INTRODUCTION

Under contract to Austin, Tsutsumi & Associates, Inc. (ATA), Pacific Consulting Services, Inc. (PCSI) has prepared this Archaeological Monitoring Plan (AMP) in support of proposed Kaumualiʻi Highway Intersection Improvements, Waimea Ahupuaʻa, Kona District, Island of Kauaʻi, Hawaiʻi. The project proponent is the Department of Transportation (DOT), and the land is owned by the State of Hawaiʻi. The extent of the proposed project is shown in Figure 1. The project scope of work includes improvements at the intersection of Waimea Canyon Drive and at Menehune Road and Halepule Road along Kaumualiʻi Highway.

This AMP was prepared in accordance with the SHPD Rules Governing Standards for Archaeological Monitoring Studies and Reports (Hawaiʻi Administrative Rules [HAR] § 13-279-4). The purpose of this AMP is to provide guidance for the monitoring archaeologist in the field and to ensure all work conforms to Chapter 6E, Hawaii Revised Statutes (HRS) and the following Hawaiʻi Administrative Rules (HAR):

- Chapter 275: Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-8; and
- Chapter 279: Rules Governing Standards for Archaeological Monitoring Studies and Reports

Consultation letters from the SHPD for Chapter 6E-8 Historic Preservation Review for this project are provided in Appendix A. Although no historic properties have been identified within the project area, the Archaeological Literature Review (ALR; Vernon and Clark 2020) notes there is a low to moderate potential to encounter intact subsurface historic properties. The ALR recommended archaeological monitoring guided by an SHPD-approved Archaeological Monitoring Plan.

The recommended effect determination for the project was “Effect, with proposed mitigation commitments,” which included archaeological monitoring during all ground disturbance conducted during the proposed project. The State Historic Preservation Officer (SHPO) concurred with the effect determination and proposed mitigation.

PROJECT AREA LOCATION AND DESCRIPTION

The proposed project is located at two intersections in Waimea Town on the leeward side of Kauaʻi. The project area measures 4.047 hectares (ha) (1.0 acre [ac]). The Tax Map Keys (TMKs) for adjacent parcels to the project area include (4) 1-6-005:002, 1-6-007:018, 028, 048, 1-6-008:004, 012, 019, 021, 024, 025, and 1-6-009:001, 003, 004, and 038. Figures 2 through 5 show the project areas highlighted on TMK plat maps. All work will be conducted in the State of Hawaiʻi owned rights-of-way. Project site plans with highlighted locations of ground disturbance are provided in Appendix B.

The Waimea Canyon Drive and Kaumualiʻi Highway intersection project area measures 2.773 ha (.685 ac) and extends from Waimea Canyon drive east to Makeke Road and west to the driveway for the Waimea Tech Center. Proposed ground disturbing work includes demolishing, removing, and replacing sections of asphalt pavement, concrete sidewalks, curbs, various catch basins and drain lines; the relocation of existing signage; and installation of new traffic signal standards, traffic meter pedestals, light poles, electrical duct line, and signage. Installation of new pavement will require excavation to a depth of 63.5 centimeters below surface (cmbs) (24 inches [in]) or more, depending on existing base course depth. Light pole and traffic signal standard installation will require excavations to a minimum of 183 cmbs (6.0 feet [ft]). Excavations for traffic meter pedestals will reach a depth of 63.5 centimeters (cm) (24.0 in) or greater. Excavations for electrical lines will reach up to 107.0 cmbs (42.0 in). Excavation depth for drain lines will exceed

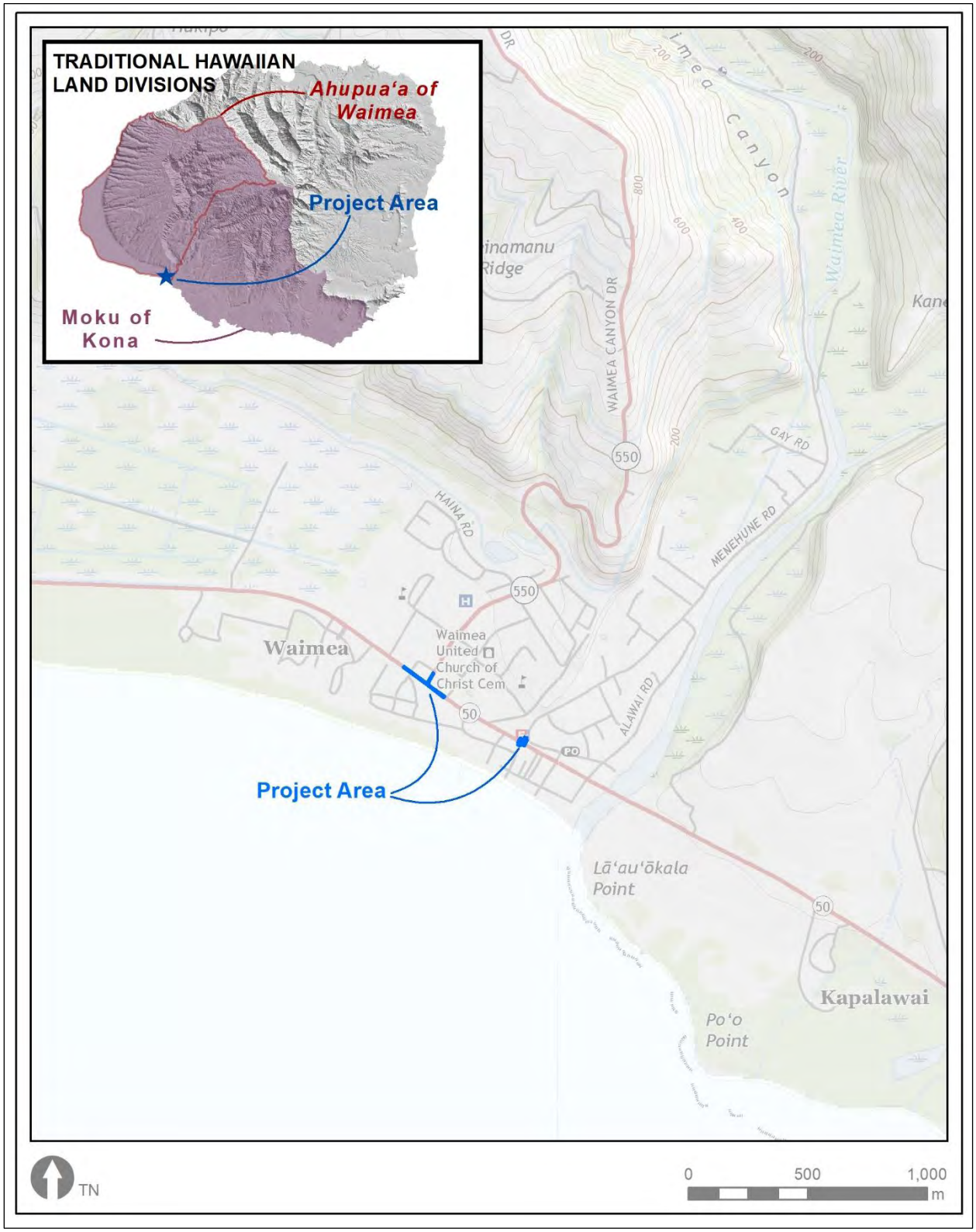

Figure 1. Project Area on 7.5-Minute Series Kekaha and Hanapepe Topographical Quadrangle Maps (USGS 2017a,b).

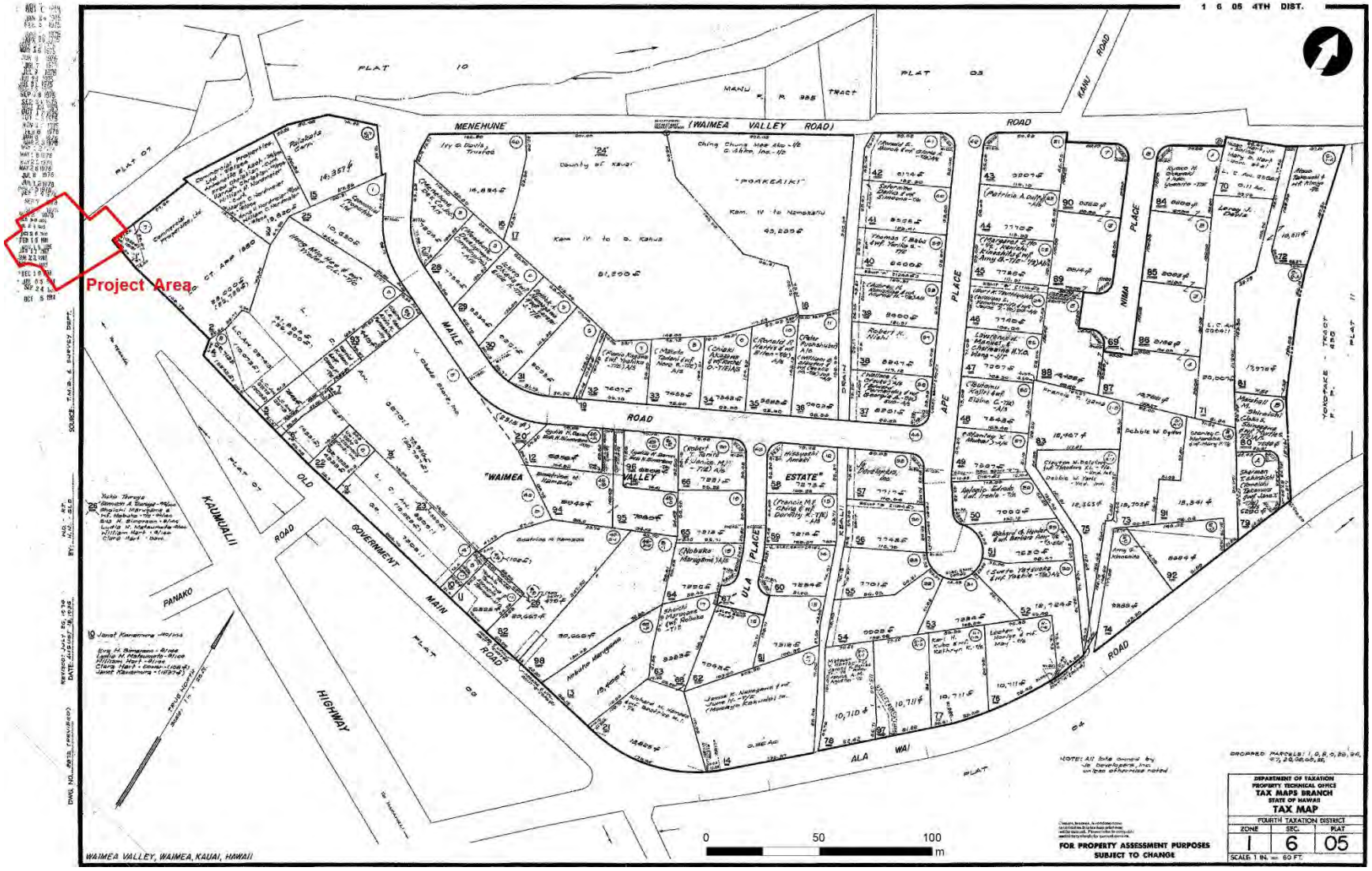

Figure 2. Location of Project Area on Plat Map (4) 1-6-05 (Taxation Maps Bureau 1936, Revised 1974).

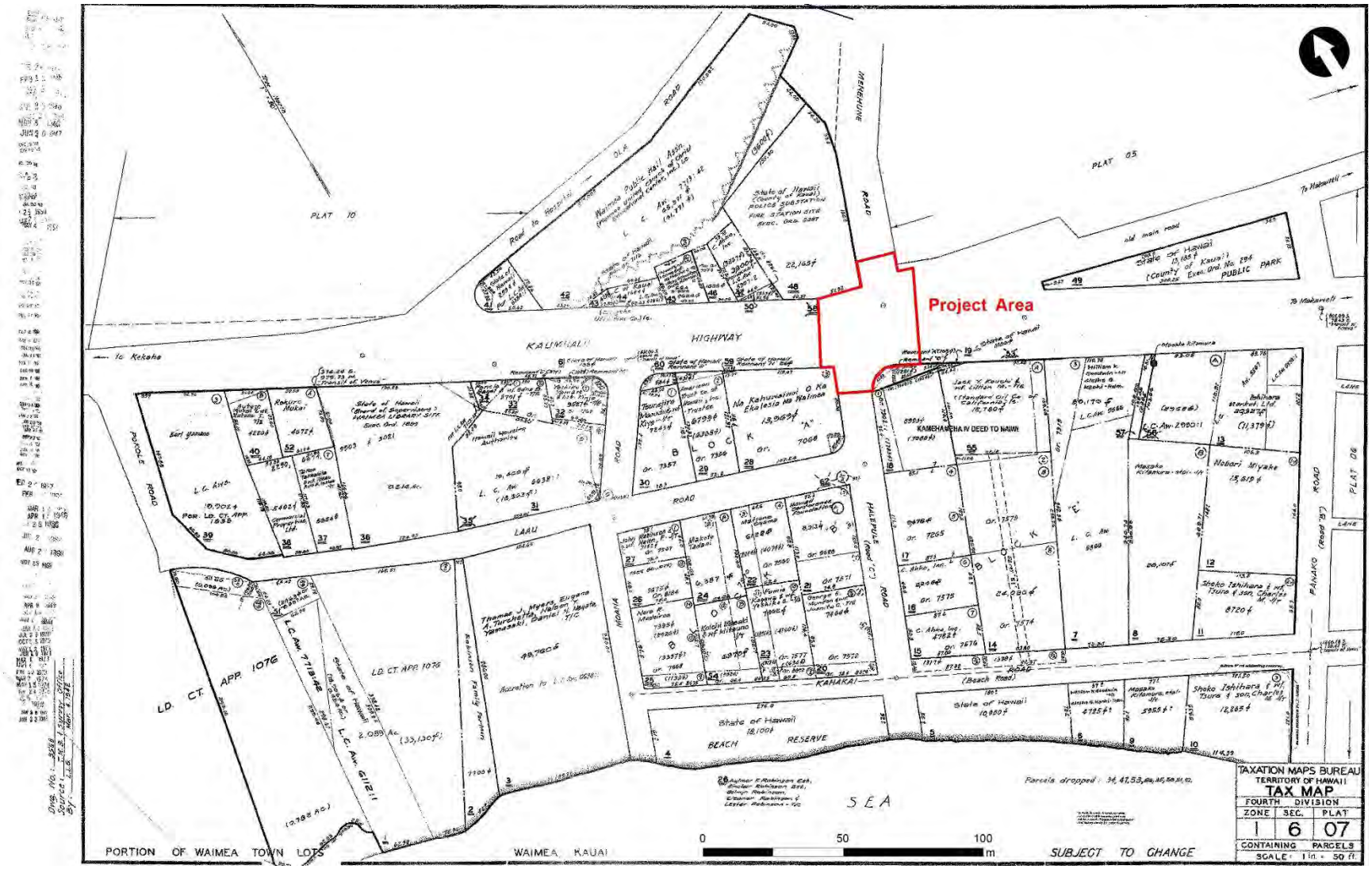

Figure 3. Location of Project Area on Plat Map (4) 1-6-07 (Taxation Maps Bureau 1942).

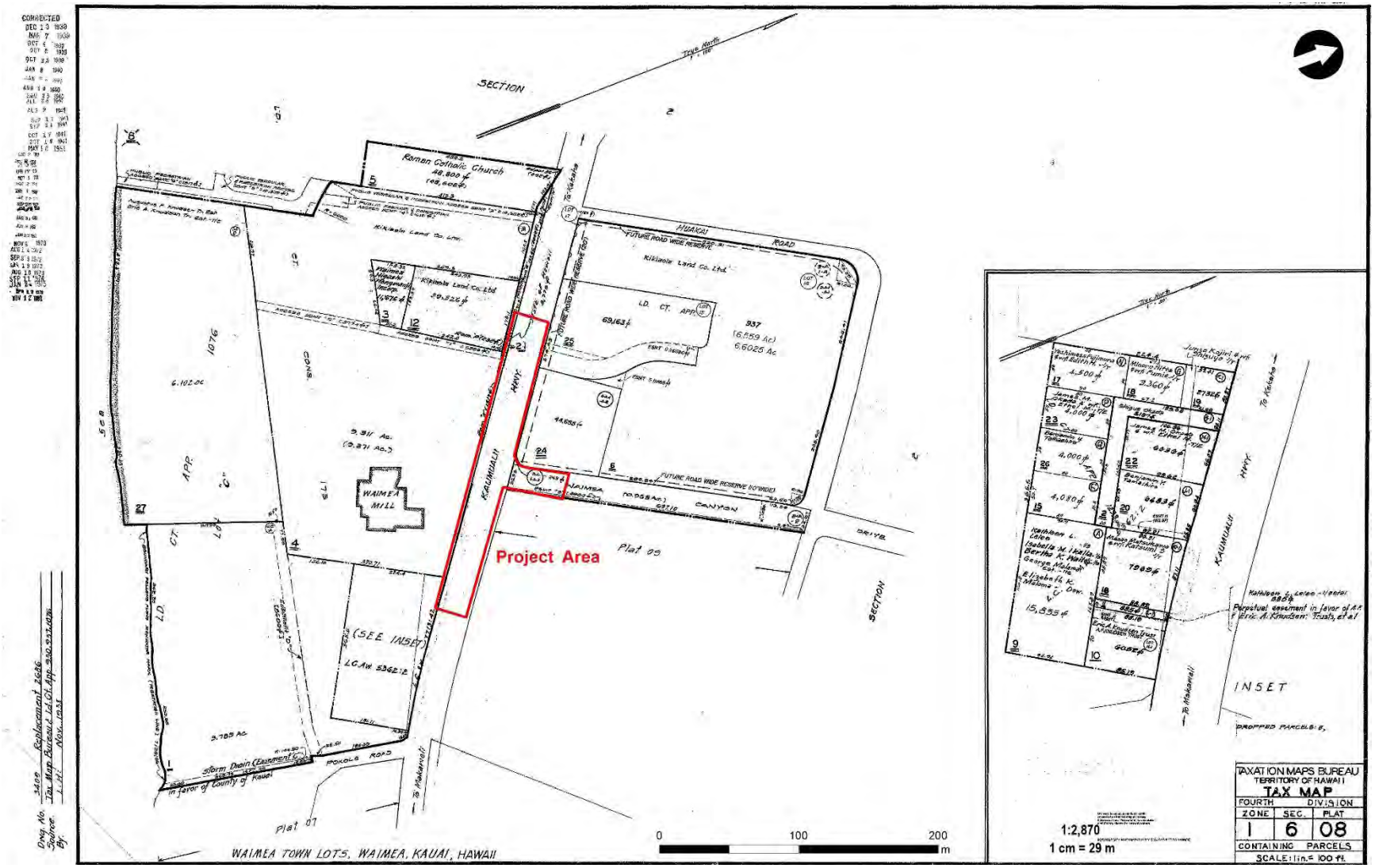

Figure 4. Location of Project Area on Plat Map (4) 1-6-08 (Taxation Maps Bureau 1938).

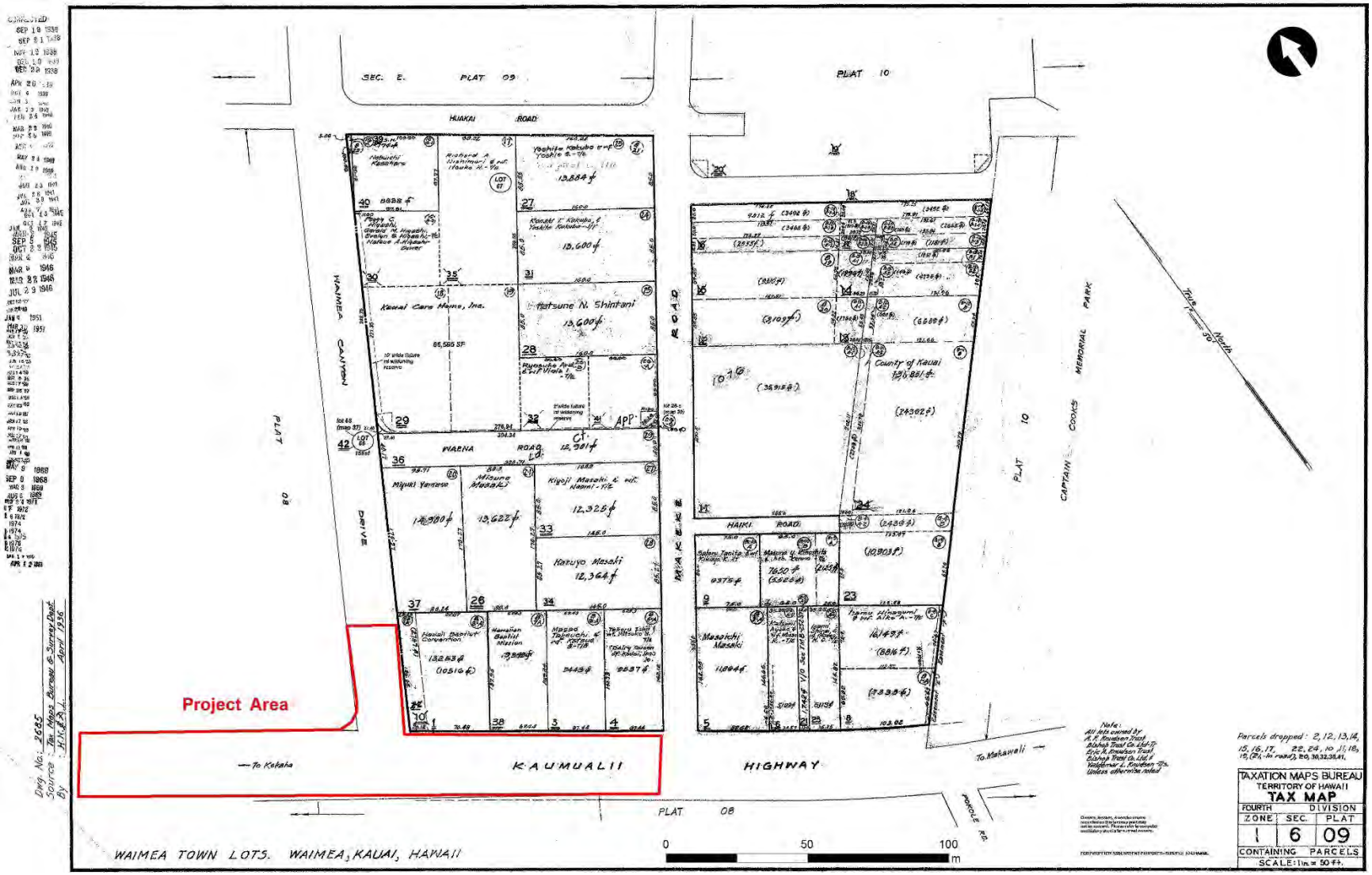

Figure 5. Location of Project Area on Plat Map (4) 1-6-09 (Taxation Maps Bureau 1936).

122 cmbs (4.0 ft). Excavation depth for signage will exceed 63.5 cmbs (24.0 inches). Striping will also be replaced, which does not require ground disturbance.

At Menehune Road and Halepule Road along Kaumualiʻi Highway the project area is the intersection, which measures 1.274 ha (.315 ac). Proposed work is limited to striping. No ground disturbing work will occur at this intersection.

ENVIRONMENTAL SETTING

Waimea Ahupuaʻa is located on the west side of Kauaʻi and covers more than one-quarter of the island. This *ahupuaʻa* (traditional Hawaiian land division) comprises the Waimea River Canyon, the Kōkeʻe uplands, Alakaʻi Plateau, numerous inland and coastal valleys, and Mānā Plain. The two project area intersections are situated in an urban environment 400.0 to 900.0 meters (m) west of the mouth of Waimea River and roughly 150.0 to 300.0 m inland from the shoreline.

TOPOGRAPHY AND SOILS

The project area is situated at 2.0–4.0 m above mean sea level (amsl). According to the USDA Web Soil Survey, the soils in the project area are classified as Jaucas loamy fine sand, dark variant, with 0 to 8 percent slopes (JkB), as shown in Figure 6. The Jaucas series are found on vegetated beach areas along the shore. These soils formed in calcareous sand deposits. They are very deep, excessively drained, and have very rapidly permeability (Soil Survey Staff 2017). Areas containing these soils are typically used for recreation and as marine wildlife refuges. Vegetation is urban and consists of sea grape (*Coccoloba uvifera*), coconut (*Cocos nucifera*) (Wagner et al. 1990), and other xerophytic and salt-tolerant plants. From a historic preservation perspective, Jaucas sand deposits are associated with the presence of traditional Hawaiian burials and subsurface cultural deposits.

RAINFALL AND VEGETATION

Annual rainfall at the project area averages 512.5 millimeters (mm) (20.18 in) per year, with most rain falling in the months between October and March. Giambelluca et al. 2013). The project area is situated along a two-lane road with parking lanes on each side, which are flanked by a landscaped verge that includes manicured grass and trees.

HISTORICAL BACKGROUND

This section presents ethnohistorical and archaeological background information for the project area. Data from the background research were compiled to create an overview of traditional Hawaiian and historic-era land use and subsistence practices. Previous archaeological research in the vicinity of the project area is reviewed and anticipated archaeological findings are discussed.

TRADITIONAL HISTORY

The Hawaiian cultural landscape can be described through *moʻōlelo* and *wahi pana* (significant Hawaiian place names). Moʻōlelo may be myths, legends, proverbs, and events surrounding well-known individuals in Hawaiian history (Pukui and Elbert 1986:254). The following is a discussion of the mythological, traditional, and early historic accounts specific to the study area. The reader is referred to O'Hare et al. (2015) for a broader background of the *ahupuaʻa* of Waimea.

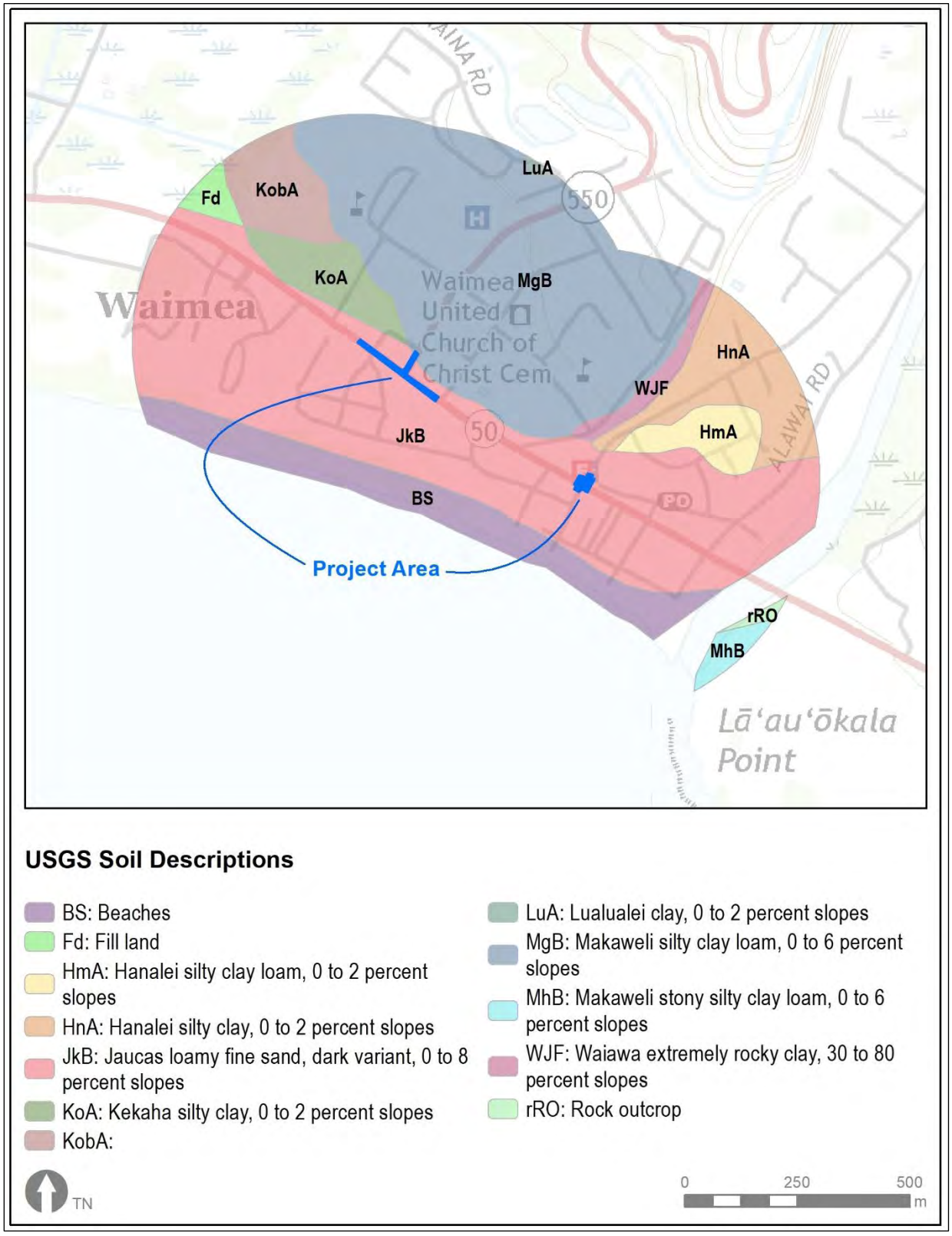

Figure 6. Soil Units Near the Project Area in Waimea Ahupua'a.

The project area is situated in the neighboring *ʻili*[1] of Kīkīaola, on the west, and Peʻekauaʻi, on the east. Hawaiian legends associated with this portion of Kauaʻi are related to the *ʻauwai* (irrigation ditch) named Kīkīaola ("container [acquired] by [Chief] ʻOla" [Pukui et al. 1974:110]), which is more commonly known as Menehune Ditch, the namesake of its builders (see Kaiwi 1917:114 -118). The impressive *ʻauwai* carried water around the cliff 24 feet above the Waimea River (Handy and Handy 1972:270), and fed a network of *loʻi* (irrigated taro terrace) below the cliff. Bennett (1931) recorded this as Site 26 (State Inventory of Historic Places [SIHP] 50-30-09-0026) during his survey of the island:

> The noted Menehune ditch (Site 26) is the acme of stone-faced ditches. The problem was that of carrying the water, at a high level, around the corner of a jutting cliff. An added difficulty was the necessity of placing the base of the causeway in the river itself where it was constantly in danger of being washed away by a freshet. It is the Menehune ditch alone that has any record preserved of its construction—and that is a myth [Bennett 1931:23–24].

The legend of the *ʻauwai* construction was recorded by Christopher B. Hofgaard in the early 1900s for the *Kauai Historical Society* and is relayed by Bennett (Hofgaard N.D. in Bennett 1931:24). The story tells of how the Menehune (a legendary race of small people) were hired by the landowner, Pi, to prepare the stones and construct the *ʻauwai*.

> When the time came, he went to the point where the dam was to be built and waited. At the dead of the night he hears the noise and hum of the voices of the Menehunes, on their way to Kikiaola, each of whom was carrying a stone. The dam was fully constructed, every stone fitting in its proper place, and also the stone auwai, or water-course, laid round the band at Kikiaola. Before the break of day the work was completed and the water of the Waimea River turned in by the dam into the water-course and through the same on to the flats at Waimea [Hofgaard N.D. in Bennett 1931:24].

After the work was finished, Pi fed each Menehune a single shrimp. As they left to return to their mountain home, they hummed and rejoiced so loudly a saying came to be: "Wawa ka Menehune i Puukapele ma Kauai, puohu na manu o na loko o Kawainui ma Koolaupoko, Oahu—The hum of the voices of the Menehunes at Puu Ka Pele, Kauai, startled the birds at the pond of Kawainui at Koolaupoko, Oahu" (Hofgaard N.D. in Bennett 1931:24).

TRADITIONAL LAND USE

Much of what is known of traditional land use comes from ethnohistorical accounts of visitors to Waimea beginning with Captain James Cook. Archaeological evidence is limited due to historic and modern activities, such as commercial sugarcane cultivation and development of Waimea Town (Mills 2005:49). Of the few radiocarbon dates for this portion of Kona District, the earliest was yielded from Waimea Town and ranges from A.D. 1000-1275 (Hammatt and Ida 1993 in O'Hare et al. 2015:51). The following section presents several descriptions of Waimea during the late eighteenth and early nineteenth centuries.

Captain James Cook anchored in Waimea Bay on January 20, 1778. After a visit to land, Cook and Lieutenant James King recorded land descriptions in their log. King noted roughly 60 grass thatched houses west of the Waimea River along the coast and around 40 more inland (Cook 1813:205; Handy and Handy 1972:408). It was estimated that more than 2,000 individuals greeted their arrival (Rickman 1781:217). Cook wrote of the *loʻi*:

> The greatest part of the ground was quite flat, with ditches full of water intersecting different parts, and roads that seemed artificially raised to some height. The interspaces were, in

[1] Traditional land division smaller than an *ahupuaʻa*.

> general, planted with taro, which grows here with great strength, as the fields are sunk below the common level, so as to contain the water necessary to nourish the roots. This water probably comes from the same source, which supplies the large pool from which we filled our casks [Cook 1813:187].

At this time, King also noted the soil and other varieties of cultivation:

> The soil of the Valleys is of a blackish colour intermix'd with sand, & the ground about the Village is cut with ditches of Water intersecting in different parts & roads which are carv'd & seem artificially made. In the dryer places were plantations of Plantains and the paper mulberry trees, kept very clean and in good order, there were but few Coconut trees & those small, with fewer bread fruit trees: The Soil of the higher ground was of a red colour'd stiff consistence & very good, but almost void of cultivation: there are now & then spaces of Potatoe beds & sugar cane, which however are generally in the Valleys. This higher ground is doubt less capable of cultivation, for the grass was very high ; & we observ'd for a considerable e extent it is clear of woods ; this district they call Wy'maia, the Island Atoui ; the larger one to the 'Westward, Neehow . . . & the smaller one Oreehoua & one we saw to Windw. Hoahoo [Handy and Handy 1972:409].

In the late eighteenth century, Captain George Vancouver arrived in the Hawaiian Islands. He was impressed with the irrigated agricultural system at Waimea. A map from 1885, shown in Figure 7, illustrates a large area of *loʻi* northeast of the project area at today's Menehune and Halepule Road and Kaumualiʻi Highway intersection. Vancouver wrote the first western account of Menehune Ditch:

> As we proceeded, our attention was arrested by an object that greatly excited our admiration, and at once put an end to all conjecture on the means to which the natives resorted for the watering of their plantations. A lofty perpendicular cliff now presented itself, which, by rising immediately from the river, would effectually have stopped our further progress into the country, had it not been for an exceedingly well constructed wall of stones and clay about twenty-four feet high, raised from the bottom by the side of the cliff, which not only served as a pass into the country, but also as an aqueduct, to convey the water brought thither by great labour from a considerable distance; the place where the river descends from the mountains affording the planters an abundant stream, for the purpose to which it is so advantageously applied. This wall, which did no less credit to the mind of the projector than to the skill of the builder, terminated the extent of our walk; from whence we returned through the plantations whose highly improved state impressed us with a very favorable opinion of the industry and ingenuity of the inhabitants [Vancouver 1801:376–377].

When British Captain Nathanial Portlock arrived at Waimea in 1786, Kāʻeokūlani, who had been ruling regent of Maui and Molokaʻi, ruled Kauaʻi and Niʻihau with his wife Kamakahelei. Their son, Kaumualiʻi, was later the last *aliʻi nui* of Kauaiʻi and Niʻihau before Kamehameha I unified the Hawaiian Islands (Bingham 1855:42; Kuykendall 1938:39). While Wailua was the main royal residence on the island (Bennett 1930:57; Bennett 1931:96), seasonal royal residences were present at Waimea Village (Bingham 1855:242; Cox 1975:5). Portlock noted these large homes during his visit:

> Being on shore: myself, with my old friend Abbenooe, I observed in the village of Wymoa, about three hundred yards from the beach, a firing of four or five houses, tolerably, large in very good order, with-out inhabitants; on- my asking. Abbenooe the reason of their being-tabooed, he. informed me that they were houses built for the king, whenever he honoured Wymoa with a visit, and that no persons whatever were allowed the use of them in his absence [Portlock 1789:189–190].

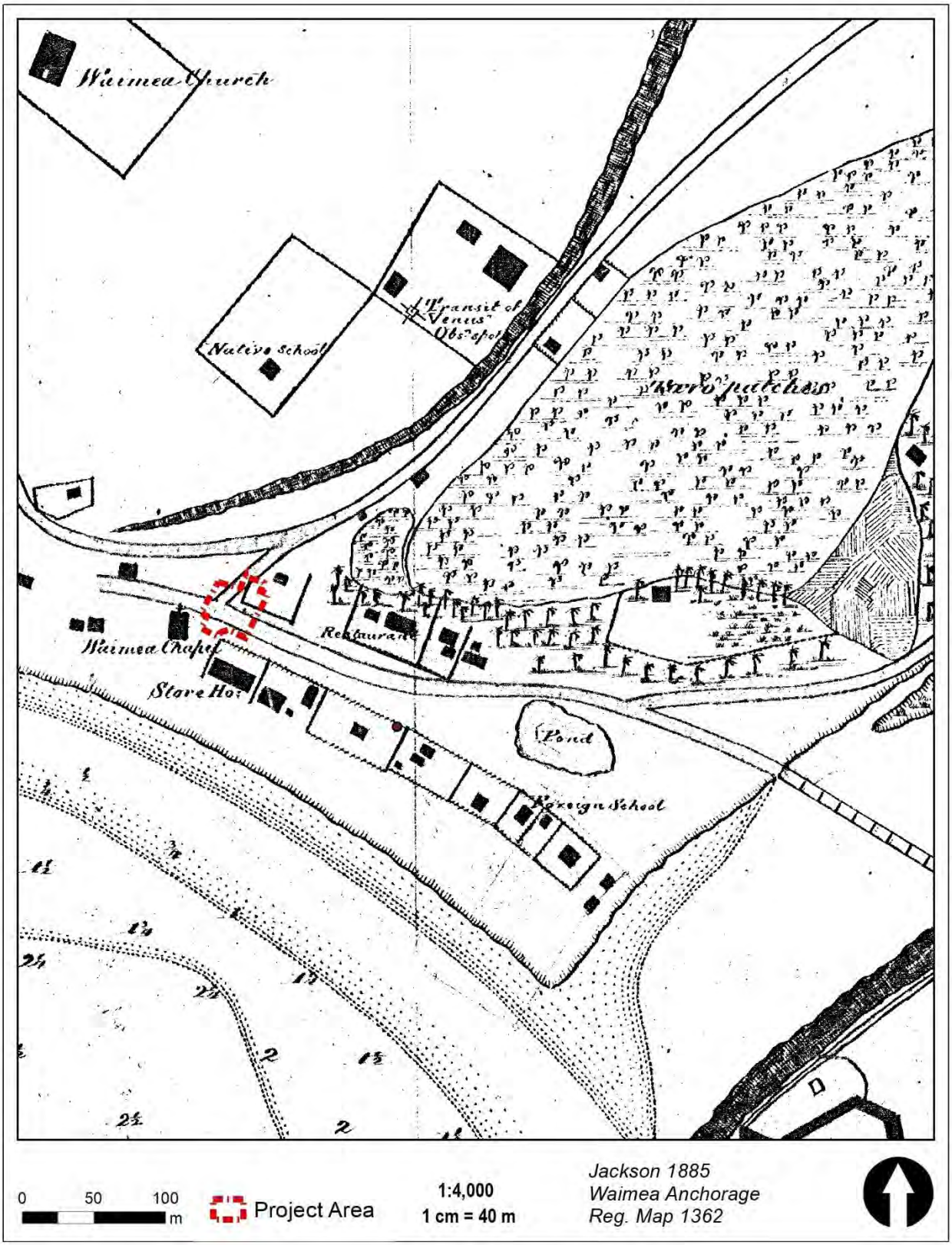

Figure 7. Portion of Map of Waimea Anchorage Illustrating *Lo'i* Northeast of the Project Area at Today's Menehune and Halepule Road and Kaumuali'i Highway (Jackson 1885).

POST-CONTACT HISTORY

Traditional land divisions of the fifteenth and sixteenth centuries persisted until the 1848 Māhele, which introduced the concept of private property into Hawaiian society (Kamakau 1991:54). During the Māhele, the Land Commission required the Hawaiian chiefs and *konohiki* (land agent for the *aliʻi*) to present their claims to the Land Commission. In return they were granted awards for the land quit-claimed to them by Kamehameha III. The remaining unclaimed land was then sold publicly, "subject to the rights of the native tenants" (Chinen 1958:29). The new western system of ownership resulted in many losing their land. Often claims would be made for discontiguous cultivated plots with varying crops, but only one parcel would be awarded.

In Waimea Ahupuaʻa, more than 150 *kuleana* awards were granted (Kamai et al. 2015a:27). Of these, fifteen claims were awarded in Kīkīaola ʻIli and more than 50 claims were awarded in Peʻekauaʻi ʻIli. The current project area is situated within and adjacent to Crown Land and several LCAs, which were primarily house lots, or *pahale*. Those nearest to the project area are listed in Table 1. Maps from the early twentieth century, shown in Figures 8 and 9, illustrate the location of LCA parcels in relation to the project area.

Missionaries began arriving in Waimea in the early nineteenth century. In 1926, there was both flooding and an influenza epidemic in Waimea (Joerger and Streck 1979:10; Kamakau 1992: 274). The flood caused extensive damage to both the *loʻi* and the newly constructed western structures built by the missionaries. Over the next few decades, the population in Waimea area declined dramatically until the 1870s (Schmitt 1977:13).

Table 1. Land Commission Award Parcels near the Project Area.

LCA	Awardee	Description
387:2	American Sandwich Island Mission	House lot with pasture land
2290, 6674, 9903, 3021	Kaipo, Milieke, and Koolau	House lot
2960	D. Oleloa	House lot
3353:3	Nawaalau	House lot
5362:2	Naumu	House lot
6638	Namokuliu	House lot called "Keonepoko"
7713:42	V. Kamamalu	Kīkīaola ʻIli

During the second half of the nineteenth century, agriculture shifted in Waimea from taro to rice and sugar cultivation. *Loʻi* were converted to commercial rice fields beginning in the 1860s, often leased by Chinese immigrants (Coulter and Chun 1937:62; Cozad 2008:45; Thrum 1877:49). In 1878, Valdemar Knudsen and Christian L'Orange began the first commercial sugar cane production in the Waimea area at Kekaha near Pōkiʻi (Condé and Best 1973:141). At its height, Kekaha Sugar Company spanned all of the district, less the *kuleana* lands, from Nuʻalolo to Waimea (Kamai et al. 2015a:31–32).

In 1880, the Waimea Sugar Mill Company was established by Conrad and Borghrevink. This estate was much smaller than Kekaha Sugar Company and comprised 200 acres leased from the missionary George Rowell (Soboleski 2015:199). The following is a reminiscence from the son of George Rowell, William E. Rowell, who was born in Hanalei in 1845 and moved to Waimea when he was one year old:

> With regard to the Waimea Mill Co., the mill, as I remember it, was established and run by the Honolulu Iron Works Co. and Conrad and Borghrevink were planters, and then finally when

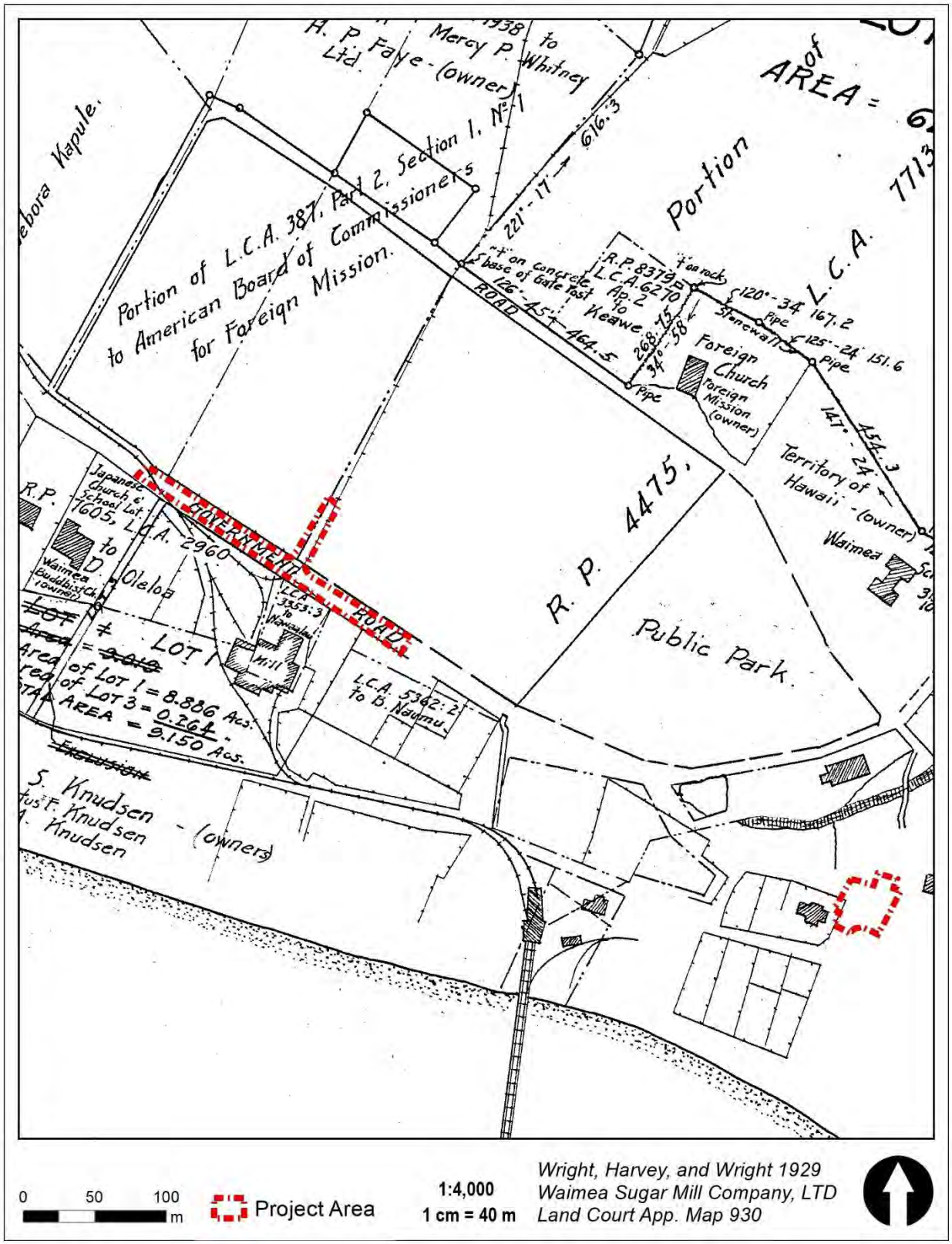

Figure 8. Portion of Land Court Application Map Showing LCA Parcels Near the Project Area at Today's Waimea Canyon Road and Kaumualiʻi Highway (Wright, Harvey, and Wright 1929).

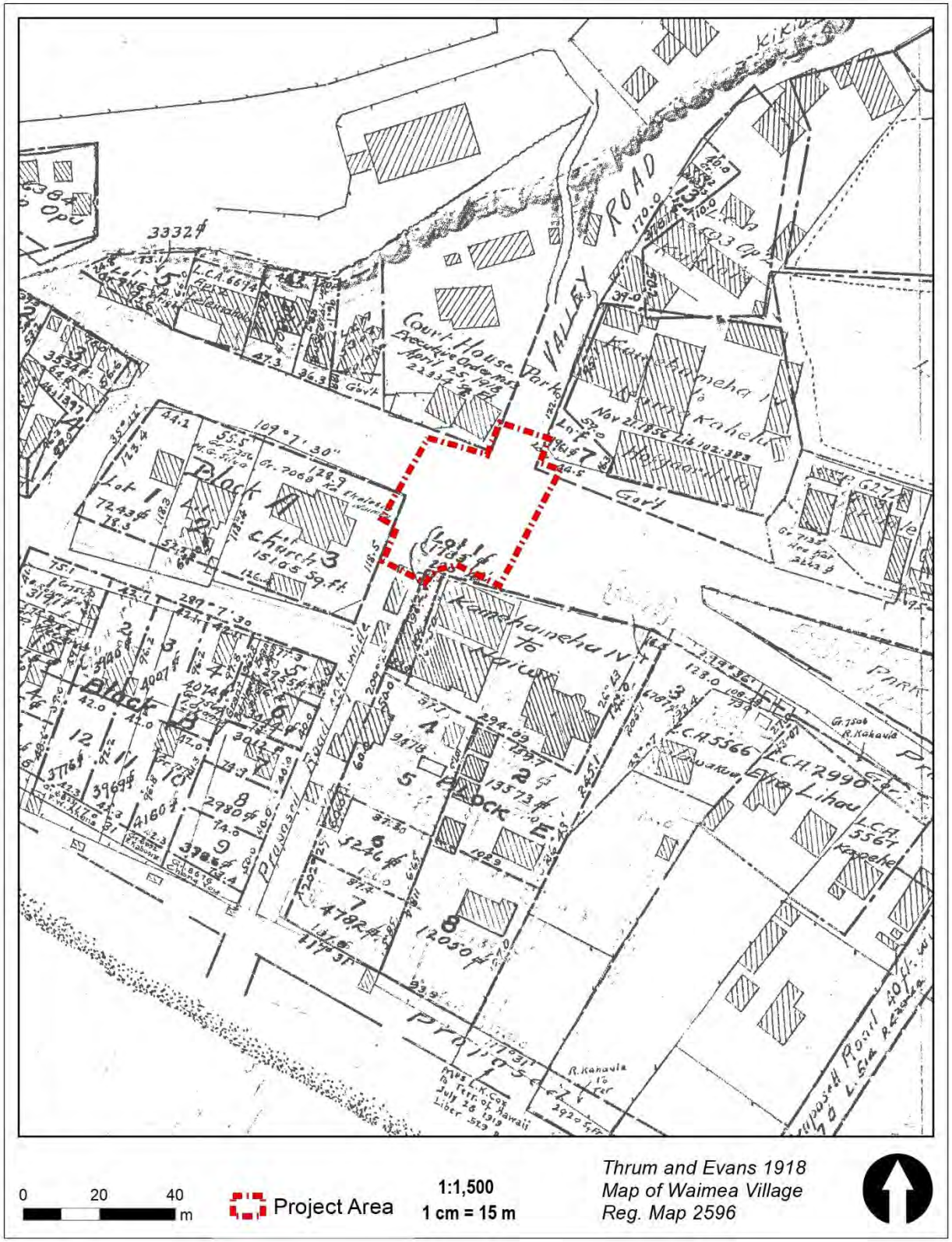

Figure 9. Portion of Map of Waimea Village Showing LCA Parcels Near the Project Area at Today's Menehune and Halepule Road and Kaumualiʻi Highway (Thrum and Evans 1918).

> the planters failed, the Waimea Mill Co. was formed to handle the whole business. The land belonged mostly to my mother, and was leased to the planters in the first instance, and then to the Mill Co. Yes, I was one of the large stockholders, was president for some time, but strange to say, I can't recall how I got my stock, but one thing I am clear about, I haven't got it now [Lydgate 1991:96].

The project area at Waimea Canyon Road is immediately north of the former sugar mill and south of the fields, as shown in Figure 10. The mill was constructed and operated by W.D. Schmidt. In 1903, Waimea Ditch was constructed, which carried water four miles from Waimea River to the plantation and replaced the use of brackish water for irrigation (Soboleski 2015:200). The following year, H.P. Faye, a manager at Kekaha Sugar Company, bought the land owned by Rowell and gained controlling interest in the Waimea Sugar Mill Company. In the following years several improvements were made to the operation: the Waimea Ditch was realigned and flumes were replaced with tunnels; the seashore marsh was drained to increase acreage; a railroad was built; and the mill was reconstructed. The railroad ran though the project area at Waimea Canyon Road and Kaumualiʻi Highway, connecting the fields, mill, and wharf (see Figure 8). These improvements, along with a higher yielding cane, heavy fertilization, ratoon planting, and mechanization, led to the operation being one of the more modern and efficient in Hawaiʻi (Soboleski 2015:200). By 1935, 530 acres were under cultivation. The Waimea Sugar Mill Company operated until 1969, at which time Kekaha Sugar Company leased the land.

As for rice, it was not a successful crop in the Waimea area, and beginning in the 1930s the fields were being reclaimed for sugar cultivation (Hammatt 2008:27). From the end of the nineteenth century on, the population of Waimea grew (Schmitt 1977:13) and the area saw a boom in development with the rise of sugar, followed by tourism (Coffin 1930:48).

PREVIOUS ARCHAEOLOGY

Several archaeological investigations have been conducted both in and near the two project area intersections. Previous work has included archaeological reconnaissance and inventory survey, assessment, subsurface testing, and monitoring. Specific to the current project, an Archaeological Literature Review (ALR) was conduct for the proposed Kaumualiʻi Highway Intersection Improvements, which recommended the preparation of this monitoring plan (Vernon and Clark 2020). Numerous human burials have been recorded within a 500 m radius of the project area, though none have been recorded within the current project area. The following section focuses on previous archaeological work conducted within approximately 500 m of the current project area in order to compare previous findings of land use. The locations of these past investigations and identified sites[2] are presented in Figure 11. Table 2 summarizes the previous work, while a detailed discussion is presented for projects with significant findings in the immediate vicinity of the project area. For a broader summary of work in Waimea the reader is referred to O'Hare et al. (2015) and Kamai et al. (2015a).

In the 1930s, W. C. Bennet surveyed archaeological sites on Kauaʻi Island (Bennett 1931). The only site recorded within 500 m of the project area was Peʻekauai (Menehune) Ditch, which was documented as Site 26 (SIHP 50-30-09-00026) (Bennett 1931:105–107).

During archaeological monitoring in 1975 for construction of the Waimea Town Sewerage System, nine human burials and scattered human remains were inadvertently discovered (Cox 1975). At this time, Waimea Town center was designated SIHP 50-30-05-03250, which included a human burial. The eight other burials were designated SIHP 50-30-05-03251 through -03256. Two cultural deposits were also recorded, which were designated SIHP 50-30-05-03244 and –

[2] All site numbers follow State Inventory of Historic Places (SIHP) Site 50-30-

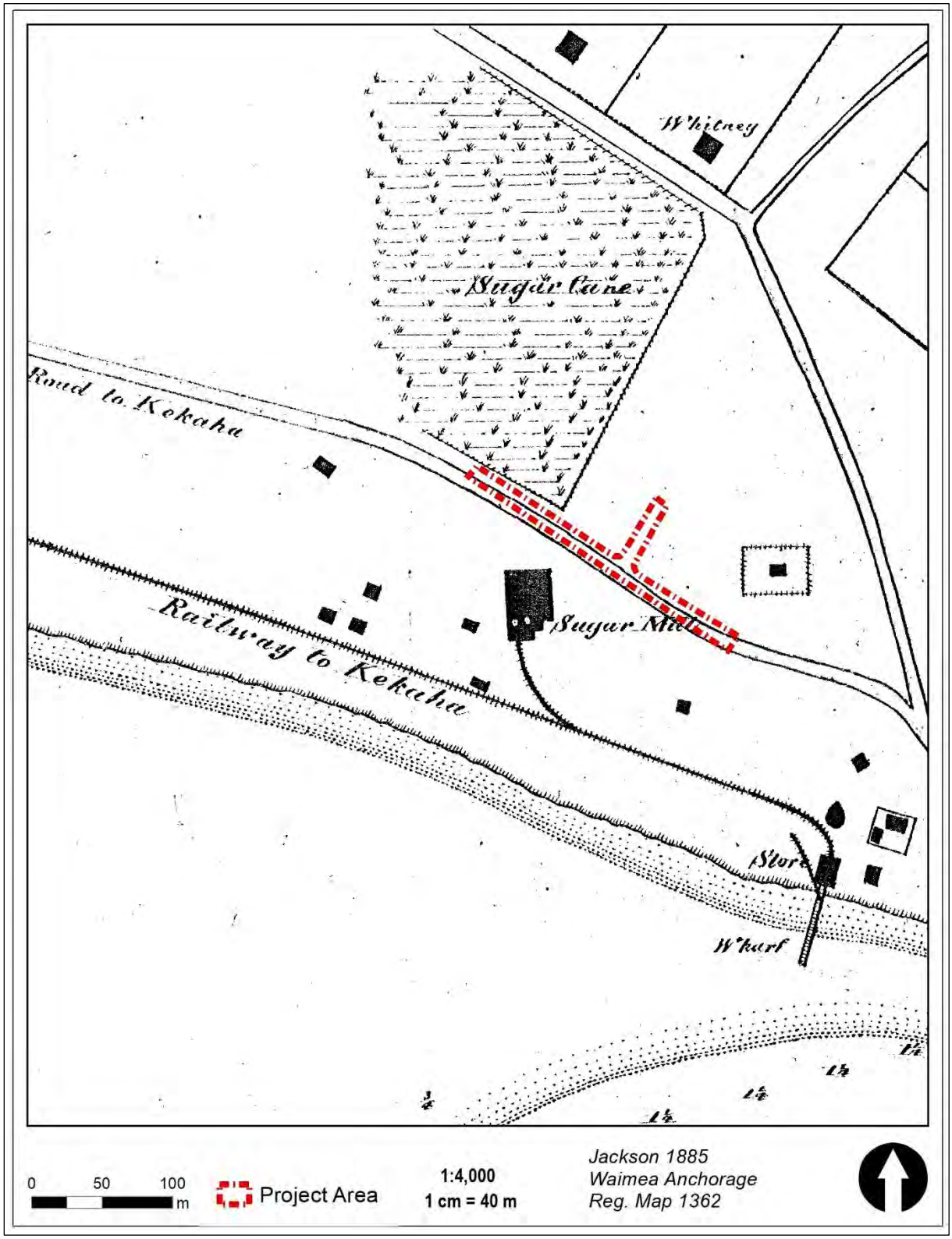

Figure 10. Portion of Historic Map Showing Waimea Sugar Mill Company Fields and Mill Near the Project Area at Today's Waimea Canyon Road (Jackson 1885).

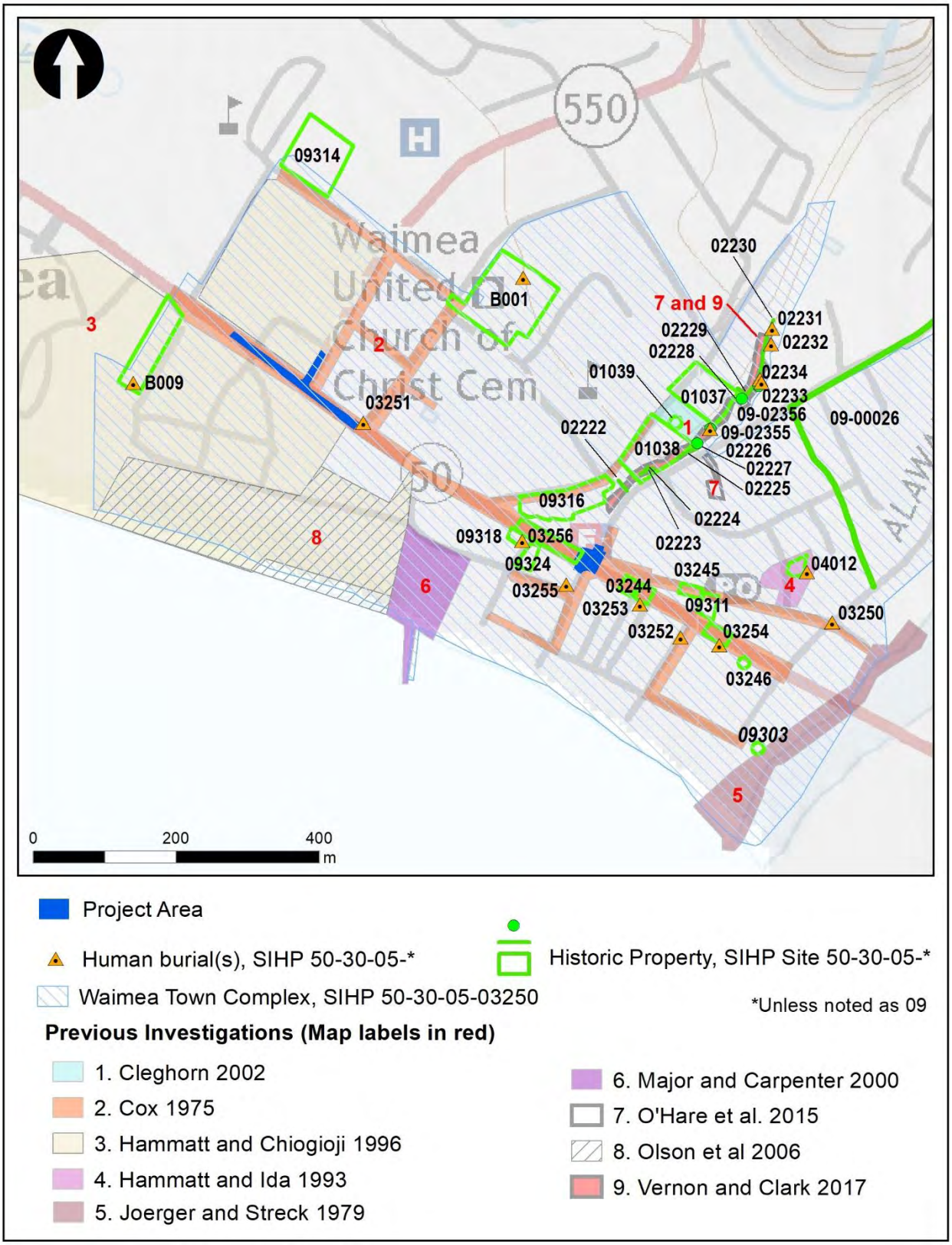

Figure 11. Previous Archaeological Investigations and Identified Historic Properties within .5 km of the Project Area.

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Table 2. List of Previous Archaeological Studies and Finds within 500 Meters of the Project Area.

Author & Year	TMK(s) or Location	Nature of Study	SIHP* Site 50-30-	Results
Bennett 1931	Island-wide	Survey	09-00026	Peʻekauaʻi Ditch (Menehune Ditch)
Cox 1975	Streets throughout Waimea Town	Monitoring	05-03244 and 05-03245	Cultural deposits
			05-03246	Historic house platform
			05-03250	Waimea Town Complex and human burial
			05-03251–03256	Nine human burials found during monitoring along several Waimea Town roads
Joerger and Streck 1979	Waimea River Bank	Reconnaissance survey	-	Exposed soil stratigraphy on west bank of Waimea River near the mouth showed recent fill
Kikuchi and Remoaldo 1992	Statewide	Cemeteries of Kauaʻi	05-B001	Waimea Hawaiian Church and Cemetery
Hammatt and Ida 1993	(4) 1-2-005:082	Inventory survey	05-04012	Cultural layer (AD 1000–1275) and human burial
Hammatt and Chiogioji 1996	Kikiaola Lands	Archaeological assessment	-	Noted two historic cemeteries, Waimea Plantation Cottages, and Waimea Mill building
Major and Carpenter 2000	(4) 1-6-007:001	Subsurface testing	-	-
Cleghorn 2002	(4) 1-6-010:002	Inventory survey	05-01037	Waimea Parsonage
			05-01038	Waimea Dispensary
			05-01039	Transit of Venus marker
Olson et al. 2006	(4) 1-6-008:001	Assessment with subsurface testing	-	-

Table 2. List of Previous Archaeological Studies and Finds within 500 Meters of the Project Area.

Author & Year	TMK(s) or Location	Nature of Study	SIHP* Site 50-30-	Results
O'Hare et al. 2015	(4) 1-6-003:056; 1-6-005:017; 1-6-010:001–003	Inventory survey	05-02222	Historic wall
			05-02223	Historic remnant wall
			05-02224	Remnant historic building foundation
			05-02225	Historic remnant wall
			05-02226	Historic incinerator
			05-02227	Historic building foundation
			05-02228	Historic remnant wall
			05-02229	Historic remnant wall
			05-02230	Historic wall
			05-02231	Cave with human burial
			05-02232	Cave with human burial
			05-02233	Possible human burial in cave
			05-02234	Low mound/possible human burial
Vernon and Clark 2017	(4) 1-6-003:056 and 1-6-010:001–003	Inventory survey	05-01038	Waimea Dispensary
			05-02234	Low mound/possible human burial; retaining wall and terrace
			09-02355	Low mound/possible human burial
			09-02356	Bell stone

*SIHP (State Inventory of Historic Places)

1

03245. Finally, a historic stone house platform was recorded off of Kaumualiʻi Highway, which was designated SIHP 50-30-05-03246.

Site 03251 is situated on the corner of Makeke Road and Kaumualiʻi Highway, adjacent to the project area, as shown in Figure 12. The following description is from Cox (1975:14–15):

> A single adult: Probably an extended burial. Only feet to upper legs excavated, remainder was left in situ. Discovered about July 2 or 3, 1975 by construction crew, before the Archaeological Research Center Hawaii, Inc. was brought on this project.
>
> Location: On Makeke Road, above (*mauka;* inland of) Kaumualiʻi Highway; adjacent to tax map key parcel number (4)1-6-009; 20 feet north of Sewer Manhole A-17, 5 feet west of pipe, centerline, about 5 feet below existing road surface.
>
> The disturbed portion of the remains were reburied as near to the original location as possible, i.e., just off the edge of the trench. This reburial took place during back fill operations on or about the 3rd or 7th of July. This find has been assigned site number 30-05-3251.

In the early 1990s, Cultural Surveys Hawaiʻi (CSH) conducted subsurface testing in a 1.0-acre parcel in Waimea Town (Hammatt and Ida 1993). A prehistoric cultural layer, (SIHP 50-30-05-04012) was recorded at 100 cm below ground surface. Radiocarbon-dated charcoal from the cultural layer yielded a date range of A.D. 1000 to 1275. A probable prehistoric burial was also recorded and designated as Site 04012.

Pacific Legacy, Inc. conducted an archaeological inventory survey of a 69.7 square meter parcel on Menehune Road (Cleghorn 2002). Three historic properties were recorded: the Waimea Parsonage (SIHP 50-30-05-01037); the Waimea Dispensary (SIHP 50-30-05-01038 [Feature 1]); and the Transit of Venus Marker (SIHP 50-30-05-01039).

In 2014, CSH conducted an archaeological inventory survey in support of the Menehune Road Rockfall project along the cliff edge at Menehune Road and a small area to the southeast (O'Hare et al. 2015). A total of 12 historic properties were recorded. These properties included four walls and two retaining walls (SIHP 50-30-05-02222, -02223, -02225, and -02228–2230), two structural base remnants (SIHP 50-30-05-02224 and -02227), a low mound (SIHP 50-30-05-02234), an incinerator (SIHP 50-30-05-02226 [Site 02226]), and two burial caves (SIHP 50-30-05-02232 and -02233). With the exception of SIHP 50-30-05-02232, which dates to the pre-Contact period based on the artifacts observed on the cave floor, all sites date to the historic period. Additionally, SIHP 50-30-05-02231, a burial cave, was identified (O'Hare et al. 2015:54). According to the project's rockfall mitigation measures, Sites 02223, 02224, 02230, 02232, 02233, and 02234 were covered with metal mesh netting, while Sites 02222, 02225, 02226, 02227, 02228, and 02229 were partly or completely destroyed during installation of the metal mesh netting. As a result of these findings, CSH prepared an Archaeological Monitoring Plan (Kamai et al. 2015a), a Burial Site Component of a Preservation Plan (BSCPP-for Sites 02231, 02232, 02233, and 02234 (Kamai et al. 2015b), and a Burial Treatment Plan (BTP).

Pacific Consulting Services, Inc. (PCSI) conducted archaeological monitoring of various ground disturbing activities associated with implementing rockfall mitigation measures along Menehune Road in 2017 (Vernon and Clark 2017). This project overlapped with a majority of the area surveyed by CSH, which was described in the preceding paragraph (see O'Hare et al. 2015). A total of five new historic properties were recorded during the course of the monitoring project. These sites include a mound/possible burial marker, designated as Feature 2 of Site 2234; a rock retaining wall and terrace, designated as Feature 3 of Site 02234; a mound/possible burial marker,

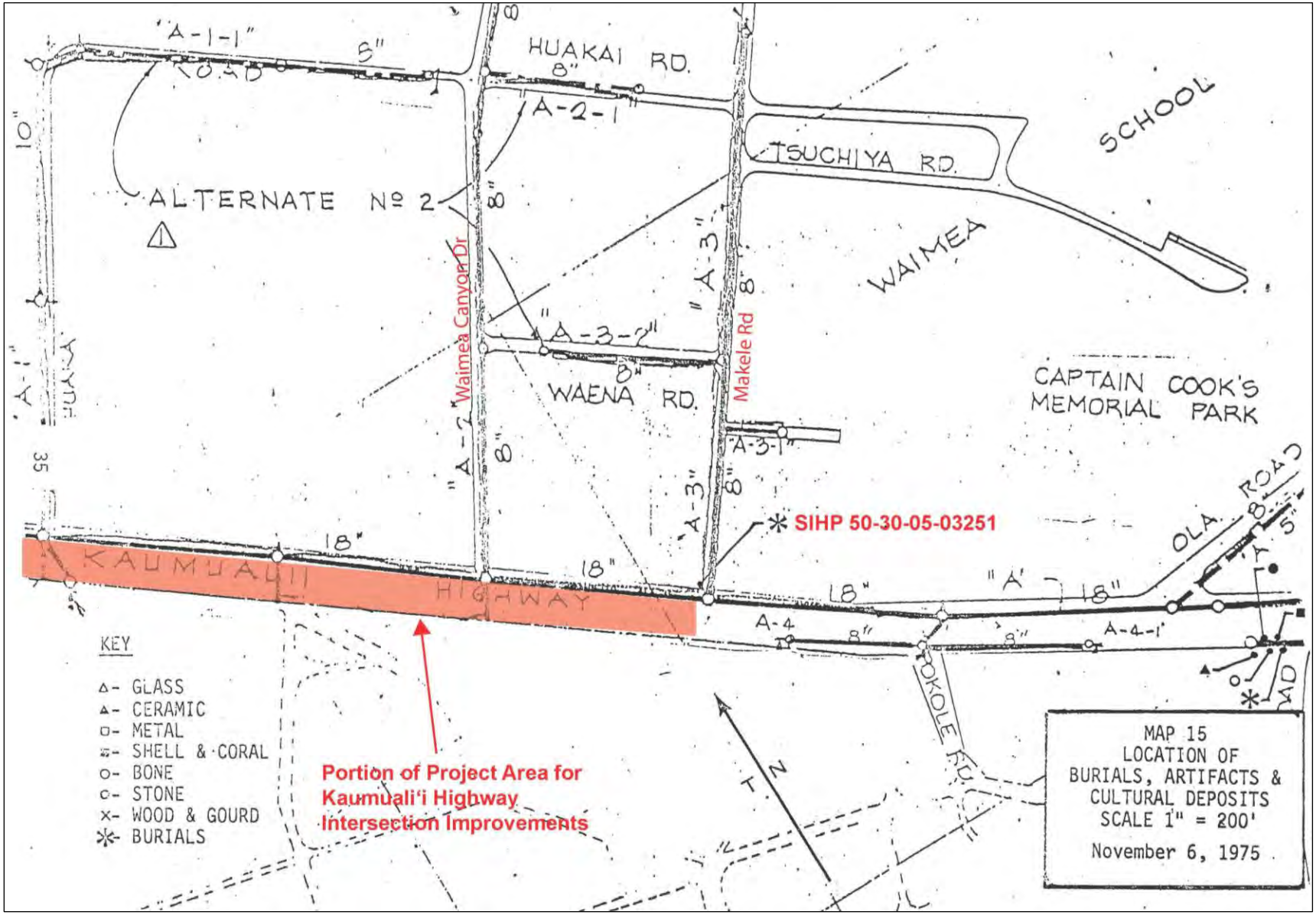

Figure 12. Map From Cox (1975:35) Showing Location of SIHP 50-30-05-03251 in Relation to the Current Project Area.

designated as Site 02355; a deposit of historical refuse, designated as Feature 2 of Site 01038, associated with the Waimea Dispensary; and a bell stone designated as Site 02356.

HISTORIC STRUCTURES NEAR THE PROJECT AREA

Several historic structures listed on both the Hawai'i and the National Register of Historic Places are near the current project area. All of these structures are also included in SIHP 50-30-05-03250, which is the Waimea Town Complex. The following structures are listed on both the Hawai'i and National Register of Historic Places: the Cook Landing Site (SIHP 50-30-05-09303); the historic Bishop National Bank (SIHP 50-30-05-09311); the Gulick-Rowell House (SIHP 50-30-05-09314); the Waimea Educational Center (50-30-05-09316); and the Yamase Building (SIHP 50-30-05-09318). Additionally, the Masuda Building (SIHP 50-30-05-09324) is near the project area, which is listed on the Hawai'i Register of Historic Places.

ANTICIPATED HISTORIC PROPERTIES IN THE PROJECT AREA

Several archaeological sites were previously identified along Kaumuali'i Highway in Waimea Town. Burial sites include nine human burials and scattered human remains designated SIHP 50-30-05-03251 through -03256, which were recorded by Cox (1975) during monitoring of construction of the Waimea Town Sewerage System. Based on these previous findings, it is anticipated that similar historic properties (burials and subsurface cultural deposits) could possibly be present in the project area. Nearest to the current project area is Site 03251, a burial encountered on the northwest corner of Makeke Road and Kaumuali'i Highway, just outside the project area, and Site 03256, a burial and cultural deposit situated along Kaumuali'i Highway west of Menehune Road and Halepule Road.

ARCHAEOLOGICAL MONITORING METHODS

This section details the extent of monitoring and the methods and procedures to be employed during field and laboratory work. All archaeological monitoring activities will be conducted in compliance with Chapter 6E, HRS, HAR Chapter 13-279 (*Rules Governing Standards for Archaeological Monitoring Studies and Reports*).

PROJECT PERSONNEL

A senior archaeologist, qualified under Hawai'i Administrative Rules (HAR) § 13-281, will serve as principal investigator (PI) for the project. The PI will be responsible for overall project organization and quality assurance for field and laboratory work and report content. The archaeological monitor will have satisfactory fieldwork experience in Hawai'i or have completed adequate college-level coursework in Anthropology and Hawaiian Archaeology.

EXTENT OF ARCHAEOLOGICAL MONITORING

The archaeologist(s) will conduct on-site monitoring of all ground-disturbing activities that penetrate below previously disturbed fills and base course within the road prism (Table 3). At Waimea Canyon Drive and Kaumuali'i Highway intersection, activities requiring archaeological monitoring include trenching for drain lines and electrical duct lines; installation of light poles, traffic meter pedestals, and traffic signal standards; and road pavement excavations. Installation of new pavement will require excavation to a depth of 63.5 cmbs (24 in) or more, depending on existing base course depth. Light pole and traffic signal standard installation will require excavations to a minimum of 183 cmbs (6.0 ft). Excavations for traffic meter pedestals will reach a depth of 63.5 cm (24.0 in) or greater. Excavations for electrical lines will reach up to 107.0 cmbs (42.0 in). Excavation depth for drain lines will exceed 122 cmbs (4.0 ft). Excavation depth for

signage will exceed 63.5 cmbs (24.0 inches). Striping will also be replaced, which does not require ground disturbance; no archaeological monitoring is required for this activity.

At Menehune Road and Halepule Road along Kaumualiʻi Highway the project area is the intersection, which measures 1.274 ha (.315 ac). Proposed work is limited to striping; no ground disturbing work will occur at this intersection; no archaeological monitoring is required for this activity.

Table 3. List of Ground-Disturbing Activities Requiring Archaeological Monitoring.

Proposed Ground-Disturbing Activity[1]	Estimated Excavation Depth	On-Call/On-Site Monitoring Necessary
Drain Line Trenching	At least 122.0 cmbs[2] (4.0 feet)	Yes; On-site
Electrical Duct Line Trenching	Up to 107.0 cmbs (42.0 inches)	Yes; On-site
Light Pole Installation	At least 183 cmbs (6.0 feet)	Yes; On-site
Road Pavement Excavation	63.5 cmbs (25.0 inches)	Yes; On-site
Traffic Signal Standard	At least 183 cmbs (6.0 feet)	Yes; On-site
Traffic Meter Pedestal	At least 63.5 cmbs (25.0 inches)	Yes; On-site

1. below previously disturbed fills and base course within the road prism
2. *cmbs = centimeters below surface

PRE-CONSTRUCTION CONFERENCE

Before ground-disturbing work begins at the project area, the on-site archaeologist will explain to the entire construction crew what materials may be encountered and the procedures to follow if archaeological materials are found, as well as the role of the archaeological monitor. At this time it will be made clear that the archaeological monitor must be on-site for these ground-disturbing activities (see Table 3) and that the archaeologist has the authority to stop work ***immediately***, if necessary.

HALTING OF EXCAVATION ACTIVITY

The monitoring archaeologist has the authority to halt construction in the vicinity of any find so that the provisions of this AMP can be carried out. The consulting archaeological firm will make it clear to the construction personnel that the archaeologist has the authority to halt work when it is deemed appropriate.

MONITORING METHODS

The archaeological monitor will closely observe all soil removal activities (e.g., grading and trenching). Following monitoring of soil removal, trench faces will be examined for cultural material and subsurface features. If any archaeological materials are encountered during the monitoring of ground-disturbing activities, work will be stopped immediately in that area and the monitoring archaeologist will investigate the nature of the discovery. Photographs of excavations and the stratigraphic sequences will be documented and included in the report even if no historically significant sites are documented during the field work.

The archaeological monitor will compile daily monitoring logs. These logs will minimally include a description of daily activities, sites or features recorded, personnel on-site, and problems encountered and corrective action taken.

Treatment of Historic Sites and Deposits

If an intact cultural layer, living surface, structural components (e.g., foundations), archaeological subsurface features (e.g., hearths, pits, postholes, etc.), artifacts, charcoal or midden deposits or trash pits are encountered, then the following actions will be taken:

- Selected, sorted charcoal samples will be collected for the possibility of radiocarbon analysis (particularly if the charcoal appears in a prehistoric context). Charcoal samples will be subject to taxa identification prior to submittal for radiocarbon analysis.
- In situ cultural layers and pit features will be sampled and matrix will be screened through 1/4- or 1/8-inch wire mesh.
- Bulk samples of midden (faunal/floral material) if present will be collected.
- All prehistoric artifacts will be collected.
- All historic artifacts will be collected unless large trash or refuse pits are encountered, in which case a sample of diagnostic artifacts will be collected (which will result in a biased sample). Historic artifacts not collected will be documented in the field with photographs containing scales and will be quantified and described
- Standard documentation will be carried out, including to-scale maps, profiles, photographs, detailed soil and provenience descriptions, and interpretation.

Treatment of Human Remains

If human remains are identified, work will immediately stop in that locale, and the SHPD and DOT will be notified immediately of the find. No further work will take place in that locale—including screening of back dirt, cleaning and/or excavation of the burial area, or exploratory work of any kind—unless explicitly requested by the SHPD.

Any human skeletal remains identified during monitoring shall be treated as an inadvertent discovery and be dealt with in accordance with Chapter 6E-43 of the Hawaii Revised Statutes (HRS) and HAR § 13-300-40.

Laboratory Work

Laboratory work will be conducted in accordance with HAR Chapter 13-279 (*Rules Governing Standards for Archaeological Monitoring Studies and Reports*). Artifacts will be catalogued and analyzed, along with any samples of midden materials that have been collected. Charcoal and other datable materials will be submitted for dating analysis, provided samples were collected in situ from prehistoric contexts that show no signs of intermixing with historic materials; e.g., charcoal obtained from distinct fire features in solely pre-Contact deposits. Charcoal from undisturbed traditional contexts may be submitted to a specialist for identification to taxon and then, if the material is short-lived and native, submitted to a specialized laboratory for dating analysis.

Report Preparation

Following completion of fieldwork, a draft Archaeological Monitoring Report (AMR) compliant with HAR Chapter 13-279 will be prepared and submitted to the SHPD/DLNR for review.

Disposition of Materials

All field records, maps, photographs, and related documents and archaeological materials will be temporarily curated at the consulting archaeologist's firm. Final disposition of these records and related materials will be determined in consultation with the land owner and the SHPD.