



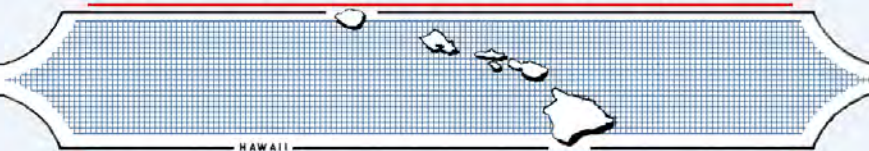
APPENDIX H
Archaeological Monitoring Plan dated July 2011 with
SHPD acceptance letter dated August 2011

**AN ARCHAEOLOGICAL MONITORING PLAN FOR
THE KAONOULU MARKETPLACE PROJECT
LOCATED IN KĪHEI,
KA'ONO'ULU AHUPUA'A, MAKAWAO DISTRICT,
MAUI ISLAND, HAWAII
[TMK: 3-9-01:16 and (2) 2-2-002:015 por.]**

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FINAL

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INTRODUCTION

At the request of Mr. Charlie Jencks of Pacific Rim Land, Scientific Consultant Services, Inc. (SCS) prepared this Archaeological Monitoring Plan in advance of grading and construction on an 88-acre parcel of land (Pi`ilani Promenade South, LLC., majority landowner) located in Kīhei, Ka`ono`ulu Ahupua`a, Wailuku and Makawao Districts, Maui Island, Hawai`i [TMK: 3-9-01:16 and 2-2-02: 015 por.] (Figures 1 through 5). Proposed development on this lot consists of a master planned project district with an integrated concept, whereby land use will be organized around a commercial and mixed-use village center to serve these planned neighborhoods. A combination of commercial, light industrial, residential, recreational and public/quasi-public uses is anticipated as part of the project area's land use.

The subject parcel has undergone Inventory Survey in the past by Fredericksen *et al.* (1994). A portion of the project area was studied by Shefcheck *et al.* (2008). Archaeological Monitoring was recommended by the State Historic Preservation Division (SHPD) in a letter dated March 7, 2011 (Log No.:2011.0536; Doc No.:1103MD05). This AMP will be in effect for all ground altering activities and planned construction related activities for the marketplace project.

Archaeological Monitoring “shall entail the archaeological observation of, and possibly intervention with, on-going activities which may adversely affect historic properties” (§13-279-4, HAR). Monitoring will ensure that significant cultural resources, if identified on the property, are documented through profiles and plan view maps, possibly sampled through excavation of exposed features, and evaluated for their historical significance. This Monitoring Plan will also ensure that if human remains are identified during subsurface work, appropriate and lawful protocol concerning the Inadvertant Discovery of Human Remains (pursuant to §13-300-40a, b, c, HAR) is followed. As will be made aware to the construction team, the archaeological Monitor has the authority to halt any ground disturbing activities during this project in the immediate area of a find in order to appropriately carry out the provisions of this plan.

This AMP will require the approval of the State Historic Preservation Division (SHPD) prior to any land altering activities on the parcel. The following text provides more detailed information on the reasons for monitoring, potential site types to be encountered during excavation, monitoring conventions and methodology for both field and laboratory work, and discusses curation and reporting of cultural material recovered.

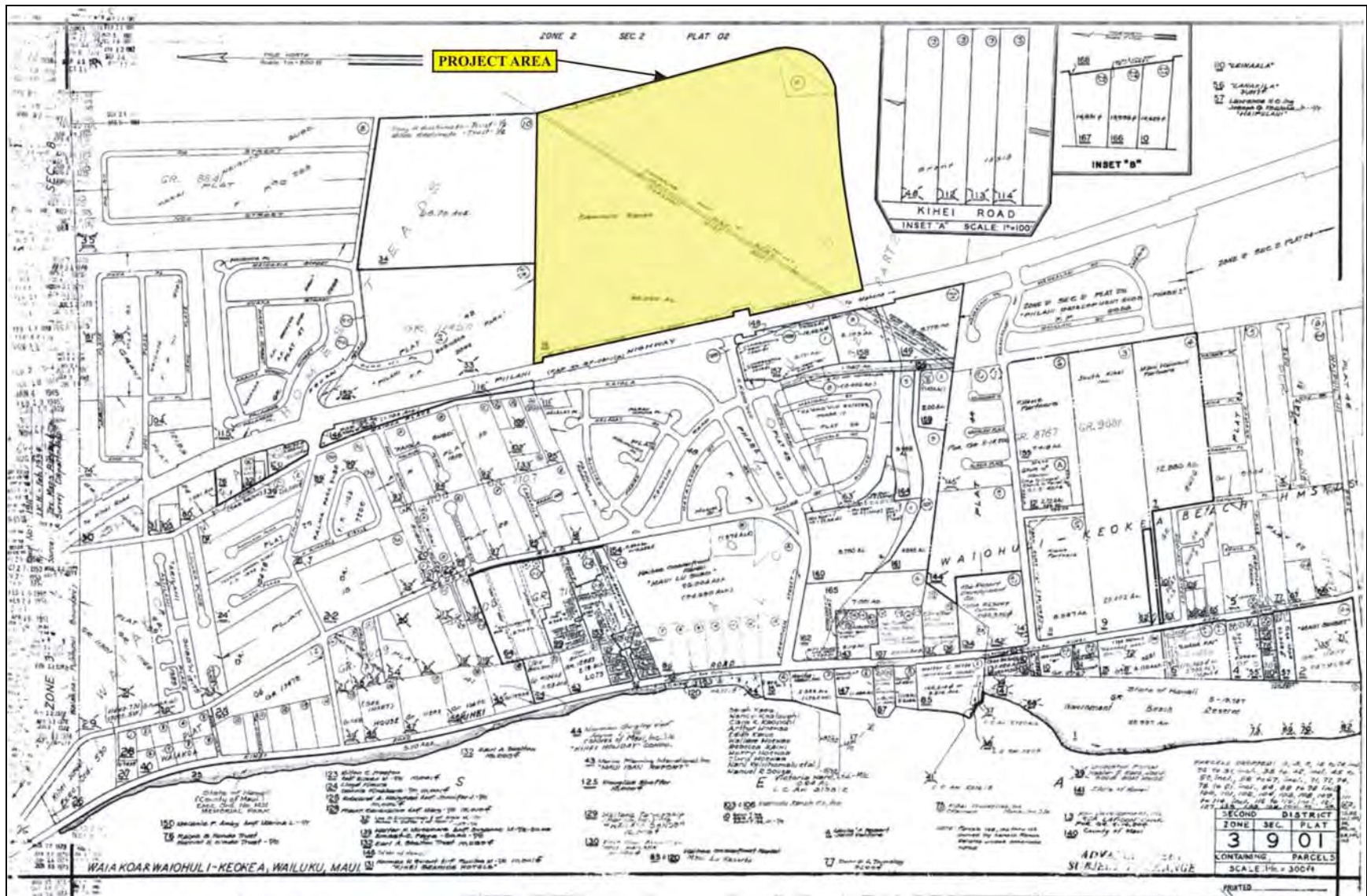


Figure 2: Tax Map Key [TMK] Showing the Project Area as a Portion of Lot 15.

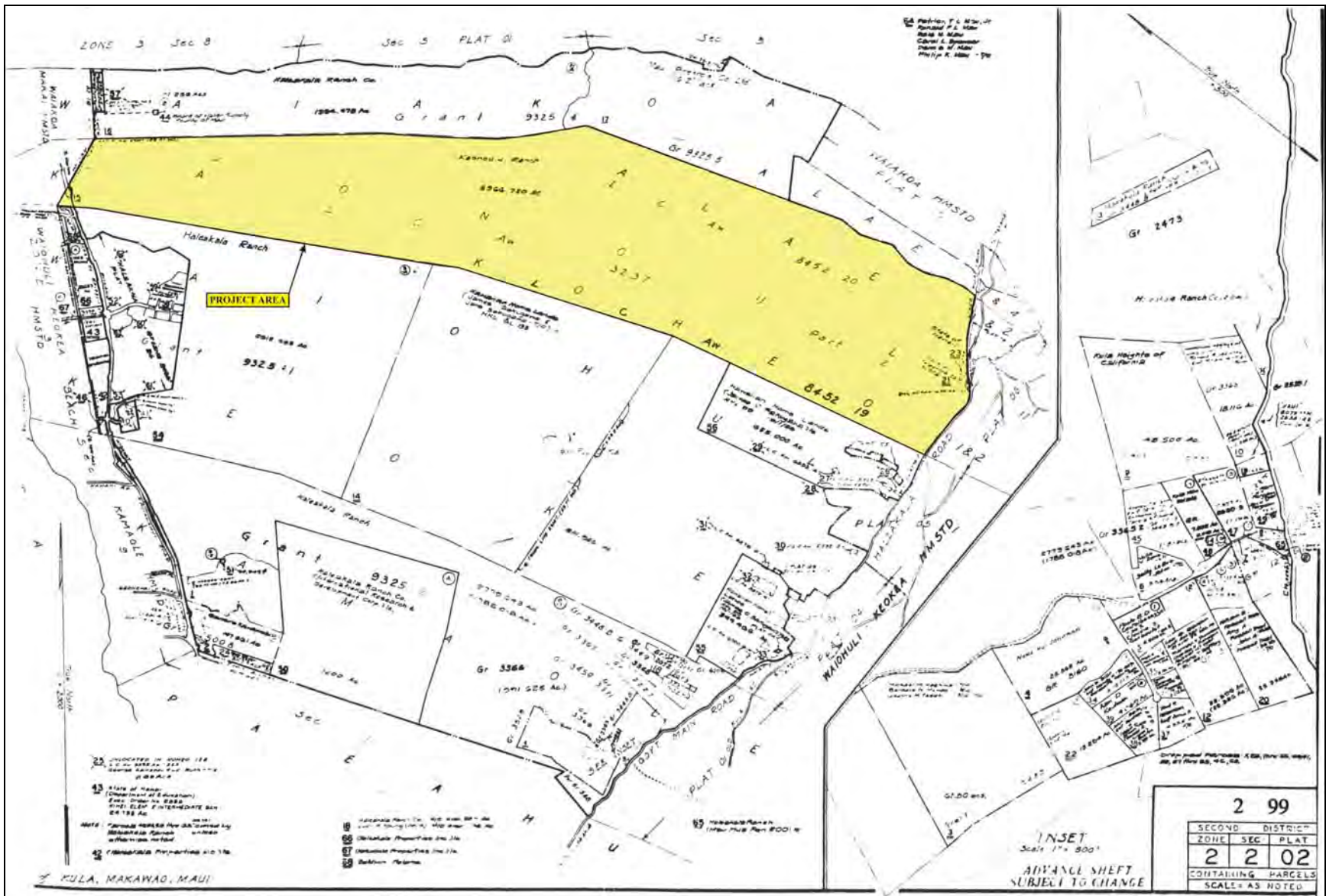


Figure 3: Tax Map Key [TMK] Showing the Project Area not Included in Figure 2

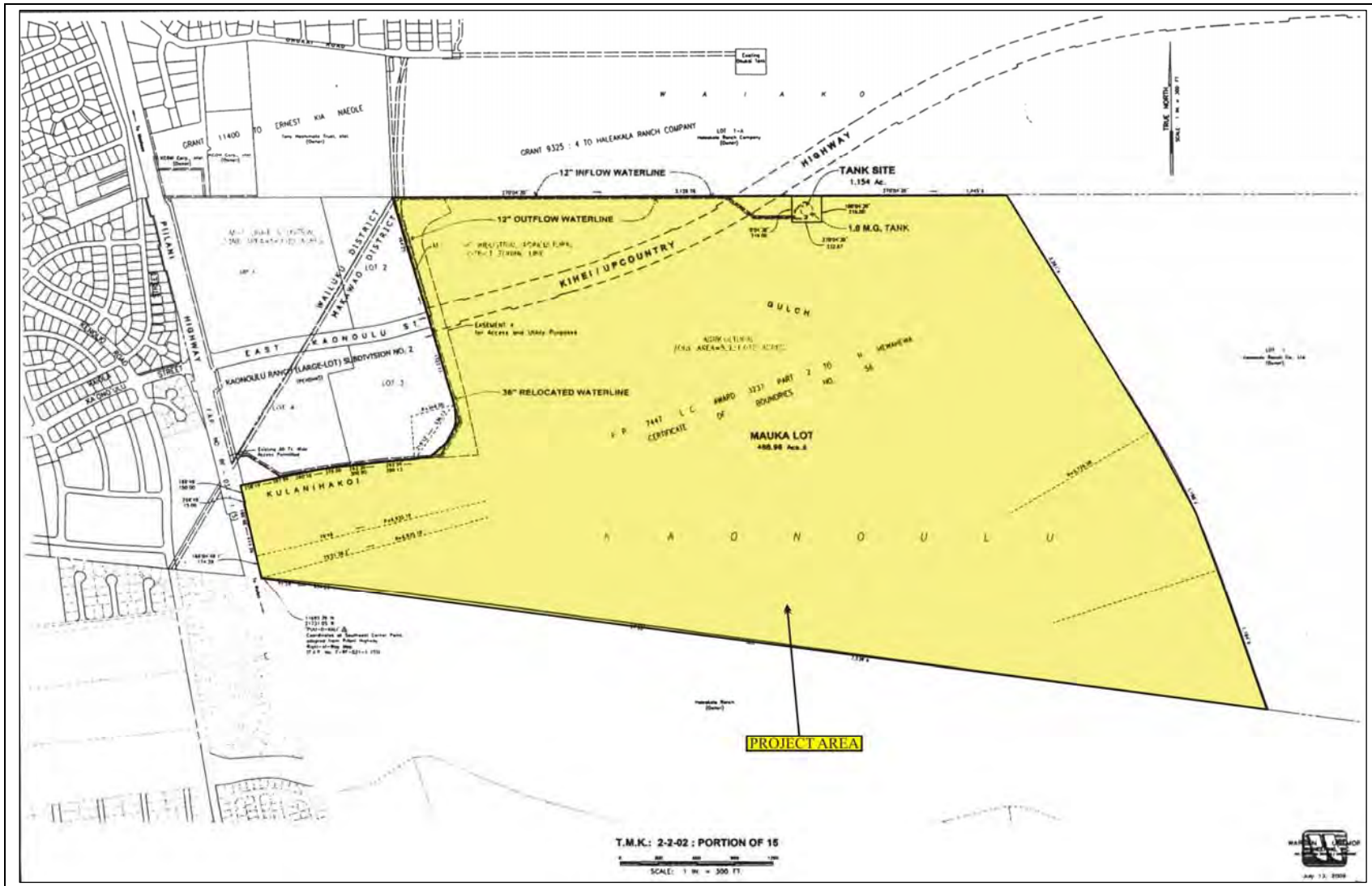


Figure 4: Tax Map Key [TMK] Showing the Lower Project Area in Detail.

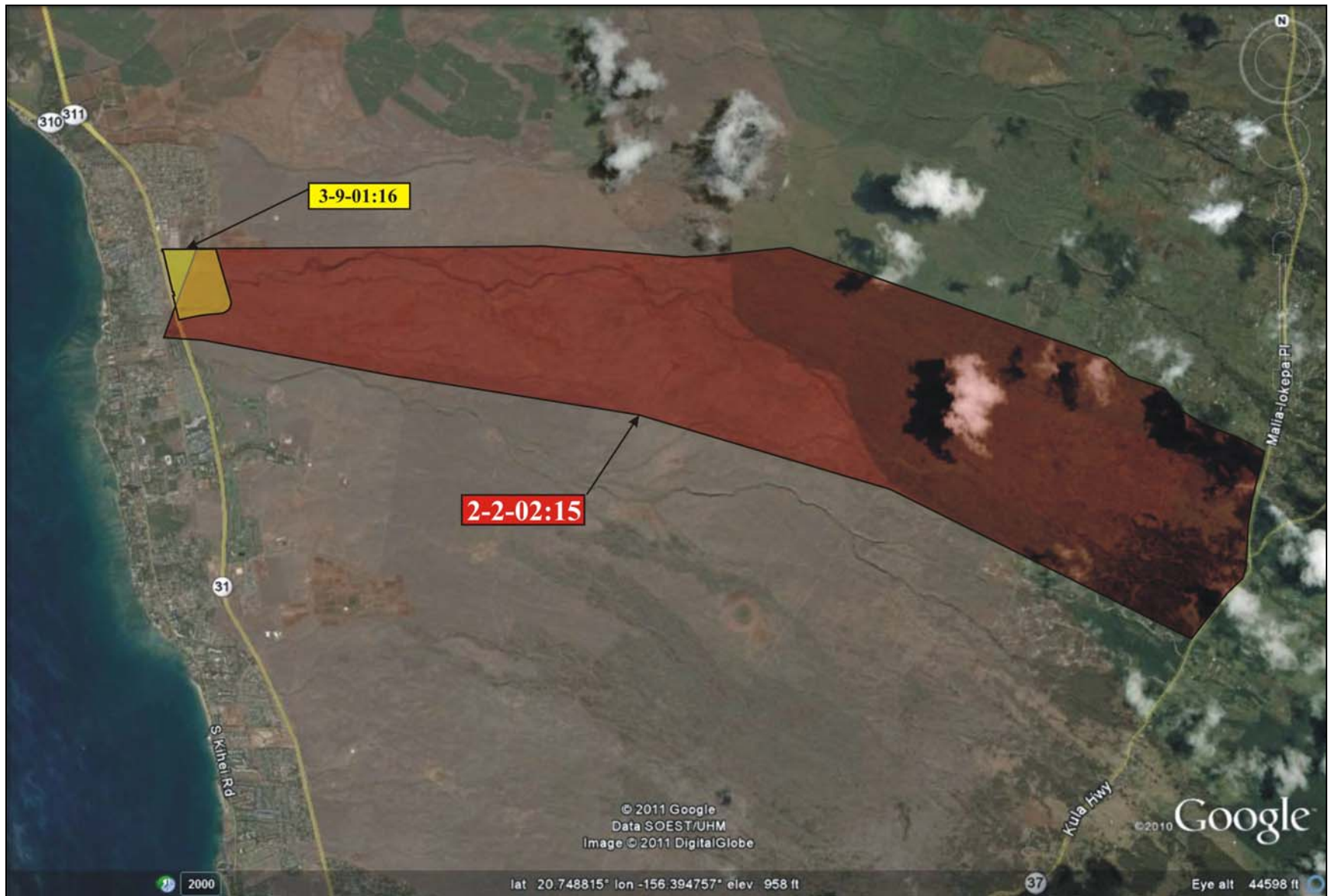


Figure 5: Google Maps Showing Project Area.

Monitoring will be conducted on a full-time basis during all ground-altering activities, with one archaeological monitor per piece of excavating equipment, in order to document any historic properties which may be encountered during the proposed undertaking and to provide its significant assessments and recommended mitigation measures, in consultation with the State Historic Preservation Division (SHPD). This Monitoring program will ensure that if human remains are identified during subsurface work, appropriate and lawful protocol concerning the Inadvertent Discovery of Human Remains (pursuant to 13-300-40a, b, c, HAR) is followed. Archaeological Monitoring will also ensure that significant cultural resources, if identified, are sampled, adequately documented, and evaluated for their historical significance in accordance with SHPD recommendations. Cultural resources, as is described in more detail below, could consist of remnant cultural layers, artifacts, or midden associated with traditional Native Hawaiian or early historic times.

PROJECT AREA DESCRIPTION

The project area is located in Ka'ono'ulu Ahupua`a, east of the Wailuku-Makawao boundary that cuts across the *ahupua`a*. It is bordered on the north by Waiakoa Ahupua`a and to the south by Kōheo Ahupua`a. The southwestern boundary abuts Pi'ilani Highway for some distance and then jogs inland ending with its northwest corner on the Wailuku-Makawao boundary (see Figure 2). The entire parcel was part of the Kaonoulu Ranch lands and spans from a half mile to approximately two miles inland of the coastline within an area archaeologically known as the "barren zone".

The project area soils are dominated by Waiakoa Extremely Stony Silty Clay Loam (WID2). This soil type is generally associated with highly eroded landscapes with shallow, 3 to 25 percent slopes and low precipitation (Foote *et al.* 1972: 126). Kīhei gets less than ten inches of rainfall per year (Armstrong 1983). Elevation ranges from 40 to 600 feet above mean sea level (amsl). The northeastern flank of the project area is marked with a steep natural gulch, called Kulanihakoi. While there is a general absence of perennial streams throughout the project area environs, Kulanihakoi Gulch does support a perennial stream during seasons of particularly heavy rainfall.

BARREN ZONE

In geographical and physiographical terms, the barren zone is an intermediary zone between direct coastline and back beach areas to upland forests and more montane environments. The barren zone is a medial zone that appears to have been almost exclusively transitory, or at best, intermittently occupied through time. Intermittent habitation loci, as defined by surface midden scatters or small architectural features (*i.e.*, C-shapes, alignments) dominate the few

documented traditional-period site types (pre-Contact) in the area through time. Post-Contact features are generally limited to walls and small alignments, respectively associated with ranching and military training in the area.

The barren zone was an intermediary region between verdant upland regions and the coastline. Apparently, agricultural endeavors were practically non-existent in the barren zone and tool procurement materials (basalt, wood) were selected from other locales as well. Sediment regimes in the area are shallow, most often overlying bedrock, and perennial water sources are virtually non-existent.

Cordy (1977) divided the Kīhei (inclusive of Kaonoulu) area into three environmental zones (or subzones when one considers the entire *ahupua`a*): coastal, transitional/barren, and inland. The current project location occurs in the transitional or barren zone: the slopes back of the coast with less than 30 inches of rainfall annually (Cordy 1977:4).

This barren zone is perceived as dry and antagonistic to permanent habitation. Use of the area would primarily have been intermittent or transitory, particularly as the zone could have contained coastal-inland trails and would have marked an intermediary point between the two more profitable ecozones. The region remains hostile to permanent habitation, only having been “conquered” in recent times through much modern adaptation (i.e., air conditioning, water feed systems, etc.).

Based on general archaeological and historic research, the barren zone was not subject to permanent or expansive population until recent times. This intimates that population pressure along the coast was minimal or non-existent in the Kīhei coastal area through time. As such, architectural structures associated with permanent habitation sites and/or ceremonial sites are not often identified in the area. The prevailing model that temporary habitation-temporary use sites predominate in the barren zone has been authenticated further by recent research.

CULTURAL HISTORICAL CONTEXT

The island of Maui ranks second in size of the eight main islands in the Hawaiian Archipelago. The island was formed by two volcanoes, Mount Kukui in the west and Haleakalā in the east. The younger of the two volcanoes, Haleakalā, soars 2,727 m (10,023 feet) above sea level and embodies the largest section of the island. Unlike the amphitheater valleys of West Maui, the flanks of Haleakalā are distinguished by gentle slopes. Although it receives more rain than its counterpart in the east, the permeable lava flows of the Honomanū and Kula Volcanic

Series prevent the formation of rain-fed perennial streams. The few perennial streams found on the windward side of Haleakalā originate from springs located at low elevations. Valleys and gulches were formed by intermittent water run-off. The environment factors and resource availability heavily influenced pre-Contact settlement patterns. Although an extensive population was found occupying the uplands above the 30-inch rainfall line where crops could easily be grown, coastal settlement was also common (Kolb *et al.* 1997). The existence of three fishponds at Kalepolepo, north of the project area, and at least two *heiau* (shrine, temple, place of worship) identified near the shore confirm the presence of a stable population relying mainly on coastal and marine resources.

Agriculture may have been practiced behind the dune berms in low-lying marshland or in the vicinity of Keālia pond. It is suggested that permanent habitation and their associated activities occurred from A.D. 1200 to the present in both the uplands and coastal region (*Ibid.*).

PAST POLITICAL BOUNDARIES

Traditionally, the division of Maui's lands into districts (*moku*) and sub-districts was performed by a *kahuna* (priest, expert) named Kalaiha`ōhia, during the time of the *ali`i* Kaka`alaneo (Beckwith 1979:383; Fornander places Kaka`alaneo at the end of the fifteenth century or the beginning of the sixteenth century [Fornander 1919-20, Vol. 6:248]). Land was considered the property of the king or *ali`i`ai moku* (the *ali`i* who eats the island/district), which he held in trust for the gods. The title of *ali`i`ai moku* ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted; his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The *maka`āinana* (commoners) worked the individual plots of land.

In general, several terms were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua`a*), which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupua`a* were able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua`a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *`ili`āina* or *`ili* were smaller land divisions next to importance to the *ahupua`a* and were administered by the chief who controlled the *ahupua`a* in which it was located (*ibid*:33; Lucas 1995:40). The *mo`o`āina* were narrow strips of land within an *`ili*. The land holding of a tenant or *hoa`āina* residing in an *ahupua`a* was called a *kuleana* (Lucas 1995:61). The project area is located in the *ahupua`a* of Ka`ono`ulu, which translated means literally "the desire for breadfruit" (Pukui *et al* 1974.:86).

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua`a*. Within the *ahupua`a*, residents were able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua`a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111).

During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugarcane, *Saccharum officinarum*), *mai`a* (banana, *Musa* sp.), and *uala* (sweet potato, *Ipomoea batatas*) were also grown. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985). Agricultural development on the leeward side of Maui was likely to have begun early in what is known as the Expansion Period (AD 1200–1400, Kirch 1985). According to Handy (1940: 159), there was “continuous cultivation on the coastal region along the northwest coast” of Maui . He writes:

On the south side of western Maui the flat coastal plain all the way from Kihei and Ma`alaea to Honokahua, in old Hawaiian times, must have supported many fishing settlements and isolated fishermen’s houses, where sweet potatoes were grown in the sandy soil or red lepo [soil] near the shore. For fishing, this coast is the most favorable on Maui, and, although a considerable amount of taro was grown, I think it is reasonable to suppose that the large fishing population, which presumably inhabited this leeward coast, ate more sweet potatoes than taro with their fish.... [*ibid*]

There is little specific information pertaining directly to Kīhei, which was originally a small area adjacent to a landing built in the 1890s (Clark 1980). Presently, Kīhei consists of a six-mile section along the coast from the town of Kīhei to Keawakapu. Scattered amongst the agricultural and habitation sites were places of cultural significance to the *kama`āina* of the district including at least two *heiau*. In ancient times, there was a small village at Kalepolepo based primarily on marine resources. It was recorded that occasionally the blustery Kaumuku Winds would arrive with amazing intensity along the coast (Wilcox 1921).

There were several fishponds in the vicinity of Kīhei; Waiohuli, Ka`ono`ulu-kai, and Kalepolepo Pond (Site 50-50-09-1288), which is also known by the ancient name of Kō`ie`ie Pond (Kolb *et al.* 1997). Constructed on the boundary between Ka`ono`ulu and Waiohuli

Ahupua`a, these three ponds were some of the most important royal fishponds on Maui. The builder of Kalepolepo and two other ponds (Waiohuli and Ka`ono`ulu-kai) has been lost in antiquity, but they were reportedly rebuilt at least three times through history, beginning during the reign of Pi`ilani (1500s) (*ibid*; Cordy 2000).

Oral tradition recounts the repairing of the fishponds during the reign of Kiha-Pi`ilani, the son of the great chief Pi`ilani, who had bequeathed the ponds to Umi, ruler of Hawai`i Island. Umi's *konohiki* (land manager) ordered all the people from Maui to help repair the walls of Kalepolepo's fishponds. A man named Kikau protested that the repairs couldn't be done without the assistance of the *menehune* who were master builders (Wilcox 1921:66-67). The *konohiki* was furious and Kikau was told he would die once the repairs had been made. Ka`ono`ulu-kai was the first to be repaired. When the capstone was carried on a litter to the site, the *konohiki* rode proudly on top of the rock as it was being placed in the northeast corner of the pond. When it was time for repairs on Waiohuli-kai, the *konohiki* did the same. As the last pond, then known as Ka`ono`ulu-kai, was completed, the *konohiki* once again rode the capstone to its resting place. Before it could be put into position, the capstone broke throwing both the rock and *konohiki* into the dirt. The workers reportedly said "*Ua konohiki Kalepolepo, ua eku i ka lepo*," or, "the manager of Kalepolepo, one who roots in the dirt" (*ibid*:66). That night a tremendous storm threw down the walls of the fishponds. The *konohiki* implored Kikau to help him repair the damage. Kikau called the *menehune* who rebuilt the walls in one night. Umi sent for Kikau who lived in the court of Waipi`o Valley from then on. The region of Ka`ono`ulu-kai and Ka`ono`ulu-kai fishpond became known as Kalepolepo fishpond (*ibid*).

The Kalepolepo fishponds were rebuilt by Kekaulike, chief of Maui in the 1700s, at which time it supplied `ama`ama (mullet) to Kahekili II. Again, it was restored by Kamehameha I when he ruled as governing chief over Maui, and for the last time in the 1840s, when prisoners from Kaho`olawe penal colony were sent to do repairs (Kamakau 1961; Wilcox 1921). At this time, stones were taken from Waiohuli-kai pond for the reconstruction of Kalepolepo. It was here at Kalepolepo that Kamehameha I reportedly beached his victorious canoes after subduing the Maui chiefs. The stream draining into Keālia pond (north of the project area) became sacred to royalty and *kapu* to commoners (Stoddard 1894).

Trails extended from the coast to the mountains, linking the two for both economic and social reasons. A trail known as the *alanui* or "King's trail" built by Kihapi`ilani, extended along the coast passing through all the major communities between Lāhainā and Mākena, including Kīhei. Kolb noted that two traditional trails extended through Ka`ono`ulu. One trail, named "*Kekuawaha`ula`ula*" or the "red-mouthed god", went from Kīhei inland to Ka`ono`ulu.

Another, the Kalelepo trail, began at the Kalepolepo fishpond and continued to upland Waiohuli. These trails were not only used in the pre-Contact era, but were expanded to accommodate wagons bringing produce to the coast in the 1850s (Kolb *et al.* 1997:61).

WESTERN CONTACT

Early records, such as journals kept by explorers, travelers and missionaries, Hawaiian traditions that survived long enough to be written down, and archaeological investigations, have assisted in the understanding of past cultural activities. Unfortunately, early descriptions of this portion of the Maui coast are brief and infrequent. Captain King, Second Lieutenant on the *Revolution* during Cook's third voyage briefly described what he saw from a vantage point of "eight or ten leagues" (approximately 24 miles) out to sea as his ship departed the islands in 1779 (Beaglehole 1967). He mentions Pu'u Ōla'i, south of Kīhei, and enumerates the observed animals, thriving groves of breadfruit, the excellence of the *taro*, and describes the sugarcane as being of an unusual height. Seen from this distance and the mention of breadfruit suggest the uplands of Kīpahulu-Kaupo and `Ulupalakua were his focus.

In the ensuing years, LaPérouse (1786), Nathaniel Portlock and George Dixon, (also in 1786), sailed along the western coast, but added little to our direct knowledge of Kīhei. During the second visit of Vancouver in 1793, his expedition becalmed in the Ma'alaea Bay close to the project area. (A marker commemorating this visit is located across from the Maui Lu Hotel). He reported:

The appearance of this side of Mowee was scarcely less forbidding than that of its southern parts, which we had passed the preceding day. The shores, however, were not so steep and rocky, and were mostly composed of a sandy beach; the land did not rise so very abruptly from the sea towards the mountains, nor was its surface so much broken with hills and deep chasms; yet the soil had little appearance of fertility, and no cultivation was to be seen. A few habitations were promiscuously scattered near the waterside, and the inhabitants who came off to us, like those seen the day before, had little to dispose of. [Vancouver 1984:852]

Archibald Menzies, a naturalist accompanying Vancouver stated, "...we had some canoes off from the latter island [Maui], but they brought no refreshments. Indeed, this part of the island appeared to be very barren and thinly inhabited" (Menzies 1920:102). According to Kahekili, then chief of Maui, the extreme poverty in the area was the result of the continuous wars between Maui and Hawai'i Island causing the land to be neglected and human resources wasted (Vancouver 1984:856).

THE MĀHELE

In the 1840s a drastic change in traditional land tenure resulted in a division, or Māhele, of island lands. This system of private ownership was based on western law. While a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kamehameha III (Kamehameha III) was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kuykendall Vol. I, 1938:145 footnote 47, 152, 165–6, 170; Daws 1968:111; Kelly 1983:45; Kame`eleihiwa 1992:169–70, 176).

Among other thing, foreigners demanded private ownership of land to insure their investments (Kuykendall Vol. I, 1938:138, 145, 178, 184, 202, 206, 271; Kame`eleihiwa 1992:178; Kelly 1998:4). Once lands were made available and private ownership was instituted the *maka`āinana* (commoners) were able to claim the plots on which they had been cultivating and living, if they had been made aware of the foreign procedures (*kuleana* lands, Land Commission Awards, LCA). These claims could not include any previously cultivated or presently fallow land, `okipū (on O`ahu), stream fisheries or many other resources necessary for traditional survival (Kelly 1983; Kame`eleihiwa 1992:295; Kirch and Sahlins 1992). The awarded parcels were called Land Commission Awards. If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA, issued a Royal Patent number, and could then take possession of the property (Chinen 1961: 16). Fifty-five LCA claims were made for land in Ka`ono`ulu.

As western influence grew, Kalepolepo, west of the project area became the important provisioning area. Europeans were now living or frequently visiting the coast and several churches and missionary stations were established. A Mr. Halstead left medical school on the East coast of the continent to become a whaler and after marrying the granddaughter of Issac Davis, settled in Kalepolepo on land given him by Kamehameha III (Kolb *et al.* 1997). His residence and store situated at Kalepolepo landing was known as the Koa House having been constructed of *koa* logs brought from the uplands of Kula. The store flourished due to the whaling and potato industry and provided an accessible port for exported produce. Several of Hawai`i's ruling monarchs stayed at the Koa House, including Kamehameha III, Kamehameha the IV, Lot Kamehameha (V), and Lunalilo. After viewing the surroundings, Wilcox stated, "...Kalepolepo was not so barren looking a place. Coconut trees grew beside pools of clear warm water along the banks of which grew taro and ape..." (1921:67). However, by 1887 this had changed. Wilcox continues:

...the Kula mountains had become denuded of their forests, torrential winter rains were washing down earth from the uplands, filling with silt the ponds at Kalepolepo...ruins of grass huts

[were] partly covered by drifting sand, and a few weather-beaten houses perched on the broad top of the old fish pond wall at the edge of the sea, with the Halstead house looming over them dim and shadowy in the daily swirl of dust and flying sand..." [ibid]

As early as 1828, sugar cane was being grown commercially on Maui (Speakman 1981:114). Sugar was established in the Makawao area in the late 1800s and by 1899, the Kihei Plantation Company (KPC) was growing cane in the plains above Kīhei. In 1908, the Kihei Plantation was absorbed by the Hawaiian Commercial and Sugar Company (HC&SC); the new-formed company continued cultivating what had been the KPC fields into the 1960s. A 200-foot-long wharf was constructed in Kīhei at the request of Maui plantation owners and farmers and served inter-island boats for landing freight and shipping produce to Honolulu (Clark 1980). In 1927, Alexander and Baldwin became the agents for the plantation (Condé and Best 1973). A landing was built at Kīhei around 1890.

Kaonoulu Ranch lands have been in the Rice family since 1916. Previously, both the Haleakalā and Kaonoulu Ranches leased the then Crown lands for pasture and other ranching activities. The introduction of a dependable water supply in 1952 set a foundation for overseas investment and development, which has thrived along the coastal region of Kīhei.

PREVIOUS ARCHAEOLOGY

Archaeological studies in the greater Kīhei area began in the early twentieth century with T. Thrum (1909), J. Stokes (1909–1916), and W. M. Walker (1931). These surveys included areas of leeward Maui and inventoried both upland of the Kula District and coastal sites (Figure 6).

The barren zone areas of this study have recently been subject to a proliferation of archaeological studies as residential and business endeavors expand from the coastline into other reaches of the Kīhei area. Concomitant with modern expansion involves necessary historic preservation work. The following section provides a general overview of archaeological studies in the general Kīhei area, focused on the barren zone.

As noted by Hammatt and Shideler (1992:10), "what is particularly striking in the many archaeological reports on Kīhei is the general paucity of sites within the transitional or barren zone." Cordy (1977) and Cox (1976) all conducted large-scale survey in this zone that led to the recordation of only small, temporary habitation or temporary use sites. Several other studies in this zone of Kama'ole Ahupua'a, including those conducted by Mayberry and Haun (1988) and

Hammatt and Shideler (1990), also only revealed the presence of temporary habitation and temporary use loci.

McDermott (2001:100) states that site densities are typically quite low within the “barren zone” with multiple studies having been conducted on large parcels (Kennedy 1986, Watanabe 1987, Hammatt and Shideler 2000, Kikiloi *et al.* 2000) that did not lead to the identification any pre-Contact sites. However, military sites related to World War II (WWII) training exercises have been previously documented in the area (McGerty *et al.* 2000), these sites often consisting of low, short alignments or walls. The few radiocarbon dates acquired from the area indicate definitive use of the landscape in later prehistory c. A.D. 1500 to 1600+.

SCS, and others, have more recently conducted numerous projects in the vicinity of the present project area. Several studies have been conducted in association with development of the Maui Research and Technology Park and the Elleair Maui Golf Club (Kennedy 1986; Hibbard 1994; Chaffee *et al.* 1997; McGerty *et al.* 2000; Sinoto *et al.* 2001; Tome and Dega 2002; Monahan 2003).

Kennedy (1986) conducted an archaeological reconnaissance of the entire 150.032 acres of the then-proposed Maui Research and Technology Park (TMK:2-2-02, since changed to 2-2-24). Kennedy’s study, which did not include subsurface testing (excavation), concluded that no archaeological sites or features were located within the project area. Chaffee *et al.* (1997) conducted an Archaeological Inventory Survey, including subsurface testing, of a portion of the Maui Research and Technology Park, within the area investigated by Kennedy (1986). Three sites consisting of ten archaeological features were identified. The features included remnant terraces, stone alignments, a mound, and a modified outcrop. All of the sites were interpreted as agricultural in function with the exception of a rock mound that may have functioned as a religious feature.

Monahan (2003) conducted an Archaeological Inventory Survey, including subsurface testing, of a 28.737-acre portion of the Maui Research and Technology Park, within the area investigated by Kennedy (1986). Other than one surface feature, a small arrangement of stacked boulders interpreted as a ‘push pile,’ this survey yielded no evidence of historic or prehistoric significance.

Theresa Donham conducted an Archaeological Reconnaissance Survey of the Haleakalā Greens Subdivision area (Hibbard 1994). She identified a low, circular rock mound, a historical site with multiple features on the crest of a prominent ridge, a linear rock mound or wall

remnant, a rock-filled terrace outlined with a low, rock wall, and other modifications along a rock outcrop. Shell midden was observed on the surface inside an enclosure.

McGerty *et al.* (2000) surveyed 15 selected areas within the Elleair Maui Golf Club, and identified five archaeological sites (State Site Nos. 50-50-10-5043, -5044, -5045, -5046, and -5047) containing a total of seven surface features. The surface features were interpreted as agricultural terraces, perhaps dating from the pre-Contact period, and C-shaped rock formations (fighting positions) built during World War II training. Ten excavation units placed within these features yielded no cultural material.

Sinoto *et al.* (2001) conducted an Archaeological Inventory Survey of a parcel adjacent to the subject property. No archaeological or historical sites or features were identified.

Tome and Dega (2002) conducted an Archaeological Inventory Survey along the northeastern flank of the Elleair Maui Golf Club property. They identified a historical ranching corral and a short agricultural wall, collectively designated State Site No. 50-50-10-5233. No other structures or subsurface deposits were identified. No traditional Native Hawaiian sites or features were identified. Another Inventory Survey along the southern flank of the Elleair Maui Golf Course (Dega 2003) failed to yield any archaeological or historical features.

Scientific Consultant Services (SCS), Inc. conducted Archaeological Inventory Survey (Monahan 2004) on two undeveloped lots totaling approximately 56.647 acres near the Elleair Golf Course in Kīhei, Waiohuli and Ka`ono`ulu Ahupua`a, Wailuku (Kula) District, Kīhei, Maui Island, Hawai`i [TMK: 2-2-24: Portion 12 and 13]. A pedestrian survey and subsurface testing was performed in advance of a proposed residential project near the Elleair Golf Course. Four surface features consisting of stacked basalt stones were located within the project area; each was assigned a separate state site number. Test excavations yielded buried cultural material consistent with traditional Native Hawaiian activities at three of the four sites (Sites 50-50-10-5506, -5507, and -5509). Excavation at the fourth site (-5508)—a C-shaped rock pile consistent with a World War II military training feature—did not yield any subsurface evidence. The discovery of three traditional Native Hawaiian sites in this area is significant, as previous studies have generally failed to document any such activity. One of these sites (-5509) yielded a modern radiocarbon date (0 ± 50 BP), but its context is questionable and it may not be associated with the buried artifacts. Two other sites (-5506 and -5507) did not yield charcoal, although both contained buried traditional artifacts and midden. No additional archaeological work was recommended in the project area (Monahan 2004).

Field Inspection for two waterline corridors was conducted by Dega and Tome in 2006. That letter report describing the results of the field work is included as Appendix A.

SCS personnel Tomasi Patolo, B.A., Dea Funka, B.A., and Bryan Armstrong, B.A. conducted Inventory Survey on the current area of study between January 24 and April 6, 2007 under the general supervision of Michael Dega, Ph.D. (Shefchek *et al* 2008). Forty new archaeological sites were identified and recorded during this work. Of the forty sites recorded during this work, eight are associated with pre-Contact activities. These pre-Contact sites consisted of temporary rock shelters with petroglyph components, enclosures, platforms, a mound and a wall. Historic sites found during this work pertained to agriculture and military training activities.

PROJECT AREA EXPECTATIONS

The current project area falls into the barren zone. Archaeological reconnaissance and inventory survey work in the barren zone have yielded only a modest amount of evidence for traditional and historic-period activity. Documented sites in the general area primarily include agricultural terraces and short walls, C-shaped structures (military period), and historic ranching features (walls, corrals).

This project area has been subject to Inventory Survey, with 20 sites documented (see above). However, being located within the barren zone, it is not expected to yield many, if any, traditional-type deposits in subsurface contexts, this due to the shallow nature of soils overlying bedrock. Previous archaeology in the area (McGerty *et al.* 2000) attests to the likelihood for encountering numerous sites relating to military activity on the parcel. There is limited expectation that significant sites will be identified in subsurface contexts.

REASON FOR MONITORING

The main impetus for full-time Archaeological Monitoring of construction activities in the current project area directly correlates to the positive results earned through Inventory Survey (Fredericksen *et al.* 1994). Given that twenty sites were identified in the area, there maintains some occupation through time, which could be revealed again during Monitoring.

In addition, the numerous archaeological projects that have been conducted in the Kīhei-Makena area have been important in determining the pre- and post-Contact period settlement patterns within the general project area (see Figure 5; Table 1). Much of this research has demonstrated that significant cultural deposits, consisting of subterranean cultural strata,

subsurface pit features, midden, artifacts, and human burials, are present in subsurface contexts in the area. Surface, and subsurface, features related to traditional and historic-period occupation, whether complete or partially truncated, have been documented in several of the area's studies (see Previous Archaeology section below). The present monitoring work will provide an opportunity to more closely assess the presence/absence of significant cultural resources on the property, and if present, will allow for complete documentation of such resources. Data gleaned through this study should allow for contributing to the database of knowledge for the area, and for refining Kīhei settlement pattern models.

MONITORING CONVENTIONS AND METHODOLOGY

This Archaeological Monitoring Plan has been devised in accordance with DLNR-SHPD rules governing standards for Archaeological Monitoring (DLNR-SHPD 2003). SCS monitors will adhere to the following guidelines during monitoring:

1. A qualified archaeologist intimately familiar with the project area and the results of previous archaeological work conducted in the Kīhei-Makena area will monitor subsurface construction activities on the parcel. Please note that one archaeological monitor is required for each piece of ground altering machinery. If significant deposits or features are identified and additional field personnel are required, the contracting archaeologist will notify the contractor, or representatives before additional personnel are brought to the site.
2. If features, or cultural deposits, are identified during Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the significant location so that the cultural feature(s), or deposit(s), may be fully evaluated and appropriate treatment of the cultural deposit(s) is conducted, per the letter of this plan. SHPD will be contacted to establish feature significance and potential mitigation procedures. Treatment activities primarily include documenting the feature/deposit through plotting its location on an overall site map, illustrating a plan view map of the feature/deposit, profiling the deposit in two dimensions, photographing the finds (with the exception of human burials), collecting artifact and soil samples, and triangulating the finds on a map. Construction work and/or back-filling of excavation pits or trenches will only continue in the sample location when all documentation has been completed.
3. Soil stratigraphy associated with subsurface cultural deposits will be noted and photographed, particularly those containing significant quantities or qualities of cultural materials. If deemed significant by SHPD and the contracting archaeologist, these deposits will be sampled, as determined by the same.

Table 1: List of Sample Archaeological Projects by Ahupua`a Location in Chronological Order.

Location	Report
Kama`ole Ahupua`a	Sinoto 1978
	Keau 1981
	Neller 1982
	Leidemann 1989
	Hammatt and Shideler 1989
	Sinoto 1989
	Fredericksen <i>et al.</i> 1989
	Fredericksen <i>et al.</i> 1990
	Hammatt and Shideler 1990
	Sinoto 1990
	Kennedy 1991
	Fredericksen <i>et al.</i> 1991
	Rotunno-Hazuka and Pantaleo 1991
	Kennedy <i>et al.</i> 1992
	Hammatt and Shideler 1992
	Fredericksen <i>et al.</i> 1994
	Mayberry and Haun 1998
	Haun 1998
	Fredericksen and Fredericksen 1999
	Calis 2001
Tome and Dega 2002	
Keokea Ahupua`a	Cox 1976
	Brown 1989
	Brown <i>et al.</i> 1989
	Donham 1990b
	Kennedy and Breithaupt 1991
	Hibbard 1995
	Hammatt and Shideler 2000
	Fredericksen 2001
	Fredericksen and Fredericksen 2001
Waiohuli Ahupua`a	Cordy 1977
	Miura 1982
	Kennedy 1986
	Watanabe 1987
	Riford 1987
	Kennedy 1988
	Donham 1989
	Donham 1990a
	Fredericksen <i>et al.</i> 1993
	Fredericksen <i>et al.</i> 1994
	Hibbard 1994
	Fredericksen and Fredericksen 1995a
	Fredericksen and Fredericksen 1995b
	Dunn and Spear 1995
	Chaffee <i>et al.</i> 1997
	Sinoto <i>et al.</i> 1999
	McDermott and Hammatt 2000
	Kikiloi and Hammatt 2000
	McGerty <i>et al.</i> 2000
	McDermott 2001
Sinoto <i>et al.</i> 2001	

4. In the event that human remains are encountered, all work in the immediate area of the find will cease and the area will be secured from further activity until burial protocol has been completed. The SHPD-Maui Cultural Historian will be immediately identified about the inadvertent discovery of human remains on the property. Notification of the inadvertent discovery will also be made to the Maui/Lanai Islands Burial Council by either SHPD or the contracting archaeological firm. A determination of the minimum number of individuals (MNI), age(s), and ethnicity of the burial(s) will be ascertained in the field by the contracting archaeologist. Rules outlined in Chapter 6e, Section 43 shall be followed. Profiles, plan view maps, and illustrative documentation of skeletal parts will be recorded to document the burial(s). The burial location will be identified and marked. If a burial is disturbed during trench excavations, materials excavated from the vicinity of the burial(s) will be manually screened through 1/8-inch wire mesh screens to recover any displaced skeletal material. If the remains are to be removed, the work will be in compliance with HRS 6.E-43.6, Procedures Relating to Inadvertent Discoveries after approval from all parties (SHPD).
5. To ensure that contractors and the construction crew are aware of this Archaeological Monitoring Plan and possible site types to be encountered on the parcel, a brief coordination meeting will be held between the construction team and monitoring archaeologist prior to initiation of the project. The construction crew will also be informed about the possibility that human burials could be encountered and how they should proceed if they observe such remains.
6. SCS will provide all coordination with the contractor, SHPD, and any other group involved in the project. SCS will coordinate all Monitoring and sampling activities with the contractor's safety officers to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.
7. As necessary, verbal reports will be made to SHPD and any other agencies as requested.

LABORATORY ANALYSIS

All samples collected during the project, except human remains, will undergo analysis at the SCS laboratory in Honolulu. In the event that human remains are identified and SHPD-Burial Sites Program personnel authorize their removal, they will be curated on-site in a secure location or at the SHPD-Maui. All other burials will remain protected and in place until any decisions are made by the SHPD-Burial Sites Program. Photographs, illustrations, and all notes accumulated during the project will be curated at the Honolulu laboratory. All retrieved artifact and midden samples will be thoroughly cleaned, sorted, and analyzed. Significant artifacts will be photographed, sketched, and classified (qualitative analysis). All metric measurements and weights will be recorded (quantitative analysis). These data will be presented in tabular form

within the final monitoring report. Midden samples will be minimally identified to major ‘class’ (e.g., bivalve, gastropod mollusk, echinoderm, fish, bird, mammal). All data will be clearly recorded on standard laboratory forms that also include number and weight (as appropriate) of each constituent category. These counts will also be included in the final report.

Should any samples amenable to dating be collected from a significant cultural deposit, they will be prepared in the SCS laboratory and submitted for specialized radiocarbon analysis. While primary emphasis for dating is placed on charcoal samples, we do not preclude the use of other material such as marine shell or nonhuman bone materials. SCS will consult with SHPD and the client if radiocarbon dates are deemed necessary.

All stratigraphic profiles will be drafted for presentation in the final report. Representative plan view sketches showing the location and morphology of identified sites/features/deposits will be compiled and illustrated

CURATION

If requested by the land owner, SCS will curate all recovered materials in Honolulu (except human remains and associated goods, which would remain on-island) until a permanent, more suitable curation center is identified. The land owner may request to curate all recovered cultural materials once analysis has been completed.

REPORTING

An Archaeological Monitoring report documenting the project findings and interpretation, following SHPD guidelines for Archaeological Monitoring reports, will be prepared and submitted within 180 days after the completion of fieldwork.

If cultural features or deposits are identified during fieldwork, the sites will be evaluated for historical significance and assessed under State significance criteria. The Archaeological Monitoring report will contain these significance assessments, as well as recommendations for any future work to be conducted on the parcel.

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**APPENDIX A: LETTER REPORT FOR TWO WATERLINES IN THE PROJECT
AREA**

Dr. Melissa Kirkendall
SHPD-Maui
130 Mahalani Street
Wailuku, HI 96793

June 9, 2006

Re: Field Inspection of Proposed Waterlines near the Kaonoulu Market Place in Kihei, Maui, Hawai'i [TMK:2-2-02:por. of 15 and 3-9-01:16]

Dear Dr. Kirkendall:

At the request of Pacific Rim Land, Inc., Scientific Consultant Services, Inc. (SCS) conducted a Field Inspection of a two proposed waterline corridors and a proposed water tank site in the "barren zone" of Kihei, Maui, Hawai'i at TMK:2-2-02:por. 15 and 3-9-01:16. The purpose of the Field Inspection was to determine the presence/absence of architecture, midden deposits, and/or artifact deposits on the surface of the corridors and to assess the potential for the presence of subsurface cultural deposits. Other characteristics pertinent to the parcel were noted and include descriptions of landscape disturbance, topographic changes, and soil regimes present, among others. Fieldwork for this project was conducted on June 9, 2006 by M. Dega, Ph.D. and G. Tome, B.A., both of SCS.

Location and Current Status

The project area is linear in morphology and is generally bounded on the North by two parcels containing corn fields, a residence, a pond, and an orchard. Ohukai Road borders the northern portions of these two parcels. The southern flank is defined by Kulanihakoi Gulch. The eastern flank is demarcated by undeveloped land associated with the future Kaonoulu Market Place (which borders Pi'ilani Highway). The western flank spreads into undeveloped land owned by Kaonoulu Ranch. The current project area is currently undeveloped. A swath of the proposed Kihei/upcountry Highway cuts through a small portion of the project area's northeastern flank.

Two proposed waterline corridors and a tank site were subject to this Field Inspection. Corridor A is designated for a north-south trending corridor running c. 2,200 feet to its terminus at the northern flank of Kulanihakoi Gulch, a large intermittent drainage. Corridor B is designated for an east-west trending segment running c. 3,400 feet to the proposed tank site. The tank site itself will measure 200 sq. ft in diameter. The width of both corridors measures 12 feet. Pedestrian survey of the corridors was conducted by the two crew members walking abreast but separated by 6 feet to cover the flanks and center of the corridors. Ground surface visibility was generally high.

Corridor A consists of slightly undulating land with slope trending toward the south where it meets the base of Kulanihakoi Gulch. Primarily flat across the northern 2/3 of the corridor, the slope descends gradually to the flank of the drainage wherein a virtual cliff face is present as the corridor descends to the stream bank. Corridor A generally runs along the 120 ft. elevation line. This corridor has been subject to minor grading in areas, with several unimproved dirt roads coursing east-west or perpendicular across the corridor in three locations. Corridor B is generally flat as it skirts existing corn fields and gains elevation near the proposed tank

location. An extremely small arterial drainage (c. 3 feet deep) in the western 1/3 has been filled with soil and rocks cleared from the corn fields. From east to west, Corridor B runs from the 120 ft elevation line to a maximum 200 ft above mean sea level at the proposed tank location. The eastern 2/3 of Corridor B primarily consists of corn fields and access roads to the fields. The remaining 1/3 is currently undeveloped. The proposed water tank site occurs at the eastern terminus of Corridor B on the top of a small knoll at the 200 ft elevation line. This land is also undeveloped. Barbed-wire fences are common through and around Corridor A, Corridor B, and the tank site.

RESULTS

Full pedestrian survey of Corridor A, Corridor B, and the proposed water tank site failed to lead to the identification of any archaeological structures, scatters, or deposits. In addition, no areas readily amenable to the recovery of cultural materials in subterranean contexts were identified. A brief listing of description and results for each of the three survey areas follows.

Corridor A

This north-south trending segment crossed both flat and slightly undulating topography to its step terminus on the north bank of Kulanihakoi Gulch. The surface of the corridor was relatively open. Bedrock and scattered, non-modified cobbles and boulders were present along the length of the survey area. Modern impacts included three non-improved roads (c. 8 feet wide) running perpendicular to the corridor, soil testing pits (filled), and multiple cattle trails. A small herd of cattle grazed under the *kiawe* trees near the northern flank of the corridor. Neither rock concentrations nor artifacts/midden were identified on the surface of Corridor A. In addition, bedrock was ubiquitous across portions of the surface. Soil deposits appeared extremely shallow in this area. A close inspection of the steep cliff area near the southern terminus failed to reveal any cultural modifications, including petroglyphs on rock panels. This corridor only yielded negative results and was not expected to yield cultural resources through any subsurface sampling.

Corridor B

A majority of this east-west directional corridor proceeded through corn fields, along modified dirt access roads to the fields, and up a small knoll at its western terminus. Most of the proposed corridor area had been extensively modified through agriculture (corn) and associated infrastructure. Undeveloped portions of this corridor were present for c. 600 feet to the top of the knoll. Surface grasses and scattered cobbles/boulders were identified. None of the rocks formed alignments, walls, or C-shapes. There also appeared to be no areas that could lead to the recovery of cultural resources in subterranean contexts. The terminus of Corridor B led to the tank site.

Water Tank Site

The proposed tank area measures c. 200 sq. ft. in diameter and occurs at the top of a small knoll. The knoll itself is fairly flat. The tank area was primarily devoid of any rock concentrations and covered in surface grasses. Bedrock was evident at the top of the knoll and along its slight slope. Soil deposits appeared shallow even at the apex of the knoll. No structures, scatters, or deposits were identified in the proposed tank area.

In addition, based on previous archaeological work by SCS in this “barren zone” area, few, if any, cultural resources would be expected in subsurface contexts.

Recommendations

This Field Inspection of a “barren zone” project area did not lead to the identification of any archaeological sites nor areas thought to contain deposits in subsurface contexts. The corridors and water tank area surveyed during this Field Inspection were void of sites, this being the result of limited activity through time in the area and the nature of the “barren zone” itself. Few archaeological signatures are present in this zone, particularly in subsurface contexts. While ranching may have altered the landscape of the overall zone, ranching related structures were virtually absent in the project area. Even informal survey of Kulanihakoi Gulch, beyond the project area boundaries, failed to lead to identification of any sites.

Based on the above factors and the extremely limited potential for excavation, no further work is recommended for the above noted project area.

If any questions arise pertaining to this Field Inspection or recommendations herein, please contact me at your earliest convenience. Thank you.

Best Regards,

Michael F. Dega, Ph.D.
Senior Archaeologist
Scientific Consultant Services, Inc.

1224
NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
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WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY KAULUKUKUI
FIRST DEPUTY

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DEPUTY DIRECTOR - WATER

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

August 10, 2011

Robert Spear, Ph.D.
Scientific Consultant Services, Inc.
711 Kapiolani Blvd., Suite 975
Honolulu, Hawaii 96813

LOG NO: 2011.2060
DOC NO: 1108MD12
Archaeology

Dear Dr. Spear:

**SUBJECT: Chapter 6E-42 Historic Preservation Review –
Archaeological Monitoring Plan for the Pi'ilani Promenade South Project
Ka'ono'ulu Ahupua'a, Makawao District, Island of Maui
TMK: (2) 2-5-002:015 (por.) and 3-9-001:016**

This letter summarizes our review of the aforementioned plan (Chaffee and Dega July 2011; *An Archaeological Monitoring Plan for the Kaonoulu Marketplace Project Located in Kihei, Ka'ono'ulu Ahupua'a, Makawao District, Maui Island, Hawai'i [TMK: 3-9-01:16 and (2) 2-2-002:015 por.]/SCS Project Number 1224 AMP-1*), which we received on July 29, 2011.

The proposed project will involve grubbing, grading and development of 88 acres. A search of our records indicates that an archaeological inventory survey of this location was conducted (Xamanek Researches 1994). SHPD previously determined that a similar proposed project would have no effect in 2006, and more recently we recommended archaeological monitoring during a grubbing and grading permit review from Maui County (*Log No. 2011.0536, Doc No. 1103MD05*).

This plan is accepted as final pursuant to HAR §13-279-4. Please notify the Maui and Oahu offices via fax at the start and completion of archaeological monitoring. Upon receipt of this letter please submit one paper copy of your report marked Final to our Kapolei office along with a CD containing a searchable pdf version of the final report and a copy of this approval letter, marked to the attention of the Kapolei Library. If you have questions about this letter please contact me at (808) 243-5169 or via email to: morgan.e.davis@hawaii.gov.

Aloha,

Morgan E. Davis
Lead Archaeologist, Maui Island Section
State Historic Preservation Division



APPENDIX H-1
Archaeological Consultant Memo
dated October 28, 2016

XAMANEK RESEARCHES LLC
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E-mail: xamanekresearchesllc@gmail.com

Jordan E. Hart, President
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Hawaii 96793-1717
Phone: 808-242-1955
Fax: 808-242-1956

Attn: Jordan Hart, President

28 October 2016

Subject: Piilani Promenade, Draft EIS Comments Received Regarding the Small Gulch (Drainageway “A”) for the Project located in Kihei, Maui, Hawaii. TMKs: (2) 3-9-001:016, 170-174.

Dear Mr. Hart,

I provide the following response to your memo, dated 12 October 2016, which I received via email on 19 October, and via mail on 24 October 2016. By way of background, the area in question - Drainageway “A” is located in the northern half of the current Project (reference your Figures 2-3 and 2-4). A portion of this drainage feature contains one previously identified historic property - Site 50-50-10-3740.

Site 3740 was first identified during an earlier 1994 archaeological inventory survey of an 88-acre portion of the current Project area (Fredericksen, et al., 1994). At the time, Site 3740 was interpreted as a post-contact ranch-era feature, possibly associated with erosion control. This site consists of segments of a low, discontinuous rock wall that primarily extend along portions of either side of the gully. The State Historic Preservation Division (SHPD) Maui staff archaeologist at the time visited the project area in 1994 to inspect the various sites that had been identified during the inventory survey, including Site 3740. The SHPD approved the archaeological inventory survey report, concurred with site interpretations, and indicated that no further archaeological work was needed for any of the remaining¹ identified sites, including Site 3740. This recommendation was reaffirmed in a 2011 SHPD comment letter (SHPD DOC NO: 1103MD05).

Xamanek Researches LLC was subsequently hired to carry out an archaeological inventory survey of the original 88-acre parcel plus additional lands in 2014-2015. This subsequent survey reexamined sites previously identified in 1994, including Site 3740, in

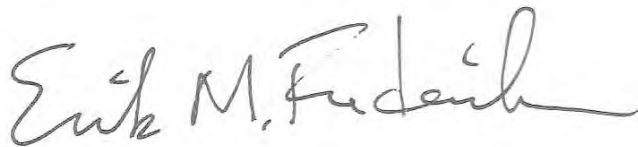
¹ At the time, one site - a petroglyph on a boulder (Site 3746) was recommended for preservation. This petroglyph was removed from the property by a former landowner after the 1994 inventory survey, and relocated to the Kula area.

addition to one newly identified site. Pedestrian inspections of all previously identified sites, including Site 3740, were conducted during our 2014-2015 fieldwork. The SHPD Maui staff archaeologist at the time carried out two project inspections with Xamanek Researches LLC staff in 2015. The SHPD Maui staff archaeologist was able to view all sites, including Site 3740. Our archaeological inventory survey report (Fredericksen, 2015) for the overall project area was approved in a 2016 SHPD comment letter (SHPD DOC NO: 1601MD08). The SHPD concurred with the interpreted function for Site 3740 and affirmed that no additional work was warranted for this post-contact site.

Xamanek Researches LLC staff members have subsequently revisited the gully area on three separate occasions since the inventory survey was accepted in early 2016. No additional findings have been made in the gully. However, given concerns raised, the developer's representative has voluntarily agreed to have archaeological data recovery work carried out on Site 3740. This additional and intensive work will include detailed mapping, subsurface and surface investigation of the construction style of sections of the wall segments, including a short wall section that is located within along a portion of the drainage feature's slope. Results of this work will be included in the Project's forthcoming data recovery report. The SHPD will review the results of this future report.

Please contact me if you have any questions regarding the above memo for the subject project in Kihei, Maui.

Sincerely,

A handwritten signature in black ink, reading "Erik M. Fredericksen". The signature is written in a cursive style with a large, stylized initial "E".

Erik M. Fredericksen