

**APPENDIX J**  
Archaeological  
Monitoring Plan

**AN ARCHAEOLOGICAL MONITORING PLAN FOR  
A 917 METER (3,007 FEET) LONG ALTERNATE ACCESS ROAD AND  
AN 86.029-ACRE PROPERTY IN PUUNENE,  
PŪLEHU NUI AHUPUA`A, WAILUKU DISTRICT,  
ISLAND OF MAUI, HAWAII  
[TMK: (2) 3-8-008:005, 006, AND 019]**

Prepared by:  
**David B. Chaffee, B.A.,**  
and  
**Michael Dege, Ph.D.**  
Revised September 2012  
FINAL

Prepared for:  
**Ms. Blanca Lafolette**  
**Project Coordinator**  
**CMBY 2011 Investment, LLC**  
**1300 North Holopono Street, Suite 201**  
**Kihei, Hawaii 96753**

**SCIENTIFIC CONSULTANT SERVICES, INC.**



**711 Kapelaani Blvd., Suite 975 Honolulu, Hawaii 96813**

Copyright © Scientific Consultant Services, Inc. 2012. All rights reserved.

**TABLE OF CONTENTS**

TABLE OF CONTENTS..... ii

LIST OF FIGURES ..... ii

INTRODUCTION ..... i

PROJECT AREA AND VICINITY ..... i

REASON FOR MONITORING ..... 6

GENERAL PROJECT AREA HISTORICAL BACKGROUND ..... 6

PROJECT AREA SOILS ..... 6

PROJECT AREA VEGETATION ..... 6

CLIMATE ..... 7

TRADITIONAL AND HISTORIC SETTING ..... 7

TRADITIONAL TIMES ..... 8

HISTORIC TIMES ..... 8

PREVIOUS ARCHAEOLOGY IN GENERAL AREA ..... 11

PREVIOUS ARCHAEOLOGY IN THE CURRENT PROJECT AREA ..... 12

POTENTIAL SITE TYPES TO BE ENCOUNTERED ..... 16

MONITORING CONVENTIONS AND METHODOLOGY ..... 17

LABORATORY ANALYSIS ..... 19

CURATION ..... 19

REPORTING ..... 20

REFERENCES CITED ..... 21

**LIST OF FIGURES**

Figure 1: USGS (Pu'u O Kali Quadrangle) Map, Showing Project Area Location..... 2

Figure 2: Tax Map Key [TMK] Showing Project Area..... 3

Figure 3: Plan View Map of Grading Plan for the Current Project Area ..... 4

Figure 4: International Archaeological Research Institute Incorporated (IARI) Plan View Map  
Showing Previously Recorded Archaeological Features and Current SCS Project Area  
Alternate Road..... 13

Figure 5: IARI Plan View Map Showing Previously Recorded Archaeological Features and  
Current SCS Project Area Perimeter of TMK (2) 3-8-008:019..... 14

## INTRODUCTION

At the request of CMBY 2011 Investment, LLC., Scientific Consultant Services (SCS), Inc. prepared this Archaeological Monitoring Plan (AMP) for the proposed Puunene Heavy Industrial Subdivision Project on a 917 meter (3,0007 feet) long alternate access road and on 86,029-acres of land within Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui, Hawaii [TMK: (2) 3-8-008-005, 006, and 019] (Figures 1, 2, and 3). This varied Monitoring program follows an Archaeological Inventory Survey (AIS; Tome and Dega 2011) of the proposed project area in which features associated with two known historic-era sites were newly documented (see below).

Archaeological Monitoring "shall entail the archaeological observation of, and possibly intervention with, on-going activities which may adversely affect historic properties" (§13-279-4, HAR). Thus, Monitoring will also ensure that significant cultural resources, if identified in the proposed project area 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 Inadvertent 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 is varied in that full-time Monitoring will be conducted if the alternate access road is improved. For the remainder of the project area, intermittent Monitoring is recommended as the area has undergone two Inventory Survey studies (see below), has been subject to intensive land alterations through time, and contains only minimal probability that subsurface deposits would be identified. 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.

## PROJECT AREA AND VICINITY

The project is located within Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui, Hawaii. According to the County of Maui Real Property Tax Division website, <http://www.mauipropertytax.com/>, the fee owner of the 86,029-acre parcel [TMK: (2) 3-8-008-019] is identified as CMBY 2011 Investment, LLC. The fee owner of TMK: (2) 3-8-

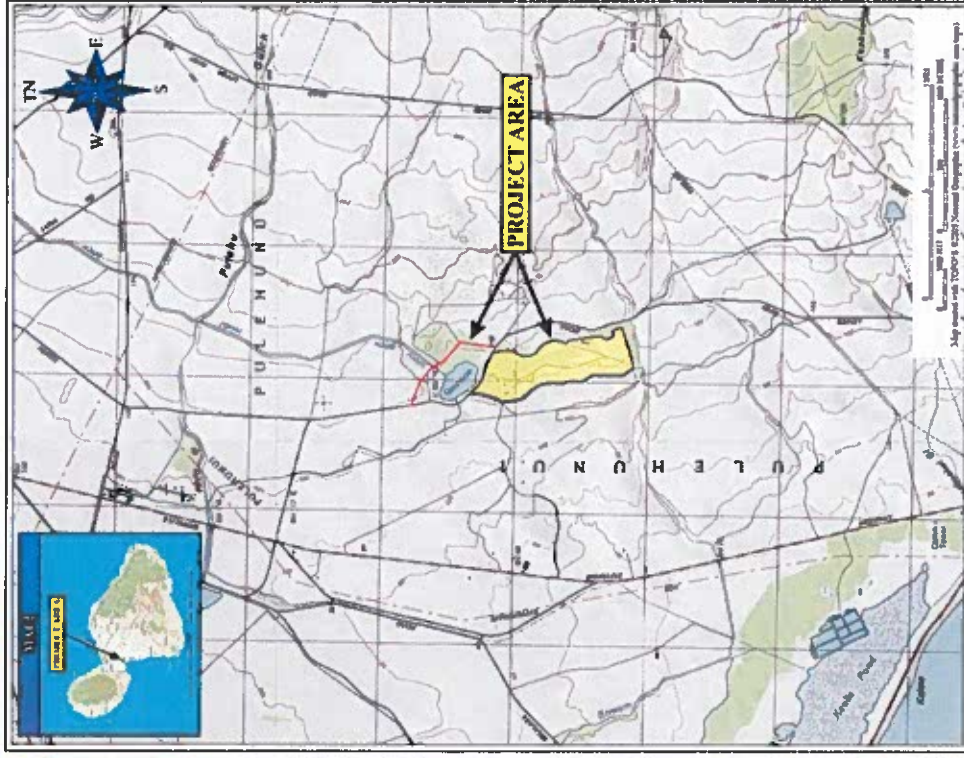


Figure 1: USGS (Pu'u O Kali Quadrangle) Map, Showing Project Area Location.

Figure 3: Plan View Map of Grading Plan for the Current Project Area.

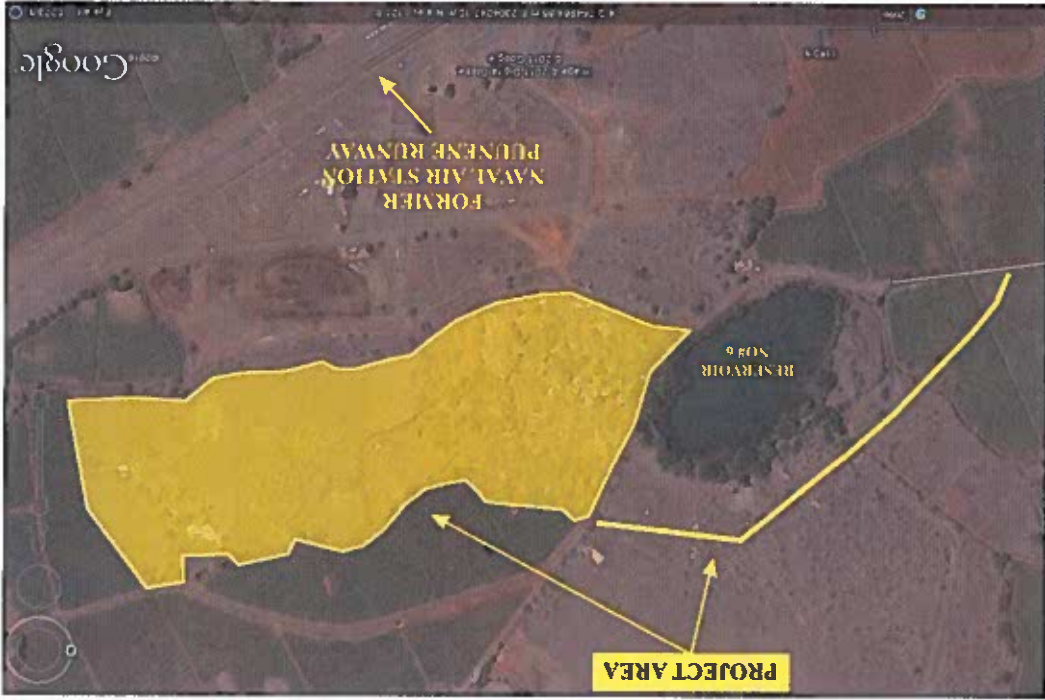
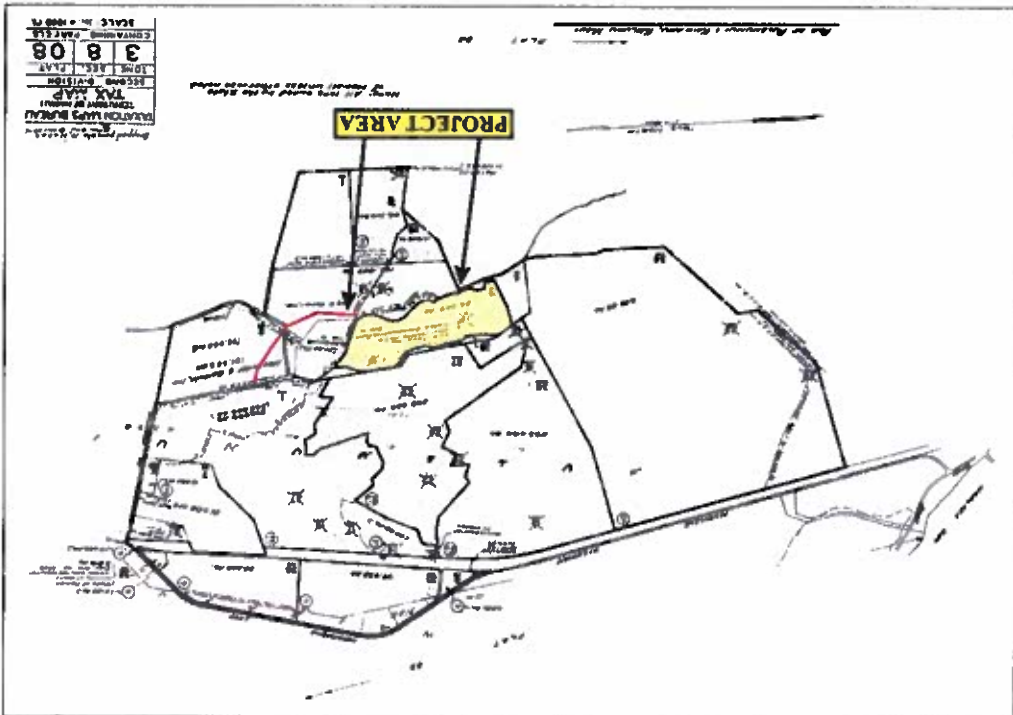


Figure 2: Tax Map Key [TRK] Showing Project Area.



008-005 and 006 on which the 917 meter (3,007 feet) long alternative access road is located, is identified as Alexander & Baldwin, Inc.

Although both portions of the project area are separated by an existing asphalt road, the alternative access road and 86-029-acre parcel are situated approximately 2.0 miles inland from the Kiihei coastline, between c. 80 to 120 feet (24 to 37 meters) above mean sea level (amsl), on the lower west slope of Haleakalā. The alternate access road is located in Tax Map Keys (2) 3-8-008-005 and 006 of which both are owned by Alexander & Baldwin. The north, east, and south flanks of the 86-029-acre portion of the project area are bordered by private land owned by Alexander & Baldwin [TMK: (2) 3-8-008-005]. The west side of the project area is bordered by private land owned by Alexander & Baldwin [TMK: (2) 3-8-008-030] and land owned by the State of Hawaii [TMK: (2) 3-8-008-037]. At the time of this writing, there were several asphalt paved roads that divided the larger portion of the project area into several unequal-sized sections.

Most of the project area contained undulating terrain. The larger portion was slightly undulated amongst patches of flat terrain. Trees on the project area had attained heights of approximately 30 feet tall. Approximately 30 percent of the project area had grown fallow since the departure of a pig farm and scrap metal storage site. Basalt boulders from the size of basketballs to the size of a 55-gallon drum littered the landscape and created physical obstacles.

The landscape condition of the project area's larger portion was varied. The northern portion of the project area was cleaned up within the recent past, according to Ken Nomura of Alexander & Baldwin. Mr. Nomura relayed to the field crew that following CMBY's purchase of the 86-029-acre property, Alexander & Baldwin had cleared the land of debris associated with a pig farm and scrap metal storage site that had previously utilized the property. The result was that various portions of the project area were mechanically altered, on the surface and in subsurface contexts (Figure 5). Visibility of the mechanically altered ground surface was excellent. The mechanical clearance of the debris was not applied to the entire project area. The areas that were not mechanically cleared were covered with dried, two to four feet tall grasses and vegetation. Nonetheless, man-made features were visible due to the mechanical clearance and the dried vegetation.

## REASON FOR MONITORING

Archaeological Monitoring will occur on a full-time basis if improvements are made to the alternative access road and on an intermittent basis during all other ground altering activities (*i.e.*, excavation). There is only a slight probability of identifying additional cultural resources in the overall proposed project area. Thus, intermittent monitoring is recommended. If the alternate access road is graded or widened, full-time Monitoring is recommended, given that the area was not previously subjected to inventory Survey-level testing. There still remains only a slight chance for encountering cultural resources along the alternate road corridor. Overall, Historic-period land use, and existing features left from the era of the Puunene Naval Air Field, remain in the proposed project area. Given the intensive historic use of the general area, Intermittent Monitoring will provide another opportunity to fully document and assess any additional cultural resources related to the two known historic sites (see below).

## GENERAL PROJECT AREA HISTORICAL BACKGROUND

### PROJECT AREA SOILS

Based on Foote *et al.* (1972: 126-127; Map 106), the project area is mainly situated within the Waiakoa very stony silty clay loam (WID2) series with a small section at the southern end of the project area containing Alae cobbly sandy loam (AcB) (*ibid.*: 26; Map 106). The Waiakoa extremely stony silty-clay loam which occurs on 3 to 25 percent slopes and is eroded, with medium runoff and severe erosional hazard. Stones cover approximately 3 to 15 percent of this soil surface. With the exception of sugarcane, this soil type has been utilized for pasture and wildlife. The Alae cobbly sandy loam has a slow runoff, is a slight erosional hazard, and is typically utilized for pastureland and sugarcane.

Subsurface testing of the WID2 and AcB soils on the southern portion of the project area revealed the presence of volcanic cinders strata that were interpreted during the current survey as natural strata. Naturally occurring rounded basalt cobbles and small boulders were also being exposed during the excavation of the project area matrices.

### PROJECT AREA VEGETATION

With the exception of few plant native species such as *'ihima* (*Sida fallax*) and *'uhaloa* (*Waltheria americana*), vegetation in the project area was generally composed of non-native introductions. Although decomposing grasses dominated the vegetation regime, larger vegetation common to arid regions such as *klawe* (*Prosopis pallida*), *koa haole* (*Leucaena leucocephala*), castor bean (*Ricinus communis*), lion's ear (*Leonotis nepetifolia*), spiny amaranth (*tukur*; *Amaranthus spinosus*), tomato (*Solanum* sp.), goosefoot (*Chenopodium* sp.), golden

crownbeard (*Verbesina encelioides*), klu (*kulu*; *Acacia farnesiana*), balsam pear (*Momordica charantia*), *koali kua hulu* (*Morrenia aegyptia*), hairy abutilon (*ma' o*; *Abutilon grandifolium*), and coat buttons (*Tridax procumbens*) were present.

#### CLIMATE

The project area lies near the dry, arid region of Maui's southwest coast. Rainfall indicators, according to Price (1983:62), show that the project area receives no more than five inches per year, with accumulations occurring mostly during the months of December and January. Unlike lower, coastal elevations, higher elevations of Pūlehu Nui Ahupua'a receive more precipitation due to fog drip and lower temperature climates. The frequency of the project area receiving upland wash is based on the amount of water accumulated upslope and the available water drainages created within or near the project area.

Given the lack of constant water resources within the project area. Traditional-type (i.e., pre-1778 A.D.) crops such as dryland sweet potato may have been the only feasible subsistence resource planted in the area prior to the advent of large-scale plantation-type irrigation systems. Of the twenty (20) stratigraphic trenches excavated during the current survey, only eight (8) suggest soils no more than a single soil layer. The windy conditions of the project area suggest soils within the project area may have been adversely affected. Upland, gravitational wash also may have contributed to soil movement through the project area environs during the Traditional-Period.

#### TRADITIONAL AND HISTORIC SETTING

Pūlehu Nui Ahupua'a is located on the southwestern side of Maui in the modern districts of both Waiuku and Makawao. Prior to being named the District of Makawao, the same district was traditionally known as Kula District. The project area would have been partially within the traditional District of Kula. As such, the project area's traditional and historic settings will be highlighted with events that occurred in the traditional District of Kula rather than in the modern District of Waiuku.

The project area is situated near the leeward coast that is located on the lower, western slope of Maui's largest volcano, Haleakala, the latter which rises to over 3,048 meters (10,000 ft) amsl. The coastal area, on which the project area lies, is currently referred to as "Kihei," which translates as "cape" or "cloak" in Hawaiian (Pukui *et al.* 1974:110).

#### TRADITIONAL TIMES

Oral documentation for pre-Contact activity exists for the district of Kula as a whole that document activities such as chiefly (*ali'i*) landings, battles, and catholic work practices such as fishing and planting (Sterling 1998). Documented oral accounts of pre-Contact activities and events occurring in the Kihei area, specifically naming Pūlehu Nui Ahupua'a, are limited to events that occurred on a single, given period rather than long terms events (e.g., area used as a place of worship for an extended period of time). A. Fomander, in Sterling (1998:253), reported that the area of Kīneipukoua was the location "where peace was concluded and festive reunions took place of warlike encounters." The festive reunions took place once Alapaiui, once *Moi* of Maui, found out that his nephew Kamehamehanui succeeded him. A separate story dates to 1776 when Kalani'opu'u landed his warring faction at Kīneipuko'a between Kealia and Kapa'ahu thinking that "the *Alapa* were to drink of the waters of Waiuku. The *Alapa* were those who excelled at being warriors. Unfortunately for Kalani'opu'u, his warriors lost when battling with forces of Kahekili at Waiuku.

#### HISTORIC TIMES

Although some accounts informally mention the possibility that Spanish traders may have known about the Hawaiian Islands two hundred years prior to the "discovery" by Captain James Cook on the H.M.S. Resolution, Cook was the first known Westerner to have recorded the Hawaiian Islands (Speakman 1978:19). When Cook "discovered" Maui in November 1778, he anchored near Kahului. Although attempting to travel to Maui's western end, he never travelled to the leeward side of East Maui where the project area lies. The first Western explorer credited with landing on Maui is Admiral Jean Francois Galtup, Compte de la Prouse of France. La Prouse, the name most used to recognize the French explorer, set foot in the area known today as La Prouse Bay, an area south of Makemā.

From the early historic period, several industries became paramount in Kula: whaling, Irish potato cultivation, ranching, and sugar cane cultivation. Most of these endeavors transformed the upland landscape itself. The coastal areas were more impacted by commerce-related activities (e.g. businesses, hotels, stores). Kolb *et al.* (1997:68-69) state that Kalepolepo (i.e., Kihei) was an important provisioning area through the 1830s, when the area became "a hub of activity for all of Kula." From the 1840s to 1860s a whaling station was maintained in Kihei. According to Colin *et al.* (14:2000), in 1849 John Halstead constructed "The Koa House" at Kalepolepo in Kihei, one of several such buildings supporting the whaling industry in Kihei. The Koa House served as a store, a residence, and a gathering place for whalers.

For an in-depth look of LCA usage in upland areas of adjacent *ahupua'a*, please see Kolb *et al.* 1997.

Based on the information provided by the Tax Map Key, it appears that LCA 5230 is quite extensive and extends over a large portion of the *ahupua'a*. It further indicates that LCA 5230 is the largest LCA awarded in Pūlehu Nui Ahupua'a. Thus, it is difficult to ascertain where particular activities were conducted (e.g. *lo'i, kula, apama*) within the LCA.

In Sterling (1998:254-257) it was reported that the late Governor W. L. Moehonua was an "owner" of Pūlehu Nui Ahupua'a and the boundaries of the *ahupua'a* were somewhat vague. Through the information provided by the Māhele, it was acknowledged that Keaweamahi previously owned land within the *ahupua'a*. Oral testimonies from multiple sources contribute to somewhat more specific but general boundaries of the *ahupua'a* and conclusions were found in favor of the late governor.

From the mid-19<sup>th</sup> Century to the early 20<sup>th</sup> Century, coastal activity remained concentrated at Kalepolepo, but by the 1870s whaling diminished and the potato industry moved to the Ulupalakua area (Colin *et al.* 26:2000). Coastal Kula became somewhat of a dusty, "dirty place" (Wilcox 1921). As a result of industry movement out of the Kihai area (for a time) or the vast expanses of land available, Haleakala Ranch utilized many coastal portions of Kula in the later 1800s.

Like the rest of Hawai'i (and the world) during the 1940s, Kihai in Pūlehu Nui Ahupua'a was interrupted by the advent of World War II (WWII). The coast from Ma'alaea to Makana was used by United States military forces as training areas in preparation for amphibious assaults that were to be made in the Pacific war theater (Davis and Fortini 2004, Tome and Dega 2004). The main military service operating along the coastal region of the Waihuku and Makawao (Kula) Districts was the United States Marine Corps' 4<sup>th</sup> Marine Division, which used the coast during the latter part of 1944. The beautiful beaches of Kihai and Wailea were transformed with the construction of concrete military bunkers to simulate enemy positions expected during amphibious combat operations. A non-4<sup>th</sup> Marine Division military unit that also trained along the coastline was the underwater demolition teams, known as UDT. Comprised of Army and Navy personnel, these people were trained to rig and detonate explosives on various obstacles in the way of the U.S. amphibious assaults.

Following Contact, one of the greatest historic events impacting the population of the Hawaiian Islands was the Māhele of 1848. Thought to have been created under pressure from foreigners, Kamehameha III enacted the Māhele, which altered the system of land transactions and legal land ownership processes for the entire population of the Islands:

By mid-century, the fledgling [Hawaiian] Kingdom undertook the single most significant inducement to cultural change, the Great Māhele or division of lands between the king, chiefs, and government, establishing land ownership on a Western-style, fee-simple basis. From this single act, an entire restructuring of the ancient social, economic, and political order followed [Kirch 1985:309].

The Māhele statute paved the way for the private ownership of land [awarded claims were called Land Commission Awards]. The present project area does not contain Land Commission Awards (LCAs). However, LCA 5230 is the closest to the project area and is shown on TMK (2) 3-8-04 to exist north of the project area on the plains of Pūlehu Nui Ahupua'a (see Figure 2). LCA 5230 was awarded to Keaweamahi on September 28, 1853 with following Royal Patent numbers 8140 and 8252 being issued to the same individual on March 16, 1855 concluding a payment of \$5.00 (Burgett and Spear 1997:5). On this LCA Keaweamahi claimed 5 *apama* (land portions), 7 *lo'i* (wet taro) and 2 *kula* (pastures). Saltwater-associated geography (i.e., shore and dunes) was also claimed by Keaweamahi as part of LCA 5230.

Based on a map contained within Sterling (1998:242) in conjunction with the tax map keys, the *ahupua'a* of Pūlehu Nui is shown to continue northeast upslope on the northwest side of Haleakala. LCA 5230 also extends into the upper portion of Pūlehu Nui Ahupua'a. An overview of upland LCAs within the upland portion of Pūlehu Nui Ahupua'a reveal that land at the higher elevations were utilized for sweet and Irish potatoes (Wathona 'Aina 2011). LCA 9019:3, claimed by Helehu, located just below the modern Kula Highway and between Holopuni and Pūlehu Roads, had pasture lands claimed. As a side note, Irish potatoes were also existent at the time of the claim (i.e., the year 1848) although to pinpoint the location of such is difficult due to insufficient map sources. Above the Kula Highway, LCA 4567:4 claimed by Wahine in 1848, stated that Irish potatoes were present on his land and that sweet potatoes were also grown on his land, although not on the same piece of land (*ibid.*). Supplemental ethnographic research concerning upland LCA usage includes Bartholomew and Bailey (195:1994) who relay that "Hawaiians in higher elevations.... traditionally grew sweet potatoes."

Following WWII, the Kihei coastline returned to its tranquil activities of ranching and the development of residential areas. During the 1960s, the Kihei stage was set for development of the area as a vacation haven for tourists and homebuyers which continues to the present day.

#### PREVIOUS ARCHAEOLOGY IN GENERAL AREA

Archaeological studies in the greater area began in the early 20<sup>th</sup> Century by T. Thum (1909), J. Stokes (1909-1916), and W. M. Walker (1931). These surveys included areas of leeward Maui and inventoried both coastal and upland sites of the Kula District. In the ahupua'a of Pūlehu Nui Walker listed two sites identified as Haleokane Heiau and Niniwivat Heiau (see Sterling 1998:253).

Archival research indicates few archaeological projects have been conducted near the current project area. Although these projects occurred some distance from the current parcel they are directly relevant. These studies provide background information to the current study area. The reader is referred to Tomonari-Tuggle *et al.* (2001:61-63) which provides a succinct summary of these studies.

Kennedy (1988) conducted a visual inspection of TMK: (2) 3-8-004:029 that did not identify archaeological sites. The absence of sites was attributed to prior development of the area for a construction baseyard with an installation of a large concrete culvert. In 1991 the Bishop Museum conducted an Archaeological Inventory Survey for the Kai Makani project that produced negative findings on the ground surface or subsurface contexts (Rotunno-Hazuka (1991)).

In 1992 Aki Sinoto Consulting conducted an Archaeological Inventory Survey of the proposed location for the Kihei Gateway Complex which led to the identification of State Site 50-50-09-31, a remnant, historic concrete bridge (crossing Waialoa Stream. It was suggested that the bridge was probably related to a narrow gauge cane railroad that operated through the area and may have serviced Kihei Camp 1 (Sinoto and Pantaleo 1992).

Between 1995 and 1999 Scientific Consultant Services, Inc. conducted an Inventory Survey (followed by two addendums) for the Puunene Bypass/ Mokulele Highway Improvements Corridor located in TMK: (2) 3-8-04, 05, 06, and 07; Burgett and Spear 1997; Charfee *et al.* 1999). No additional archaeological sites were identified. However, one previously recorded site was relocated and identified as the Naval Air Station Puunene Dump

Site (State Site 50-50-09-1164). Scientific Consultant Services, Inc. conducted an archaeological study on TMK: (2) 3-9-041:027, which included excavation of nine stratigraphic trenches. No new sites were identified (Pestana and Dega 2002).

In 2005 Scientific Consultant Services, Inc. conducted an Archaeological Inventory Survey, including limited subsurface testing, was conducted on a 9,289-acre property in North Kīhei, Maui, Hawai'i [TMK: (2) 3-8-004:028] (Tome and Dega 2005). This project area, located immediately adjacent and abutting the southern boundary of the Hale Pihani Park, had been partially modified by illegal dumping, utilization as an informal dirt bike course, and ranching activities. Two archaeological sites comprising four structural features were newly identified during this Inventory Survey. The sites were interpreted respectively as a World War II-related site (State Site No. 50-50-09-5801, WW II training site) and a traditional Hawaiian site (State Site No. 50-50-09-5802, pre-Contact agricultural/habitation complex). The two sites date utilization of the subject parcel from the pre-Contact Period (*i.e.*, pre-1778) to the United States Marine Corps' 4<sup>th</sup> U.S. Marine Division training during the closing years of World War II.

#### PREVIOUS ARCHAEOLOGY IN THE CURRENT PROJECT AREA

An Archaeological Inventory Survey, including limited subsurface testing, was conducted on an 86,029-acre property in Puunene, Island of Maui, Hawai'i [TMK: (2) 3-8-008:005, 006, and 019]. Fieldwork was conducted between June 27 and 30, 2011 by SCS archaeologists Ian Bassford, B.A. and Guerin Tome, B.A., under the direction of the Principal Investigator Michael Dega, Ph.D. (Tome and Dega 2011 *in prep.*).

The 917 meter (3,007 feet) long alternate access road was not subjected to excavation since most of the access route was already established (*i.e.*, there is a combination of a dirt and asphalt road), and the area that did not contain an established road contained active sugarcane cultivation. Although the 1999 IARI survey documented archaeological features close to the east and west sides of the alternate access road, no archaeological sites or features were observed in the alternate access road corridor. These features that were documented along the alternate access road were assigned to State Site 50-50-09-4801, interpreted as a post-World War II cattle ranching site.

As stated elsewhere in this report, the current project area was previously subject to an Archaeological Inventory Survey in 1999 by IARI (see Figures 4 and 5). The current project area, part of the larger former Naval Air Station Puunene, was designated by the air station as Housing Area A, Southern and Northeastern portions. Within the larger portion of the current



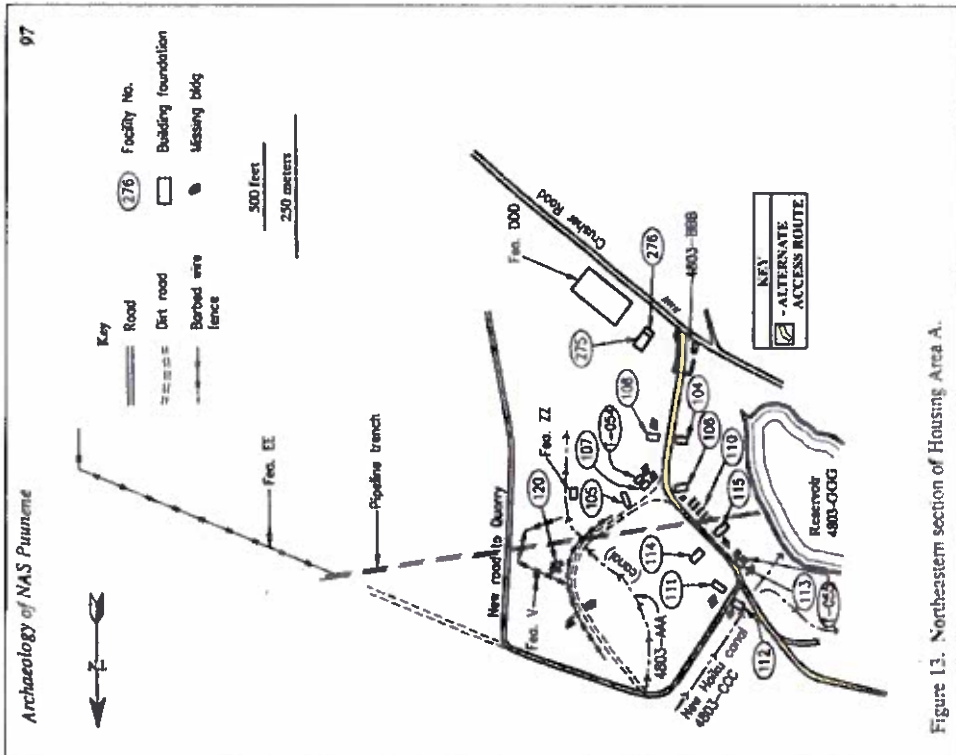
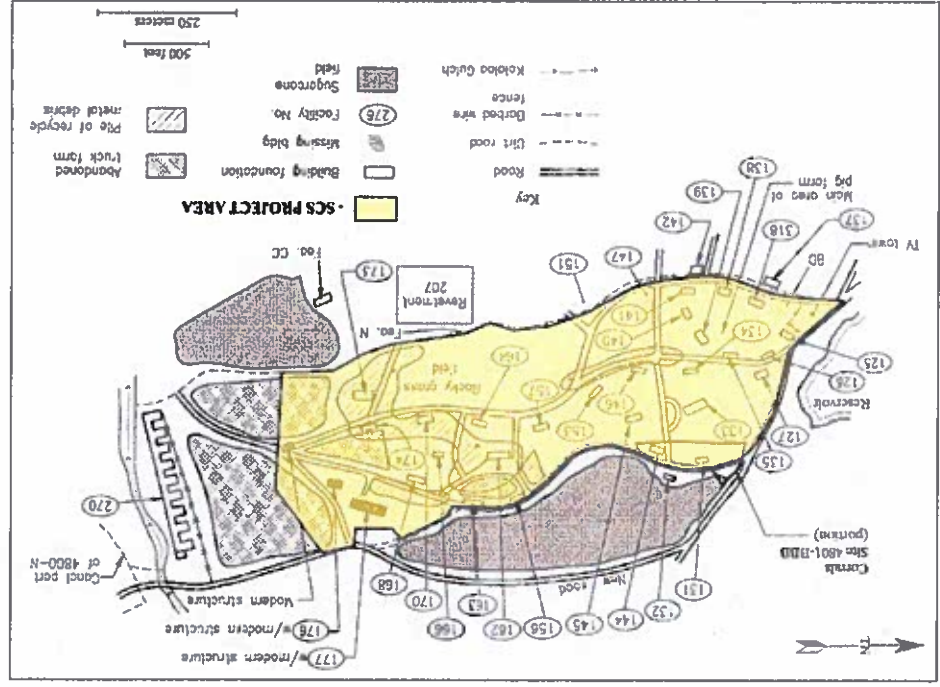


Figure 13. Northeastern section of Housing Area A.

Figure 4: International Archaeological Research Institute Incorporated (IARIII) Plan View Map Showing Previously Recorded Archaeological Features and Current SCS Project Area Alternate Road.

Figure 5: IARIII Plan View Map Showing Previously Recorded Archaeological Features and Current SCS Project Area Perimeter of TMK (2) 3-8-008:019.



project area, the IARII survey identified two archaeological sites comprised of a section associated with the former Naval Air Station Puunene (State Site 50-50-09-4164), as well as a post-World War II cattle ranching site (State Site 50-50-09-4801). The current survey relocated the two historic sites, assessed the presence/absence of those features within two sites, and identified previously undocumented features within the two sites (Figure 8). The newly identified features have been subsumed under the previous State site number designations.

Most of the historic features within in the current project area were heavily impacted by modern mechanical clearing and ensuing debris removal. The majority of those mechanically impacted features belonged to the former Naval Air Station Puunene (Site -4164). Some of the historic features belonging to Site -4164 did appear to have been mechanically impacted but also abandoned and neglected prior to any mechanical alterations. Prior to the mechanical disturbance, the north half of the current project area had been utilized for a pig farm (Maui Hog) and a scrap metal storage site. The south half of the subject property remained fallow.

A total of fifteen (15) features, interpreted as either related to the NAS Puunene or post-war cattle ranching period, were identified by SCS but not previously recorded during the IARII survey (Tomonari-Tuggle *et al.* 2001). Of the 15 features that were not recorded, three (3) features were located in the State Site 50-50-09-4801 post-war cattle ranching area. The remaining twelve (12) features were located in the State Site 50-50-09-4164 former Naval Air Station Puunene area (Housing Area A).

The current project area [TMK: (2) 3-8-008:019] represents a portion of a larger project area previously subject to an Archaeological Inventory Survey in 1999 by International Archaeological Research Institute Inc. (IARII) (Tomonari-Tuggle *et al.* 2001) (Figures 6 and 7). In addition to surveying the current project area [TMK: (2) 3-8-008:019] as part of the initial survey, IARII also surveyed the remaining parcels in TMK: (2) 3-8-008. International Archaeological Research Institute Inc. (Tomonari-Tuggle *et al.* 2001) found that TMK: (2) 3-8-008 was utilized by multiple commercial businesses that included:

- agriculture [sugarcane; Hawaiian Commercial and Sugar Company (HC&S), Ltd.];
- rock quarrying [Hawaiian Cement, (Maui Concrete and Aggregate Division)];
- motorsports recreational areas (Maui Raceway Park);
- an animal shelter (Maui Humane Society);
- a pig farm (Maui Hog) and scrap metal storage site; and
- a crop dusting operation (Murray Air, Ltd.).

Spread amongst the commercial businesses were five (5) archaeological sites.

- Former Naval Air Station Puunene (State Site 50-50-09-4164; Feature Amount: 165)
- Sugarcane Plantation Features (State Site 50-50-09-4800; Feature Amount: 7)
- Post-World War II Ranching Features (State Site 50-50-09-4800; two complexes of corrals, fences, troughs)
- Old Kihnei Railroad Bed (State Site 50-50-09-4802; Feature Amount: 1)
- Haiku Ditch and Reservoir (State Site 50-50-09-4802; Feature Amount: 5)

IARII determined that at least two of these archaeological sites were used for multiple historic activities (Tomonari-Tuggle *et al.* 2001). For example, the crop dusting operation utilized the former Naval Air Station Puunene's airstrip as a runway for their planes. A few of the standing military structures located on the current project area [TMK: (2) 3-8-008:019] were converted from military features to holding facilities for pigs.

The archaeological sites located in the current project area [TMK: (2) 3-8-008:019] consist of the former Naval Air Station Puunene, which was recognized as a World War II archaeological site and designated as State Site 50-50-09-4164, and two post-World War II cattle ranching complexes that were consolidated and designated as State Site 50-50-09-4801. The current Archaeological Inventory Survey led to relocation of most of the previously identified sites, as well as several newly identified features. These new features have been incorporated into the existing State site numbers.

#### POTENTIAL SITE TYPES TO BE ENCOUNTERED

Archaeological and documentary evidence in and around the project area illustrates the types of sites that may be encountered during Archaeological Monitoring. The two Inventory Survey projects, noted above, showed the area to contain much historical information regarding the former Naval Station and cattle ranching complexes. No other time periods, beyond modern debris and land clearing, were identified. Potential sites to be encountered would thus include cultural deposits (historic metal, glass, etc. debris) and architecture (concrete foundations, rock walls, etc.) directly related to construction and use of the Naval Station and cattle complexes. There appears at present very little probability of identifying prehistoric cultural resources or burials.

## MONITORING CONVENTIONS AND METHODOLOGY

This AMP has been prepared in accordance with DLNR/SHPD administrative "Rules Governing Standards for Archaeological Monitoring Studies and Reports" (§ 13-279, DLNR-SHPD 2002). Archaeological Monitors will adhere to the following guidelines during monitoring:

1. A qualified archaeologist intimately familiar with the project area and the results of previous archaeological work conducted in the Puuene area will intermittently monitor subsurface construction activities in the proposed project area. Full-time Monitoring is only recommended should the alternate road access be created. During Monitoring, one archaeologist will be required per each piece of ground altering machinery in use. No land altering activities will occur on the parcel until this AMP has been accepted by SHPD.

If significant deposits or features are identified and additional field personnel are required, the archaeological consultants conducting the Monitoring will notify the contractor or representatives thereof before additional personnel are brought to the site.

2. If features or cultural deposits are identified during Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the significant location so that the cultural feature(s) or deposit(s) may be fully evaluated and appropriate treatment of the cultural deposit(s) is conducted. SHPD will be contacted to establish feature significance and potential mitigation procedures. Treatment activities primarily include documenting the feature/deposit through plotting its location on an overall site map, illustrating a plan view map of the feature/deposit, profiling the deposit in three dimensions, photographing the finds with the exception of human burials, artifact and soil sample collection, and triangulation of the finds. Construction work and/or back-filling of excavation pits or trenches will only continue in the sample location when all documentation has been completed.
3. Control stratigraphy in association with subsurface cultural deposits will be noted and photographed, particularly those containing significant quantities or qualities of cultural materials. If deemed significant by SHPD and the contracting archaeologist, these deposits will be sampled, as determined by the same.
4. In the unlikely event that human remains are encountered, all work in the immediate area of the find will cease; the area will be secured from further activity until burial protocol has been completed. The SHPD island archaeologist and SHPD Cultural Historian will both be immediately identified as to the inadvertent discovery of human remains on the property. Notification of the inadvertent discovery will also be made to the Maui/Lanai Island Burial Council by the SHPD Maui staff or the

contracting archaeologist. A determination of minimum number of individuals (MNI), age(s), and ethnicity of the burial(s) will be ascertained in the field by the archaeological consultants conducting the Monitoring. 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" 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, Burial Council).

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 as to the possibility that human burials could be encountered and how they should proceed if they observe such remains.
6. The archaeologist will provide all coordination with the contractor, SHPD, and any other groups involved in the project. The archaeologist will coordinate all Monitoring and sampling activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.
7. As necessary, verbal reports will be made to SHPD and any other agencies as requested.
8. Acceptance of this Archaeological Monitoring Plan will be done in writing by the SHPD within 45-days of receipt. If no written response is forwarded by the SHPD after 45-days, concurrence with this documented shall be accepted and work will proceed, pursuant to 6e-42 HRS, Chapter 13-284 HAR.

## LABORATORY ANALYSIS

All samples collected during the project, except human remains, will undergo analysis at the SCS Maui laboratory. In the event that human remains are identified and the SHPD-Maui/Lanai Island Burial Council authorizes their removal, they will be curated on Maui.

Photographs, illustrations, and all notes accumulated during the project will be curated at the laboratory of the archaeological consultants conducting the Monitoring. All retrieved artifact and midden samples will thoroughly cleaned, sorted, and analyzed. Significant artifacts will be photographically recorded, sketched, and classified (qualitative analysis). All metric attributes and weights will be recorded (quantitative analysis). These data will be presented in tabular form within the final monitoring report. Midden samples will be minimally identified to major "class" (e.g., bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). All data will be clearly recorded on standard laboratory forms that include number and weight (as appropriate) of each constituent category. These counts will also be included in the final report.

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

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

## CURATION

If requested by the landowner, archaeological consultants conducting the Monitoring will curate all recovered materials in the laboratory of the archaeological consultants conducting the Monitoring (except human remains) until a permanent, more suitable curation center is identified. The landowner may request to curate all recovered cultural materials once analysis has been completed. Human remains will be stored on-site in a secure location until a Burial Treatment Plan has been prepared and accepted.

## REPORTING

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

If cultural features or deposits are identified during fieldwork, the sites will be evaluated for historical significance and assessed under State and Federal Significance Criteria. The Archaeological Monitoring report will be in draft form until accepted by SHPD and will be submitted to both SHPD and the client.

**REFERENCES CITED**

- Beaglehole, John. Ed.  
1967 *The Journals of Captain James Cook on his Voyages of Discovery: Vol 3. The Voyage of the Resolution and Discovery, 1776-1780.* Cambridge: Hakluyt Society, Cambridge University Press: London.
- Beckwith, Martha  
1940 *Hawaiian Mythology.* The University of Hawaii. Honolulu.
- Burgett, Berdena B and Robert L. Spear  
1999 *Archaeological Monitoring of Storage yard Paving and Utility Improvements Kahului Harbor, Maui. TMK: (2) 3-7-10.* Prepared for State of Hawaii's Dept. of Transportation. JOB H.C. 3280.
- Chinen, Jon  
1961 *Original Land Titles in Hawaii.* Copyright 1961 Jon Jitsuzo Chinen. Library of Congress Catalogue Card No. 61-17314.
- Clark, John  
1980 *The Beaches of Maui County.* A Kolowalu Book, University Press of Hawaii: Honolulu.
- Condé, Jesse, and Gerald Best  
1973 *Sugar Trains, Narrow Gauge Rails of Hawaii.* Glenwood Publishers: Felton, California.
- Cordy, Ross  
2000 *Exalted Sits the Chief.* Mutual Publishing. Honolulu.
- Daws, G.  
1968 *Sins of Time: History of the Hawaiian Islands.* University of Hawaii Press. Honolulu.
- Donham, Teresa K.  
1990 *Interim Report: Archaeological Inventory Survey Maui Palms Hotel Site, Land of Wailuku, Wailuku District, Island of Maui (TMK: 3-7-03).* Prepared for Mr. John Abe, President Maui Beach Hotel, Inc.
- Eblé, Francis J. and Ingrid K. Carlson  
1996 *Archaeological Inventory Survey of The Hobron Triangle Kahului, Maui (TMK 3-7-1-03).* Prepared for Steel Tech, Inc.
- Gast, Ross J.  
1973 *Don Francisco de Paula Marin, a Biography: The letters and Journal of Francisco de Paula Marin.* Edited by Agnes C. Conrad. The University Press of Hawaii for The Hawaiian Historical Society.
- Formander, Abraham  
1969 *An Account of the Polynesian Race, its Origins and Migrations.* Vol. 1 to 3. Charles E. Tuttle Co. Inc.: Jutland.
- 1919 *Hawaiian Antiquities and Folklore.* Bishop Museum Press: Honolulu.
- Fredericksen Erik M. and Demaris L., Fredericksen  
1999 *Archaeological Monitoring Report for the Kahului Barge Terminal Improvements Project (Job No. H.C. 3281) Wailuku Ahupua'a, Wailuku District, Maui Island (TMK: 3-7-08:1, 3, par.4 & 6).* Prepared for Dept. of Transportation Harbors Division.
- Fredericksen, W.M. and D.L., Fredericksen  
1992 *An Inventory Survey of a Parcel of Land (TMK: 3-8-07-123), Located in the Ahupua'a of Wailuku, District of Wailuku, Island of Maui.* Xamanek Researchers, Pukalani, Hawai'i.
- Fredericksen, Demaris L., Erik M. Fredericksen, Walter M. Fredericksen  
1997 *Archaeological Data Recovery Report for Site 50-50-043120, NISEI Veterans Memorial Center TMK: 3-8-07:123 Wailuku Ahupua'a, Wailuku District, Maui Island.* Prepared for State Historic Preservation Division. Dept. of Land and Natural Resources on behalf of Earl Kono, AIA, for the Nisei Veterans Memorial Center.
- Fredericksen, Erik M., Walter M. Fredericksen, Demaris L., Fredericksen  
1994 *An Inventory Survey of a 10-Acre Parcel of Land, Maui Central Park Parkway, Wailuku Ahupua'a, Wailuku District, Maui Island (TMK: 3-8-07-125).* Prepared for Muneakiyo & Amakawa, Inc.
- Handy, Craighill  
1940 *The Hawaiian Planter, Vol 1.* Bishop Museum Press: Honolulu.
- Heidel, Melody, Leilani Pyle, and Hallett H. Hammett  
1997 *Archaeological Inventory Survey of the 110-Acre Maui Central Park, Wailuku, Maui (TMK: 3-8-07:1 and 3-7-01:2).* Prepared for Muneakiyo & Amakawa, Inc.
- Hungerford, J.B.  
1963 *Hawaiian Railroads.* Hungerford Press, Reseda, California.

- Hunt, J., D. Shefcheck, and M. Dege  
2006 *Archaeological Monitoring Report for a 5.443-acre Property Located at Kahului Harbor, Wailuku Ahupua'a, Lāhaina District, Island of Maui, Hawaii* [TMK: 3-7-008, por. 006 and 3-7-008: 004]. Scientific Consultant Services, Inc., Honolulu
- Johnson, K., and M. Dege  
2006 *An Archaeological Assessment of the Kahului Shopping Center Project, Wailuku Ahupua'a, Kahului, Island of Maui, Hawaii* [TMK: 3-7-7:5: 8-10: 27 and 50]. Scientific Consultant Services, Inc., Honolulu.
- Kamakau, Samuel  
1961 *Ruling Chiefs of Hawaii*. The Kamehameha Schools Press: Honolulu.
- Kame'eichiwa, Lilikala  
1992 *Native Land and Foreign Desires: Pehea La E Pono Ai? Bishop Museum Press, Honolulu.*
- Kelly, Marion  
1983 *Nā Māla o Kona: Gardens of Kona*. Dept. of Anthropology Report Series 83-2. Bishop Museum, Honolulu.
- 1998 *A Gunboat Diplomacy, Sandalwood Lust and National Debt*. In *Ka Wai Ola o OHA*, Vol. 15, No. 4, April 1998.
- Kennedy, Joseph, Peter P. Brennan and Sandra Ireland  
1993 *Archaeological Inventory Survey with Subsurface Testing Report for a Property Located at Portions of TMK: 3-8-07: 1, 40, 125, 117 and 3-7-01: 2, Wailuku Ahupua'a, Wailuku District, Island of Maui*
- Kirch, Patrick  
1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawaii Press, Honolulu.
- Kirch, Patrick V. and Marshall Sahlins  
1992 *Anahulu*. Vol. 1 and 2. University of Chicago Press. Chicago.
- Kolb, Michael, Patty Conte, Ross Cordy (eds.)  
1997 *Kula: The Archaeology of Upcountry Maui in Wainihulu and Keoken*. Prepared for Dept. of Hawaiian Home Lands.
- Kuykendall, R.S.  
1938 *The Hawaiian Kingdom*. Vol. 1. University of Hawaii Press, Honolulu.
- Kamakau, Samuel  
1961 *Ruling Chiefs of Hawaii*. The Kamehameha Schools Press. Honolulu.
- McGerty, O. A., and R. L. Spear  
2001 *An Archaeological Assessment For The Wailuku Force Main Project In Wailuku And Kahului, Maui* [Portions Of TMK: 3-04-027; 3-07-001, 002, 003, 004, 007-011; 3-08-007]
- McGerty, O. A., and R. L. Spear  
2001 *A Cultural Practices Assessment For The Force Main Project In Wailuku And Kahului, Maui, Hawaii* [Portions Of Tmk: 3-04-027; 3-07-001, 002, 003, 004, 007-011; 3-08-007]
- Tome, G., and M. F. Dege  
2011 (in Prep)  
*An Archaeological Inventory Survey Of An Approximate 917 Meter-Long Alternate Access Road And An 86.029-Acre Property In Punene, Piālehu Nui Ahupua'a, Wailuku District, Island Of Maui, Hawaii* [TMK: (2) 3-8-008:005, 006, And 019]. SCS, Honolulu
- Wade, Kimberly, Francis Eble, and Jeffrey Puntaleo  
1997 *Archaeological Inventory Survey of the Barge Terminal Improvement Project at Kahului Harbor, Kahului, Wailuku, Maui* JOB H.C. 3281 (TMK 3-7-8: 1, 2, 3, 4, and 6). Prepared for Sato and Associates Inc.
- Welch D.  
1991 *Archaeological Subsurface Testing for Kanaha Beach Park Addition and Kanaha Airport Transient Apron, Kahului Airport, Wailuku, Maui, Hawaii*. International Archaeological Research Institute, Honolulu.
- Wineski, John and Hallett H. Hammatt  
1999 *Archaeological Monitoring Plan for a Proposed Waterline Replacement Project in Paikukalo, Wailuku Ahupua'a on Kāhala, Kaiko'o, and Ukali Streets, and Lipo, Līhūa, and Kamai Places, Island of Maui* (TMK 3-4-27, 28, 29).
- Vancouver, George  
1984 *A Voyage of Discovery to the North Pacific Ocean and Round the World 1791-1795*. Kaye Lamb, ed. The Hakluyt Society. Cambridge University Press: London.