Consultation Plan for Assessing Potential Cultural Impacts for the Proposed Olowalu Town Master Plan Olowalu Ahupua‘a, Lāhaina District, Island of Maui

TMK: (2) 4-8-003: 84, 98 through 118, and 124

Prepared for

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and

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(Job Code: OLOWALU 3)

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Management Summary

Reference	Consultation Plan for Assessing Potential Cultural Impacts for the Proposed Olowalu Town Master Plan Olowalu Ahupua‘a, Lāhaina District, Island of Maui TMK: (2) 4-8-003: 84, 98 through 118, and 124
Date	February 2012 (Draft)
Project Number (s)	Cultural Surveys Hawai‘i (CSH) Job Code: OLOWALU 3
Project Location	Olowalu Ahupua‘a, Lāhainā District, Maui Island, TMK: [2] 4-8-003: multiple parcels as depicted on the 7.5-minute USGS topographic map, Olowalu Quadrangle (1992) (see Section 1.1 Project Background)
Land Jurisdiction	Private: Olowalu Town, LLC. and Olowalu Ekolu, LLC.
Agencies	State: Hawai‘i Department of Health/Office of Environmental Quality Control (DOH/OEQC) Hawai‘i Department of Land and Natural Resources/State Historic Preservation Division (DLNR/SHPD)
Project Description	The Olowalu Town Master Plan seeks to combine conservation, agricultural, rural, and urban land uses to re-establish a small-scale and mixed-use community. Approximately 1,500 residential units, ranging from single-family to multi-family dwellings, are proposed with appropriate infrastructure to be built concurrently.
Area of Potential Effect (APE) and the Overall Region of Influence (ROI)	The area of direct effect for the proposed undertaking is considered as the footprint of the proposed 636-acre footprint of the Olowalu Town Master Plan When assessing the presence or absence of direct, indirect, or cumulative effects of the proposed project on the traditional cultural practices of this region, traditional use and access to resources from the mountains to ocean, or *mauka* to *makai*, must be taken into consideration. As such, the ROI for this undertaking is defined as the geographic area encompassed by the known traditional boundaries of Olowalu Ahupua‘a, which includes any offshore traditional fisheries that may have been associated with Olowalu Ahupua‘a.
Regulatory Context	With regard to State of Hawai‘i Environmental Regulations, this undertaking is subject to Hawai‘i Administrative Rules (HAR) Title 11 Chapter 200-4(a) and Chapter 343 of the Hawai‘i Revised Statutes (HRS) which requires consideration of a proposed project’s effect on traditional cultural practices. As the proposed project seeks to re-establish an entire town center and residential community within the *ahupua‘a* of Olowalu, CSH has put forward this research design as a guide for assessing the potential impacts of the proposed project on extant cultural practices and traditional beliefs. This document is intended to facilitate the project’s state environmental review and provide the framework for the project’s consultation efforts.

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Section 1 Introduction

At the request of Olowalu Town, LLC and Olowalu Ekolu, LLC., Cultural Surveys Hawai‘i (CSH) has prepared this research design for a Cultural Impact Assessment for the Proposed Olowalu Town Master Plan Project. The location of the proposed project is bound by the Pacific Ocean to the west and lands currently under the jurisdiction of State of Hawai‘i to the north, south and east at Olowalu and Ukumehame Ahupua‘a, Lāhainā District, Maui Island (TMK [2] 4-8-003:84, 98 through 118, and 124**) (**Figure 1 and Figure 2).

1.1 Project Background

The Olowalu Town Master Plan will serve as a guide for the establishment of a small-scale "mixed-use" community with land uses that will vary from urban neighborhood town centers to rural and agricultural areas within the 636-acre project area (Munekiyo & Hiraga 2010:7 and Table 2). Overall, the master plan proposes the development of 1,500 residential units along with civic structures (educational facilities, community and cultural centers, and emergency worker facilities), park and gathering facilities, greenways, bikeways, and trails all of which would be constructed concurrently with the appropriate infrastructure over an approximate 10 year period (Munekiyo & Hiraga 2010:10) (Figure 3).

The area of direct effect, or area that may be physically altered by the proposed project, consists of the entire 636.48-acre project footprint as described above (hereafter referred to as the "project area"). To ensure that potential impacts to traditional cultural practices which may not occur within the area of direct effect, but may nonetheless be adversely affected by the proposed project are identified (e.g. where a proposed action that may not physically alter subsistence and medicinal gathering resources but may affect access to such gathering areas,) the *ahupua‘a* is the appropriate geographical unit of study. With this in mind, and for the purpose of this preliminary assessment of potential cultural impacts, the broader region of influence (ROI), hereafter referred to as the "study area", will be considered to identify any potential impacts to traditional cultural practices that may result from the proposed project. The study area for this report consists of the entire *ahupua‘a* of Olowalu (Figure 4) including the off-shore reef area which may have supported traditional fisheries associated with Olowalu Ahupua‘a.

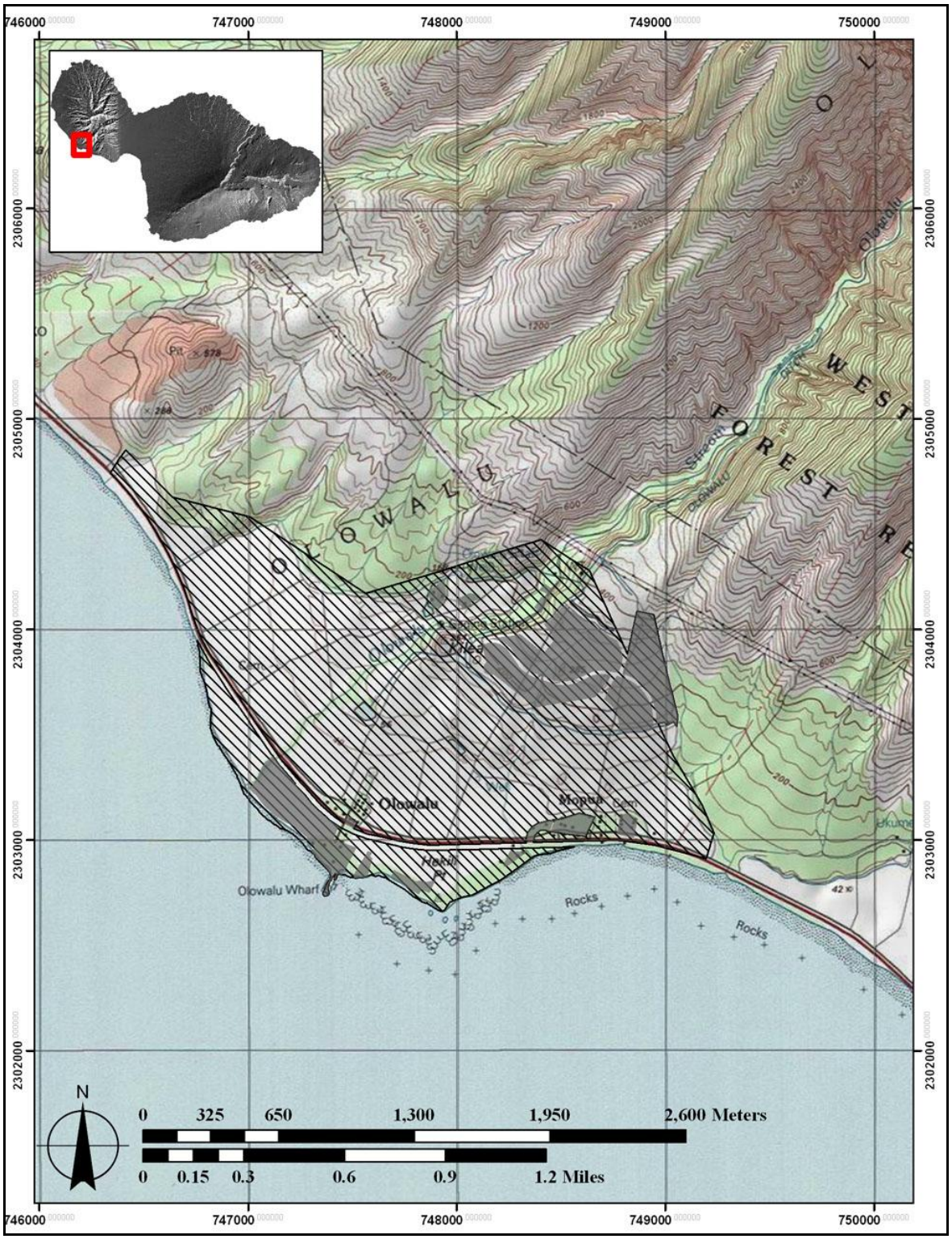

Figure 1. Portion of the 7.5-minute USGS topographic map, Olowalu Quadrangle (1992) showing the location of the current project area in cross-hatch, privately owned parcels not included in the Olowalu Town Master Plan shaded in gray.

Figure 2. TMK (2) 4-8-03 showing the location of the current project area outlined in red, privately owned parcels not included in the Olowalu Town Master Plan shaded in gray.

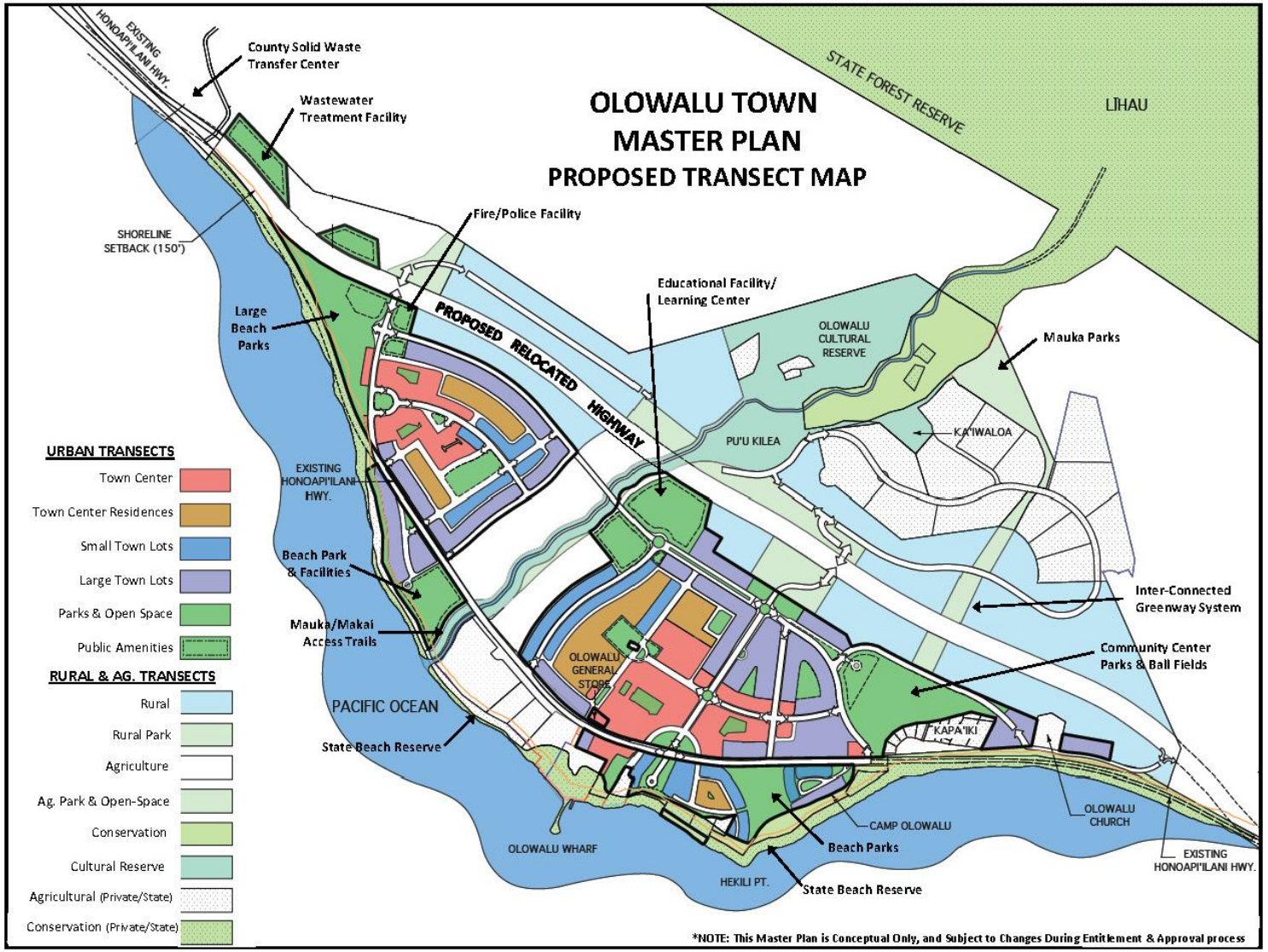

Figure 3. Conceptual drawing for the Proposed Olowalu Town Master Plan (figure courtesy of Olowalu Town, LLC.)

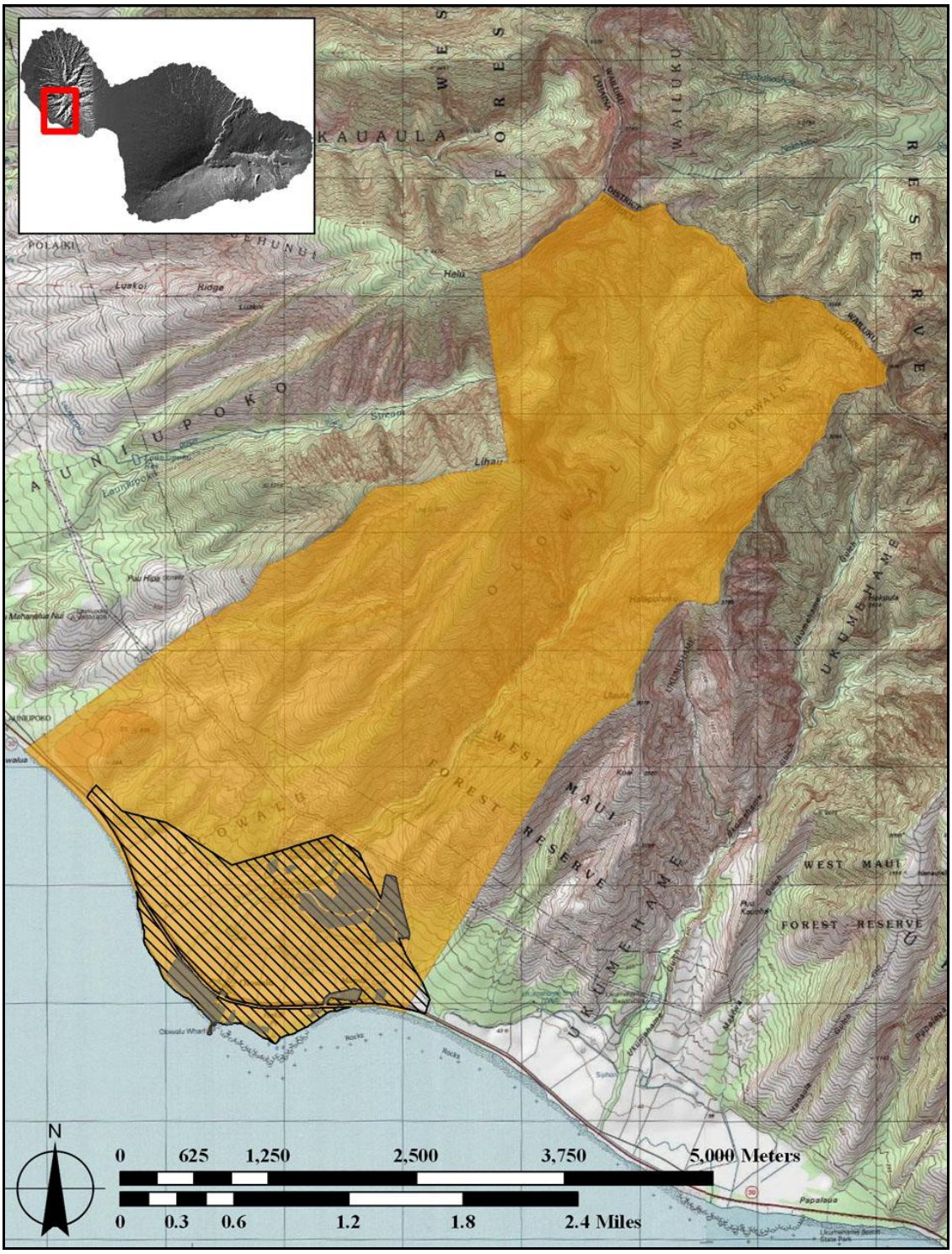

Figure 4. Portion of the 7.5-minute USGS topographic map, Olowalu Quadrangle (1992) showing the location of the current project area in cross-hatch, the study area and Olowalu Ahupua‘a shaded in orange, privately owned parcels not included in the Olowalu Town Master Plan shaded in gray.

1.2 Environmental Setting

1.2.1 Natural Environment

The current study area extends from the located on the broad alluvial plain of Olowalu Ahupua‘a where the principle geologic features consists of the Olowalu Gulch and Stream. Other contributing physical features of the landscape include smaller stream systems and their resulting gulches along the northern and southern flanks of Olowalu Gulch.

The general soils of the project area are of the Pulehu-Ewa-Jaucus Association and are largely dominated by the Pulehu Soil Series which comprises the majority of the alluvial fan of Olowalu Ahupua‘a. Other soils types include sediments associated with the Jaucus Series and Beaches that are found along the southern coastal reaches of the *ahupua‘a*, patches of soils that fall into the Kealia Series and Ewa Series occur *mauka* of Honoapi‘ilani Highway, soils of the Wainee and Ewa Series comprises the southern flank of Olowalu Gulch, and rocky soils are found along the streambed of Olowalu Gulch (Figure 5). The Pulehu Soil Series consists of well-drained soils that developed in alluvium washed from basic igneous rock (Foote, et al. 1972:115). Pulehu clay loam, 0 to 3 percent slopes, consists of a surface layer of dark brown clay loam approximately 21 inches thick that is underlaying by stratified loam, loamy sand, fine sandy loam and silt loam that is approximately 39 inches thick (Foote, et al. 1972:115-116). The permeability of this soil type is moderate with a slow runoff rate and slight erosion hazard. Low areas characterized by PsA soils can be subject to flooding (Foote, et al. 1972:116). Pulehu cobbly clay loam, 0 to 3 percent slopes (PtA), is similar to PsA soils except that it is cobbly. The underlying parent material consists of coarse, gravelly or sandy alluvium. Pulehu cobbly clay loam, 3 to 7 percent slopes (PtB), also has slow runoff with a slight erosion hazard. Pulehu silt loam, 0 to 3 percent slopes, (PpA) are also similar to PsA soils except that the texture is silt loam. At the time of the USDA soil survey, PtA and PtB soils were used for sugarcane cultivation and pasture, PsA soils included some acreage that was used for truck crops, and finally PpA soils were noted as used for house sites (Foote, et al. 1972:115, 116).

Beaches (BS) occur as sandy, gravelly, or cobbly areas that are derived from coral and seashells and are washed and rewashed by ocean waves (Foote, et al. 1972:28). In the case of the current project area however, beach sediments are dark in color as the sands are derived from from basalt and andesite parent material (Foote, et al. 1972:28). The USDA, at the time of the soil survey determined that soils associated with this series had no value for farming and were better suited for recreational use and resort development (Foote, et al. 1972:28). It should be noted that pre-contact human burial interments are commonly found in beach sand deposits.

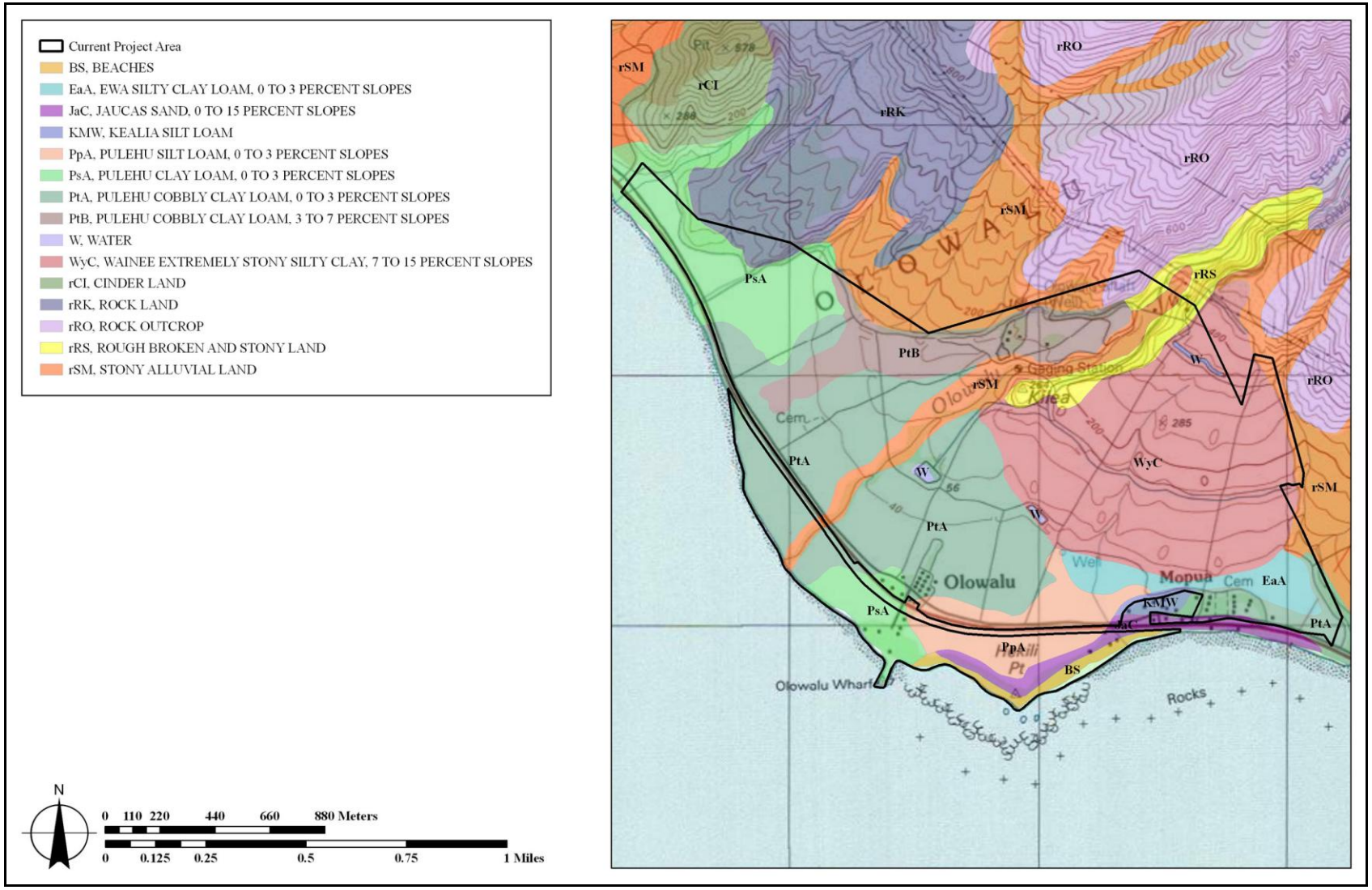

Figure 5. . Portion of the 7.5-minute USGS topographic map, Olowalu Quadrangle (1992) showing the current project area relative to the local soil series (U.S. Department of Agriculture 2001).

The Jaucas Series consists of excessively drained, calcareous soils that are developed in wind and water deposited sand from coral and seashells and occur as narrow strips on coastal plains adjacent to the ocean (Foote, et al. 1972:48). Normally pale brown to very pale brown in color, within Olowalu Ahupua‘a, the surface layer is dark brown as a result of the accumulation of organic matter and alluvium (Foote, et al. 1972:48). Jaucas sand, 0 to 15 percent slopes (JaC), is neutral to moderately alkaline throughout. Permeability of JaC soils is rapid and runoff is slow to very slow. The general erosion hazard is slight, but wind erosion poses a severe hazard where vegetation has been cleared. At the time of the USDA survey, JaC soils were used for pasture, sugarcane, truck crops, and urban development (Foote, et al. 1972:49). Like beach sand deposits, pre-contact human burial interments are commonly found in Jaucas sand deposits.

The Kealia Soil Series consists of rather poorly drained and poorly drained soils on coastal flats, and are geographically associated with Jaucas, Mala, and Pulehu soils. Kealia silt loam (KMW) is a poorly drained soil with a high salt content. Ponding often occurs in low areas after heavy rains and when the soil dries, salt crystals accumulate on the surface. This soil has an underlying brackish water table that fluctuates with the tides. As the occurrence of the KMW soils within the project area are near the coastline, it is important to note that the water table is nearer to the surface along the shoreline than in inland areas. Permeability of KMW soil is moderately rapid with a slow to very slow runoff. The hazard of water erosion is no more than slight, but the hazard of wind erosion is severe when the soil is dry and the surface layer becomes loose and fluffy (Foote, et al. 1972:67). At the time of the USDA survey, KMW soils were used only for wildlife habitat and occasional pasturage as the high salt content and poordrainage was not suitable for agriculture (Foote, et al. 1972:68).

Wainee soils are generally well-drained soils that have developed on alluvial fans. Unlike the Pulehu Series, which is found in similar geologic environments throughout Maui County and on the island of O‘ahu, Wainee soils are found only on Maui Island. Wainee extremely stony silty clay, 7 to 15 percent slopes (WyC) occur on smooth alluvial fans with a moderately rapid permeability rate and slow to medium run off rate. The erosion hazard is slight to moderate and stones cover three to 15 percent of the surface. At the time of the USDA soil survey, WyC soils were used primarily for sugarcane with small acreages used for pasture and home sites (Foote, et al. 1972:134).

The Ewa Soil Series is generally characterized by well-drained soils in basins and on alluvial fans that have developed in alluvium derived from basic igneous rock (Foote, et al. 1972:29). Ewa silty clay loam, 0 to 3 percent slopes (EeA) has very slow runoff rate and the erosion hazard is no more than slight. At the time of the USDA soil survey, EeA soils were used for sugarcane and homesites (Foote, et al. 1972:30).

Finally, Rough, Broken and Stone Land (rRS) and Stony Alluvial Lands (rSM) characterizes the soils at the base of Olowalu Gulch and adjacent soils of Olowalu Streambed respectively. Rough, Broken and Stone Land (rRS) consists of very steep, stony gulches where the local relief is generally between 25 and 500 feet with soil material general less than 20 inches deep over saprolite or bedrock (Foote, et al. 1972:119). Stony Alluvial Lands (rSM) soils consist primarily of stones, boulders, and silt deposited by streams along the bottoms of gulches and on alluvial fans (Foote, et al. 1972:120). At the time of the USDA soil survey, rRS soils was used for

pasture, wildlife habitat, and watershed (Foote, et al. 1972:119) while rSM soils were suited to pasture in dry areas and woodland in wet areas (Foote, et al. 1972:120).

The average annual rainfall accumulation within the entire project area averages from 15 to 20 inches (Giambelluca and Schroeder 1998:56) per year, with the heaviest rainfall occurring during the winter months (December through February) and little to no rainfall during the summer months (June through August) (Giambelluca and Schroeder 1998:56). This pattern of rainfall and low annual precipitation rate may have once sustained a lowland, dry shrubland and grassland native ecosystem (Pratt and Gon 1998) with some wetland environments in areas of the Kealia soil type. The landscape and watershed of the project area, however, has been heavily modified by sugarcane cultivation and supporting irrigation development from the early historic period up until modern times, with only small stands of native plants remaining. The current vegetation consists of thick *kiawe* (*Prosopis pallida*), *klu* (*Acacia farnesiana*), *koa haole* (*Leucaena leucocephala*), australian salt bush (*Atriplex semibaccata*), and pickleweed (*Batis maritime*) adjacent to the Honoapi‘ilani Highway, as well as, small stands of *niu* (*Cocos nucifera*), *kou* (*Cordia sebestena*), and other introduced plant species. Inland of the highway the natural environment is dominated by fallow sugar cane fields with vegetation that can be characterized as grasslands and shrublands.

1.2.2 Built Environment

The most prominent feature of the modern built environment within the current project area consists of the two-lane Honoapi‘ilani Highway. Other features include residential homes and associated infrastructure both *mauka* and *makai* of the Honoapi‘ilani Highway, the Olowalu General Store, and unimproved cane haul access roads.

Section 2 Summary of Background Research

The division of Maui's lands into political districts occurred during the rule of Kaka‘alaneo, under the direction of his *kahuna*, Kalaiha‘ōhi‘a (Beckwith 1970:383). This division resulted in the creation of twelve districts or *moku* during traditional times: Kula, Honua‘ula, Kahikinui, Kaupō, Kīpahulu, Hāna, Ko‘olau, Hāmākua Loa, Hāmākua Poko, Na Poko (Wailuku), Kā‘anapali, and Lāhainā (Alexander 1890:106; Sterling 1998). The *moku o loko,* or *moku* as it is most commonly called, literally means "to cut across, divide, separate" (Lucas 1995:77). When used as a term of traditional land tenure, a *moku* is similar to a modern political district. Within these *moku* are smaller units of land termed the *ahupua‘a,* the name of which is derived from the Hawaiian term *ahu* (altar), which was erected at the point where the boundary of land was intersected by the *alaloa* (main road encircling the island), upon which a *pua‘a* (hog) image, carved of kukui wood and stained with red ochre, was and placed along with the tax of food items from that particular land unit, paid to the *ali‘i* (chief) (Alexander 1890:105). The typical configuration of the *ahupua‘a* extends from the sea to the mountain, and while the boundary generally followed prominent landforms (i.e. ridge lines, the bottom of a ravine, or defined by a depression) there were times where a stone or rock that was notable from a tradition or sacred uses would mark a corner or determine a line (Alexander 1890:105-106). Similarly, the line of a growth of a certain kind of tree, herb or grass, or the habitat of a certain kind of bird would sometimes define a division (Alexander 1890:105-106).

The present study area includes the entire *ahupua‘a* of Olowalu, a land division located on the leeward slopes of Mauna Kahalawai (West Maui Mountains) (Figure 6) in the traditional *moku* of Lāhainā (Figure 7). The boundary of Olowalu Ahupua‘a, along the most *mauka* extent, follows the ridge separating the headwall of Iao Valley from that of Olowalu Valley and extends *makai* touching the landforms of Helu and Lihau, ending at Awalua on the Launiupoko side and incorporates the landforms of Halepohaku and Ulaula, ending at Mōpua on the Ukumehame side (see also Figure 4).

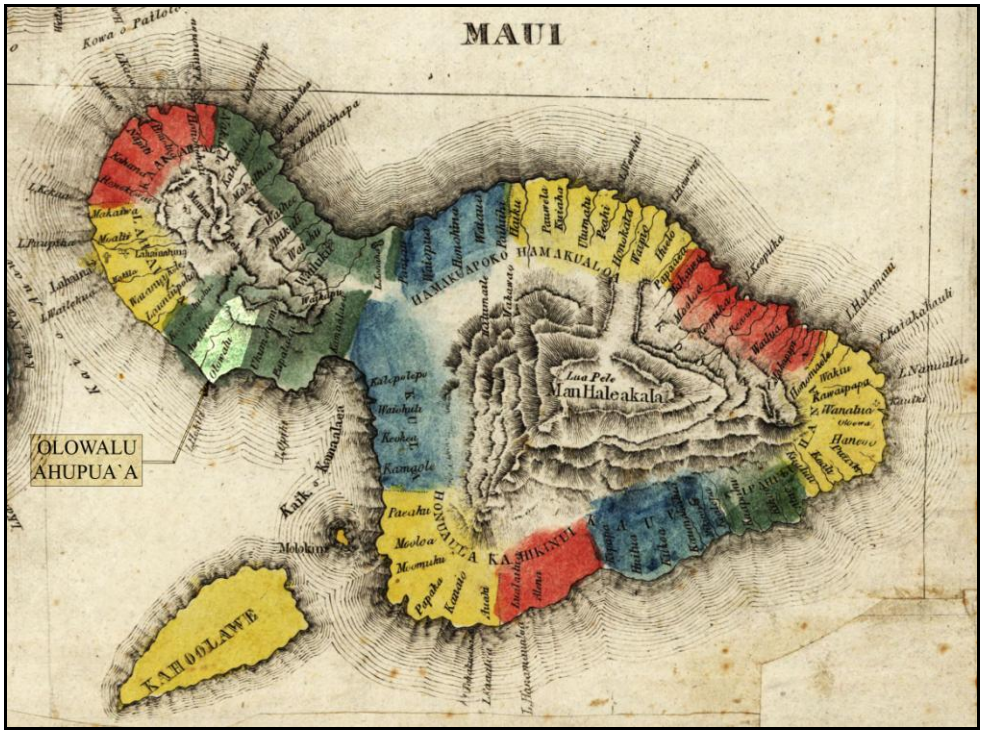

Figure 6. A portion of the S.P. Kalama Map (1837) showing the location of Olowalu Ahupua‘a in relation to the *moku* of Maui Island.

Figure 7. A portion of the F.S Dodge map (1885) showing Olowalu Ahupua‘a in relation to the traditional *moku* of Lāhainā (crown lands in yellow).

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2.1 Traditional and Historical Background

In the preface of *Place Names of Hawaii* (Pukui, et al. 1974:x), Samuel Elbert states that:

> Hawaiians named taro patches, rocks and trees that represented deities and ancestors, sites of houses and heiau, canoe landings, fishing stations in the sea, resting places in the forests, and the tiniest spots where miraculous or interesting events are believed to have taken place.
>
> Place names are far from static … names are constantly being given to new houses and buildings, land holdings, airstrips, streets, and towns and old names are replaced by new ones … it is all the more essential, then to record the names and the lore associated with them (the ancient names) now.

Inherent in the statements of Elbert is the knowledge that the oldest place names held meaning and told the story of an area prior to European contact. A study of the place name meanings for the study area may yield some insight into the stories, patterns of life and land use within Olowalu Ahupua‘a. The place names listed below are for land areas, fisheries, land divisions, markers, and other resources identified through research of available historic literary resources like the Hawaiian Government and Territorial Survey Maps (Dodge 1885; Kalama 1837), and USGS Topographic 7-Minute and 15-Minute Series Maps (1925, 1997), as well as consultation with *kama‘āina* and *kūpuna* of Olowalu. Unless indicated otherwise, the spelling and translations presented below are taken from Pukui and others (1974). Alternate spellings are provided where multiple translations were noted from different sources and cited in text.

Lāhainā (*moku*)	*hainā* literally translated as “cruelty” and *la* as “day “or, alternatively, *haina* that translates literally as “merciless” and *lā* as “sun” (Sterling 1998:16-17);“land [of] prophesy” (Ashdown 1970:10)
Awalua	Literally translates as “double harbor” (p.15)
Halepohaku	Literally, “stone house” (p.38-39)
Hawaiikekee (*‘ili*[1])	*keke‘e*: a redup of *ke‘e* (Pukui and Elbert 1986:143) which means crookedness (Pukui and Elbert 1986:141), possibly a reference to the distinctive bend in the *‘ili* boundary, an *‘ili* name associated with LCA 5829E: Apana 1 and 2 to Kawehena located within Olowalu Valley;
Hekili Point	*hekili* is literally translated as “thunder” (p.44)
Kaluaaha (*‘ili*)	Literally, “the gathering pit” (p. 78); an *‘ili* of LCA 1742: Apana 2 to Z. Kaauwai and LCA 5829H: Apana 1 to Nahue located in the area of the former Olowalu Mill Site.
Kamani (*‘ili*)	A large tree (*Calohpyllum inophyllum*) which produced a hard wood that was formerly made into calabashes (Pukui and Elbert 1986:125); An *‘ili* name associated with LCA 6728: Apana 1 to Mahulu, LCA 1742 Apana 1 to A Kaauwai, LCA 5829E: Apana 3 to Kawehena, LCA 8573: Apana 1 to

[1] a land subdivision of an *ahupua‘a* with its own name and defined boundary

Alexander, William DeWitt

1890 A Brief History of Land Titles in the Hawaiian Kingdom. In *Hawaiian Almanac and Annual for 1891*, edited by T. G. Thrum. Press Publishing Company Print, Honolulu, HI.

	Kailiula, LCA 8817: Apana 1 to Kanakaole , LCA 6058: Apana 3 to Peekauai, LCA 5829: Apana 3 to Haole
Kapaiki	Translated as “the small enclosure” a section or *mo‘o* of *ali‘i* lands at Olowalu Ahupua‘a (Mr. Hinano Rodrigues in Lee-Greig and Hammatt 2006)
Kaunukukahi (*‘ili*)	An *‘ili* name associated with LCA 8817: Apana 2 and 3 to Kanakaole, LCA 5952: Apana 1 and 2 to Minamina, LCA 6728: Apana 2 to Mahulu, LCA 6058: Apana 4 to Peekauai
Kuekue (*‘ili*)	An *‘ili* name associated with LCA 8573: Apana 2 to Kailiula
Līhau	literally, “a gentle cool rain”, a gentle rain considered favorable for the work of fishermen (Emerson 1909:241)
Maomao (*‘ili*)	literally a type of fish, a variation of *mamao* or far, calm, clear (Pukui and Elbert 1986:241); An *‘ili* name associated with LCA 7719: Apana 1 to Haia
Mōpua	a traditional village at Olowalu and translates literally as “melodious” (p.158); currently a popular snorkeling spot
‘Ōhi‘a (*‘ili*)	Two kinds of trees, *‘ōhi‘a‘ai* (*Eugenia malaccensis* mountain apple) (Pukui and Elbert 1986:277) and *‘ōhi‘a lehua* (*Metrosideros macropus, M. collina polymorpha*) (Pukui and Elbert 1986:199). Found in the forested regions, the fruit of the *‘ōhi‘a‘ai* was prepared by splitting and drying it in the sun (Pukui and Elbert 1986:277). The wood of the *‘ōhi‘a lehua* is hard and once used for images, spears, and mallets (Pukui and Elbert 1986:199). An *‘ili* name associated with LCA 6058: Apana 1 to Peekauai and claim 10127 by Makanialoha.
Olowalu (*ahupua‘a*)	literally, “many hills” (p.170)
Pākalā	literally translates as the “sun shines” (p.174), a place located just after Mōpua and before Kapaiki
Paumaumau (*‘ili*)	An *‘ili* name associated with LCA 9906: Apana 1 to Pikao and LCA 8546: Apana 1 to Kaawili
Pu‘u Kīlea	literally, “small but conspicuous hill” (p.111), a cemetery
Ulaula	Literally, “red” (p.214)
Wailoa (*‘ili*)	literally, “long water” (p.224); An *‘ili* name associated with LCA 5829: Apana 4 to Haole

2.1.1 He Mo‘olelo no Olowalu

Handy and others (1991) summarize the relationship that traditional Hawaiians have with the natural environment best in the following passage:

> The sky, sea, and earth, and all in and on them are alive with meaning indelibly impressed upon every fiber of the unconscious as well as the conscious psyche. Hawaiian poetry and folklore reveal this intimate rapport with the elements, (Handy, et al. 1991:23-24)
>
> (T)he relationship which existed from very early times between the Hawaiian people … is abundantly exemplified in traditional mele (songs), in pule (prayer chants), and i genealogical records which associate the ancestors, primordial and more recent, with their individual homelands, celebrating always the outstanding qualities and features of those lands. (Handy, et al. 1991:42)

At Olowalu the *mo‘olelo* (traditions) revolve around the surrounding mountains and the elemental characteristics of this *‘aina* (land) which has been known as a *pu‘uhonua* or refuge of Maui since ancient times (Ladana 1858). The winds of Maui, as named and described in the story of Paka‘a, is recounted by J.H. Kanepu‘u (in Sterling 1998:7) and mentions the strong wind of Olowalu in the following excerpt:

> The house breaking wind is at Olowalu,
>
> The kilihau is also there.

The strength and prominence of this wind at Olowalu is additionally described in Hawaiian Proverbs and Poetical sayings gathered by Mary Kawena Pukui (1983) and related below:

> *‘Ōlelo No‘eau 215*
>
> *‘A‘ohe umu mo‘a i ka makani.*
>
> No *umu* can be made to cook anything by the wind.
>
> (Talk will not get the umu lighted and the food cooked. This saying originated in Olowalu, Maui, where it was very windy and hard to light an umu.)
>
> *‘Ōlelo No‘eau 1457*
>
> *Ka makani ha‘iha‘i lau hau o Olowalu.*
>
> The hau-leaf tearing wind of Olowalu. (A gust wind.)
>
> *‘Ōlelo No‘eau 2502*
>
> *Olowalu ihu pāpa‘a.*
>
> Crusty-nosed Olowalu.
>
> (Disparaging expression for the people of Olowalu, Maui, where the wind is said to blow into the nostrils, drying the mucus into crust.)

While not all proverbs were complimentary, as illustrated by ‘Ōlelo No‘eau 2502 above, it is clear that the wind of Olowalu Ahupua‘a was a significant element for the *kama‘aina* of this land and well known by others who did not reside there.

Tempering the “house breaking” wind of Olowalu, is the presence of the *kilihau* (J.H. Kanepu‘u in Sterling 1998:7). Defined by Pukui and Elbert (1986:151), *kilihau* translates as ice-cold shower; cold drizzle; to rain thus. It is possible that this particular rain is a rain that falls at the higher elevations and may possibly be linked with the following ‘saying (Pukui 1983:246):

‘Ōlelo No‘eau 2250

Na lehua o Līhau i pehia e ka noe.

The lehua blossoms of Līhau, weighted by the mist.

(Līhau, a mountain of Maui, was noted for its beautiful lehua blossoms.)

At Olowalu, Līhau is a prominent and picturesque mountain peak located toward the back of the valley. So prominent were the *ohi‘a lehua* blossoms of Līhau that it was said the rich color of the blossoms would reflect onto to the waters of Ka Lae Hekili and turn the water red (Mr. Hinano Rodrigues in Lee-Greig and Hammatt 2006:59).The *lehua* of Līhau also figures prominently in a set of *mele inoa*, or name chants, known as “*He lei no ka Moi Wahine Kapiolani*” (A Wreath for Queen Kapiolani) that were composed for the queen at her coronation and represented each island (Stillman 1996). The following *mele, Aia i Lihau ko lei nani*, written by a Mrs. Paupau, and translated by Mary Kawena Pukui, was the *mele* for Maui (Stillman 1996):

Aia i Lihau ko lei nani	At Lihau is your beautiful lei,
O ka ao lehua i poe i ka manu	Made of the full blown lehua loved by birds,
Ke haku a mai la e ka lau makani	It is braided together by the wind’s deft fingers
a hono o Lele ua lai lua	On the calm and peaceful realm of Pi‘ilani
Luana i Hauola kahi manao	Two thoughts enter the mind
I ka lai huli o ka Maaa	With the conflicting blowing of the Maaa
Hanohano ka opua i ka malie	Proudly appear the clouds in the calm
I ke kau a ke ao i Maunalei	As they gather on Maunalei
He lei hoi no ua lai nei	The lei is to be worn by you on a calm day
No ka nalu haihai maka a Uo	On the rolling surf of Uo
Ke noho nei no au i ka lulu	The sea dwells there before the calm
Me na lai elua a ka manu	Beside the pleasant haunts of birds.
Alia oe la e Haleakala	Wait there, Haleakala,
E alai nei ia Kauiki	Before you hide Ka‘uiki from view.
Ua maikai ke alo o Piiholo	Beautiful is the face of Pi‘iholo
I ka noho a ka ua ulalena	Fore there dwells the ‘ulalena rain.
Haina ka wahine nona ka lei	This is in praise of the chiefess whose lei chant this is,
O Kapioloni i ka iu o ka moku	Kapi‘olani, so high above.

2.1.1.1 The Origins of Pu‘ulaina at Wahikuli and the Role of Līhau

Prior to her current incarnation as a mountain peak, Līhau was once a woman who had a child with Eeke named Pu‘ulaina, a now prominent landform in Wahikuli Ahupua‘a. Fornander (1919b) recounts the following regarding the birth of Pu‘ulaina and the transformation of Līhau to a hill at Olowalu:

> …some say it was begotten by two mountains, Eeke (the summit crater of the West Maui Mountains) and Lihau (the mountain top back of Olowalu). Eeke was the husband and Lihau was the wife. They were real persons, but it will be shown later the reason for their being changed to mountains. After they had lived as man and wife, a child was born to them, a son, the subject of this story which we are considering. But after some time Eeke became entangled, for he saw a beautiful woman, Puuwaiohina from Kauaula, and they committed adultery. Because of this, Lihau thought to choke the child to death, so that the two of them could go and do mischief; this caused them to quarrel. Eeke took the child to his mother, Maunahoomaha, and left him with her. After that their god, Hinaikauluau, placed a restriction over them; they were not to live together, nor were they to have any intercourse with others; but ten days after this order, Eeke again committed adultery with Puuwaiohina above referred to, who was a younger sister to Lihau. Because of this their god punished them by making Eeke a mountain and Puuwaiohina a mountain ridge; that is the ridge prominent at Kauaula.
>
> After that, Lihau was possessed with love for their child, so she asked Maunahoomaha for permission to meet her son, that was agreeable to her mother-in-law, and when she met her child she was glad. When she realized what a handsome man her favorite son had grown to be, she gave him for husband to Molokini, one of the noted beauties of that time, because she was the wife intended for him …
>
> However, arriving on Maui, this was one of Pele's (the fire goddess) cruel deed; one of her younger sisters saw how handsome Puulaina was, so she asked Molokini to let her have him for husband. The other refused, for she was greatly in love with her own husband; so she (Molokini) was changed into a little island, and she has remained so to this day.
>
> When Lihau heard of this, she grieved for her daughter-in-law, so she went to consult Pele on the matter. But Pele replied gruffly: "If that is the case, then I say to you that you will die; also your son." Lihau was there and then changed into a hill where Pele resided for some time; the son also died. But the one whose was the desire, earnestly entreated and begged that her husband be spared. But the red-bleary-eyed (Makole-ulaula, an epithet applied to Pele) did not wish it that way. That was how the son became a hill and has remained such until this day.

2.1.1.2 Drought and the Lesson of Hua

There is an ancient proverb, or *‘olelo no‘eau*, that warns others to not talk too much of one's king and is a reminder that trouble will follow those who destroy the innocent (Pukui 1983:194 [1811]):

> *Ko‘ele na iwi o Hua i ka lā.*
>
> The bones of Hua rattled in the sun.

According to the story of Hua, retold by Fornander (1919a:514-516), he was a chief of Lāhainā who had forsaken his *kahuna*, or priest, Luaho‘omoe and caused a drought throughout the Hawaiian Islands. The mountains of Olowalu and *ua‘u* (Hawaiian Petrel [*Pterodroma sandwichensis*] that nest there are central to the story:

> There lived here in Lahaina a chief named Hua … he desired to get some ua‘u squabs to eat; he sent some men up to the mountains above Oloalu [sic] to get some ua‘u squabs to satisfy his desire. He did not wish for birds from the beach. When the birds were obtained, they were to be taken to the priest for him to ascertain where the birds came from; if he should give out the same information as the men had given to the chief as to the source of the birds, then he would be safe; if he should give a contrary answer, he would be killed. The name of this priest was Luahoomoe and he also had children. When the men went up, they could not find any mountain birds at all, so they decided to get some shore birds. When they caught some, they daubed the feathers red with dirt so that the chief would think the birds came from the mountain. When they returned and handed the birds to the chief, he was exceedingly glad because he thought the birds came from the mountain. The chief told the men to take them to the priest for his inspection. The priest perceived, however, that the birds came from the seashore. Then the chief said to the priest: "You shall not live, for you have guessed wrongly. I can very well see that these are mountain birds." Then and there an imu was prepared in which to bake the priest.
>
> Before he was placed in the imu, however he said to his children: "You two wait until the imu is lighted, and when the smoke ascends, should it break for the Oloalu mountains, that indicates the path; move along; and where the smoke becomes stationary, that indicates where you are to reside … Then the priest was cast into the oven and the opening closed up tightly. The smoke arose and darkened the sky … after the priest had been in the imu for two days, he reappeared and sat by the edge of the imu unknown to any one; the chief thinking all the time that he was dead; but it was not so.
>
> When the smoke ascended and leaned towards the Oloalu mountains, the two sons went off in that direction; the cloud pointed towards Hanaula, and there it stood still, so the two sons ascended to the place and resided there…
>
> Then the whole of Maui became dry; no rain, not even a cloud in the sky, and people died from lack of water. The smoke that hung over Hanaula became a cloud, and rain fell there.
>
> Hua, the chief, lived on, and because of the lack of water and food he sailed for Hawaii, the home of his elder brother; but because Hawaii also suffered from lack of water and food he came back and lived at Wailuku. Wailuku also did not have any water, and that caused the chief to be crazed, so he leaned against the edge of the precipice and died, and that was the origin of the saying "The bones of Hua rattle in the sun."

Fornander further notes that the saying, "The bones of Hua rattle in the sun," refers to the chief whose wickedness won him the ire of his people. In an ultimate show of disregard, they let his body lie where he fell so that his bones bleached in the sun and rattled in the wind. Hence the above proverb warning others to not destroy the innocent as Hua had destroyed Luaho‘omoe and in that caused great suffering to people of Hawai‘i and ultimate desecration of his bones by his own people.

2.1.2 Traditional Hawaiian Period prior to Western Contact

2.1.2.1 Traditional Settlement and Subsistence

As emphasized by Handy and others in the following summary, the *ali‘i* and *maka‘āinana* were attracted to the Lāhainā District by its natural resources and geographic position:

> Lāhainā District was a favorable place for the high chiefs of Maui and their entourage for a number of reasons: the abundance of food from both land and sea; its equable climate and its attractiveness as a place of residence; it had probably the largest concentration of population, with its adjoining areas of habitation; easy communication with the other heavily populated areas of eastern and northeastern West Maui, ‘The Four Streams,’ and with the people living on the western, southwestern and southern slopes of Haleakala; and its propinquity to Lanai and Molokai. (Handy, et al. 1991:492)

They further indicate that Olowalu, along with the three other major waterways of the Lāhainā District (Ukumehame, Launiupoko, Kaua‘ula), provided a productive leeward environment for the cultivation of a wide range of agricultural goods:

> Southeastward along the coast from the *ali‘i* settlement were a number of areas where dispersed populations grew taro, sweet potato, breadfruit and coconut on slopes below and in the sides of valleys which had streams with constant flow. All this area, like that around and above Lāhainā, is now sugar-cane land … Olowalu, the largest and deepest valley on southwest Maui, had … extensive *lo‘i* lands both in the valley and below. Just at the mouth of the valley we found in 1934 a little settlement of five *kauhale* (family homes) surrounded by their flourishing *lo‘i*. There are said to be abandoned *lo‘i* far up in the valley. (Handy, et al. 1991:492)

Winslow Walker of the Bishop Museum corroborated the writings of Handy and others during an island-wide archaeological inventory survey where he notes the presence of *lo‘i* and ancient house sites within Olowalu Ahupua‘a (Walker 1931):

> “Terraces for the cultivation of taro were seen on West Maui in the vicinity of... Lāhainā, Olowalu, and Ukumehame” [p.71]
>
> Above Mrs. Naho‘oikaika’s house (at Olowalu), old taro patches and house sites, old *auwai* (traditional Hawaiian irrigation ditches) were used for sugarcane ditches...at the edge of a house platform (15 by 28 feet) there is a large red stone used as a *papamu* for *konane* [p.77]

While the upland areas provided a good environment for agricultural crops, the coastal reaches, were rich in marine resources. Most of the fishing grounds lying between Lāna‘i, Kaho‘olawe, Ukumehame, and Lāhainā were only one to two miles apart (Daniel Kahā‘ulelio in Maly and Maly 2003:22). *‘Ō‘io*[2] fishing, using a method referred to as *mamali ‘ō‘io*, was done just beyond the reef and in places close to shore from the steamer landing of Ma‘alaea to the cape of Kunounou at Honokapohau, in the district of Lāhainā. These were the places in which fishing was done by those of Olowalu, Lāhainā, Ka‘anapali, Honolua, and Honokohau (Kahā‘ulelio 2006:141).

[2] Adult ladyfish, bonefish (*Albula glossodonta*)

As the coastal environs were intensively used for gathering marine resources, it should follow that the existence of permanent or re-current seasonal habitations would be present along the coastline. *Kuleana* claims for *pahale* or house lots along the Olowalu coastline reflects a picture of settlement in the coastal environs (see Section 2.1.4 and Figure 7).

A basic comparative picture of the pre-western contact population of Olowalu Ahupua‘a is suggested by figures in nineteenth century missionary censuses (Schmitt 1973). Results of the 1832 census, in which the total population of Maui is 35,062, give the following populations: for Lāhainā, 4028; for Ukumehame, 573; and for Olowalu, 832. These three figures, when combined, represent 15 percent of the total Maui population. Allowing for post-contact distortions (e.g., disease and commercially-inspired population shifts), the population totals suggest that this portion of Maui accommodated a substantial portion of the island's pre-western contact population.

An “overland” trail system allowed pedestrian access between Lāhainā and the north coast of West Maui, as well as into the upper forests for bird-catching and the collection of wild plant resources. According to Handy and others (1991:490), the trail extended *mauka* in Olowalu Valley to the highest point of the West Maui summit at Pu‘u Kukui, then descended to Waiehu on the northern side ui (Handy, et al. 1991:490; Sterling 1998:26).

Kealaloloa, located within the modern boundaries of Ukumehame Ahupua‘a, is a broad ridge of the southeast flank of West Maui which ascends *mauka* of a traditional Hawaiian coastal settlement (Walker 1931:43). Following this ridge *mauka* provides a direct and easily navigated route (now a jeep road) to the West Maui summit area, at the headwaters of Pohakea stream on the east and Ukumehame stream on the west. From this point, at Hana‘ula, the trail likely continued along the summit ridge to intersect the inland Olowalu-Pu‘u Kukui-Waiehu “overland” trail (Handy, et al. 1991:490).

2.1.2.2 Politics and Warfare

The Mokupuni of Maui, being the second largest island in the Hawaiian island chain, was a major center for political development during pre-contact and early historic times (Kirch 1985:135). Many battles were fought between the Maui Island and Hawai‘i Island polities, with the earliest conflicts primarily centered on the east coast of Maui.

During the reign and following the death of Maui ruler Kekaulike in the early 1700's, the chiefs of Maui and Hawai‘i were once again at war, this time bringing the battles closer to the present study area. After Kamehameha-nui, the original successor of Kekaulike, was defeated in battle at Lāhainā by his older brother Kauhi, Alapa‘i (ruling chief of Hawai‘i) brought Kamehameha-nui back to Hawai‘i and began making plans for battle against Kauhi. Around 1738 Alapa‘i and his Hawaiian forces occupied the Lāhainā region, holding the lands from Ukumehame to Māla and employed the following wartime tactics to keep the subjects of Lāhainā under control:

> A whole year Alapa‘i spent in preparation for the war with Maui. It was in 1738 that he set out for the war in which he swept the country. What was the war like? It employed the unusual method in warfare of drying up the streams of Kaua‘ula, Kanaha, and Mahoma (which is the stream near Lāhainā luna). The wet taro patches and the brooks were dried up so that there was no food for the forces of Ka-uhi or for the country people. Alapa’i's

> men kept close watch over the brooks Olowalu, Ukumehame, Wailuku, and Honokowai. (Kamakau 1992:74)

This tactic, along with a day of hard fighting at Pu‘unene near Mailepai, won this war for the forces of Alapa‘i and Kamehameha-nui, the latter of whom became the ruling chief of Maui (S. Kamakau 1992:75).

Kamehameha, future *Mō‘ī* (King) who unites the Hawaiian Islands under a single ruler, finds himself at the *pu‘uhonua* of Olowalu following the great battle of Kakanilua, a battle fought on the sand hills of Kalua where Kalaniopu‘u of Hawai‘i lost to Kahekili of Maui (S. Kamakau 1992:85-88). Joseph Mokuohai Poepoe (inSterling 1998:24) relates the story of Kamehameha at Olowalu:

> Four days after the battle of Kakanilua the chiefs of hawaii received a kind of welcome from King Kahekili of Maui. Kahekili told the Hawaii chiefs to pause awhile on Maui and rest. The land which Kahekili gave them is the place where they stayed. It was Puuokapolei at Olowalu. Their division of land reached as far as Lahaina.

Kahekili, who rose to power following the passing of Kamehameha-nui, was one of the more powerful and ambitious chiefs of Maui who, by 1786, ruled O‘ahu, Moloka‘i and Lāna‘i (Daws 1968:31). During the later years of Kahekili’s reign and the early years of Western contact, the traditional Hawaiian lifestyle changed rapidly, as western goods, particularly weapons and metals became obtainable through either trade or theft. Daws comments that several of the early traders “saw nothing wrong in arming one Hawaiian chief against another as they sold guns to as many factions as they could find and then encouraged them to fight” (Daws 1968:32).

The “Olowalu Massacre,” one of the more infamous events immediately following European contact reveals how conflicts between early western traders and native Hawaiians were easily provoked as western goods became the focus of Hawaiian needs. On February 1790, the Eleanora arrived from Liverpool, England captained by Simon Metcalfe, and anchored off of Honua‘ula (S. M. Kamakau 1992:145). Kalola, the widow of Kalaniopu‘u, was residing at Honua‘ula at the time of the arrival of the ship with her new husband Ka‘opuiki when the following events occurred:

> … Ka-‘opu-iki was glad to go on board to trade for iron, muskets, and red cloth; but muskets were the objects he most desire. The people brought in exchange hogs, chickens, potatoes, bananas, and taro. Night fell before they had finished their bargaining, and the next day Ka-‘opu-iki and others went out again to trade further; but the strangers were unfriendly and beat them off with ropes. When Ka-‘opu-iki heard from the people of Honua‘ula about the small boat which it was customary to keep tied to the back of the ship, he determined to steal the boat at night. At midnight when the guard on the skiff and the men of the ship were sound asleep, Ka-‘opu-iki and his men cut the rope without being seen from the ship. As they were towing it along, the guard awoke and called out to those on board the ship, but he was too far away to be heard; he was killed and his body thrown into the sea. The boat was taken to Olowalu and broken up, and the iron taken for fishhooks, adzes, drills, daggers, and spear points.
>
> The next morning when the men on the ship awoke and found both skiff and watchman missing and realized that the boat had been stolen and the watchman killed, they shot off the cannon upon Honua‘ula and killed some men, among them a peddler from Wailuku, named Ke-aloha, who had come to Honua‘ula to peddle his wares. Two men were held

> on board the ship, one from Honua‘ula and one from Olowalu, perhaps because these men had given information about the theft or perhaps because the foreigners suspected that Ka-‘opu-iki and the others … said they were from Olowalu, were responsible for the theft. That evening they sailed to Olowalu, and in the morning Ka-lola declared a tabu restricting canoes from going out to the ship on pain of being burned to death of they disobeyed. “Withered grass” (Mau‘uae) was the name of this law…on the fourth the tabu was ended, and canoes in great numbers went out to trade with the foreigners … Little did they suspect the terrible carnage that was to follow, a carnage without any effort to apprehend and punish the offenders or any pity for the innocent. So these Christians murdered the Hawaiian people without any more mercy than cannibal Nukuhivans show, or people of pagan lands. … At noon that day the *Eleanor* sailed, and the people went out and brought the dead shore … and the dead were heaped on the sands at Olowalu. Because the brains of many were oozing out where they had been shot in the head, this battle with the ship *Eleanor* and her captain was called “The spilled brains” (Kalolopahu). It was a sickening sight … (S. M. Kamakau 1992:145-146)

The arrival of the Eleanora plays significantly into the history of Hawai‘i not only for the atrocity that was the Olowalu Massacre, but for the shipboard presence of John Young who, along with Isaac Davis, would become a favorite of Kamehameha I and instrumental as leaders in the wars of unification which would bring all of the islands under a single ruler. This push for unity would shift the traditional sociopolitical system from a Chiefdom hierarchy to a Kingdom under the Kamehameha line and make way for rapid changes in the islands.

2.1.3 Early Post-Contact Period

The nineteenth century brought to Lāhainā, and the surrounding lands which include the study area, a multitude of commercial, demographic, social, and religious changes that were encouraged by the burgeoning foreign influx. During the year 1819 the first whaling ships arrived in Hawaiian waters and Lāhainā Harbor became a primary port of call for provisioning ships in the islands. Closely following the arrival of the first whaling ships, thefirst Protestant missionaries and their families arrived in Lāhainā in 1823. The missionary William Ellis, who visited Lāhainā during the 1820’s, described the landscape that had entranced both the Hawaiians themselves and the nineteenth century newcomers:

> The appearance of Lāhainā from the anchorage is singularly romantic and beautiful. A fine sandy beach stretches along the margin of the sea, lined for a considerable distance with houses and adorned with shady clumps of kou-trees, or waving groves of cocoa-nuts. . .The level land of the whole district, for about three miles, is one continued garden, laid out in beds of taro, potatoes, yams, sugar-cane, or cloth-plants. The lowly cottage of the farmer is seen peeping through the leaves of the luxuriant plantain and banana tree, and in every direction white columns of smoke ascend, curling up among the wide-spreading branches of the bread-fruit tree. The sloping hills immediately behind, and the lofty mountains in the interior, clothed with verdure to their very summits, intersected by deep and dark ravines, frequently enlivened by waterfalls, or divided by winding valleys, terminate the delightful prospect. (Ellis 1826:76-77)

Specific to Olowalu was an excursion around part of the island beginning at Lāhainā by the Rev. Hiram Bingham and Rev William Richards. In a letter to the American Board of Commissioners for Foreign Missions, Mr. Bingham describes their journey and overall impressions:

> Day before yesterday, Mr. Richards and I set off on an excursion to explore a part of the Island, and to visit the king, now on the other side. By the favor of the king's mother and her husband we obtained a good double canoe to facilitate our progress. We sailed along the shore in the direction of Maurakea (Mow-rah-ka-ah) [Mauna Kea] on Owhyhee, [Hawaii] of which we had a view among the clouds. Seven or eight miles from Lahinah we alighted on shore, and walked a mile or two through a pleasant plantation called Oroaru (O-ro-ah-roo) [Olowalu] belonging to the king's mother and containing 128 houses; then joined the canoe again. We found that some of the people had attended divine worship. As I was giving them a few words of instruction, I heard a lad pronounce the name of JESUS CHRIST. I asked him by whom he had heard the name of our Savior; he replied, "By the missionaries at Lahinah." We proceeded sailing along the shore, several miles passed [sic] several plantations belonging to Urumaheihei (Oo-roo-mah-ha-ee-ha-ee) [Ukumehame] and containing about 80 houses … (Bingham 1824)

The whaling trade flourished until the 1860's and gave impetus to the development and growing population of Lāhainā. Between 1824 and 1861, 4747 whale ship arrivals were recorded for Lāhainā, representing 47 percent of the total arrivals in all ports of the Hawaiian Islands. Figures from an 1846 census of Lāhainā documents the following changes brought to the area midway through the nineteenth century: 3,445 Hawaiians, 112 foreigners, 600 seamen, 155 adobe houses, 822 grass houses, 59 straw and wooden houses and 529 dogs (Jarves 1847:240). With an increasing population of foreigners entering Lāhainā, there was a need to increase the traditional agricultural surplus, primarily under the control of the *ali‘i* class, for economic trade. Henry Whitney, editor for The Pacific Commercial Advertiser, implies that western vegetables became a common and abundant constituent of the Hawaiian gardens in the following excerpt about Maui Island:

> ...Fruits are generally abundant. The grape seems to luxuriate in the rich soil, and the sunny, clear weather of Lāhainā is, par excellence, the fruit of this place or Islands. Figs, bananas and melons are produced in abundance, and pumpkins enough for all New England to make pies for a general Thanksgiving (Whitney 1858)

After the consolidation of the rulership of the Hawaiian Islands by Kamehameha I early in the nineteenth century, Lāhainā became the "capitol" of the kingdom until the 1840's when the government moved to Honolulu. The sugar cane Ellis observed in the environs of Lāhainā in the 1820's would become, during the second half of the nineteenth century, the basis for a commercial venture that would reshape the landscape within much of the present study area.

2.1.4 Mid- 1800s and the Great Māhele

With the unification of the Hawaiian Islands in 1791(Andrews 1865:556) and the arrival of the first Missionaries in 1820 (American Board of Commissioners for Foreign Missions 1832; Andrews 1865:556), western commerce and the Christianization of the Native Hawaiian people swept across Lāhainā Moku. The lands surrounding Lāhainā town were cultivated in commercial sugar (Gilmore 1936:198-203), while the whale trade (Graves, et al. 1998), the Irish potato trade in response to the California Gold Rush (Gilman 1906:177), and the establishment of the Lahaina Mission Station and Lahainaluna High School, drew people to the waterfront areas as well as the town itself. This trend made Lāhainā town one of the main religious and educational centers for the entire island chain (S. Kamakau 1992:304) and strongly influenced the religious and economic development of adjacent land divisions.

2.1.4.1 Religious Development

The Reverend Richard Williams established the Olowalu Mission of the Lāhainā Station between around 1829, and provided Christian meetings for the people there. In a letter written October 2, 1830, by Richard Williams and Jonathan S. Green, a review of the status of public worship on the Sabbath was reported thus:

> In every considerable village from one end of the island to the other, the people have erected a house for the worship of God … At Olualu [sic], a village eight miles distant from Lāhainā, we have preached during the season, nearly thirty sermons to a congregation of five to six hundred. This and a single Sabbath at Kanepale, a village equally distant from Lāhainā in another direction, is all that we have been able to do for the people on this side of the island … The congregation at Olualu [sic] listen with seriousness to the preaching of the gospel. A few teachers of schools there have formed themselves into a Bible class, who have been instructed in the interval between the services of the Sabbath. (Richards and Green 1831)

In an 1837 report to the American Board of Commissioners for Foreign Missions, a review of meeting-house construction in the Hawaiian Islands was presented with the following comment on progress at Olowalu:

> A *doby* meeting-house, or one the walls of which are of clay hardened in the sun … has been built at Oloalu [sic], on Maui. (American Board of Commissioners for Foreign Missions 1837)

Mr. Hinano Rodrigues (in Lee-Greig and Hammatt 2006:A-32) offered the following description of the effort that went into building the Olowalu Church (see Figure 8):

> The church was founded in 1835 … what happened is that my *tutu* folks formed a human line from the church up the mountain, and then they passed the stones down to the church, then they went across the street and got the coral and ground the coral to make cement yeah? And they built the church.

Figure 8. General Interior View of the Olowalu Church, photographed by Jack E. Boucher in 1966 for the Historic American Buildings Survey (HABS), and the Historic American Engineering Record (HAER) (National Park Service).

By the mid 1800's Hawai‘i, the Lāhainā area in particular, was infiltrated by a growing community of foreign business entrepreneurs, transient whalers, and Calvinist-minded missionaries; all of whom had personal interests to protect and virtues to impress upon the traditional Hawaiian people. Encouraged by these foreign factions, the western-like land divisions of the Māhele were instigated under Kamehameha III (Kauikeaouli). The series of acts to "Organize the Executive Ministry" known commonly as the Organic Acts of 1845 and 1846, initiated the process of the Māhele, or division of Hawaiian lands, which would introduce private property ownership into Hawaiian society, as well as, transform the governance of the Kingdom from a full monarchy to a constitutional monarchy (Van Dyke 2008:32-33). Beginning in 1848, the Land Commission oversaw land divisions of three groups: Crown Lands (for the King); Konohiki or Ali‘i Lands; and Government Lands, all of which were "subject to the rights of native tenants" (Wong Smith in Graves and Goodfellow 1991).

In 1848 the crown and the *ali‘i* (royalty) received their land titles and *kuleana* awards for individual parcels within the *ahupua‘a* were subsequently granted in 1850 (Alexander 1890:114). Crown Lands are lands defined as follows:

> … lands reserved by Kamehameha III, March 8, 1848, "for himself, his heirs and successors forever", as his private property.

At the death of Kamehameha IV, it was decided by the Supreme Court that …under the confirmatory Act of June 7th, 1848, "the inheritance is limited to the *successors* to the *throne*," "the wearers fo the crown which the conqueror had won," and that at the same time "each successive possessor my regulate and dispose of the same according to his will and pleasure as private property, in the manner as was done by Kamehameha III." (Alexander 1890:121)

As illustrated above, in designations of lands as Crown, and through all awards of whole *ahupua‘a* and *ili* to specific *ali‘i*, the rights of the native tenants were expressly reserved, "*Koe na Kuleana o Kanaka"* (Reserving the Rights of Native Tenants) (Alexander 1890:114). In an Act ratified on August 6th, 1850, the gathering rights of the common people for personal use, which included the gathering of both terrestrial and marine resources, in addition to the right to water and the right of way on the lands of the Konohiki, were guaranteed and embodied in Section 10477 of the Civil Code (Alexander 1890:114-115). By this same Act, resolutions passed by the Privy Council granted fee simple titles, free of all commutation, with the exception of awards granted within the towns of Honolulu, Lāhainā, and Hilo, to all native tenants for their cultivated lands and house lots, (Alexander 1890:115). *Kuleana* awards were presented to tenants of the land, native Hawaiians, naturalized foreigners, non-Hawaiians born in the islands, or long-term resident foreigners, who could prove occupancy on the parcels prior to 1845. Despite the effort to allocate lands to the *maka‘āinana*, the *ali‘i* control of the majority of lands persevered and, as the future would indicate, much of these lands were ultimately obtained by foreigners for sugarcane enterprises.

The majority of Olowalu Ahupua‘a was retained by Kamehameha III as Crown Lands. Within these lands, most of the *kuleana* claims where concentrated along Olowalu Stream in the *mauka region* and along the coastline of the *ahupua‘a* in the *makai* areas. The primary uses of the *kuleana* claims in the upper environs and along the stream bed were for agricultural pursuits, with some used as house lots, while the claims along the coastal regions consisted primarily of house sites with home gardens. Again, these land claim testimonies affirm that the *kuahiwi* or upper forested regions were a focus of gathering or maintaining household plant resources such as *wauke*, *hala*, and *‘ohi‘a* while the watered valley bottom was good for *lo‘i kalo* (pondfield taro) with cultivation of *kula* crops (e.g. sweet potatoes and dryland taro) or *kihapai* presumably along the dryer upper alluvial plains (Table 1 and Figure 9 through Figure 10).

References to adjunct *po‘alima*, or agricultural lands tended for the *ali‘i*, and *konohiki* lands are accounted in the native or foreign testimonies as well. Of note, one of the testimonies given during the Mahele claims that the *konohiki*, had three *lo‘i* plots in the middle of his land. Following the Mahele, in 1871, surveyors noted that "140 konohiki lois" were present on one side of Olowalu stream (Letter to J.O. Dominis from Nahaolelua, September 14, 1871-State Archives files).

Table 1. Sample of Land Commission Awards within Olowalu Ahupua‘a

Helu	Royal Patent Number	Claimant	‘Ili	Award Details
01742:02	2154	Kaauwai, Z.	Kailoaiki/ Wailoanui	*kula* land adjacent to Olowalu Stream
0240	None	Clark, John	Kaluakanaka	House lot
04376:01	6267	Keahi	Puukoloohilo	25 *mo‘o* of *kula* (pasture) land
05620:01, 04	5477	Kehele	Maomao, Wailoa	Section 1 is *kalo* land adjacent to Olowalu Stream, Section 4 is 2 *lo‘i* adjacent to Olowalu Stream
05829:H	4840	Nahue,	Kaluaha	2 *lo‘i* and 1 house lot adjacent to Olowalu

Helu	Royal Patent Number	Claimant	‘Ili	Award Details
		wahine		Stream
05952:01	5181	Minamina	Kaunukukahi	A house lot adjacent to the government road
06728:2	4952	Mahulu	Kaunakukahi	1 house lot and *kula*; referred to as “School Building” in boundary description
07719	7209	Haia	Maomao	15 *lo‘i*, 1 *kula*, and 1 house lot adjacent to Olowalu Stream and the government road
08573:1	3810	Kailiala	Kuekue	A house lot
08817:01	7572	Kanakaole	Kaunukukahi	1 house lot
10128:05	4041	Maui, E	Kamani 3	small salt land
8546	3353	Kaawili	Paumaumau Kapaikoa Pu‘uhililiʻole	One parcel of dry taro land near Pu‘u hililiʻole and Kapaikoa. One piece of *Kalo* land in the three *ili* of Pulaia, Pu‘ukoliolio and Hawaiikekee. 16 *lo‘i*, a *pahale* (houselot) with a *wauke* patch, a banana orchard in Paumaumau, a *wauke* forest in Pualaia, another banana orchard in Pahua, and 11 *lo‘i* in Pu'ukoleaohilo
6058	5468	Peekauai	Kamani & Kaunukukahi	2 pieces of forest ‘ohiʻa land, *kalo* in Kamani (10 *lo‘i*) and one in Kaunukuhahi
4376	6267	Keahi	Pu‘ukoliohilo Launukukahi Pualaia	Apana 1 – kula land in the *‘ili* of Puukoliohilo. Apana 2 is *kalo* and *kula* in Pu‘ukoliohilo. Keahi’s testimony states: I tell you of my *kuleana* of 58 *lo‘i*, 5 *puhala lei* and *lauhala* factories and the wood upland from the *mo‘o* lands from my father. I am his heir. From Pikai is our *kuleana* and living compound and the *kula*. There was never any dispute up to this time. And three patches of *wauke*, one located in Pualaia, several stands of *wauke*, 2 more stands, 2 dryland taro gardens--they are in the *kuahiwi* (uplands/forest).

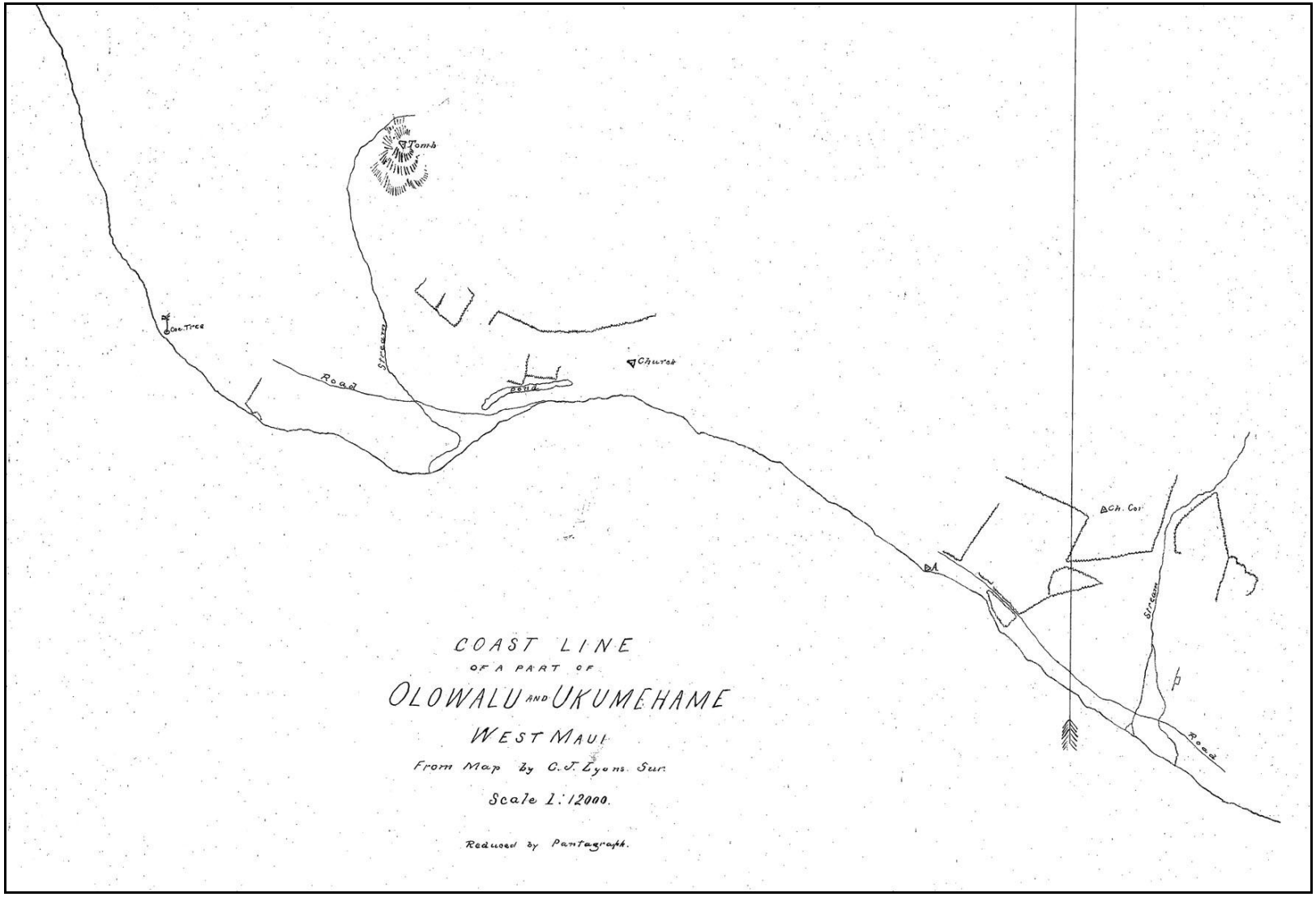

Figure 9. Original route of Olowalu Stream, as surveyed by C.J. Lyons (Dodge 1879), as opposed to the rerouted stream of modern day Olowalu (see Figure 1).

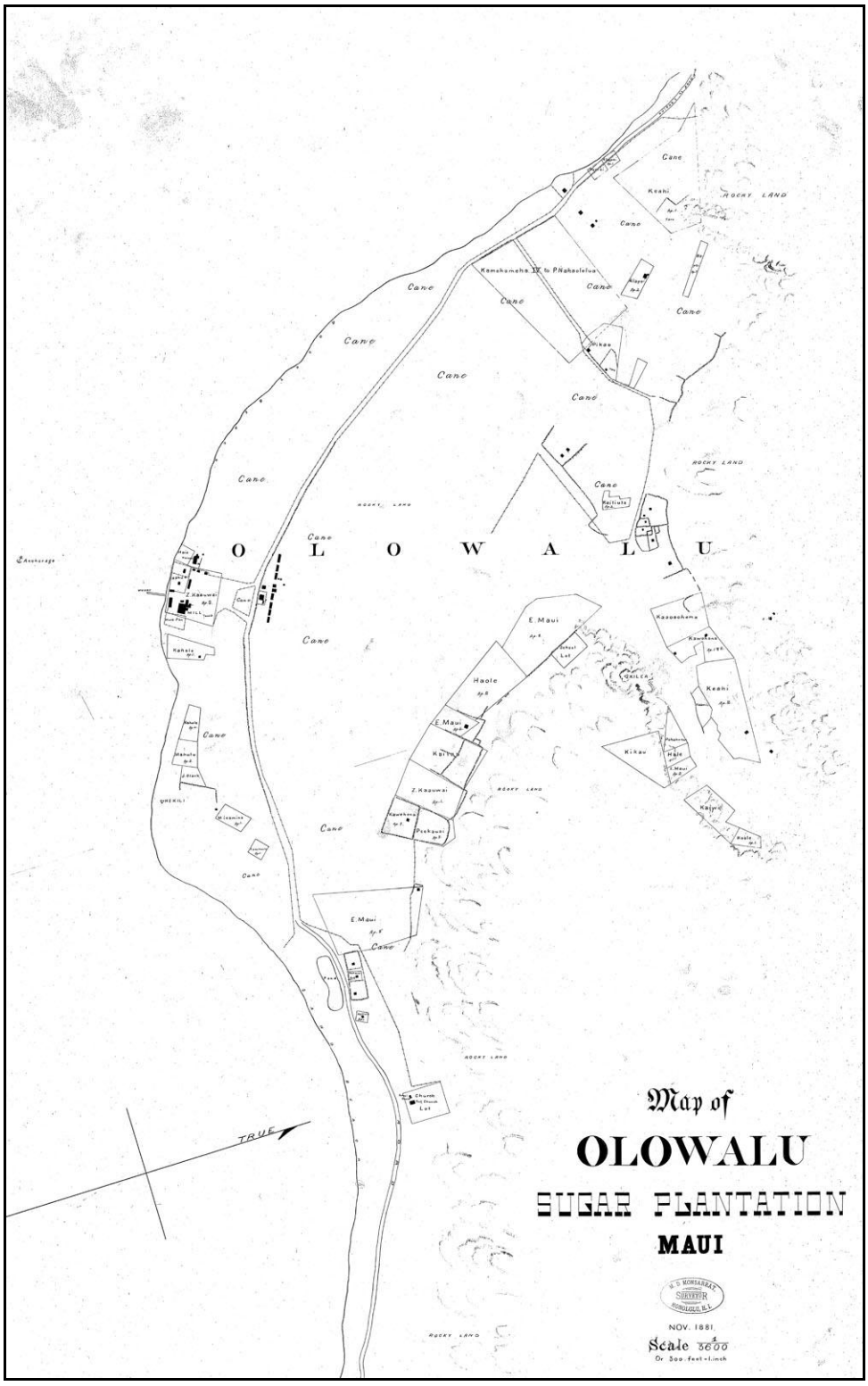

Figure 10. Distribution of *kuleana* awards within Olowalu Ahupua‘a, note concentration along the base of Olowalu Valley and former location of Olowalu Stream bed (Monsarrat 1881).

2.1.5 Development of the Sugar Industry in Olowalu Ahupua‘a (Mid-1800 to Mid-1900s)

The Lāhainā area was the location of some of the earliest sugarcane ventures in Hawai‘i. The earliest reference to sugar grown in the Lāhainā area is credited to G. W. Wilfong, the manager of the Hana Plantation in 1851. In his 1882 writings, Wilfong made note of the various sugar enterprises established on Maui during his first tour of the island in 1849, and described the early sugar operations in Lāhainā. He noted that cane trash was an inefficient fuel for the boiling down of the juice extract into syrup, and that a large supply of indigo (*Indigofera suffruticosa*) was cut down for firewood in Lāhainā. "The area cleared by this means was subsequently used for the first planting of a supply of seed brought by Captain Edwards, of the whale ship George Washington. This cane was called Lāhainā" (Wilfong 1882). ‘

Captain Pardon Edwards had brought samples of two varieties of sugarcane to Hawaii in 1854: one variety from Tahiti, and one from Cuba. Both varieties flourished, but the Tahitian variety excelled, and was named "Lāhainā" (Dorrance and Morgan 2000). The first Lāhainā mill was operated by Judge A.W. Parsons in 1849. This mill plus 1000 acres of land was subsequently auctioned to O.H. Gulick. The Lāhainā Sugar Company was established in 1859, under the direction of Henry Dickenson (Wong-Smith in Graves and Goodfellow 1991:A6). The primary sugarcane enterprises developed during the mid to late 1800's along the alluvial plains of the West Maui Mountains were the Olowalu Sugar Company and Pioneer Mill Company.

Seeking to capitalize on the sugar industry, King Kamehameha V (Lot Kamehameha) leased the Crown Lands of Olowalu and Ukumehame to a new venture, the West Maui Sugar Association, in1871. One of 32 plantations that existed in Hawai`i and one of 12 on Maui listed in an 1872 report, this sugar venture produced an average yearly crop of 600 tons, though its mill had a capacity of 1,200 tons. By comparison, Pioneer Mill produced an average of 1,000 tons for its 1,200-ton capacity mill. Both plantations were hindered by lack of labor. (Ainsworth 2011)

The owners of the West Maui Sugar Association needed to concentrate on the difficult task of growing sugar so they turned to an agent, also called a factor, to handle the sale and shipping of their product. C. Brewer & Co. acted as agent for the yearly crop in the 1870s. Unfortunately, the sugar industry slumped in the 1870s. The Olowalu venture, struggling to survive, received a major blow when Lot Kamehameha died in 1872. Two years later, the West Maui Sugar Association sold both its plantation and mill in 1874 to James C. Campbell and Henry Turton, owners of what was by then called the Pioneer Mill Plantation, for $38,000. (Ainsworth 2011)

When the sugar industry rebounded, as a result of a reciprocity treaty with the United States that went into effect in 1876, and in anticipation of a boom in sugar, Milton Philip, a Lāhainā businessman, started to acquire land in Olowalu and Ukumehame in 1875. Another Maui resident, Goodale Armstrong, also acquired Olowalu property and together they formed what they called the Olowalu Plantation. (Ainsworth 2011)

2.1.5.1 The Olowalu Sugar Company

Utilizing former crown and *kuleana* lands, Phillip and Armstrong started growing sugar in 1876 (Ainsworth 2011) and formally organizing the Olowalu Sugar Company in 1881 on lands given up by the West Maui Plantation. The sugar venture was originally represented by the agency of McFarlane & Co., with shares in the plantation purchased by Theophilus Harris Davies, who became the agent for the enterprise in the late 1880's.

The history of the Olowalu Sugar Company included the construction of a mill and wharf development at Olowalu prior to 1884 (Wright 1974a). In addition processing cane harvested from the fields of Olowalu and Ukumeham, the mill was also contracted to process the cane harvested by Maunalei Sugar Company, a Lāna‘i Island enterprise. Cane harvested by the Maunalei Sugar Company in Keōmuku was shipped from Halepalaoa to be processed at Olowalu beginning with the 1899 crop. Processing of the Lāna‘i cane continued until 1901with the closing of the Maunalei Sugar Company(Conde and Best 1973:206).

The lands of the Olowalu Sugar Company lie on the lee side of the west Maui Mountains, where the rainfall is low, but the streams behind the plantation reach back to the crest of the mountains and are supplied chiefly by trade-wind rainfall. Heavy "kona" rains augmented the water supply during years of low trade-wind rainfall. It is estimated that the first well drilled at Olowalu for the plantation was sunk in 1905, a single shaft with 670 feet of lateral tunnels designed to skim 3 million gallons of fresh irrigation water per day from sources beneath the Olowalu plains. It was drilled vertically approximately 20 feet through the Wailuku basalts, at an elevation of 20 feet (Stearns and MacDonald 1942). A second well was drilled in Ukumehame around 1908, which consisted of a pit five feet deep, with a 6-inch drilled well 12-feet deep in the bottom. This arrangement was able to pump 1.25 million gallons per day (Stearns and MacDonald 1942).

In the 1920's, the Olowalu Sugar Company drilled an additional Maui-Type well at 165 feet of elevation, which consisted of a 30˚ inclined shaft measuring 300 feet long. This became known as well site no. 12, and replaced the Ukumehame well, which was subsequently filled in (Stearns and MacDonald 1942). In the early 1930's, the Olowalu Plantation merged with the Pioneer Mill Company, bringing along its two small and relatively crude systems. The Ukumehame Ditch system had a capacity of 15.5 mgd, and a median flow of 3.30 mgd. The Olowalu system had a capacity of 11 mgd and a median flow of 4.08 mgd.

Table 2. Sugar Crop figures for the Olowalu Plantation are listed as follows for the years leading up to Annexation with the United States: (listed as tons)

1891	**1892**	**1893**	**1894**	**1895**	**1896**	**1897**	**1898**	**1899**	**1900**
760	859	702	937	905	1,163	1,112	1,425	1,502	1,480

At its operating peak in the 1920's, the plantation was divided into thirty-three fields, of an average size of twenty acres. The fields were named either for plantation employees ("Yoshino 15.75 acres", "Santiago 15.0 acres"), or for geographic locations ("Church 22.5 acres", "Olowalu Gulch 9.75 acres"). The Olowalu Sugar Company field map, drawn by F.W. Broadbent in 1924 for the Hawaiian Sugar Planter's Association, also shows the location of the Olowalu mill, the school, and the "old church". Production of about 2,000 tons of sugar per year was maintained until the plantation was purchased by the Pioneer Mill Company in May 1930 (Pioneer Mill Company 1931). In 1932, according to the records of the Pioneer Mill Company, the mill at Olowalu was dismantled and shipped to the Philippine Islands.

2.1.5.1.1 Railway Operations

The first reference regarding the use of a railroad at Olowalu Plantation to transport cane to the mill was found in the *Planter's Monthly* for April, 1882. The use of a "Fowler Railroad Plant" at the Olowalu plantation was considered by historian Jesse "Jay" Conde to mean that the

track had been installed, and the cane cars in operation utilized “mule power” until the enterprise could afford to order a locomotive (Conde and Best 1973). By November of 1882, according to the *Hawaiian Gazette*, the Olowalu railroad had completed the two-mile section of track to Ukumehame, for a total of three miles of fixed track.

The order for a Baldwin locomotive named “Olowalu” was placed late in 1889 by the firm of W.G. Irwin. The two-foot gauge plantation engine arrived on Maui just after the turn of the century. By September of 1905, a second locomotive was ordered from the Baldwin Locomotive Works, for a new boiler (“B”) version of the same type of 2-foot gauge locomotive; also to be named “Olowalu”. By 1918, new steel rails were being installed to replace the existing layout.). The 2-foot gauge track for the Olowalu Plantation Company railroad was built to the same specifications as the railway linking the HC&S mill at Spreckelsville to its fields; and to the sugar warehouses at the Kahului wharf. The uses of the railroad at Olowalu had made it possible to harvest and transport over six thousand tons of sugar in a single year (Gilmore 1936)

2.1.5.2 Pioneer Mill Company

The Pioneer Mill Company was established as a partnership in 1862, between James Campbell, Henry Turton, and Benjamin Pittman. The first Pioneer Mill plantation lands were deeded to the partners by Benjamin Pittman for the price of $30,000 (Condé and Best 1973:252.). How Pittman obtained such a sizable piece of land is unknown, however, one may posit that the first Pioneer Mill lands were in Launiupoko Ahupua‘a which was acquired by Thomas Phillips in 1840 (Wong-Smith in Graves 1991:A6).

Using gravity flow water from mountain streams, the Pioneer Mill Company produced 500 tons of sugar in 1866. Production reached 1,000 tons annually by 1872, and the viability of the enterprise was assured when H. Hackfield was appointed sugar factor in 1877. By the turn of the century, the Pioneer Mill Company was producing over 10,000 tons of sugar a year (Thrum 1901).

In 1877, the entire Pioneer Mill plantation holdings were evaluated as being worth $500,000 (Wong-Smith in Graves 1991:A6-7). Henry Turton is credited during the early 1880's with planning construction of the first railway in Lāhainā to facilitate cane hauling from the cane fields in Kā‘anapali to the Lāhainā-based mill. The Pioneer Mill was incorporated in 1885 and sold to H. Hackfeld & Company, the predecessor of Amfac, Inc. (Wilcox n.d.:, Wong-Smith in Graves 1991:A9). In order to maintain production and the successful growing of sugar cane along the west coast of Maui required further development of water resources.

The Pioneer Mill installed a simple galvanized iron flume in the Honokowai Stream in 1898, but the mechanism by which arid coastal lands could receive mountain waters was not to be perfected on Maui’s western coastline until the building of the Honokohau Ditch in 1904. With the construction of Honokohau Ditch, the Pioneer Mill Company was able to reach back into the mountain valleys and obtain water in a system developed by the Honolua Ranch, effectively delivering about 20 million gallons per day to the Pioneer Mill fields. This main ditch was augmented over the years with seven additional ditches.

General reorganization of the Pioneer Mill Company began around the turn of the 20th century. A prospectus for change describes assets of the four main cane fields composing the company at that time (Conde and Best 1973:253):

> Lāhainā - 1,000 acres of land on the flat and outside of small kuleanas, (land areas claimed by the Hawaiians under Royal grants), the land is fee simple (could be deeded).
>
> Launiupoko - 2,900 acres of fee simple land, lying between Lāhainā and Olowalu.
>
> Wahikuli - A tract of government land of 5,000 acres, under lease for eighteen years, lies between Lāhainā and Kaanapali.
>
> Kaanapali - Some 3,600 acres at various levels, fee simple land, beyond Wahikuli.

An immediate result of the reorganization was the construction of "twenty miles" of new railroad, replacing old lines and extending the entire length of the plantation, with branches emanating *mauka* into the upper elevations of the cane fields (Condé and Best 1973:253.). By the late 1920's, the Pioneer Mill Company developed a complex of irrigation systems including flumes used to transport cane to railroad "car loading stations" (Condé and Best 1973:254). As suggested by archaeological evidence and respective cane maps, the Pioneer Mill may have developed irrigation canals and flumes at an earlier time in Launiupoko where the examination of an un-labeled Pioneer Mill map (possibly titled: *Canefield Map - 1918 MC-10 to 33*) differentiates the irrigation canal and flume as the "new flume" and "old flume, respectively. Thus, suggesting that both structures are not contemporaneous in origin.

In May of 1931 the Pioneer Mill Company expanded their cane enterprise as far as Ukumehame to the east through the purchase of Olowalu Sugar Company (Conde and Best 1973:264). During this same period, less lucrative cane fields, specifically in upper Launiupoko, were abandoned for the most part due to labor shortages "imposed by World War II" (Graves 1991:5). During the 1930's the Pioneer Mill Co. also began cattle ranching in the abandoned cane fields of Launiupoko. According to Herbert Kinores, Pioneer Mill Co. ranch foreman, ranching infrastructure including walls, fences, and wooden and stone-walled corrals were constructed in the Launiupoko region above the cultivated cane fields (Graves 1991:7).

A dramatic technological change to cane production of the Pioneer Mill occurred in 1946 when it became more economical to use trucks to transport the harvested cane instead of railroad carts. As reported in a Pioneer Mill Co. annual, the year of 1953 marked the final elimination of railroad use in the Pioneer Mill Company (in Conde and Best 1973:255). Changes in the operation, as a result of an exhaustive study by the combined staffs of Pioneer Mill Company, and American Factors, Ltd., Plantation Division, resulted in the elimination of the railroad system altogether. All sugarcane would be hauled by trucks, with the ability to haul 45-65 tons per load, on a shift basis.

2.1.6 Late 1900s to Modern Era

In the late 1900s and toward the end of the Sugar Era in Lāhainā, small scattered residential lots were present within the current project area along the shoreline at Olowalu and in the upper reaches of the valley. These isolated house lots are referred to as *kuleana* (Kimo Falconer, in Robins et al. 1994) and likely represent original boundaries of land claims made during the Māhele.

The intensive sugarcane agriculture under the direction of Pioneer Mill continued operations from Ukumehame to Launiupoko until 1998. With the final harvest and closure of Pioneer Mill in 1999 (Kubota 1999) lands that were formerly cultivated in sugarcane were either left fallow, in pasturage, or have been subdivided out of larger landholdings for development of agricultural

estates. During the 1970s Maui Electric installed a power line between Mā‘alaea and the town of Lāhainā. The existing line stretches over elevations of between roughly 600 and 2600 feet above mean sea level. A *pu‘u*, commonly referred to as “cut mountain”, is located between Olowalu and Launiupoko presently being used as a quarry or “borrow pit”. Immediately west of the *pu‘u* is an old landfill site.

2.2 Previous Archaeological Research within Olowalu Ahupua‘a

In 1916, John F. Stokes of the Bishop Museum performed the first systematic reconnaissance of monumental, pre-contact architecture as a part of an archaeological reconnaissance of *heiau* on Maui Island. At Olowalu, Stokes recorded Kaiwaloa Heiau with the following notation:

> … on a hill near power line. Large, walled heiau in fair condition. Many graves inside. (Stokes 1916:5)

Between 1928 and 1929 Winslow Walker, also of the Bishop Museum, conducted an island-wide systematic archaeological survey that built upon the initial work carried out by Stokes. Like Stokes, the primary focus of the Walker Survey, was on the identification of monumental architecture and ceremonial structures in the form of *heiau* (temples) and *ko‘a* (shrines). At Olowalu Walker re-identified Kaiwaloa Heiau and recorded a smaller unnamed *heiau* below the ditch. The following descriptive information from Walker’s survey (1931) for both *heiau*, with a notable variation in the spelling of the name from Kaiwaloa (Stokes 1916:5) to Kawaialoa (Walker 1931:108) and Kawailoa (Walker 1931:109 map illustration), is offered below:

Table 3. Walker Sites within Olowalu Ahupua‘a, adapted from Walker (1931)

Walker Site	Name	Location	Description
4	Kawaialoa Heiau Kawailoa Heiau	On the rising ground south of Kilea Hill above the ditch	Measures approximately 156’ by 110’. The walls range in thickness from 8 ½ feet on the west to 12 feet on the south and east where it is composed of two terraces. The highest part is 10 feet high. The north wall is lower and ranges from 5 to 6 feet thick. Several low terraces and enclosures are found inside. The low platforms in the western part are probably graves of recent date. The entrance evidently was the the north. At a point on the west wall and at two points on the south wall are piles of stones cone-shaped whose use or purpose could not be determined. Rough red vesicular basalt is the material used in the heiau construction and no coral is found. Nor artifacts were found there.
5	Unknown	In the cane lands below the ditch	Measures 40 x 60 feet but all interior structures have been destroyed.

While Walker was primarily concerned with the identification of ceremonial sites, he made survey notations of house and village sites within the regions that he visited. At Olowalu, Walker corroborated the later observation of Handy and Handy (1991) regarding the prominence of *lo‘i* agriculture and permanent habitation within Olowalu Ahupua‘a by noting that:

> Terraces for the cultivation of taro were seen on West Maui in the vicinity of ... Lāhainā, Olowalu, and Ukumehame (Walker 1931:71).

> Above Mrs. Naho‘oikaika’s house are evidences of old taro patches and house sites. The site of the ancient ditch bringing down water from Olowalu Gulch is now used for the modern ditch supplying the cane fields. At the edge of a house platform measuring 15 x 28 feet, is a large flat stone of red basalt used as a *papamu* for the game of *konane*. It has 9 rows of holes ½ inch deep, and 12-15 holes in a row (Walker 1931:77).

In 1973 the Department of Land and Natural Resources, State Parks Division conducted a similar island-wide archaeological survey, as a follow-up to Winslow Walker's study. As a result of the 1973 survey, Kaiwaloa/Kawaialoa Heiau was thoroughly documented and the site was given State Inventory of Historic Property (SIHP) number 50-50-08-00004 (Connolly 1973a) (Appendix A). While an attempt to re-identify Walker Site 5 (50-50-08-00005) was made at this time, it was determined that the *heiau* was destroyed by sugar cane cultivation (Hawai‘i Department of Land and Natural Resources State Historic Preservation Division 1974). Other historic properties that were identified during the State sponsored survey included the Olowalu Petroglyph Complex (50-50-08-01200 and -01201) (Connolly 1973b), features associated with the Olowalu Mill District (50-50-08-01602) (Wright 1974a), and the Olowalu Stone Church at Mōpua (50-50-08-01603) (Wright 1974b) (Appendix A).

Robins and others (1994) conducted an archaeological inventory survey of a power transmission line from Ma‘alaea to Lāhainā within the upper reaches of the current project area. During the survey 34 sites and site complexes were identified throughout their project corridor. The archaeological sites that were identified consisted of a wide range of formal pre-contact site types that included agricultural features characteristic of intensive non-irrigated agriculture, temporary and permanent habitation sites, major *heiau* and shrine sites, a travel route, a marker site, possible human burials, historic ranching walls, in addition to, irrigation canals, flumes and a possible railroad bed associated with large-scale, historic sugarcane cultivation. The traditional Hawaiian sites that were identified during the survey, however, were clustered in the Ukumehame and Launiupoko valley regions, with more isolated pre-contact historic properties located near Kaua‘ula Stream and in the upland alluvial plains of Ukumehame Ahupua‘a. Within Olowalu Ahupua‘a, two historic properties (50-50-08-03172 and -03180) primarily associated with the historic sugar industry were identified adjacent to the Olowalu Stream (Robins, et al. 1994:37 and 83). The scarcity of traditional Hawaiian sites within the project corridor as it crossed the Olowalu valley area was attributed to the destructive nature of large-scale cane agriculture that encompassed nearly all of Olowalu lands within the project corridor (Robins, et al. 1994:99).

Two separate studies, specific to the current project area, were conducted by Xamanek Researches along a section *makai* of Honoapi‘ilani Highway (approximately 73-acres) (D. L. Fredericksen and Fredericksen 2000a) and a section *mauka* of Honoapi‘ilani Highway (approximately 662-acres) (D. L. Fredericksen and Fredericksen 2000b) for an overall 735-acre project area. Both sections of the project area were covered by cultivated sugarcane lands at the time of the archaeological inventory survey. Seven historic properties consisting of pre-contact and early post-contact traditional Hawaiian habitation and burial sites, as well as, historic era features associated with commercial sugar cane cultivation and government infrastructure were identified within the *makai* section of the *makai* section of the current project area (D. L. Fredericksen and Fredericksen 2000a) (SHPD LOG NO: 24957; DOC. NO: 000RC39 – see also Appendix B). Six of these historic properties were newly identified (50-50-08-4693 through -4698 and -4822) while one, the Olowalu Mill District (50-50-08-01602), was previously

recorded during the State of Hawaii sponsored inventory survey (see Section 2.2.1 Table 4 for summary historic property information).

A total of 31 sites, both pre-contact and historic, were identified within the *mauka* portion of the current project area (D. L. Fredericksen and Fredericksen 2000b) (SHPD: LOG NO: 25237; DOC. NO: 0004RC1O – see also Appendix B). Three historic properties were previously identified and recorded (50-50-08-00004, -01200, -01201 and -01603) while 27 were newly identified (50-50-08-04699 through -04721, -04758, and -04820 through -04823) (see Section 2.2.1 Table 4 for summary historic property information). Pre-contact sites recorded in the *mauka* section include habitation sites (walls, enclosures, and rock shelters), ceremonial and religious sites (*heiau* and burials), and agricultural sites (terraces and modified outcrops); as well as, rock art features. Historic era properties identified within the *mauka* study were associated with the sugar industry and subsequent historic era settlement of the area. These features include the remnants of a church, a cemetery, and sites related to historic agriculture. Radio carbon dates from four rockshelters and a permanent habitation site (D. L. Fredericksen and Fredericksen 2000b:66) indicates that settlement of Olowalu Ahupua‘a was chronologically established during the middle of the time period that Kirch (1985:Figure 239) identifies as the “Expansion Period" (A.D. 1100-1650). Throughout this 550-year time span, the Hawaiian population expanded to several hundred thousand; economic production intensified through the development of large irrigation works and dryland field systems as well as aquaculture methods and new fishing technology; and social and political organization became highly stratified (Kirch 1985:303-306).

Archaeological monitoring for the installation of a septic tank within an approximate 1.3 acre project area along the coastal boundary of the current project area was carried out by Xamanek Researches (E. M. Fredericksen 2003). While no significant historic properties were identified within a subsurface context, the excavation did encounter coastal sand deposits. As sensitive historic properties are often found in these types of environments, continued archaeological monitoring within adjacent areas was recommended and approved (SHPD LOG NO: 2003.0954; DOC. NO: 0306MK31 – see also Appendix B).

An archaeological field inspection of a residential parcel (TMK [2] 4-8-004:010) within the current project area was carried out by CRM Solutions Hawai‘i (Conte 2007) (SHPD LOG NO: 2008.0957; DOC. NO: 0802TD16-- Appendix B). The field inspection resulted in no new or previously recorded historic properties being identified. It was further noted that the property had been previously grubbed and graded on several occasions and, due to proposed method of dwelling construction (post and pier over imported fill), no further archaeological work was recommended.

Finally, following the large brush fires of 2007, Scientific Consultant Services was contracted by the current project applicant to conduct a field inspection of approximately 500-acres that had been cleared by fire (Shefcheck and Dega 2007). One new historic property, consisting of agricultural terraces, was identified during the course of the field inspection. Due to the horizontal proximity and morphological similarities of these terraces to Feature B of previously recorded SIHP 50-50-08-04708, the newly identified historic property was designated as Feature C of Site -04708. Additionally, two historic properties (SIHP 50-50-08-04758 and -01200) were noted as adversely impacted by the fire. Several headstones of Site -04758, historic Awalua Cemetery, had cracked and spalled as a result of the heat of the fire. Similarly, thermal damage

was also noted at Site -01200, the Olowalu Petroglyph Complex, where smoke damage and spalling of some of the petroglyphs panels were noted.

2.2.1 Historic Properties Identified within the Current Project Area

A total of 41 historic properties, some consisting of multiple features, were identified and recorded during previous archaeological studies within the current project area (Connolly 1973a; D. L. Fredericksen and Fredericksen 2000a, b; Robins, et al. 1994; Shefcheck and Dega 2007; Stokes 1916; Walker 1931). The following section provides a summary of all known historic properties that have been identified along with recommended significance evaluations by the recording archaeologists (Table 4 and Figure 11).

Table 4. Summary of Historic Properties Identified and Recorded within the Current Project Area (SIHP Prefix 50-50-80-), see also Figure 11

SIHP No	Formal Type	Probable Function	Age[3]	Significance	Brief Description
00004[4 5 6]	Heiau (Kaiwaloa/Kawaialoa Heiau)	Ceremonial	P	C,D,E	Site consists of "...[L]arge walled heiau...156 x 110 feet..." interior features include: "... terraces and enclosures...graves...piles of stones cone-shaped
01200[7]	Olowalu Petroglyph Complex	Rock Art	P	C,D,E	Petroglyph panels (2): Area 1 = minimum of 37 petroglyphs, Area 2 = minimum of 31 petroglyphs. Some are badly vandalized; Shefcheck and Dega (2007) noted fire damage.
01201[8]	Rock Shelter	Temporary Habitation	P	D	Rock shelter associated with Area 1 of SIHP -01200
01602[9 10]	Olowalu Mill District	Habitation/Mill/ Wharf	H	A,D	Historic District: structures, sugar mill, wharf, manager's house.

[3]P=Pre-contact; H=Historic; U=Undetermined (used where the archaeological report indicated a "?" in age determination)

[4] **Stokes, John F. G.**

1916 Maui Heiau. December 1916. (typeset notes). Unpublished Bernice Pauahi Bishop Museum, Honolulu, HI.

[5] **Walker, Winslow M.**

1931 Archaeology of Maui. Manuscript. Bernice Pauahi Bishop Museum. Honolulu, HI.

[6] **Connolly, Robert D. III**

1973a *50-50-08-00004 Kawaialoa Heiau*. Hawaii Register of Historic Places Archaeological Forms. Hawai‘i Department of Land and Natural Resources State Historic Preservation Division. Kapolei, HI

[7] 1973b *50-50-08-01200 Olowalu Petroglyphs*. Hawaii Register of Historic Places Archaeological Forms. Hawai‘i Department of Land and Natural Resources State Historic Preservation Division. Kapolei, HI

[8] **Fredericksen, Demaris L. and Erik M. Fredericksen**

2000b *Archaeological Inventory Survey of Mauka Portion of Olowalu Development Parcel Phase 2, Olowalu Ahupua‘a, Lahaina District, Maui Island (TMK 4-8-3:10).* Prepared for Olowalu Elua Associates. Kahului, Maui. Xamanek Researches. Pukalani, HI

[9] **Wright, J.C.**

1974a *50-50-08-01602 Olowalu Mill District*. Hawaii Register of Historic Places Archaeological Forms. Hawai‘i Department of Land and Natural Resources State Historic Preservation Division. Kapolei, HI

[10] **Fredericksen, Demaris L. and Erik M. Fredericksen**

2000a *Archaeological Inventory Survey of Makai Portion (Phase 1) of Olowalu Development Parcel, Olowalu Ahupua‘a, Lahaina District, Maui Island (TMK 4-8-3:por.5)*. Prepared for Olowalu Elua Associates. Kahului, HI. Xamanek Researches. Pukalani, HI

SIHP No	Formal Type	Probable Function	Age[3]	Significance	Brief Description
01603[11]	Lanakila Hawaiian Protestant Church	Church/Cemetery	H	D,E	Historic church and graveyard.
03172[12 8]	Concrete Irrigation Ditch	Agriculture	H	D	Site consists of a historic irrigation ditch constructed of cement and boulders.
03180[12 8]	Historic Cattle Wall	Ranching	H	D	Site consists of a wall located on west side of Olowalu Stream; 234 x .85 x 1.45m; an alternative interpretation of function was as an *ahupua‘a* boundary wall.
04693[10]	Burial Complex	Burial	P	D,E	Site consists of 6 *in situ* burials ranging from .05 to .80-.85cmbs; burials 1 thru 5 were articulated, burial 6 interpreted as scattered
04694[10]	L-Shape	Habitation	P	D	Site consists of an L-shape wall, 10m long (E/W) and 9.5m long (N/S) x 1.2 m wide x 0.3-0.6m high; located on Hekili Point.
04695[10]	Wall/terrace	Erosion Control	H	D	Site consists of retaining wall segment, 10 x 4.5 x 1.1m
04696[10]	Old Government Road	Transportation	H	D	Site consists of an old road segment that follows a traditional trail, 100m long x 15m wide;; located 15-18m northeast of SIHP -4695.
04697[10]	Subsurface Cultural Deposit	Habitation	U	D	Site consists of a possible historic dog burial, possibly associated with nearby kuleana house lots; and a subsurface cultural deposit, 6 x 3-4 x .12m deep.
04698[10]	Subsurface Cultural Deposit	Habitation	P	D	Site consists of subsurface cultural deposit, 35 x 50m (depth and thickness not provided).
04699[8]	Habitation Complex	Habitation/Burial/ Possible Boundary	U	D,E	Habitation Complex located along S-SE side of ridge: 8 rock shelters (Features A-H) with one containing a probable burials (Feature D); and a modified outcrop (Feature I), 12.6 x 0.8 x 0.75m; overall site complex dimensions = 155 x 30m.

[11] **Wright, J.C.**

1974b *50-50-08-01603 Olowalu Stone Church Ruins*. Hawaii Register of Historic Places Archaeological Forms. Hawai‘i Department of Land and Natural Resources State Historic Preservation Division. Kapolei, HI

[12] **Robins, Jennifer J, William H. Folk and Hallett H. Hammatt**

1994 *An Archaeological Inventory Survey of an Approximately 14.7 Mile Proposed Transmission Line, from Ma‘alaea to Lahaina, Maui, Hawai‘i*. Prepared for Dames & Moore. Cultural Surveys Hawai‘i Inc. Kailua, HI

SIHP No	Formal Type	Probable Function	Age[3]	Significance	Brief Description
04700[8]	Habitation Complex	Habitation/Undetermined	P	D	Habitation Complex: 7 rockshelters: (Features A and C-I); one C-shape (Feature B), 1.7 x 2 x 0.5m; and a wall segment (Feature J), 2.3 x 0.8 x 0.7m; overall site complex dimensions = 55 x 40m.
04701[8]	Possible Ko‘a	Ceremonial	P	D,E	Site consists of a platform, 15 x 11 x 0.3m and paved area; overall site area = 33 x 27m.
04702[8]	L-Shape	Boundary	H	D	Site consists of L-shape wall, 47 x .75 x 1.2m; 6 x 0.75 x 1.2m and an inactive historic concreted ditch.
04703[8]	Complex	Boundary	U	D	Site complex consisting of features of an indeterminate age: enclosure/alignment/uprights (Feature A), 4 x 3 x 0.7m; wall remnant (Feature B), 5.5 x 0.65 x 0.65m; alignment (Feature C), 3 x 1 x .6m; overall site complex dimensions = 30 x 8m.
04704[8]	Habitation Complex w/Petroglyphs	Habitation	P	C,D,E	Habitation Complex: 27 individual petroglyphs (Feature A), 14 x 3.6m; terraces (Features B-G), 8.5 x 4 x 0.75m to 2.3 x 2.4 x .8m; overall site complex dimension = 61 x 23m.
04705[8]	Rock Shelters	Temporary Habitation	P	D	Site consists of 2 rock shelters: Feature A, 4.5 x 1.75 x 2m; Feature B, 2.5 x 1.3 x .9m.
04706[8]	Rock Shelter	Temporary Habitation	P	D	Rock shelter: 4.25 x 2.25 x 1.25m; located on west side of Olowalu Stream.
04707[8]	Wall and Mound	Marker/ Burial	U	D,E	Two features: wall or alignment (Feature A), 77 x 3.5 x .8m high; and a rock mound (Feature B), 5 x 2.7 x .85m; overall site dimensions = 77 x 5.5m.
04708[8 13]	Platform and Terrace Complex	Agriculture/ Ceremonial	P	D,E	Agricultural Complex: terrace/platform (Feature A), 19 x 8 x 2.6m; terrace complex (Feature B), 40 x 22m; terrace complex (Feature C[13]); overall site complex dimensions = 62 x 23m.
04709[8]	Historic Hydro-Electric Plant	Historic Agriculture	H	C,D	Site consists of foundation that formerly supported a hydro-electric plant measuring 29 x 23m.

[13] **Shefcheck, Donna and Michael F. Dega**

2007 *Letter Report: Field Inspection of Previously Identified Sites within a Burned Area (Approximately 500-acres of a Total 660 Acres) in Olowalu Ahupua‘a, Lahaina District, Island of Maui [TMK: 4-8-3:10 por.]*. Prepared for Olowalu Town, LLC. Wailuku, HI. Scientific Constultant Services, Inc. Honolulu, HI

SIHP No	Formal Type	Probable Function	Age[3]	Significance	Brief Description
04710[8]	Habitation Complex	Agriculture/Burial	P	D,E	Habitation Complex: terrace w/ enclosure (L-shape alignment) (Feature A), 14.5 x 9 x .9m; four terraces (Features B and F-G); two enclosures (Features C and D); and an oval alignment indicating a possible burial (Feature E), 2.1 x 1.5 x 0.3m
04711[8]	Alignment and Terrace	Agriculture	P	D	Site consists of 2 features: alignment (Feature A), 5.5 x 2 x 0.6m; and a terrace (Feature B), 3.2 x 3.5 x 0.5m; overall site dimension = 16 x 6m.
04712[8]	Terrace and Mound	Agriculture/Burial	P	D,E	Site consists of 2 features: terrace and rock pile (Feature A), 14 x 3 x 1.3m; modified outcrop (Feature B), 1.8 x 0.8 x 0.6m; overall site dimensions = 30 x 6m.
04713[8]	Rock Shelter	Temporary Habitation	P	D	Site consists of rock shelter, 6 x 3.5 x 2.4m; located on east slope of Pu‘u Kilea.
04714[8]	Rock Shelter	Temporary Habitation	P	D	Site consists of rock shelter, 2 x 2.4 x 0.7m; located on northwest side of Pu‘u Kilea.
04715[8]	Cemetery	Burial	P/H	D,E	Site consists of cemetery containing minimum of 33 graves; located on the summit of Pu‘u Kilea; overall site dimensions = 38 x 20m.
04716[8]	Terrace and Wall	Boundary/Habitation	P	D	Site consists of 2 features: terrace/platform (Feature A), 5 x 3.5 x 2.3m; wall (Feature B), 22 x 1 x 1m.
04717[8]	Retaining Walls	Historic Agriculture	H	D	Site consists of 5 retaining wall segments: Feature A, 15 x 4 x 2.6m; Feature B, 25 x 2.5 x 2.9m; Feature C, 20 x 2.7 x 0.9m; Feature D, 51 x 3.3 x 1.3m; and Feature E; 12 x 1.8m.
04718[5 8]	Heiau Complex	Ceremonial	P	C,D,E	Site is believed to be the "unnamed heiau" identified by Walker 1931 (SIHP 50-50-08-00005) and documented as destroyed during the 1973 inventory (Hawai‘i Department of Land and Natural Resources State Historic Preservation Division 1974); Complex consists of 3 features: an enclosure (Feature A), 12 x 6 x 0.7m; and two burials (Features B and C); overall site complex dimensions = 21 x 12 x 0.7m.
04719[8]	Rock Wall	Boundary	H	D	Site consists of a dry-stacked wall, 8 x 0.8 x 0.9m.
04720[8]	Retaining Wall	Transportation	H	D	Site consists of a retaining wall.
04721[8]	Rectangular Platform	Habitation	H	D	Site consists of a small rectangular platform with a retaining wall on the western side. Historic era artifacts found.

SIHP No	Formal Type	Probable Function	Age[3]	Significance	Brief Description
04758[8]	Historic Cemetery	Burial	H	D,E	Site is historic Awalua Cemetery containing a minimum of 60 graves, 80 x 30m; Shefcheck and Dega (2007) noted fire damage to some of the headstones.
04820[8]	Surface Scatter Human Skeletal Remains	Burials	P	D,E	Surface scatter of human skeletal remains; overall site area: 100m sq; located in cane field; no indication of an *in situ* burial..
04821[8]	Surface Scatter Human Skeletal Remains	Burial	P	D,E	Surface scatter of human skeletal remains; overall site area: 50-60m sq; no indication of an *in situ* burial..
04822[8]	Kaloko o Kapa‘iki Pond?	Pond	P	D	Site consists of probable fishpond sediments; located between shoreline and Olowalu Subdivision in eastern section of Olowalu Subdivision.
04823[8]	Marsh/Lagoon, Olowalu	Lagoon	P	D	Site consists of gleyed deposits.

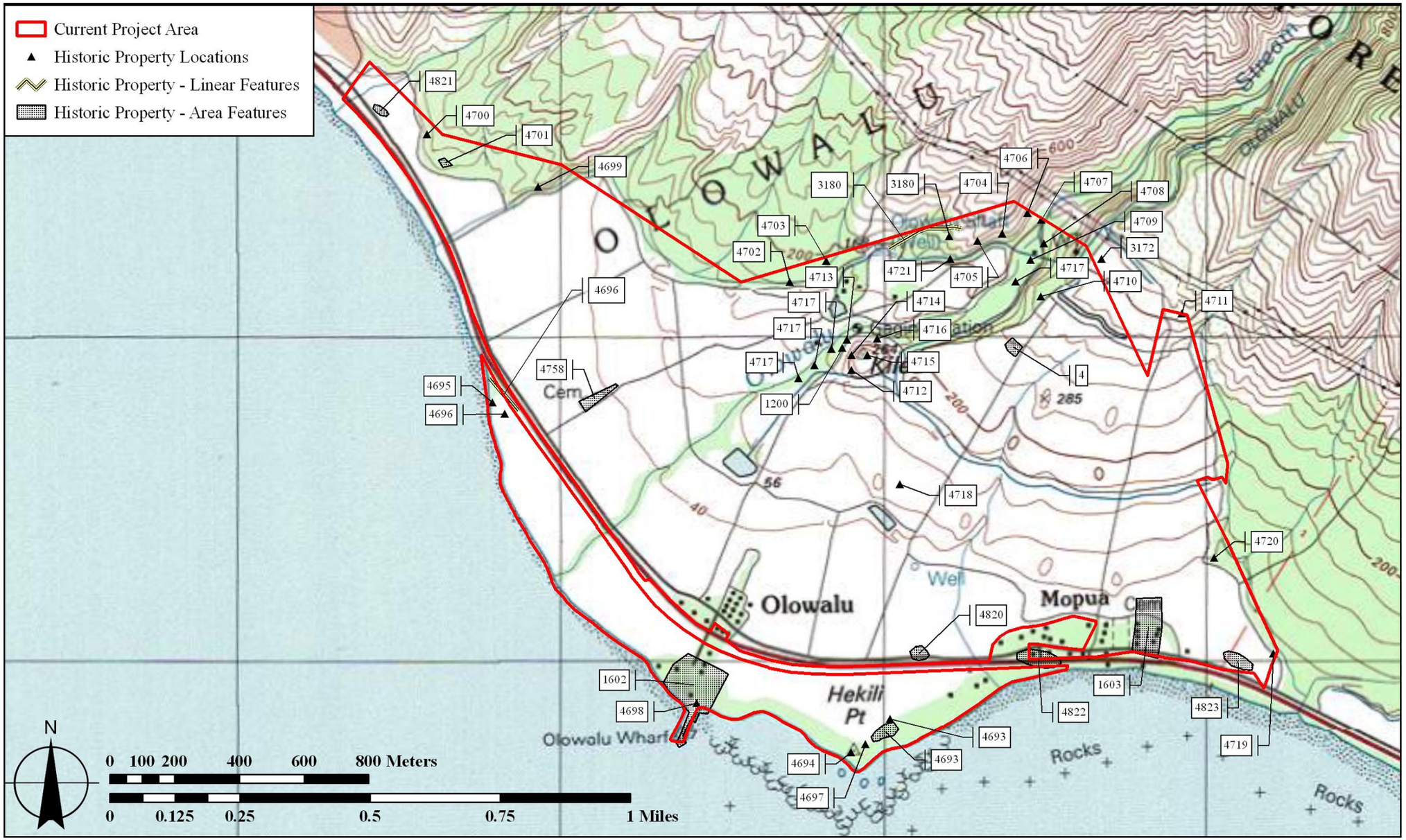

Figure 11. Portion of the 7.5-minute USGS topographic map, Olowalu Quadrangle (1992) showing the locations of historic properties within the current project area

2.3 The Project Area within the Context of Ahupua‘a System

The arrangement of a typical Hawaiian *ahupua‘a* extended from the coastline to the upland forest areas. Depending on the location within this broad *makai* to *mauka* context, a wide variety of cultural practices and resources within the *ahupua‘a* could be found. The central idea behind the *makai* to *mauka* configuration was to take advantage of the variety resources within that land division. Such resources and rights would include marine resources and fishing rights in the coastal area, arable lands for crop cultivation, as well as, water and timber rights in the planting and upland zones, and valuable bird catching privileges at the higher elevations (Handy, et al. 1991:48). Based on the land commission award distribution in the *mauka* and *makai* sections of the current project area, as well as, the stories and information gathered during the background research for this study, it is apparent that settlement and land use within Olowalu Ahupua‘a functioned in the traditional sense.

The general pattern was to maintain two residences, a *makai* residence that could take advantage of the marine resources and a *mauka* residence to maintain the staple taro crops and other agricultural pursuits. The waters of Olowalu Stream were perennial and would have supported *lo‘i* agriculture all the way down to the coast. Some freshwater aquatic resources were also likely available along the lower reaches of the stream system. As a whole, the primary traditional activities within the area would have centered on marine resource gathering, domestic activities during the hottest times of the day, and agricultural pursuits associated with maintaining a home garden and the *mauka lo‘i* and *kula* agricultural lands.

2.3.1 Traditional Trails

Trails served to connect the various settlements within and between the *ahupua‘a* and districts of the Hawaiian Islands in traditional times. While the Alaloa, or foot trail, that encircled the coastline likely existed along the coast, the preferred mode of inter-*ahupua‘a* travel for leeward environs of West Maui was through an upland route and/or major valleys of the West Maui Mountains, where the temperatures were cooler and more tolerable. Traditional trails along the coast were more frequently used for intra-*ahupua‘a* travel between the coastal reaches and permanent habitation locations to the upland agricultural area. Mr. Hinano Rodrigues (in Lee-Greig and Hammatt 2006) indicated that these trails generally followed the course of each major stream and were more often than not marked by petroglyphs along the trails as evidenced along the bedrock exposures of Olowalu Gulch (Olowalu Petroglyph Complex [50-50-08-01200 and -01201] [See also Section 2.2]).

2.3.2 Traditional Hawaiian Habitation and Agriculture

Land commission awards for the *makai* region of Olowalu Ahupua‘a show small scattered house lots with associated agricultural plots along the coastline, while *mauka* awards along the former stream route and valley bottom show larger lots for more extensive agricultural endeavors. The smaller agricultural plots were presumably used for home gardens, *kula* agriculture or dryland crop cultivation occurred at *kuleana* lots situated further away from the primary stream, and *lo‘i* agriculture occurred at *kuleana* lots situated closer to the stream outlets and along the valley bottom (see also Section 2.1.4 Mid- 1800s and the Great Māhele).

2.3.3 Gathering for Plant Resources

Based on the early historic literature and testimony to the Land Commissioners during the Mahele, most plant gathering occurred at the upper elevations and within the gulches. Such plants included *wauke* (paper mulberry, *Broussonetia papyrifera*), *hala* (*Pandanus tectorius*), and *‘ōhi‘a* (likely *‘ōhi‘a lehua*, *Metrosideros polymorpha*) (see also Section 2.1.4 Mid- 1800s and the Great Māhele). Plant gathering along the coast was likely for the different *limu* species such as *limu līpoa*, *limu kohu*, *lipe‘ep‘e, māne‘one‘o,* and *manauea*. .

2.3.4 Aquatic Resources

The coastal reaches of Olowalu Ahupua‘a were noted as rich with marine resources and is distinguished as the traditional fishing grounds for the people of the Lahaina District. Noted resources include *pāpio,* mullet, *moi, ‘ōpelu, akule, ū‘ū, opihi, ha‘uke‘uke, wana, he‘e*, *ula*, and *loli*. Fishing methods included spear fishing, pole fishing, *paea ea*, and *ho‘omoemoe. Paea ea* fishing is generally a low-impact type method that was carried out from the shoreline using a straight pole or bamboo. Commonly practiced in Olowalu during the traditional time period, this type of fishing was only conducted on nights of the new moon, a phase of the moon that is often referred to as “dark night” or “pitch dark night”.

Moemoe net is a rectangular type of gill of net, with floats on one edge and weights on the opposite edge. The floats and weights keep the lay net suspended vertically while in the water. The net is “set” and left in place for several hours and later retrieved. The name *moemoe* net comes from the Hawaiian word *moe* meaning “to sleep”. The method involved setting the net, going home to sleep, and returning later to retrieve the net. The set begins when the net first touches the water and ends when the net is completely removed. This method of fishing is highly efficient at catching a larger volume of fish.

The presence of Kaloko O Kapaiki, the *ali‘i* fishpond at Kapaiki also indicates that marine resource based subsistence for Olowalu also relied on aquaculture. Gley deposits at SIHP 50-50-08-4823 may indicate an additional fishpond feature.

2.3.5 Traditional Hawaiian Archaeological Sites

Previous cultural resource management investigations within the current project area have documented the area’s rich cultural resources (see Section 2.2 Previous Archaeological Research within Olowalu Ahupua‘a); however, historic and modern sugar cane cultivation have greatly modified the traditional landscape. Such activities have largely removed any surface remnant of cultural resources that may have been present along the alluvial plains of the current project area. Lessons learned along Hekili Pt. indicate that subsurface deposits can be found in a disturbed context within the plow zone and an intact context below the plow zone. Therefore, the fact that there was extensive ground disturbance associated with sugar cane cultivation from the historic era up until modern times does not preclude the presence of historically significant cultural deposits within former habitation areas at subsurface level.

2.3.6 Traditional Burial Practices and Ceremony

SIHP # 50-50-08-4693, a pre-contact burial ground consisting of a minimum of six individuals is dedicated to passive preservation (see Section 2.2.1 Historic Properties Identified within the Current Project Area). The preserve area for this burial site is situated adjacent to the campgrounds of Camp Olowalu.

Other burial sites include the known cemeteries at Awalua, SIHP 50-50-08-4758, Pu‘u Kilea SIHP 50-50-08-4715, and Lanakila Hawaiian Protestant Church SIHP 50-50-08-1603. There is some concern with regards to the boundaries of the Church graveyard in that the graves extend beyond the recorded metes and bounds for the cemetery. Mr. Rodrigues (in Lee-Greig and Hammatt 2006) indicated that the:

> Territory of Hawai‘i decided that they were gonna give all the churches their property and so they decided to draw the map and give the churches two acres. The plantation jumped in and said “Oh but no, we want the original two acres because we want to grow the sugar cane”. So when they drew the map they shoved us two acres forward toward the ocean which left the graves in the back and they grew the sugar cane on our graves.

This fact was verified during an inventory survey conducted by Xamanek Researches(D. L. Fredericksen and Fredericksen 2000b) when conducting backhoe testing behind the church beyond the recorded boundaries of the church yard.

Kaiwaloa Heiau, SIHP 50-50-08-0004, and what is believed to be a smaller *heiau* complex, SIHP 50-50-08-4718, is also located within the current project area, both of which have been noted as having associated burial interments (D. L. Fredericksen and Fredericksen 2000b). Based on the construction style of Kaiwaloa Heiau, it is thought that the *heiau* was a *luakini* type *heiau* (H. Rodrigues in Lee-Greig and Hammatt 2006:Appendix A pA-46). According to the writing of Malo (1951:212), the right to build a *luakini* belonged only to the king. This particular type of temple was dedicated Kū and built as a war temple when one sovereign sought to make war upon another, or in a reaction to a declaration of war (1951:210-212). Construction of a *luakini* required *‘ōhi‘a* for the both the idols and structure timber, *loulu* (native fan palm, *Pritchardia* sp.) or ‘*uki* (*Machaerina angustifolia*) for the thatch and *‘ōhi‘a* that had been stripped of bark for the fence (1951:211).

Section 3 Assessment of Cultural Impacts

Act 50 of the Session Laws of Hawaii 2000 amended Chapter 343, of the Hawaii Revised Statutes, to require that environment impact statements assess the effects of a proposed action on the cultural practices of the community and State, specifically acknowledging the State's responsibility to protect native Hawaiian cultural practices:

> The legislature also finds that native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the "aloha spirit" in Hawaii. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups.
>
> Moreover, the past failure to require native Hawaiian cultural impact assessments has resulted in the loss and destruction of many important cultural resources and has interfered with the exercise of native Hawaiian culture. The legislature further finds that due consideration of the effects of human activities on native Hawaiian culture and the exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture.

While a requirement for a Cultural Impact Assessment exists as a part of the environmental review process, the *Guidelines for Assessing Cultural Impacts* (hereafter referred to as "Guidelines") originally adopted in 1997 by the Hawai‘i State Department of Health, Office of Environmental Quality Control (OEQC) were suspended in 2008. Suspension of these Guidelines notwithstanding, the following plan for assessing the potential for cultural impacts will utilize the general framework as outlined in the Guidelines for consistency in content and methods. In the Guidelines, the following protocol was recommended for preparers of assessments analyzing a proposed projects potential for cultural impact:

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or *ahupua‘a*;

2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;

3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;

4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;

5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and

6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

To accomplish the above in the context of the proposed Olowalu Town Master Plan, the analysis of potential impacts will incorporate the methods in the following section.

3.1 Document Review and Research

The traditional and historic background presented above was developed through research of published and unpublished accounts, land and archaeological survey reports and maps, as well as, photographs found in public and private collections pertaining to Olowalu Ahupua‘a and the study area. English language historical documents, maps, and archaeological studies were researched at the DLNR/SHPD library, the Survey Office of the Department of Accounting and General Services (DAGS), the Lahaina Restoration Foundation Archives at the Hale Pa‘i, the Maui County Planning Department, and the Cultural Surveys Hawai‘i (CSH) library; in addition to private collections held by others in the community.

The sample of *Kuleana* claims and testimony presented in Section 2.1.4 Mid- 1800s and the Great Māhele were studied using historic maps and cross referenced with the Māhele ‘Aina data compiled in the online Papakilo Database (Office of Hawaiian Affairs 2011) and Waihona ‘Aina (Waihona ‘Aina 2002). Native register documents, as well as, native and foreign testimony that were recorded in Hawaiian language were translated by Ms. Katherine Kama‘ema‘e Smith.

Hawaiian newspaper resources and other Hawaiian language documents were researched using *Ulukau: The Hawaiian Electronic Library* (www.ulukau.org) and translated by Ms. Katherine Kama‘ema‘e Smith and Ms. Cori-Ann Lorenzo, B.A. The final Cultural Impact Assessment for the proposed project will continue to build upon the cultural and historic background information presented in Section 2.1 Traditional and Historical Background as a means to provide a comprehensive historic narrative for Olowalu Ahupua‘a.

3.2 Scoping and Community Outreach

3.2.1 Government Agencies, Advisory Councils, and Local Community Organizations

In order to cast a wide net in identifying individuals with knowledge of traditional cultural practices and gathering cultural recommendations for the cultural impact assessment study for the proposed project, government agencies, advisory councils, and local community organizations identified in Table 5 will be contacted.

Table 5. 3.2.1 Government Agencies, Advisory Councils, and Local Community Organizations

Name	Affiliation
Mr. Hinano Rodrigues	Department of Land and Natural Resources State Historic Preservation Division -- Maui Annex, Cultural Historian
Mr. Matthew Erickson	Lāhainā Hawaiian Civic Club
Ms. Hokulani Holt	Maui Arts and Cultural Center, served as a member of the Olowalu Cultural Reserve Committee
Ms. Nicole McMullan	Bailey House Museum

Name	Affiliation
Mr. Kamana‘opono Crabbe	Office of Hawaiian Affairs, Chief Executive Officer
Ms. Thelma Shimaoka	Office of Hawaiian Affairs, Maui Community Affairs Coordinator
Mr. Stan Solamillo	Maui County Cultural Resources Commission, Planner
Ms. Pua Aiu	Department of Land and Natural Resources State Historic Preservation Division, Administrator
Mr. Ke‘eaumoku Kapu	Maui/Lanai Islands Burial Council, Burial Council Chair
Ms. Patty Nishiyama	Na Kupuna O Maui
Ms. Uilani Kapu	Kuleana Ku'ikahi LLC
Ms. Rose Marie Duey	Olowalu Cultural Reserve, Executive Director
Mr. Albert Lagunero	Olowalu Cultural Reserve, President of the Board of Directors

To initiate consultation with these organizations, a scoping letter along with project area maps showing the proposed project footprint, as well as the overall region of influence will be mailed out with the following text (see Appendix A for the letter and attachments):

> At the request of Olowalu Town, LLC and Olowalu Ekolu, LLC., Cultural Surveys Hawai‘i (CSH) is conducting a Cultural Impact Assessment (CIA) for the proposed Olowalu Town Master Plan Project. The Olowalu Town Master Plan will serve as a guide for the establishment of a small-scale “mixed-use” community with land uses that will vary from urban neighborhood town centers to rural and agricultural areas within the 636-acre project area (Attachment 1). Overall, the master plan proposes the development of 1,500 residential units along with civic structures (educational facilities, community and cultural centers, and emergency worker facilities), park and gathering facilities, greenways, bikeways, and trails all of which would be constructed concurrently with the appropriate infrastructure over an approximate 10 year period.
>
> The area of direct effect for the proposed undertaking, here after referred to as the “current project area”, is considered as the footprint of the proposed 636-acre footprint of the Olowalu Town Master Plan (Attachement x). When assessing the presence or absence of direct, indirect, and cumulative effects of the proposed project on the traditional cultural practices of this region, traditional use and access to resources from the mountains to ocean, or *mauka* to *makai*, must be taken into consideration. As such, the Region of Influence (ROI), hereafter referred to as the “study area” for this CIA is defined as the geographic area encompassed by the known traditional boundaries of Olowalu Ahupua‘a which includes any offshore traditional fisheries that may have been associated with Olowalu Ahupua‘a. (Attachments 2 and 3)
>
> We are seeking your *kōkua* or help and guidance regarding the following aspects of our study:
>
> - **General history and present and past land use of the project area.**
> - **Knowledge of cultural resources which may be impacted by the proposed Olowalu Town Master Plan - for example, traditional plant gathering areas,**

traditional fishing areas, historic sites, archaeological sites, and burials (see also Attachment 4).

- **Knowledge of traditional gathering practices in the area – both past and ongoing.**
- **Cultural associations of the project area, such as legends and traditional uses.**
- **Referrals of *kūpuna* or elders who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua‘a* lands.**
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within Olowalu Ahupua‘a and/or in the vicinity of the proposed Olowalu Town Master Plan area.**

I invite you to contact me, Tanya Lee-Greig at 1-808-242-9882. You may also contact me by e-mail at leegreig@culturalsurveys.com if you have any mana‘o or information you would like to share.

3.2.2 Individuals and Families with Generational Knowledge and Lineal Ties to the Lands of the Current Study Area

As a result of the initial community outreach by Olowalu Town, LLC. and their intensive work with the community during the Olowalu Talk Story Community-Based Planning Workshop, families and individuals with lineal ties to the lands and generational knowledge of the history and traditional cultural practices within the current study area have been identified. The cultural impact assessment study will look to these families and individuals for their knowledge of current traditional cultural practices and *mana‘o* (thought, idea, opinion) on the potential for either positive or adverse effects to such practices in the context of the proposed project.

3.3 Group Consultation, Informal Interviews, and Formal Interviews

Interviews will be conducted in either a group setting, informally via telephone, or as a part of a formal sit-down interview between the researcher and participating individual. Handwritten notes of all consultations will made by the researcher, and with the permission of the participant, formal interviews will be recorded using either a Sony ICD-SX25 or Olympus VN-4100PC Digital Voice Recorder.

Verbatim transcriptions of recorded interviews will be completed using the Sony Digital Voice Editor Software. All formal and informal interview notes, along with the verbatim transcriptions where applicable will submitted to each participant for clarification and accuracy prior to inclusion in cultural impact assessment. Transcripts from formal interviews will only be included in the study upon written consent from the interviewee (see Appendix B for the consent form).

3.4 Final Report Preparation

A Cultural Impact Assessment report will be prepared and include the findings from Sections 3.1, 3.2, and 3.3 above and consist of the following as suggested by the Guidelines:

1. An explanation of confidential information that has been withheld from public disclosure in the assessment.
2. A discussion concerning any conflicting information with regard to identified cultural resources, practices and beliefs.
3. A discussion concerning the cultural resources, practices and beliefs identified:
    a. for resources and practices, their location within the broad geographical area in which the current project is proposed.
    b. their direct or indirect significance or connection to the proposed project area footprint.
4. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area that may be affected directly or indirectly by the proposed project.
5. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs which may include:
    a. the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting.
    b. and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

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Appendix A Scoping Letter

CULTURAL SURVEYS HAWAI'I
ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL DOCUMENTATION SERVICES - SINCE 1982

CSH Job Code: **OLOWALU 3**

Thursday, January 19, 2012

Addressee:

O'ahu Island
P.O. Box 1114
Kailua, Hawai'i 96734
Ph: (808) 262-9972
Fax: (808) 262-4950

Maui Island
1860 Main Street
Wailuku, Hawai'i 96793
Ph: (808) 242-9882
Fax: (808) 244-1994

Branch Offices:
Hilo, Hawai'i
Kona, Hawai'i
Lāwai, Kaua'i

Subject: **Cultural Impact Assessment for the Proposed Olowalu Town Master Plan in Olowalu Ahupua'a, Lāhaina District, Island of Maui.**

Dear Recipient:

At the request of Olowalu Town, LLC and Olowalu Ekolu, LLC., Cultural Surveys Hawai'i (CSH) is conducting a Cultural Impact Assessment (CIA) for the proposed Olowalu Town Master Plan Project. The Olowalu Town Master Plan will serve as a guide for the establishment of a small-scale "mixed-use" community with land uses that will vary from urban neighborhood town centers to rural and agricultural areas within the 636-acre project area (Attachment 1). Overall, the master plan proposes the development of 1,500 residential units along with civic structures (educational facilities, community and cultural centers, and emergency worker facilities), park and gathering facilities, greenways, bikeways, and trails all of which would be constructed concurrently with the appropriate infrastructure over an approximate 10 year period.

The area of direct effect for the proposed undertaking, here after referred to as the "current project area", is considered as the footprint of the proposed 636-acre footprint of the Olowalu Town Master Plan (Attachement x). When assessing the presence or absence of direct, indirect, and cumulative effects of the proposed project on the traditional cultural practices of this region, traditional use and access to resources from the mountains to ocean, or *mauka* to *makai*, must be taken into consideration. As such, the Region of Influence (ROI), hereafter referred to as the "study area" for this CIA is defined as the geographic area encompassed by the known traditional boundaries of Olowalu Ahupua'a which includes any offshore traditional fisheries that may have been associated with Olowalu Ahupua'a. (Attachments 2 and 3)

Thursday, January 19, 2012

We are seeking your *kōkua* or help and guidance regarding the following aspects of our study:

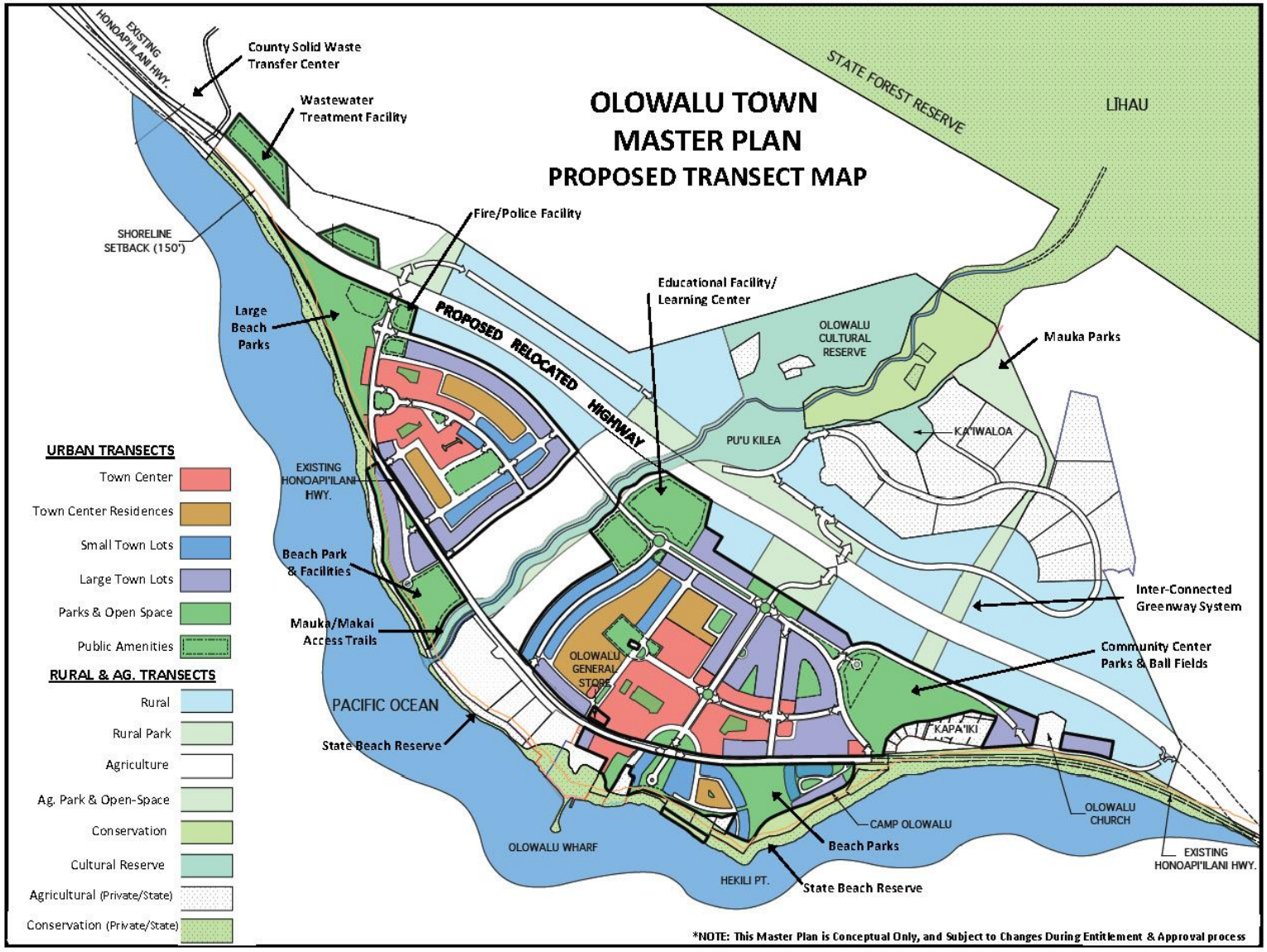
- **General history and present and past land use of the project area.**
- **Knowledge of cultural resources which may be impacted by the proposed Olowalu Town Master Plan - for example, traditional plant gathering areas, traditional fishing areas, historic sites, archaeological sites, and burials (see also Attachment 4).**
- **Knowledge of traditional gathering practices in the area – both past and ongoing.**
- **Cultural associations of the project area, such as legends and traditional uses.**
- **Referrals of *kūpuna* or elders who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua* □*a* lands.**
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within Olowalu Ahupua‘a and/or in the vicinity of the proposed Olowalu Town Master Plan area.**

I invite you to contact me, Tanya Lee-Greig at 1-808-242-9882. You may also contact me by e-mail at leegreig@culturalsurveys.com if you have any mana‘o or information you would like to share.

Mahalo a nui,

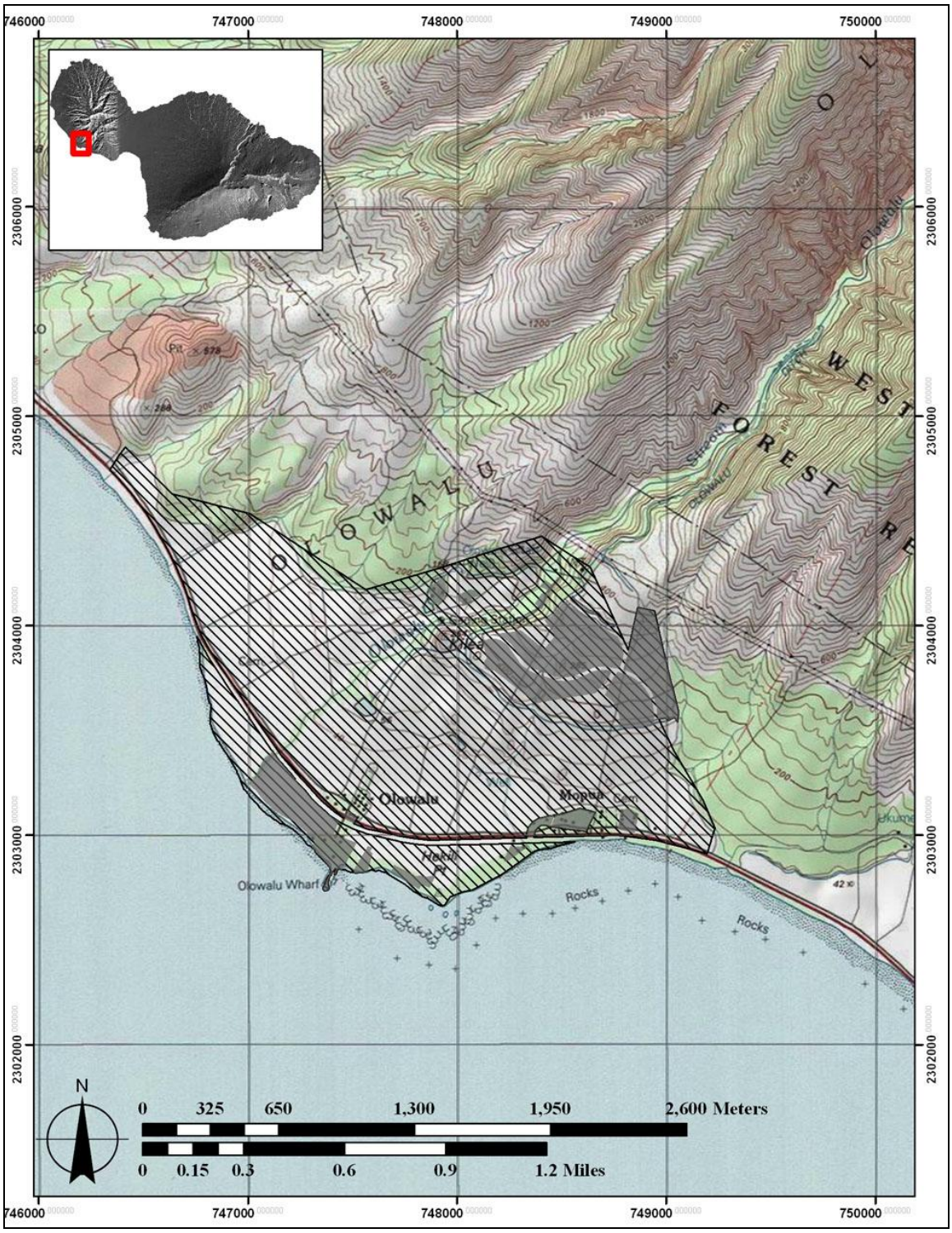
Tanya L. Lee-Greig

Cultural Surveys Hawai‘i, Inc.

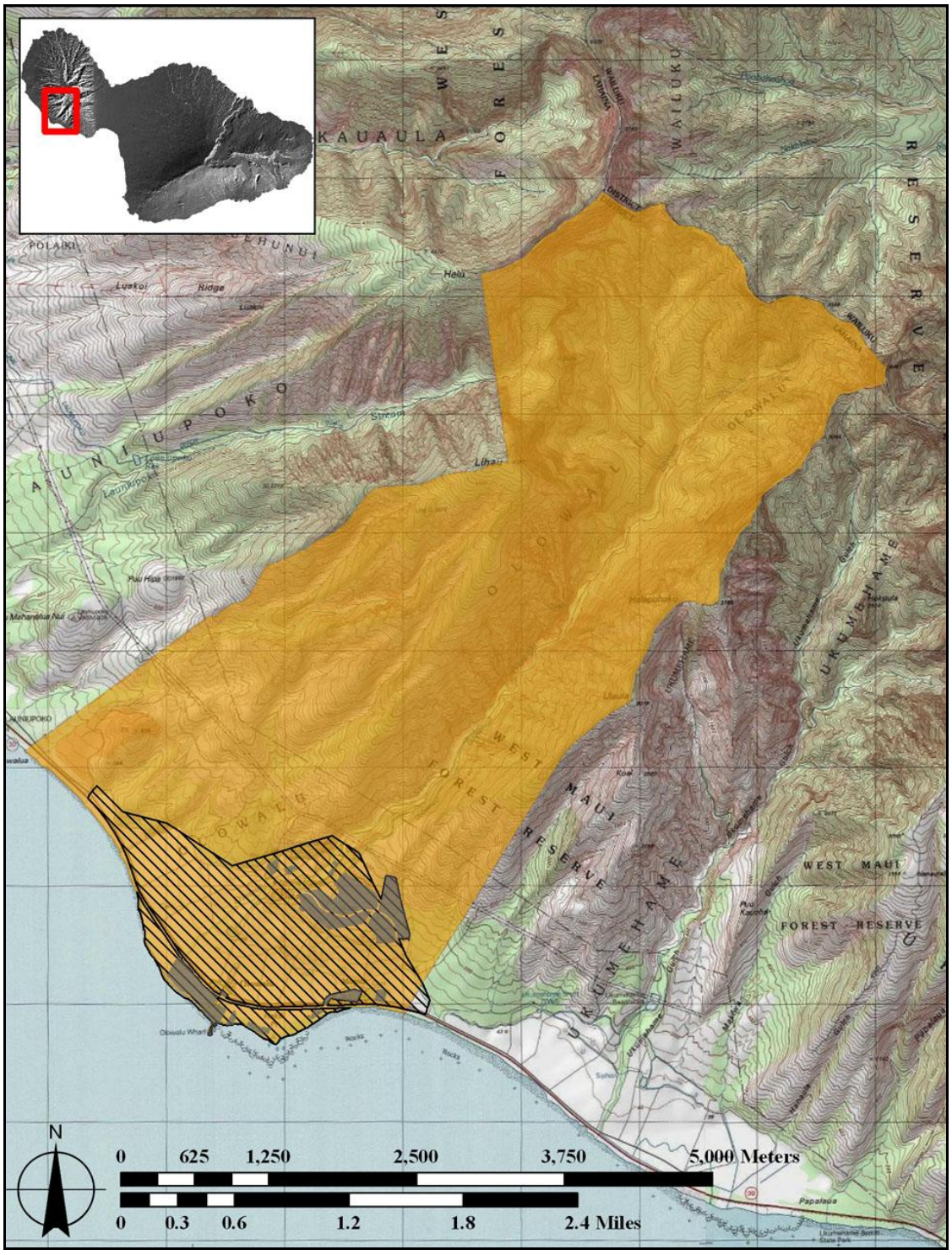


Conceptual drawing for the Proposed Olowalu Town Master Plan (figure courtesy of Olowalu Town, LLC.)

Thursday, January 19, 2012

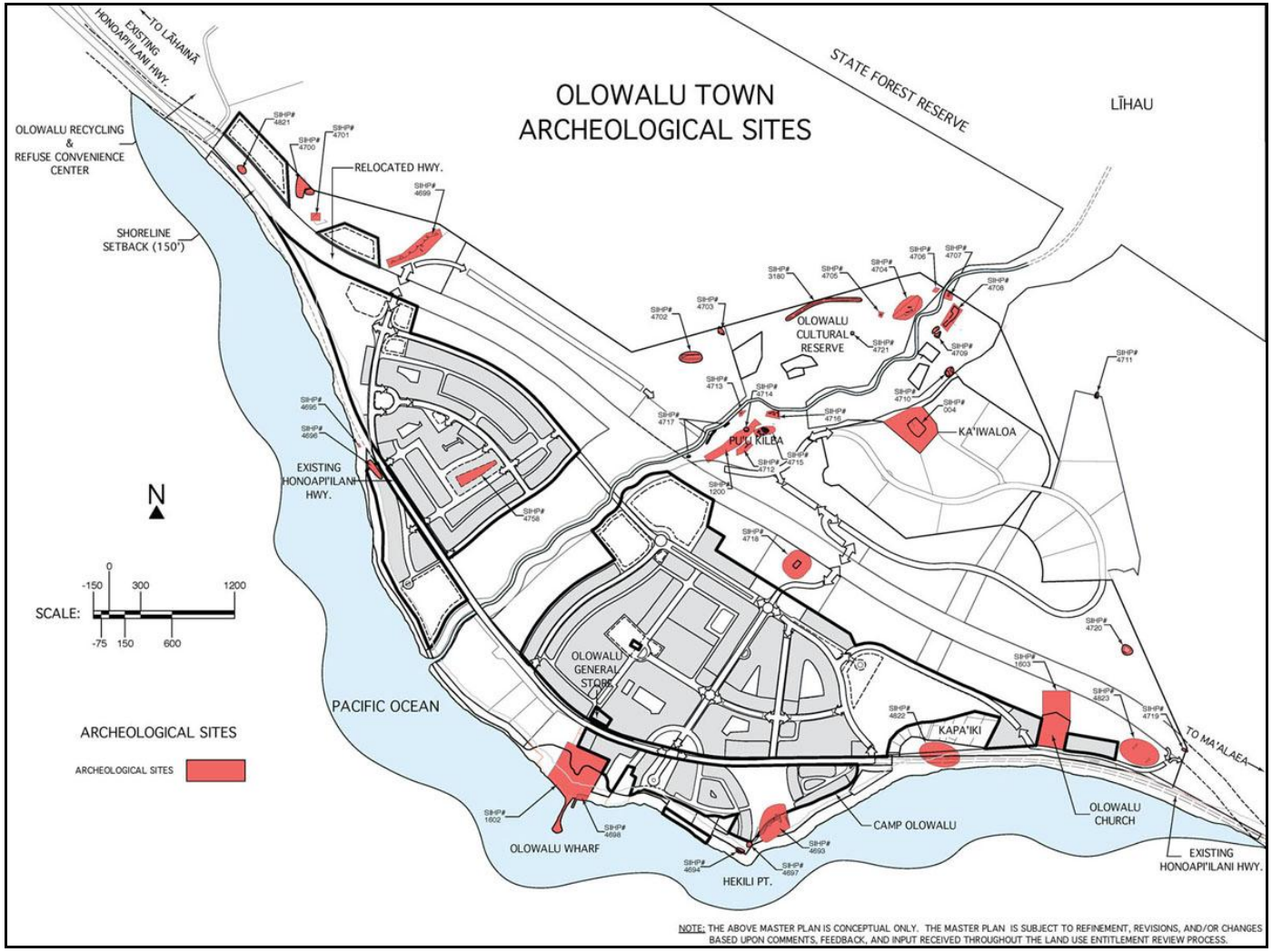


Portion of the 1992 7.5-minute USGS topographic map, Olowalu Quadrangle showing the location of the current project area in cross-hatch, privately owned parcels not included in the Olowalu Town Master Plan shaded in gray



Portion of the 7.5-minute USGS topographic map, Olowalu Quadrangle (1992) showing the location of the current project area in cross-hatch, the study area and Olowalu Ahupua‘a shaded in orange, privately owned parcels not included in the Olowalu Town Master Plan shaded in gray.

Thursday, January 19, 2012



Location of known archaeological sites with preservation buffers (in orange) in relation to the proposed Olowalu Town Master Plan (figure courtesy of Olowalu Town, LLC).

Appendix B Transcript Release Form

Ethnographic Interview Authorization and Release Form

Cultural Surveys Hawai‘i (CSH) is grateful for the generosity of the Kūpuna and Kama‘aina who have willingly shared their knowledge and experiences for the preparation of a cultural impact assessment for the proposed Olowalu Town Master Plan project.

We understand our responsibility in respecting the wishes and concerns of the interviewees participating in our assessment. Here are the procedures we promise to follow:

1. You will have the opportunity to review the written transcription of our interview with you. At that time, you may make any additions, deletions, or corrections you wish.
2. You will be given a copy of the interview transcript you have approved for your records.

For our records and yours, we humbly request your confirmation that:

1. You were given the opportunity to review the transcript of the interview.
2. You consent to the use of the interview with any revisions specified by you for historic documentation and academic purposes.
3. You consent to the interview being made available to the public.

I, _____, agree to the procedures outlined above and by my

(Please print your name)

signature, given my consent and release for this interview to be used for historic documentation and academic purposes.

Additional Comments and Clarifications:

_____

(Signature)

_____

(Date)