

FINAL—Archaeological Assessment for Improvements to Duke Maliu Regional Park, Kaunakakai Ahupua‘a, Kona District, Island of Moloka‘i

TMK: (2) 5-3-003:012



Prepared For:

County of Maui, Department of Parks and Recreation
700 Halia Nakoa St. #2
Wailuku, HI, 96793

November 2013

Keala Pono 

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MANAGEMENT SUMMARY

An archaeological assessment was conducted for the Duke Maliu Regional Park at TMK: (2) 5-3-003:012 in Kaunakakai Ahupua'a, Kona District, on the island of Moloka'i. The assessment consisted of a pedestrian survey and excavation of nine trenches throughout the park to determine the nature of stratigraphy on the parcel and to identify any cultural material or deposits that might occur there. This was conducted in anticipation of park improvements, including expansion of the parking lot and replacement of lights on the softball field. Two isolated glass fragments were found within one of the nine trenches. These were likely part of mid-20th century bottles. Aside from these glass fragments, no cultural material or deposits were encountered during trenching.

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INTRODUCTION

At the request of the Maui County Department of Parks and Recreation, Keala Pono Archaeological Consulting conducted an archaeological inventory survey for improvements to Duke Maliu Regional Park at TMK: (2) 5-3-003:012 in Kaunakakai Ahupua'a, Kona District, on the island of Moloka'i. The primary focus of the survey was on the identification and appropriate treatment of historic properties that might be affected by construction. This report is drafted to meet the requirements and standards of state historic preservation law, as set out in Chapter 6e of the Hawai'i Revised Statutes and the State Historic Preservation Division's (SHPD) draft *Rules Governing Standards for Archaeological Inventory Surveys and Reports*, §13–276.

The report begins with a description of the project area and an historical overview of land use and archaeology in the area. The next section presents methods used in the fieldwork, followed by the results of the archaeological monitoring. Project results are summarized and recommendations are made in the final section. Hawaiian words are defined in a glossary at the end of the document.

Project Location and Environment

The project area is at Duke Maliu Regional Park in Kaunakakai, Kona District, on the island of Moloka'i (Figure 1). The archaeological assessment covers all of TMK: (2) 5-3-003:012, a 13.145-acre parcel owned by the County of Maui (Figure 2). Construction will only take place on a portion of the parcel, however, with improvements to the park including expansion of the parking lot and replacement of lights on the softball field (Figure 3).

In 2009, the Molokai Commission recommended an archaeological monitoring program be conducted in support of ground-disturbing activities associated with the construction of a maintenance facility on the parcel. SHPD reviewed and accepted the archaeological monitoring plan (Log 2009.2757, Doc 0907PC52). Although the monitoring project was completed in October 2009, a report was not submitted to SHPD for review and the results of the archaeological investigation were not available to SHPD during their assessment of the above SMA application. On July 2, 2013, SHPD received a draft archaeological monitoring report for the maintenance facility project and revisions were recommended (Log 2013.2976, Doc 1306NN21). A revised draft was submitted on August 12, 2013, and a review is forthcoming. SHPD recommended that subsurface testing be conducted in support of the current project and that this testing include the entire parcel, not just the proposed development footprint.

Duke Maliu Regional Park is situated at approximately 10 feet (3 m) in elevation, and is bounded by the Kamehameha V Highway on the south, Kaunakakai Elementary School on the west, the Ranch Camp Subdivision and Pumehana Elderly Housing on the north, and agricultural land on the east. Southeast of the project area is the Kapa'akea Cemetery, which is in use and maintained by the County of Maui for burials.

Topography is relatively flat and rainfall is sparse, averaging roughly 0–15 inches (0–40 cm) per year (Juvik and Juvik 1998). The nearest watercourse is Kamiloloa Stream, which lies approximately 200 m to the east. Kaunakakai Stream, another major watercourse, is located roughly 800 m to the west. Vegetation in the park consists predominantly of landscaped plants and grasses. Soils consist of Mala silty clay 0–3% slopes (MmA) (Figure 4). The Mala series are well drained soils located at the base of drainages or on alluvial fans of coastal plains. Soils of the Jaucas-Mala-Pulehu association are described as follows (Foote et al. 1972):

Deep, nearly level, and gently sloping, excessively drained and well-drained soils that have coarse-textured to fine-textured underlying material; on alluvial fans and in drainageways.



Figure 1. Project location on a 7.5 minute USGS Kaunakakai quadrangle map (USGS 1993).

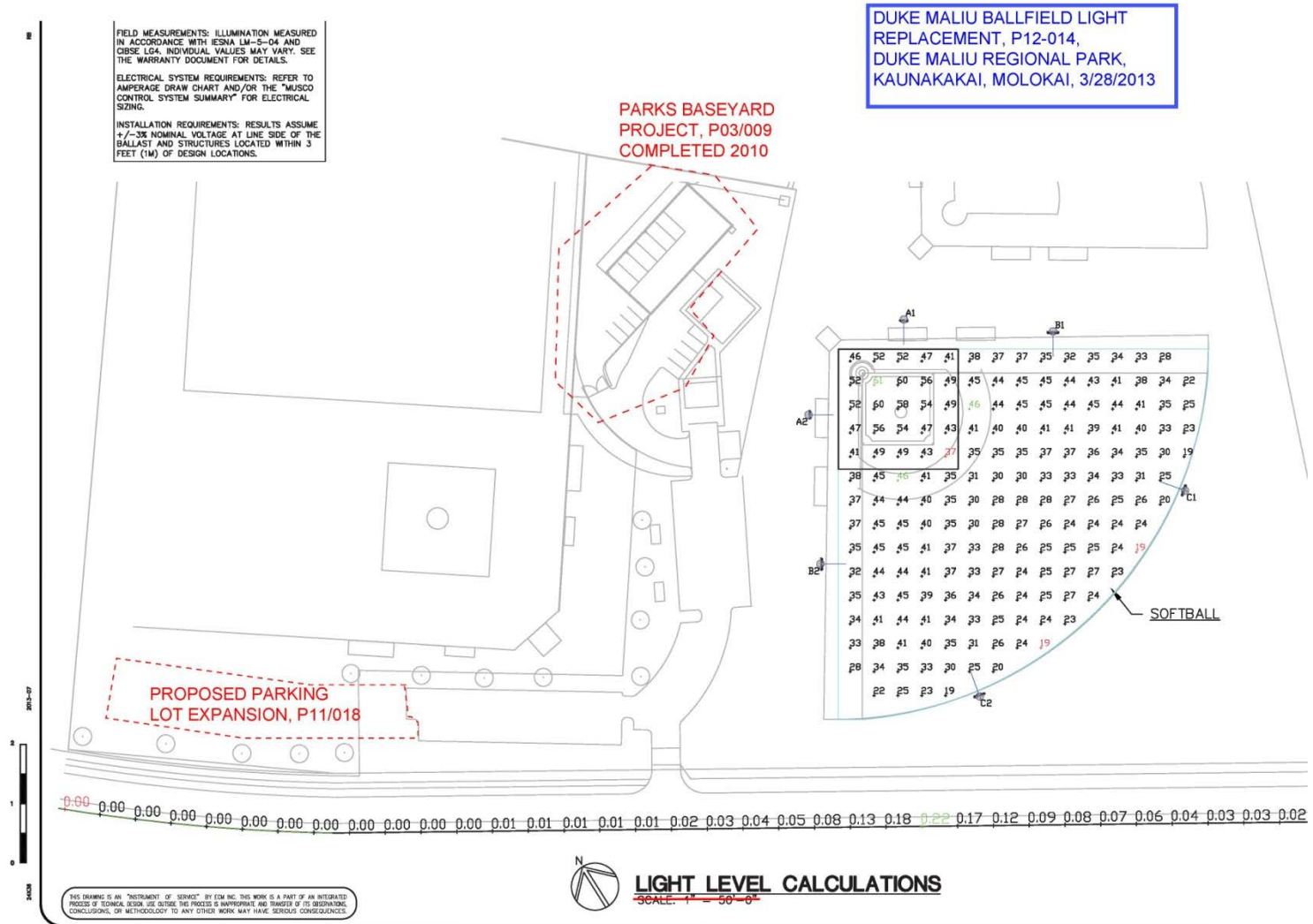


Figure 3. Location of proposed park improvements, consisting of parking lot expansion and ballfield light replacement.



Figure 4. Soils in the vicinity of the project area.

BACKGROUND

This section of the report presents background information as a means to provide a context through which one can examine the cultural and historical significance of the project environs and the *ahupua'a* of Kaunakakai. Information is provided for both the traditional Hawaiian period and the historic era. This is followed by a summary of previous archaeological research in the vicinity of the project area and a discussion of settlement pattern of the region. Background research is then evaluated to determine what kinds of archaeological remains might be expected in the project area.

Traditional Cultural Background

Traditionally Moloka'i was divided into two districts: Ko'olau and Kona. Ko'olau District was composed of the wet valleys on the northern coast of the island as well as Kalaupapa Peninsula, also on the northern coast, while Kona District included the rest of the island. Located in Kona District, Kaunakakai encompasses 5,310 acres roughly in the center of the island and includes a stretch of coastline on the south shore. It is bordered by Kalama'ula Ahupua'a on the west, Kahanui Ahupua'a on the north, Kapa'akea Ahupua'a on the east, and the Pacific Ocean on the south.

Information obtained for the traditional Hawaiian period includes a history of the naming of Kaunakakai, a wind name, *'ōlelo no'eau*, *mo'olelo*, a discussion of subsistence patterns, and an examination of warfare and the presence of *ali'i* in the region. Throughout this report, "traditional" refers to the period before 1778 Western contact, and "historic" denotes the time after 1778.

"Kaunakahakai"

The evolution of the name of Kaunakakai has been attributed to several sources which offer insight into different aspects of the inherent nature of the area. In numerous *mo'olelo*, several which are presented in the current study, one can see multiple Hawaiian-language sources which refer to the area of study as "Kaunakahakai."

According to Mary Kawena Pukui, the original, Kaunakahakai, is translated as "resting-on-the-beach" or "beach-landing" as it was a landing place for the fishing canoes which were attracted by the multitude of fish in the area (Pukui et al. 1986:95). George Cooke, former manager of Molokai Ranch provides the meaning of "Kaunakahakai" as "to go along in the company of four" (Cooke 1949:83).

Another explanation for the name of "Kaunakakai" is provided by Harriet Ne who describes the name Kaunakakai as a homage to a foreigner assisting Chief Kapuāiwa (Kamehameha V). This sunburned foreigner who helped manage the chief's finances gave the chief the idea to dig paddies where sea water could enter during high tide, and dry during low tide, thus creating salt flats. When naming the village, the foreigner asked the chief how one would say "current," and the chief named the place Kaunakahakai, or "current of the sea." At the same time Chief Kalaimoku remarked that the term "kauna" can also refer to the foreigner who they regarded as a "count" and person of nobility (Ne 1981:23–24).

Ka Makani o Kaunakakai

The wind of Kaunakakai is known as Hauali'ali'a and is noted in the *mo'olelo* of Paka'a and the wind gourd of La'amaomao, "...Hauali'ali'a ko Kaunakakai..." (Nakuina 1990:70).

‘Ōlelo No‘eau and Mo‘olelo

Four *‘olelo no‘eau* relating to the southern shore of Moloka‘i and Kaunakakai were identified and are presented below.

Moloka‘i ko‘o lā‘au.

Moloka‘i of the canoe-poler.

The reef at the southern shore of Moloka‘i extends out as far as one-half mile in some places. At low tide the water is no more than eight feet deep. Because it is so shallow, the people could propel their canoes with poles (Pukui 1983:238).

Hele i Kaunakakai i Hikauhi.

Go to Kaunakakai to seek Hikauhi.

Go to seek that which is lost. One day, when a man of Moloka‘i was fishing, his wife felt the beginning of labor pains and went to the upland to seek help from her mother. When the husband returned, he searched everywhere in Kaunakakai for his wife. After a time she returned with their daughter, whom they named Hikauhi (Pukui 1983:82).

I Hikauhi, i Kaumanamana.

At Hikauhi, at Kaumanamana.

A man and his wife lived at Kaunakakai, Moloka‘i. While he was gone fishing one day, she felt the beginning of labor pains and went to her mother’s home in another village. When the husband arrived home and his wife was not there, he began to search for her. After he searched fruitlessly for several days, his wife returned with their baby daughter, whom they named Hikauhi. Ever since that day, hikauhi has meant “in vain,” and when a person loses something and goes in search, one says, “I Hikauhi, i Kaumanamana” (Pukui 1983:126–127).

Wā ‘ōlelo i Kaunakakai.

Loud talking at Kaunakakai.

Said of much boisterous talking. The chiefs liked to play games such as *kōnane* at Kaunakakai, and their shouts and laughter could be heard for some distance. (Pukui 1983:319)

Kaunakakai is also mentioned in numerous *mo‘olelo*. According to the *mo‘olelo* of Aiai recorded in Martha Beckwith’s *Hawaiian Mythology*, Aiai, the son of the fishing god Ku‘ula, was known to kick “mullet spawn ashore with his foot at Kaunakakai,” a reference to the abundance of fish in the waters of the area (Beckwith 1970: 22).

In the epic of Hi‘iaka-i-ka-poli-o-Pele, Hi‘iaka, the sister of Pele, traverses the Hawaiian island chain from Hawai‘i island to Kaua‘i on a mission to bring Lohiau, Pele’s lover, to her residence on her island home. The *mo‘olelo* describes this voyage of Hi‘iaka, along which she stops on Moloka‘i after crossing Maui. Following adventures on the north shore of Moloka‘i, Hi‘iaka and the accompanying women depart from Kaunakakai and head to O‘ahu (Beckwith 1970:175).

In a *mo‘olelo* recounted by Fornander, Maniniholokuaua, known for his “great strength and fleetness,” lived in Kaunakakai, while his *mo‘o* grandmother, Kalama‘ula, lived in the neighboring

ahupua'a, with which she shared the name. When the fastest runner of O'ahu, Keliimalolo, arrived on the beach of Kaunakakai, he was warned of the thief who would steal his canoe. Sure enough, Maniniholokuaua lifted the canoe onto his back and carried it to a cave, for which Keliimalolo could not find the opening. After traveling to Kaua'i in search of fast runners who would help him retrieve his canoe, Keliimalolo found Kamaakamikioi and Kamaakauluohia. Once again, as the canoe landed, Maniniholokuaua was there to steal it. Ignoring their warning to not take the canoe, Maniniholokuaua put it on his back and ran to his cave of treasures. Ultimately, Kamaakamikioi caught up with Maniniholokuaua, and as he demanded the cave to open, Kamaakamikioi ordered the cave to close, crushing Maniniholokuaua and the canoe. Inside the cave, Kalama'ula was dead, and the Moloka'i residents entered the cave to retrieve all of their precious belongings stolen by Maniniholokuaua (Fornander 1918–1919:166).

Kaunakakai is also the setting for the *mo'olelo* of Halemano. While running from Aikanaka, king of O'ahu, Halemano, his beautiful wife, Kamalalawalu, and grandmother, Kaaealii, headed to Kaunakakai. There they “remained for some time farming, and when their crops were almost ripe they set out for Lele, Maui, where they sojourned for a time” (Fornander 1918–1919:238). Later in the *mo'olelo*, Kamalalawalu landed in Kaunakakai from Kaluako'i as she searched for her husband (Fornander 1918–1919:260).

In the *mo'olelo* of Moikeha, his son, Kila, who became the chief of Waipi'o, sent food to his 'ohana on Kaua'i during a famine. However, during the voyage the canoe was only able to go as far as Kaunakakai, where the food was squandered in “adulterous living.” These men then proceeded to tell Kila that the food indeed made it to Kaua'i. This happened several times, each time, the men repeating the same lie.

Mahope iho o keia mau la, noonoo iho la o Kila, o pau io auanei kona mau makuahine i ka make i ka pololei, nolaila, hoounaua aku la kekahi mau kanaka, e lawe aku i ai i Kauai. Aka, i ka lawe ana a na kanaka aole i hiki loa aku ia a ii Kauai; a Kaunakakai no i Molokai pau loa ka ai i ka hookamakamaia i ka wahine; nolaila hoi hou na waa a hiki i Waipio me ka olelo aku ia Kila, ua hiki i Kauai. Pela mau no ka hana ana a ua mau kanaka nei, a nui na holo ana me ka hiki ole i Kauai. (Fornander 1916:141)

During the voyage of Palila, the *mo'olelo* describes Kaunakakai as seen from the rise of Hanauma, where Palila “stood and looked at the heat as it ascended from the *pili* grass at Kaunakakai, Molokai” (Fornander 1918–1919:148). The Hawaiian translation reads, “Hele aku la ia a luna o Hanauma, nana aku la i ka enaena o ke pili o Kaunakahakai, i Molokai... (Fornander 1918–1919:149). [Note the use of the name “Kaunakahakai” before it was changed to the modern name of “Kaunakakai.”

In a brief story of Kamehameha, the young *ali'i* lived at Kaunakahakai and sent a messenger to Kahekili asking to bring back 'ulu *maika* to amuse himself with. Giving Kahekili a calabash of feathers as *makana* offended him and he sent Kamehameha a message telling him to move back to Hawai'i Island and wait for him to die before he attempts to conquer the kingdom (Keakaloloa in Fornander 1918–1919:689-688).

Traditional Subsistence

The south shore of Moloka'i is known for its many fishponds, and these likely played a major role in the subsistence economy of Kaunakakai. The pond nearest the project area is Kaloko'eli Fishpond, which lies approximately 1.2 km (.75 mi.) to the east. Kaunakakai was also famous for a shrimp-like crustacean known as the *aloalo*, or squilla, which were delicious to eat with *poi* (Handy and Handy 1991:520). Growing up to four inches in length, *aloalo* were drawn out of their

small holes in coral with a small fish on a string. Only the male *aloalo* were caught, as they were recognized by their jerky motion, while the females moved in a smooth, gliding manner (Handy and Handy 1991:520).

Handy and Handy note that sweet potato was planted on the southern shore of Molokaʻi, while the only areas of wetland taro cultivation were located in the swamps below Manawainui Gulch, approximately 4.8 km (3 mi.) northwest of Kaunakakai (1991:515). Handy and Handy also mention the cultivation of dryland taro on the slopes upland of the village at Kaunakakai. Other crops were grown in the vicinity near Malama, the retreat of Kamehameha V (Cooke 1949:110). One such area was located near a spring that “bubbled up through an eight-inch vent and ran as a stream to the shore. Along the banks of the stream sugar cane, bananas, and taro flourished. There were many shrimp in the spring” (Cooke 1949:110).

Warfare and *Aliʻi* Presence in Kaunakakai

In the time of Hawaiʻi island chief Alapaʻi Nui, it became known to him that the ruling chiefs of Oʻahu were waging war against the Molokaʻi chiefs, who were largely descendants of Keawe of the island of Hawaiʻi. Alapaʻi sailed from Maui to Molokaʻi and landed at Pukoʻo. The Hawaiʻi fleet was encamped from Waialua to Kaluaʻaha with the battle ensuing at Kamaloʻo (Kamalō) and Kapualei. Oʻahu chief Kapiʻiohookalani stationed himself in Kalamaʻula, while the other Oʻahu chiefs and warriors camped along the area stretching from Nāʻiwa to Kaunakakai. On the fifth day of battle, Molokaʻi and Hawaiʻi warriors surrounded and defeated Oʻahu’s forces in Kamiloloa (Kamakau 1992:70–71).

Kamehameha I was known to have landed in Kaunakakai with Keʻeaumoku, Keaweheulu, Kameʻeiamoku, and Kamanawa, where they went to Kalamaʻula to visit with Kalola Kapupukaohonokawailani on her deathbed. Kalola, the former wife of Kamehameha’s uncle Kalaniopuʻu, then married Kaʻopuiki. Kalola granted Kamehameha permission, upon her death, to take his “royal daughter” and sisters to Hawaiʻi island where they would rule as chiefs. When Kalola died, Kamehameha “wailed and chanted dirges, and some were put to sleep with the dead....Kamehameha was also tattooed [along with some of the chiefs] and had his eyeteeth knocked out, and the chiefs and commoners acted like madmen” (Kamakau 1992:149).

It is also recorded that around 1795 Kamehameha and his warriors stayed at Kaunakakai prior to their invasion of Oʻahu (Beckwith 1970:11). When Kauaʻi chief, Kaʻeokulani, and his war party landed in Kaunakakai and saw the size of the ovens and camp left by Kamehameha’s army, he stated, “Where the big squid digs itself a hole, there crab shells are heaped at the opening” (Kamakau 1992:159).

Kaunakakai was the landing location of the canoes of Kualīʻi, *aliʻi nui* of Oʻahu, who traveled to Molokaʻi to assist the people of Kekaha, the Kona region, who were in conflict with the people and chiefs of the Koʻolau side. Kualīʻi stayed in Kaunakakai briefly while meeting with the leeward Molokaʻi chiefs prior to his assisting them in their fight against the windward Molokaʻi chiefs.

The strife started sometime in the beginning half of the 1700s, when the windward, or Koʻolau, chiefs began fighting the leeward, or Kekaha, chiefs over the rich fishing grounds of Kekaha along the south side of Molokaʻi. Kualīʻi was residing in Hilo at the time and heard of the trouble on Molokaʻi. He set out for the island and after arriving in Kamalō was redirected to Kaunakakai, where the Kekaha chiefs were encamped nearby. A council was held in Kaunakakai between Kualīʻi and the Kekaha chiefs after which they left for the Koʻolau side of Molokaʻi, fighting the men around west Molokaʻi by canoe and the chiefs directly overland. The engagement began at Kalaupapa and ended at Pelekunu, both places being along the Koʻolau side of the island. The

Ko‘olau chiefs were defeated and Moloka‘i went to Kualī‘i, the O‘ahu king. Kualī‘i re-divided the lands of Moloka‘i and left Paepae and his wife Manau as *ali‘i ‘aimoku* over Moloka‘i and under himself as *ali‘i nui* (Fornander 1916:416–421).

Historic Cultural Background

Information found for the historic period includes accounts by early visitors, a selection of maps of the area, Māhele land tenure data, and descriptions of an *ali‘i* residence in Kaunakakai.

Historic Accounts

During Captain James Cook’s expedition of 1778, the first written description of the island is provided by Captain King:

Morotoi is only two leagues and a half from Mowee to the West North West. The South Western coast, which was the only part near which we approached, is very low; but the land rises backward to considerable height; and, at the distance from which we saw it, appeared to be entirely without wood. Its produce, we were told, consists chiefly of yams. It may, probably, have fresh water, and, on the South and West sides, the coast forms several bays that promise good shelter from the tradewinds (Cook 1785 in Summers 1971:21)

In 1792, Captain Vancouver provided an early description of Moloka‘i’s southern shore:

The country from Crynoa [Kalaeloa] rises from the sea by an ascent, uninterrupted with chasms, hills or vallies, this uniform surface, on advancing to the westward, exhibited a gradual decrease in population; it discovered an uncultivated barren soil, and a tract of land that gave residence only to a few of the lower orders of the islanders, who resort to the shores for the purpose of taking fish, with which they abound. Those so employed are obliged to fetch their fresh water from a great distance; none but which is brackish being attainable on the western parts of Morotoi. This information I had before gained from several chiefs at Mowee, and was now confirmed in it by Tomohomoha, who was accompanying us to Woahoo; and who also acquainted me, that along the shores of this south side, which are chiefly composed of a sandy beach, anchorage would be found on a clear sandy bottom. But as there were no projecting points for shelter, I did not think a further examination worth the time it would employ, and therefore proceeded to the bay at the west end of the island, for the purpose of seeing if, contrary to my former observations, it was commodious for the refitting of vessels, as it had been reported. ...The contrary [west end] had the same dreary and barren appearance as that noticed on the south side, and I was informed it was equally destitute of water (Vancouver 1798 in Summers 1971:21–22).

In addition to the early historic accounts presented above, ethno-historical interviews have been conducted for the project area and are summarized in an Environmental Assessment (Munekiyo & Hiraga, Inc. 2008). Two interviews were completed, with Zachary Zane Helm and Harriet “Aunt Nona” Fukuoka. Informants noted that the current Duke Maliu Park was formerly agricultural land planted in alfalfa, and owned by Molokai Ranch until the 1970s. The park was established in 1987 and named after an umpire that was involved in many of the island’s baseball events. No traditional cultural practices were identified for the property.

Maps

An examination of historic maps of Kaunakakai offers an important look into the past. Information provides knowledge of cultural resources such as land use and settlement, socio-political boundaries, as well as traditional and historic cultural sites. The following section offers a review of several historic maps of Kaunakakai.

One of the most notable early maps of Kaunakakai was that drawn by G.E.G. Jackson in 1882 (Figure 5). Labeled as a “Hawaiian Government Survey,” this map portrays the extent of the natural harbor which is located within a section of the fringing reef outside of Kaunakakai Village. Much of the water surrounding the land consists of mud and sand flats which are “partially dry” or “dry” during low tides. This map shows a rectangular-shaped, gated compound along the seashore, labeled as the “Kamehameha Property,” within which is a building marked as “Ruth’s House.” This refers to Princess Ruth Ke’elikōlani, an important figure in the Kamehameha *‘ohana* and the history of Hawai‘i. There are a total of 15 structures within this area. To the northwest of the “Kamehameha Property” is also a woodhouse, two navigational lights (an outer and an inner light), a cattle pen, a store, and a slaughterhouse. *Mauka* of this area lies a village with numerous structures, as well as a schoolhouse and Protestant church. Inland of the Kamehameha property, the area is labeled as “grasslands” while the region to the west of the map, toward Kalama‘ula reads “Low level sterile land, swampy in rainy weather.”

A survey by E. Pope on behalf of the American Sugar Company (ASCO) performed in May of 1900 depicts Kaunakakai and “vicinity” highlighting improvements made by the aforementioned company (Figure 6). The largest difference in this map to the previous is the presence of the Kaunakakai Wharf and railroad. Other additions include water features associated with efforts of obtaining and transporting water to agricultural fields. This map denotes Kaunakakai village as “Native Village” and shows a “Japanese Camp.” To the northeast of the wharf, along the shoreline, areas seen as “Salt Marsh” and “Pond” are also noted. A feature labeled “Stone Fence” is present and surrounds all of Kaunakakai village, likely associated with the protection of trees and plants from ungulates such as deer and goats which were released to the wild by Kamehameha IV and V in the 1850s and ‘60s. Interestingly, this particular map does not show any structures associated with the royal encampment of the Kamehameha *‘ohana*. This is one of the two historic maps that intersect with the project area location, and this region is labeled as “Cane Field” (Figure 7).

A 1901 U.S. Coast and Geodetic Survey map shows Kaunakakai Harbor and recorded the various depths and attributes of the ocean floor and shallows (Figure 8). Adjacent to the west of the Kaunakakai Wharf is also the older wharf. Additional information could not be found regarding this wharf, however, extant today are the remains of this structure which consisted of stacked basalt boulders. There are numerous structures depicted along the coast, none of which are labeled, except for the “Front Range Light” and “Rear Range Light.”

The U.S. Coast and Geodetic Survey office produced another map in 1916 which further shows the depths of Kaunakakai’s waters as well as industrial growth of the town (Figure 9). The area surrounding the wharf is covered with algaroba, or *kiawe* trees. To the west of the wharf, large areas noted as “salt pans” are recorded, and further west, toward “Lamaula” (Kalama‘ula), the Kapuāiwa Coconut Grove is also depicted.

In 1924, J. Jorgensen’s map of Kaunakakai shows the development of the town, with numerous businesses, churches and even a jail recorded. This map depicts the extended route of the railroad and the building that housed a wireless station (Figure 10).

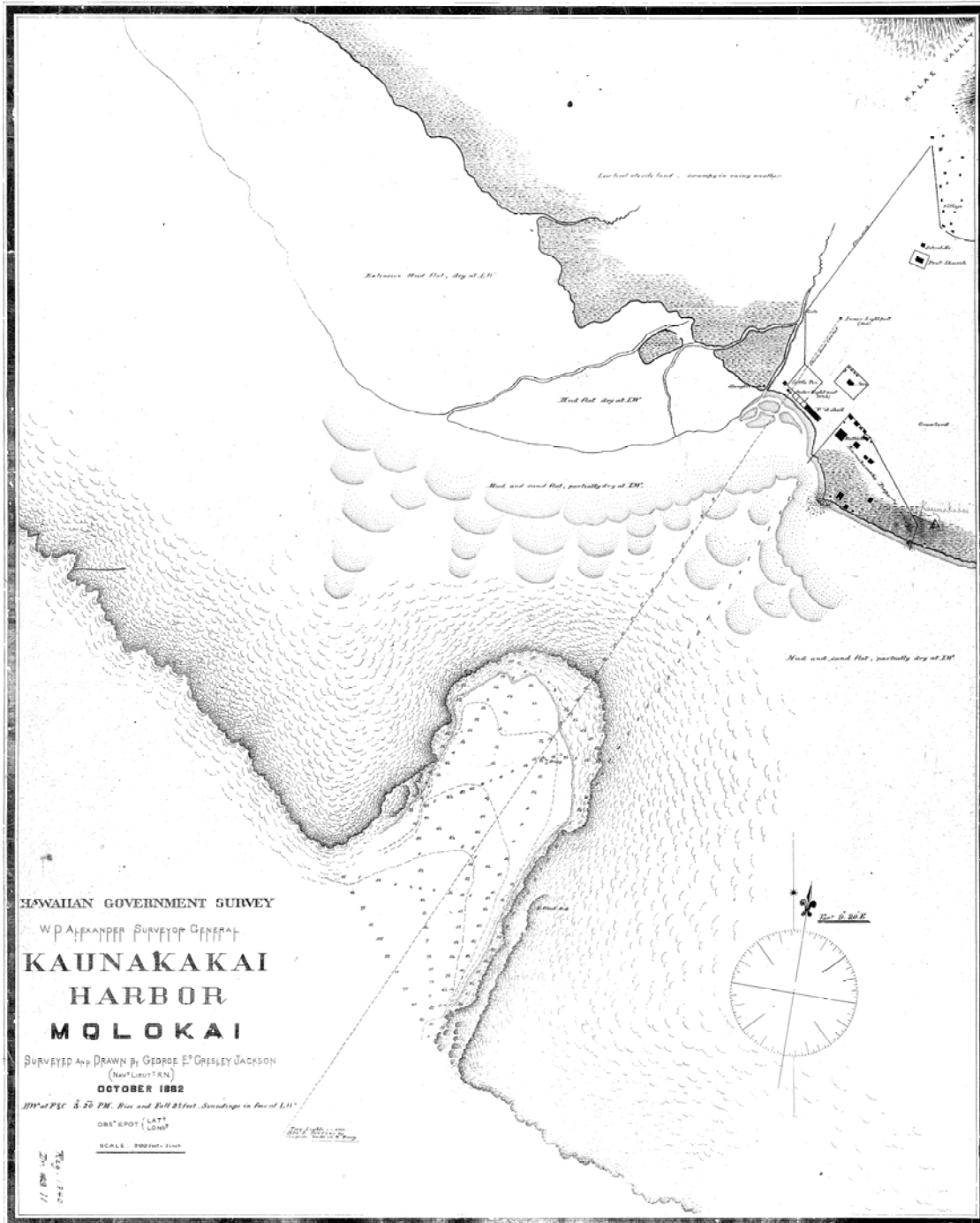


Figure 5. Hawaiian Government Survey map of Kaunakakai Harbor (Jackson 1882).



Figure 6. American Sugar Co. map of Kaunakakai (Pope 1900).

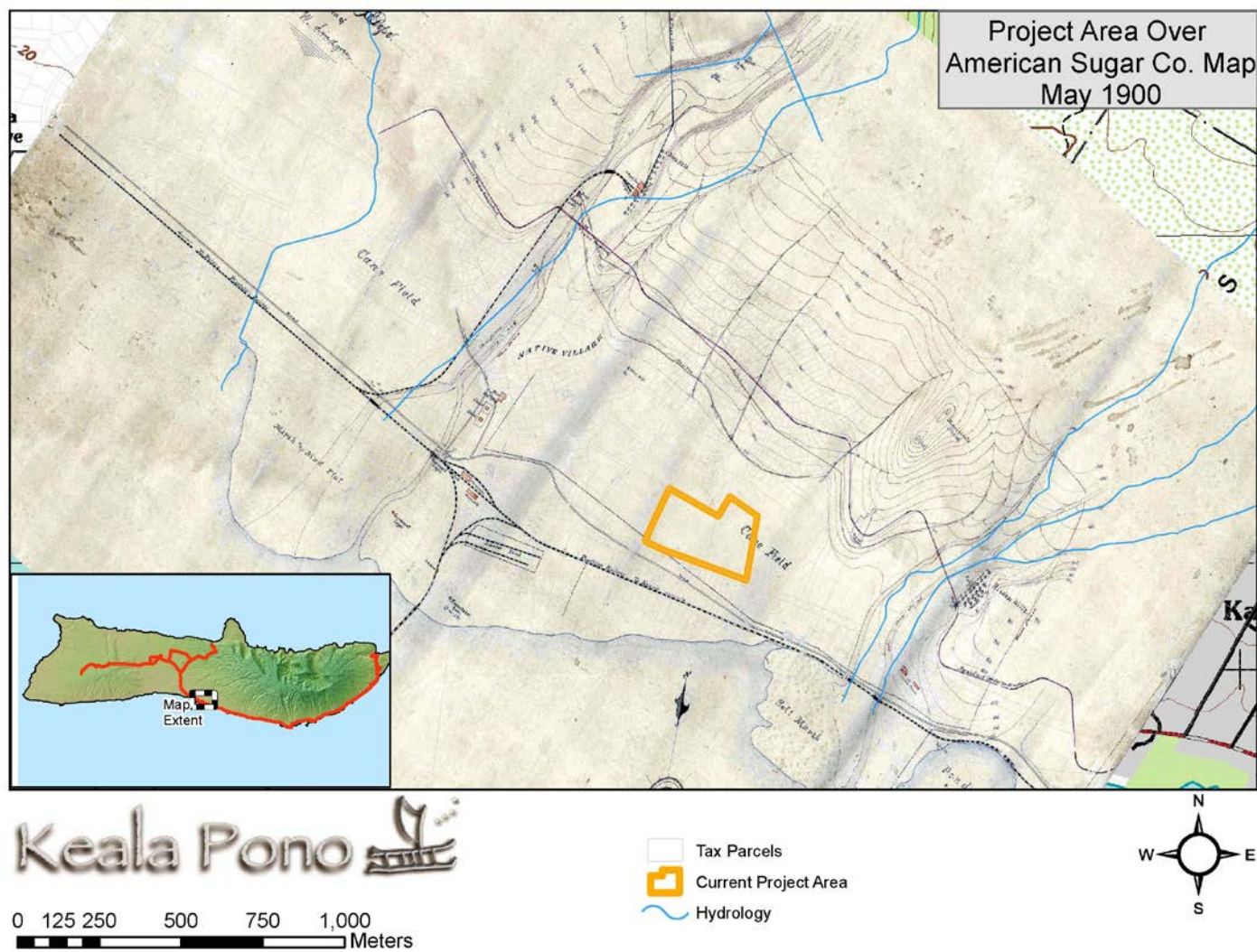


Figure 7. American Sugar Co. map of Kaunakakai (Pope 1900) with project area overlay.

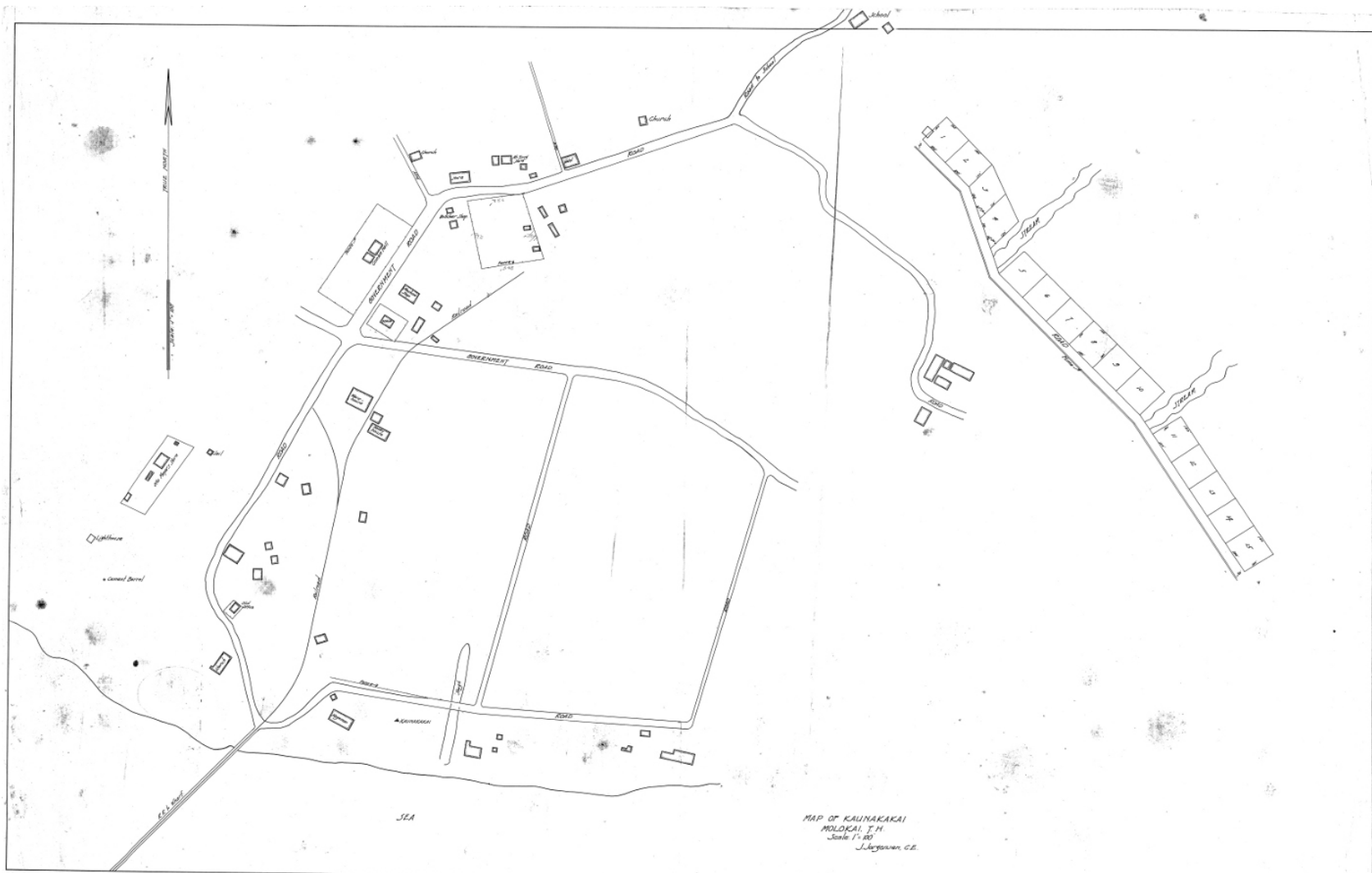


Figure 10. Map of Kaunakakai (Jorgensen 1924).

Chart 4121, mapped by an unknown surveyor, shows a small section of Kaunakakai. Handwritten notes on this chart read “Surveys to 1925.” This map depicts the radio station, a church and spire, the navigational range lights, the railroad track route from the wharf to the town, and various unnamed structures (Figure 11).

A 1930 ASCO map shows land in Kaunakakai that was planted in alfalfa (Figure 12). Alfalfa and algaroba were grown in the project area and a concrete flume and pipeline once ran through the park. A corridor labeled as “stream waste land” runs *mauka* to *makai*, bisecting the park, and a fenceline is illustrated nearby. An apiary, with beehives and a honey house, is shown to the east, near the *ahupua‘a* boundary.

While the date for a more recent map is unknown, it presents the locations and functions of numerous structures of Kaunakakai, including the salt pans and “old salt warehouse,” Maui County’s Kaunakakai Park, Cooke Hall, a dispensary, honey warehouse, a building labeled “Hawaiian Board,” and several private landowners (Figure 13). This map exemplifies the expanding Kaunakakai community and diversifying commercial enterprises of the time.

A current USGS map (1993) shows several features of interest in the area (see Figure 1). These include a long L-shaped rock wall and cemetery to the north and east of the project area and Pu‘u Maninikolo to the northeast. The name of this *pu‘u* translates to “hill [for] seining *manini* fish or creeping *manini* fish hill” (Pukui 1986). The place names Haleahi and Kohea are also depicted nearby, but these names and translations are not listed by Pukui (1986).

Māhele Land Tenure

The change in the traditional land tenure system in Hawai‘i began with the appointment of the Board of Commissioners to Quiet Land Titles by Kamehameha III in 1845. The Great Māhele took place during the first few months of 1848 when Kamehameha III and more than 240 of his chiefs worked out their interests in the lands of the Kingdom. This division of land was recorded in the Māhele Book. The King retained roughly a million acres as his own as Crown Lands, while approximately a million and a half acres were designated as Government Lands. The Konohiki Awards amounted to about a million and a half acres, however title was not awarded until the *konohiki* presented the claim before the Land Commission.

In the fall of 1850 Legislature was passed allowing citizens to present claims before the Land Commission for lands that they were cultivating within the Crown, Government, or Konohiki lands. By 1855 the Land Commission had made visits to all of the islands and had received testimony for about 12,000 land claims. This testimony is recorded in 50 volumes that have since been rendered on microfilm. Ultimately between 9,000 and 11,000 *kuleana* land claims were awarded to *kama‘āina* totaling only about 30,000 acres and recorded in ten large volumes.

There are no legal Māhele documents referring to the ownership of Kaunakakai Ahupua‘a and no *kuleana* claims were awarded. There are, however, letters to the Interior Department dating to 1852 and 1854 in which Abner Pākī states that he owns the *ahupua‘a* (Int. Dept. Letter 1852 and 1854 in Hammatt et al. 2010).

Kaunakakai fell into the hands of Lot Kapuāiwa (Kamehameha V) in 1855 when the *ahupua‘a* was “conveyed” to him for a sum of two hundred dollars (Int. Dept. Letter 1855 in Hammatt et al. 2010). Lot Kapuāiwa’s brother Alexander Liholiho (Kamehameha IV) would later establish a sheep station in Kaunakakai. Kapuāiwa inherited the station upon Liholiho’s death and added deer to the animal population of Moloka‘i.

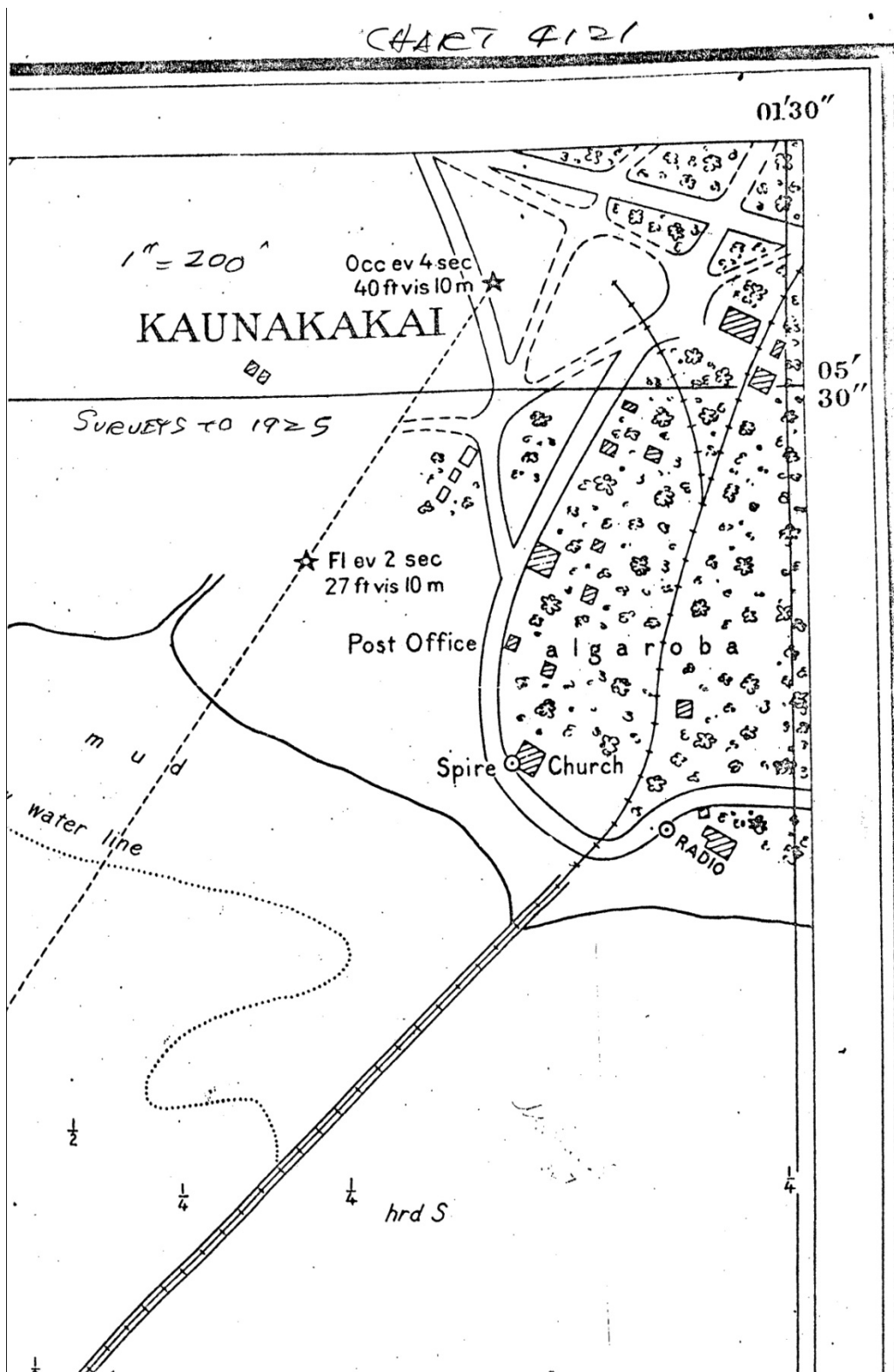


Figure 11. Portion of map showing Kaunakakai post-1925 (Unknown n.d.a).

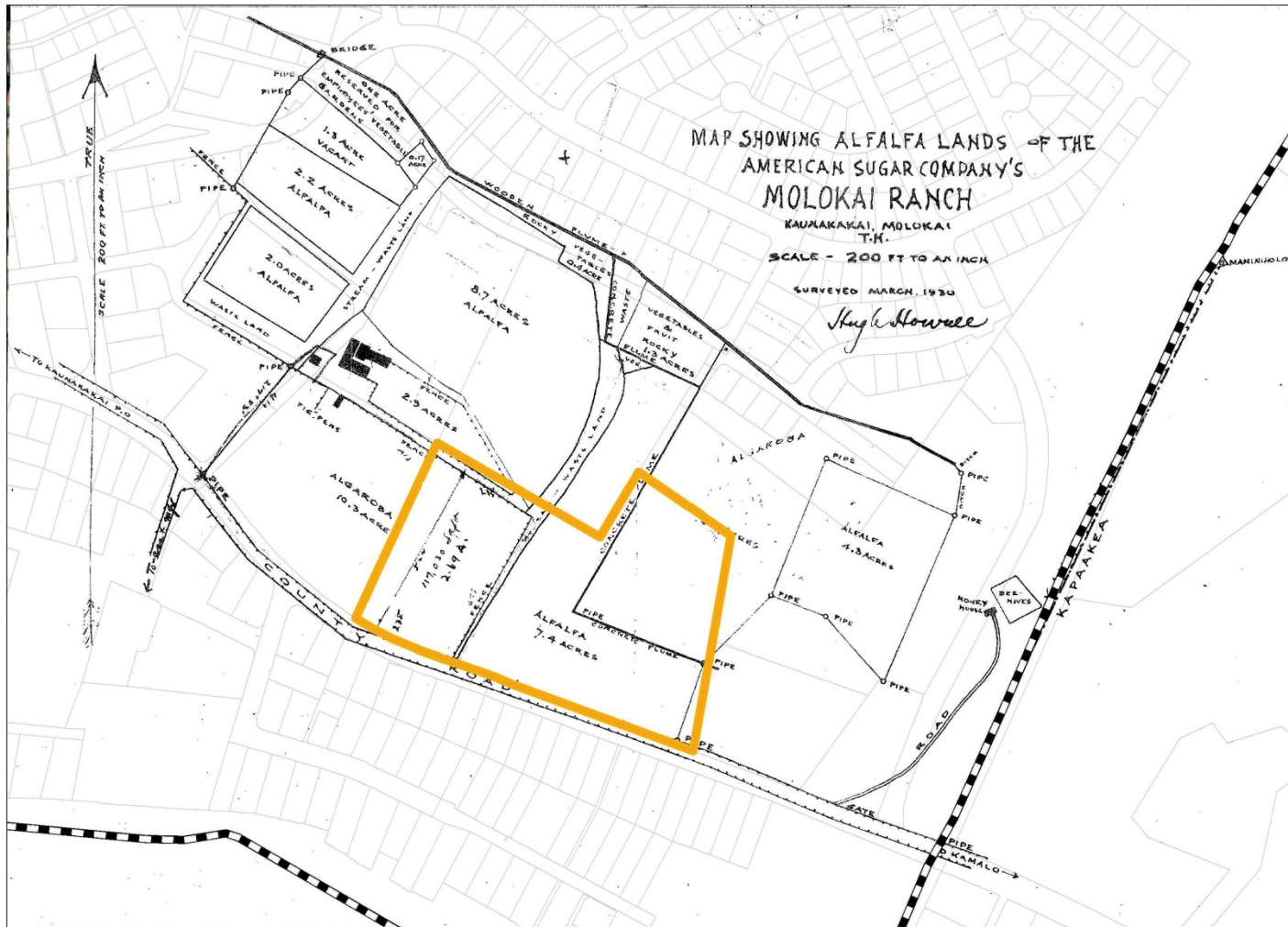


Figure 12. Map showing alfalfa land in Kaunakakai (Howell 1930), with overlay of the project area in orange, *ahupua'a* boundaries in stripe, and TMK parcels in gray.

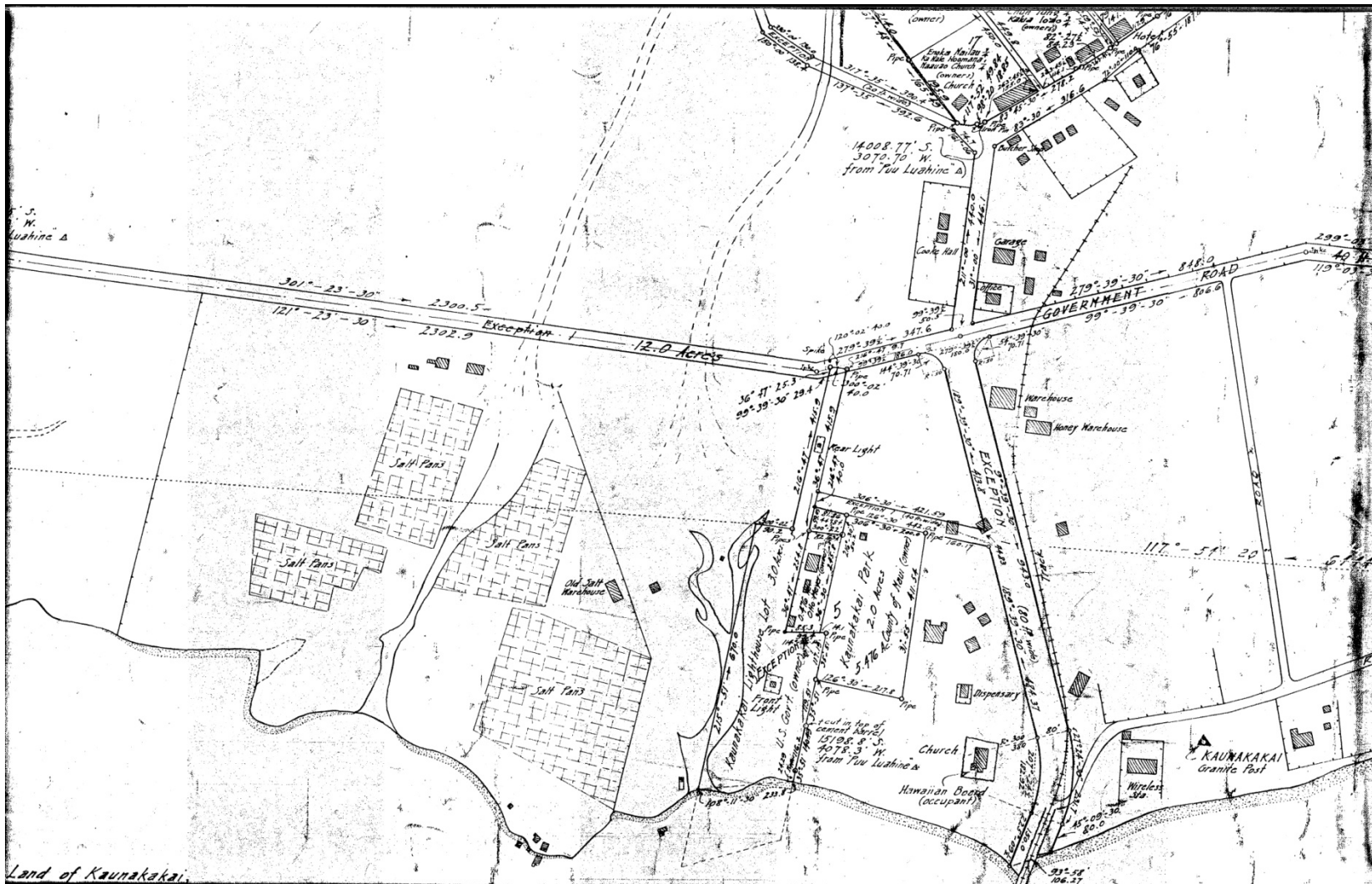


Figure 13. "Land of Kaunakakai" (Unknown n.d.b).

When Lot Kapuāiwa died in 1872, Kaunakakai was bequeathed to Ruth Ke‘elikōlani. Upon her passing in 1883, most of her land holdings were transferred to Bernice Pauahi Bishop, but Kaunakakai was not included among these. When Pauahi died in 1884, however, the trustees of her estate petitioned for and received Kaunakakai.

Hammatt et al. report a dispute in the claim for ownership of Kaunakakai, although Bishop Estate was eventually confirmed as the owner:

An Interior Department letter of 11/15/1889 indicates that Kaunakakai was owned by Kalani Pueo in 1843, “from whom Mrs. Bishop inherited same,” though as mentioned previously, (Interior Dept. Letters, 852 & 1854) Abner Pākī, Bernice Pauahi Bishop’s father, indicated he owned Kaunakakai. The relationship of “Kalani Pueo” to Abner Pākī and Bernice Pauahi Bishop is not known to us at this time. (Hammatt et al. 2010:9)

In 1897 large expanses of Moloka‘i were purchased to form the Molokai Ranch by a group who would later become the American Sugar Company (ASCO) (Summers 1971:24). This prompted the construction of the Kaunakakai Wharf:

A good harbor was imperative so they built a mole one-half mile long over the shores of Kaunakakai to a natural harbor formed by a break in the reef. They built a railroad from the end of the mole up through Palaaui and Ioli to the middle of the Hoolehua plateau. Locomotives were imported, and a huge coal dump was formed at Kaunakakai to supply fuel. A large camp was constructed... (Judd IV 1936 in Summers 1971:24)

Kaunakakai became the urban center of the island due to its proximity to the wharf. The ASCO was unsuccessful, however, and the reason for its downfall was the subject of speculation:

...in the construction of the railroad from the mill to the dock at Kaunakakai, the railroad builders had disturbed a heiau ...since the railroad builders at American Sugar Company had not only used the heiau stones in building roadbed, but had also routed the railroad directly through the center of the temple site, the whole organization was doomed to disaster. ... (Condé and Best 1973 in Hammatt et al. 2010:9).

Hammatt et al. (2010:9, 13) examine the premise further:

This may have been the time of the destruction of Kamalae Heiau as reported by John Stokes. The reported *heiau* location, when plotted on the 1924 Land Court App. 632 map...puts it within the vicinity of Lot 6 which includes walls and a flume. The construction of the walls and flume may have been the agents of destruction. However, the 1886 map, which John Stokes utilized during his 1909 survey does not show a structure (stone or wooden framed) in the locus of the *heiau*, possibly indicating the *heiau* was not there at that time, though such structures as *heiau* were not routinely plotted by Monsarrat anyway. It is also possible that the reference to *heiau* destruction was to Mahinahina Heiau (Site 131), otherwise said to have been located 500 ft NE of the pier at Kaunakakai.

A Royal Enclave

Said to have been the favorite island of Kapuāiwa, or Kamehameha V, the monarch frequented the island of Moloka‘i and built a country estate for himself on the shores of Kaunakakai (Summers 1971:23). Born in 1830, Kapuāiwa ruled the Kingdom of Hawai‘i from 1863 until his death in 1872. According to G.P. Judd IV, Kamehameha V “bought up land and cattle from the resident

Hawaiians and used Molokai as a vacation ground from the cares of the State” (Judd IV 1936:10 in Summers 1971:23). The house was built ca. 1859 and by 1888, it was highly deteriorated. The structure could be seen until 1908 (Hammatt et al. 2010:20). According to Cooke, Malama was eventually “moved to the village, and the property of Wm. Kamakana” (Cooke 1949:151).

An article published in an 1870 edition of the Hawaiian-language newspaper *Ke Au ‘Oko‘a*, offers a detailed and poetic description of the king’s vacation home, which was known as “Malama.”

It is close to the edge of the sand and if the tide is very high, the murmuring wavelets wash up and whisper to the grains of earth which were rubbed off the royal feet at the threshold of the entrance leading up to the lanai.

It is a grass hut, skillfully thatched, having a lanai all around, with floors covered with real Hawaiian mats. The house has two big rooms. The parlor is well furnished, with glass cases containing books in the English language...This is a very good vacation house for the king, in spite of that sun baked area.

On the northwest side of the house is a large grass house, and it seems to be the largest one seen to this time. The house is divided into rooms and appears to be a place in which to receive the king’s guests. There are four other fine, big houses, mostly thatched. These are surrounded by the houses of those who wait on him and some are houses used for storage.

The royal residence is set apart from the rest by a wooden fence that encloses it on all sides except the sea side. The king’s yard covers about three acres and is planted with trees, mostly coconuts, that are thriving nicely. Another reason why we admire it so is that we saw no faucets since we left Honolulu, but when we got there we saw “the water that sleeps in the houses of men” (Holoholopinaau 1870 in Summers 1971:23).

Brigham also provides further detail about the king’s Malama residence, as well as insight into his attitudes and preferences:

When the photograph was taken in 1888 the house was in ruin and quite uninhabitable; were it not for the bars across the lanai openings, cattle might have entered this deserted fishing lodge of the king who, like all his family, was so fond of fishing that he often deserted his court in Honolulu and was paddled to this place where he remained for weeks at a time, out of the reach of the foreigners who he liked none too well. The enclosed corner of the lanai or verandah was very foreign, however, and so were the partitions found within the house. (Brigham 1908:112)

A photograph of “Malama” appeared in W.T. Brigham’s *The Ancient Hawaiian House* (1908:111) (Figure 14). According to George Cooke’s memoirs, the beach fronting “Malama” was reserved strictly for the use of the *ali‘i* who enjoyed sunbathing on a sandy spit named Ka Lae o Ka Manu after the *kōlea* (plover) which would return there each year (Cooke 1949:151).

Kalaiaakamanu Church was built on top of Malama Platform. As it is not certain whether the church was named after the place “Ka Lae o Ka Manu”, the name of this church has been presented in a few ways. Pukui and Elbert (1986) refer to it as Kala‘iakamanu, and another report refers to the church as Ka Lae Ka Manu Hou (Athens 1983), although the “Hou” was probably given to the church’s name when it moved to its present location. The date of its construction is unknown, but an interviewee in a previous study, Walter Kiawe, noted that it was built of *‘ōhi‘a* wood. The church was moved off the foundation to a nearby location in the 1920s. And because of the 1946

tsunami, the church was moved again to its present location *mauka* of Maunaloa Highway (Athens 1983:24).

Approximately 50 feet to the west of the Kamehameha V house, the King built a residence for Governor Dominis and Colonel Charles Judd. Although ultimately succumbing to fire, retainers' houses once stood where the Standard Oil Company's fuel tanks currently exist (Figure 15). In that area, there was also a canoe house, which was at the location of the current Malama Park. It was also noted in Cooke's recollections that small boats from steamers would later come to shore to ship sugar and molasses from the Meyer family's operations, and a shed was used to store this sugar (Cooke 1949:110, 151).

Previous Archaeology

Numerous archaeological studies were performed in Kaunakakai and provide significant data regarding traditional and historic land use and settlement patterns (Table 1). The following section presents previous archaeological investigations in the *ahupua'a* of Kaunakakai, with studies located in the vicinity of the project area summarized below and depicted in Figure 16 and known archaeological sites shown in Figure 17.

One of the earliest archaeological surveys was conducted by Catherine Summers. Her island-wide study produced her book, *Molokai: A Site Survey*, which records five sites located in Kaunakakai, three of which were designated with site numbers. After a brief description of Kamehameha V's Malama residence platform, she goes on to describe Sites 129, 130, 131, and a *kahua maika* believed to be located in Kaunakakai. The saltworks, visible on several of the historic maps, were situated to the west of the current project area. It is also believed that Mahinahina Heiau was located at the same place as Kamehameha V's residence, Malama. The following is an excerpt from Summers' book (1971:87–88):

West of the approach to Kaunakakai wharf is a platform that was part of Kamehameha V's home, Malama (see p. 23). The beach in front of this site was used exclusively by the *ali'i* for sun bathing. There formerly was a spit of sand in front of here called *Ka Lae O Ka Manu*, so named because the plover used to settle here. At the site of the County Park was a canoe shed (Cooke 1949:110, 151).

Site 129. Saltworks, Kaunakakai

Located at the site of the Kaunakakai dump in 1961, the salt pans were made "something like a taro patch." Sea water was run into the pans at high tide, and when the tide ebbed, some of the water remained. The water was allowed to stand from one to three weeks, after which the salt was gathered and dried. The salt formed here was not as salty as the salt formed by waves from the deep sea—"Our salt here is not too sour, the salt is white" (Tape n.d.d.).

Site 130. Kamalae Heiau, Kaunakakai

Located behind Kaunakakai Village, the site of the *heiau* is at the foot of the median ridge. From Kakalahale [triangulation symbol] it bears 35°29'30"; 12,890 ft. Stokes wrote of it, "Heiau entirely destroyed. It is said to have been for human sacrifice, and that the drums were heard at night" (n.d.a:1).

Site 131. Mahinahina Heiau, Kaunakakai

This heiau is located 500 ft NE of the pier at Kaunakakai. According to Stokes, "The site pointed out was a low platform lined with ala, on which a church stood...Said to have been for human sacrifice, and that the drums were heard at night" (n.d.a:).

Kahua Maika, Kaunakakai (?)

N.B. Emerson said that he saw a curved *kahua maika* “...on the plains back of Kaunakakai” (Malo, 1951:221, note 2).

Several archaeological studies were carried out at the Kaunakakai Wastewater Treatment Facility (Shun 1981 and 1982). During investigations located west of the current area of study, the earlier study identified three sites, while the later project recorded post-Contact parallel mounds as well as a subsurface cultural deposit dated to AD 1819.



Figure 14. Photograph of Malama, Kamehameha V's residence (Brigham 1908:111).



KING KAMEHAMEHA V'S RETAINERS' HOUSE, KAUNAKAKAI
(Torn down in 1940)

Figure 15. Kamehameha V's retainer's home (adopted from Cooke 1949:111).

Table 1. Previous Archaeological Studies in the Vicinity of the Project Area

Author and Year	Location	TMK	Type of Study	Findings
Summers 1971	Moloka'i		Survey	Sites recorded within Kaunakakai include Kamehameha V's home, Malama; Site 129, Kaunakakai Saltworks; Site 130, Kamalae Heiau; Site 131, Mahinahina Heiau; and a <i>kahua maika</i> believed to be located in Kaunakakai.
Shun 1981	Kaunakakai, Sewage Treatment Facility	2-5-3-05:02	Archaeological Investigations	Three sites were recorded with 19-acre area of study, of these three, SIHP 50-60-03-129 and -631 were given site numbers. Radiocarbon dating was also performed.
Shun 1982	Kaunakakai, Wastewater Treatment Facilities		Reconnaissance Survey and Test Excavations	This study recorded post-Contact parallel mounds as well as a subsurface cultural deposit dated to A.D. 1819 ± 50.
Komori 1983	Kaunakakai	2-5-3-01:02	Reconnaissance Survey and Historical Research Investigations	On Lots 521 and 522, one site, SIHP 0-60-03-630, a subsurface midden deposit consisting of shellfish and fish bone as well as pre-Contact and Historic artifacts was recorded.
Athens 1983	Kaunakakai, Kaunakakai Place and Hio Place	2-5-3-01:02	Archaeological and Historical Investigations	As a continuation of Komori's study of the same year, radiocarbon dating revealed dates of A.D. 1230–1340 and A.D. 1435–1665.
Landrum 1984	Kaunakakai, U.S. Coast Guard Harbor Range Lights Facility	2-5-3-01:03	Reconnaissance Survey	Within a 3.6-acre area, one site, SIHP 50-60-03-632, a subsurface traditional cultural deposit was recorded. An historic foundation was also present but was not recorded.
Kennedy 1988	Kaunakakai	2-5-3-01:77	Survey and Subsurface Testing	No additional sites recorded.
Weisler 1989	Kaunakakai, "Ranch Camp"	2-5-3-01	Survey and Excavation	Within an approximately 115-acre area, four sites were recorded and include agricultural complexes with shelter features, stacked rock wall alignments and mounds, as well as a "massive boundary wall," SIHP 50-60-03-886, -887, -888, and -889. At time of publication, Sites 886, 887, and 888 collectively were the largest agricultural complex in leeward Moloka'i, covering an area of 34.6 acres. Radiocarbon dating was also conducted during investigations, the earliest date being AD 1280 for a dryland agricultural feature.
Tuggle 1993	Kaunakakai, Malama Platform	2-5-3-01:02	Excavations	Investigations were conducted at State Sites 50-60-03-00630, 50-60-03-890 and 50-60-03-1030.

Table 1. (Continued)

Author and Year	Location	TMK	Type of Study	Findings
Borthwick and Hammatt 1994	Kaunakakai, Within portion of Drainage System A	2-5-03-01, -02, -06 & -07	Inventory Survey	Within a 2.18-acre area of study associated with the corridor of Drainage A, two sites were identified, SIHP 50-60-03-895, an enclosure with pavements and -896, a stacked boulder wall.
Collins 1994	Kaunakakai	2-5-3-03:01	Field Check	Three sites recorded and found as part of field checks for Soil Conservation Service in area proposed for use as Molokai Community Pasture Project and include SIHP 50-60-03-996, -997, and -998.
Heidel et al. 1998	Kaunakakai, Within portion of Drainage System A	TMK: 2-5-3-02: por. 72; 2-5-3-63:por. 01; 2-5-3-09: por. 17	Data Recovery	At same location as Borthwick and Hammatt (1994) and McGuire and Hammatt (2000). Investigations consisted of cross-trenching of historic cattle wall (SIHP 50-60-03-896) and areal excavations at SIHP 50-60-03-895.
Titchenal 1998	Kaunakakai, Malama Cultural Park	2-5-3-01:por. 02, 05, 97, 99, 100	Monitoring	Five subsurface features were encountered during monitoring, and included four features of historic age (19 th & 20 th centuries) and one of indeterminate age in the Site 50-60-03-630 area.
McGerty and Carson 1999	Kaunakakai, Within portion of Drainage System A	2-5-3-002:72; 2-5-3-063:001; 2-5-3-009:017	Inventory Survey	This supplemental survey recorded additional features of SIHP 50-60-03-895, all of which were determined to be no longer significant through completion of survey.
McGuire and Hammatt 2000	Kaunakakai, Within portion of Drainage System A	2-5-3-002: por. 072; 2-5-3-003:por. 1; 2-5-3-005:por. 008; 2-5-3-009: por. 006, 007, 017, 018 & 022	Monitoring	An expanded location from Borthwick and Hammatt (1994) and Heidel et al. (1998). No additional sites or deposits found during monitoring of drainage installation.
Cordy 2001	Kaunakakai <i>mauka</i>		Reconnaissance Survey	Student training project conducted reconnaissance-level survey of 500 acres of upland slopes. A total of 12 sites were described, two of which had been previously identified.

Table 1. (Continued)

Author and Year	Location	TMK	Type of Study	Findings
Dye and Jourdane 2006	Kaunakakai	2-5-3-003014	Archaeological Assessment	No findings.
McGerty and Spear 2006	Kaunakakai Fire Station	2-5-3-003:15	Archaeological Assessment	No findings.
Hammatt 2008	Kaunakakai Elementary School	2-5-3-002:052	Literature Review and Field Check	No sites were found, although the school's establishment in 1908 qualifies the campus as an historic property.
Madeus et al. 2010	Kaunakakai Elementary School	2-5-3-002:052	Monitoring	No findings.
Desilets 2011	60 Maluolu Place	2-5-3-002:073	Monitoring	No findings.
Medrano and Dega 2013	Duke Maliu Field	2-5-3-003:012	Monitoring	No findings.
McElroy and Elison in prep.	Kaunakakai Wharf	2- 5-3-001:005 and :011	Monitoring	Two historic walls identified: SIHP 50-60-03-2514 and -2523.

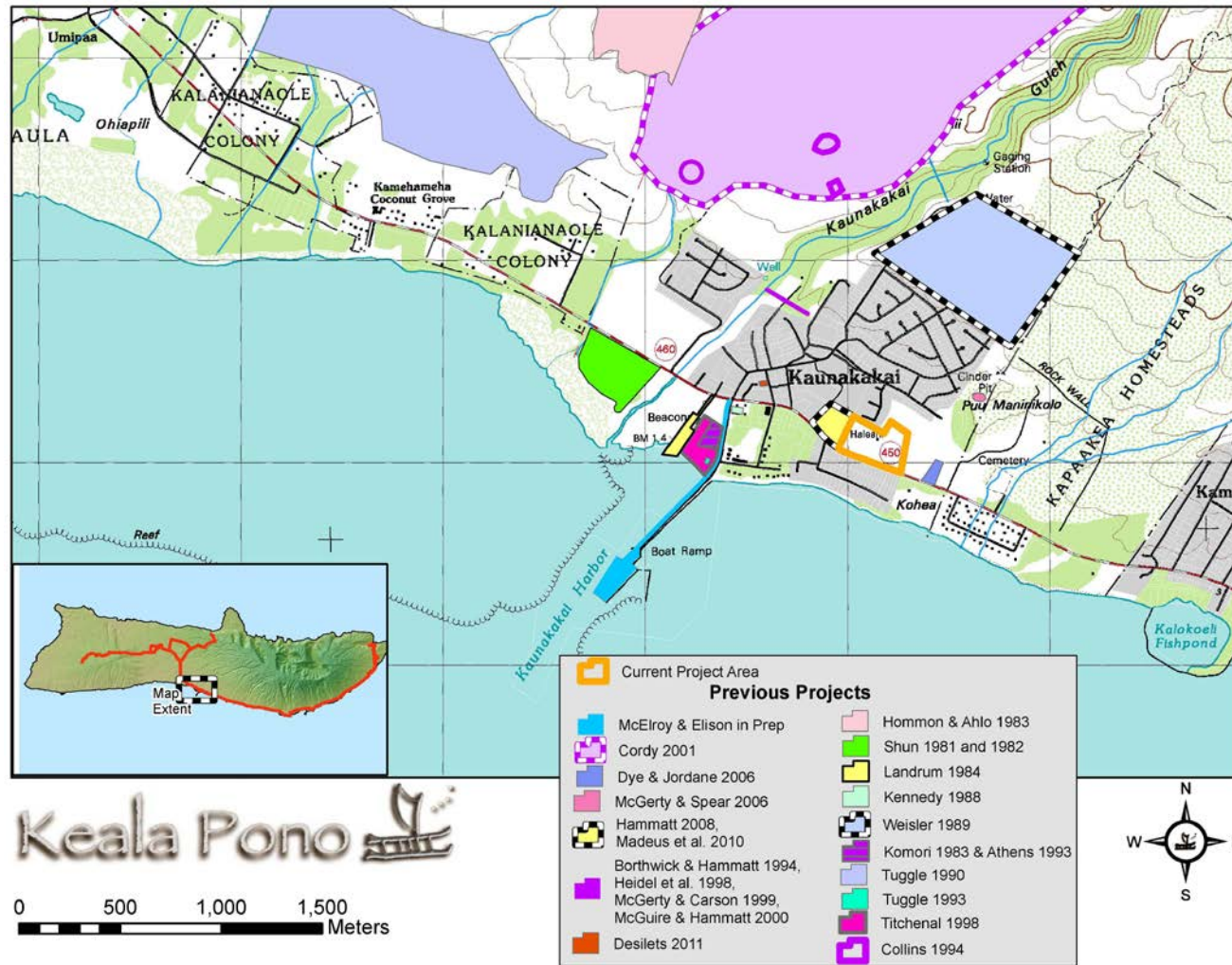


Figure 16. Location of previous archaeological studies near the project area. Note that the Medrano and Dega (2013) study was conducted in the same location as the current project area.

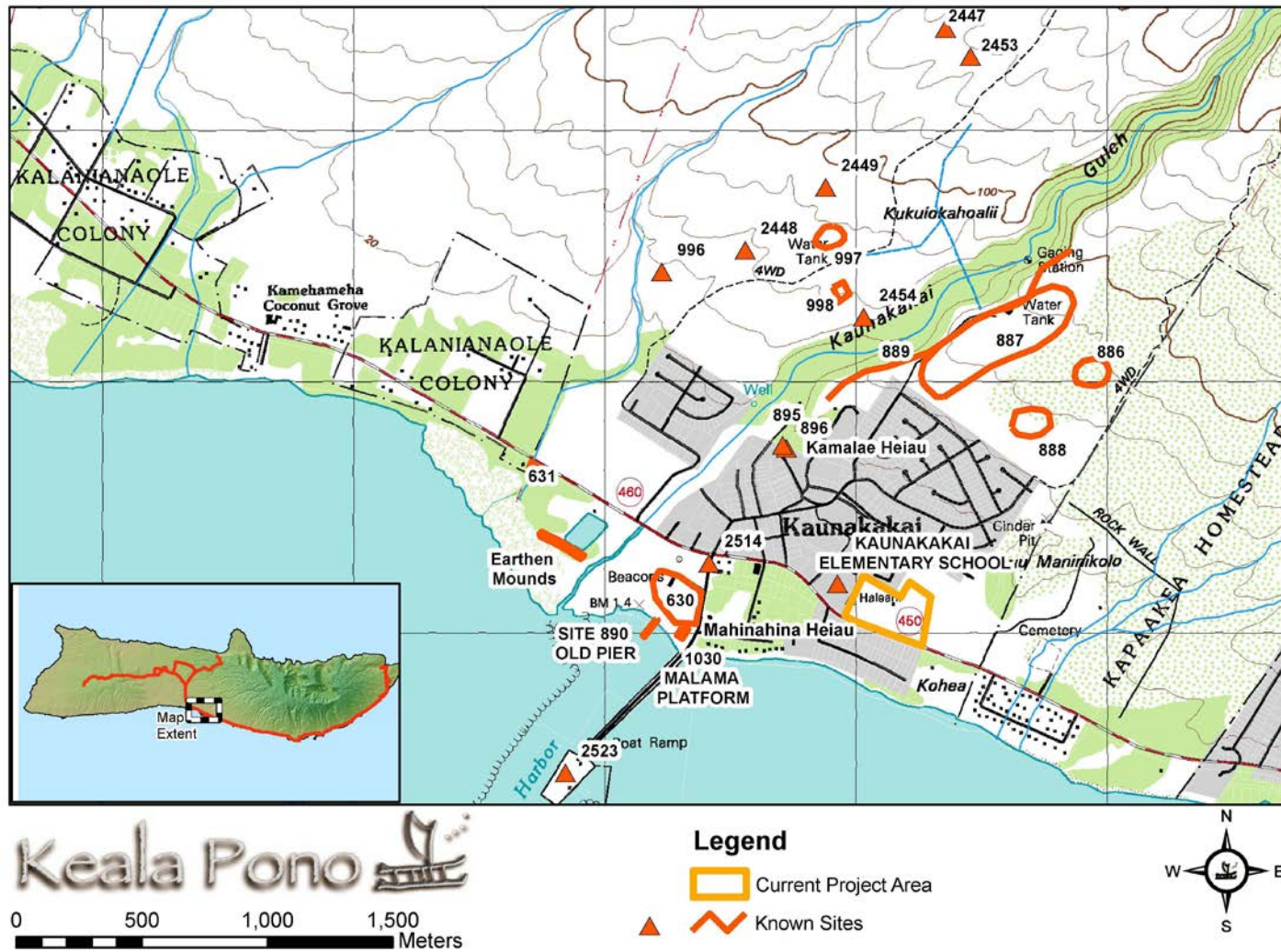


Figure 17. Location of known archaeological sites near the project area.

In 1983, two studies were performed at Kaunakakai Place and Hio Place, southwest of the current project area. The first investigations were conducted by Komori (1983). This reconnaissance survey revealed a subsurface midden deposit consisting of shellfish and fish bone as well as historic artifacts. This site was later designated as SIHP (State Inventory of Historic Places) 50-60-03-630. The second study of this area was conducted by Athens (1983) who excavated four test pits and 26 trenches, obtaining dates of AD 1230–1340 and AD 1435–1665. Historic material dating to the time of Kamehameha V's residence was also noted, although subsurface cultural deposits were either disturbed or absent in the east side of their study area.

Previous oral history studies presented in Athens' 1983 report provide important information which may not be present in the archaeological record or on historic maps. According to informants, the area across from Kaunakakai Place hosted a variety of tenants in the 1940s, from the military to E.K. Fernandez circus, and in the 1950s, the Libby, McNeil, & Libby Pineapple Co. Athens notes that some military structures still stand today in this area (1983:24). The pineapple company built the cement truck weigh station along the eastern side of the property which remains today as a quiet reminder of Moloka'i's pineapple heyday.

Several archaeological studies were carried out within a corridor associated with "Drainage A," the first being an inventory survey by Borthwick and Hammatt (1994). In their study, two sites were identified, SIHP 50-60-03-895, an enclosure with pavements and SIHP 50-60-03-896, a stacked boulder wall. Heidel et al. (1998) conducted data recovery investigations which consisted of cross-trenching of an historic cattle wall (SIHP 50-60-03-896) and areal excavations at SIHP 50-60-03-895. McGerty and Carson (1999) carried out a supplemental survey that recorded additional features of SIHP 50-60-03-895, all of which were determined to be no longer significant through completion of the survey. Archaeological monitoring by McGuire and Hammatt (2000) did not reveal further sites.

A reconnaissance survey at the U.S. Coast Guard Harbor Range Lights Facility was conducted by Landrum (1984). Within a 3.6-acre area, one site, SIHP 50-60-03-632, a subsurface traditional cultural deposit, was recorded. An historic foundation and artifacts were noted but not fully documented.

To the west of the current project area, two archaeological studies were done at Malama Platform. Tuggle (1993) excavated eleven test trenches around the platform and one trench that bisected the platform. While it is believed that the location of Kamehameha V's residence was constructed on Mahinahina Heiau, subsurface excavations were unable to confirm this. Titchenal (1998) conducted archaeological monitoring at Malama Cultural Park, within which is Malama Platform, and also the former location of Kala'iakamanu Church. This is near Site 50-60-03-890, the remains of the former Kaunakakai Pier. Five subsurface features were encountered during monitoring, and included four features of historic age (19th and 20th centuries) and one of indeterminate age.

In 2006, a survey was completed on a 5-acre parcel where the Kaunakakai Fire Station is currently located (McGerty and Spear 2006). This area was once a part of Molokai Ranch pasturelands and straddles the boundary of Kaunakakai and Kapa'akea Ahupua'a. No identifiable archaeological features were present due to past alteration of the landscape.

An archaeological assessment was conducted southeast of the current project area for the addition of the Verizon Wireless H12 Kaunakakai Cell site, located in the vicinity of the Moloka'i Education Center (Dye and Jourdan 2006). No significant sites were recorded during past construction of the Moloka'i Education Center and the assessment yielded no surface or subsurface historic properties within the vicinity.

An archaeological study including an historic literature review was completed for the improvement to a wastewater system for the Kaunakakai Elementary School (Hammatt 2008). Located adjacent to and northwest of the current project area, no archaeological surface features were identified during the study. In addition, the establishment of the school's campus in 1908 qualified it as an historic property. In 2010, archaeological monitoring concluded that no significant historical sites were observed (Madeus 2010).

Archaeological monitoring was carried out for soil boring at 60 Maluolu Place, to the west of the current project location (Desilets 2011). No findings were reported, and the area was found to be heavily disturbed.

Archaeological monitoring was recently performed for improvements to portions of Duke Maliu Field (Medrano and Dega 2013). Ground disturbing work included excavations for fence posts, sprinklers, drains, and a building foundation, as well as tree removal and paving, conducted within a portion of the current project area. No findings were reported.

Archaeological monitoring is currently taking place for improvements to the Kaunakakai Wharf (McElroy and Elison in prep.). Excavations were carried out on the wharf itself and within a corridor of Kaunakakai Place. Two archaeological sites were found. Site 50-60-03-2514 is an historic wall located on Kaunakakai Place, across the street from the Molokai Burger driveway. The site is thought to be associated with pursuits of the American Sugar Company, which was active in the region during the early 20th century, although nothing was recovered to indicate a more precise age or function of the wall. Site 50-60-03-2523 is an historic wall buried below the Kaunakakai Wharf. It is likely a tie beam that functions as structural support for the wharf and may date to 1928, when the old wooden wharf was replaced with a concrete one.

Settlement Pattern

Research on pre-Contact Kaunakakai reveals that the coastal region was frequently used as a safe and protected canoe landing and launching point. With fresh water springs preventing the growth of coral, a natural harbor was formed. Most of the *mo'olelo* as well as early historic references to Kaunakakai present it as a destination for those traveling by boat.

Subsistence likely focused on coastal resources, as the region is too dry for wetland agriculture. Fishponds occur to the east of the project area, and Kaunakakai was known for harvesting of the *aloalo* shrimp. Cultivation of crops occurred in spring-fed areas and along the two main watercourses of the region, Kamiloloa and Kaunakakai Stream. Dryland agriculture, focusing on sweet potato cultivation, was likely practiced on the slopes above the town.

The settlement pattern for the central region of Moloka'i's southern shore suggests that the coastal habitation zone was populated by the 13th century, with the *mauka* portions being settled by the 15th century (Weisler 1989). The upland zones were the location of agricultural activities and much of the existing archaeological research has recorded the presence of primarily temporary shelters among other site types (Weisler 1989). Archaeological studies have shown that the swampy coastal areas affected by tidal levels were not ideal for settlement and habitation (Tomonari-Tuggle 1990:54). Because of this, and the presence of fresh water in Kaunakakai Stream, the coastal flat *mauka* of this swamp became the center of the area's settlement.

Historic period use of Kaunakakai focused on sugar and ranching interests. This largely occurred after 1897, when large expanses of land were purchased to form the Molokai Ranch by a group who would later become the American Sugar Company. This prompted the construction of the

Kaunakakai Wharf, which became a major port around which subsequent urban development was centered.

Summary of Background Research and Anticipated Finds

Background research revealed that the original name for Kaunakakai was Kaunakahakai. As the setting for a number of different *mo'olelo*, the area was an important place in traditional Hawaiian times. Traditionally, the coastal zone was used as a canoe landing and also supported a small population, while upland areas were used for agriculture and were settled later. Two *heiau*, Kamalae and Mahinahina were known for the area.

The region's significance continued into the historic era, when Kamehameha V made his home, Malama, on the shores of Kaunakakai. Constructed at the turn of the 19th century, Kaunakakai Wharf played a vital role in the development of Kaunakakai as the urban center of Moloka'i. The wharf was a hub for commerce and entry to the island and a railroad once connected the wharf to other parts of Moloka'i.

Previous archaeological studies yielded nothing of significance in the immediate vicinity of the project area. The nearest historic property is Kaunakakai Elementary School, which was constructed in 1908. Farther west of the project area, previous research has documented traditional subsurface midden deposits, as well as historic subsurface features related to the Kaunakakai Wharf and surrounding structures.

Based on *mo'olelo*, land use, settlement patterns, and previous archaeological studies, along with the rich historical significance of Kaunakakai, expected archaeological finds during subsurface testing can be surmised. Due to the presence of highly culturally significant structures west of the current project area, both traditional and historic cultural features and deposits may be present. These may include midden deposits, human burials, tools and flakes, as well as historic artifacts. Features associated with the historic Kaunakakai town, Kaunakakai Elementary School, and the railroad may also be encountered and may consist of hewn stones, paving, glass, ceramics, nails, and railroad materials.

METHODS

The subsurface testing portion of the archaeological inventory survey was conducted on September 3, 2013 by Steven Eminger and Windy McElroy, PhD. Eminger returned on October 25, 2013 to complete the pedestrian survey. McElroy served as Principal Investigator, overseeing all aspects of the project.

Consultation was carried out from January 2013 to September 2013 with April Shiotani, Capital Improvements Project Coordinator for the County of Maui Parks, Planning, and Development. This was done by telephone and email. Shiotani did not know of any archaeological resources within the project area. Consultation was carried out with SHPD in person and via email with Deona Naboa from June 2013 to August 2013. Naboa met with the Principal Investigator to review background research that was conducted prior to fieldwork and determine the number and placement of trenches to be excavated.

Although the entire 13.145-acre project area has been developed into grassy fields (Figure 18), a pedestrian survey was conducted to determine if any surface archaeological remains are present in the project area. This consisted of a 100% ground cover survey of the property and project area with transects spaced 10–20 m apart. The project area is landscaped with mown grass, thus vegetation did not hinder the survey in any way and visibility was excellent.

Subsurface testing was conducted to assess the stratigraphy and potential for subsurface cultural deposits to provide a synthetic overview of the cultural history of the area. This was completed in nine locations throughout the survey area, as determined in consultation with SHPD. The nine trenches covered an area of .012 acres, so that .09% of the property and project area were covered. Trenches were excavated with a backhoe and were excavated to the water table. Wall profiles were drawn and photographed, and sediments were described using Munsell soil color charts and a sediment texture flowchart (Thien 1979). All trenches were backfilled after excavation. Trench locations were recorded with a Garmin GPSmap 62st, which was accurate to 5 m during the survey.

The scale in all field photographs is marked in 10 cm increments. The north arrow on all maps points to magnetic north. Throughout this report rock sizes follow the conventions outlined in *Field Book for Describing and Sampling Soils*: Gravel <7 cm; Cobble 7–25 cm; Stone 25–60 cm; Boulder >60 cm (Schoeneberger 2002:2–35).



Figure 18. Excavation of Trench 2, facing west, showing landscaping of the park.

RESULTS

Pedestrian survey of the parcel did not identify any historic properties, as nearly the entire parcel has been landscaped for use as ballfields and recreational areas. Nevertheless, 100% of the property was covered during the surface survey. The perimeter of the parcel was given special attention, as these zones represented the least disturbed landscapes on the property. In addition, the areas of the park that are patches of bare ground (open patches within the grass) were thoroughly inspected to identify cultural material that may be on the surface, and none was found.

A total of nine trenches were excavated throughout the park to get an understanding of the stratigraphy throughout the area and to identify any possible cultural material or deposits that might be present (Figure 19). This strategy of testing both within and outside the areas proposed for park improvements was suggested by SHPD so that future work in any part of the park will not require an archaeological inventory survey. Stratigraphy generally consisted of alluvium with natural marine sand below (Table 2). Isolated glass fragments were found within one of the trenches but no cultural deposits or other cultural resources were encountered.

Trench 1 was located on the southwest side of the park in the area proposed for parking lot expansion (see Figure 19). The trench measured 7.4 m long, .73 m wide, and was oriented at 110°. The water table was encountered at 99 cm below surface (cmbs) and excavation was halted at 107 cmbs. Stratigraphy consisted of silty clay loam alluvium at the surface with two layers of natural marine sand below (Figure 20). A utility line cut through the east side of the trench within the alluvial layer at 41 cmbs.

Trench 2 was placed 40 m northwest of Trench 1 in the southwest corner of the park (see Figure 19). The trench measured 8 m long, .73 m wide, and ran at an orientation of 150°. The water table was encountered at 98 cmbs and excavation ceased at 102 cmbs. Stratigraphy was composed of two layers of alluvium with a basal layer of natural marine sand (Figure 21). A utility line cut through the center of the trench within the Layer I alluvium at 28 cmbs. The Layer II alluvium layer was very dark in color and had an oily smell.

Two isolated glass fragments and sparse natural marine shell were noted within Layer II (Table 3). The first glass piece consisted of a neck fragment with a broken mouth. It measured approximately 1 cm long and 1 cm in diameter. The glass was clear in color with patination. A vertical seam runs up the side with a horizontal seam just below the lip. Due to the fragmentary nature of the bottle top it is unknown whether the seam ran into the mouth of the bottle. By all appearances it looks to be a machine-made medicine bottle due to the nature and placement of the seams. These were typical of the 1920s or '30s, although the date of this piece cannot be determined from the small fragment that was recovered.

The second piece consisted of the top portion of a light, transparent amber gold bottle. The lip was broken and was only complete to the shoulder, and vertical seams were evident on both sides. This fragment measured approximately 10 cm long and possibly had a crown top. By all appearances it seems to be mid-20th century beer bottle. As the two glass fragments were found within the Layer II alluvium, it can be surmised that this layer dates to the mid-20th century.

Trench 3 was located 115 m northeast of Trench 2 in the northwest corner of the park (see Figure 19). The trench measured 7 m long, .73 m wide, and was oriented at 108°. The water table was encountered at 138 cmbs and excavation was halted at 147 cmbs. Stratigraphy consisted of silty clay alluvium at the surface with two layers of natural marine sand below (Figure 22).



Figure 19. Location of Trenches 1–9 within Duke Maliu Field.

Table 2. Sediment Descriptions

Location	Layer	Depth (cmbs)	Color	Description	Interpretation
TR 1	I	0-71	10YR 3/4	Silty clay loam; utility line on east end at 41 cmbs; 2% roots; 1% rocks; smooth, very abrupt boundary.	Alluvium
	II	71-89	10YR 6/3	Coarse sand; smooth, very abrupt boundary.	Marine Sand, Natural
	III	89-107+	10YR 5/3	Coarse sand, very wet; water table at 99 cmbs; base of excavation.	Marine Sand, Natural
TR 2	I	0-75	10YR 3/4	Silty clay loam; utility line near center of trench at 28 cmbs; 2% roots; 1% rocks; smooth, very abrupt boundary.	Alluvium
	II	75-86	10YR 2/1	Silty clay; bottle glass near center of trench at 78-83 cmbs; natural marine shell; 0% roots, 2% rocks; smooth, very abrupt boundary.	Alluvium
	III	86-102+	10YR 6/3	Coarse sand, very wet; water table at 98 cmbs; base of excavation.	Marine Sand, Natural
TR 3	I	0-91	7.5YR 2.5/3	Silty clay; 2% roots; 1% rocks; smooth, abrupt boundary.	Alluvium
	II	91-107	10YR 6/4	Medium sand; smooth, abrupt boundary.	Marine Sand, Natural
	III	107-147+	10YR 5/1	Coarse sand, very wet; water table at 138 cmbs; base of excavation.	Marine Sand, Natural
TR 4	I	0-22	7.5YR 3/2	Silty clay loam; 2% roots; 1% rocks; smooth, abrupt boundary.	Alluvium
	II	22-160	7.5YR 3/3	Clay loam; 0% roots; 2% rocks; smooth, abrupt boundary.	Alluvium
	III	160-179+	10YR 2/2	Silty clay, very wet; water table at 174 cmbs; base of excavation.	Alluvium
TR 5	I	0-160	7.5YR 2.5/3	Silty clay; utility line on north side at 122 cmbs; 2% roots; 1% rocks; smooth, very abrupt boundary.	Alluvium
	II	160-162	Gley 2 5/5B	Sandy clay; 0% roots; 2% rocks; smooth, very abrupt boundary.	Intrusive Lens
	III	162-164	Gley 2 6/5PB	Coarse sand; smooth, very abrupt boundary.	Intrusive Lens
	IV	164-264+	Gley 2 4/10B	Loamy sand, very wet; natural marine shell; water table at 262 cmbs; base of excavation.	Marine Sand, Natural

Table 2. (Continued)

Location	Layer	Depth (cmbs)	Color	Description	Interpretation
TR 6	I	0-25	10YR 3/6	Clay loam; 2% roots; 1% rocks; smooth, very abrupt boundary.	Alluvium
	II	25-41	10YR 5/1	Sandy clay loam; 0% roots; 2% rocks; smooth, very abrupt boundary.	Alluvium
	III	41-148	7.5YR 2.5/2	Silty clay; 0% roots; 2% rocks; smooth, very abrupt boundary.	Alluvium
	IV	148-173	2.5Y 5/1	Sandy loam; 0% roots; 2% rocks; smooth, very abrupt boundary.	Alluvium
TR 7	I	0-83	7.5YR 2.5/2	Silty clay; 2% roots; 1% rocks; smooth, gradual boundary.	Alluvium
	II	83-99	10YR 6/4	Coarse sand; smooth, abrupt boundary.	Marine Sand, Natural
	III	99-112	10YR 5/1	Coarse sand; water table at 110 cmbs; smooth, very abrupt boundary.	Marine Sand, Natural
	IV	112+	N/A	Solid sedimentary rock; base of excavation.	Bedrock
TR 8	I	0-82	5YR 3/3	Silty clay ; utility line on northwest end at 55 cmbs; 2% roots; 1% rocks; smooth, abrupt boundary.	Alluvium
	II	82-100	10YR 5/4	Coarse sand, mottled; smooth, abrupt boundary.	Marine Sand, Natural
	III	100-128	10YR 5/1	Coarse sand, mottled; smooth, very abrupt boundary.	Marine Sand, Natural
	IV	128-175+	Gley 2 4/5PB	Loamy sand, very wet; natural marine shell; water table at 170 cmbs; base of excavation.	Marine Sand, Natural
TR 9	I	0-45	7.5YR 2.5/3	Silty clay; 2% roots; 1% rocks; smooth, abrupt boundary.	Alluvium
	II	45-73	10YR 5/8	Coarse sand; smooth, abrupt boundary.	Marine Sand, Natural
	III	73--109+	10YR 4/1	Coarse sand, mottled; water table at 99 cmbs; base of excavation.	Marine Sand, Natural

Table 3. Artifact Data

Artifact	Provenience	Measurements	Color	Possible Age/Use
Bottle Fragment	TR 2, 78–83 cmbs	1 cm tall; originally 1 cm in diameter	Clear	1920s–1930s medicine bottle
Bottle Fragment	TR 2, 78–83 cmbs	10 cm tall; diameter uncertain due to missing lip	Amber	Mid-20 th century beer bottle

Trench 4 was placed 100 m southeast of Trench 3, on the west side of the park maintenance building (see Figure 19). The trench measured 7 m long, .73 m wide, and ran at an orientation of 8°. The water table was encountered at 174 cmbs and excavation ceased at 179 cmbs. Stratigraphy was composed of three layers of alluvium (Figure 23).

Trench 5 was located 75 m east of Trench 4, on the east side of the park maintenance building (see Figure 19). The trench measured 7.2 m long, .73 m wide, and was oriented at 2°. The water table was encountered at 262 cmbs and excavation was halted at 264 cmbs. Stratigraphy consisted of silty clay alluvium at the surface and a basal layer of natural marine sand, with two thin sandy lenses in between (Figure 24). Natural marine shell was scattered throughout the sand layer. A utility line cut through the north side of the trench within the alluvial layer at 122 cmbs.

Trench 6 was placed 50 m northeast of Trench 5, on the northwest side of the baseball field (see Figure 19). The trench measured 7 m long, .73 m wide, and ran at an orientation of 80°. The water table was encountered at 272 cmbs and excavation ceased at 275 cmbs. Stratigraphy was composed of four layers of alluvium with natural marine sand below (Figure 25). Natural marine shell was scattered throughout the sand layer.

Trench 7 was located 75 m southeast of Trench 6, on the outskirts of the baseball field (see Figure 19). The trench measured 7.8 m long, .73 m wide, and was oriented at 160°. The water table was encountered at 110 cmbs and excavation was halted at 112 cmbs upon hitting bedrock. Stratigraphy consisted of silty clay alluvium at the surface underlain by two layers of natural marine sand sitting atop a base of sedimentary rock (Figure 26).

Trench 8 was placed 70 m south of Trench 7, on the east side of the park (see Figure 19). The trench measured 7.5 m long, .73 m wide, and ran at an orientation of 130°. The water table was encountered at 170 cmbs and excavation ceased at 175 cmbs. Stratigraphy was composed of silty clay alluvium at the surface with three layers of natural marine sand below (Figure 27). Natural marine shell was scattered throughout the basal sand layer. A utility line cut through the northwestern side of the trench within the alluvial layer at 55 cmbs.

Trench 9 was located 100 m southwest of Trench 8, in the southeast corner of the park (see Figure 19). The trench measured 7.1 m long, .73 m wide, and was oriented at 60°. The water table was encountered at 99 cmbs and excavation was halted at 109 cmbs. Stratigraphy consisted of silty clay alluvium at the surface underlain by two layers of natural marine sand (Figure 28).

Summary of Results

In sum, a pedestrian survey was conducted and nine trenches were excavated throughout the Duke Maliu Regional Park in Kaunakakai, Moloka'i. Stratigraphy generally consisted of alluvium atop natural marine sand. The trenches were excavated to the water table, which occurred between 98 and 272 cmbs in various areas of the park. Isolated glass fragments were found within one of the trenches but no cultural deposits or other cultural resources were encountered. Nothing was found during the pedestrian survey.

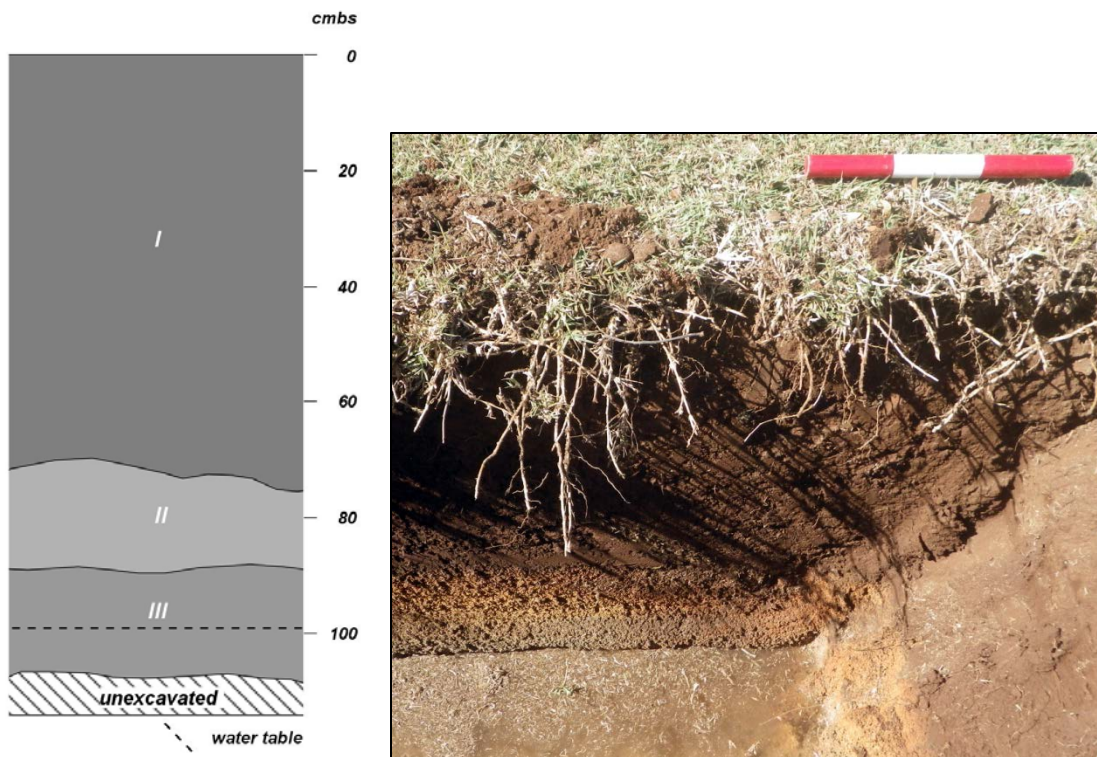


Figure 20. Trench 1 south face profile drawing and photo.

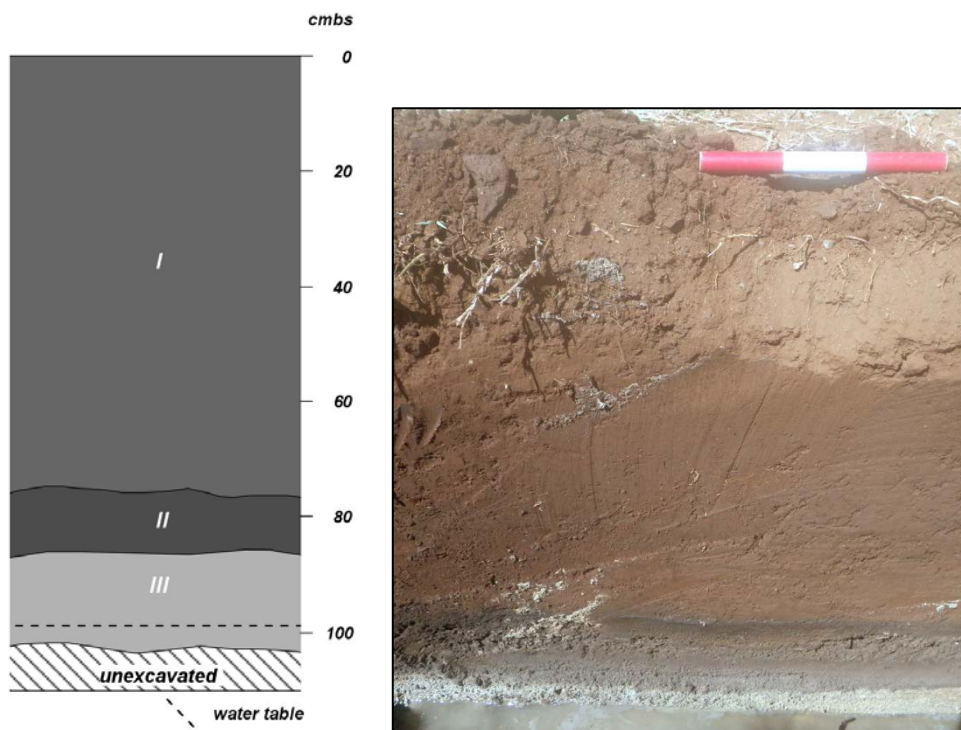


Figure 21. Trench 2 southwest face profile drawing and photo.

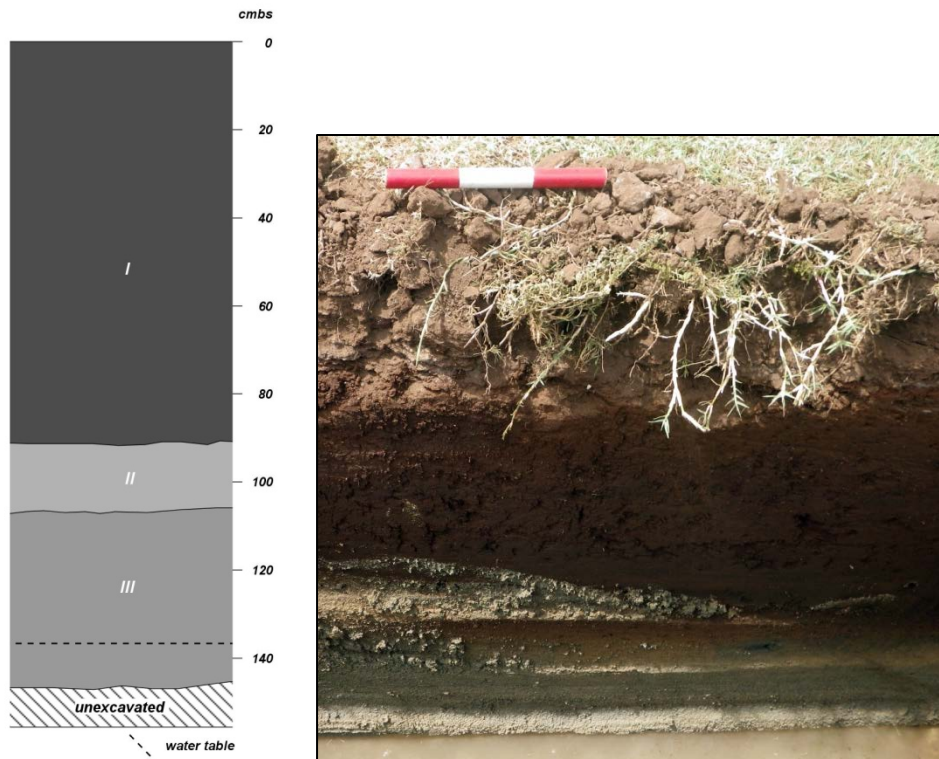


Figure 22. Trench 3 south face profile drawing and photo. Note that it appears that additional layers are present in the photo, but these are the result of smearing from the backhoe bucket.

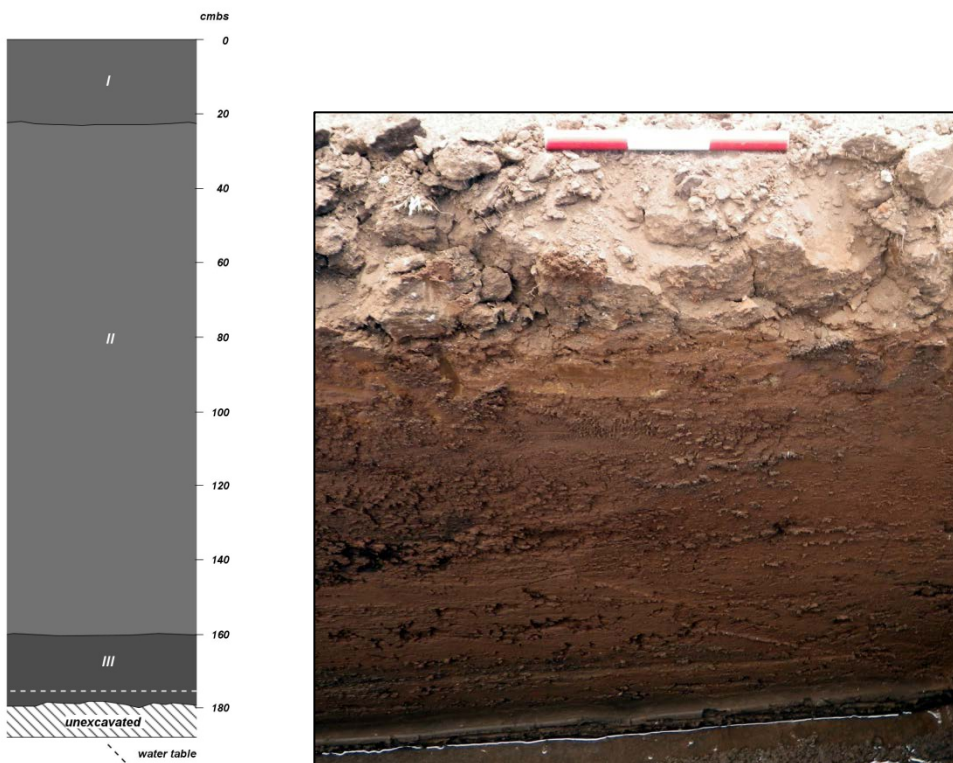


Figure 23. Trench 4 east face profile drawing and photo.

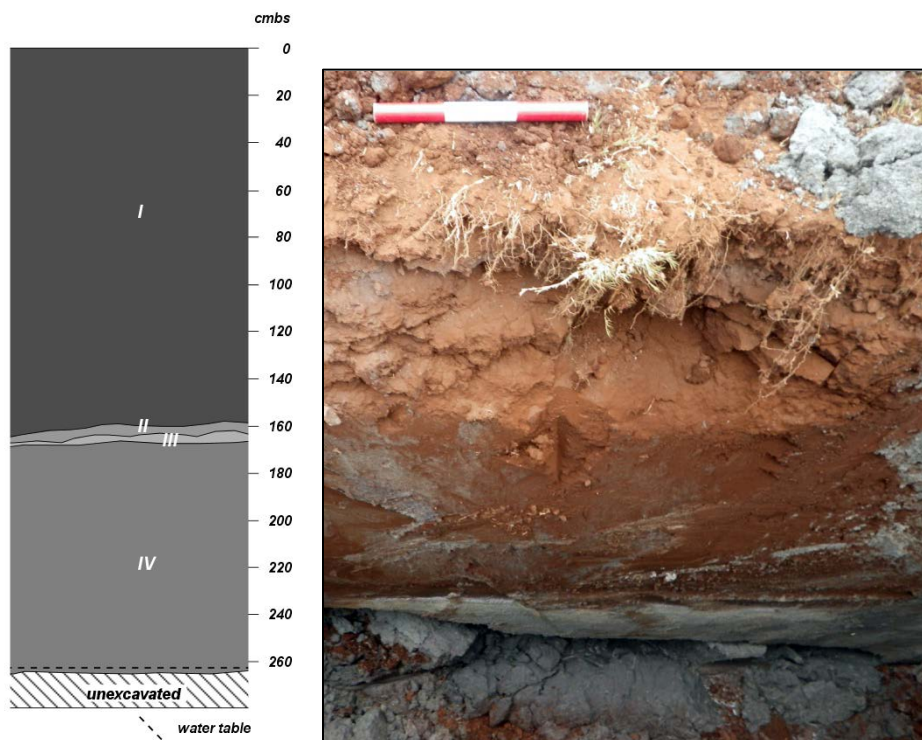


Figure 24. Trench 5 east face profile drawing and photo.

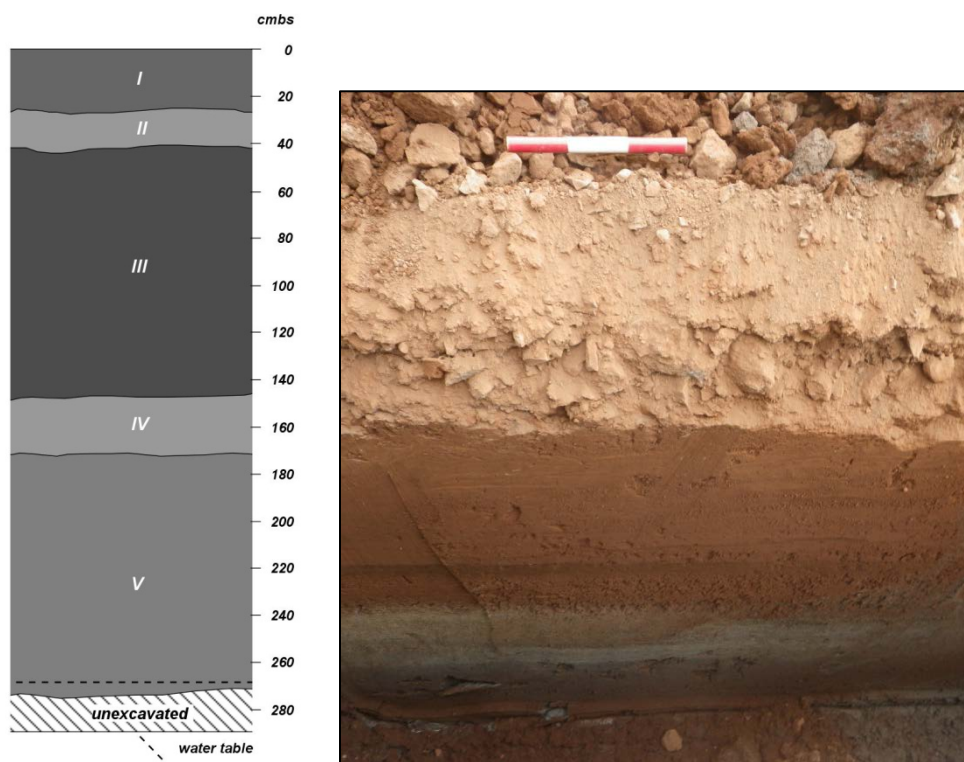


Figure 25. Trench 6 northwest face profile drawing and photo.

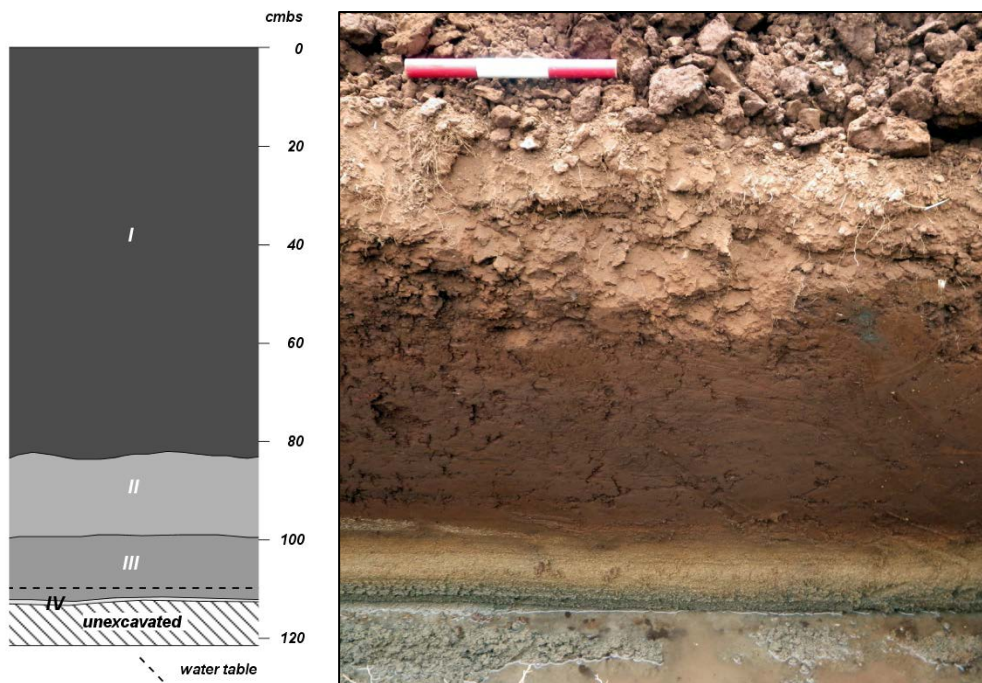


Figure 26. Trench 7 southwest face profile drawing and photo.

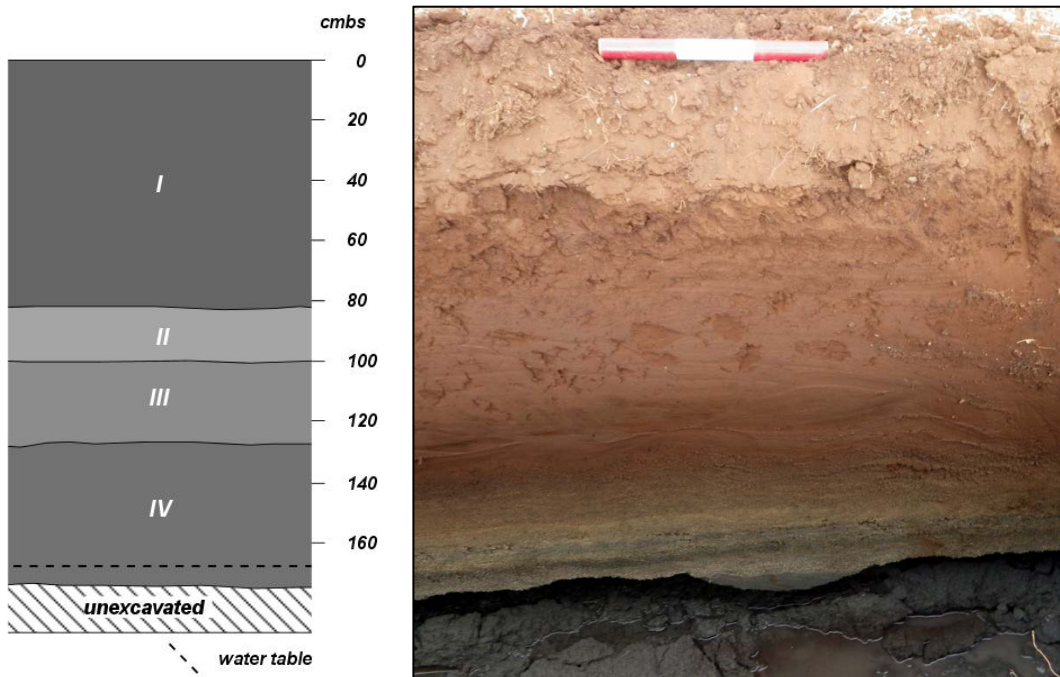


Figure 27. Trench 8 northeast face profile drawing and photo.

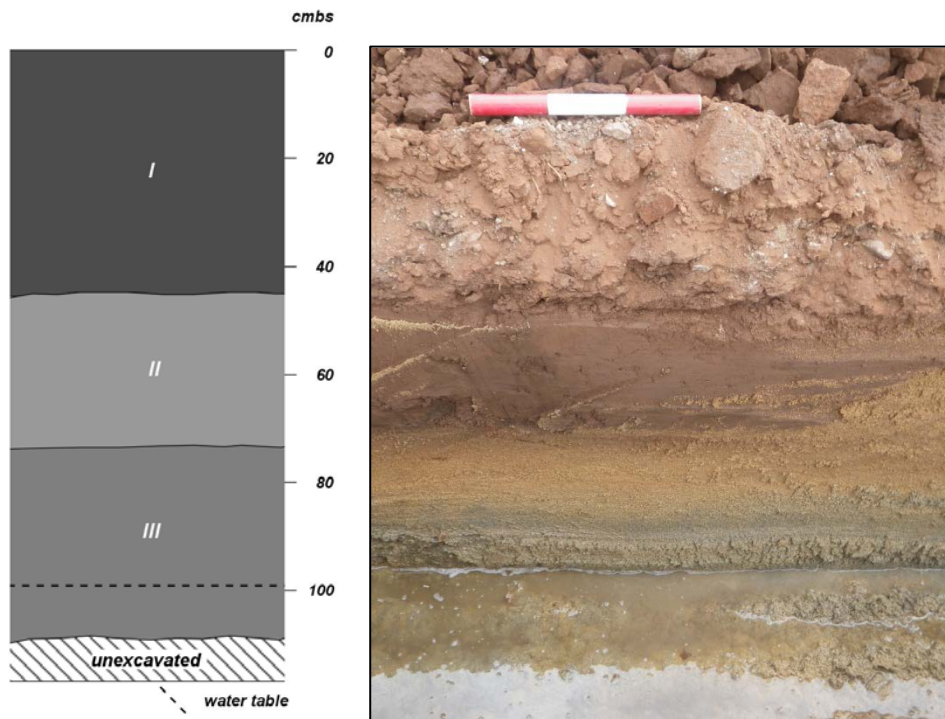


Figure 28. Trench 9 southeast face profile drawing and photo.

SUMMARY AND RECOMMENDATIONS

An archaeological assessment was conducted for the Duke Maliu Regional Park at TMK: (2) 5-3-003:012 in Kaunakakai Ahupua'a, Kona District, on the island of Moloka'i. The assessment consisted of a pedestrian surface survey and the excavation of nine trenches throughout the park. This was done to determine the nature of stratigraphy in the area and to identify cultural material or deposits that might be present on the property in anticipation of park improvements. Proposed improvements in the near future include expansion of the parking lot and replacement of lights on the softball field. The strategy of testing both within and outside the areas proposed for park improvements was suggested by SHPD so that future work in any part of the park will not require an archaeological inventory survey.

The nine trenches were excavated to the water table, which ranged from 98–272 cmbs in various areas of the park. Two isolated glass fragments were found in one of the trenches that were likely part of mid-20th century bottles. Aside from these glass fragments, no cultural material or deposits were encountered during trenching and no surface cultural remains were identified during the pedestrian survey. Park improvements at TMK: (2)5-3-003:012 in Kaunakakai will therefore have no effect on significant historic properties because significant historic properties were not found on the parcel.

Because of the negative findings of this study, archaeological monitoring is not recommended for construction activity at Duke Maliu Regional Park. It should be noted, however, that it is possible for isolated human burial remains to be discovered during construction activities, even though no evidence of human burials was found during trenching. Should human burial remains be discovered during construction activities, work in the vicinity of the remains should cease and the SHPD should be contacted.

GLOSSARY

<i>ahupua‘a</i>	Traditional Hawaiian land division usually extending from the uplands to the sea.
alfalfa	<i>Medicago sativa</i> , also known as lucerne, a flowering plant in the pea family, widely grown as a forage crop.
algaroba	See <i>kiawe</i> .
<i>ali‘i</i>	Chief, chiefess, monarch.
<i>ali‘i nui</i>	High chief.
<i>aloalo</i>	Squilla (<i>Pseudosquilla ciliata</i> , <i>Lysiosquilla maculata</i>), a crustacean considered a delicacy.
boulder	Rock 60 cm and greater.
cobble	Rock fragment ranging from 7 cm to less than 25 cm.
gley	A soil horizon in which the material is bluish gray or blue-gray, more or less sticky, compact, and often structureless. It is developed under the influence of excessive moisture.
gravel	Rock fragment less than 7 cm.
<i>heiau</i>	Place of worship and ritual in traditional Hawai‘i.
<i>kahua</i>	Open place for sports, such as ‘ulu maika.
<i>kama‘āina</i>	Native-born.
<i>kapa</i>	Tapa cloth.
<i>kiawe</i>	The algaroba tree, <i>Prosopis</i> sp., a legume from tropical America, first planted in 1828 in Hawai‘i.
<i>kōlea</i>	The Pacific golden plover <i>Pluvalis dominica</i> , a bird that migrates to Hawai‘i in the summer; the native trees and shrubs <i>Myrsine</i> , the sap and charcoal of which were used as a dye, the wood used for houses and for beating <i>kapa</i> .
<i>kōnane</i>	A traditional Hawaiian game played with pebbles on a wooden or stone board.
<i>konohiki</i>	The overseer of an <i>ahupua‘a</i> ranked below a chief; land or fishing rights under control of the <i>konohiki</i> ; such rights are sometimes called <i>konohiki</i> rights.
<i>kuleana</i>	Right, title, property, portion, responsibility, jurisdiction, authority, interest, claim, ownership.
<i>Māhele</i>	The 1848 division of land.
<i>makai</i>	Toward the sea.

<i>makana</i>	Gift, reward, prize.
<i>manini</i>	The surgeonfish <i>Acanthurus triostegus</i> , common in Hawaiian waters.
<i>mauka</i>	Inland, upland, toward the mountain.
midden	A heap or stratum of refuse normally found on the site of an ancient settlement. In Hawai‘i, the term generally refers to food remains, whether or not they appear as a heap or stratum.
<i>mo‘o</i>	Lizard, dragon, water spirit.
<i>mo‘olelo</i>	A story, myth, history, tradition, legend, or record.
<i>‘ohana</i>	Family.
<i>‘ōhi‘a</i>	Two kinds of forest trees. See also <i>o ‘ōhi‘a ‘ai</i> and <i>‘ōhi‘a lehua</i> .
<i>‘ōhi‘a ‘ai</i>	The mountain apple tree, <i>Eugenia malaccensis</i> , a forest tree to 50 ft.high.
<i>‘ōhi‘a lehua</i>	The native tree <i>Metrosideros polymorpha</i> , the wood of which was utilized for carving images, as temple posts and palisades, for canoe spreaders and gunwales, and in musical instruments.
<i>‘ōlelo no‘eau</i>	Proverb, wise saying, traditional saying.
<i>pili</i>	A native grass, <i>Heteropogon contortus</i> .
<i>poi</i>	A staple of traditional Hawai‘i, made of cooked and pounded taro mixed with water to form a paste.
<i>pu‘u</i>	Hill, mound, peak.
stone	Rock fragment ranging from 25 cm to less than 60 cm.
<i>‘ulu maika</i>	Stone used in the <i>maika</i> game, similar to bowling.

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