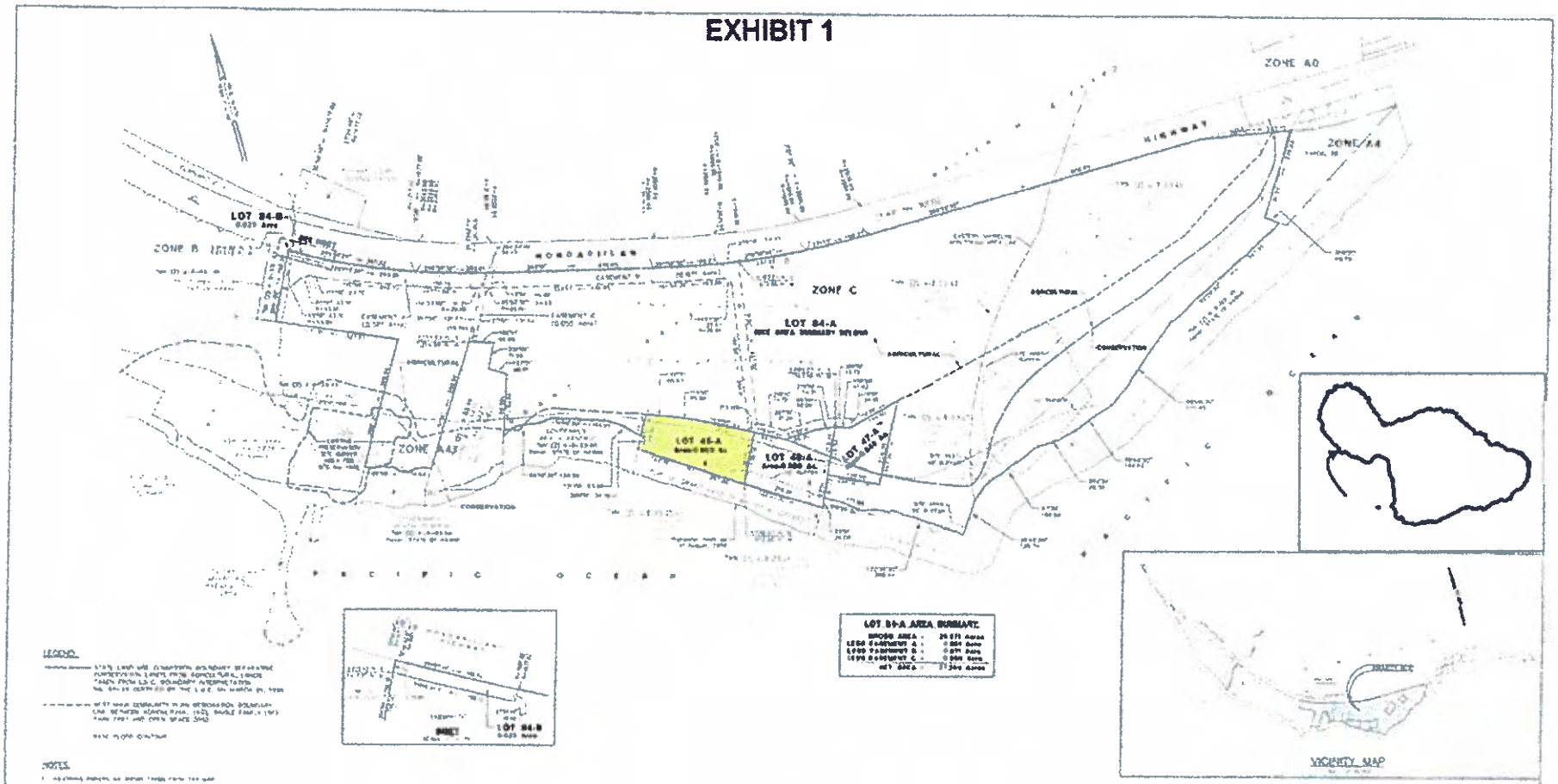
Sincerely,

Jim Riley, Owner / Applicant

JR:at
Enclosure

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\ololca45_Rileyprelimarea_final.doc

EXHIBIT 1



OLOWALU MAKAI - HIKINA SUBDIVISION

CONSOLIDATION OF A PORTION OF GRANT 4973 TO WALTER M. GIFFARD, R. P. 5477, L.C. AW. 5620, AP. 4 TO KAHELE, R. P. 4952, L. C. AW. 6728, AP. 2 TO MAHULU, L. C. A'W. 240 TO JOHN CLARK, R. P. 5181, L. C. AW. 5952, AP. 1 TO MINAMINA AND R. P. 7572, L. C. AW. 8817, AP. 1 TO KANAKAOLE

AND RESUBDIVISION OF SAID CONSOLIDATION INTO LOTS 45-A, 46-A, 47-A, 84-A AND 84-B

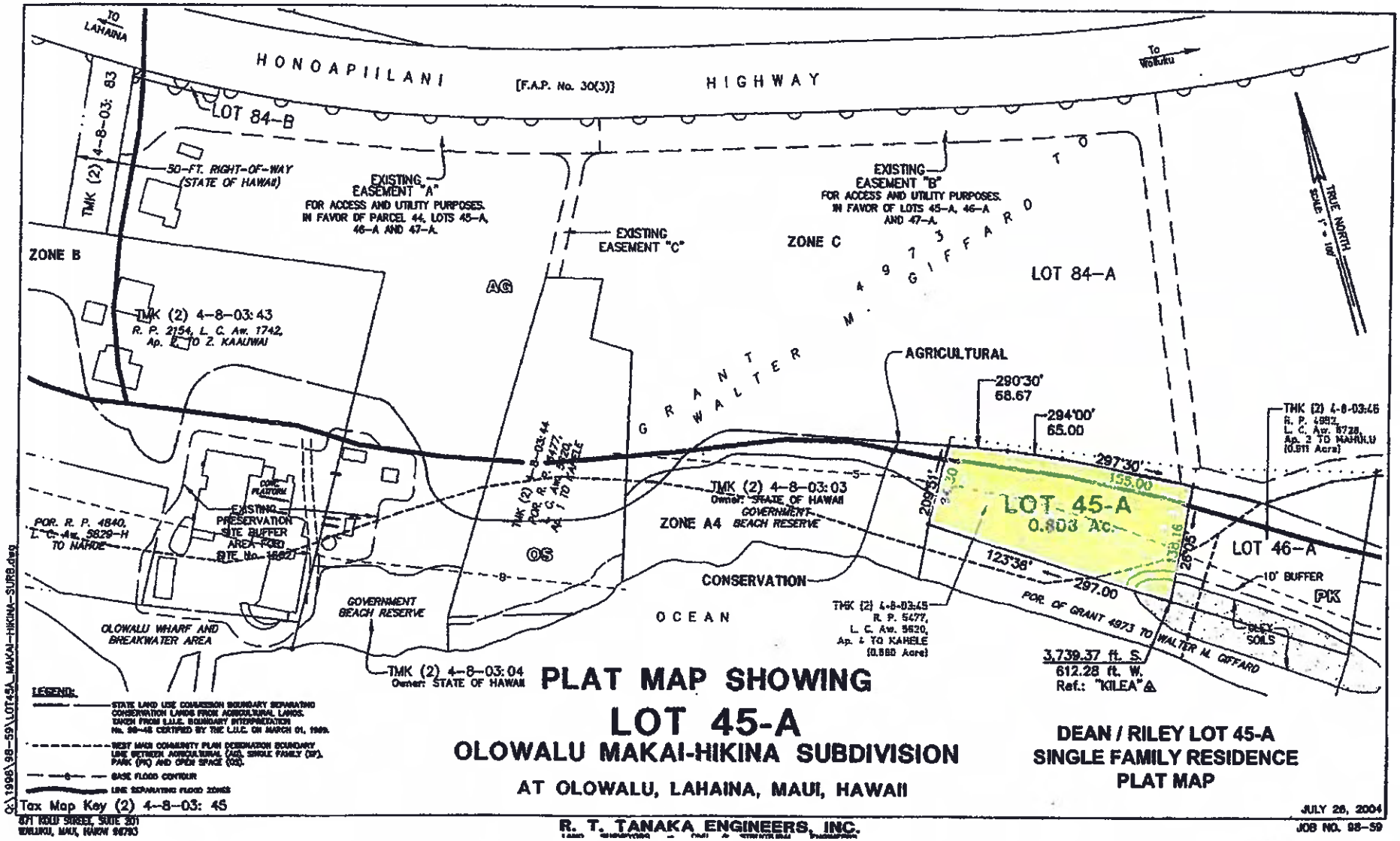
AND DESIGNATION OF EASEMENTS A, B AND C

AT OLOWALU, LAHAINA, MAUI, HAWAII

R. T. TANAKA ENGINEERS, INC.

DEAN / RILEY LOT 45-A
SINGLE FMILY RESIDENCE
PROJECT LOCATION MAP

EXHIBIT 2

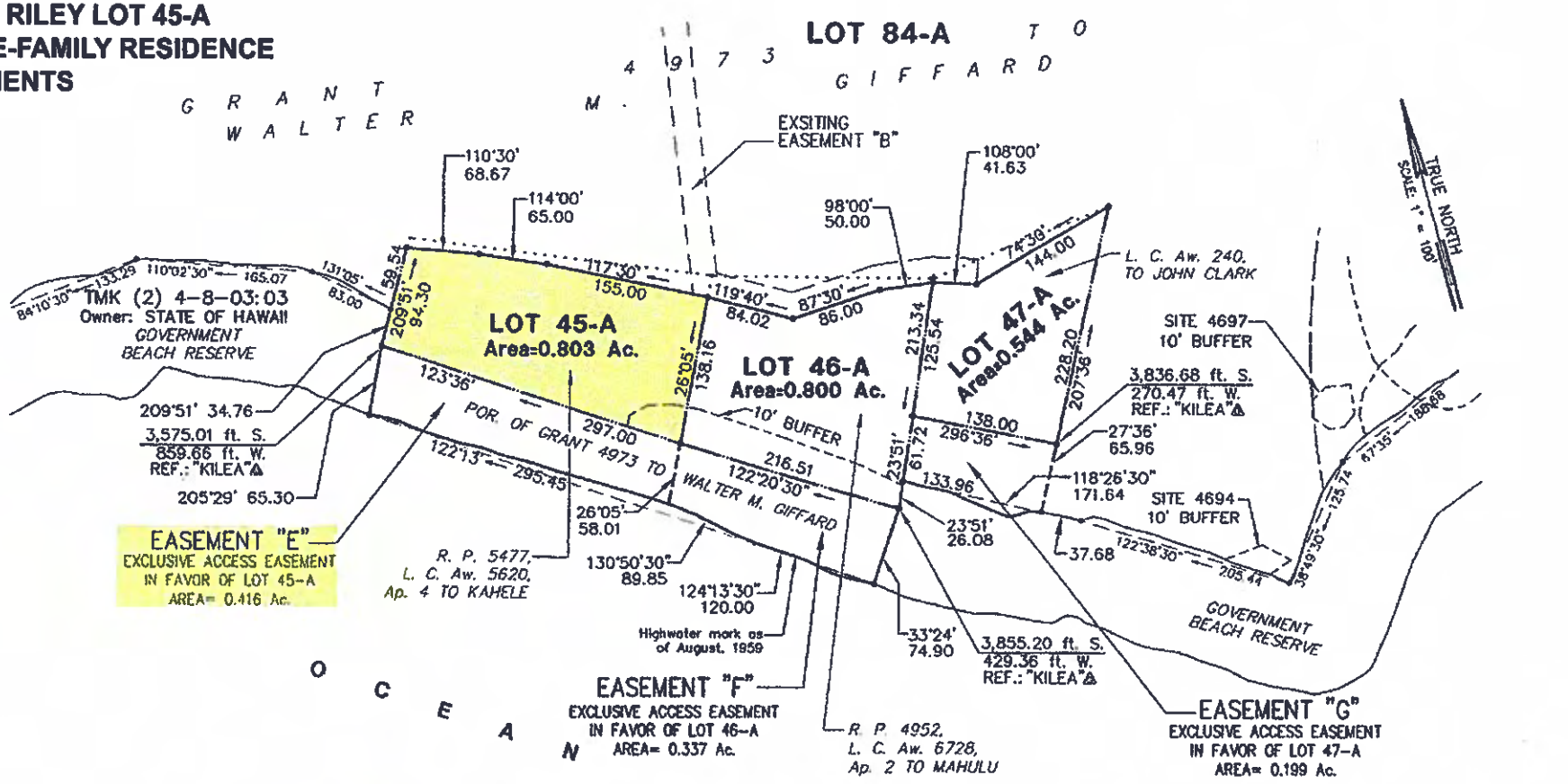


PLAT MAP SHOWING
LOT 45-A
OLOWALU MAKAI-HIKINA SUBDIVISION
AT OLOWALU, LAHAINA, MAUI, HAWAII

DEAN / RILEY LOT 45-A
SINGLE FAMILY RESIDENCE
PLAT MAP

EXHIBIT 3

DEAN / RILEY LOT 45-A
SINGLE-FAMILY RESIDENCE
EASEMENTS



OLOWALU MAKAI-HIKINA SUBDIVION
DESIGNATION OF EASEMENTS "E", "F" AND "G"
AT OLOWALU, LAHAINA, MAUI, HAWAII

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

KIRK T. TANAKA
Licensed Professional Land Surveyor
Certificate No. 7223
License Expires: APRIL 30, 2006

08/20/04
DATE

AUGUST 20, 2004

Tax Map Key : (2) 4-8-03

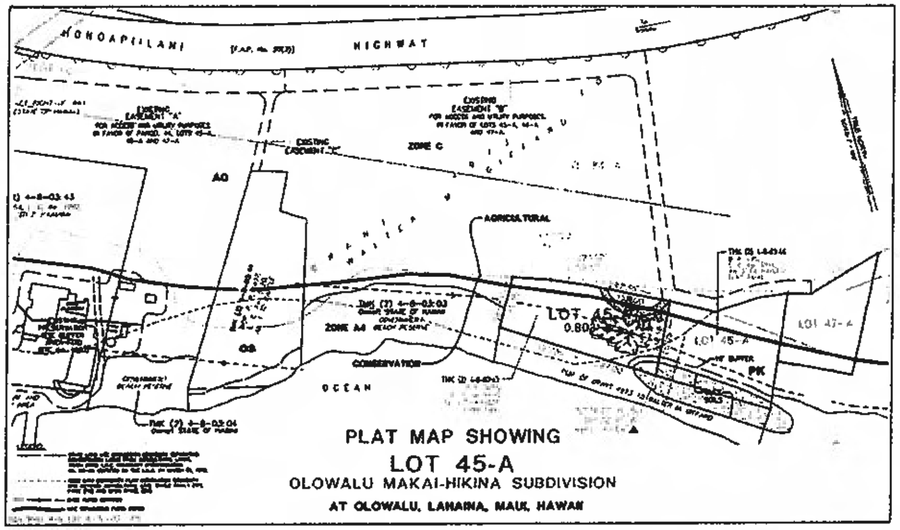
871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII 96793

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

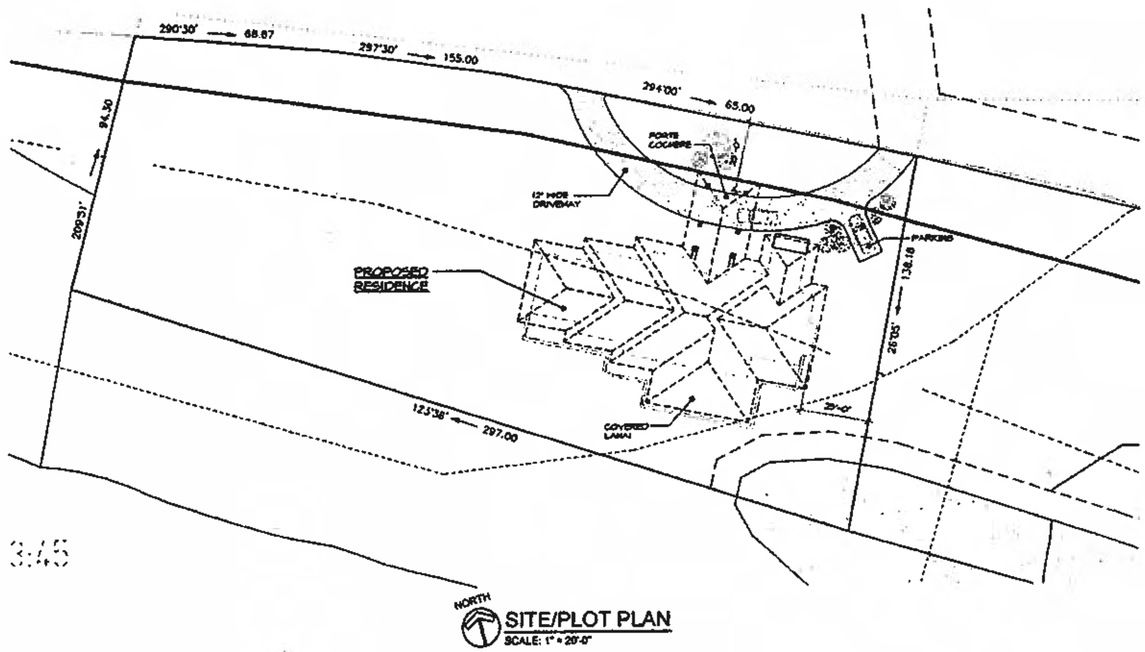
JOB NO. 98-59

C:\1998\98-59\45-46-47-MAKAI-HIKINA.dwg FILE:OEAS.CRD

EXHIBIT 4



LOCATION MAP
SCALE: 1" = 100'-0"



SITE/PLOT PLAN
SCALE: 1" = 20'-0"

DEAN / RILEY LOT 45-A

SINGLE FAMILY RESIDENCE

SITE PLAN

TMK (2) 4-8-03: 45

3:45

REVISION	BY
03-29-06	LL

Proposed Residence for:
DEAN/RILEY
OLOWALU MAKAI - HIKINA SUBDIVISION
Olowalu, Lahaina, Maui, Hawaii
T.M.K. (2) 4-8-03 : 45A

LINDA M. LANGE
ARCHITECTURAL DESIGN

DRAWN: manila etc.
CHECKED: HG/LL
DATE: MAY 2006
SCALE: as noted
JOB NO.
SHEET: T-1
OF SHEETS

EXHIBIT 5

DEAN / RILEY LOT 45-A
SINGLE FAMILY RESIDENCE
ELEVATIONS

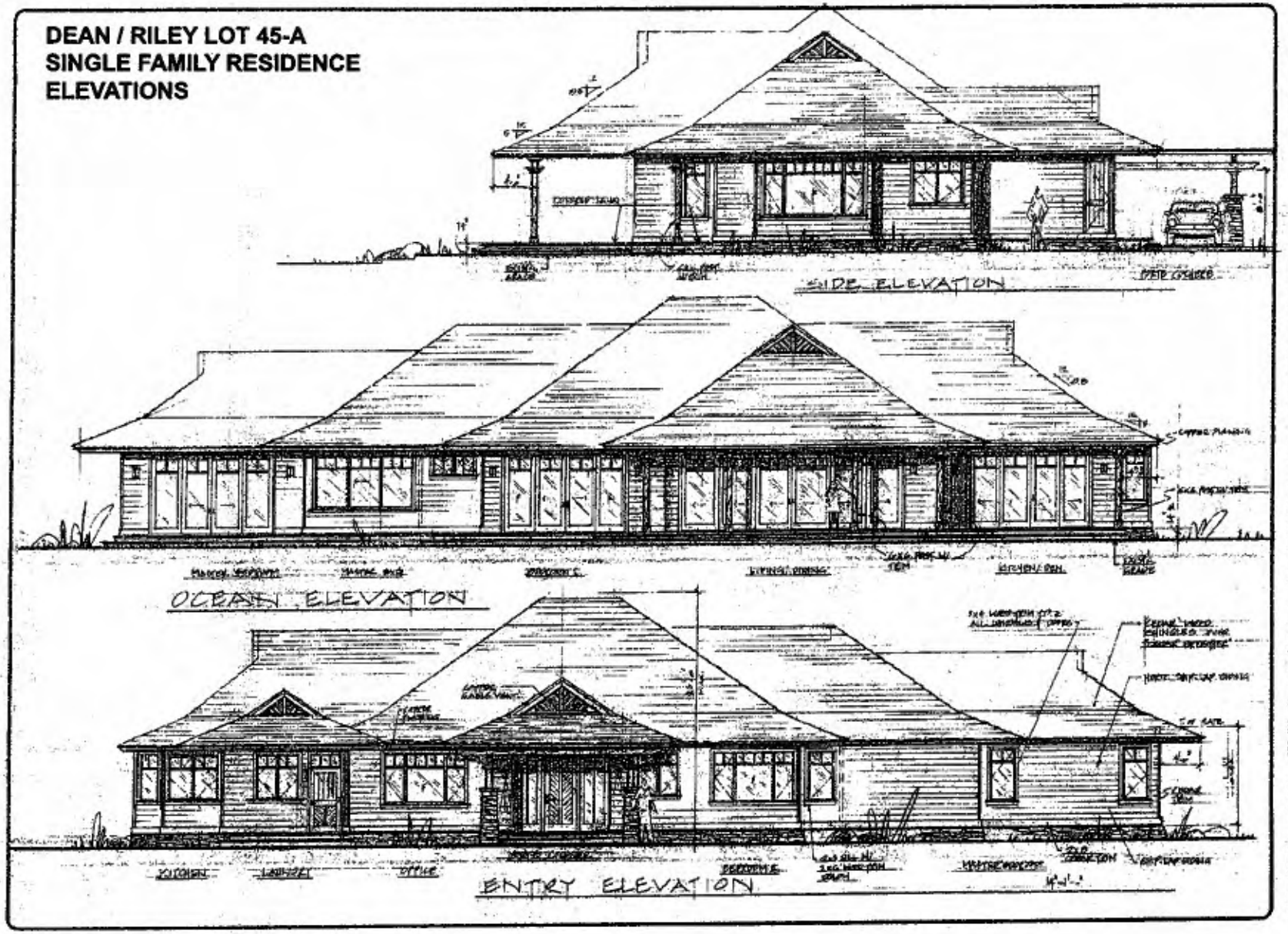
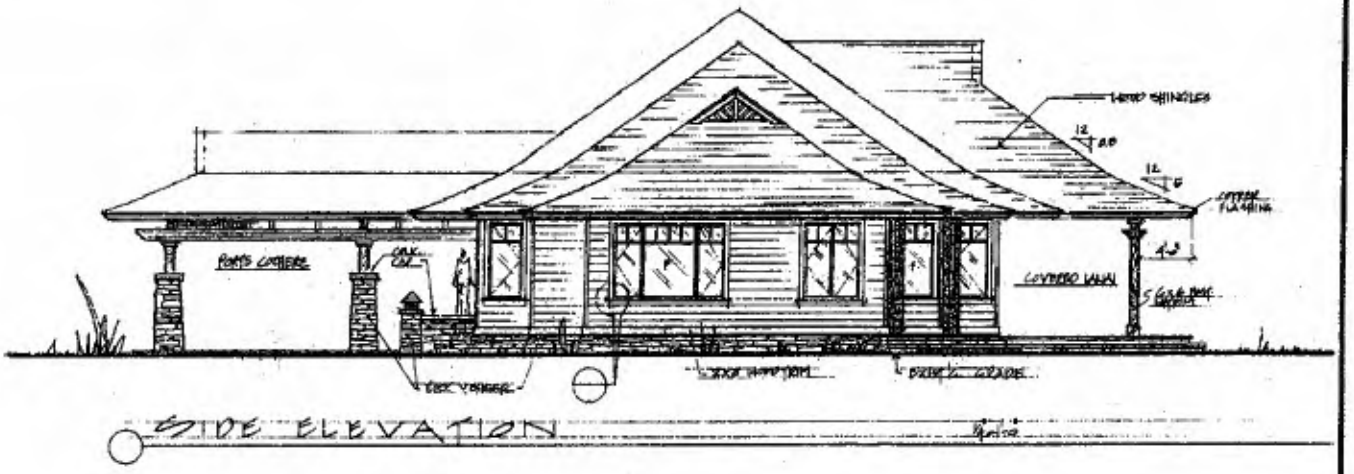
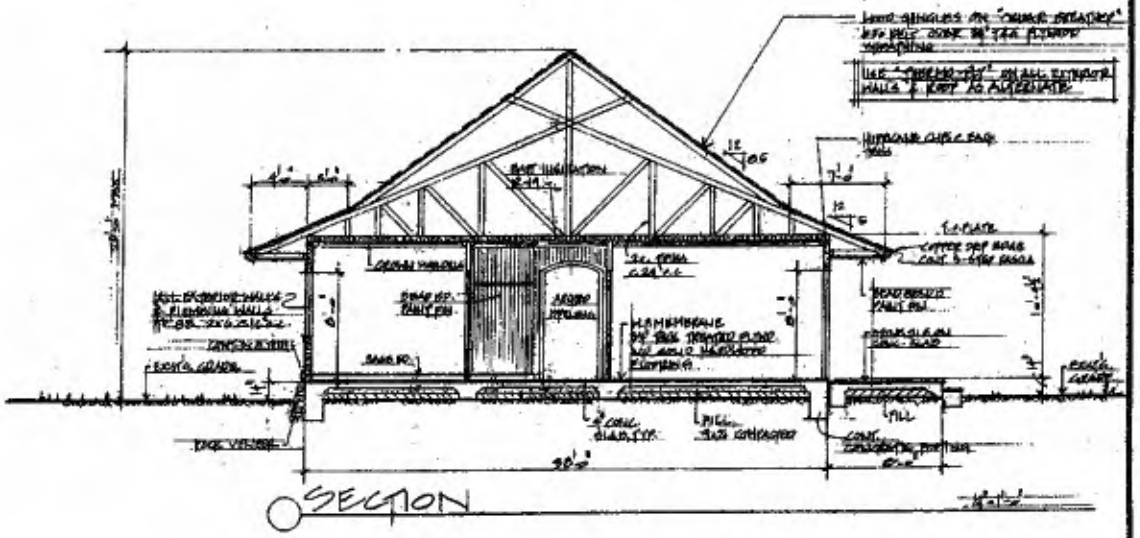


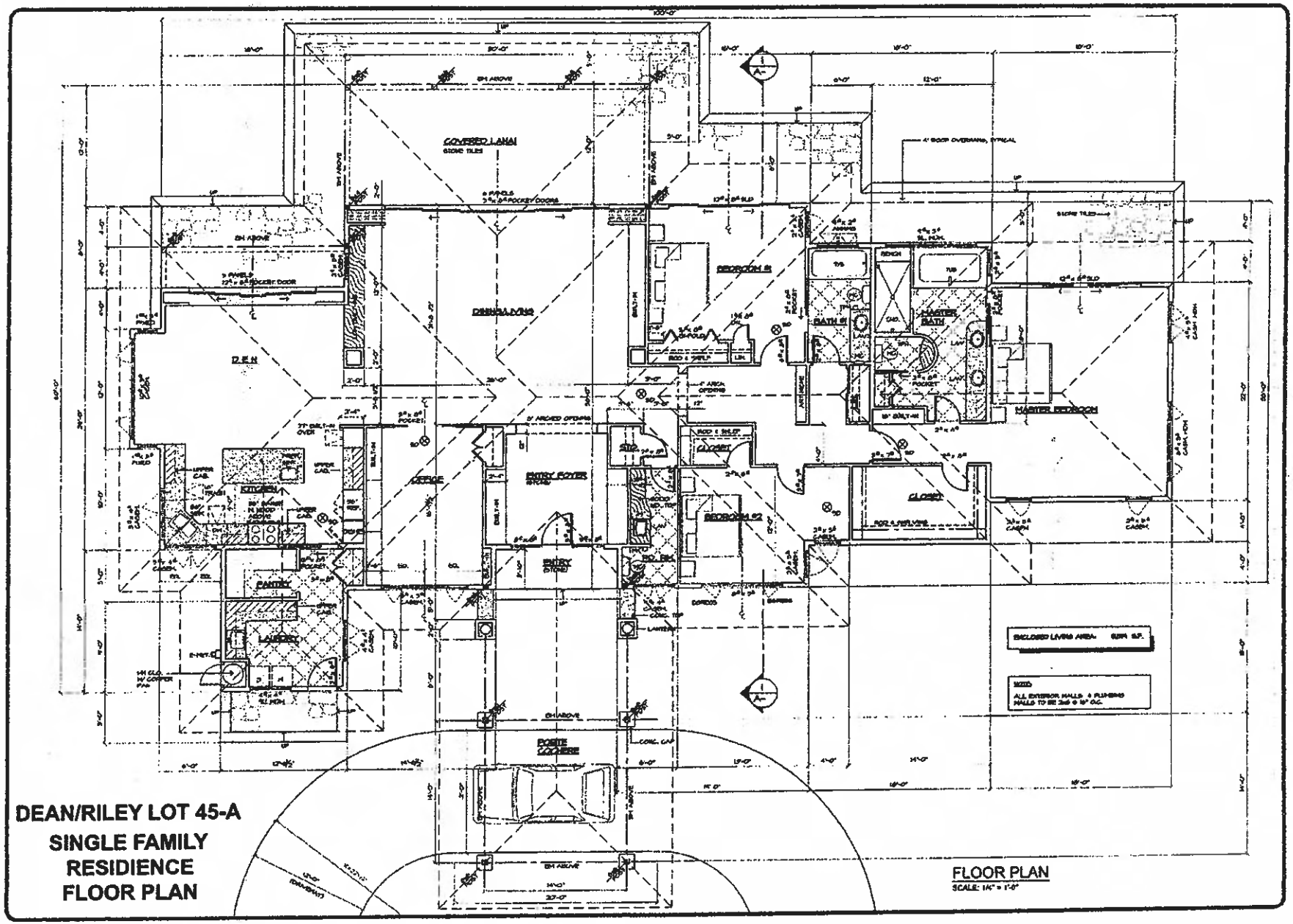
EXHIBIT 6





DEAN / RILEY LOT 45-A
SINGLE FAMILY RESIDENCE
ELEVATIONS

EXHIBIT 7



DEAN/RILEY LOT 45-A
SINGLE FAMILY RESIDENCE FLOOR PLAN

REVISION	BY
03-28-06	L.

LINDA M. LANGE ARCHITECTURAL DESIGN

Proposed Residence for:
DEAN/RILEY
OLOWALU MAKAI - HIKINA SUBDIVISION
Olowalu, Lahaina, Maui, Hawaii
T.M.K. (2) 4-5-03 : 45A

DRAWN: manila etc.
CHECKED: MAUL
DATE: MAY 2006
SCALE: as noted
JOB NO.
SHEET: A-1
OF SHEETS

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

COPY

May 10, 2007

Mr. Jim Riley
33 Lono Avenue, Suite 450
Kahului, Hawai`i 96732

Dear Mr. Riley:

Subject: **Early Consultation Request for Dean/Riley Single Family Residence, TMK: (2) 4-8-03: 45**

Thank you for the opportunity to participate in the early consultation process for the Dean/Riley single family residence. The following comments are offered:

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

2. The applicant should be made aware that the property is located in a high water table area. The wastewater disposal system should be designed accordingly.

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

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

Sincerely,

Herbert S. Matsubayashi
District Environmental Health Program Chief

c: EPO w/enc.

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

Mr. Herbert S. Matsubayashi,
District Environmental Health Program Chief
State of Hawaii
Department of Health, Maui District Health Office
54 High Street
Wailuku, HI 96793-2102

RE: Early Consultation for Draft Environmental Assessment for Construction for Dean / Riley Single Family Residence Lot 45-A
Olowalu, Maui TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear Mr. Matsubayashi,

Thank you for your correspondence of May 10, 2007 regarding the subject project. We appreciate your review of our request and your comments. We offer the following responses to your comments:

1. Noise created during the construction phase of the project is similar to noise levels associated with the construction of any single-family dwelling. Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control" has been reviewed and mitigation measures to comply during construction will be implemented.

2. The applicant will work with professional engineers to design a septic system acceptable to the Department of Health.

A Draft Environmental Assessment (DEA) has been prepared and will further address your comments. The DEA will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency.

Thank you again for your assistance. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\correspondence\ololca45_riley_sdoh-reply 7-07.doc

COPY

LINDA LINGLE
GOVERNOR OF HAWAII

ALLAN A. SMITH
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

May 10, 2007

Warren and Susan Dean
James and Jeanne Riley
33 Lono Avenue Suite 450
Kahului, Hawaii 96732

Ladies and Gentlemen:

Subject: Early Consultation for Draft Environmental Assessment for construction of single family residence, Olowalu, Maui, Tax Map Key: (2) 4-8-3:45

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 Division of Aquatic Resources, Engineering Division, Office of Conservation & Coastal Lands, Commission on Water Resource Management, 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 call our office at 587-0433. Thank you.

Sincerely,

Russell Y. Tsuji
Administrator

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

Mr. Russell Tsuji, Administrator
State of Hawaii
Department of Land & Natural Resources
Land Division
PO Box 621
Honolulu, HI 96809

RE: Early Consultation for Draft Environmental Assessment for Construction for Dean / Riley Single Family Residence Lot 45-A
Olowalu, Maui TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear Mr. Tsuji

Thank you for your correspondence of May 10, 2007 regarding the subject project. We appreciate your initiative in routing and coordinating our request for comments throughout the various agencies of your department and appreciate your assistance.

A Draft Environmental Assessment (DEA) has been prepared and will address the comments provided by the agency representatives as provided. The DEA will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency

Thank you again for your help. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\ololca45_rileypre-con_dlnr reply 7-07.doc

Suspense Date: May 10, 2007 COPY

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii

MEMORANDUM

To: Dan Polhemus, Administrator
From: Richard Sixberry, Aquatic Biologist RS
Subject: Comments on Consultation for an Draft EA.

Comments Requested By: Russell Tsuji, Land Management

Date of Request: 4/27/07 Date Received: 4/30/07

Summary of Project

Title: Single Family Residence

Proj. By: Dean Riley

Location: Olowalu, Maui

Brief Description:

The applicant proposes to Construct a single-family residence on a 34,978 square foot parcel in the conservation district at Olowalu, Maui. The property is separated from the ocean by a narrow strip of land, approximately 60 feet wide.
Comments:

We will review the DEA when it is completed and comment on any significant impacts adverse to aquatic resource values at a later date.

Although the information we received describes briefly the proposed project, we suggest the forthcoming EA discuss in detail potential short term impacts and propose specific means for averting or minimizing adverse effects, and provide possible mitigation for unavoidable damage to natural resource values.

Any activities near the shoreline should be adequately described in the DEA and the Department should have the opportunity to review all activities that may limit, restrict or discourage the public use of State shoreline land in this vicinity.

Finally, precautions should be taken to prevent construction material, debris, petroleum products, chemicals and other potential contaminants from entering the aquatic environment.

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

Mr. Richard Sixberry, Aquatic Biologist
State of Hawaii
Department of Land & Natural Resources
Division of Aquatic Resources
PO Box 621
Honolulu, HI 96809

RE: Early Consultation for Draft Environmental Assessment for Construction for Dean / Riley Single Family Residence Lot 45-A
Olowalu, Maui TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear Mr. Sixberry,

Thank you for your Memorandum of May 10, 2007 to Dan Polhemus, Administrator, DLNR, Division of Aquatic Resources regarding the subject project. We appreciate your review of our request and your comments.

A Draft Environmental Assessment (DEA) has been prepared and will address your comments. The DEA will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency.

Thank you again for your assistance. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\correspondence\ololca45_riley_dlnr-aqua reply 7-07.doc

COPY

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/RYT
Ref.: EarlyConDEASDRDean/Riley
Maui.358

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone A4. The National Flood Insurance Program does regulate developments within A4 as indicated in bold letters below.**

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

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

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

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

( ) Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 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.

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

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

( ) Additional Comments: _____

_____

( ) Other: _____

_____

Should you have any questions, please call Ms. Alyson Yim of the Planning Branch at 587-0259.

Signed: Eric T. Hirano
ERIC T. HIRANO, CHIEF ENGINEER

Date: 5/2/07

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

Mr. Eric T. Hirano, Chief Engineer
State of Hawaii
Department of Land & Natural Resources
Engineering Division
PO Box 621
Honolulu, HI 96809

RE: Early Consultation for Draft Environmental Assessment for Construction for Dean / Riley Single Family Residence Lot 45-A
Olowalu, Maui TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Ref: EarlyConDEASDRDean/Riley Maui.358

Dear Mr. Hirano,

Thank you for your comments of May 2, 2007 to Russell Tsuji, Administrator, DLNR, Land Administration regarding the subject project and confirming the Flood Zone A4 project location designation per (FIRM). We appreciate your review of our request and your comments.

We will consult with Ms. Carol Tyau-Beam, State NFIP Coordinator and Mr. Francis Cerizo, Maui County Planning Department to try to insure the final design of the home meets or exceeds all design standards set forth by the NFIP and by local ordinances as requested.

A Draft Environmental Assessment (DEA) has been prepared and will address your comments. The DEA will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency.

Thank you again for your assistance. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\correspondence\ololca45_riley_dlnr-engr reply 7-07.doc

LINDA LINGLE
GOVERNOR OF HAWAII

COPY

ALLAN A. SMITH
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR

PETER T. YOUNG
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

File: No. MA-07-239

MAY 15 2007

Jim Riley
33 Lono Avenue, Suite 450
Kahului, Hawaii 96732

Dear Mr. Riley:

Subject: Request for Comments on a Proposal for a Single-Family Residence at Olowalu, Maui – TMK: 4-8-3:45

The Office of Conservation and Coastal Lands (OCCL) is in receipt of your April 23, 2007 letter regarding a proposed single-family residence at Olowalu, Maui. Our preliminary comments are as follows.

The single-family residence should be designed as post and pier, rather than slab on grade. This area may be subject to coastal hazards such as flooding and erosion. We do not believe that a slab on grade design is appropriate at this location. In addition, if you intend to claim a Kuleana Land Use under Section 13-5-22(P-3), Hawaii Administrative Rules, you need to show that the parcel was "actually" used for residential purposes. We are also attaching our earlier comments for your information and use.

We will reserve further comments for the Conservation District Use Application. Please let us know how we may be of further service to you. Should you have questions, please call the Office of Conservation and Coastal Lands at 587-0377.

Sincerely,

Samuel Lemmo, Administrator

C: Chairperson
County of Maui Planning Department
Land Division

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

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

RE: Request for Comments for a Single-Family Residence at Olowalu, Maui TMK: (2) 4-8-03:45

File: No. MA-07-239

Dear Mr. Lemmo,

Thank you for your correspondence of May 15, 2007 regarding the subject project. We appreciate your response and assistance.

Your comments regarding the "post on pier vs. slab on grade" foundation is acknowledged. We have certain concerns and issues that we request be evaluated and factored into the design of the home. These issues would include historical erosion rates, the architecture of the house, 25-foot maximum heights and usable decks. We look forward to working with your office to resolve any and all concerns during the Environmental Assessment and CDUA processes.

As to your comments regarding the claim of prior use of the parcel as a "residence". The applicants do intend to pursue this claim and will be providing evidence during the CDUA permitting process.

A Draft Environmental Assessment (DEA) has been prepared and will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency.

Thank you again for your help. We look forward to working closely with you to help us through the CDUA and permitting process. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\correspondence\ololca45_riley_dlnrOCCL reply 7-07.doc

CHARMAINE TAVARES
Mayor

JEFFREY S. HUNT
Director

COLLEEN M. SUYAMA
Deputy Director

COPY

COUNTY OF MAUI
DEPARTMENT OF PLANNING

July 31, 2007

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

Dear Mr. Lemmo

RE: Request for Comments on a Proposal for a Single-Family Residence in the Conservation District of the Former Olowalu Plantation at Maui
TMK: (2) 4-8-003:045 Olowalu, Lahaina, Island of Maui
(RFC 2006/0053)

The Department of Planning (Department) with your May 15, 2007, recommendations for the above-referenced project site. The area in question may be subject to flood innundation and storm surge based on evidence observed at the site in June and July of this year (see included photographs). Accordingly, the proposed slab-on-grade construction of a single family residence may be inappropriate in contrast to other construction methods such as post and pier.

In addition, the corner pin for the site (Ukemehame side) is estimated to be no more than 20 feet from the top of the bank. Rocks, debris and other material indicate that high wave action and storm surge overtops the rocky bank following the alleged shoreline, running mauka to deposit these materials in lower lying portions of the parcel and conservation area. As such, the measure of the highest wash of the waves at the highest tide of the year, may be more mauka than the top of the rocky embankment.

Prior to development of the site, a Special Management Area (SMA) Assessment will need to be conducted in conformance with the SMA Rules for the Maui Planning Commission. In addition, construction immediately inland of the shoreline is subject to the Shoreline Rules of the Maui Planning Commission, which base setbacks on historic shoreline position, erosion rates, and depth of lot. Lastly, no approval can be issued if the underlying land use designations are inconsistent with the proposed use of the site. The site has a myriad of somewhat conflicting land use designations and a full discussion of the history and delineation of each designation will be required for any permits issued by the County. Furthermore, a State-certified shoreline survey will be required. Grading and

fill in the shoreline setback area is prohibited and any grading mauka of the setback area must use best management practices pursuant to Maui County Code 20.08. We recommend that any Environmental Assessment (EA) incorporate these considerations. The EA can be used as a supporting document in the SMA and shoreline setback permitting processes.

Thank you for the opportunity to comment. Should further clarification be required, please contact Mr. Thorne Abbott, Staff Planner, by email at thorne.abbott@mauicounty.gov or by telephone at 270-7520.

Sincerely

JEFFREY S. HUNT, AICP
Planning Director

JSH:TEA:nst
c: Colleen M. Suyama, Deputy Planning Director
Clayton I. Yoshida, AICP, Planning Program Administrator
Aaron H. Shinmoto, PE, Planning Program Administrator
DLNR - Land Division, Maui Office
Jim Riley, 33 Lono Avenue, Suite 450, Kahului, Hawaii 96732
K:\WP_DOCS\PLANNING\RFC\2006\0053_RileySFR-Olawalu\response.wpd

Ponding and over wash were observed at the Olowalu-side of the site

Distance from back side of rocky bank to property pin (adjacent to rock) is approximately 25 feet.

The slumped tree is indicative of an area that receives innundation from waves and water that overtops the bank

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

May 5, 2008

Mr. Jeffrey S. Hunt, AICP
Planning Director
County of Maui
Department of Planning
250 South High Street
Wailuku, HI 96793

RE: Early Consultation for Draft Environmental Assessment for Construction for
Dean / Riley Single Family Residence Lot 45-A
Olowalu, Maui TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear Mr. Hunt,

Thank you for your office's reply to our Early Consultation letter dated April 23, 2007. We appreciate the thought and effort that went into the response. The applicant acknowledges the need for an SMA Assessment. An application for this SMA Assessment will be filed shortly.

The applicant also acknowledges the myriad of land use designations associated with the property. The applicant is hopeful a full understanding of these designations will be forthcoming in consultation with planning staff.

The applicant also agreed that a State Certified Shoreline Survey would help to clarify some issues.

In three years of ownership and eight years of being involved in the area by the current applicant, the parcel has never been subject to flood inundation by storm surge or any other ocean activity. Wave action caused by storm conditions, high tide, storm surges or any other condition have not breached the rocky bank fronting the property. At no time has the ocean waters flowed over the bank and onto the parcel.

Photo #1 was not taken on the subject parcel or on the property to the ocean side of the property. The applicant requests clarification of the location of where the photo was taken from as it appears to be a misrepresentation of conditions on or next to the subject parcel.

Photo # 2 is representative of the subject parcel (note rocky shoreline and separation of the property from ocean). A Shoreline Survey map dated 8/24/07 (BLNR certified 10/17/07) is attached for your review.

Photo #3 showing a downed tree along the rocky bank may have been caused by the wind that blows through Olowalu Valley at upwards of 70 mph and the soft soil along the ocean.

The comment pertaining to the use of a slab on grade foundation is similar to comments received by the applicant from the Office of Conservation and Coastal Lands (OCCL). The applicant hopes to address this concern to the satisfaction of the OCCL during the CDUA permitting process.

Again, the applicant would like to thank the Office of Planning for its comments and hopes to work with the Planning Director and staff to address concerns raised by the Department of Planning.

Thank you again for your assistance. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Samuel J. Lemmo, Administrator, OCCL, DLNR
Colleen M. Suyama, Deputy Planning Director
Clayton I. Yoshida, AICP, Planning Program Administrator
Aaron H. Shinmoto, PE, Planning Program Administrator
DLNR – Land Division, Maui Office
Thorne Abbott, Staff Planner
Chip & Susan Dean
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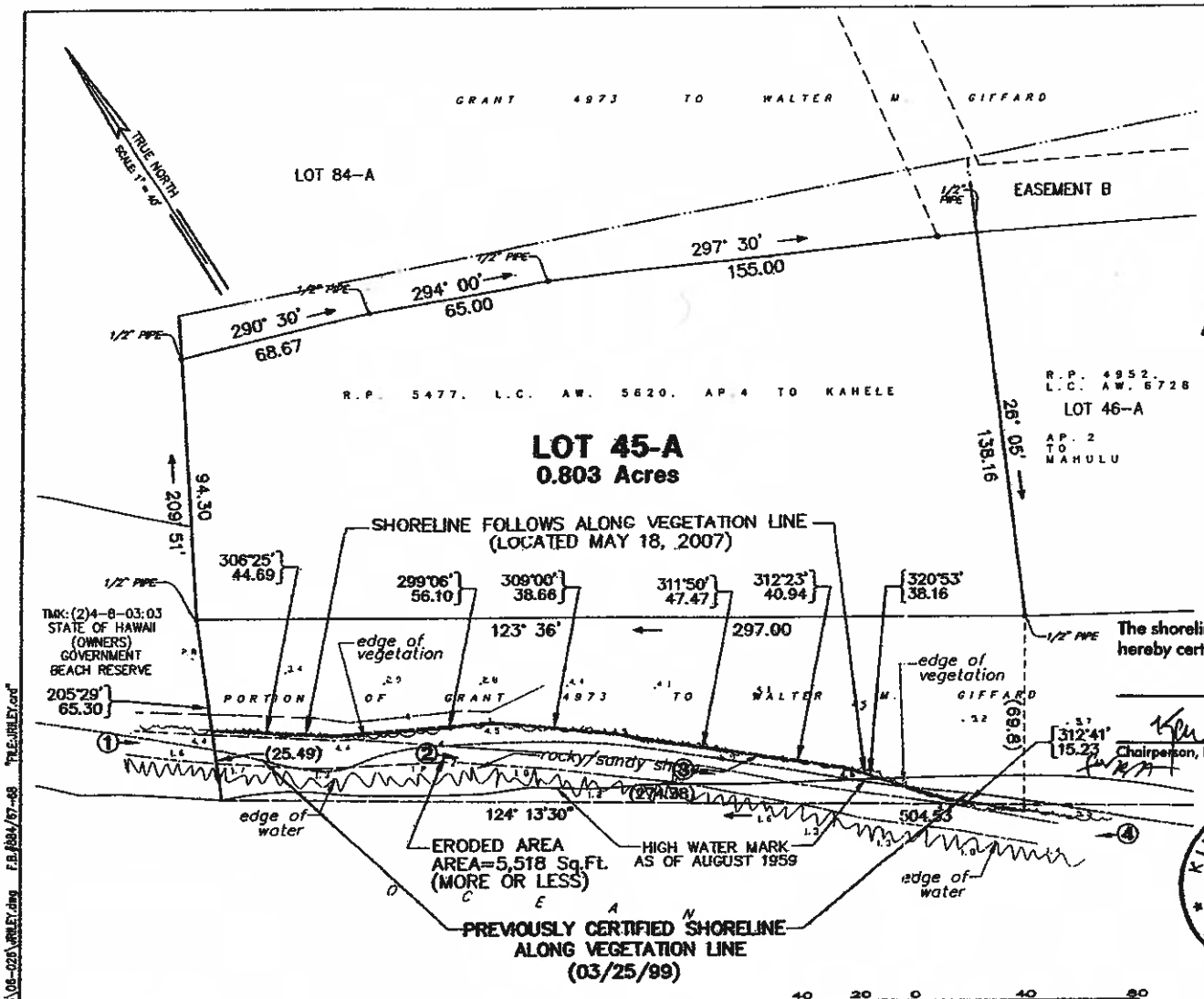


LEGEND:

① LOCATION AND DIRECTION OF PHOTOGRAPH TAKEN ON MAY 18, 2007 AT 2:30 PM.

.52 EXISTING SPOT ELEVATION

CONTOUR

SHORELINE SURVEY MAP

OF

A PORTION OF GRANT 4973 TO WALTER M. GIFFARD FRONTING LOT 45-A, OLOWALU MAKAI-HIKINA SUBDIVISION

AT OLOWALU, LAHAINA, MAUI, HAWAII

The shoreline as delineated in red is hereby certified as the shoreline as of

OCT 17 2007

Chairperson, Board of Land and Natural Resources

OWNERS:

LOT 45-A
JAMES RILEY, ETAL.
590 OLD STABLE ROAD
PAIA, HAWAII – 96779

GRANT 4973
OLOWALU ELUA ASSOCIATES
33 LONO AVENUE, SUITE 450
KAHULUI, HAWAII – 96732

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISK

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, 2008

08/24/07
DATE

REVISED: AUGUST 24,

JOB NO. 06

Tax Map Key (2) 4-8-03 : 05 (PORTION)

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS – CIVIL & STRUCTURAL ENGINEERS
871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII 96793

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 877-9409 Email: Riley@aloha.net

May 3, 2007

COPY

Ms. Zoe Norcross-Nu`u,
Sea Grant Extension Agent
310 Kaahumanu Avenue
Kahului, HI 96732

RE: Dean / Riley Single Family Residence
Lot 45-A, Olowalu Makai-Hikina Subdivision
TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear Zoe,

Thank you for listening and being open-mind enough to hear me out this morning. I know I can go on...

Enclosed is the topographical and flood map prepared by R.T. Tanaka Engineers, Inc. I think the map shows:

1. The flood zone to be A-4
2. The flood height to be 5' above mean sea level
3. The existing elevation of the property in the area of the proposed house to be 3.7 to 6' above mean sea level

I am trying to meet with Francis Cerizo at the County Planning Department to discuss the above. I hope this is somewhat helpful.

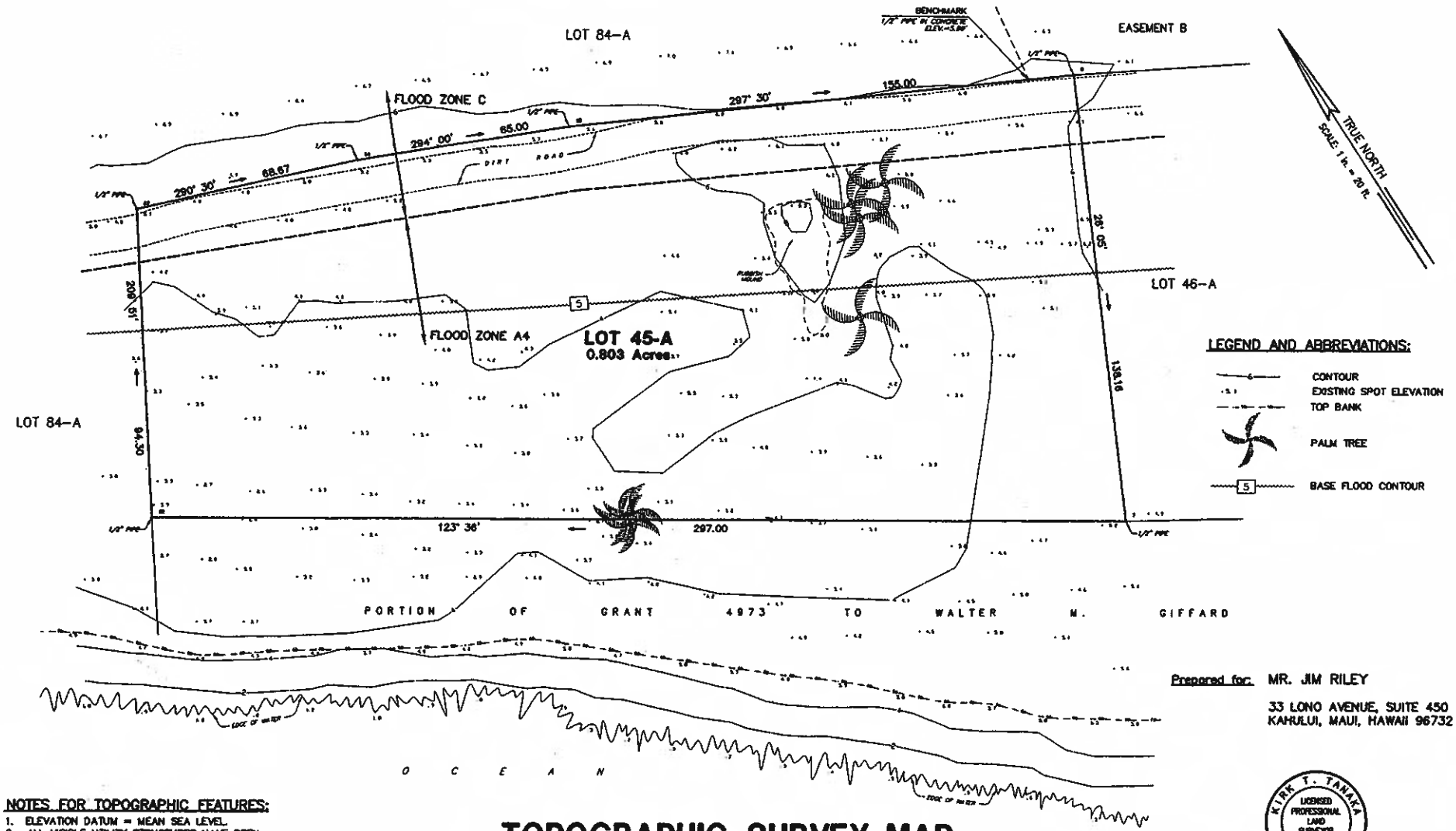
Sincerely,

Jim Riley by amt

Jim Riley

Enclosure

JR:amt
Cc: file- *\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Dean-Riley_OloLot45-a_znorcrossnuu 050507.doc*



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.
3. THE FLOOD ZONE INFORMATION SHOWN IS INTERPOLATED FROM THE FLOOD INSURANCE RATE MAP PANEL 150003 0229B DATED JUNE 1, 1981.

TOPOGRAPHIC SURVEY MAP
OF
LOT 45-A, OLOWALU MAKAI-HIKINA SUBDIVISION
BEING A PORTION OF R.P. 5477, L.C. AW. 5620, AP. 4 TO KAHELE
AT OLOWALU, LAHAINA, MAUI, HAWAII

20 10 0 20 40
GRAPHIC SCALE IN FEET

Prepared for: MR. JIM RILEY

33 LONO AVENUE, SUITE 450
KAHULUI, MAUI, HAWAII 96732

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

KIRK T. TANAKA
Licensed Professional Land Surveyor
Certificate No. 7223
License Expires: APRIL 30, 2008

05/25/06
DATE

Revised: MAY 25, 2006
MAY 15, 2006

Tax Map Key (2) 4-8-03 : 45

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

R. T. TANAKA ENGINEERS, INC.

JOB NO. 06-026

C:\2006\06-026\JRILEY.DWG

CHARMAINE TAVARES
Mayor

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

MICHAEL M. MIYAMOTO
Deputy Director

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

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

DAVID TAYLOR, P.E.
Wastewater Reclamation Division

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

TRACY TAKAMINE, P.E.
Solid Waste Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET, ROOM 322
WAILUKU, MAUI, HAWAII 96793

May 14, 2007

Mr. James Riley
33 Lono Avenue, Suite 450
Kahului, Maui, Hawaii 96732

Dear Mr. Riley:

SUBJECT: EARLY CONSULTATION FOR DEAN AND RILEY SINGLE-FAMILY RESIDENCE; TMK: (2) 4-8-003:045

We reviewed the subject application and have the following comments:

1. Address construction waste and land-clearing waste.

2. The plans submitted for this project do not adequately show sufficient detail to determine whether the project is compliant with the building and housing codes. We will review the project for building and housing code requirements during the building permit application process.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,

MILTON M. ARAKAWA, A.I.C.P.
Director of Public Works and
Environmental Management

MMA:MMM:jso
S:\LUCA\CZM\Draft Comments\Dean_Riley_erly_consult_48003045_ls.wpd

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

Mr. Milton M. Arakawa, A.I.C.P., Director
County of Maui
Department of Public Works and Environmental Management
200 South High Street, Room 322
Wailuku, HI 96793

RE: Early Consultation for Dean / Riley Single Family Residence Lot 45-A
Olowalu, Maui TMK: (2) 4-8-03:45, Olowalu, Maui, Hawaii

Dear Mr. Arakawa,

Thank you for your correspondence of May 14, 2007 responding to our early consultation letter involving the preparation of an environmental assessment. We offer the following as to response to your comments.

1. All construction and land-clearing waste will be handled in the most environmentally sensitive way s possible. Green waste from land clearing will be recycled through the County of Maui recycling at the Puunene Landfill. Efforts will be made to keep construction waste to a minimum by recycling or re-using all leftover materials where possible.

2. Drawings submitted are preliminary and we acknowledge they are not complete or show sufficient detail for building permits.

A Draft Environmental Assessment (DEA) has been prepared and will further address your comments. The DEA will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency.

Thank you again for your assistance. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley, Owner / Applicant

JR:at

Cc: Chip & Susan Dean
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MAY 2 - 2007

Network Engineering and Planning
OSP Engineering - Maui

Hawaiian Telcom

60 S. Church Street
Wailuku, Maui, HI 96793

Phone 808 242-5258
Fax 808 242-8899

May 1, 2007

Dean / Riley
33 Lono Avenue, Suite 450
Kahului, HI 96732
Attention: Warren "Chip" and Susan Dean
James "Jim" and Jeanne Riley

SUBJECT: Chapter 343, Hawai'i Revised Statutes (HRS) Early Consultation Request for Proposed Dean/Riley Single-Family Residence at Lot 45-A (TMK (2)4-8-003:045), Olowalu Makai-Hikina Subdivision, Olowalu, Maui, Hawaii

Dear Mr. Dean and Mr. Riley:

Thank you for providing Hawaiian Telcom Incorporated, the opportunity to comment on the proposed action for Chapter 343, HRS Early Consultation Request for the proposed Dean/Riley Single-Family residence at Lot 45-A, Olowalu Makai-Hikina on the Island of Maui.

At this time, Hawaiian Telcom Inc. would like to notify you that telephone service requests for this project will require a perpetual easement through the surrounding properties from Honoapiilani Highway and may be subject to a Line Extension or service connection fee as well as State or County permitting processes, should work along a State Highway or County access road be required in order to service this project.

If there are any questions, please call Brent Matsui at (808) 242-5289.

Sincerely,

Gordon Yadao
Manager –Network Engineering & Planning

c: File (3045 0704-034)
B. Matsui

DEAN / RILEY

Warren "Chip" & Susan Dean / James "Jim" & Jeanne Riley

33 Lono Avenue, Suite 450 Kahului, Hawaii 96732
Phone: 808-877-4202 Fax: 808-877-9409 Email: Riley@aloha.net

July 13, 2007

Mr. Gordon Yadao
Manager – Network Engineering & Planning
Hawaiian Telcom
60 S. Market Street
Wailuku, HI 96793

RE: Chapter 343, Hawaii Revised Statutes (HRS) Early Consultation Request for Propsed Dean / Riley Single - Family Residence at Lot 45-A (TMK: (2) 4-8-03:45) Olowalu Makai-Hikina Subdivision, Olowalu, Maui, Hawaii

Dear Mr. Yadao,

Thank you for your correspondence of May 1, 2007 regarding the subject project. We appreciate your review and comments.

We acknowledge your notification for the requirement for a perpetual easement through the surrounding properties for telephone services from Honoapi`ilani Highway and that Line Extension / service connection fees, State or County permits may be applicable. (Please note Easement B is designated as an Access and Utility Easement in favor of the subject lot.)

A Draft Environmental Assessment (DEA) has been prepared will be submitted with the Office of Conservation & Coastal Lands as the Approving Agency

Thank you again for your help. Should you have any questions or require additional information regarding the subject project, please feel free to contact Jim Riley at 808-877-4202.

Sincerely,

Jim Riley

Jim Riley, Owner / Applicant

JR:at

Attachment (1)

Cc: Chip & Susan Dean
\\Wmlsbs\WML\Master Documents\Olowalu\Olowalu Makai\Olo LCA's\olomak lca_Jim Lot 45a\Precon drafts\correspondence\ololca45_riley_htco reply 7-07.doc

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