FINAL—Archaeological Monitoring Report for Rehabilitation of Localized Streets: ʻAiea Heights and Ulune Street Intersection Project, ʻAiea Ahupuaʻa, ʻEwa District, Island of Oʻahu

City & County Right-of-Way on TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062 (por.)

Prepared For:

City and County of Honolulu Department of Design and Construction
650 S. King Street
Honolulu, HI 96813

June 2020

Keala Pono Archaeological Consulting, LLC ● PO Box 1645, Kāneʻohe, HI 96744 ● Phone 808.381.2361

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Prepared By:

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MANAGEMENT SUMMARY

Archaeological monitoring was conducted for ground disturbing activity associated with the ʻAiea Street Rehabilitation Project located in ʻAiea Ahupuaʻa, ʻEwa District, on the island of Oʻahu. The area that was monitored covers the Honolulu City & County Right-of-Way at the intersection of ʻAiea Heights Drive and Ulune Street on portions of TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062. Archaeological monitoring was performed under the Keala Pono's Permit to Conduct Archaeological Activities in the State of Hawaiʻi for the Calendar Year 2019 (Permit# 19-03). Archaeological monitoring was called for in a Chapter 6E-8 Historic Preservation Review letter, dated September 6, 2016 (Log No. 2016.01479, Doc No. 1608GC15) (Appendix A). There were no findings.

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INTRODUCTION

At the request of Grace Pacific, Keala Pono Archaeological Consulting conducted archaeological monitoring on behalf of the City and County of Honolulu Department of Design and Construction for the Rehabilitation of Localized Streets: ʻAiea Heights and Ulune Street Intersection Project in ʻAiea Ahupuaʻa, ʻEwa District, on the island of Oʻahu, Hawaiʻi. The primary focus of the monitoring was on the identification and appropriate treatment of historic properties that might be affected by construction.

Archaeological monitoring was conducted in accordance with an archaeological monitoring plan (Farley and Shideler 2016) reviewed and accepted by the Hawaiʻi State Historic Preservation Division (SHPD). This report meets the requirements and standards of state historic preservation law, including Chapter 6E of the Hawaiʻi Revised Statutes, and SHPD's *Rules Governing Standards for Archaeological Monitoring Studies and Reports* (§13–279).

The report begins with a description of the project area and a 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 and technical terms are defined in a glossary at the end of the document.

Project Location and Description

The project area is within the road right-of-way at the intersection of ʻAiea Heights Drive and Ulune Street on portions of TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062 (Figures 1 and 2). The project area is located in ʻAiea Ahupuaʻa, ʻEwa District, on the island of Oʻahu. While ground disturbance covered a larger area, the archaeological monitoring plan called for monitoring only within the ʻAiea Heights Drive/Ulune Street intersection (Farley and Shideler 2016). The project area covers an area of approximately .4 ha (.1 ac.).

Descriptions of the project are provided in the archaeological monitoring plan for the project:

> The proposed project at the intersection of ʻAiea Heights Drive and Ulune Street is part of a larger project for the rehabilitation of localized streets within ʻAiea, ʻAiea Heights, and Hālawa. Street rehabilitation will include the resurfacing and reconstruction of asphalt pavements, cold planing, the adjustment of utility manholes and manhole frames and covers, the installation of pavement markers and vehicle loop detectors, the reconstruction of existing concrete curb and/or gutters and sidewalks, and the installation of concrete curb ramps and signage. In addition, the project will require the installation of new duct lines and traffic signal standards along ʻAiea Heights Drive and Ulune Street. While the bulk of the proposed work will not extend below the existing pavement substratum, anticipated excavation for the traffic signal work at the intersection of ʻAiea Heights Drive and Ulune Street will extend to a maximum depth of 6 feet (ft) below surface... (Farley and Shideler 2016:i)

A SHPD review letter dated September 6, 2016 (Log No. 2016.01479, Doc No. 1608GC15) indicated a determination of "no historic properties affected with implementation of a SHPD-accepted archaeological monitoring plan for TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062" and that "No archaeological monitoring is required at other project locations" (Appendix A) Therefore archaeological monitoring was only conducted within the ʻAiea Heights Drive/Ulune Street intersection portion of the construction project.

Figure 1. Project area on a 7.5 minute Waipahu quadrangle map (USGS 2017).

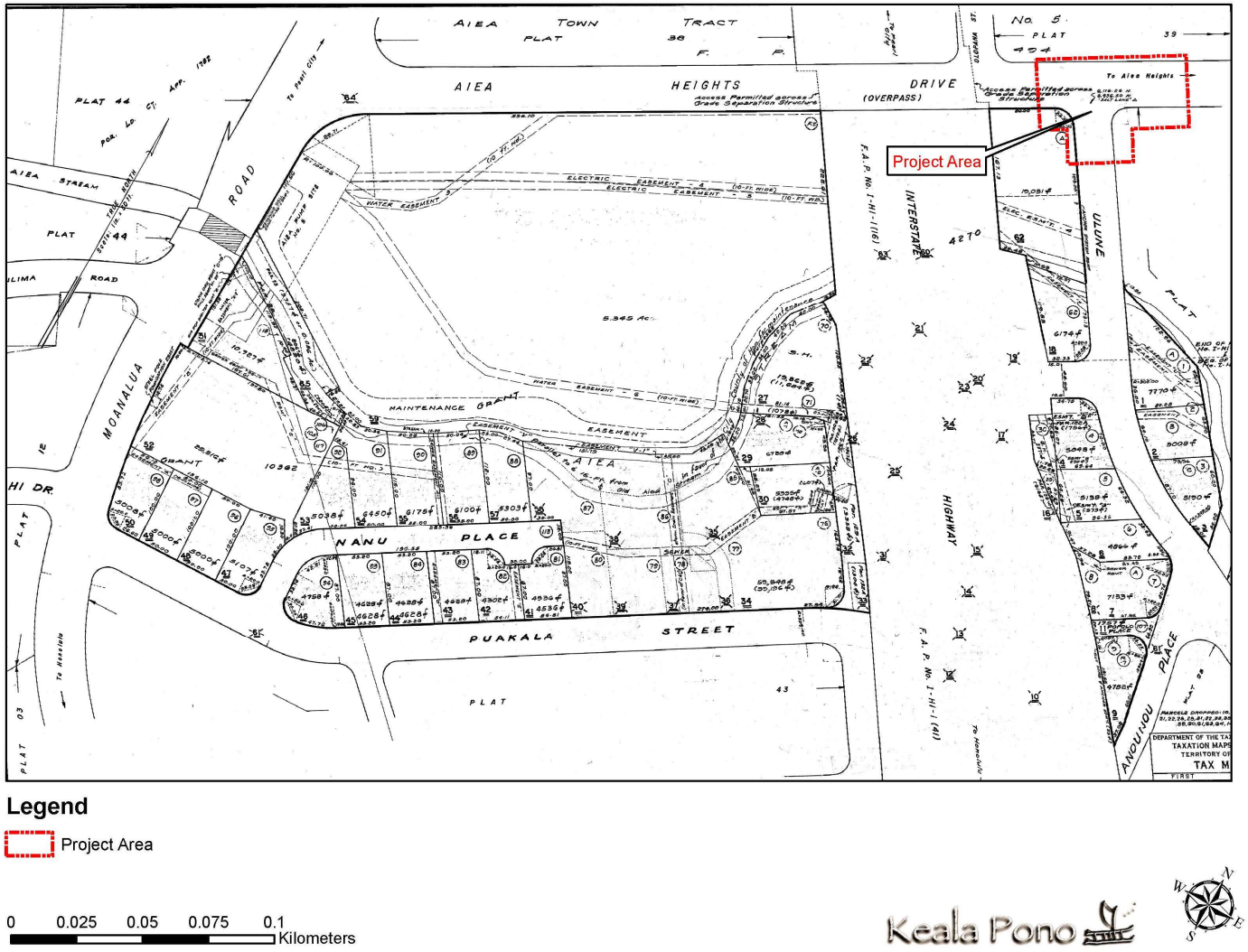

Figure 2. Project area on TMK plat (1) 9-9-042 (State of Hawai'i 1954).

Physical Environment

ʻAiea lies between the neighborhoods of Hālawa and Pearl City on the leeward side of Oʻahu. The general project area is located within an urbanized residential neighborhood, with a few small patches of green spaces scattered among housing, streets, and businesses. Vegetation is sparse to non-existent, as the specific project area lies within the roadway. ʻAiea Stream, an intermittent drainage, lies 75 m (246 ft.) south of the project. Rainfall averages 90 cm (35 in.) per year (Giambelluca et al. 2013), and terrain at the ʻAiea Heights Drive/Ulune Street intersection is flat to gently sloping.

The project is situated below the slopes of the Koʻolau Mountains, approximately 800 m (.5 mi.) inland from the coast at ʻAiea Bay, at an elevation of roughly 60 m (197 ft.) above mean sea level. The Koʻolau volcano is relatively old, having ceased activity approximately one million years ago (Macdonald et al. 1983:298). Pearl Harbor, south of ʻAiea, formed as the island of Oʻahu sank and the river valleys of the Koʻolau Mountains submerged (Macdonald et al. 1983:424). This is described further in the classic geological text *Volcanoes in the Sea*:

> …during the Kaena (plus-29–30-meter) stand a delta of silt and sand grew into the bay near Aiea and Pearl City…Later, sea level dropped to the Waipio (minus-18-meter) level, and the streams flowing across the sediments in the old bay, cut valleys into them…The sea level rose again, to the Waimanalo stand, 7.5 meters above present sea level. The valleys were drowned, branching embayments were formed, and again sediments were deposited at the head of the bay…(Macdonald et al. 1983:425–426)

Soils within the project area consist of Waipahu silty clay 0–2% slopes (WzA), with areas of Waipahu silty clay 6–12% slopes (WzC); Lahaina silty clay 3–7% slopes (LaB); Lahaina silty clay 7–15% slopes, severely eroded (LaC3); Hanalei silty clay 2–6% slopes (HnB); Ewa silty clay loam 3–6% slopes (EaB); and Rock land (rRK) nearby (Foote et al. 1972) (Figure 3). Waipahu series soils developed in alluvium and are used for sugarcane and housing (Foote et al. 1972:134). Lahaina series soils developed from weathered igneous rock and are mostly used for sugarcane and pineapple (Foote et al. 1972:78). Hanalei series soils developed in alluvium and are used for pasture, sugarcane, taro, and vegetables (Foote et al. 1972:38). Ewa series soils also developed from alluvium; they are used for sugarcane, pasture, and truck crops (Foote et al. 1972:29). Rock land consists of places where exposed rock covers 25–90% of the ground surface (Foote et al. 1972:119).

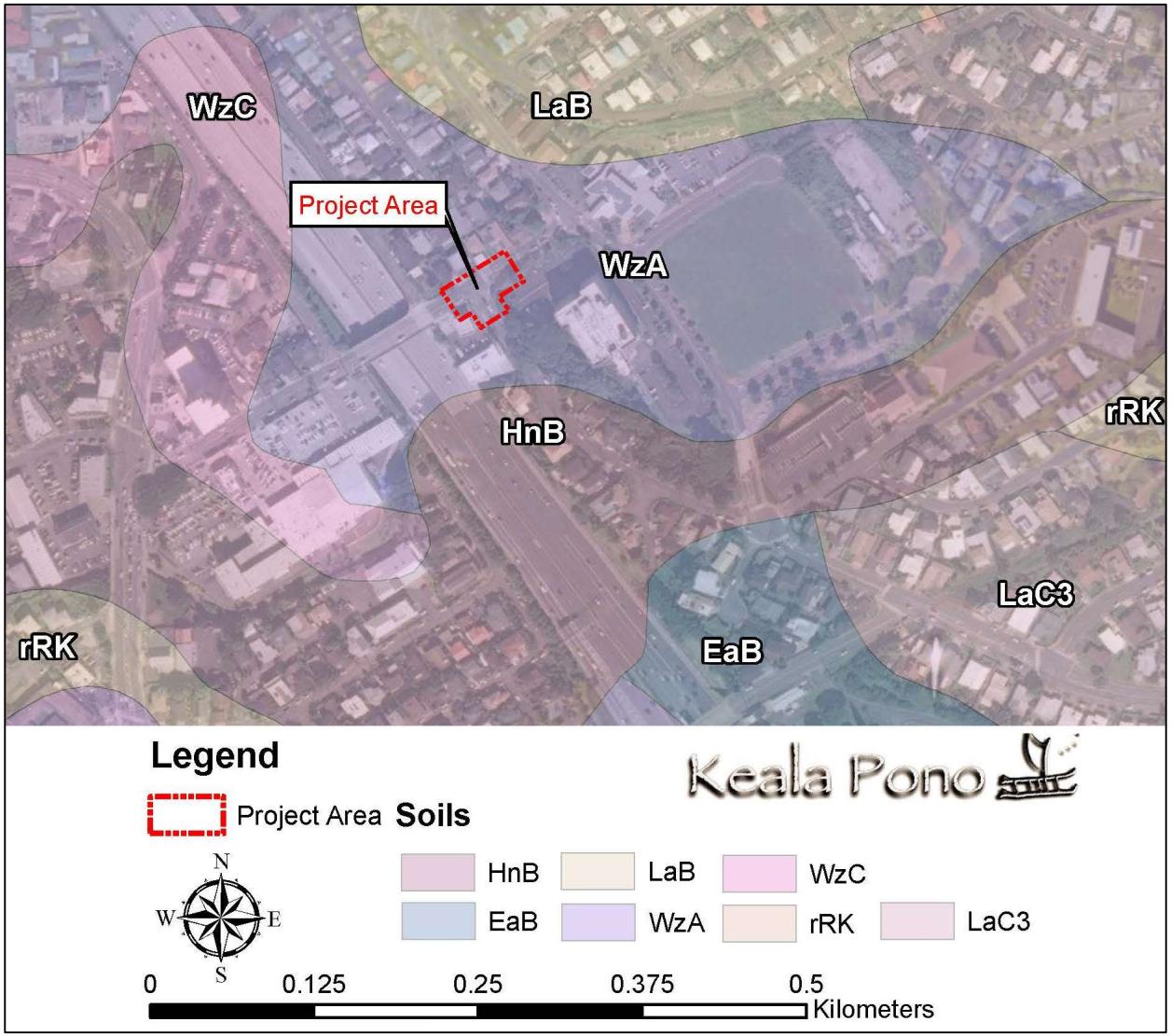

Figure 3. Soils in the vicinity of the project area (data from Foote et al. 1972).

BACKGROUND

This chapter presents traditional and historic background information for the project region, including discussions of land use, Hawaiian proverbs and moʻolelo, Māhele land tenure data, historic maps, and a summary of previous archaeological research. Research was conducted at the Hawaiʻi State Library, the SHPD library, and online at the Office of Hawaiian Affairs website (OHA n.d.) and the Department of Accounting and General Services (DAGS n.d.), Avakonohiki (n.d.), and Ulukau (n.d.) databases. Archaeological reports, historic maps, and historical reference books were among the materials examined.

ʻAiea in the Pre-Contact Era (Prior to 1778)

ʻAiea is one of 12 ahupuaʻa in the ʻEwa moku, or district, of Oʻahu on the leeward side of the Koʻolau mountain range. The other ahupuaʻa that make up this moku are Hālawa, Kalauao, Waimalu, Waiau, Waimano, Manana, Waipiʻo, Waikele, Hōʻaeʻae, and Honouliuli. ʻAiea is located between Kalauao and Hālawa, and extends from the East Loch of Pearl Harbor and generally follows the ʻAiea Stream to a mountain peak known as Puʻu ʻUaʻu. ʻAiea, is named for the ʻaiea (*Nothocestrum*) tree or shrub (Pukui et al. 1974). Puʻu ʻUaʻu is named for the ʻuaʻu bird, or dark rumped petrel (Pukui et al. 1974).

Not much is written about ʻAiea in the pre-Contact era, though nearby ahupuaʻa such as Kalauao and Hālawa, and the moku of ʻEwa in general, are mentioned more in the historical literature. This does not mean that ʻAiea did not play an important role in history or was insignificant. Early accounts reference the fishponds at Puʻuloa (known today as Pearl Harbor) and its rich resources, along with loʻi kalo (taro patches). It may be that passersby, who traveled the nearby ʻEwa to Honolulu trails, had little reason to go into the uplands because of the rich resources near the coast, therefore not much was written about it.

The geography and traditional land use of ʻEwa Moku is described by Handy and Handy (1972). Taro, yams, bananas, and ʻawa are noted for the region, although it is not clear if these were grown specifically in ʻAiea.

> The salient feature of ʻEwa, and perhaps its most notable difference, is its spacious coastal plain, surrounding the deep bays (ʻlochs') of Pearl Harbor, which are actually the drowned seaward valleys of ʻEwa's main streams, Waikele and Waipiʻo…The lowlands, bisected by ample streams, were ideal terrain for the cultivation of irrigated taro. The hinterland consisted of deep valleys running far back into the Koʻolau range. Between the valleys were ridges, with steep sides, but a very gradual increase of altitude. The lower parts of the valley sides were excellent for the culture of yams and bananas. Farther inland grew the ʻawa for which the area was famous. The length or depth of the valleys and the gradual slope of the ridges made the inhabited lowlands much more distant from the wao, or upland jungle, than was the case on the windward coast. Yet the wao here was more extensive, giving greater opportunity to forage for wild foods in famine time. (Handy and Handy 1972: 469)

Handy and Handy (1972) continue by describing ʻEwa Moku as providing a variety of resources, such as birds, wauke, mamaki, olonā, as well as wild bananas and yams:

> In the interior was the same avifauna, including the birds whose feathers were prized for feather capes, helmets, and lei making. In fact this, with its spacious wao inland, was the region were these birds were most numerous. There were more extensive areas also where wauke and mamaki, which supplied bast for the making of tapa, grew in

> abundance. In fact, ʻEwa was famous for its mamaki. There was, too, much olona grown in the interior, and wild bananas and yams flourished. (Handy and Handy 1972:470)

The native kalo to ʻEwa was rather unique and described as producing a tasty variety of poi. Called kāī, it is said to have made a poi that was a favorite of aliʻi, and sometimes reserved for them. Kāī is defined as "a variety of taro, the corms of which are fragrant when cooked and, though tough, yield excellent poi. Kinds are qualified by the terms ʻeleʻele, kea, keʻokeʻo (said to be reserved for chiefs), koi, nenene, pala, ʻulaʻula, uliuli, welo, ʻeka" (Pukui 2003). It was so famous that ʻEwa became known as Kāī o ʻEwa (Handy and Handy 1972).

ʻEwa is defined to mean "crooked" and refers to a moʻolelo about how the district was named:

> When Kane and Kanaloa were surveying the islands they came to Oahu and when they reached Red Hill saw below them the broad plains of what is now Ewa. To mark boundaries of land they would throw a stone and where the stone fell would be the boundary line. When they saw the beautiful land lying below them, it was their thought to include as much of the flat level land as possible. They hurled the stone as far as the Waianae range and it landed somewhere in the Waimanalo section. When they went to find it, they could not locate the spot where it fell. So Ewa (strayed) became known by that name. The stone that strayed. (Sterling and Summers 1978:1)

Another saying, *ʻEwa, ka ʻāina o nā aliʻi*, or *ʻEwa, land of chiefs*, originated because the district was known as a favorite residence for chiefs (Sterling and Summers 1978:1), likely due to its abundant fishponds. One named pond is known for ʻAiea Ahupuaʻa. Located at its boundary with Hālawa Ahupuaʻa this pond, Loko Kahakupōhaku (also spelled Kahupōhaku), was adjacent to another, Loko Kailapaia. Loko Kailapaia was on the Hālawa side of the ahupuaʻa boundary, and Loko Kahakupōhaku was on the ʻAiea side. The stone wall that separated these two fishponds was aligned with a few notable islets further in the depths of Pearl Harbor called Na Maka O Hālawa or "The Eyes of Hālawa." Loko Kahakupōhaku is illustrated on an 1873 map as one small and one large pond (see Figure 4). On a map drawn one year later the two ponds are shown in the configuration noted above (see Figure 5).

All of the marine resources throughout Hālawa, as with elsewhere across Hawaiʻi, were guarded by ʻaumakua who were either identified in a shark or lizard form and whose memories have been kept in the oral traditions of the islands (e.g., Beckwith 1970:138–139; *Na Wahi Pana o Ewa* [1899] in Sterling and Summers 1978:50).

ʻŌlelo Noʻeau

In 1983, Mary Kawena Pukui published a volume of close to 3,000 ʻōlelo noʻeau that she collected throughout the islands. The introductory chapter reminds us that if we know these proverbs and wise sayings well, then we will know Hawaiʻi well (Pukui 1983). Although no ʻōlelo noʻeau were found specifically for ʻAiea, several proverbs suggest that life was prosperous in ʻEwa, which was once the political center of the island. They describe the district as a fishing ground with pearl oysters, having the best taro for eating, and a land of dusty red dirt which can redden the water. The following ʻōlelo noʻeau are quoted from Pukui's book, *ʻŌlelo Noʻeau Hawaiian Proverbs and Poetical Sayings* (Pukui 1983).

> ʻĀina koi ʻula i ka lepo.
> *Land reddened by the rising dust.*
> Said of ʻEwa, Oʻahu.

Anu o ʻEwa i ka iʻa hāmau leo e. E hāmau!

ʻEwa is made cold by the fish that silences the voice. Hush!

A warning to keep still. First uttered by Hiʻiaka to her friend Wahineʻomaʻo to warn her not to speak to Lohiʻau while they were in a canoe near ʻEwa.

ʻEwa kai lumalumaʻi.

ʻEwa of the drowning sea.

An epithet applied to ʻEwa, where kauwā were drowned prior to offering their bodies in sacrifice.

ʻEwa nui a Laʻakona.

Great ʻEwa of Laʻakona.

Laʻakona was a chief of ʻEwa, which was prosperous in his day.

Haunāele ʻEwa i ka Moaʻe.

ʻEwa is disturbed by the Moaʻe wind.

Used about something disturbing, like a violent argument. When the people of ʻEwa went to gather pipi (pearl oyster), they did so in silence, for if they spoke, a Moaʻe breeze would suddenly blow across the water, rippling it, and the oysters would disappear.

He kai puhi nehu, puhi lala ke kai o ʻEwa.

A sea that blows up nehu fish, blows up a quantity of them, is the sea of ʻEwa.

He lōʻihi o ʻEwa; he pali o Nuʻuanu; he kula o Kulaokahuʻa; he hiki mai koe.

ʻEwa is a long way off; Nuʻuanu is a cliff; Kulaokahuʻa is a dry plain; but all will be here before long.

Said of an unkept promise of food, fish, etc. Oʻahu was once peopled by evil beings who invited canoe travelers ashore with promises of food and other things. When the travelers asked when these things were coming, this was the reply. When the visitors were fast asleep at night, the evil ones would creep in and kill them.

I Waialua ka poʻina a ke kai, o ka leo ka ʻEwa e hoʻolono nei.

The dashing of the waves is at Waialua, but the sound is being heard at ʻEwa.

Sounds of fighting in one locality are quickly heard in another.

Ka iʻa hāmau leo o ʻEwa.

The fish of ʻEwa that silences the voice.

The pearl oyster, which has to be gathered in silence.

Ka iʼa kuhi lima o ʻEwa.

The gesturing fish of ʻEwa.

The pipi, or pearl oyster. Fishermen did not speak when fishing for them but gestured to each other like deaf-mutes.

Ke kai heʻe nehu o ʻEwa.

The sea where the nehu come in schools to ʻEwa.

Nehu (anchovy) come by the millions into Pearl Harbor. They are used as bait for fishing, or eaten dried or fresh.

Ke one kuilima laula o ʻEwa.

The sand on which there was a linking of arms on the breadth of ʻEwa.

ʻEwa, Oʻahu. The chiefs of Waikīkī and Waikele were brothers. The former wished to destroy the latter and laid his plot. He went fishing and caught a large niuhi, whose skin he stretched over a framework. Then he sent a messenger to ask his brother if he would keep a fish for him. Having gained his consent, the chief left Waikīkī, hidden with his best warriors in the "fish." Other warriors joined them along the way until there was a large army. They surrounded the residence of the chief of Waikele and linked arms to form a wall, while the Waikīkī warriors poured out of the "fish" and destroyed those of Waikele.

Ku aʻe ʻEwa; Noho iho ʻEwa.

Stand-up ʻEwa; Sit-down ʻEwa.

The names of two stones, now destroyed, that once marked the boundary between the chiefs' land (Kuaʻe ʻEwa) and that of the commoners (Noho iho ʻEwa) in ʻEwa, Oʻahu.

O ʻEwa, ʻaina kai ʻula I ka lepo.

ʻEwa, land of the sea reddened by earth.

ʻEwa was once noted for being dusty, and its sea was reddened by mud in time of rain.

Ua ʻai I ke kāī-koi o ʻEwa.

He has eaten the kāī -koi taro of ʻEwa.

Kāī is Oʻahu's best eating taro; one who has eaten it will always like it. Said of a youth or a maiden of ʻEwa, who, like the kāī taro, is not easily forgotten.

Pearl Harbor

Puʻuloa is the Hawaiian name for the place that has now become called Pearl Harbor. It translates to "long hill" (Pukui et al. 1974), and was referred to that for "the rounded area projecting into the sea at the long narrow entrance of the harbor" (Handy and Handy 1972:469). It is often described and seen on historic maps as "Pearl River," for the pearl oysters that were once prevalent in the water. The coastal end of ʻAiea Ahupuaʻa is located in what is now known as the East Loch of Pearl Harbor.

Puʻuloa was home to two guardian sharks, Kaʻahupahau ("well-cared for feather cloak") and her brother Kahiʻuka ("smiting tail"). Kaʻahupahau is said to have guarded people from being molested by sharks and lived in an underwater cave at the entrance of Puʻuloa. Kahiʻuka lived in an underwater cave at Mokuʻumeʻume (now known as Ford Island). They were not considered to be man-eating sharks and were taken care of by a kahu, who would feed them and keep them clean. In one moʻolelo, a chiefess named Papio tried to take a lei from the kahu that she had been wearing, but the kahu refused and Papio later stole the lei. Kaʻahupahau, hearing of this, killed Papio. The shark goddess felt remorse for killing the chiefess and established a law that no shark would kill a human in her waters (Sterling and Summers 1978:54–56). It is also noted that the rule that "no shark must bite or attempt to eat a person in Oahu's waters" was an ancient law (Kamakau 1964). Kaʻahupahau and Kahiʻuka would prevent this from ever happening and ensured that all other sharks followed the law. It was also a tradition that no leis or flowers would be worn in the waters or sacred places of Puʻuloa (Sterling and Summers 1978:54–56).

Outlines of numerous fishponds can be seen on historic maps along the shoreline of Pearl Harbor, including Loko Opu, Loko Kunana and Loko Kahakupōhaku. In *Archaeology Oʻahu*, J.G. McAllister describes Pearl Harbor as having more fishponds than any other place on Oʻahu (McAllister 1933). Most of the ponds are now gone, having been destroyed or filled in, and the

land used as real estate or part of the U.S. Navy's operations. The famous pipi, or pearl oysters, that the area was named after also disappeared. There were many varieties, including nahawele, kupekala and mahamoe.

The following account tells of how the oysters of Pu'uloa disappeared:

> The kahu of the sea and pipi lived at Palea. One day, a woman from Manana [Pearl City] went crabbing in the sea of Kaholona. The pipi were thick and plentiful there. As she thought not one was watching, she grabbed some pipi at the same time as she reached for crabs. She was found out and her hulilau gourd container was broken and thrown into the sea. The kahu also fined her 25 cents. The woman consented to pay the fine saying, 'The money is at home.' So the kahu went home with her to get the quarter. He knotted it in a flap of his malo and returned to Palea. When he reached his home, he discovered that he had lost the quarter and he was very disappointed.
>
> Kanekuaana was the famous mo'o [lizard] god of 'Ewa and it was Kanekuaana who was credited with bringing the pipi to Puuloa from Kahiki. Continuing the story, the kahu, after returning to Palea, became possessed by Kanekuaana. The mo'o god said to those in the house, 'I am returning to Kahiki and am taking all the pipi with me. They will not return until all the descendants of this woman are dead. Only then shall the pipi be returned. I go to sleep. Do not awaken my medium until he wakes up of his own accord.' The kahu slept for four days and four nights. During that time, the pipi vanished from all the places where they were once so abundantly found. To this day, they have not returned to the shores of Puuloa. (*Ka Loea Kalai 'Āina* 1899)

Pipi could still be found in Pu'uloa in 1870, according to Handy and Handy (1972), therefore they likely disappeared sometime between 1870 and the printing of the above story in 1899.

'Aiea in the Historic Era

When the first Westerners arrived in the Hawaiian archipelago in 1778, the islands were not yet united under one sovereign. At that time, 'Aiea and the entire island of O'ahu were under the rule of Chief Kahahana. In 1783, Chief Kahahana's reign was ended with the invasion and victory of Chief Kahekili of Maui. This would forever be the end of O'ahu's independence as a separate island kingdom. When Chief Kahekili died in 1794, control of O'ahu went to his son Kalanikūpule. The following year, Chief Kamehameha of Hawai'i Island invaded O'ahu to engage Kalanikūpule in battle. Kamehameha overwhelmed Kalanikūpule's warriors, effectively gaining control of all the islands from Hawai'i to O'ahu. Eventually, Kamehameha would make a peaceful agreement with Chief Kaumuali'i of Kaua'i, bringing that island and Ni'ihau into the fold and thereby uniting the Hawaiian archipelago under one rule (Kamakau 1996, Kanahele 1995).

It is recorded that in 1778 James Cook became the first westerner to see the Hawaiian Islands. Following Cook, a wave of other western explorers landed on Hawai'i's shores. Around the same time as the arrival of the first westerners to Hawai'i, O'ahu was experiencing major political changes. It was during this time, as mentioned above, that O'ahu's sovereignty ended with the invasion of the Maui chiefs, and the Maui rule was subsequently overcome by the invasion of the forces from Hawai'i Island when all of the islands were united under Kamehameha I in 1795.

There are very few mentions of 'Aiea in early historical accounts. One of these comes from an early visitor, George Mathison, who notes the interests of the king in the area:

> We passed over a long cultivated plain, varied by occasional ravines, for a distance of twenty miles, and about two o'clock reached Pearl River, so called from the pearls which are found in small quantities in its bed … The sea here forms a small bay, which has the appearance of a salt-water lake, being landlocked on every side except at the narrow

> entrance. Two or three small streams, too insignificant to merit the appellation of rivers discharge their united waters into the bay, which is full six miles in length and two in breadth. The adjoining low country is overflowed both naturally and by artificial means, and is well stocked with tarrow-plantations, bananas, etc. The land belongs to many different proprietors; and on every estate there is a fishpond surrounded by a stone wall, where the fish are strictly preserved for the use of their rightful owners, or tabooed, as the natives express it. One of the particularly large dimensions belongs to the King. (Mathieson 1825:416–417)

Māhele Land Tenure

Following the unification of the islands in 1795, Kamehameha I awarded 9,000 acres of Hālawa Ahupua‘a (adjacent to ‘Aiea on the east) to his foreign aides John Young and Isaac Davis for their aid in the unification effort. When Davis died in 1810, his property was passed down to his wife and daughters, but John Young Sr. commented in 1825 about how some of Davis’ property was taken away:

> On his decease, he had possessed many lands or farms in different islands, given him by Tamahamaah for his faithful services, which afterward became the property of his wife and daughters, but some have lately been taken from them by some of the covetous chiefs now in power. (Macrae 1972:42-44)

Later, in 1847, Davis’ son wrote to the Minister of Interior Keoni Ana, who happened to be John Young’s son, about the division of the Hālawa lands:

> Only one land was given jointly by the King [Kamehameha I] to our parents [Isaac Davis and John Young]; that was Halawa, in Ewa, Oahu. One side of it has been lost to someone else…” (G.H. Davis to Keoni Ana, 30 December 1847, Barrere’s translation 1994)

Davis died in 1810 after being poisoned. He had warned Kaua‘i’s King Kaumuali‘i of a plot by Kamehameha’s chiefs to kill him, and it is believed the poison intended for Kaumuali‘i was given to Davis. It is unclear if Davis’ land in Hālawa remained with his family or if it was returned back to Kamehameha I. Scotsman Archibald Campbell, who worked for Kamehameha I for a short period of time, also had land along the Pearl River, but it is not certain where this land was located or if it was part of Davis’ land.

Early descriptions of the area also give clues regarding land ownership. In about 1817, Kotzebue, a Russian explorer, wrote about this visit to Honolulu:

> The scenery is here uncommonly picturesque; fields and villages intermingled with woods of cocoa and banana trees … We passed the possessions of Young and Holmes, which the King had given them; and which were considerable, and well cultivated. (Kotzebue 1967:345–346)

Around the same time, Glynn Barratt describes an account by French botanist Chamisso:

> There were other settlements of no great size and other coconut plantations, as well as properties presented by Kamehameha I to his ‘minister,’ John Young and to a well-respected Massachusetts man, Oliver Holmes … The estates were beautifully tended by Hawaiian labourers. Even though the sun was high, the air was suddenly made noisy by Hawaiian bats (‘opeape‘a), and Kotzebue shot one so he could examine it. (Barratt 1988:59)

Several decades later, during the reign of Kamehameha III in 1848, sweeping changes were made to the traditional land tenure system. This was called the Māhele. This proclamation allowed the

king to divide land ownership between three groups of people: the king, the chiefs, and the commoners. The new system of land tenure was another influence of Westerners in Hawai‘i:

> THE MAHELE is rightfully considered one of the most significant chapters in the modern history of Hawai'i. Several legislative acts during the period 1845-1855 codified a sweeping transformation from the centuries-old Hawaiian traditions of royal land tenure to the western practice of private land ownership. (Moffat and Fitzpatrick 1995)

The king enacted the Māhele intending for it to provide the Native Hawaiian population with an irrevocable land base they would own. The process that the commoners needed to follow to secure their land titles consisted of filing a claim with the Land Commission; having their land claim surveyed; testifying in person on behalf of their claim; and submitting their final Land Commission Award (LCA) to get a binding royal patent (Moffat and Fitzpatrick 1995). However, in actuality, the vast majority of the native population never received any Land Commission Awards recognizing their land holdings due to several reasons such as their unfamiliarity with the process, their distrust of the process, and/or their desire to cling to their traditional way of land tenure. In 1850, the king passed another law, this one allowing foreigners to buy land. This further hindered the process of natives securing lands for their families.

All of ‘Aiea Ahupua‘a was designated as Crown Lands during the Māhele, and there are no LCAs recorded in the immediate vicinity of the project area. By the 1870s, ownership of the adjacent Hālawa Valley had fallen into the hands of foreigners Dowsett and Williams, who in turn leased the land for ranching operations, dairy production, and sugarcane enterprises.

Late-Historic Land Use

Following an influx of immigrants in the 19th century, including those from many Asian countries, demand for kalo declined and rice increased. Lo‘i patches once used for kalo were abandoned and this created an opportunity for the Chinese to use the lo‘i lands for rice production. By the mid-19th century, the majority of lo‘i lands on O‘ahu had been turned into rice fields. In 1892, there were about 76 acres of rice planted in ‘Aiea and the adjacent ahupua‘a of Kalauao (Coulter and Chun 1937:21).

Whereas a brief stint of sugar cultivation occurred in ‘Aiea in the 1850s, sugar plantations did not emerge in earnest until the late 19th century in the ahupua‘a. Originally consisting of 4,000 acres of sugar land that extended along the shoreline of Pearl Harbor and up the hillsides, the Hālawa Plantation Company was established in 1898. When ‘Aiea lands were cleared for sugar planting, the ‘aiea shrub for which the ahupua‘a was named was decimated. The Hālawa Plantation Company name was changed in 1899 to Honolulu Plantation Company, and the project lands were sublet to Honolulu Sugar Company. This latter enterprise constructed a sugar mill and refinery not far from the project area to the east. It was a prosperous operation and helped create Old ‘Aiea Town, which served as the hub for the community. Much of the ‘Ewa Plain was being used for sugar production by the early 1900s, with plantations extending from the Pearl Harbor area to where the Honolulu International Airport is located today. In 1901, a narrow-gauge railway was constructed to transport cane from Hālawa’s lower fields to the Aiea Sugar Mill. By the 1930s, more than 23,000 acres of ‘Aiea land were controlled by the Honolulu Plantation Company.

Another major factor in shaping historic-era Hālawa was the buildup of the American military. The overthrow of the Hawaiian government by mostly foreign businessmen backed by the American military in 1893, and the subsequent supposed annexation of Hawai‘i by the U.S. in 1898 set the scene for permanent American presence. It should be noted that the narrative which chronicles the U.S. annexation is not a narrative that is accepted by all. Another equally recognized narrative explains that the overthrow of the monarchy was illegal and not accepted by large segments of

both the Hawaiian and American populations at the time, and therefore Hawai‘i has been under a prolonged American military occupation since then. Still, following the war with Spain in the Philippines, and worried by the expansion of Japanese influence, the U.S. viewed Hawai‘i’s geographic location as extremely strategically valuable. Pearl Harbor, formerly known as Pu‘uloa, was selected to base American naval forces. By the mid-1900s, the imposition of the American military in Pearl Harbor irretrievably destroyed traditional Hawaiian management systems of the land and sea resources of the area.

By the mid-1900s, operations at the Honolulu Plantation Company ended after they lost much of their land to the U.S. military to build Hickam Field and associated roads and infrastructure, as well as residential housing. For a few years during World War II, the sugar refinery in ‘Aiea was used by the U.S. Army as a lookout tower. California and Hawaiian Sugar Company (C&H) bought the Honolulu Plantation Company and continued running it until the 1990s when it was sold to Alexander & Baldwin Properties. Crazy Shirts, a clothing manufacturer, then bought the property in hopes of renovating it and using it as a corporate headquarters. Costs for the renovation proved too high however, and the Aiea Sugar Mill was demolished in 1998.

Historic Maps

Historic maps help in visualizing what the project area was like in times past and depict the changes that have taken place in the region over the years. The series of five maps presented here illustrate the project area from the late-19th to early-20th centuries.

The earliest map dates to 1873 and shows the project area at the intersection of two roads (Figure 4). A “White Bridge” was just south of the project, and aside from the roads and bridge, no man-made structures are illustrated in the vicinity. The ahupua‘a boundaries are labeled as “Old Boundary,” and several place names are shown in ‘Aiea. Kalo lands, coconut trees, and a few possible structures are makai of the project area. Loko Kahakupōhaku is depicted at the coast.

The next map, drawn one year later, shows the same basic features (Figure 5). Notably, Loko Kailapaia and Loko Kahakupōhaku are both illustrated—the former in Hālawa Ahupua‘a and the latter in ‘Aiea. Names of foreigners are written on the map, including a Dr. J.S. McGrew, who appears to have owned a house in ‘Aiea. The ‘auwai of the large lo‘i system are illustrated, with their source labeled as “Springs.”

An 1897 map depicts a windmill and a well to the southwest of the project area (Figure 6). What appear to be marshlands extend through almost all of lower ‘Aiea, from the road to the coast (note that there is no key on the map). The “Oahu Railroad” is indicated as the heavy line that crosses the mouth of “Aiea Creek.” It continues northwest into Kalauao, where it turns southwest to follow the natural topography.

The next map, drawn one year later, shows the presence of the sugar industry in the region (Figure 7). The project area sits within Honolulu Sugar Co. lands and the “Government Road to Honolulu.” There is also a “New Government Road” to the west, with a series of large rectangular structures situated between the two roads. Rice and taro lands are depicted to the west of the project area, and a hospital is located near the coast.

The final map dates to 1910–1925 and shows property belonging to the Honolulu Sugar Co. (Figure 8). The project area is situated between a sugar mill and what is labeled as “Mill Site.” Many more structures are now shown, as well as numerous LCA plots southwest of the new Government Road. Also depicted are windmills, tanks, a store, sheds, and structures labeled as “DWG” (dwellings). “Wooden Pipe Lines (Syphons)” are illustrated to the east of the sugar mill.

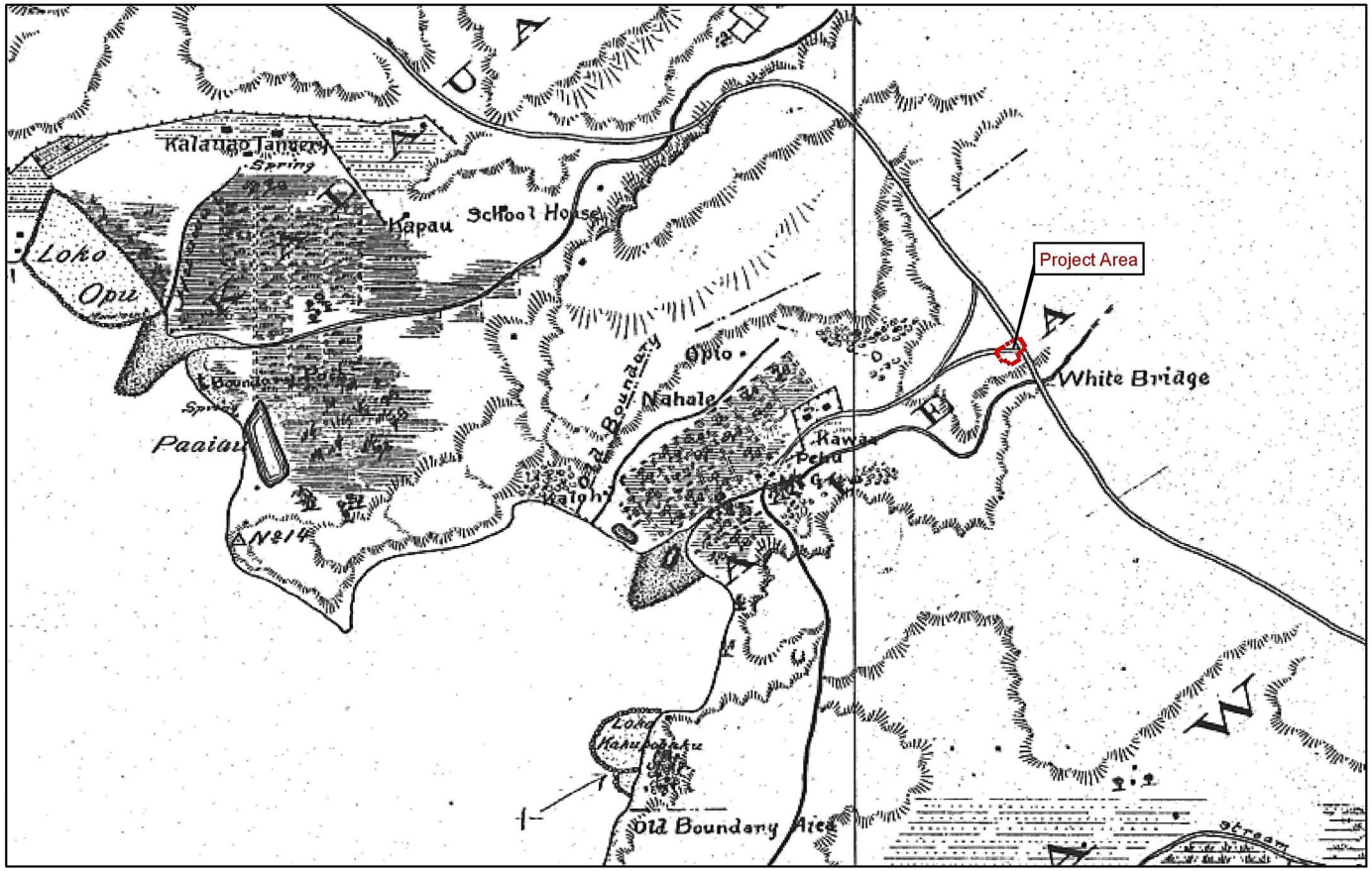

Figure 4. Portion of an early map of Pearl Lochs (Alexander et al. 1873).

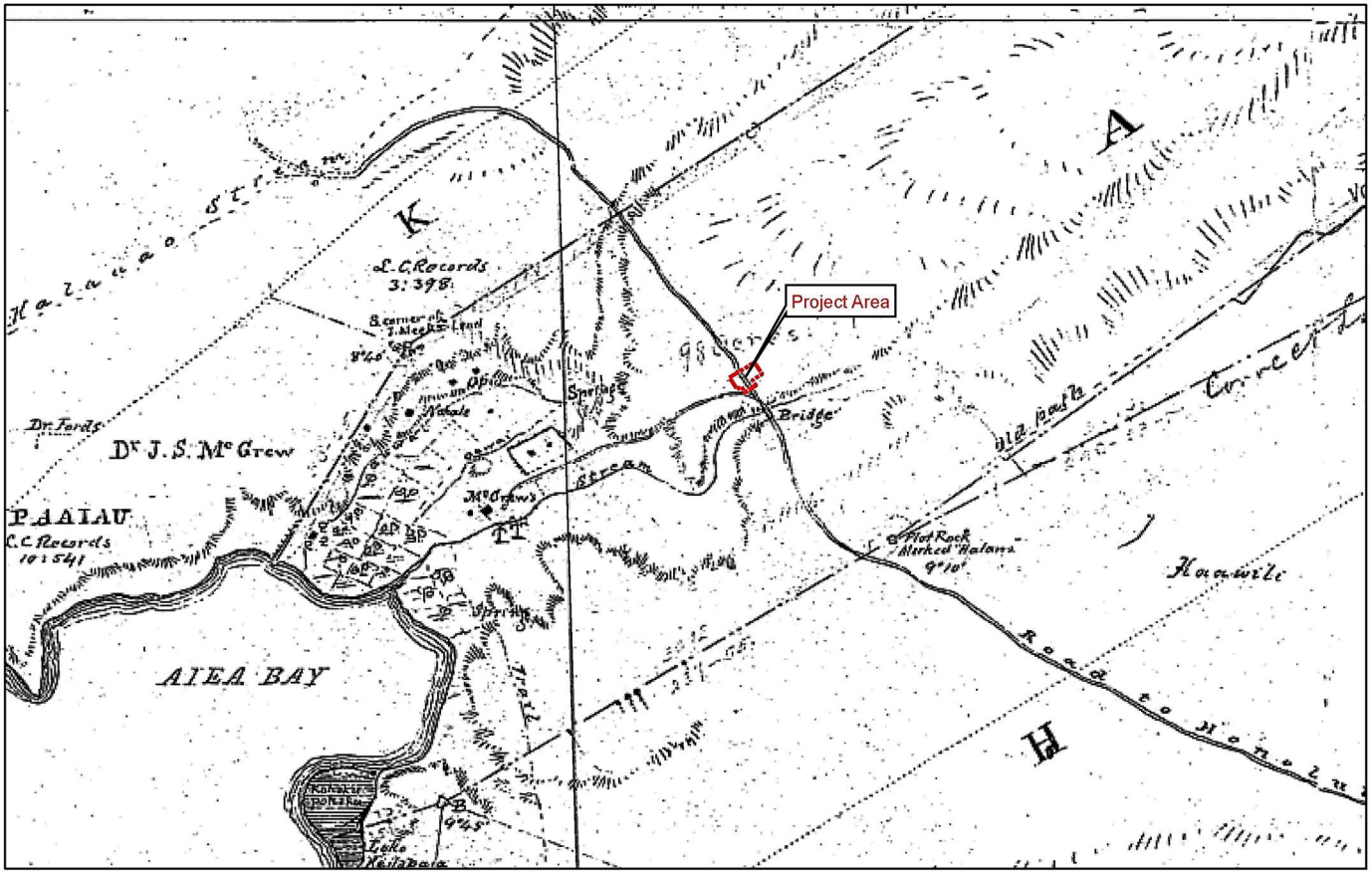

Figure 5. Portion of an ‘Aiea map (Lyons 1874).

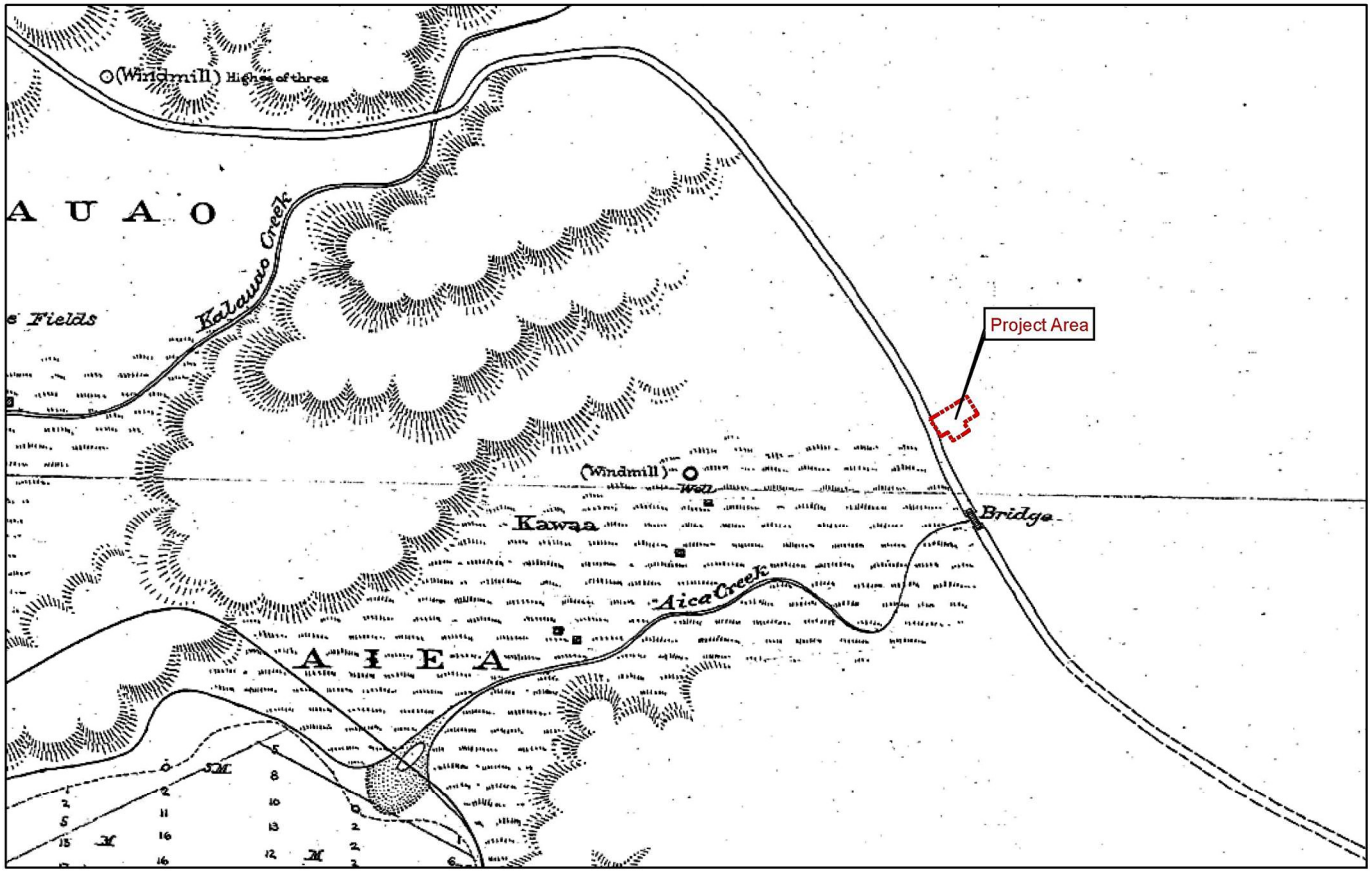

Figure 6. Portion of a map of Pearl Lochs (Nichols 1897).

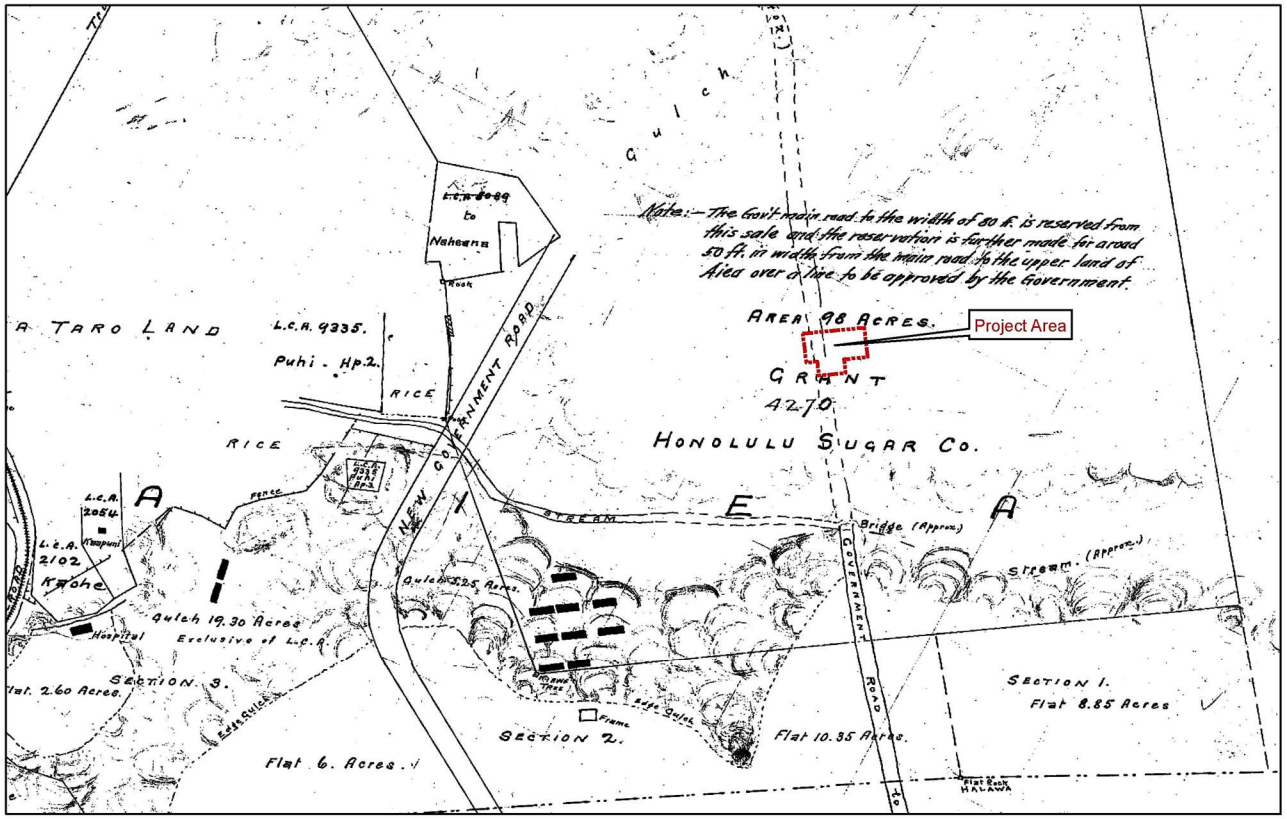

Figure 7. Portion of a map of ‘Aiea (Monsarrat 1898).

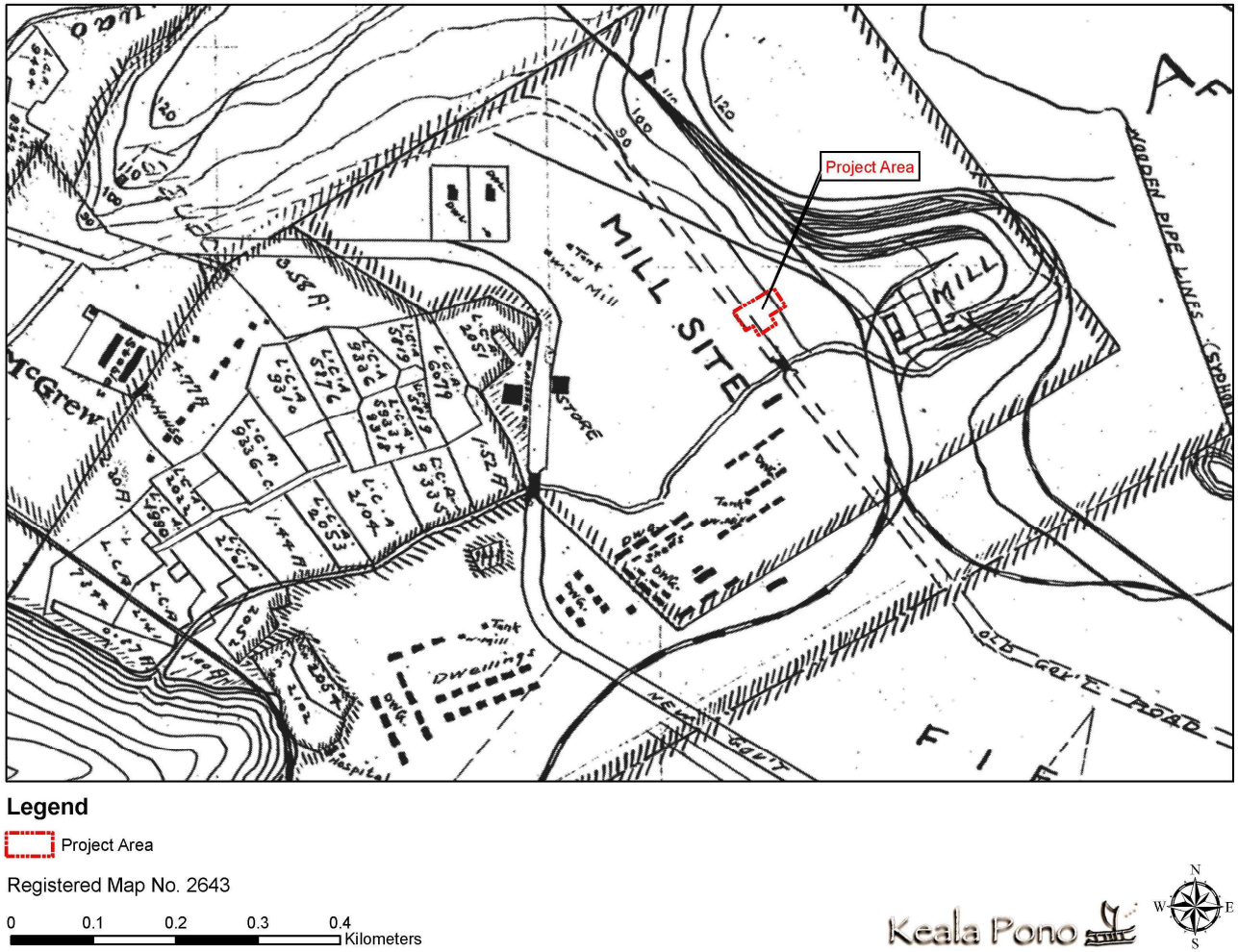

Figure 8. Portion of a map of Honolulu Sugar Co. Property (Taylor 1910–1925).

Previous Archaeology

Previous archaeological studies offer significant information regarding traditional and historic land use. The following discussion summarizes the findings of archaeological studies within approximately 1 km of the project area, based on reports found at the SHPD Kapolei library (Figure 9 and Table 1). State Inventory of Historic Places (SIHP) site numbers are prefixed by 50-80-09 unless otherwise noted.

An early archaeological survey spanned the entire island of O‘ahu (McAllister 1933). One site was found in the project vicinity, Loko Kahakupōhaku, the fishpond described earlier. It was designated as Site 104.

An archaeological surface survey was conducted over 28 acres for the Hālawa Interchange of the Interstate H-1 Freeway (Cluff 1970). In the investigation, eight features were discovered, including a historic house platform, grave structures and what could be a possible heiau. SIHP 50-80-09-5306 was assigned for the historic habitation complex and five burials.

Marked and unmarked graves were identified near a construction site near Aloha Stadium (Barrera 1971). No SIHP numbers were assigned at the time of the study.

An archaeological reconnaissance survey on the shorelines of ‘Aiea Bay at Rainbow Bay State Park showed that the land had already been very disturbed, and no archaeological surface remains were observed (Yent and Ota 1981). It is possible that aquaculture was practiced in the area however, given the likelihood of subsurface cultural deposits.

Two coffin burials and a trash pit were identified at Pali Momi and Moanalua Roads (Kawachi and McEldowney 1990). The remains were designated as SIHP -3713 and were disinterred. The reinterment location for the remains was not published.

Archeological monitoring was conducted for subsurface drilling for power line poles along Kamehameha Highway (Avery et al. 1994). No archaeological resources were encountered, However, one bore hole adjacent to Hālawa Stream indicated the possibility of a lowland loulu forest thousands of years ago prior to Polynesian settlement.

The historical significance of Pōhaku O Ki‘i, a boulder in ‘Aiea, was documented (Napoka 1994). Although the boulder was not modified by humans, an informant, John Kaimikaua, helped with the conclusion that it should be designated as a traditional cultural property. SIHP -4892 was assigned.

A survey to analyze fishponds in and around Pearl Harbor documented one fishpond, Loko Kahakupōhaku, in ‘Aiea (Athens et al. 2000). It was described as a “small filled fishpond located along the east shoreline of East Loch. The fishpond (Site 104) was previously identified by McAllister (1933). No further work was conducted due to the possibility of contaminated soil.

No cultural properties were observed during a literature review and field inspection of ‘Aiea Intermediate School for an erosion control study (Alitzer et al. 2009). An archaeological inventory survey for roadwork at Liliha and Ka‘amilo Streets in the ahupua‘a of Kalauao also produced no findings (Mintmier and Collins 2009).

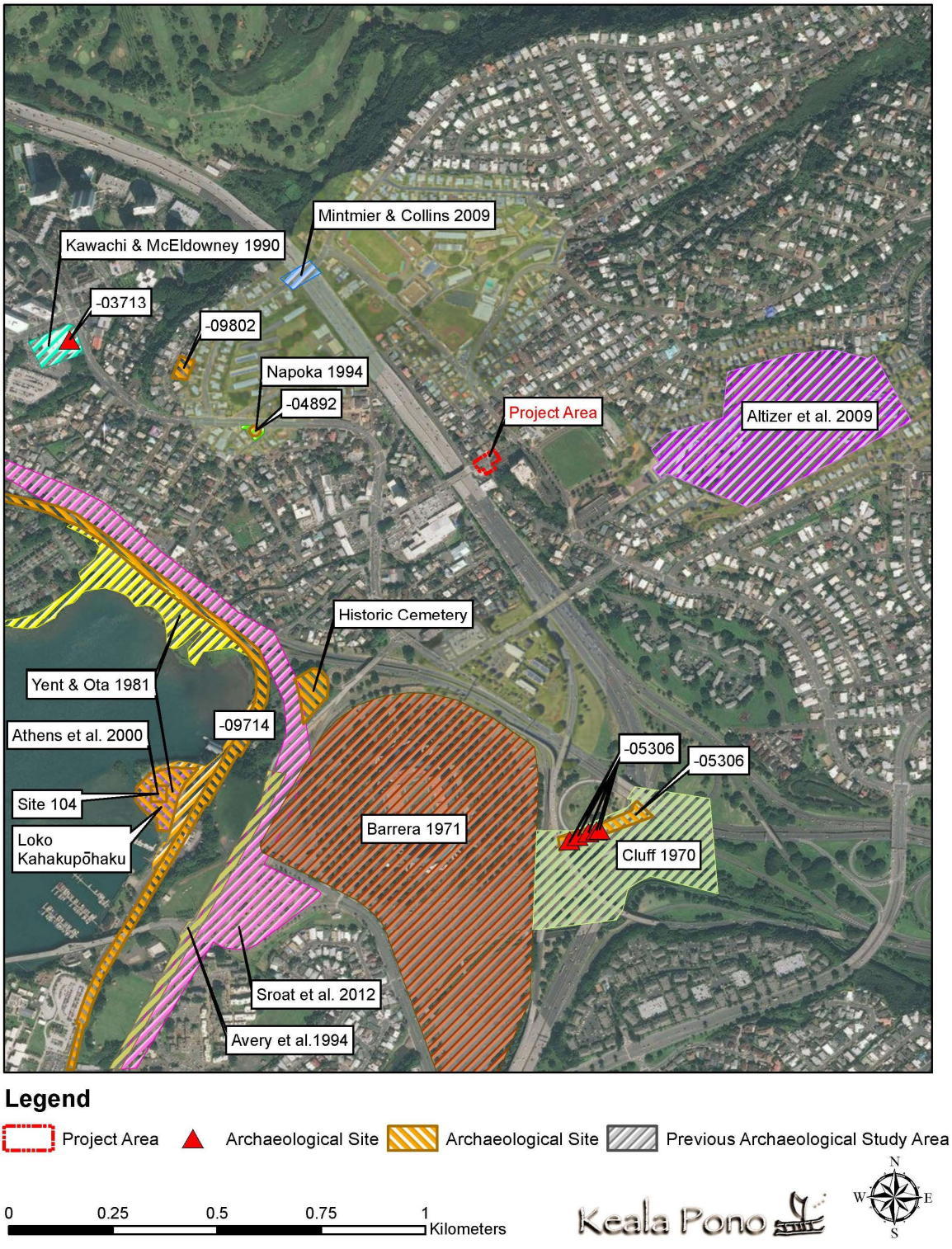

Figure 9. Location of previous archaeological studies and known sites in the project area vicinity.

Table 1. Previous Archaeology in the Project Area Vicinity

Reference	Type	Location	Results
McAllister 1933	Archaeological Survey	Island-Wide	Identified Loko Kahakupōhaku (Site 104) in the project vicinity.
Cluff 1970	Archaeological Inventory Survey	Hālawa Interchange	Eight features noted, including a stone house platform, grave structures, and possible heiau (SIHP -5306).
Barrera 1971	Archaeological Reconnaissance Survey	Honolulu Stadium	Documented marked and unmarked graves around construction housing site; no SIHP numbers were assigned at the time of the study.
Yent and Ota 1981	Archaeological Reconnaissance Survey	Proposed Rainbow Bay State Park	No findings.
Kawachi and McEldowney 1990	Archaeological Monitoring	Pali Momi and Moanalua Rd. in Kalauao Ahupuaʻa	Documented a pair of coffin burials and a trash pit (SIHP -3713).
Avery 1994	Archaeological Monitoring	Kamehameha Hwy., South of Aloha Stadium	No archaeological findings reported; paleoenvironmental analysis identified a previous loulu forest.
Napoka 1994	Archaeological Inventory Survey	Nalopaka Place	Natural boulder identified as a traditional cultural property (SIHP -4892).
Athens et al. 2000	Data Recovery	Pearl Harbor	Identified Loko Kahakupōhaku in ʻAiea Ahupuaʻa (SIHP 50-80-13-0104), but no further work was conducted due to contaminated soil.
Altizer et al. 2009	Literature Review and Field Assessment	ʻAiea Intermediate School	No findings.
Mintmier and Collins 2009	Archaeological Inventory Survey	Liliha and Kaʻamilo St., Kalauao Ahupuaʻa	No findings.
Sroat et al. 2012	Archaeological Inventory Survey	Honolulu High-Capacity Transit Corridor Project	Identified an OR&L corridor in the project vicinity (SIHP 50-80-12-9714).
Farley and Shideler 2016	Archaeological Monitoring Plan	Current Project Area	Noted the Honolulu Plantation Manager's residence (SIHP 9802) and a historic cemetery with no SIHP number.

An archaeological inventory survey was conducted for the Honolulu High-Capacity Transit Corridor project (Sroat et al. 2012). The Oahu Railway & Land (OR&L) right-of-way is the only property that was identified near the project area. This was designated as SIHP 50-80-12-9714.

The archaeological monitoring plan for the current project (Farley and Shideler 2016) identified two additional historic properties are in the project vicinity, although no archaeological work was conducted there. The first is a historic cemetery with no SIHP number. The second is SIHP 9802, the house of the Honolulu Plantation manager.

Summary of Background Research

Little information is available about the ahupuaʻa of ʻAiea, though it is known as a place rich with agricultural and aquatic resources. Much knowledge about ʻAiea is determined by surrounding ahupuaʻa, such as Hālawa and Kalauao, where more information on land use has been recorded.

The moku of ʻEwa boasted abundant resources and was the political center in traditional times, with many aliʻi residing there prior to the shift to Honolulu and Waikīkī. The entire ahupuaʻa of ʻAiea was deemed Crown Lands following the Māhele in 1848, and not much is documented about its use during that timeframe. However, maps show that ʻAiea was used for agricultural purposes, including the production of taro, rice, and later sugarcane. A sugar mill, plantation village, and railroad were located in the project vicinity, along with the government road which was relocated to the west sometime before the turn of the 20th century.

By 1901, the U.S. Navy took control of much of the lowlands to build the naval base at Pearl Harbor and dredge the harbor for easier ship entry. Sugarcane production continued until around the 1960s until housing projects became the major form of development.

Previous archaeology reports confirm the existence of a fishpond, a possible heiau, human burials, as well as several features related to the sugarcane industry. However, due to the disturbance of the land, such as from sugarcane production and modern development, it is believed that many of the cultural resources that may have once been in ʻAiea are now destroyed. If anything can be found, it would most likely be related to sugarcane agriculture, or it would be preserved beneath the surface.

METHODS

Archaeological monitoring was conducted from February 20, 2019 to March 12, 2019, with a total of 11 days of monitoring (68.5 person-hours) during that time. Archaeological monitors consisted of Megan Edwards, MA, Arleen Garcia-Herbst, CPhil, and Windy McElroy, PhD, with one monitor present per day. Dr. McElroy served as Principal Investigator, overseeing all aspects of the project. Archaeological monitoring was guided by a SHPD-accepted monitoring plan, which called for full time archaeological monitoring by a Secretary of the Interior (SOI) qualified archaeologist, for all ground disturbance at the Aiea Heights Drive/Ulune Street intersection (Farley and Shideler 2016). There were no deviations from the plan.

On the first day of work, the archaeological monitor spoke with the construction team to ensure that they understood the purpose of the monitoring and that the monitor has the authority to halt construction activity. Excavation was conducted with a backhoe and by hand with shovels (Figure 10).

Representative profiles were drawn and photographed, and sediments were described using Munsell Soil Color Charts (Munsell 2010), a sediment texture flow chart (Thien 1979), and the U.S. Department of Agriculture soil manual (Soil Science Division 2017). Trench locations were recorded with a 3 m-accurate Garmin GPSmap 62st.

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 et al. 2002:2-35). No material was collected and no laboratory analyses were conducted.

Figure 10. Excavation with a backhoe.

RESULTS

Archaeological monitoring was conducted between February 20 and March 12, 2019. Excavations were monitored at the intersection of ʻAiea Heights Drive and Ulune Street (Figure 11). Stratigraphy was consistent throughout the project area, consisting of the current road surface, basecourse, and the disturbed native soil (Table 2). No cultural material or deposits were encountered.

Stratigraphy

Stratigraphy was very consistent throughout the small project area, and one profile is presented here. The profile location can be seen in Figure 11. Stratigraphy was composed of three stratigraphic layers. These consisted of the current road surface, with the basecourse for the road below it, and a basal deposit of native soil. The basecourse and native soil both contained modern debris, such as glass fragments and metal wire. The native soil was also disturbed by utility lines, including a large sewer pipe at 52 cm below surface (cmbs) that was exposed just north of where the profile was drawn.

The profile was recorded at the southeast corner of the ʻAiea Heights. Drive/Ulune Street intersection, just off the northwest corner of an electric box that is visible on the sidewalk. Stratigraphy consisted of three layers as noted above (Figures 12 and 13; see Table 2). No cultural material or deposits were observed.

Summary of Results

In sum, excavations were monitored at the intersection of ʻAiea Heights Drive and ʻUlune Street in ʻAiea Ahupuaʻa. Stratigraphy consisted of the current roadway, basecourse, and a disturbed native soil. No cultural material or deposits were found.

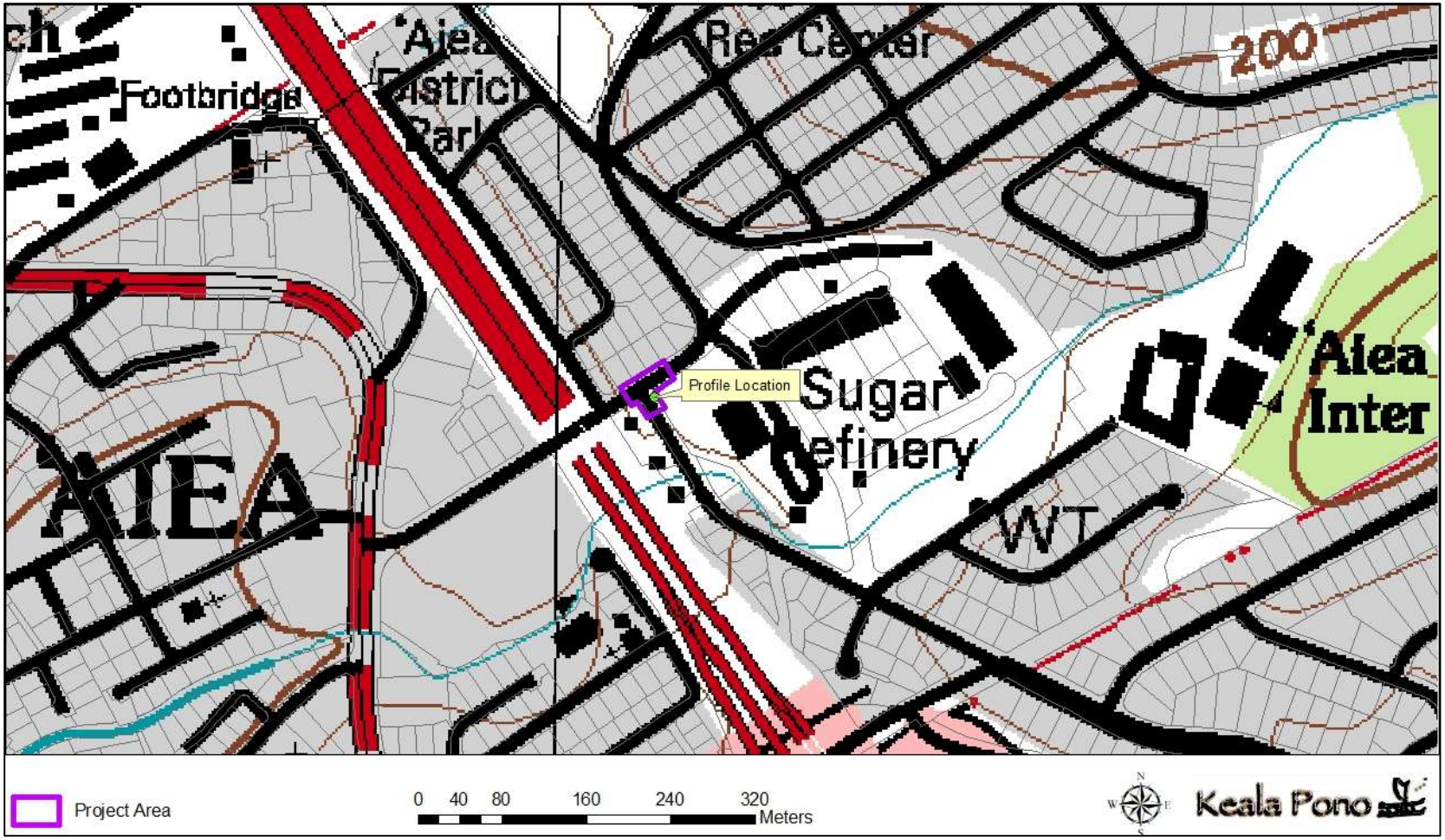

Figure 11. Project area and profile location.

Table 2. Soil Descriptions

Location	Layer	Depth (cmbs)	Color	Description	Interpretation
SE corner of ʻAiea Hts. Dr./Ulune St. Intersection	I	0–15	N/A	Cement; smooth, very abrupt boundary.	Current Curb/Gutter
	II	15–40	2.5YR 3/2	Gravelly sandy clay; no roots; modern debris; smooth, very abrupt boundary.	Basecourse
	III	40–109+	5YR 4/3	Gravelly silty clay; no roots; modern debris; base of excavation.	Disturbed Native Soil

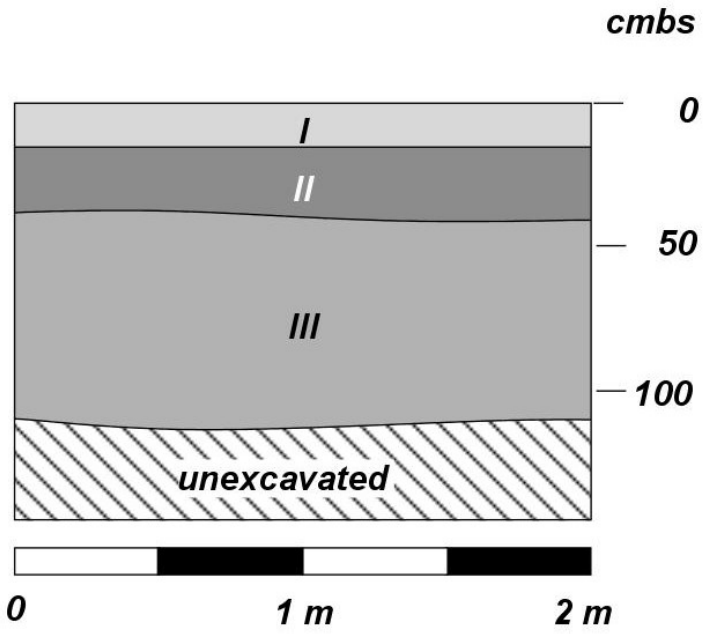

Figure 12. Northeast face profile drawing.

Figure 13. Northeast face profile photo. The scale is marked in 10 cm increments, for a total of 30 cm.

SUMMARY AND CONCLUSION

In summary, archaeological monitoring for the ʻAiea Street Rehabilitation Project took place within the road right-of-way at the intersection of ʻAiea Heights Drive and Ulune Street on portions of TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062 in ʻAiea Ahupuaʻa, ʻEwa District, on the island of Oʻahu. Archaeological monitoring was conducted for all ground disturbance within this small area. No cultural material or deposits were encountered during monitoring, and stratigraphy consisted of the current road/curb and gutter surface, basecourse, and a disturbed native soil. Because of the occurrence of a former sugar mill and other plantation-related structures in the vicinity, it is recommended that archaeological monitoring is conducted for any future work in the area. Even though these features do not remain on the surface and no subsurface evidence of them was found during this project, they may be encountered beneath the surface nearby.

GLOSSARY

ahupua‘a Traditional Hawaiian land division usually extending from the uplands to the sea.

‘aiea The tree or shrub *Nothocestrum*, one species of which was used for fire-making and thatching poles.

ali‘i Chief, chiefess, monarch.

‘auwai Ditch, often for irrigated agriculture.

‘awa The shrub *Piper methysticum*, or kava, the root of which was used as a ceremonial drink throughout the Pacific.

banana The mai‘a, or *Musa* sp., whose fruit was eaten and leaves used traditionally as a wrapping for cooking food in earth ovens.

boulder Rock 60 cm and greater**.**

cobble Rock fragment ranging from 7 cm to less than 25 cm.

gravel Rock fragment less than 7 cm.

heiau Place of worship and ritual in traditional Hawai‘i.

hulilau A large calabash or gourd, used as a container for garments, cloth, or food offerings.

kahu Honored attendant, guardian, nurse, keeper, administrator, pastor.

kalo The Polynesian-introduced *Colocasia esculenta*, or taro, the staple of the traditional Hawaiian diet.

kauwā Outcast or slave caste within the traditional Hawaiian social hierarchy.

ki‘i Image, drawing, idol, petroglyph.

lo‘i, lo‘i kalo An irrigated terrace or set of terraces for the cultivation of taro.

loko Inside, interior. Pond, lake, pool.

loulu The fan palm (*Pritchardia spp*.), endemic to Hawai‘i.

loko Inside, interior. Pond, lake, pool.

Māhele The 1848 division of land.

makai Toward the sea.

malo Male’s loincloth.

māmaki *Piptarus* spp., a small native tree. Fiber from its bark was used to make a kind of coarse tapa. Sometimes spelled mamake in old texts.

moku District, island.

mo‘o Narrow strip of land, smaller than an ‘ili; lizard, dragon, water spirit.

mo‘olelo A story, myth, history, tradition, legend, or record.

nehu The anchovy, *Stolephorus purpureus*, used for eating and as a chum for bonito.

niuhi Man-eating shark; any shark more than 3.5 m long is probably a niuhi. Catching the niuhi was a sport of chiefs.

‘ōlelo no‘eau Proverb, wise saying, traditional saying.

olonā The native plant *Touchardia latifolia*, traditionally used for making cordage.

‘ōpe‘ape‘a General term for starfish or bat; taro plant after the top has been removed; window shutters or blinds.

pipi *Pinctada radiata*, the Hawaiian Pearl Oyster. In songs this is referred to as the i‘a hāmau leo o ‘Ewa, or ‘Ewa’s silent sea creature, as it was believed that speaking would cause a breeze to ripple the ocean and scare the pipi.

pōhaku Rock, stone.

poi A staple of traditional Hawai‘i, made of cooked and pounded taro mixed with water to form a paste.

post-Contact After A.D. 1778 and the first written records of the Hawaiian Islands made by Captain James Cook and his crew.

pre-Contact Prior to A.D. 1778 and the first written records of the Hawaiian Islands made by Captain James Cook and his crew.

stone Rock fragment ranging from 25 cm to less than 60 cm.

sugarcane The Polynesian-introduced *Saccharum officinarum*, or kō, a large grass traditionally used as a sweetener and for black dye.

wauke The paper mulberry, or *Broussonetia papyrifera*, which was made into tapa cloth in traditional Hawai‘i.

yam *Dioscorea alata*, known as uhi in Hawaiian, commonly grown for food.

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APPENDIX A: SHPD CHAPTER 6E-8 REVIEW

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DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
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September 6, 2016

Mr. Robert J. Kroning, Director
Department of Design and Construction
City and County of Honolulu
650 south King Street, 11th Floor
Honolulu, HI 96813

LOG NO: 2016.01479
DOC NO: 1608GC15
Archaeology

Dear Mr. Kroning:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –**
Chapter 343 Exemption, Rehabilitation of Localized Streets
Job 2-16, Phase 19-A, Initial Consultation
Aiea and Halawa Ahupua'a, 'Ewa District, Island of O'ahu
TMK: (1) 9-8-012, 016-018, 029-034, 039; 9-9-005-007, 009, 010, 012, 015-022, 024-027, 030, 033, 035-040, 042, 051, 052, 054, 055, 057, 059, 067, 072-074, and 078

Thank you for the opportunity to review the proposed City and County of Honolulu's Department of Design and Construction (DDC) project involving rehabilitation of localized streets within Aiea, Aiea Heights and Halawa. The project is located entirely within City and County of Honolulu rights-of-way (ROW). We received this submittal on June 20, 2016. The submittal included an electronic version of project site plans and photographs.

The submittal indicates that the bulk of the proposed work will not extend below the existing pavement substratum. The scope of work includes resurfacing and reconstruction of asphalt pavements; cold planning; adjustment of utility manhole and manhole frames and covers; installation of pavement markers and vehicle loop detectors; reconstruction of existing concrete curb and/or gutters and sidewalks; and installation of concrete curb ramps and signage. In addition, the project will require installation of new duct lines and traffic signal standards along Aiea Heights Drive and Ulune Street. Anticipated excavation will extend to a maximum of 6 ft. deep.

SHPD records indicate that a copy of a *Memorandum of Understanding (MOU) between the City and County of Honolulu, Department of Design and Construction Civil Division (DDC) and the Hawaii State Historic Preservation Division*, regarding the *Rehabilitation of Streets, Curb Ramps and Sidewalk Constructions, May 27, 2016* is on file. The MOU indicates that DDC (1) plans for, manages and administers on-going programs for the Rehabilitation of Streets, Curb Ramps and Sidewalk Construction; (2) has determined that these projects will not have an effect on historic properties; (3) has determined that these improvements are within the limits of ground previously disturbed and do not disturb subsurface levels below the existing roadway structure or existing base course; and that (4) this MOU applies to "City funded projects only and projects that do not construct improvements below the previously disturbed depth;" and that (5) the above four agreed upon stipulations are implemented for rehabilitation projects. However, the submittal indicates that installation of new duct line and traffic standards along Aiea Heights Drive and Ulune Street will trigger Stipulation Item No. 2 of the MOU.

SHPD records also indicate that several archaeological studies have been conducted within the proposed project locations, and that no archaeological historic properties has been identified. Aerial imagery indicates that the project locations have been previously disturbed by residential and commercial development and roadway construction. The USDA identifies the soils as Rocky outcrop (Foote et al. 1972).

Based on the information above, **SHPD's determination is no historic properties affected** with implementation of a SHPD-accepted archaeological monitoring plan for TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062. No archaeological monitoring is required at other project locations.

SHPD looks forward to reviewing and accepting an archaeological monitoring plan meeting the requirements of Hawaii Administrative Rules (HAR) §13-279-4 for TMK: (1) 9-9-005:010, 9-9-039:036, and 9-9-042:062.

SHPD will notify your office when the archaeological monitoring plan has been accepted and work may proceed.

Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov if you have any questions regarding archaeological resources or this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
Archaeology Branch Chief

cc: John Lamer, DDC (jlamer@honolulu.gov)