AN ARCHAEOLOGICAL INVENTORY SURVEY REPORT
FOR 9.5 ACRES IN MĀKENA, KAʻEO AHUPUAʻA,
MAKAWAO (HONUAʻULA) DISTRICT,
ISLAND OF MAUI, HAWAIʻI
[TMK: (2) 2-1-008:080 (por.)]

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November 2014
FINAL
July 2015

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ABSTRACT

At the request of ATC Makena Holdings, LLC (landowner’s representative), Scientific Consultant Services, Inc., conducted an Archaeological Inventory Survey of 9.5 acres in Ka`eo Ahupua’a, Makawao (Honua‘ula) District, Island of Maui, Hawai‘i [TMK: (2) 2-1-008:080 (por.)] in advance of mixed use development. In all, 17 sites, composed of 23 archaeological features, were documented and designated State Sites 50-50-14-7068 through -7083 and -7095. Overall, a variety of site types and functions, dating from pre-Contact through the Historic Period, were present on the parcel, suggesting a likely continual use of the project area. State Sites 50-50-14-7068, -7070, -7071, -7081 and -7095 were previously documented by Rogers-Jourdane (1979) in a Bishop Museum reconnaissance survey and were re-located and documented during the present investigation.

Functional interpretation of the 17 sites documented during the Inventory Survey included six temporary habitation sites, four historic ranching sites, three agricultural sites, one permanent habitation site, one transportation site and two that were of indeterminate function.

State Sites 50-50-14-7068 through -7083 and -7095 have been evaluated for significance according to the established criteria of the Hawai‘i State Register of Historic Places §13-275-6 and have been determined to be significant under Criterion D (information important to the history of Hawai‘i).

State Site 50-50-14-7071, a double enclosure, has also been found to be significant under Criterion C, as it represents a traditional Hawaiian permanent habitation site for the Mākena area and is a good example of a respective site type. Thus, preservation is recommended for State Site 50-50-14-7071.

A program of Data Recovery is recommended for State Sites 50-50-14-7078, -7079, -7081 (Feature A), -7082, -7083 and -7095 as these sites have also been found to be significant under Criterion C, as good examples of their respective site types and are likely to yield additional information through systematic excavation and interpretation. Site -7081, Features B and C have been recommended for Preservation by the client and community stakeholders.

No further work is recommended for State Sites 50-50-14-7068 through -7070, State Sites 50-50-14-7072 through -7077 and State Site 50-50-14-7080 as these sites have yielded sufficient information and have been sufficiently documented through the current Archaeological Inventory Survey.
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INTRODUCTION

At the request of ATC Makena Holdings, LLC (landowner’s representative), Scientific Consultant Services, Inc. (SCS) conducted an Archaeological Inventory Survey, in advance of mixed use development, for approximately 9.5-acres of land in Ka`eo Ahupua`a, Makawao (Honua`ula) District, Island of Maui, Hawai`i [TMK: (2) 2-1-08:80 (por.)] (Figures 1 and 2). The archaeological inventory survey consisted of historical background and archival research; pedestrian survey and inspection of the parcel; mapping and description of site features, manual subsurface testing; and, analysis, interpretation, and reporting of all relevant data. Fieldwork was conducted in December, 2010 by Ian Bassford, B.A. and David Perzinski, B.A. under the overall direction of Michael Dega, Ph.D., Principle Investigator.

Archaeological work in the project area was conducted to determine the presence/absence of archaeological deposits in surface and subsurface contexts through a thorough survey and representative manual subsurface testing. The ultimate goals of the project were to determine if significant cultural or historic resources, and/or human burials occurred on the parcel; and, to provide significance assessments and recommendations to the State Historic Preservation Division (SHPD).

Prior to the current inventory survey, previous archaeological work was conducted on a portion of the project area by Rogers-Jourdane (1979) and Bordner and Cox (1981), though these studies were reconnaissance surveys and did not document the sites in detail. During the present inventory survey, 17 sites (State States 50-50-14-7068 through -7083 and -7095) were documented which included six temporary habitation sites, four historic ranching sites, three agricultural sites, one permanent habitation site, one transportation site and two sites of indeterminate function. State Sites 50-50-14-7068, -7070, -7071, -7081, and -7095 were previously documented by Rogers-Jourdan (1979) in a Bishop Museum reconnaissance survey and re-located and documented during the present investigations.

ENVIRONMENTAL SETTING

PROJECT AREA LOCATION

The project area is located within Ka`eo Ahupua`a, Makawao (Honua`ula) District, with elevations ranging from 20 to 80 feet amsl (above mean sea level) and extending 250 to 450 m
Figure 1: Portion of USGS Topographic Map Showing Location of Project Area.
Figure 2: TMK 2-1-08 Showing Location of Project Area.
inland from the coast. The project area is bounded by undeveloped land to the north, Makena Alanui Road to the east, an existing hotel to the south, and Mākena Road-Keoneoio and undeveloped land to the west.

**RAINFALL**

Annual rainfall in the project area is less than 15 inches annually, one of the lowest on Maui, making this region one of the driest in the Hawaiian Islands archipelago (Juvik and Juvik, 1998; Giambelluca, 1986). Winter months account for the majority of the rainfall and during these months the drainage gulches will intermittently flow into Mākena Bay.

**SOILS**

The project area soils are classified as “Makena loam, stony complex” (Foote *et al.* 1972:91; Sheet 110). These soils are derived from volcanic ash with gentle to moderate slopes on elevations ranging from 0 to 500 feet. The stony land is concentrated on the bedrock ridges that generally run in an east/west (makai/mauka) direction. The permeability is classified as “moderately rapid, runoff is slow to medium, and the erosion hazard is slight to moderate” (Foote *et al.*, 1972:91). The soils in the project area were historically used for pasture and wildlife habitat (*ibid*), though in pre-Contact times were used for habitation and agriculture.

**VEGETATION**

The vegetation in the project area appears to fluctuate depending on available water. In drier months the dominant species were trees such as *kiawe* (*Prosopis pallida*), a few *wili`wili* (*Erythrina sandwicensis*) and *koa haole* (*Leucaena leucocephala*) and dried grasses including *pili* (*Heteropodon contortus*) and shrubs (*`ilima; Sida fallax*). Following heavy rains, the ground cover changed drastically with numerous flowers including rabbits paw (*Wedelia trilobata*), spiderlings (*Boerhavia* sp.), Flora’s paintbrush (*Emilia coccinea*), Lion’s ear (*Leonotis leonurus*), hairy abutilon (*Abutilon grandifolium*), false mallow (*Malvastrum coromandelianum*), castor bean (*Ricinus communis*) and indigo (*Indigofera* sp.).

**HISTORICAL ACCOUNTS**

**TRADITIONAL AND ORAL ACCOUNTS (HONUA`ULA DISTRICT)**

The traditional district of Honua`ula translates literally to “red land” (Pukui, *et al.*, 1974) and is accurately described in the following phrases (C.M. Hyde in Sterling, 1998:215):
Honua`ula, whose shoulders are pummeled by the Moa`e wind.
The clouless rain of Honua`ula.
The noisy rain of Ulupalakua.

Documented oral accounts of prehistoric activities and events occurring in the Mākena area are limited in terms of area usage. One oral tradition repeatedly used in historical and archaeological contexts concerns the use of Mākena as a canoe landing in 1776 for the Hawaii Island chief Kalani`opu`u:

In the year 1776 Kalani`opu`u and the chiefs returned to war on Maui, and in the battle with Kahekili’s forces at Wailuku were completely overthrown. The army landed at Keone`o`io, their double canoes extending to Makena at Honua`ula. There they ravaged the countryside, and many of the people of Honua`ula fled to the bush” [Kamakau 1992:85].

Kalani`opu`u, the son of Ka`u ruling chief Kalaninuiiamamao, intended to defeat Maui’s paramount chief Kahekili and his military forces, thereby claiming Maui. However, Kalani`opu`u forces were no match for Kahekili’s powerful warriors and the conquest was averted (Day 1984:65).

In pre-Contact times, the Mākena area was recognized for its politics and subsistence base, the latter including “good fishing” and “noteworthy” subsistence agriculture [sweet potato] (Handy and Handy 1972:272). As is explained in some detail below, traditional habitation and use of the Mākena lands prior to Western Contact has some time depth and carried an important role in the overall functioning of the ahupua`a in terms of habitation and subsistence resources.

Although not documented to a specific time frame, Handy and Handy (1972) state that during pre-Contact times, utilization of upland areas within Papa`anui Ahupua`a consisted of cultivating crops such as potatoes. This practice was done along the dry coastline as well. As Handy and Handy (1972:130) state,

The ancient Hawaiians planted potatoes in mounds (pu`e). Where soil is powdery and dry, as at Ulupalakua and Makena on Maui, the earth is heaped up carelessly into low mounds spaced with no particular precision or care.
Handy and Handy (1972:272) also note that fishing was an important component of the ahupua`a subsistence strategy: “On the south coast of East Maui, from Kula to Ulupalakua, a consistently dry and lava-strewn country, Mākena and Ke`oneo`io were notable for good fishing; this brought many people to live by the shore and inland.” Sterling (1998) compiled a list depicting a total of ten offshore fishing grounds that were supposedly utilized in the Honua`ula District during pre-Contact times. Of these ten offshore fishing grounds, four were located within the Waipao portion of Papa`anui Ahupua`a, three were located within the general Mākena area, and the three remaining fishing grounds were located south of Honua`ula.

Prior to the introduction of historic ranching of cattle, the area of Honua`ula was a much more agriculturally productive area with the forest zone stretching nearer to the coast. The lands were known for their relative productivity (compared to areas such as Kihei). Agricultural development on the leeward side of Maui was likely to have begun early in what is known as the Expansion Period (A.D. 1200–1400 [Kirch 1985]). According to Handy, there was “a small community of native fishermen who from time to time cultivate small patches of potatoes when rain favors them” who lived in Mākena in the 1940s. He writes:

> For fishing, this coast is the most favorable on Maui…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… Formerly, before deforestation of the uplands, it is said that there was ample rain in favorable seasons for planting the sweet potato, which was the staple here. A large population must have lived at Makena in ancient times for it is an excellent fishing locality, flanked by an extensive area along shore and inland that was formerly very good for sweet potato planting and even now is fairly good, despite frequent droughts… [1940:159].

**HISTORIC TIMES**

The early historic accounts of European explorers in Honua`ula suggest an area that was not as abundant or populated as those in east Maui. In La Perouse’s account of this portion of Maui he states:

> The soil of this land is entirely formed of decomposed lava and other volcanic substances. The inhabitants have no other drink but a brackish water, obtained from shallow wells, which afford scarcely more than half a barrel a day.
During our excursion we observed four small villages of about ten or twelve housed each, built and covered with straw in the same manner as those of our poorest peasants… (M. Dondo, 1807 in Sterling 1998:222)

Another account by a member of the same expedition, Dr. Rollins, recounted his impression of Honua`ula:

The vegetation of this part of Mowee is by no means so luxuriant, nor the population so numerous, as in the eastern part where we had just before touched. Scarcely had we anchored when we were surrounded by the inhabitants who brought us in their canoes hogs, fruit and fresh vegetables…

Though the island of Mowee furnishes in sufficient abundance animals and every species of food necessary to subsistence, the inhabitants neither enjoy an equal degree of health, nor possess the same elegance of form and beauty of body, as the natives of Easter Island… They appeared however to have some resemblance to them in their conformation, and in general even a more robust make, if their health had not been impaired by disease… M. Dondo, 1807 in Sterling 1998:222).

The apparent lack of available resources and health may have been the result of a long period of war in the Hawaiian Islands, and notable in Honua`ula. As Cordy (1985) states:

Hawai`i’s armies raided (plundering crops, killing, and destroying property), and Honuula was the site of such a landing and raid in 1776 (Fornander, 1969 in Cordy, 1985:11). Both Maui’s and Hawaii’s armies were constantly being provisioned with the islands’ produce, and at least in 1793, there was little food in the Lahaina area (Vancouver 1798 in Cordy, 1985: 11).

Even as traditional activities continued into the early post-Contact period, historical documentation of Mākena places an 1828 missionary intervention with the spread of western religious activities. Mākena Church, built c.1828, was constructed as a missionary outstation. In 1855, Keawalai Congregational Church (State Site 50-50-14-1584) was built. During the early 1830s, local missionaries conducted a census of the Mākena population and discovered a population decline. Between the 1840s and the 1850s, the Mākena population experienced further population decreases due to introduced diseases (see Chaffee and Spear 1994:4).
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 by the pressuring of foreigners, Kauikeaouli (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 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].

It was in December of 1845 that a statute [The Māhele] was enacted creating The Board of Commissioners to Quiet Land Titles, commonly known as The Land Commission. The act also granted unto said Land Commission the authority to accept claims for land received prior to the enactment of the statute, to investigate said claims and to grant awards to the successful claimants. This statute paved the way for private ownership of lands [Land Commission Awards] in Hawai‘i. Since the enactment of said statute thousands of land Commission Grants, Kamehameha Deeds, Public Works Grants, Land Patent Grants and other documents have been issued by the Hawaiian Government for lands sold and conveyed to individuals (Chinen 1961:3).

In retrospect, it appears that some of the only people who profited from the Māhele were those who were informed of the process and understood the requirements imposed by the new statute. The rest of the claimants failed to support their claims and lost lands that had been utilized by their lineal ancestors for generations.

The present project area does not contain Land Commission Awards (LCAs). However, LCA 8071 is present within coastal Papa’anui Ahupua‘a and, in combination with LCAs in Waipao Ahupua‘a, provide some insight on proto-Historic land use for the Mākena area. Chaffee and Spear (1994:4) note that “all of these [LCAs within the Waipao Ahupua’a] were houselots ranging in size from 0.013 to 0.250 acres and that these awards all appear to be well inland. One awardee, Kiniakua (LCA 2658) testified in the Native Register that his houselot was bequeathed by his parents at the time of Kamehameha I.” LCA 8071 was less than 10-acres and
was utilized for crops such as taro (*Colocasia esculenta*), sweet potato (*Ipomea batatas*), Irish potato (*Solanum tuberosum* L.) and *hala* (*Pandanus tectorius*).

Other LCAs were awarded for coastal properties in Ka`eo Ahupua`a located. Land Commission Award (LCA) 4292B *apa`na* 2 consisted of a houselot (Native Testimony v7:137-138). LCA 2399, located above Mākena-Keoneoi Road (the old government road), also consisted of a houselot (Native Register v3:482). Due to inconsistencies in reporting, “LCA 2985-B could not be located, but LCA 2395 appears to describe the correct location for the property. This piece of land was given to Kaili by Kalama, his neighbor, in 1845, and it consisted of a house lot” (McGerty and Yeomans 2001:7).

The project area is part of Grant 223 and 234 that was made to Linton L. Torbert sometime during 1849 and 1850. This grant allowed Tolbert access from upland Ulupalakua to the sea (Fredericksen and Fredericksen 1998c:2). Fredericksen and Fredericksen continue to state that the labeling of “Grant 223” may be incorrect as Grant 234, awarded also to Tolbert (and Wm. Wilcox) around the same time, allowed him the same access.

Given the minimal number of LCAs within coastal Papa`anui Ahupua`a, and in the neighboring *ahupua`a* of Ka`eo, the overall LCA pattern for the Mākena area suggests that a permanent residence was one land use strategy in the area during historic times (see McGerty and Yeomans 2001 for a more detailed discussion of area LCAs). Accompanying plots for the cultivation of sweet potato and use of the coastline for fishing likely accompanied such occupation. A prime example of historic era cultivation in Mākena occurred during the California gold rush of 1848 when the Irish potato was cheaper to import from Hawai`i as opposed to localities within the continental United States (Fredericksen and Fredericksen 1998b:9). Hawaiians and company-owned plantations quickly filled roles as producers of the crop. As discussed below, permanent and temporary occupation of the Mākena region has some time depth, with the earliest permanent habitation sites having been constructed and occupied from the A.D. 1200s (Cordero and Dega 2001).

In 1845, 50 acres of Mākena sugar-cane and ranch lands, including a portion of Ka`eo, were rented by Lonton Torbert from James Nowlein and Solomon Burrow who had received it from the government (Gosser *et al*: 1993: 27-35). There were two landings at either end of Mākena Bay. A road for oxen extended from a landing on the northern end of the bay (known as
Torbert Landing) to Torbert’s mauka (upcountry) plantation. By 1848, Torbert had acquired a license to open a retail store. The Government Landing was located at the southern end of the bay. Torbert finally purchased Land that had been previously leased from the government in 1849 (Grant 223, Dept. of Land and Natural Resources 1964:30). However, Torbert was forced to sell everything in 1856, including 800 cattle and 475 sheep, to pay his debts. Torbert Plantation Estate became the property of James Makee in 1858 and was afterward known as the Rose Ranch.

In 1852, a man named Mahoe purchased a 514 acre land grant in Ka’eo, the boundaries of which followed the southern boundary of Torbert’s land and included the fishpond at Apuakehau Point, as well as the government landing, road mauka, and storehouse. The boundary description of the Grant (835) mentions a kukui (Aeurites moluccana) tree, an ‘auwai, and old road, five wiliwili (Erythrina sandwicensis) trees, a sand dune, “the house of a full blooded Hawaiian”, and 24 rock piles. In 1868, Mahoe and his wife partitioned a 0.59-acre portion of their grant and conveyed it to the American Board of Commissioners for Foreign Missions (ABCFM Trustees Minute Book 1912:104).

In 1865, residents of Honua`ula were either employed by the Makee Plantation at Ulupalakua or were fishermen living along the coast. The coastal population was described by Fornander as “…a thrifty, handy set of people, to judge from the general appearance of their houses, not a few of which were of wood, and many of the others, especially along the seaboard, being neatly built and looking tidy and clean within. The children seem to be numerous and those that I observed were decently clad and looked bright and healthy” (Fornander in Barrere 1975:58).

The harbor at Mākena had become one of the busiest on Maui and was a regular stop on the Honolulu to Hilo run. An interesting anecdote from Makee, the owner of Rose Ranch, described the results of a summer hurricane in August of 1871. Makee wrote:

It was fearful to see the havoc during its duration. Trees were prostrate in every direction; the mill and engine house, the bowling alley, sugar house, cook house, two of the Chinese and one native house were down. One store house at the beach, and all the native houses there had been blown into the sea (Hawaiian Gazette, August 16, 1871:2.2).
Thrum also reported information concerning the storm:

... A tropical storm or hurricane caused extensive damage to the Ulupalakua Ranch, took the roof off the storehouse at Makena, which was near the church, and swept all the native houses into the sea – all within six hours [1926:36].

The harbor served as a loading port for the ranch and, after a breakwater and landing were constructed in 1877, sugarcane could be transported from the location. By 1885, structures along the bay included a church, cemetery, school, corral, the “old sugar house”, a stone wall, and a total of nine houses, one being fashioned from grass (Jackson Map, Reg. No. 1337). The development of Kahului Harbor (1920s), which contained cold storage facilities, marked the end of commercial shipping for Mākena Harbor.

From the 1940s through present times, much development has occurred near the project area. Military activities, such as amphibious beach landings, were conducted along coastal areas during World War II. In addition, concrete bunkers were constructed on the beach and other locations near the shoreline. Most recently, activities along the western coast have focused upon the development of large vacation resorts and golf courses. Cattle ranching continues on the upper slopes of the Honuaʻula District.

From the mid-1800s through the early 1900s, ranching activities employed many Mākena residents and as a result, lessened time for traditional activities. The previously mentioned Mākena Landing, a preserved example of ranching associated structures, was utilized as a staging from where cattle were transported to ships awaiting offshore. The many cattle walls and enclosures visible in the Mākena area today attest to the importance of ranching to the local economy, which continues today in areas such as Ulupalakua. Following the ranching period (c.1925 to current), the major foci of Mākena became oriented toward the construction of residential homes and tourist destinations (Chaffee and Spear 1994:5). These undertakings still dominate present-day land use in the area.

**PREVIOUS ARCHAEOLOGY**

Prior to the current archaeological investigations, the present project area had been subject to archaeological reconnaissance survey by Rogers-Jourdane (1979) and Bordner and
Cox (1981). In addition, several archaeological projects were conducted on nearby land parcels within neighboring Papa`anui Ahupua`a and within the ahupua`a of Ka`eo. Many projects were also conducted nearby, along the Mākena coastline (Figure 3; Table 1).

W. M. Walker, between 1929 and 1930, conducted one of the earliest archaeological surveys of the Mākena area and inventoried both coastal and upland sites of the ahupua`a, including fishponds, heiau, and house sites. Although some of the sites Walker documented were destroyed, he nonetheless assigned site numbers. Of the destroyed sites, four were heiau located in Ulupalakua (see Sterling 1998:229, 231-232). Also within Ulupalakua, Walker recorded a platform that had been converted into a house site; T. Thrum, another early surveyor, interpreted the structure as a sacrificial platform.

During the late 20th and continuing into the 21st Century, Mākena was subject to more drastic land alterations caused by the influx of construction in which residential homes and tourist hotel destinations were quickly built. Supplemental to the major construction boom was the concomitant increase in associated archaeological work in the area. Several archaeological projects were conducted nearby the present project area and illuminate data important in determining the settlement pattern of the Mākena area.

Bishop Museum conducted a reconnaissance of approximately 1000-acres of land in Mākena that was comprised of 5 parcels. Parcel II included the project area and a rough count of archaeological features included “23 enclosures, seven platforms, three ahu, three isolated walls, three possible burials, seven cave shelters, three terraces and one possible house site—for a total of 50 (Clark, 1974:4).” He then noted that, “The sites are not concentrated in any particular area but are scattered throughout the parcel. They are generally in fair condition. No artifacts or midden were seen (ibid: 5).

Sinoto (1978) conducted pedestrian survey of the Papa`anui Ahupua`a uplands that led to the identification of agricultural features. These features were assessed as pre-Contact in origin. In a model posed by Cordy and Athens (1988), these features, and possibly associated habitation areas, could have been constructed from the A.D. 1600s.
Figure 3: Portion of USGS Map Showing Location of Previous Archaeological Studies Conducted in the Vicinity of the Project Area.
Table 1: Previous Archaeological Studies in the Vicinity of the Project Area.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Ahupua`a</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clark</td>
<td>1974</td>
<td>Multiple in Mākena</td>
<td>261 Sites during a reconnaissance survey of 1000-acres</td>
</tr>
<tr>
<td>Sinoto</td>
<td>1978</td>
<td>Papa`anui</td>
<td>18 Sites during reconnaissance survey of 17-acres</td>
</tr>
<tr>
<td>Haun</td>
<td>1978</td>
<td>Maluaka</td>
<td>88 Sites- Including Walls, Terraces, Enclosures, C-Shapes, Mounds, Pavings, Pits</td>
</tr>
<tr>
<td>Cordy</td>
<td>1978</td>
<td>Ka`eo and Maluaka</td>
<td>79 Sites- Including pre-Contact and Historic Sites; modified outcrops, terraces, enclosure, platforms, pits, midden scatters,</td>
</tr>
<tr>
<td>Schilt</td>
<td>1979</td>
<td>Ka`eo</td>
<td>8 Sites- Including Kalani Heiau, enclosures, possible burial, modified outcrop, rockshelter</td>
</tr>
<tr>
<td>Rogers-Jourdane</td>
<td>1979</td>
<td>Papa<code>anui and Ka</code>eo</td>
<td>21 Sites; 5 in the current project area.</td>
</tr>
<tr>
<td>Denison</td>
<td>1979</td>
<td>Papa<code>anui, Ka</code>eo and Maluaka</td>
<td>Data Recovery of Rogers-Jourdane sites</td>
</tr>
<tr>
<td>Sinoto</td>
<td>1981</td>
<td>Multiple in Mākena</td>
<td>14 Sites- Including midden scatters, modified outcrops, terraces, enclosure, platform, feature complex (agricultural and temporary habitation)</td>
</tr>
<tr>
<td>Bordner and Cox</td>
<td>1982</td>
<td>Multiple in Mākena</td>
<td>82 Sites- Sites and site complexes including agricultural complexes and at least five heiau that were recommended for further study</td>
</tr>
<tr>
<td>Cordy and Athens</td>
<td>1985</td>
<td>Ka`eo</td>
<td>Data Recovery of Sites 50-50-14-1916 and -2101; agricultural complexes with temporary habitation and workshop components</td>
</tr>
<tr>
<td>Clark</td>
<td>1985</td>
<td>Ka`eo</td>
<td>Coastal reconnaissance and subsurface testing in sand dune; traditional coastal trail not found</td>
</tr>
<tr>
<td>Sinoto</td>
<td>1993</td>
<td>Ka`eo</td>
<td>Six sites including historic trash pit, enclosure, agricultural mounds and an historic well</td>
</tr>
<tr>
<td>Chaffee and Spear</td>
<td>1994</td>
<td>Waipao</td>
<td>Pohakunahaha Heiau</td>
</tr>
<tr>
<td>Fredericksen and</td>
<td>1998</td>
<td>Waipao</td>
<td>Enclosure, overhang shelter, a pre-Contact habitation area</td>
</tr>
<tr>
<td>Fredericksen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Year</td>
<td>Ahupua`a</td>
<td>Results</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Fredericksen and Fredericksen</td>
<td>1998 (multiple)</td>
<td>Papa`anui</td>
<td>WWII gun placements, overhang shelter, modified outcrop, fishing shrine, historic wall</td>
</tr>
<tr>
<td>McGerty and Yeomans</td>
<td>2000</td>
<td>Ka`eo</td>
<td>State Site 50-50-14-4986 (intermingled historic and pre-Contact features), Kalani Heiau</td>
</tr>
<tr>
<td>Tome and Dega</td>
<td>2001</td>
<td>Papa`anui</td>
<td>State Site 50-50-14-5123, numerous pre-Contact artifacts from a temporary habitation</td>
</tr>
<tr>
<td>Cordero and Dega</td>
<td>2001</td>
<td>Waipao</td>
<td>13th Century temporary habitation previously documented by Chaffee and Spear (1994)</td>
</tr>
<tr>
<td>Rotunno-Hazuka and Pantaleo</td>
<td>2005</td>
<td>Ka`eo</td>
<td>Nine sites including ranching enclosures, habitations, agricultural sites and a possible religious structure</td>
</tr>
</tbody>
</table>
In Kaʻeo Ahupuaʻa, Haun (1978) conducted Inventory Survey that led to the identification of multiple agricultural features. Utilizing volcanic glass hydration dating, the features were dated from A.D. 1606 to 1705 and A.D. 1600 (Haun 1978; see also McGerty and Yeomans 2001:12). Additionally, Bordner and Cox (1982) surveyed the uplands of Kaʻeo Ahupuaʻa. The survey led to the identification of habitation structures and associated agricultural features. Upland of Mākena-Keoneio Road and the present project area, a survey by Schilt (1979) yielded several traditional features, including habitation enclosures and modified natural outcrops, with scatters of marine midden and historic artifacts. Excavation of a habitation site on the parcel produced a radiocarbon date of A.D. 1410 to 1660, intimating pre-Contact occupation of the area (see McGerty and Yeomans 2001:18).

Bishop Museum conducted an archaeological reconnaissance survey of the Garcia family property in Kaʻeo Ahupuaʻa, just south and west of the current project area (Schilt 1979). In total, one previously identified site (Kalani Heiau, Ma-B8-1) and seven areas of archaeological significance were documented. These included a small enclosure, a possible burial, modified outcrop and a “lava-bubble” shelter. This site was later subjected to an archaeological inventory survey by Haun and Henry in 2000 and a total of six sites, including Kalani Heiau, were identified.

An archaeological reconnaissance by Rogers-Jourdane (1979) was conducted of a larger area and the present project area. During the survey, a total of twenty-one sites were identified. Five of these sites (State Site 50-80-14-7068/50-Ma-B9-100; State Site 50-80-14-7070/50-Ma-B9-102; State Site 50-80-14-7071/50-Ma-B9-103; and State Site 50-80-14-7081/50-Ma-B9-101; State Site 50-80-14-7095/50-Ma-B998) are located in the current project area (see Results section for descriptions). The sites included a terrace (State Site 50-5014-7058). Types of features identified during the Jourdane (1979) reconnaissance survey included a rockshelter, enclosures, historic walls, an alignment,, L-shape, platforms, and terraces.

Bishop Museum conducted Phase I and Phase II surveys at six sites in Papaʻanui and Maluaka Ahupuaʻa for Seibu Hawaiʻi (Denison, 1979). The sites were previously recorded by Rogers-Jourdane (1979) and included a wall, enclosure remnant, enclosure and platform complex, and a platform complex and terrace, The sites were typical for the area, and were interpreted as habitations and agricultural features.

Sinoto (1981) conducted a reconnaissance survey for Fairways 2 through 6 and a road alignment in areas just east (mauka) of the current project area. The survey included
approximately 100-acres and a total of 14 sites (six site types) were located. The sites included a surface midden scatters, modified outcrops, terraces, an enclosure, platforms and a feature complex along a small ridge. Sinoto concluded that extensive historic disturbance to the project area had affected the site distribution and density (compared to surrounding areas) and that there was a low variability in site types (suggesting limited utilization of the area).

An archaeological reconnaissance survey for Seibu Hawai`i located 82 sites and site complexes in lands just mauka of the project area (Bordner and Cox, 1982). Sites were noted but not mapped and included shelter caves, platforms, terraces, enclosures, historic walls and heiau. The study concluded that more sites were encountered than expected in the mauka portion of the project area (above 300-foot contour), at least five heiau were encountered though need to be studied further, agricultural sites seemed to follow the pattern suggested by Handy’s descriptions and that sites in the lower portion of the study area were distributed similarly to those in the north (Bordner and Cox, 1982).

Cordy and Athens (1985) conducted data recovery on two sites (State Sites 50-50-14-1916 and -2101) in Mākena, approximately 0.75 km east of the current project area. The sites were both agricultural complexes that were recorded by Cordy in 1978. In sum, the study found that although there were some organization similarities in both field systems, there was also considerable variation. “In each site, there was a primary field shelter, a low, rectangular enclosure open to the sea. Remains indicate that these were probably sleeping, resting, eating, cooking and manufacturing- working areas that were used recurrently for short periods of time… However, there are marked variations in the nature, density and location of these basic activity areas in each site (Cordy and Athens, 1985:11).”

Clark (1985) was contracted by Seibu Hawai`i to conduct an archaeological reconnaissance for a segment of Mākena Road. The survey area was located along the coast and cut into a sand dune that was at elevations of 1 to 15 feet above mean sea level (amsl). The 1,150 foot long by 60 foot wide corridor was investigated to locate a traditional coastal Hawaiian trail. Despite the limited subsurface testing and surface survey, no evidence of a trail or other cultural materials were found.

In 1993 an Archaeological Inventory Survey was conducted on another coastal Mākena property [TMK: (2) 2-1-007:066; Sinoto 1993]. Altogether, the survey identified six archaeological features. Feature 1 was a trash deposit containing traditional and historic cultural materials; Features 2 and 3 were both walls of which one (Feature 2) was core-filled. Feature 4
was a sweet potato mound identified by oral accounts. Feature 5 was a small enclosure utilized for animal husbandry, which may have had an alternate, unknown primary function due to its well-stacked walls and general appearance. Feature 6 was a historic well-constructed of mortar and brick. Subsurface testing of selected feature and non-feature areas revealed traditional midden—sometimes co-mingled with historic debris.

Chaffee and Spear (1994:6) noted the presence of Pohakunahaha Heiau, which is located approximately 15 meters to the south of State Site 50-50-14-3516, on an adjacent parcel (primarily TMK: (2) 2-1-007:012). The heiau and a platform adjacent to the heiau were documented by Kolb (1991). Only the heiau was later mentioned in the Chaffee and Spear (1994) report, the latter not having re-documented the platform. The retaining wall around the heiau, occurring on three parcels divided between Na Hale O Mākena (parcel 101), Seibu lands, and Chang family property (parcel 12), was further investigated and found to contain a burial. According to SHPD records, the burial has not yet received a site number. However, the heiau and environs were subject to preservation planning.

In Waipao Ahupua`a (just west of the project area along the coast), Fredericksen and Fredericksen (1998a) conducted Inventory Survey of a c. 1-acre land parcel occurring near the coast [TMK: (2) 2-1-007:071]. Survey led to the identification of an enclosure (State Site 50-50-14-4504), an overhang shelter (State Site 50-50-14-4505), and a pre-Contact habitation area (State Site 50-50-14-4506). Based on construction methods, Fredericksen and Fredericksen (1998a: 29) placed construction of the rock enclosure to early post-Contact times. The function of the rock shelter was determined to be a low use activity area, due to the limited amount of recovered cultural material; due to the absence of historic artifacts, use of the shelter was placed during pre-Contact times, (ibid: 31). Based upon the recovery of traditional artifacts and midden, as well as the absence of historic artifacts, State Site 50-50-14- 4506 was also designated as a pre-Contact site (ibid: 34).

Cordero and Dega (2001) provide additional evidence with which to evaluate the temporal placement and nature of State Site 50-50-14-3513, Feature 2A (enclosure), State Site 50-50-14-3514, Features 1 through 3 (modified outcrops-agricultural), and State Site 50-50-14-3516, Feature 4 (surface lithic scatter) documented by Chaffee and Spear (1994). Briefly, block excavations within the State Site 50-50-14-3513 enclosure yielded 64 subsurface features related to food preparation and habitation (postmolds) with various concentrations of lithic, faunal, and midden remains. Initial construction and occupation of the enclosure (house site) was dated to c. A.D. 1280±1460, a time period somewhat earlier than posed by Cordy and Athens (1988), yet,
supported by the work of Gosser et al. (1996). Formalization of the structure (`ili`ili pavement) occurred in late traditional/early historic times. Overall, the hale was utilized for habitation, food preparation and consumption, and lithic manufacturing on a continuous basis from the A.D. 13th Century through 17th Century. Intra-feature patterns regarding secular areas of domestic activity were identified.

The agricultural site (State Site 50-50-14-3514) yielded a date range of A.D. 1420 to 1700, a time period contemporaneous with occupation of the house site. No dates were acquired from State Site 50-50-14-3516 (lithic scatter) but the nature and manufacture of the tools implied a pre-Contact time frame. The pattern of these six sites shows long-term use of the Mākena landscape for various purposes, in close proximity (c. 500 m removed) to the current study area.

Several years later in the ahupua’a of Papa’anui, multiple surveys (reconnaissance and inventory-types) were reported by Fredericksen and Fredericksen (1998b and 1998c). The results of an Archaeological Inventory Survey on TMK: (2) 2-1-007:099 (Fredericksen and Fredericksen 1998b) identified multiple archaeological sites that included a World War II shoreline gun footing (State Site 50-50-14-4673), a rock overhang shelter (50-50-14-4674), a modified rock structure remnant (State Site 50-50-14-4675), and a rockshelter (State Site 50-50-14-4676). Of the four sites, excavations yielded modern debris and beach-type materials (marine shellfish, coral, etc.). Fredericksen and Fredericksen (1998c) conducted an Archaeological Inventory Survey on TMK: (2) 2-1-007:007 and 098 which identified four more sites that included a fishing shrine (State Site 50-50-14-4524), small rock overhang shelters (State Sites 50-50-14-4525 and -4526) and a portion of the Old Government Road retaining wall (State Site 50-50-14-4527). The fishing shrine was thought to have been previously identified by Winslow Walker and subsurface testing revealed a subsurface pit feature, an `ili`ili pavement and traditional cultural material. Subsurface testing at State Site 50-50-14-4525 revealed only historic cultural materials such as bottle glass shards while the same type of testing at State Site 50-50-14-4526 yielded modest amounts of marine invertebrates, charcoal and waterworn pebbles. No radiocarbon samples were submitted for this survey.

In July 2000, Archaeological Inventory Survey-level investigations were conducted on a small land parcel also located near the Mākena coastline in neighboring Ka’eo Ahupua’a (McGerty and Yeomans 2001). Thirteen features composing State Site 50-50-14-4986 were recorded and tested. Representative shovel probes placed within the features yielded marine shell midden intermingled with historic artifacts. Carbon samples were not obtained due to the almost complete absence of charcoal and other organic matter. This situation inhibited absolute
dating and thus, relative dating was utilized for this particular survey. A manufacturer’s stamp dated “1901” on a bullet casing was recovered from one shovel probe and provided the only solid date. The existence of Historic-type artifacts at all the features did not preclude them from solely relating to historic times. As the features occurred in a close proximity to Kalani Heiau, a traditional site (McGerty and Yeomans 2001:40-41) it is possible the features may have been constructed during the pre-Contact Period, but modified at a later date. Overall, State Site 50-50-14-4986 consisted mainly of Historic features; yet, sampling methods may have precluded the identification of Traditional components.

In 2001, an Archaeological Inventory Survey was conducted on a coastal Mākena property that identified a temporary habitation site (State Site 50-50-14-5123) comprised of two features (Tome and Dega 2001). Feature 1 consisted of an alignment or truncated terrace and interpreted as a remnant temporary habitation terrace or agricultural terrace-retaining wall, based on site location, feature architecture, and recovered Traditional-type cultural materials (marine shell beads, volcanic glass and basalt flakes, cut bone, basalt flakes with polish). Feature 2, a rock-filled terrace fronted by a soil-terrace, was interpreted as a temporary habitation locus. A radiocarbon sample obtained from Feature 2 produced a radiocarbon date of A.D. 1410-1530 thus reinforcing that both features were utilized during the pre-Contact Period.

A few months later, SCS conducted Archaeological Monitoring of the same parcel, which resulted in the identification of an Historic component of State Site 50-50-14-5123 (Dega 2003). During the Monitoring program, Historic glass bottles, associated with Mākena’s military occupation during WWII (see Tome and Dega 2002) were encountered. A few Traditional-type artifacts were also collected during the Monitoring, including coral abraders, marine shell beads, volcanic glass and basalt debitage, a basalt hammerstone, and a basalt ulu’maika (gaming piece).

In 2003, SCS conducted an Archaeological Inventory Survey on several undeveloped land parcels totaling 4.76-acres in Papa’anui [TMK: (2) 2-1-07:09; 2-1-08:por. 100; 2-1-7:por. 94; 2-1-7:60] (Tome and Dega 2005, Dega 2003). Four sites (State Sites 50-50-14-5542, -5543, -5544, and -5545) were documented. All but one site (ranch wall) were subject to testing. Several time periods of land use are evident across the subject parcel in the form of built environment and landscape modifications. Constructed architecture spanned a time range of pre-Contact (State Site 50-50-14-5543, Feature C alignment; A.D. 1000-1230) to historic times (State Site 50-50-14-5545). This study provided additional evidence for earlier than expected occupation of the Mākena area.
In 2005, Archaeological Services Hawai`i, LLC (ASH) conducted an Archaeological Inventory Survey in Ka`eo Ahupua`a [TMK: (2) 2-1-006:037, 056 and 2-1-005:084] (Rotunno-Hazuka, and Pantaleo 2005). Nine sites (six newly identified and three previously identified) were documented. These sites consisted of ranching enclosures, habitations, agricultural sites and a square enclosure classified as a religious structure.

**SETTLEMENT PATTERNS AND PREDICTIVE MODEL**

The settlement pattern for the district of Honua`ula is varied, with several competing models being proposed (Cordy 1981; Kolb et al. 1997; Cordy and Athens 1988; Gosser et al. 1996, Cordero and Dega 2001). For the purposes of this report, the focal point is the coastal area of Mākena.

Cordy (1981) suggests that prehistoric permanent housing in the Mākena area dates to ca. A.D. 1600 or “no farther back than the mid-AD 1500s” (Cordy and Athens 1988:10). Conversely, Gosser et al. (1996) and Cordero and Dega (2001) provide evidence that permanent habitation initially appeared in the Mākena area from approximately A.D. 1200s, with increased (read: more intensive) settlement in the form of a more heavily built landscape by A.D. 1650.

As a majority of the sites recorded in the Mākena area have been pre-Contact permanent habitation and agricultural sites, there is a slight gap in knowledge concerning temporary habitation sites such as those occurring in the present project area. Given the evidence that permanent residences were established in the area by A.D. 1200 (Cordero and Dega 2001), one would expect temporary habitation sites to pre-date or, at the least, be contemporaneous with permanent sites. As is shown below, this concept is supported further by an early radiocarbon date from a rockshelter feature (State Site 50-50-14-5543, Feature C), in which the cultural deposit revealed a fairly early time range: A.D. 1000 to 1230 and A.D. 1030 to 1160.

Employing archaeological data from around the island, it appears that the settlement pattern in Makena suggests that as the population increased in the earlier settled areas of windward Maui, inhabitants began emigrating to leeward sides. This pattern is consistent with time periods suggesting early occupation of Windward Maui by A.D. 300 to 600 and population spreading to more marginal areas by c. A.D. 1000 to 1200. Within comparatively marginal zones such as Makena, even these zones could be subject to micro-divisions. As such, directly coastal and more upland areas would have been more amenable to habitation and/or cultivation than the drier areas in between.
The elevation model proposed by Cordy and Athens (1988) suggests that certain site types may be associated with specific elevation zones and time periods. For instance, Cordy and Athens (1988) propose that permanent house sites in Makena were situated within 0.25 miles of the coastline and agricultural lands and temporary house sites were located over 0.25 miles inland from the coast. Permanent housing settlements scarcely occurred beyond 0.25 miles from the coast (Ibid.). This may be true, with the data in hand, yet, there are, as noted above by several projects in the area, also pre-Contact temporary habitation sites (shelters) that occur within 0.25 miles from the coastline. The present project seeks to further confirm this hypothesis and to analyze the relationship between permanent and temporary habitation sites occurring within the 0.25 mile zone of coastal Mākena.

In brief, the settlement pattern of coastal Makena shows the presence of both temporary and permanent habitation sites beginning from about A.D. 1200, and agricultural features, — mainly sweet potato mounds — beginning from the early 14th Century. Formalization of architecture, added structures for habitation and agriculture, and lithic workshops have been documented from the A.D. 14th Century yet, were more paramount from the A.D. 17th Century. Occupation and land utilization of the area continued through Post-Contact times, as evidenced by the area’s many LCAs denoting house sites. Ranching activities in the late 1800s dominated much of Makena’s marginal areas while coastal habitation and fishing remained constant. While the influx of residences and hotels in the area during modern times covered much of the former traditional lands, evidence to refine existing settlement pattern models for the area is still amenable to evaluation. The present project aims to contribute to this growing database.

**METHODS**

Archaeological Inventory Survey was conducted, in advance of mixed use development, by SCS archaeologists Ian Bassford, B.A. and David Perzinski, B.A. in December, 2010, under the direction of Michael Dega, Ph.D., Principal Investigator. Inventory Survey consisted of a surface survey and limited manual excavation (testing) in the form a single test unit (TS-1). A 100% pedestrian surveys utilizing 5 to 10 meter (m) transects was utilized and oriented roughly east/west (upslope/down slope), depending on ground cover and visual range. The 5 to 10 m survey distance was adequate as surface visibility was high.

When sites were encountered, the site location was flagged, noted on a project area map and later recorded. The sites were plotted on a map using a Trimble GPS with sub-meter accuracy, site topography, and visual indicators, and were documented with written descriptions,
photographs and scale plan view maps. Site boundaries were primarily determined by the horizontal extent of their surface components.

Manual excavation was conducted at State Site 50-50-14-7071 to better understand site function and chronology. This was the only site subject to testing during the current study (Note: other sites have been selected for Data Recovery, see below). The test unit measured 2.0 m by 0.50 m. Testing was done by trowel, with all sediment being screened through 1/8” wire mesh screens. Once the test unit was excavated to sterile, the units were recorded with scale profiles using Munsell Soil descriptions, plan views, and photographs. Site age and function were determined based on construction technique, spatial relationship to other sites and topography, presence/absence of historic indicators (i.e. introduced materials, construction techniques), and previous archaeological research.

Archival research entailed investigating the historic and archaeological background of the general project area. This examination included a documentary search of previous archaeological research conducted in this region of Maui, as well as a review of archival literature relating to Land Commission Awards and local mythology. The review of historical documents was mainly accomplished in order to understand the impact of post-Contact events on the cultural and archaeological landscape of the region.

Laboratory work was undertaken at the SCS laboratory on O`ahu and consisted of cleaning, sorting, and analyzing all artifacts and collected soil samples. Additional laboratory work involved cataloging all project photographs, drafting of sites and stratigraphic profiles, and writing. All project area records (i.e. notes, profiles, photographs, etc.) are currently being curated in the SCS Maui office. All collected cultural material (i.e. artifacts, and midden) are currently being curated in the SCS Honolulu office. These artifacts will be sent back to the SCS Maui office for long-term curation.

**RESULTS**

Archaeological Inventory Survey within the 9.5-acre parcel led to the identification and documentation of seventeen (17) archaeological sites (Figure 4). State Sites 50-50-14-7068 through -7083 and -7095 represent both pre-Contact and Historic Period activities on the parcel. Of the seventeen sites documented during the project, eleven (State Sites 50-50-14-7055, -7056, -7058 through -7062, and 50-50-14-7065 through -7067 and -7095) are associated with pre-Contact activities. The remaining four sites consisted of two walls (State Sites 50-50-14-7054
Figure 4: Portion of USGS Map Showing Location of Sites (State Sites 50-50-14-7068 through -7083 and -7905).
and -7063), an enclosure (State Site 50-50-14-7064), and a road (State Site 50-50-14-7057) have
been interpreted as associated with the Historic Period. State Sites 50-50-14-7068, -7070, -7071,
-7081 and -7095 were previously documented by Rogers—documented during the present
investigations. Jourdane (1979) did not map all of the sites, but locations and photos were taken
which matched descriptions of the current study.

STATE SITE 50-50-14-7068

Condition: Good
Site Type: Wall
Function: Ranching/Boundary
Age: Historic
Feature (#): 1

Previous Site #: Bishop Museum Site 50-Ma-B9-100

Description: State Site 50-50-14-7068 was initially identified by Rogers-Jourdane (1979:7) as a
“…discontinuous all segment…[which] extends 1.2 meters to the E and . 5.0 meters to the W.
Only 2 meters of this western extension is presently intact.” State Site 50-50-14-7068 was re-
located and documented during the current survey as a basalt wall located in the southeastern
portion of the project area, roughly paralleling Mākena Alanui Road near the Makena Beach and
Golf Resort (Figure 5). The wall measures approximately 100 m in length and has a maximum
height of 1.8 m and an average width of 65 cm. The wall is built up to 10 courses in places of
medium cobbles to boulders and is cobble filled in places.

STATE SITE 50-50-14-7069

Condition: Fair
Site Type: Enclosure
Function: Ranching
Age: Historic
Feature (#): 1

Description: State Site 50-50-14-7069 consists of an enclosure built off of State Site 50-50-14-
7068 (wall) located in the southern portion of the project area, near the Makena Beach and Golf
Resort. The enclosure is roughly rectangular with exterior measurements of 11.5 m north/south
by 12.0 m east/west (Figure 6, and see Figure 5). The interior of the site measures 8.5 m
north/south by 9.0 m east west. Wall heights range from a minimum of 35 cm to a maximum of
166 cm with widths of up to 2 meters. Collapse of the wall has occurred in the north and south
walls, though overall, the general integrity of the enclosure is good.

Based on the size, location and likely historic age, it is believed that the enclosure functioned for
ranching activities or possibly as a garden enclosure.
Figure 5: View Southeast of Southern Portion of State Site 50-50-14-7068 (State Site 50-50-14-7069 in Foreground).
Figure 6: Plan View of State Site 50-50-14-7069.
STATE SITE 50-50-14-7070

Condition: Fair
Site Type: Modified Outcrop
Function: Agriculture
Feature (#): 1
Age: Pre-Contact
Previous Site #: Bishop Museum Site 50-Ma-B9-102

Description: State Site 50-50-14-7070 was initially identified by Rogers-Jourdane (1979: 9) as a wall remnant which was “…extremely deteriorated and measures c. 13 meters long and 1 meter wide.” State Site 50-50-14-7070 was relocated and documented during the current survey as a modified outcrop located in the southern portion of the project area, approximately 20 m north of State Site 50-50-14-7071 (Figures 7 and 8). The site measures 3.5 m north/south by 2.8 m east west. The outcrop has basalt boulders and cobbles up to 40 cm in diameter scattered atop the bedrock and may have once been a mound that has since collapsed.

STATE SITE 50-50-14-7071

Condition: Good
Site Type: Enclosure
Function: Permanent Habitation
Feature (#): 2
Age: pre-Contact
Previous Site #: Bishop Museum Site 50-Ma-B9-103

Description: State Site 50-50-14-7071 was initially identified by Rogers-Jourdane (1979:10) as “two adjoining walls…and a low-lying alignment.” Rogers-Jourdane (ibid) described the walls of Enclosure A 3.0 meters by 3.6 meters…[with walls that] average 1.0 meter in width and ranging in height from 0.55 to 1.0 meter”; Enclosure B “…measures 8.0 by 5.6 meters [with walls that] average 0.7 meters high…and 1.0 meter wide”; Feature C measures "measures 3.0 by 2.0 meters.” During the current survey, State Site 50-50-14-7071 was relocated and documented as consisting of a double enclosure located in the extreme southeast portion of the project area, adjacent to the Maui Prince Hotel driveway entrance. The site consists of two features that are abutting one another (Figures 9 and 10).

Feature A consists of a basalt cobble and boulder rectangular enclosure that is the larger of the two features. The exterior measurements of Feature A are 7.7 m by 5.8 m with interior measurements of 6.7 m by 4.3 m (29 m²). The intact walls are faced and cobble filled with an average width of 50 cm. The walls have a maximum height of 73 cm and are well stacked up to 5 courses high. The southeast wall is nearly collapsed, though the original footprint of the wall is still visible. The interior of the feature is nearly level with a shallow layer of silt overlying the bedrock. An entrance to the interior of the feature was visible along the southwest (makai) wall.
Figure 7: View East of State Site 50-50-14-7070 Showing Modified Outcrop.
Figure 8: Plan View Drawing of State Site 50-50-14-7070.
Figure 9: Plan View of State Site 50-50-14-7071, Features A and B.
Figure 10: View Northeast of State Site 50-50-14-7071 (Feature A is to the left; Feature B is to the right).
Feature B is the smaller of the two enclosures and measures 3.4 m by 2.8 m on the outside and 2.2 m by 2.1 m on the inside. The walls have a maximum height of 112 cm on the outside of the feature and 92 cm on the interior. The walls have widths ranging from 48 to 62 cm. The feature is attached to the near the center of the northeast (mauka) wall of Feature A with a stepped entrance in the center. The walls are well constructed with the exception of the east wall of which has suffered collapse into the interior of the enclosure.

To better understand the function and age of the site a 2.0 m by 0.5 m test unit was manually excavated. The test unit was placed along the southwest interior corner of the site in an attempt to uncover the base of the architecture for a better understanding of the site’s chronology. Stratum I consisted of a very dark grayish brown (10 YR 3/2) silt that was composed primarily of decomposing organic material. Stratum II consisted of very dark brown (7.5 YR 2.5/2) silty loam that contained one fragment of invertebrate shell midden and an ash lens (no charcoal was observed). Stratum III consisted of very dark brown (7.5 YR 2.5/2) sterile silty loam that overlies the basalt bedrock (Figure 11).

**STATE SITE 50-50-14-7072**

**Site Type:** Wall Segment  
**Feature (#):** 1  
**Condition:** Poor  
**Function:** Indeterminate  
**Age:** Indeterminate

Description: State Site 50-50-14-7072 consists of a collapsed wall located in the southern portion of the project area (Figure 12). The wall segment is collapsed and measures 4 m long by 100 cm wide (with collapse) by 40 cm high and is constructed of basalt cobbles and boulders.

**STATE Site 50-50-14-7073**

**Site Type:** Paving  
**Feature (#):** 1  
**Condition:** Poor  
**Function:** Agriculture  
**Age:** Indeterminate

Description: State Site 50-50-14-7073 consists of a 1.8 m by 1.2 m paving that is constructed of 5-30 cm diameter cobbles to small boulders (Figures 13 and 14). The paving is a maximum 12 cm high and is built atop a bedrock outcrop. Based on the size, construction and location it is believed the site functioned as an agricultural feature.
Figure 11: Profile of Northwest Wall of State Site 50-5014-7071, Feature A, Test Unit 1 (TU-1) Showing Stratigraphic Sequence.
Figure 12: View of State Site 50-50-14-7072.
Figure 13: Plan View of State Site 50-50-14-7073.
Figure 14: View Northeast of State Site 50-50-14-7073.
STATE SITE 50-50-14-7074
Site Type: Trail
Feature (#): 1
Condition: Poor
Function: Transportation
Age: Historic

Description: State Site 50-50-14-7074 consists of two parallel alignments 3 m apart that delineate a likely old historic road (Figures 15 and 16). The segment extends 17 m over a low knoll in a northeast/southwest direction. The southwest portion has a very rough cobble surface while the northeast portion has a more scattered small cobble surface.

STATE SITE 50-50-14-7075
Site Type: Wall
Feature (#): 1
Condition: Good to Fair
Function: Ranching
Age: Historic

Description: State Site 50-15-14-7075 consists of an irregularly aligned wall in the southwestern portion of the project area (Figure 17). The wall is approximately 100.0 m in length and has a maximum height of 1.82 m and an average width of 60 cm. The wall is constructed up to 10 courses of small cobbles to medium boulders. The wall is well built and bifaced, though has collapsed along several portions.

STATE SITE 50-50-14-7076
Site Type: Paving
Feature (#): 1
Condition: Fair
Function: Agriculture
Age: Indeterminate

Description: State Site 50-50-14-7076 consists of an irregularly shaped pavement measuring 4.1 m north/south by 3.2 m east/west (Figures 18 and 19). The site is paved with 5 to 25 cm diameter cobbles to small boulders that are lichen covered and is located approximately 30 m west of State Site 50-50-14-7077.

STATE SITE 50-50-14-7077
Site Type: Rock Shelter
Feature (#): 1
Condition: Fair
Function: Temp Habitation
Age: pre-Contact

Description: State Site 50-50-14-7077 consists of a small rock shelter/overhang that measures 1.8 m long by 1.0 m deep by 50 cm high (Figure 20 and 21). The site appeared too small to serve as a long term habitation, but would have been adequate as a temporary habitation or work site. The site is located in the southern portion of the project area and
Figure 15: Plan View of State Site 50-50-14-7074.
Figure 16: View Southwest of State Site 50-50-14-7074.
Figure 17: View North of State Site 50-50-14-7075.
Figure 18: View East of State Site 50-50-14-7076.
Figure 19: Plan View Drawing of State Site 50-50-14-7076.
Figure 20: Plan View of State Site 50-50-14-7077.
Figure 21: View Northeast of State Site 50-50-14-7077 Showing Overhang.
is constructed along an outcrop. A small terraced area is situated outside the shelter with a leveled surface. No cultural materials or midden were observed in or around the site.

**STATE SITE 50-50-14-7078**

- **Site Type**: Enclosure and C-Shape
- **Feature (#)**: 2
- **Condition**: Fair
- **Function**: Temp. Habitation
- **Age**: pre-Contact

Description: State Site 50-50-14-7078 consists of two enclosures (Features A and B) located in the southern portion of the project area, downslope of a basalt outcrop and talus slope (Figures 22 and 23).

Feature A is a small circular enclosure that measures 3.5 m in diameter with an interior measurement of 1.5 m in diameter. The wall of the enclosure is severely collapsed and may have fallen partially into the interior of the feature. The wall is constructed of medium cobbles with the maximum height measuring 12 cm and suggesting that the original wall heights were low. No cultural materials or midden were observed in or around the feature.

Feature B consists of a larger C-Shape that measures 5 m in diameter with a 3.2 m diameter interior. The feature is located 2 m east of Feature B and has a leveled interior. It is believed that the C-Shape may have originally been a circular enclosure, though collapse has affected the western side making determination of the original architecture difficult to determine. No cultural materials or midden were observed in or around the feature.

**STATE SITE 50-50-14-7079**

- **Site Type**: Rock Shelter
- **Feature (#)**: 1
- **Condition**: Fair
- **Function**: Temp. Habitation
- **Age**: pre-Contact

Description: State Site 50-50-14-7079 consists of an overhang located in the south central portion of the project area (Figures 24 and 25). The enclosure measures 3.0 m long by 2.0 m deep with a 70 cm high ceiling and built up against a north facing outcrop. The interior has a rough pebble and cobble pavement with fire residue on the ceiling in the western extent. Above the shelter is a small, roughly constructed terrace of basalt boulders retaining basalt cobbles.
Figure 22: Plan View of State Site 50-50-14-7078.
Figure 23: View Southeast of State Site 50-50-14-7078.
Figure 24: Plan View of State Site 50-50-14 -7079.
Figure 25: View South of State Site 50-50-14-7079 Showing Opening of Overhang.
STATE SITE 50-50-14-7080

**Site Type:** Modified Outcrop  
**Feature (#):** 2  
**Condition:** Fair  
**Function:** Temp. Habitation  
**Age:** pre-Contact

Description: State Site 50-50-14-7080 consists of a large modified outcrop located in the south central portion of the project area (Figures 26 and 27). The outcrop measures approximately 35.0 m east/west by 17.0 m north south and is modified with basalt walls around the south side and a spur wall off the western side. On the northeastern corner (adjacent to State Site 50-50-14-7081 B) is a small C-shape and terracing. It is believed that this site has been assigned a site number previously.

STATE SITE 50-50-14-7081

**Site Type:** Enclosures and Overhang  
**Feature (#):** 3  
**Previous Site #:** Bishop Museum Site 50-Ma-B9-101  
**Condition:** Good  
**Function:** Ranching/Habitation  
**Age:** pre-Contact/Historic

Description: State Site 50-50-14-7081 was initially identified by Rogers-Jourdane (1979:7, 8) as “…composed of three enclosures…and a series of interconnecting walls…Feature A measures 36 by 32 meters…with wall heights ranging from 1.0 to 2.0 meters. Feature B shares the western wall of Feature A and measure c. 26 by 22 meters… with [wall] widths ranging from0.8 to 1.3 meters and a maximum height of 1.9 meters.” Feature C measures c. 8x10 meters…with wall widths ranging from 0.6 to 0.8 meter and heights from 0.85 to 1.75 meters.” State Site 50-50-14-7081 was relocated during the current survey and documented as consisting of two large enclosures (Features A and B) and one overhang (Feature C) located in the south central portion of the project area (Figure 28).

Feature A is a large 5-sided enclosure that measures a maximum 23.0 m north/south by 28.0 m east/west (Figure 29). The interior in enclosed by massive walls with a maximum interior height of 216 cm (12 courses) and up to 145 cm wide. An opening in the southeast wall leads to Feature B, which shares the northwestern wall with Feature A.

Feature B is the larger of the two enclosures that measures a maximum of 40 m north/south by 36 m east/west (Figure 30). The interior of Feature B is enclosed by walls that are a maximum 164 cm in height (7 courses) by 145 cm wide. The interior of the feature slopes slightly from the
Figure 26: View North of South Side of State Site 50-50-14-7080 Showing Wall.
Figure 27: Plan View Drawing of State Site 50-50-14-7080.
Figure 28: Plan View of State Site 5-50-14-7081, Features A through C.
Figure 29: View West of State Site 50-50-14-7081, Feature A.
Figure 30: View Southeast of State Site 50-50-14-7081, North Wall of Feature B with Feature C in Corner.
north to south and is believed (along with Feature A) to have functioned as a ranching or cattle enclosure (historic) that likely utilized some pre-existing pre-Contact walls. Feature C is an overhang incorporated into the north wall of Feature B (Figure 31). The overhang measures 1.1 m wide by 2 m deep with a maximum height of 112 cm in the interior (see Figure 28).

**STATE SITE 50-50-14-7082**

<table>
<thead>
<tr>
<th>Condition: Poor</th>
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<td>Function: Agriculture</td>
<td>Age: pre-Contact</td>
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Description: State Site 50-50-14-7082 consists of a collapsed mound in the west central portion of the project area (Figures 32 and 33). The mound measures 4.4 m north/south by 3.8 m east west (including collapse). The mound has a maximum height of 90 cm and is roughly crescent shaped and constructed of basalt cobbles and boulders up to 45 cm in diameter.

**STATE SITE 50-50-14-7083**

<table>
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<tr>
<th>Condition: Fair</th>
<th>Site Type: Rock Shelter, and Modified Outcrop</th>
<th>Feature (#): 2</th>
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<tbody>
<tr>
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<td>Age: pre-Contact</td>
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</tbody>
</table>

Description: State Site 50-50-14-7083 consists of a modified outcrop and rock shelter located in the west central portion of the project area (Figure 34).

Feature A consists of a 3.2 m long C-shape enclosing a rock shelter in a bedrock outcrop. The surface area is roughly paved with basalt cobbles and boulders. The rock shelter measures 2 m long with a maximum depth of 80 cm and has a ceiling height of 49 cm.

Feature B consists of 3 m by 2 m paved area with a 2 m long low wall at the opening of a small rock shelter. The wall has a maximum exterior height of 58 cm and the interior is paved with small cobbles and boulders. The rock shelter measures 150 cm along the opening with a maximum ceiling height of 32 cm and a depth of 60 cm.
Figure 31: View West of State Site 50-50-14-7081, Feature C.
Figure 32: Plan View Drawing of State Site 50-50-14-7082.
Figure 33: View North of State Site 50-50-14-7082.
Figure 34: Plan View of State Site 50-50-14-7083.
STATE SITE 50-50-14-7095

Site Type: Lava Blister
Feature (#): 1
Previous Site Number: 50-Ma-B8-98

Condition: Good
Function: Habitation
Age: Pre-Contact

Description: State Site 50-50-14-7095 was initially identified by Rogers-Jourdane (1979:5) as a “...pahoehoe bubble shelter...[which] measures c. 10 meters long and c.7.0 meters wide...[with] interior floor space [that] measures c. 6.0 by 4.0 meters, with a ceiling averaging 1.2 meters in height.” State Site 50-50-14-7095 was relocated during the current survey and documented as located in the western portion of the project area approximately 15 m east of the pump station fence near the Maluaka Beach Park parking lot. The site was previously documented by Rogers-Jourdane (1979) and assigned Bishop Site No. 50-Ma-B8-98.

The site consists of a lava blister with two openings that measures 6 m NE/SW by 4 m NW/SE with the openings on the northeast and southwest ends (Figures 35-37). The blister is part of a larger outcrop that measures 17 m E/W by 6 m N/S. The interior of the blister is relatively level and the surface is covered in a`a, silt and decomposing organic material. The ceiling of the blister has a maximum height of 120 cm and averages approximately 80 cm creating a area sufficient for several individuals to sit. Relatively little surface midden was observed with only one Nerita sp. and a Cypraea sp. identified. Fire stained rock was observed near the northeast entrance, though it is unclear if it was from historic/modern use or pre-Contact use (no charcoal was observed).

DISCUSSION AND CONCLUSIONS

A pedestrian survey of 9.5-acres documented seventeen (17) sites composed of 23 archaeological features, State Sites 50-50-14-7068 through -7083 and 50-50-14-7095. State Sites 50-50-14-7068, -7070, -7071, -7081 and -7095 were previously documented by Rogers-Jourdane (1979) in a Bishop Museum reconnaissance survey and was re-located and documented during the present investigations. Overall, a variety of site types and functions (from the pre-Contact Period through the Historic Period) were present on the parcel, suggesting a likely continual use of the project area.

Functional interpretation of the seventeen (17) sites documented during the current Archaeological Inventory Survey included six (35.3%) temporary habitation sites, four
Figure 35: Plan View of State Site 50-50-14-7095.
Figure 36: View West of State Site 50-50-14-7095 Showing Northeast Opening.
Figure 37: View North of State Site 50-50-14-7095 Showing Southwest Opening.
(23.5%) historic ranching sites, three (17.6%) agricultural sites, one (5.9%) permanent habitation site, one (5.9%) transportation site and two (11.8%) that were of indeterminate function.

Of the twenty-three (23) features recorded in the project area, nine (39.1%) were interpreted as pre-Contact temporary habitations, five (21.8%) were interpreted as Historic Period ranching features, five (21.8%) were interpreted as pre-Contact agricultural features, two (8.7%) were interpreted as pre-Contact permanent habitation features, one (4.3%) was interpreted as an Historic Period trail/transportation feature and one (4.3%) feature was of indeterminate function (Figure 38).

AGRICULTURAL FEATURES

The agricultural features documented during the inventory survey appear to concur with settlement and land use models suggested by Cordy (1977), (Cordy and Athens 1985). At elevations from near sea level to the 120-foot contour, the project area was likely under intensive or at the margins of an intensively cultivated area of Mākena. The types of agricultural sites encountered within the project area include two modified outcrops (State Sites 50-50-14-7070 and -7080, Feature A), two pavings (State Sites 50-50-14-7073 and -7076) and a mound (State Site 50-50-14-7082). These feature types similar to types at like elevations found during previous archaeological investigations in the general vicinity. Missing from this assemblage are terraces, though several have been recorded to the north in Papa‘anui, and may be a function of a lack of topographic features that would be conducive to these types of features. Cordy (1985:22) states: “information indicates that the area of Mākena from about 0.25 miles inland (the 80 foot contour) up to the old forest line at the 1,200 foot elevation, 2.1 miles inland.”

TEMPORARY HABITATION/WORKSHOP FEATURES

The temporary habitation sites documented during the inventory survey were mostly clustered along an east/west (mauka/makai) ridge in the central portion of the project area. The features were in close proximity to the agricultural features located on a flatter area immediately south and were likely ancillary to agricultural activities in the Mākena area. The features classified as temporary habitations included rock shelters (State Sites 50-50-14-7077; -7079; -7081, Feature C; State Site 50-50-14-7083, Features A and B and State Site 50-50-14-7095), enclosures (State Sites 50-50-14-7078, Features A and B and State Site 50-50-14-7080, Feature B). Surface midden scatters and lithic debitage was observed within the sites indicating that these habitations/shelters were also utilized as eating and/or workshop areas.
Figure 38: Portion of USGS Quadrangle (Makena) Map Showing Functional Interpretation of State Sites 50-50-14-7068 through -7083 and -7095.
Table 2: Feature Type and Functional Interpretations of State Sites 50-50-14-7068 through -7083 and -7095.

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Prev. Site Designation</th>
<th>Feature</th>
<th>Site Type</th>
<th>Function</th>
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<td>Lava Blister</td>
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PERMANENT HABITATIONS

One permanent habitation site, located adjacent to the Makena Beach and Golf Resort driveway entrance, was documented in the project area. State Site 50-50-14-7071 consists of a double enclosure with a total internal area of 33 m². The site is located approximately 200 m east of Kalani Heiau and is in close proximity to numerous temporary habitation sites to the west.

HISTORIC FEATURES

Six features interpreted as associated with the Historic Period were documented during the current Archaeological Inventory Survey. State Sites 50-50-14-7068 and -7075 are interpreted as Historic Period ranch walls that run roughly north/south, paralleling the coast and creating cross slope barriers. It is likely that the walls were associated with cattle ranching operations in the Mākena area that used Mākena Landing as a transport site for cattle on-loading. State Site 5-50-14-7081, Features A and B are massive enclosures that measure over 600 m² and 1000 m² respectively. The site was previously recorded by Rogers-Jourdane (1979) who described them as Historic Period cattle enclosures, as well. Given the importance of Mākena Landing for the transport of cattle it is not surprising that these functional types are well represented.

Previous archaeological studies in the Mākena area have well established general settlement patterns and land use. Early studies such as those conducted by Thrum and Walker concentrated on large scale architectural examples (i.e. heiau), of which one was identified in close proximity to the project area (Kalani Heiau). Studies in the 1970’s and early 80’s consisted of large scale reconnaissance surveys and inventory level surveys for future development of Mākena and Wailea resorts and golf courses. It was during these studies that the study area and surrounding lands were found to contain rich and varied types of archaeological sites, ranging from small scale agricultural plots to large scale heiau to historic ranching and habitation sites.

Overall, several time periods of land use are evident across the subject parcel in the form of built environment and landscape modifications. A majority of the natural structures (rock shelters) were utilized during pre-contact times and represent intermittent-use locales associated with temporary habitation, food preparation/consumption and lithic manufacturing. Constructed architecture spanned a time range extending from the pre-Contact Period (A.D. 1100) through the Historic Period (post-1778).

When comparing the site-elevation model proposed by Cordy and Athens (1988; see above) which suggests that certain site types may be associated with specific elevation zones and
time periods, the data gleaned from the current project area show that pre-Contact sites do occur within .25 miles of the coastline. These findings support the model primarily because the project area landscape is more conducive to temporary habitation and agricultural sites rather than permanent occupation. The lack of local water resources also makes permanent occupation more tenuous as well, though it is likely that the gulches would at times have provided a local water source. Permanent housing settlements of the *ahu`pua`a* are found to be more common at higher elevations, specifically in the uplands. At these higher elevations, staple crops such as banana, dryland taro, and sweet potato were readily cultivated. These plants would be more adept to survive for extended periods of time, in contrast to crops (i.e. sweet potato) located at lower elevations and in such places as the arid Mākena region. Given the aforementioned, and the record for few permanent habitation loci found within coastal Mākena, temporary habitation would be more abundant at lower elevations, especially for the Mākena region. Furthermore, activities such as fishing, supplemented by small scale agricultural plots located on the ridges would more likely be dominant types of subsistence strategies along coastal Mākena. This is also supported by the oral and historic literature (see Handy and Handy 1972 and Sterling 1988). Certainly the timing of these sites, when further clarified through radiocarbon analysis, will aid in more fully determining when temporary use of the area commenced/terminated in relation to known permanent house sites in the area.

**SITE SIGNIFICANCE ASSESSMENTS**

During the current Archaeological Inventory Survey seventeen (17) sites (State Sites 50-50-14-7068 through -7083 and -7095) were documented. State Sites 50-50-14-7068, -7070, -7071, -7081 and -7095 were previously documented by Rogers-Jourdane (1979) in a Bishop Museum reconnaissance survey and was re-located and documented during the present investigations. State Sites 50-50-14-7068 through -7083 and -7095 have been evaluated for significance according to the established criteria of the Hawai`i State Register of Historic Places §13-275-6. The five criteria are presented below:

- **Criterion A:** Site is associated with events that have made a significant contribution to the broad patterns of our history
- **Criterion B:** Site is associated with the lives of persons significant to our past
- **Criterion C:** Site is an excellent site type; embodies distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual construction
Criterion D: Site has yielded or has the potential to yield information important in prehistory or history

Criterion E: Site has cultural significance to an ethnic group; examples include religious structures, burials, major traditional trails, and traditional cultural places

The following table illustrates State Site Number, function, condition, significance and recommendations at the respective site.

Table 3: Significance Evaluations and Recommendations for State Sites 50-50-14-7068 through -7083 and -7095.

<table>
<thead>
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<th>Previous Site Des.</th>
<th>Function</th>
<th>Age</th>
<th>Condition</th>
<th>Significance</th>
<th>Recommendation</th>
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<td>50-Ma-B8-100</td>
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<td>7076</td>
<td>Agriculture</td>
<td>pre-Contact</td>
<td>Fair</td>
<td>D</td>
<td>No Further Work</td>
<td></td>
</tr>
<tr>
<td>7077</td>
<td>Temporary Habitation</td>
<td>pre-Contact</td>
<td>Fair</td>
<td>D</td>
<td>No Further Work</td>
<td></td>
</tr>
<tr>
<td>7078</td>
<td>Temporary Habitation</td>
<td>pre-Contact</td>
<td>Fair</td>
<td>C, D</td>
<td>Data Recovery</td>
<td></td>
</tr>
<tr>
<td>7079</td>
<td>Temporary Habitation</td>
<td>pre-Contact</td>
<td>Fair</td>
<td>C, D</td>
<td>Data Recovery</td>
<td></td>
</tr>
<tr>
<td>7080</td>
<td>Temporary Habitation</td>
<td>pre-Contact</td>
<td>Fair</td>
<td>D</td>
<td>No Further Work</td>
<td></td>
</tr>
<tr>
<td>7081</td>
<td>50-Ma-B8-101</td>
<td>Ranching</td>
<td>Historic</td>
<td>Good</td>
<td>C, D</td>
<td>Data Recovery (Feature A), Preservation (Features B, C)</td>
</tr>
<tr>
<td>7082</td>
<td>Agriculture</td>
<td>pre-Contact</td>
<td>Poor</td>
<td>C, D</td>
<td>Data Recovery</td>
<td></td>
</tr>
<tr>
<td>7083</td>
<td>Temporary Habitation</td>
<td>pre-Contact</td>
<td>Fair</td>
<td>C, D</td>
<td>Data Recovery</td>
<td></td>
</tr>
<tr>
<td>7095</td>
<td>50-Ma-B8-98</td>
<td>Temporary Habitation</td>
<td>pre-Contact</td>
<td>Good</td>
<td>C, D</td>
<td>Data Recovery</td>
</tr>
</tbody>
</table>
RECOMMENDATIONS

Of the seventeen (17) sites documented in the project area, State Site 50-50-14-7071 and -7081, Features B and C have been recommended for preservation, six sites are recommended for Archaeological Data Recovery (including -7095 and -7081, Feature A), and the remaining ten are recommended for no further work.

State Site 50-50-14-7071 is recommended for preservation as this site has been found to be significant under multiple criteria: Criterion D, information content, and Criterion C, as it represents an excellent example of a respective site type - a traditional, pre-Contact, permanent habitation site in the Mākena area. State Site 50-50-14-7081, Features B and C are also recommended for Preservation, upon agreement between the client and community stakeholders (Site –7081 Feature A is slated for Data Recovery). State Site 50-50-14-7095 will also be subject to Data Recovery, following the initial recommendation by Muffett-Jourdane (1979:28). Preservation methods will be outlined in a Preservation Plan, which will be prepared under separate cover and submitted to the SHPD for review and acceptance prior to the commencement of any construction-related ground alterations.

A program of Data Recovery is recommended for State Sites 50-50-14-7078, -7079, -7081 (Feature A), -7082, -7083, and -7095. These sites have also been found to be significant under Criterion C (good examples of their respective site types and are likely to yield additional information through systematic excavation and interpretation) and under Criterion D (information content). State Sites 50-50-14-7078, -7079, -7083 and -7095 have been interpreted as pre-Contact temporary habitations.

No further work is recommended for State Sites 50-50-14-7068 through -7070, State Sites 50-50-14-7072 through -7077, and State Site 50-50-14-7080, as these sites have yielded sufficient information and have been sufficiently documented through the current Archaeological Inventory Survey.

A program of Archaeological Monitoring is recommended during grading and construction activities within the project area. Additional cultural materials associated with the effected sites may be present within subsurface contexts and may provide information to further understanding the sites. Previous archaeological studies conducted within coastal Mākena suggest the possibility that human skeletal remains may be present in the subsurface deposits of the project area. A program of Archaeological Monitoring will ensure that any historic properties, including inadvertently identified human skeletal remains, will receive appropriate documentation and mitigation measures, as necessary. An Archaeological Monitoring Plan will
be prepared, under separate cover, for, and accepted by SHPD prior to the initiation of any construction-related ground alterations in the project area.
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