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**Archaeological Inventory Survey
Remaining Unsurveyed Areas
Hawaii Preparatory Academy
Upper School Campus**

**Land of Waiala, South Kohala District
Island of Hawai'i**

PHRI

Paul H. Rosenthal, Ph.D., Inc.

Archaeological • Historical • Cultural Resource Management Studies & Services

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PLANNING DEPARTMENT
COUNTY OF HAWAII

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Archaeological Inventory Survey Remaining Unsurveyed Areas Hawaii Preparatory Academy Upper School Campus

Land of Waiaka, South Kohala District
Island of Hawai'i (TMK:3-6-5-001:Por. 33)

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SUMMARY

At the request of Hawaii Preparatory Academy, c/o Ken Melrose, Project Manager, Pa'ahana Enterprises, Paul H. Rosendahl, Ph.D., Inc. (PHRI) conducted an archaeological inventory survey of remaining areas needing archaeological survey coverage within the grounds of the Upper School Campus, Hawaii Preparatory Academy (HPA), in the Land of Waika, South Kohala District, on the leeward side of Hawai'i Island (TMK:3-6-5-001:Por. 33). More specifically, the project area consists principally of the northeastern portion of the Upper School Campus and both sides of Hale'aha Stream. It is the intent of HPA that the current archaeological inventory survey – with the possible exception of any subsequent mitigation work that might be found to be needed – will complete all historic preservation review requirements necessary in connection with the master planned expansion of the Upper School Campus.

During the surface survey of the project area two sites were newly identified, and one previously identified site was relocated. The newly identified sites consist of two historic boundary or ranching walls. The previously identified site (State Site 19644) consists of agricultural soil terraces. During the current work, backhoe trench excavations were placed in the terraces, and no cultural remains were identified. All project area sites are assessed as significant solely for information content (Criterion D). The information content at the sites has been adequately collected during the current project, and the sites require no further archaeological work.

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INTRODUCTION

BACKGROUND

At the request of Hawaii Preparatory Academy, c/o Ken Melrose, Project Manager, Pa'ahana Enterprises, Paul H. Rosendahl, Ph.D., Inc. (PHRI) conducted an archaeological inventory survey of remaining areas needing archaeological survey coverage within the grounds of the Upper School Campus, Hawaii Preparatory Academy (HPA), in the Land of Waika, South Kohala District, on the leeward side of Hawai'i Island (TMK:3-6-5-001:Por. 33) (*Figure 1*). More specifically, the project area consists principally of the northeastern portion of the Upper School Campus and both sides of Hale'aha Stream. It is the intent of HPA that the current archaeological inventory survey – with the possible exception of any subsequent mitigation work that might be found to be needed – will complete all historic preservation review requirements necessary in connection with the master planned expansion of the Upper School Campus.

PURPOSE AND OBJECTIVES

The basic purpose of the survey was to conduct an archaeological inventory survey in accordance with the appropriate standards of the Hawai'i State Historic Preservation Division (SHPD) as contained in the SHPD Administrative Rules Chapter 276: *Rules Governing Standards for Archaeological Inventory Surveys and Reports*; Hawai'i Administrative Rules; Title 13, Subtitle 13 (effective December 2003), and to comply with all current historic preservation requirements of the SHPD and the Hawai'i County Planning Department (HCPD).

The specific objectives of the survey were fourfold: (a) to identify all potentially significant archaeological remains present within the project area; (b) to collect information sufficient to evaluate and document the potential significance of all identified remains; (c) to evaluate the potential impacts of any proposed development upon any identified significant remains; and (d) to recommend appropriate measures that would mitigate any adverse impacts upon identified significant remains.

SCOPE OF WORK

Based on discussions with the client concerning the work requirements, a preliminary review of prior archaeological work conducted for the school during the period 1988-2007, and our familiarity with both the general project area and the current regulatory review requirements of the State Historic Preservation Division (SHPD) and the Hawai'i County Planning Department (HCPD), the following scope of work was determined to be appropriate for the current study:

1. Conduct appropriate background review and research-including SHPD consultations;
2. Mobilization – including all field work preparations, field crew travel time, and demobilization;
3. Conduct medium- to high-intensity, 100%-coverage, pedestrian surface survey fieldwork – including detailed site recording;

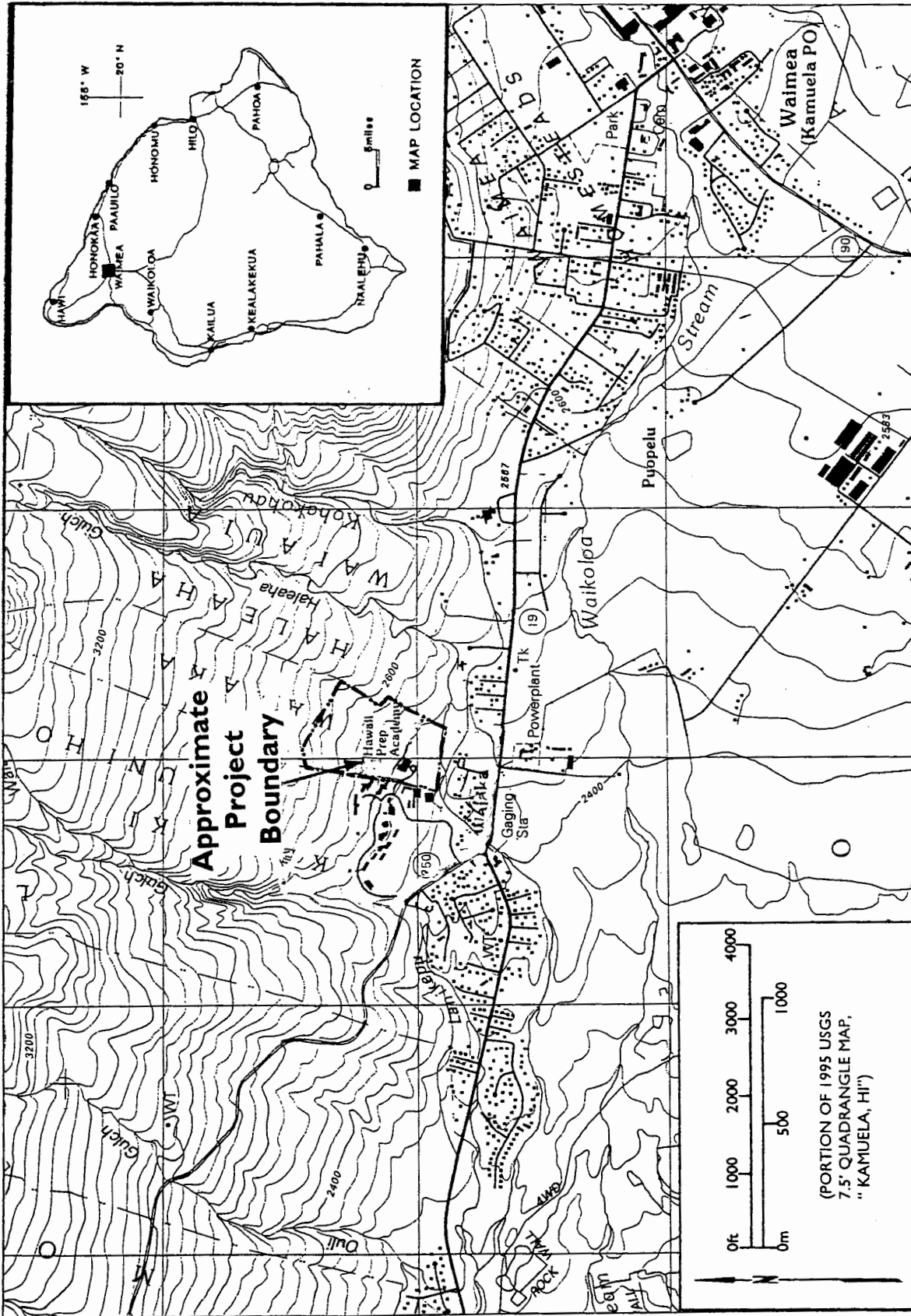


Figure 1. Project Location

4. Conduct limited subsurface testing by backhoe to recover stratigraphic information and radiometric dating samples;
5. Conduct post-field analysis of field and other data;
6. Prepare written draft and final reports – including description and evaluation of findings; and
7. Coordinate and consult with client, client representatives, agency staff, etc. (as appropriate and/or required).

PROJECT AREA DESCRIPTION

The project area is located on the grounds of Hawaii Preparatory Academy (HPA), on lands bordering the area of the Gates Performing Arts Center Building (*Figure 2*). The project area is irregularly shaped in plan view; the intention of the survey was to thoroughly cover any areas that had not been covered by previous archaeological surveys (see *Previous Archaeological Work* section).

The project area lies on the Waimea Saddle, at the toe of the slightly dissected Waimea uplands, on the leeward side of the island of Hawai'i, at an elevation of 744 AMSL (2,440 ft) on the south to 808 AMSL (2,650 ft) on the northern boundary. The mean annual temperature in the vicinity ranges from 60 to 70° F (16 to 21° C), with mean maximum temperatures ranging between 70 and 80° F (21 to 27 C) (Armstrong 1983:62-64). Winds in the project area generally are northeasterly trades; at times *mumuku*, fierce gusts, blow from the northeast (Clark and Kirch 1983:240).

Soil in the project area consists of Waimea very fine sandy loam (WMC), a soil of the Waimea Series, which consists of well-drained very fine sandy loams that formed in volcanic ash (Sato et al. 1973: 53-54). These soils are found on gently sloping to moderately steep uplands at elevations ranging from c. 600 to 1,800 m (2,000 to 6,000 ft) AMSL. Mean annual rainfall for these soils ranges from 25 to 45 inches (c. 65 to 115 cm) a year.

The topography of the area is generally flat, dominated by *kikuyu* grass (*Pennisetum clandestinum*) (McEldowney 1983). Approximately one-quarter of the current project area contains modern housing and previously modified terrain. In September of 1989, Bonk (1989:2) noted that the general vicinity of the project area was covered with short, cropped grass, and was currently used as cattle pasturage. During the current project the grass in the project area was found to be short.

PREVIOUS ARCHAEOLOGICAL WORK

In 1973, Barrera and Kelly (1974), for B.P. Bishop Museum, conducted an archaeological inventory survey of a proposed new sector of the Hawaii Belt Road, from Mudlane through Waimea to Kawaihae (*Figure 3* shows locations of selected major previous archaeological work conducted in the vicinity; see *Table 1* for a summary of previous archaeological work). A corridor of roughly 10,272 acres was inventoried, and 4,561 archaeological features were recorded. The majority of the features were located near Kawaihae on the coast, or in the Lalamilo area near Waimea. As a result of the survey, the proposed highway alignment was rerouted to bypass the Lalamilo area, and the core of this area was designated a historic district (Barrera and Kelly 1974).

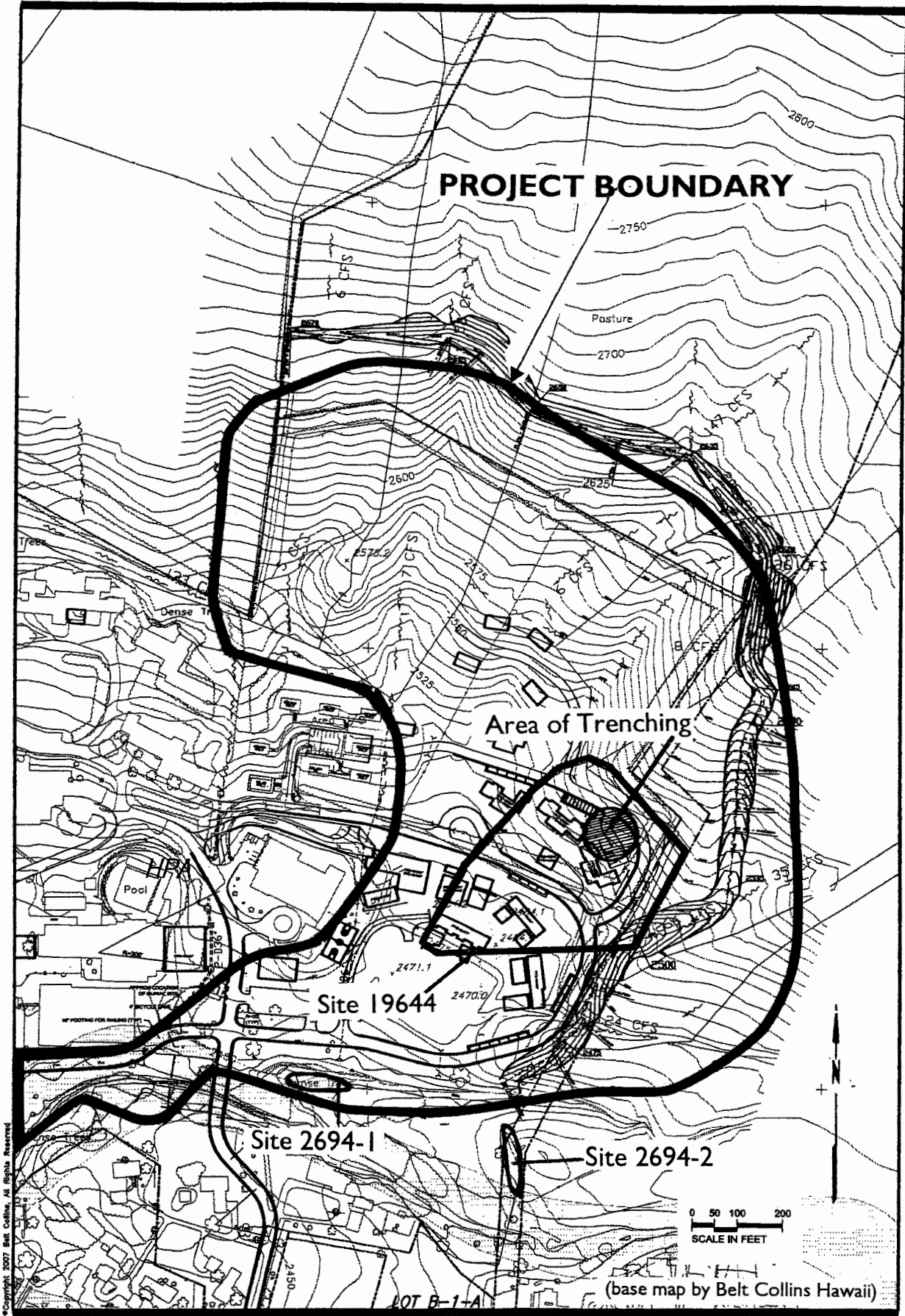


Figure 2. Site Locations

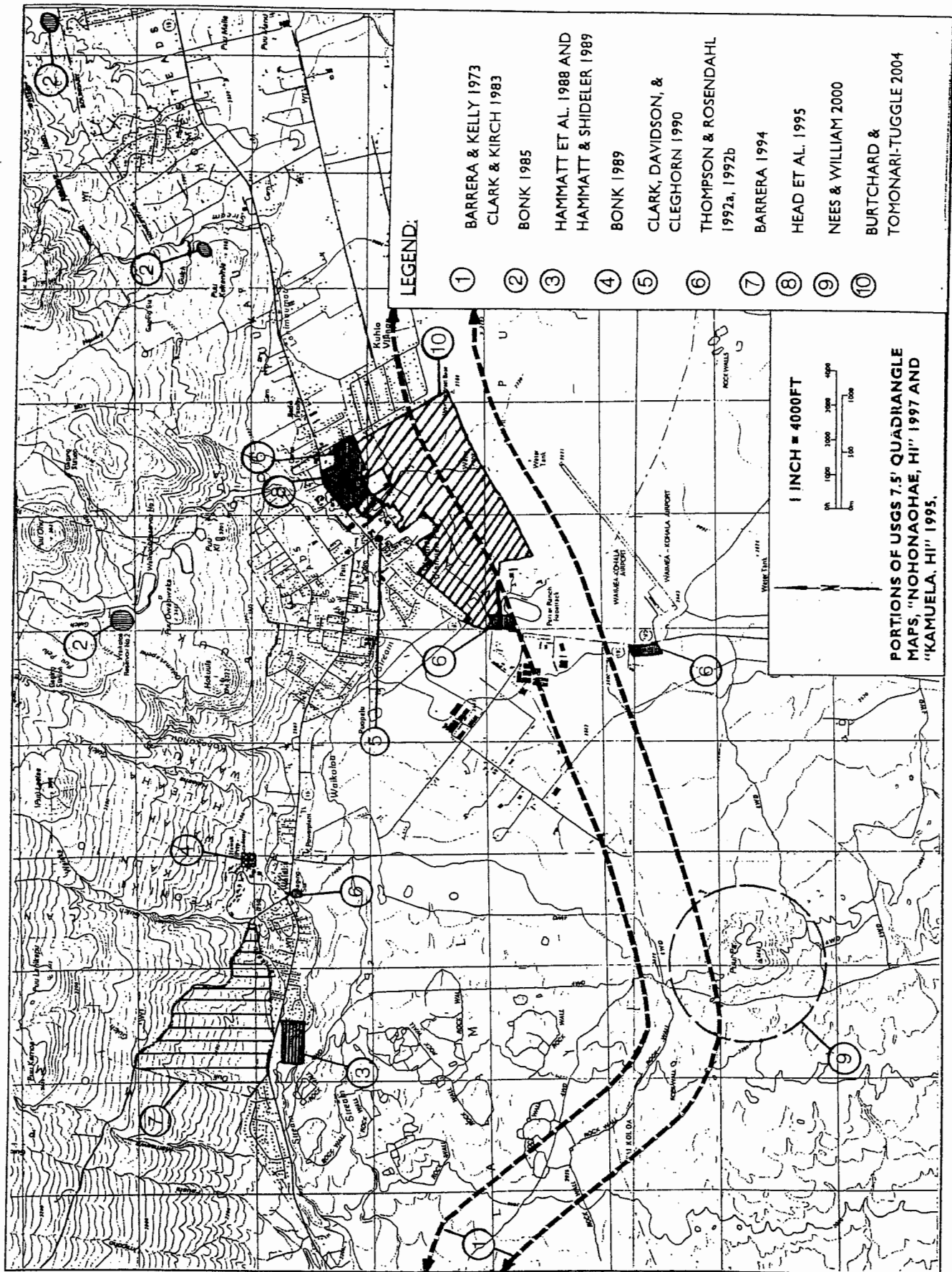


Figure 3. Locations of Previous Archaeological Work

Table 1. Previous Archaeological Research

Researcher	Year of Report	Level of Study	Approx. Size of Project Area	Portion of Waimea Field Complex (after Clark 1981)	Location
Barrera and Kelly	1974	Inventory	10.3 km	Outside	Proposed Waimea-Kawaihae road corridor
Clark (see also Ching 1979, reconnaissance)	1981	Inventory	295 ac	FC 3	Lalānilo
Clark and Kirch	1983	Inventory	32.3 km	Outside	Mudlane-Waimea-Kawaihae road corridor
Bonk	1985b	Reconnaissance, inventory coverage in one area	(not given)	FC 4	Waimea Pa'auilo Watershed, Lalānilo
Hammatt, Borthwick, and Shideler (1988), Hammatt and Shideler (1989)	1986-89	Reconnaissance, inventory testing	50 ac	FC 1 and 2 interface	Lalānilo
Bonk	1989	Reconnaissance	100 ac	FC 1	Wai'aka
Clark, Davidson, and Cleghorn	1990	Testing and data recovery	3 ac	FC 4	Waikoloa
Thompson and Rosendahl	1992a	Inventory	7 parcels totaling 35 ac	FC 2,3,4, near FC 1	Waikoloa, Pu'ukapu, Lalānilo
Barrera	1994	Inventory	250 ac	SW of FC 1	Ouli and Lanikapu
Franklin, Maly, and Rosendahl	1994	Inventory	14.9 ac	E of FC 1	Wai'aka 2
Head et al.	1995	Excavation	18 sq miles	FC 4	Waikoloa, Pu'ukapu, Lalānilo
Nees and Williams	2000	Survey	700 ac	Outside FC 4	Lalānilo
Burtchard and Tomonari-Tuggle	2004	Data Recovery	390 ac	FC 4	Lalānilo
Corbin	2005	Inventory	1.0	E of FC 1	Wai'aka 2
Corbin	2006 (a)	Assessment	16.0	E of FC 1	Wai'aka 2
Corbin	2006 (b)	Inventory	16.0	E of FC 1	Wai'aka 2

In 1979 Ching conducted an archaeological reconnaissance survey for the proposed Lalamilo agricultural park, located approximately 0.25 miles southwest of the current project area. Thirty-five sites were recorded, indicating extensive pre-contact habitation and land use. The sites included an extensive network of *lo'i* (irrigated taro fields), *'auwai* (irrigation ditches), stone walls and platforms, and possible burial platforms (Ching 1979).

In 1981 Clark (1981) surveyed agricultural parklands at Lalamilo in South Kohala. He found an extensive agricultural system, the Waimea Agricultural System, which extended in a large arc to the north, south, and west of the town of Waimea. As Clark described it, the southern end of the system is on the flank of the Kohala Mountains, below Pu'u La'ela'e. It extends down the slope onto the Waimea plain west of Waimea. From this point, it extends east to an area just south of Waimea and west of Kuhio Village. Clark recorded 321 sites composed of hundreds of features. Features included *'auwai*, C-, L-, and U-shaped shelters, mounds, small enclosures, habitation terraces, and platforms. Historic sites included ranching and WWII features. Through volcanic glass dating, it was determined that the prehistoric features fell in the late pre-Contact Period (Clark 1981).

Clark's work resulted in the designation of an extensive archaeological complex, the Waimea Archaeological District (Clark 1981). This agricultural system was divided into four field complexes, each with its own characteristics (*Figure 4*). Field Complex 1 is on the Kohala slopes, on the north side of the existing Kawaihae-Waimea Road. The current project area is located in the vicinity of this first complex. Field Complex 2 is south of the existing Kawaihae-Waimea Road and is bordered by Waikoloa Stream to the south. In Field Complex 2 are agricultural fields demarcated by terrace retaining faces, or low ridges of soil and/or stone. The fields average 25 m in width with the long axis oriented northwest by southeast, perpendicular to the prevailing winds. Numerous *'auwai* are associated with the fields. In addition, numerous residential and other non-agricultural features are scattered throughout the area. Field Complex 3 encompasses most of the Lalamilo Agricultural Park project area (Clark 1981). It is south of Field Complex 2, with Waikoloa Stream the northern boundary. The eastern boundary of the complex is roughly defined by Mamalahoa Highway. The original landscape in the eastern portion of Field Complex 3 has been largely destroyed by creation of the existing Lalamilo Farm Lots.

Field Complex 4 is east of Mamalahoa Highway, south of Waimea, and southwest of Kuhio Village. It is the smallest of the field complexes and the least complex in development. It consists of a set of agricultural fields delineated by low soil ridges. The ridges are oriented perpendicular to the prevailing winds and average c. 30 m apart. As with the other complexes, a set of *'auwai* was found associated with the fields, although in Complex 4 the *'auwai* may not be integral components of the agricultural system. Residential structures and numerous stone walls were documented. Field Complex 4 was intensively surveyed and mapped by Clark (1981).

In 1983, investigators from the Bishop Museum conducted further archaeological investigations within the Mudlane-Waimea-Kawaihae road corridor. This project resulted in the generation of valuable data pertinent to a variety of topics but focusing primarily on the upland agricultural system. Numerous sites were identified, both agricultural and habitation, and the project provided a broad data base for comparing site distribution data from the coast of Kawaihae to upland Lalamilo (Clark and Kirch 1983).

In 1985 Bonk surveyed the Waimea-Paauilo watershed area of portions of the districts of south Kohala, focusing on three proposed reservoir sites, approximately 1.65 miles, 3.65 miles, and 4.65 miles northeast of the current project area. No findings were reported for these areas. Bonk also surveyed three areas set aside as potential cropland tracts to the south and southeast of Waimea. He relocated several sites first investigated by Clark (Clark and Kirch 1983:240-290). These were nine sites consisting of residential complexes, agricultural fields, stone walls, and *'auwai* (Bonk 1985 a and b).

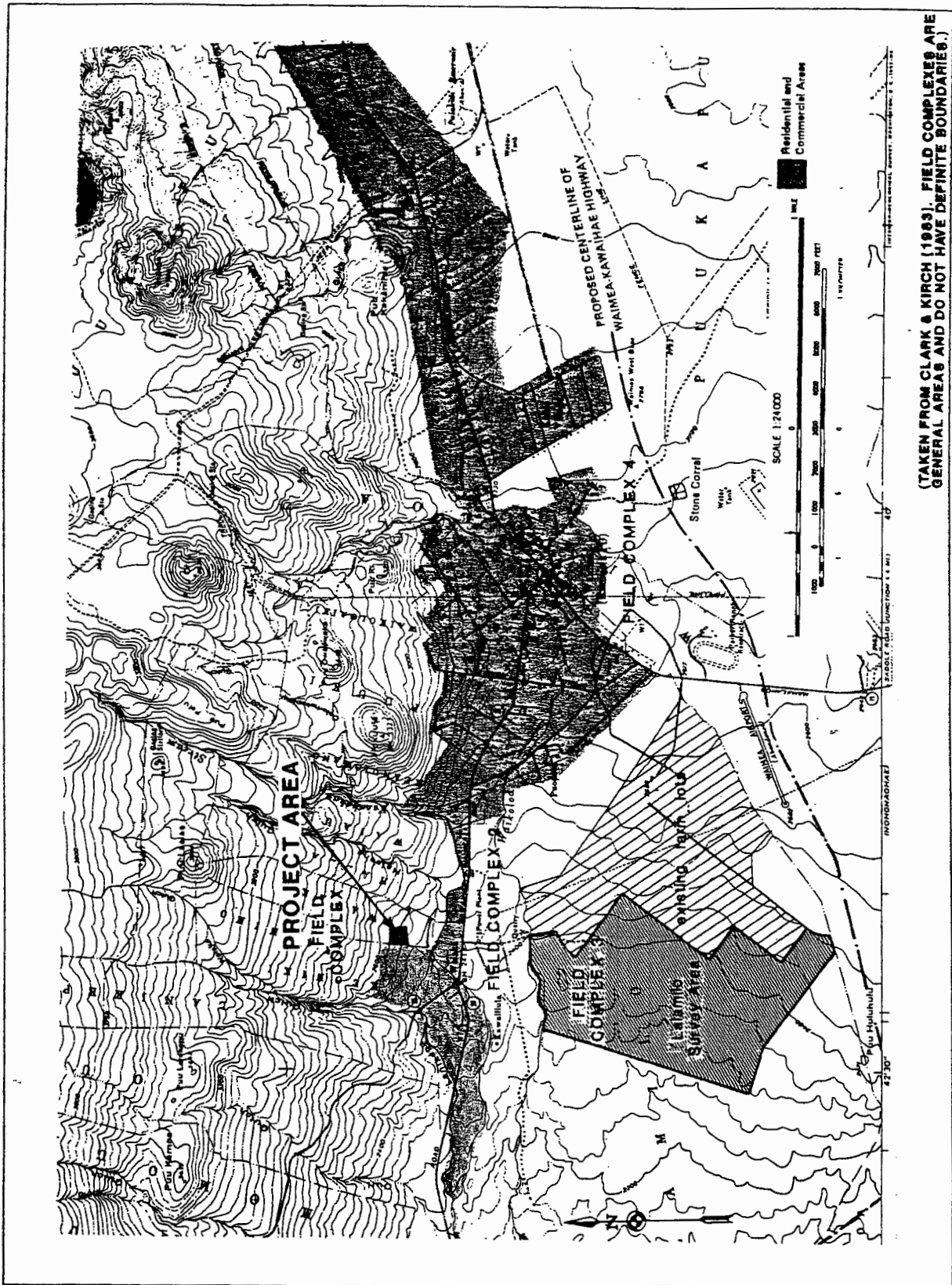


Figure 4. Map of the Waimea Field System Showing the Four Field Complexes

In 1988, Hammatt, Borthwick, and Shideler (1988) conducted archaeological investigations on a 12-acre parcel in upper Lalamilo, just west of Waimea town, for a proposed expansion of the Lalamilo House Lots Subdivision. Seven archaeological sites were recorded, and limited subsurface testing was conducted. Both habitation and agricultural sites were documented.

In 1989, Hammatt and Shideler (1989) conducted further investigations at two of their previously identified sites within the same project area, and further analyses were performed on some of the earlier collected materials. Their data analysis suggests the informal agricultural activity (represented by agricultural mounds) was occurring by the mid-13th century, field boundary walls were constructed by the mid-15th century, and permanent habitation was occurring from the early 16th century to the late 18th century (Hammatt and Shideler 1989).

In 1990, the Applied Research Group, Public Archaeology Section, of the Bishop Museum conducted archaeological testing and data recovery for the proposed expansion of Waimea Elementary and Intermediate Schools in the town of Waimea (Clark et al. 1990). Site 8808, previously identified during the inventory survey of the Mudland-Waimea-Kawaihae road corridor (Clark and Kirch 1983), was located within the project area. Three of the 'auwai associated with Site 8808 were relocated. In addition, two surface features, another 'auwai, a subsurface activity area, and a historic house foundation were located. Backhoe testing was conducted at the site, and buried agricultural soils were also identified. Further subsurface archaeological investigations were recommended for the identified buried activity area (Clark et al. 1990).

In 1992 PHRI conducted an archaeological inventory survey of potential sites for the North Hawaii Community Hospital in Waimea. During the survey, an 'auwai complex (Site 16095) was identified. The complex consisted of a series of 'auwai linked to a larger irrigation system identified by Clark and Kirch (1983:242). No features or sites were noted in association with this complex. An additional field complex was identified, consisting of at least six fields, characterized by a series of low, soil retaining faces oriented perpendicular to the prevailing winds (Thompson and Rosendahl 1992a:ii).

In 1994, Barrera completed an inventory study to the southwest of Field Complex 1, in the Lands of Ouli and Lanikepu. Barrera's project area is located to the west of the present project area, on the other side of Lanikepu Gulch at roughly the same elevation and terrain. Sites identified by Barrera included agricultural complexes (terraces, mounds, retaining walls and berms, walls, pens, permanent and temporary habitations), and a trail (Barrera 1994).

In 1994 and 1995 Burtchard and Tomonari-Tuggle (2003) conducted data recovery investigations and research on a 390-acre development on Parker Ranch lands. The study provided more definitive data on the temporal range, distribution, and function of the key components, as identified by Clark (1983), of the Waimea Agricultural System, Field Complex 4. Specifically, the co-occurrence and presumed temporal/functional association of residences, field ridges, and irrigation features of the upper Waimea Plain was studied. The results from this project (WTC project), indicate that, contrary to previous studies, prehistoric agriculture on this portion of the Waimea Plain was more limited in scale than previously believed, did not involve irrigation, and should not be equated, in terms of size and complexity, to the Kona and Kohala field systems on leeward Hawai'i Island. It was also found that road and trail networks at Camp Tarawa, a huge World War II marine encampment, were mistaken for prehistoric field ridges on aerial photographs (cf. Burtchard and Tomonari-Tuggle 2004).

In 1995, PHRI conducted excavations at the North Hawaii Community Hospital in Waimea. Research focused on radiocarbon dating of previously discovered 'auwai. Five samples from several 'auwai were tested. These yielded a range of adjusted conventional date ranges, two of which were acceptable pre-

contact dates of 710±80 and 210±50 years B.P. However, three dates yielded significantly older dates of 1060±60, 1490±40, and 1690±60 years B.P. (Head et al. 1995:15-16,21), and are therefore considered anomalous. Because the stratigraphic context was uncertain, the authors cautiously advanced the proposition that construction of the *'auwai* along with associated agricultural activities in Waimea may have occurred earlier than researchers had previously considered (Head et al. 1995:21).

In 2000, Ogden Environmental and Energy Services conducted a large survey of the Waikoloa Maneuver Area. One archaeological site was recorded approximately 5.0 km south of the current project area. It is related to the previously recorded Waimea Agricultural Field System and probably dates between the late pre-Contact period or early historic periods, AD 1600-1850. It consists of a small square enclosure within a larger enclosure, and a slab-lined fire pit (Nees and Williams 2000:101-102).

Previous Archaeological Work at Hawaii Preparatory Academy

In 1988 Bonk surveyed an eight-acre parcel of land on the HPA campus upon which was later built the current theater-auditorium building, just north of the current project (Bonk 1989). Bonk also surveyed an additional 22 acres of HPA land east of and adjacent to the eight-acre parcel, and eventually expanded his survey to 100 acres of Wai'aka. It was not clear, however, in Bonk's report, how many of the features found during the survey were within the original eight-acre parcel (letter dated April 24, 1990, to D. Kanuha, HCPD, from D. Hibbard, SHPD), and it was not clear where the sites were located. His findings revealed only two examples of "low, mildly terraced field ridges" and the "larger terraces with broader and flatter surfaces behind soil embankments" (Bonk 1989:15). Bonk also identified several *'auwai* further eastward (Bonk 1989:15).

In May 1990 PHRI conducted an inventory survey of the same eight-acre parcel that Bonk had surveyed earlier (Figure 3; labeled No. 4). During the PHRI survey, seven sites were identified and eight backhoe trenches were placed. The sites were associated with agriculture and related habitation, and the sites were both prehistoric and historic. Feature types identified included cemetery, terrace, concrete foundation, and alignment. Functional types included agriculture, habitation, burial, water storage, and indeterminate. In 1994, the survey area was expanded to 14.9 acres to include a ball field and classroom buildings (Franklin et al. 1994) (see Figure 3). The expanded area was inspected in June of 1994 by PHRI. By then, portions of the expanded area had been bulldozed. Only intact portions were surveyed as part of the field inspection. Following this, all previous documentation for the project was reviewed, and a final site count was determined; in all seven sites were identified in the 14.9-acre area (Franklin et al. 1994). The Franklin et al. (1994) report was submitted to the SHPD and the SHPD issued a review letter on November 15, 1994. The review comments, however, were never addressed because the project was put on an indefinite hold. The SHPD's principal concern in their review letter was the lack of dating samples from the project.

In 2005, Paul H. Rosendahl, Ph.D., Inc. (PHRI) conducted an archaeological inventory survey and backhoe trenching of the approximately five-acre Faculty Housing Complex - Phase III project area to recover radiocarbon samples. During the surface survey no new archaeological sites were identified. The surface survey indicated the project area had been highly modified by previous ranching activities. The backhoe trenching involved placing eight trenches throughout previously identified Site 19646, an area of agricultural terracing. During the trenching three radiocarbon samples were recovered from trench walls; no cultural matrices, subsurface horizontal features, or other cultural remains were observed. The three samples yielded radiocarbon ranges that indicate the site was probably utilized from the 15th century to the 19th century. These findings were in concurrence with previous radiocarbon date ranges for the general area (Corbin 2005).

In 2006, PHRI conducted an archaeological assessment survey of an approximately 16-acre site under consideration as a new K-8 campus (TMK:3-6-5-001: Por. 8,33,51). During the surface survey seven sites were identified. Three were historic boundary or ranching walls. The remaining sites comprise a possible sharpening “station” for cutting implements, a low *kuaiwi*, a large mound composed of earth and rocks, and a buried vault that contained a canoe. Based on national evaluation criteria, all of the identified sites were tentatively assessed as significant for information content. One site, the buried vault with canoe, was also assessed as significant as an excellent example of a site type and as culturally significant. It was recommended that prior to any land modification in the project area the area undergo a full archaeological inventory-level survey. The survey should include testing of the Site 2618-6 mound, as informants had indicated it may cover the entrance to a burial cave (Corbin 2006a).

In December, 2006, the three historic boundary or ranching walls, the possible sharpening “station” for cutting implements, and the low *kuaiwi* underwent detailed recording. The previously identified buried vault with canoe was left “as is”, as it is surrounded by a wooden fence, a mound, and landscaping, and no further recording or protection was deemed necessary. The large mound composed of earth and rocks was excavated and found to contain no evidence of any buried archaeological features and did not cover an entrance to a burial cave (Corbin 2006b).

HISTORICAL DOCUMENTARY RESEARCH

by Kepā Maly, Cultural Resources Specialist

The project area is in the *ahupua'a* (a traditional land division) of Wai'aka, which lies in the southeastern portion of the district of Kohala, on the island of Hawai'i. Wai'aka and its neighboring *ahupua'a* to the west and east (e.g., Kauniho, Keoniki, and Lanikepu on the west, and Hale'aha, Wai'auia, Keanu'i'omanō, and Pu'ukī on the east) are small, atypical, land-locked *ahupua'a*. Usually, *ahupua'a* include various natural resources which range from the ocean to the upper slopes of the mountainous regions. Generally, this range of resources, from sea to mountain, made for adequate support of the needs of the communities within the *ahupua'a*. Because of the topographical nature of land divisions like Wai'aka, residents of these land-locked parcels probably had close relationships with larger, traditionally aligned *ahupua'a* in order to maintain access to the range of staple resources not available within them. Because there was water available in the streams of this upland area, the lands around Wai'aka (e.g., Keoniki, Wai'auia, and Hale'aha) could have played an important role in providing the bulk of the vegetable produce for the area, and in return, other communities (e.g., Waikōloa, Puakō, Lālāmilo, and 'Ōuli) that had coastal resources, and perhaps were occupied by people with familial ties to residents of the landlocked *ahupua'a*, could have provided the marine resources and other meat-protein resources of the larger, regional communities.

Wai-'aka may be translated as “laughing-water” (Pukui et al. 1974), and the name is used to identify both a stream that flows off the Kohala mountains, and the *ahupua'a*. The project area is located in a region that is generally referred to as “Waimea” (Red-water), a name that also identifies several localities in this section of Kohala. They are: (a) the town of Waimea, also called Kamuela [Samuel], named either for the postmaster, Samuel Spencer or for rancher Samuel Parker [Pukui et al., 1974]; (b) a region, or *kalana*, that extends from the coast to the uplands and encompasses several *ahupua'a* between Kawaihae and Waikōloa; (c) the upland area only of that region, including the entire plain between Kohala and Mauna Kea mountains; and (d) the upland region of intensive residential and agricultural occupation—the Waimea Field System (Clark and Kirch 1983:46).

Although there is little specific information readily available for the *ahupua'a* of Wai'aka, Kauniho, and Keoniki, there has been detailed and comprehensive research and documentation of events and practices of the general region (e.g., Kamakau 1961; Ellis 1969; Doyle 1953; Fornander 1919; Handy and Handy 1972; Kelly 1974; and Clark and Kirch 1983). Indeed, to date, only few legendary accounts that refer to the general area have been located; among them are the narratives of Lono-i-ka-makahiki and Kamalālāwalu (Kamakau 1961:58) and Fornander 1917 Vol. IV, Part II:342-344 and Vol. V, Part II:446-451), and Ka-Miki (In *Ka Hōkū o Hawai'i* 1914-1917). These two legendary accounts specifically refer to events that occurred on, or nearby, the *pu'u* (hills) of Hōkū'ula and 'Owā'owaka ('Oaoaka), in the land of Pu'ukī, within half a mile of the project area. Several historical resources, such as early explorer and missionary journals, *Māhele* and Grant records, and a few more-recent studies document the use of *'auwai* (irrigation systems) and irrigated fields, and dryland agricultural field systems in the general vicinity of the project area.

Pre-Contact History

Nineteenth century Hawaiian historian Samuel Kamakau (1961) relates that Kawaihae (c. seven miles below the project area, at the coast) was famous as a landing spot. One of the famous landings occurred in the late 1500s, when the Maui chief Kamalālāwalu invaded the island of Hawai'i. Having landed at Kawaihae, the Maui armies found no one there because the people had gone up to Waimea. Kamalālāwalu's counselors told him that Waimea was not a good battle site for strangers, because the plain was long and there was no water. Should they meet with defeat they would all be slaughtered. The Maui chief failed to heed the warnings of his own advisers, and instead, he listened to two old men of Kawaihae who purposefully misled him saying that Pu'oa'oaka was a good battlefield. These old men also told the chief that all his canoes should be taken apart because the warriors may want to run back to the canoes and return in secret to Maui. Kamalālāwalu listened to this advice, and destroyed all the canoes, thinking to get new ones after the battle was won (Kamakau 1961:58). Kamakau describes the battle this way:

After Kama-lala-walu's warriors reached the grassy plain, they looked seaward on the left and beheld the men of Kona advancing toward them. The lava bed of Kaniku and all the land up to Hu'ehu'e was covered with the men of Kona. Those of Ka'u and Puna were coming down from Mauna Kea, and those of Waimea and Kohala were on the level plain of Waimea. The men covered the whole of the grassy plain of Waimea like locusts. Kamalalawalu with his warriors dared to fight. The battlefield of Pu'oa'oaka was outside of the grassy plain of Waimea, but the men of Hawaii were afraid of being taken captive by Kama, so they led [Kamalalawalu's forces] to the waterless plain lest Maui's warriors find water and hard, waterworn pebbles. The men of Hawaii feared that the Maui warriors would find water to drink and become stronger for the slinging of stones that would fall like raindrops from the sky. The stones would fall about with a force like lightning, breaking the bones into pieces and causing sudden death as if by bullets...

The Maui men who were used to slinging shiny, water-worn stones grabbed up the stones of Pu'oa'oaka. A cloud of dust rose to the sky and twisted about like smoke, but the lava rocks were light, and few of the Hawaii men were killed by them. This was one of the things that helped to destroy the warriors of Kama-lala-walu: They went away out on the plain where the strong fighters were unable to find water...The warriors of Maui were put to flight, and the retreat to Kawaihae was long. [Yet] there were many who did reach Kawaihae, but because of the lack of canoes, only a few escaped with their lives... (Kamakau 1961:58-60).

Another version of this battle, by Abraham Fornander (1919), tells about how Kamalalawalu's invading army arrayed itself on top of the hill of Hōkū'ula where, Kamalalawalu had been falsely told, there were large stones to roll down on the enemy. From the heights of Pu'u Hōkū'ula, the warriors of Maui could see the armies of all Hawai'i advancing and taking their positions along the plains of Waimea. Fornander notes that the warriors from North Kohala were stationed between the lands of Momoualua to Waihaka (possibly Wai'aka) (Fornander 1917 Vol. IV-11:344):

The hill [Hōkū'ula] is located in Waimea until this day...It is a very famous eminence because of the battle fought by Kamalalawalu and his distinguished warrior Makakuikalani thereon. On that hill, there are no stones, nor trees, but grass and soils are thereon...

While Kamalalawalu was on the hill of Hokuula, in Waimea, he beheld the dust rising above the stones of Kaniku, the stones being gradually reddened by the dirt. On account of the many men the darkness of the stones was covered by the dust. And when Kamalalawalu saw the men of Kaniku advancing, he inquired of Kauhikama: "Where have you traveled on Hawaii that you failed to observe the people?" Kauhikama answered: "From Kawaihae to Kaawaloa, in Kona were the places I visited, but I encountered no person." Kamalalawalu said to Kauhikama: "Did you not see houses standing?" "There were houses indeed, but there were no occupants. There were pigs running about, and there were chickens crowing." Whereupon, Kumaikeau and Kumakaia remarked: "You could not find the occupants at home, for they had gone upland to till the ground because it was morning, and they had gone out fishing. If it were in the afternoon you went there, you would have met the men at home."

Kamalalawalu, on hearing this, said to Kauhikama: "We shall perish; we can not be saved. I thought your report was true, but it is not so. By whom have you been taught that the house is a thing that stands without dwellers. Why! The house is erected, the men live therein. Woe betides us that we perish by your report..." (Fornander 1919{5}:446-448).

This version of the narrative provides readers with two important points of interest which relate to land use in the general project area and Waimea: (a) it is the recording of an event that probably also impacted the community of Wai'aka; and (b) there is a statement regarding the practice of coastal residents going to the uplands in the mornings to "till the ground." The narrative implies that this was a practice of the residents from Kawaihae to Ka'awaloa; if so, this might mean that primary residences were along the shore, while agricultural activities took place in the uplands.

The legend of Ka-Miki, published in the Hawaiian language newspaper "Ka Hōkū o Hawai'i" between the years 1914-1917 (translated by the author of this section of the report), is the story of two brothers and their journey around the island of Hawai'i. The legend includes references to over 800 place names, and provides readers with an interesting description of the significance of Pu'u Hōkū'ula. The *kaona* (an underlying, or hidden meaning) of the text may have a direct relationship to the nature of the land surrounding Hōkū'ula, including Wai'aka:

Hōkū-'ula (Red star) – When Ka-Miki and Maka-'iole drew near to completing their formal *'ōlohe* (fighting and competing skills) training under their goddess-great grandmother Ka-uluhe, she told them to go and visit their *kūpuna* (ancestress) Lani-nui-ku'i-a-mamao-loa who dwelt at Lanimaomao (Waimea). Lani-nui-ku'i-a-

mamao-loa was the guardian and keeper of the sacred *kānoa 'awa* ('awa mixing bowl) *Hōkū'ula* which belonged to Lono-Makahiki, and the *ma'au* (strainer) called *Kalau-o-ke-Kāhuli* which was upon the plain of Waikōloa. These two items were to be used in the 'awa ceremonies for the brothers 'ailolo (brain eating - completion of training ceremonies) (2/5/1914).

Ka-Miki used the 'awa bowl *Hōkū'ula* to carry *Ka-wai-a-Kāne* (the sacred water of *Kāne*) from Mauna Kea, back to Ka-uluhe's house at Kalama'ula on the slopes of Hualālai. After getting the water, Ka-Miki departed from Mauna Kea and joined Maka-'iole at the Holoholokū hills on the Waikōloa plain. The wind of the goddess *Wai-kō-loa* (Water carried far) caused some of the water to splash from the bowl of *Hōkū'ula*. The god *Pōhakuakāne* retrieved the water from where it fell, and thus the spring of *Wai-ki'i* (Water fetched) was formed (3/12/1914).

The following riddle or proverb from this legend is used to describe *Hōkū'ula*:

Ke kānoa kapu o Lono-Makahiki; 'oia ho 'i o Hōkū'ula!

The sacred bowl of Lono-Makahiki; it is *Hōkū'ula*! (4/23/1914)

The association of the bowl or container of the god Lono (provider of abundant crops and rain-laden clouds) with *Hōkū'ula* is interesting, and may in fact be a reference to the agricultural lands of the region; i.e., (a) the bowl or container could symbolize a land of agricultural abundance; (b) the sprinkling of waters from the bowl could refer to the waters or streams that flow from the uplands and spread across the plains; and (c) the importance of rituals of Lono in agricultural endeavors, particularly in areas like Kohala and Kona, where the water supply may vary, is well documented (e.g., Kamakau 1968 and 1976; Malo 1971; Handy and Handy 1972). Thus the legendary account could be one way of embellishing the actual occurrences or features for the area.

The Protohistoric and Early Historic Periods (c. 1778-1835)

In their study on the upland agricultural field system of South Kohala, Clark and Kirch (1983) speculate that during the times of *Alapa'inui* (c. 1720-1754) and *Kalani'ōpu'u* (1754-1782), cultivation of the upland Waimea area lands was expanded to supply the needs of the chiefs while they dwelt or trained their troops there (Clark and Kirch 1983:26).

During Kamehameha's campaign to extend his rule to all the major islands he stayed at Waimea and at Kawaihae for an extended time. One period was between 1791 and 1792 when the building of the *heiau* (ceremonial site - temple) at Pu'ukoholā required the support of a large number of workers. Another period was between 1794 and 1795, at the time of the preparation of his long-hulled "Peleleu" canoe war fleet which was to carry his warriors across the sea to Maui and O'ahu (ibid:27).

There is only limited information about the local chiefs of Waimea. One chief was well known during the reign of *Kalani'ōpu'u*. This chief, *Hīna'i*, was famous for his prowess in leaping cliffs, and he was a close relative of the chief *Kalani'ōpu'u* (Kamakau 1961:111-112). Another Waimea chief named *Nuhi* supported *Kiwalā'ō* (*Kalani'ōpu'u*'s son) in the battle of *Moku'ōhai* against Kamehameha (c. 1782). When Kamehameha gained control of Hawai'i, he took Waimea as a conquered land, and the Waimea chiefs were reconciled to Kamehameha I by the marriage of his niece, *Ka'ohelani*, to *Nuhi*.

After western contact, and in the latter 1700s, few of the early foreign visitors to Kawaihae went inland. Archibald Menzies, who traveled with Captain George Vancouver's expedition, did travel a short distance inland of Kawaihae in 1793, and he provides the following comments of his trip:

I traveled a few miles back...through the most barren, scorching country I have ever walked over, composed of scoriuous dregs and black porous rocks, interspersed with dreary caverns and deep ravines....The herbs and grasses which the soil produced in the rainy seasons were now mostly in the shriveled state, thinly scattered and by no means sufficient to cover the surface from the sun's powerful heat, so that I met with very few plants in flower in this excursion. A little higher up, however, than I had time to penetrate, I saw in the verge of the woods several fine plantations, and my guides took great pains to inform me that the inland country was very fertile and numerously inhabited. Indeed, I could readily believe the truth of these assertions, from the number of people I met loaded with the produce of their plantations and bringing it down to the water side to market, for the consumption was now great, not only by the ship, but by the concourse of people which curiosity brought into the vicinity of the bay (Menzies 1920:55-56).

A few more descriptions of Waimea come from Ellis, who reported the observations of other members of his party in 1823:

On Monday morning Messrs. Bishop and Goodrich commenced their journey to Waimea. Having procured a man to carry their baggage, they left Kapulena (in the Hamakua district), and, taking an inland direction, passed over a pleasant country, gently undulated with hill and dale. The soil was fertile, the vegetation flourishing, and there was considerable cultivation, though but few inhabitants. About noon they reached the valley of Waimea, lying at the foot of Mouna-Kea, on the north-west side. Here a number of villages appeared on each side of the path, surrounded with plantations, in which plantains, sugar-cane, and taro were seen growing unusually large (Ellis 1963:253).

A few days later Mr. Thurston, a missionary and preacher, traveled inland to Waimea from Kawaihae. He walked to Kalaloa (just below Wai'aka), and the residence of the chief at that time, who was called Kumuoekipi (Source of the rebellion), and had served as a chief-administrator for Kamehameha (cf. LCA 3838-B and C to Pālea; Native Register 8:381 and Native Testimony 4:31-32). Leaving there he walked on to Waiākea, Waikōloa, Pukalani, and Pu'ukapu noting that this was the last village in the district of Waimea (ibid:289).

A few years after the Ellis party, Waimea was visited by the Rev. Hiram Bingham who described the environment of Waimea (c. 1830):

Leaving the other travellers, and crossing over to Kawaihae with my family, we ascended at evening to the new inland station. When we had escaped from the oppressive heat on the shore, and reached the height of about 2000 feet, we were met by a slight rain and a chilly wind, which made our muscles shiver, though covered with a cloak, as we came within some twenty-five miles of the snows of the mountain. The rain and clouds passed away as we approached the place of the sojourn of Mr. Ruggles and Dr. Judd. The full-orbed moon looked serenely down from her zenith upon the hoary head of Mauna Kea, and the ample and diversified scenery around.

Riding out one day to call on Gov. Adams, who had done liberally for the station by the erection of the buildings, I was delighted, on my way to his temporary residence, with the grandeur and beauty of the scenery around me. The clear rippling streams that wind their way along the verdant plain, through alternate plats of shrubbery, grass, kalo, sugar-cane, bananas, flowering bushes, and wild vines, occasionally crossed my path. Beyond the scattered cottages, the wild cattle were grazing unrestrained on their own unenclosed territories bordering on the mountain. The green hills and mountains of Kohala, crowned with trees and shrubbery, and their sides partly cultivated and partly covered with grass of spontaneous growth, rose on the north side of the plain (Bingham 1969:374).

Handy and Handy (1972) describe Waimea as an area where dry taro was planted along the slopes toward Honoka'a, and along the plains south and west of Kamuela (Handy and Handy 1972:532). Due to fertile soil and abundant rainfall this area was highly productive. In addition, three main streams flowed off the Kohala slope and onto the plain, all of which were described by early visitors to the region. With the streams as the focus, the people's homes and agricultural fields were scattered along the lower slope of the Kohala mountains and stretched out onto the plain. The settlement was not in the form of a nucleated village, but was fairly well spread out. The area was divided into a number of named locales (e.g., Kea'ali'i, Lihu'e, Kalaloa, Wai'aka, Waikōloa, Ala'ōhi'a, Pukalani, Pu'ukapu, and others), some of which had a greater population than others (Clark and Kirch 1983:39).

In the study of the Waimea-Kawaihae area completed by Clark and Kirch (1983), readers are provided with an overview of the regional environments of this portion of Kohala; they note:

...a stark contrast emerges between the two zones of Waimea and Kawaihae. Terms such as "desolate," "destitute," "barren," "scorching," "excessively hot," and "oppressive heat" are commonly used in descriptions of Kawaihae and the area extending for several kilometers inland. Descriptions of Waimea, on the other hand, abound with terms such as "rolling," "verdant," "driving rains," "chilling winds," and "abundantly cultivated" (Clark and Kirch 1983:39).

As documented in earlier writings, and archaeological studies, Waimea was both a productive and important agricultural center for Hawai'i in the early years following Euro-American contact. In the traditional system, taro was the main crop with sweet potatoes, sugarcane, and bananas also being produced abundantly (Clark and Kirch 1983:47)

In the years following the first visits of foreigners to the Waimea region, subsistence agriculture sharply declined although there were a couple of periods of increased activity. The primary reasons for the decline in agricultural activity were: (1) depopulation and the abandonment of fields; (2) the pursuit of other commercial interests, such as sandalwood, sugarcane, *pulu* (wool that grows on tree-ferns used to stuff mattresses and pillows) trade and the cattle industry (the latter of these was the most devastating, not only in drawing the people away from the fields, but also in bringing about the destruction of the fields); and (3) pest infestations (ibid:48).

Commercial Interests in Waimea

In the early 1800s (c. 1810-1829), thousands of "piculs" (a Chinese weight averaging 130-140 pounds) of *'iliahi* (sandalwood) were cut from the forests around Waimea and shipped out of Kawaihae (Clark and Kirch 1983:48). During his visit to the area in 1823, Ellis reported seeing about two to three thousand men carrying loads of sandalwood down to Kawaihae (Ellis 1969:397). By the 1830s, the forest had been stripped of sandalwood, and it is assumed that many other plants of the forest were impacted by the clearings made for collection and transportation of the sandalwood harvests.

In 1837, Hawai'i Island Governor Kuakini had "an immense cotton field at Waimea" planted as it was his desire to enter into the business of manufacturing cotton at a factory he was building in Kailua. By mid 1838, "a large quantity of yarn had been spun," but the Governor's health was in decline, and it is assumed that it was found to be cheaper to purchase coarse cotton, than it was to make it (Kuykendall 1968:183-184).

By the 1850s, the trade of *pulu* ("wool" that grows on the *hāpu'u* tree-ferns) became an important economic interest in areas with forests in which the tree-fern grew. The *pulu* was harvested, and prepared for export, to be used to stuff mattresses and pillows. By the 1860s, this short-lived industry reached its peak and began its decline (Clark and Kirch 1983:48). Reverend Lorenzo Lyons, who was stationed in the Waimea parish, described the work (c.1859):

...church members...spending their time in the woods, gathering *pulu*, from the avails of which their houses of worship are to be built.

This is very self denying and badly trying labor. It is tedious work to pick it from the ferns, dry it, pack it and take it to the sea side to be shipped. Sometimes they have to descend precipitous rocks and bluffs to get their *pulu* (Doyle 1953:165).

The most stable and long-term economic pursuit in the Waimea area, and the one which has perhaps had the most far-reaching effects on the environment has been the cattle industry. In 1793, Captain George Vancouver of the British Royal Navy introduced a few head of cattle to the Waimea region. These cattle were placed under a *kapu* (protective restriction) for ten years so that they could multiply and eventually supply a new source of protein for the Hawaiian population (Kamakau 1961:164). Vancouver described Waimea as a place "reputed to be very rich and productive," a large tract several miles in size at the foot of the three mountains, being a "luxuriant and natural pasture," where all the cattle and sheep he had imported could roam freely, produce and multiply, "far from the site of strangers" (Vancouver 1801:5,107 IN Kelly 1974:28).

By 1794, Vancouver left seven cows, three bulls, five ewes, and five rams on Hawai'i (Bowser 1880:550). The feral cattle population grew out of control – one observer estimated that by 1858 there were about 10,000 head on Mauna Kea (Doyle 1953:49). Wherever the cattle were kept to "increase and multiply" they did so, so rapidly that by 1815 John Whitman reported:

The cattle have become so numerous on the Island of Owhyhee that they are found in large droves and apprehensions were entertained that it would be necessary to destroy part of them on the expiration of the term which Vancouver set, when he left the first pair on the Island (Whitman 1979:61).

By about 1815, Kamehameha I hired a few people whom he allowed to shoot cattle in their wild state. One of his bullock hunters was John Palmer Parker, an American who had shipped with traders in the Northwest Coast-China fur trade and finally settled in Hawai'i (c. 1808) (Kelly 1974:44). John Parker went on to start the famous Parker Ranch of Waimea:

After 1819, Parker lived at Waiapuka in North Kohala and moved to the Waimea area about 1835, where he lived first at Puuloa and then at Mana, Hamakua. He married a Hawaiian woman and raised a family there [Hawaiian Club Papers 1868]. At Mana he developed his ranch based on large herds of cattle and a large acreage over which to graze them. His home became a convenient stopping place for visitors travelling between Hilo and Waimea, and his ranch later became the world-famous Parker Ranch, the largest in Hawaii and perhaps the largest in the world for acreage (Kelly 1974:44).

In the 1830s a true cattle industry developed based on meat, hides, and tallow (Clark and Kirch 1983:48). By the late 1830s and 1840s the industry had slowed down dramatically. Less than ten years later, however, the industry was up again, although the common people were largely left out of any of the real opportunities in this line (Kelly 1974:45). The government (or chiefs), on the other hand, stayed strong in the cattle business. In 1846 two-thirds of the Waimea area had been converted to pasture for government cattle, sheep and horses (ibid.). As a result, many native residents had moved away.

By the 1840s, free-roaming cattle, sheep, and goats were having such a severe impact on the native dwellings (eating thatched houses) and consuming the produce of the agricultural fields, that most of the families who remained upon the land built stone walls around their residences and gardens (Forbes 1991:54). The "*pā hale*" (house lots enclosed with walls or fences) are recorded in most of the Land Commission Awards (LCA) of 1848-1850 (see section titled "Land Tenure" below). Reverend Lorenzo Lyons dwelt in Waimea and served as the regional minister between 1832-1886. In his journals and writings (Doyle 1953) is found a chronology of historic events in Waimea. Lyons also documents changes in the community and environment which were brought about as a result of the development of the cattle industry. He writes on February 8, 1845: "Many are moving from Waimea on account of change of land holders. Waimea has fallen into the hands of a half foreigner, Mr. Beckley" (Doyle 1953:138).

William Beckley was the son of Captain George Beckley and a Hawaiian woman of *ali'i* lineage. In 1844, he was appointed *konohiki* (land overseer) for the King (Kamehameha III), and it was Beckley who for a time managed the government's cattle operations, and facilitated allotting lands to native tenants and foreigners during the Māhele of 1848 (Doyle 1953:138, Kelly 1974:45, and Barrere 1983:34). Beckley oversaw the branding of the Government's cattle, which the government sold as salted beef to traders and whalers that harbored in Hawai'i and shipped as a trade item. Kelly (1974) states:

Beckley became very powerful in Waimea while he was in charge of the Government's land and cattle. His name appears on many of the land claims as the *konohiki* who had given the claimants permission to use the land in the first place; it also appears on many letters and documents of the Interior Department of the Hawaiian Kingdom Government (Kelly 1974:45).

Lyons noted that by 1847, "two thirds of Waimea has been converted to government pasture" (Doyle 1953:48):

People are compelled to leave their cultivated spots and seek distant corners of the woods beyond the reach of the roaming cattle sheep and goats. But the cattle follow, and soon destroy the fruit of their labor. "There is a despairing spirit among my people, and great suffering among them..." (Doyle 1953:48)

Around 1850, Reverend Lyons commented on the sport of bullock catching which was greatly enjoyed by the natives, and he also noted that the forests and weather had changed over the years of his residence. The once famous gale-force "*mumuku*" winds which blew down the plains towards the ocean did not blow as frequently:

The natives enjoy such sport amazingly, and as they cannot now touch the wild cattle, a great deal of unnecessary excitement is gotten up among the tame ones; and Beckley's Boys, who attend to the government herd are known by the clouds of dust that constantly envelope them. Waimea of an evening is a perfect cloud of dust. The soil is remarkably dry, and so extremely fine that water does not even seem to wet it.

Even the elements were affected: Cattle destroying the forest has changed the *mumuku*. It was formerly so strong that natives always lashed canoes to the rocks, stakes, or trees at Kawaihae (Doyle 1953:49).

That the free-roaming cattle were having an impact not only on the cultivated lands of the native tenants, but also on the remaining forests was documented in 1856 by Curtis Lyons, son of Reverend Lyons:

It is in the memory of many foreigners now living here, when the whole of these plains were covered with thick wood... Where hardly a tree is to be seen for miles, we were informed by an old resident that twenty-five years ago he lost himself with his team in the woods. He also stated that at that time there was far more rain at Waimea than there is now (Lyons in Forbes 1991:54).

The senior Lyons reports in 1865:

Feb. 1, 1865. ...Waimea is going downwards, population diminishing, those who remain sickly. How few well bodied are left! It will perhaps not be long until Waimea becomes a desolation. Waimea Grazing company holds on – but how much longer remains to be seen. Waimea Tannery is prosperous (Doyle 1953:199).

Clark and Kirch (1983) comment on the overall effect of ranching on the community of Waimea in the historic period; as a result, there was:

(1) the abandonment of agricultural fields which were subject to destruction by marauding cattle; (2) the construction of stone walls to contain, restrict, or exclude cattle; and (3) deforestation of some areas, primarily because the cattle trampled and ate many of the young sprouts (Clark and Kirch 1983: 48).

Clark and Kirch also note, that while the cattle caused many people to move away from Waimea, it also drew many new residents to the area, many of whom were foreigners:

Waimea even took on a bit of the look of old Mexico. The landscape already bore certain similarities that were enhanced by the introduced prickly pear cactus and the sisal plants. Some of the wild cattle were broken-in “after the Spanish fashion...” Most striking were the paniolos—a Hawaiian distortion of *espanoles*. Paniolos were Spanish-Americans brought to the islands to handle the wild cattle (Clark and Kirch 1983:49).

Clark and Kirch also cite several references that document that as early as 1832 cultivated crops were being severely damaged due to a “worm” that had infested the fields. In 1837 Reverend Lyons recorded the occurrence of a famine that resulted because crops were destroyed by worms. Again in 1841 and 1847 similar infestations were occurring, and Clark and Kirch note that “one or more of the many species of cut-worms are likely candidates, but the sweet potato horn-worm and the sweet potato weevil are also possibilities” (Clark and Kirch 1983:49).

Agriculture did undergo a couple of brief periods of revitalization especially in the late 1840s and early 1850s; primarily as a result of cultivation of Hawaiian sweet potatoes (*'uwala* or *'uala*) and Irish potatoes (sometimes called *'uala kahiki*). The demand for sweet potatoes and the Irish potato was partially related to their value for replenishing ships supplies, and for shipment during the California Gold Rush (Clark and Kirch 1983:50).

Land Tenure - The Māhele of 1848

Between 1790 and the 1840s, the Hawaiian kingdom underwent radical changes as Western influence over the *ali'i* (rulers) of Hawai'i grew. In 1848, during the reign of Kamehameha III, (1833-1854), the traditional Hawaiian land distribution system was replaced with a Western-style ownership system. This radical restructuring was called The Great Māhele (Division [of land]). The Māhele defined the land interests of the King, the high-ranking chiefs, and the *konohiki*, who were originally those in charge of tracts of land on behalf of the king or a chief (Chinen 1958:vii; 1961:13).

During the Māhele, all land was placed in one of three categories: Crown Lands (for the occupant of the throne), Government Lands, and Konohiki Lands. These were all "subject to the rights of the native tenants" (Laws of Hawaii 1848:22). The *hoa'āina* or native tenants were the common Hawaiian people who lived on the land and worked it for their subsistence and for the welfare of the chiefs. Once a commoner's claim was confirmed (based on registration and testimony), a survey was required before the Land Commission was authorized to issue any award. The commoner's lands became known as "Kuleana Lands" (ibid:30). By the time the Land Commission was dissolved, on March 31, 1855, it had issued only 8,421 *kuleana* claims, totaling 28,658 acres of land, to the native tenants (Kame'eleihiwa 1992:295).

Because the native tenants were required to prove that they either lived upon, cultivated, and/or used the land in some way, they needed to submit documentation of those activities. As a result the process of recording claims for Kuleana Awards resulted in the creation of a number of volumes of registry and testimony (Board of Commissioners 1929). The LCA volumes contain specific documentation on land-use practices, crop production and resource harvesting, and on the various structures which were present on the parcels at the time of the awards. Thus, the LCA registration and testimonies provide readers with valuable information for discussing land use in the mid 1800s (1848). *Figure 5* of this report is a portion of Register Map No. 2786, from the State Survey Office, the map includes locations of LCAs, Grants, and Homesteads both in, and around the Hawaii Preparatory Academy grounds.

As noted earlier in this section of the report, Kalaloa, situated a short distance below the project area *ahupua'a*, was one of the important villages, and residence of an important Waimea area chief in the early 1800s. Ellis (1963) names several of the villages that extend from Kalaloa to what is now the heart of Waimea town. The villages include Waiākea, Waikōloa, Pukalani, and Pu'ukapu (Ellis 1963:289). Referring to an excursion into the upland made by Reverend Thurston, Ellis stated:

The soil over which he had travelled was fertile, well watered, and capable of sustaining many thousands of inhabitants. In his walks he has numbered 220 houses, and the present population is probably between eleven and twelve hundred (ibid.).

Though there is no mention of Wai'aka in Ellis' narratives, the land records of the Māhele provide readers with specific documentation for Wai'aka and the village sites referenced above. These records in turn provide us with some understanding into settlement and land use activities that may have been an extension of earlier settlement and land use practices. Additionally, because there is only limited information for Wai'aka, selected LCA narratives from the neighboring *ahupua'a* will be cited below, to illustrate land use within the general area.

The Kuleana Awards of Wai'aka

At least five LCA claims were registered for Wai'aka during the Māhele. One of the *kuleana* of a native tenant (LCA 3760 in Wai'aka II), was awarded to Iese A'a; his *kuleana* was later acquired by the Ka'ilianu family, and they retained the land until 1952. Kuahine, another native tenant, received his *kuleana* (LCA 4127) in Wai'aka I, just east of the project area.

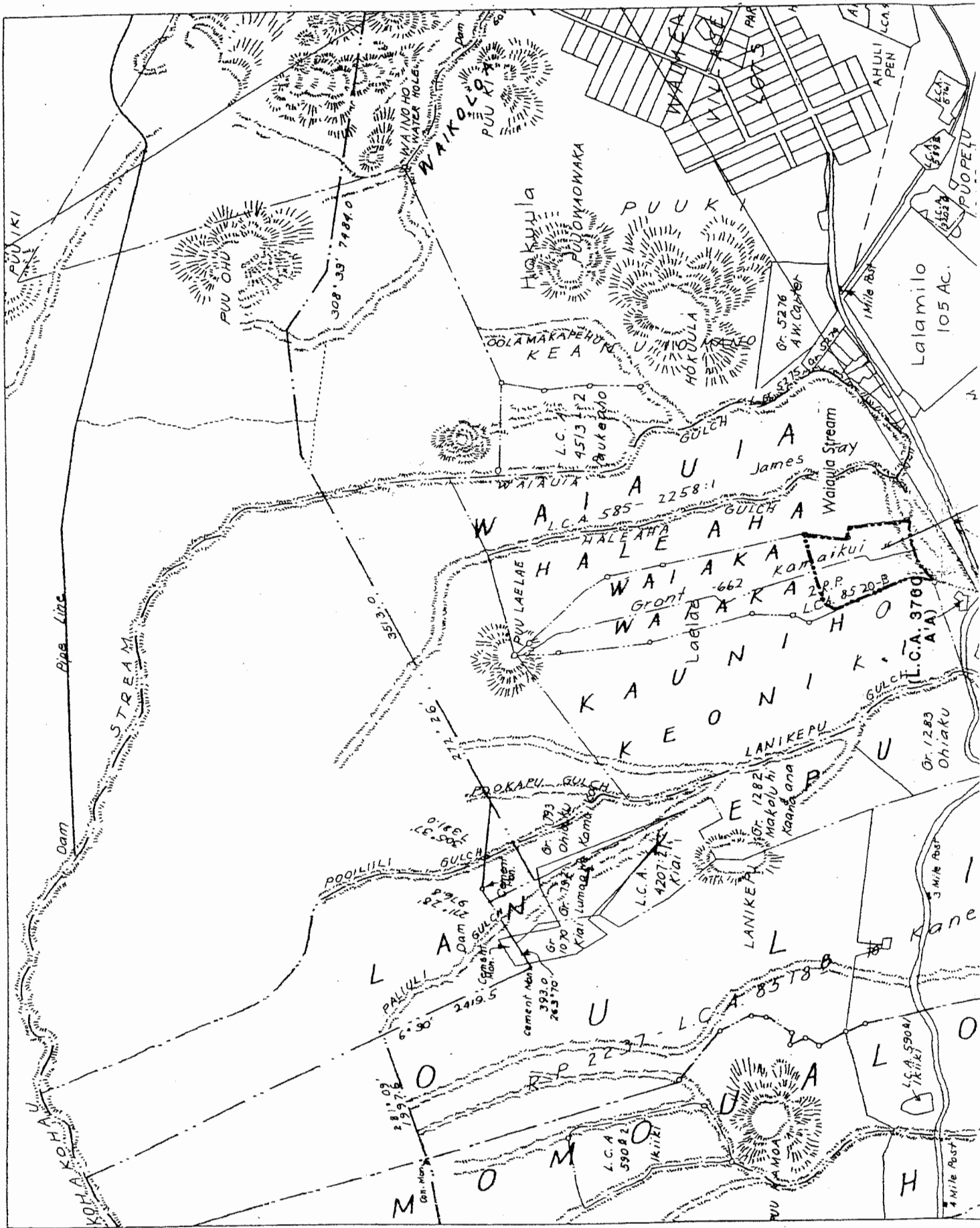


Figure 5. Locations of Land Commission Awards In Wai'aka and Vicinity

The two large awards of land in Wai'aka went to the children of John Young, one of the two favored *haole* (foreign) advisors of Kamehameha I (Indices of Awards 1929:58-81). John Young (Olohana), a companion and advisor of Kamehameha I, and the grandfather of Queen Emma, died Dec. 16, 1835. In Young's will there were instructions to divide all his lands among his children and the children of Isaac Davis. The land was exempted from division and commutation by the Privy Council on August 29, 1850, by a resolution which stated:

Resolved that the Minister of the Interior is hereby authorized to grant Royal Patents to the heirs of John Young for the lands they severally inherit from their father, without commutation or division (Board of Commissioners 1929).

Kama'iku'i (the mother of Queen Emma, wife of Kamehameha IV) and Gina Lahilahi, daughters of John Young, received land in Wai'aka 1 (LCA 8516-B) and Wai'aka 2 (LCA 8520-B), respectively. Wai'aka 2 was listed as LCA 8520-B. Because Kama'iku'i and Lahilahi were of both royal and favored lineage, and their lands had come through their father from Kamehameha I, little information on their LCA claims could be located. This is not unusual, as *ali'i* rarely needed to do anything more than name the lands that they were claiming.

(A) LCA Records of Wai'aka

LCA 3760 - Aa Iese (*Native Register 8:49, Ianuali, 13, 1848*)

...He wahi pāhale ko 'u aia ma Wai'aka ma Waimea, Hawai'i, he 40 anana ka loa a he 40 anana ka laula, mai o Kaha'anapilo lāua me Hū'eu...

By A'a, Iese

...I have a house lot there in Wai'aka at Waimea, Hawai'i; it is 40 fathoms long and 40 fathoms wide, it was from Kaha'anapilo and Hū'eu...

Na A'a, Jese

(Native Testimony 4:35; 16, Sepatemaba 1848) *Ho'ohiki'ia o Kaha'anapilo... ..aia i ka 'ili 'āina i Wai'aka, he pāhale, ua pa'a i ka pā, 'elua hale maloko. Owau nō mawaho o nā palena a pau. He wahi kahiko no ia no lākou mamua aku o ko'u ha'awi ana...*

Kaha'anapilo sworn... ..there in the land parcel of Wai'aka, is a house lot, it is enclosed by a wall, there are two house within it. I bound it on all sides. It is an old place for them, before I gave it to them...

LCA 4148 - Kupa (*Native Register 8:62; Ian. 13, 1848*)

Na Kupa

...He pā hale ko'u aia no ia ma Wai'aka i Waimea Hawai'i; 40 anana ka loa, 40 anana ka laula, mai a Hū'eu lāua me Kaha'anapilo mai...

By Kupa

...I have a house lot which is there at Wai'aka, Waimea, Hawai'i; it is 40 fathoms long and 40 fathoms wide. It was from Hū'eu and Kaha'anapilo...

(Native Testimony 4:15; 12, Sepatemab. 1848)

Ho'ohiki'ia G.D. Hū'eu...aia no i ko'u 'ili 'āina i Wai'aka W.H...ho'okāhi hale, no Kupa nō ia hale, owau no mauka, ma Waho he hale kula, makai o ko A'a pā, ma Kohala owau no...ko Kupa noho ana i ka wā o Kamehameha II...

G. D. Hū'eu sworn, there within my 'ili land parcel of Wai'aka , Waimea, Hawai'i...is one house, the house is for Kupa, I am on the upland side, outside [Waikōloa plain] is the school house, shoreward is A'a's wall, and towards Kohala is also mine...Kupa has dwelt there since the time of Kamehameha II [c. 1820-1824]...

LCA 8516-B - Kamaikui (*Native Register 3:709/Native Testimony 10:170*)

Ko Kama'iku'i 'āina ho'oilina...Wai'aka 1 Ahupua'a, Waimea, Kohala, Hawai'i...

This is Kama'iku'i's inheritance...Wai'aka 1 ahupua'a, at Waimea, Kohala, Hawai'i...

LCA 8520-B - Gini Lahilahi (*Native Register 4:342/Native Testimony 10: 183*)

'Āina ho'oilina...Wai'aka 2 Ahupua'a.

Inherited land... Wai'aka 2 ahupua'a.

(B) Excerpts of Selected LCA Awarded in Neighboring Ahupua'a
(documenting residence and agricultural activities)

LCA 3762 - Auwae (*Native Register 8:49; Ian 11, 1848*)

...He kuleana hale ko'u ma Waikōloa Ala'ōhia ma Waimea Hawai'i; 24 anana ma ka 'Akau, a pēlā me ka 'ao'ao a pau 'ehā, he huina hālike. A'ole i pa'a i ka pā, akā o ko'u manao no ia e pa'a i ka pā. He hapa 'u'uku loa ua pa'a i ka pā...Eia ho'i ko'u mau kuleana 'āina; 2 māla kalo ma Keanui'omanō, aia iloko o ka ululā'au ma Waimea nei no. Ua mahi ai au malaila i nā makahiki 15...

...I have a house claim at Waikōloa, Ala'ōhi'a in Waimea, Hawai'i; It is 24 fathoms on the north, and on all four sides, it is equal. It is not enclosed with a wall, but it is my intention to enclose it with a wall. Less that half is [presently] enclosed...Here is my land claim; 2 [dry land] taro patches at Keanui'omanō, which is there in the foresst at Waimea. I have cultivated there for 15 years...

(Native Testimony 4:35-36 16, Sepatem. 1848))

...Section one: A house lot in the 'ili land of Waikōloa, one house enclosed by a rock wall;

Section two: A cultivated field in the 'ili land of Keanu'i'omanō;

Section three: Also a cultivated field...

LCA 3832 - Poolipi (*Native Register 8:49; Ian. 7, 1848*)

...wahi pā hale ko 'u aia ma Kauniho Waimea Hawai'i, he 50 anana ka loa, 50 anana ka laula, mai a Wilama Bekele...

...mine is a house lot there at Kauniho Waimea, Hawai'i, it is 50 fathoms long, and 50 fathoms wide, from Wilama Bekele...

(Native Testimony 4:36-37 18, Sepatem. 1848)

Ho 'ohiki ia William Bakle: ...aia i ka 'ili 'āina o Kauniho, Pāhale. Ua noi mai no ia ia 'u i wahi pā, i wahi e mahi ai, ua 'ae aku noho 'i au...

William Bakle sworn: ...there in the 'ili land of Kauniho, a house lot. He asked me for it, a house lot and a garden, and I agreed...

LCA 4505 - Manuwa (*Native Register 8:66-67; Ian. 11, 1848*)

...e ha'awi mai no māua i kēia pā hale a māua e hoakāka aku nei, aia no ia ma 'Ōpe'awai, ma 'Ala'ōhi'a ma Waimea Hawai'i. 40 anana ka loa, 40 anana ka laula, he huina hālike. 'Elua hale maloko, 'elua ohana, a 'ole i pa'a i ka pā, e pa'a ana no na 'e. Ua 'ae mai o Wm. Bekele ke konohiki. Eia kekahi, 'ekolu māla kalo na māua aia no ia maloko o ka Ululā'au o Waikōloa Waimea, mai kahiko loa mai ia wahi mahi ai i māua... Na Manuwa [me] Keoni.

...please give us this house lot which we describe to you, it is there at 'Ōpe'awai, in Ala'ōhi'a, in Waimea, Hawai'i. It is 40 fathoms long and 40 fathoms wide, of equal boundaries. There are two houses and two families, it is not entirely enclosed with a wall, but is being enclosed. Wm. Bekele the konohiki has agreed. Also, there are three taro fields which we (two) have, there within the forest of Waikōloa, Waimea, the agricultural site of ours is from very old times... By Manuwa and Keoni.

(Claim confirmed in Native Testimony 4:20-21; 13, Sepatem. 1848)

LCA 4513 - Paukeaho (*Native Register 8:53; Ian. 12, 1848*)

...Eia ko'u e hoakāka aku ai, he pā hale no'u aia ma Keanu'i'omanō Waimea Hawai'i, mai a Wilama Bekele mai...Ua pa'a i ka pā pōhaku, 2 hale no iloko...2 māla kalo maloko o ka Ululā'au 'oia 'āina.

...Here is my explanation, I have a house lot there at Keanu'i'omanō, Waimea, Hawai'i, it is from Wilama Bekele...It is enclosed with a stone wall, with 2 houses inside...[there are also] 2 taro fields within the forest of the same land [Keanu'i'omanō].

(Claim confirmed in Native Testimony 4:32; 16, Sepat. 1848)

LCA 589 & 2258 - James Fay (*Kimo Fe*) December 1, 1847 (*Foreign Register* 2:147)

I beg to present to your consideration my claim to the following ___ to a tract of land near Waimea called *Waiuia* bounded on the East by a gulch called *Keanuiomanu*; on the West by gulch *Haleaha*; North by forest of ohia trees; South by land owned by Mokuhia. The above was given me as a land for planting upon by Gov. John Adams in 1839 for services rendered him in the care of his cattle and management of his general business...

(Confirmed in Native Testimony 4:46; 18, Septem. 1848)

Kelly (1974) also documented that "Purchases of Government lands at Waimea between 1846 and 1856 were made in three land areas, Lanikepu, Wai'aka, and Lalamilo. Out of eleven parcels of land sold by the government, six of the purchasers had Hawaiian names" (Kelly 1974:47). Kama'iku'i purchased some land at Wai'aka in Grant 662, a parcel of 93.00 acres (*ibid.*).

In *Native Planters in Old Hawaii*, Handy and Handy identify various areas at Waimea where, in 1935, the ruins of dry and wet taro terraces could still be seen:

For 1.4 miles along the southern base of Pu'u Hoku'ula, terraces are visible under pasture and house sites, presumably formerly watered by a ditch from Waikoloa Stream. These evidently used to be more or less continuous down to and below Waiaka Stream where the road now crosses. Here in 1935 a Hawaiian planter still cultivated taro in a few terraces irrigated from Waiaka Stream flowing out of the Kohala mountains. On the Kawaihae side of the road numerous old terrace lines could be seen. There are places in the pasture south of the road that may be traces of old terraces, lines of old walls, or ridges surviving from the era of experimental planting of cane at Waimea.

...Waikoloa is a sizable stream with constant flow of water which was undoubtedly used for irrigating terraces scattered on the plains southwest of the upland town of Kamuela... Dry taro used to be planted along the lower slopes of the Kohala Mountains on the Waimea side, up the gulches and in the lower forest zones... (Handy and Handy 1972:531).

Before HPA acquired the current project land, several land grants and two LCA existed near or on the current project area. Grants S-13706 and S-13707 were given to Richard Smart, previous owner of Parker Ranch; Grant 8822 to Keoni Naiheuhau; Grant 662 to Kamaikui, and LCAs 4127 to Kuahine (2.40 acres) and 8520-B to Gini Lahilahi (no acreage given). Of interest may be the testimony of the latter:

LCA 4127 - **Kuahine** (*Native Register* 8:64; *Ian. 13, 1848*)

By Kuahine

... *He wahi pā hale ko'u aia ma Wai'aka, Waimea Hawai'i; 80 anana ka loa, 40 anana ka laula. Ua pa'a i ka pā pōhaku kahiko loa, mai a Kaha'anapilo lāua me Hū'eu mai, makemake au e pa'a ia wahi ia'u.*

...I have a house lot at Wai'aka, Waimea Hawai'i; it is 80 fathoms long and 40 fathoms wide. It is enclosed by a very old wall. It was given by Kaha'anapilo and Hū'eu, I want to secure this place for me.

By G.D. Hū'eu

(Native Testimony 4:12-13; 12, Sept. 1848) *Ho 'ohiki 'ia o G.D. Hū'eu... ..aia i ka 'ili 'āina ma Wai'aka W.H. E like me ka 'ōlelo iloko o kāna palapala a pēlā ka nui, ua pa 'a i ka pāpōhaku, mauka owau, a pēlā no a puni; ho 'okāhi hale no Kuahine nō ia hale, no 'u aku ko Kuahine...*

G.D. Hū'eu sworn... ..there in the land parcel of Wai'aka, Waimea, Hawai'i, as stated in his written testimony is the extent [of the parcel], it is enclosed by a stone wall. I am to the uplands, and on all sides of the parcel; there is one house which is for Kuahine, I gave it [the parcel] to Kuahine...

Barrere (*In Clark and Kirch 1983*) also provides readers with an additional accounting of events around LCA 4127. Barrere cites a missionary visit to Waimea in 1829, to determine the area's suitability as a mission station. The party stayed first at what is now believed to have been the home of the late chief Kumuoekēpi (at Kalaloa - Ko'ali'ula), in the vicinity of LCA 3828-C:

The missionary group soon "removed to a school house half a mile distant." The house was probably on the school lot at Waiaka 1, later recorded as being adjacent to the pahale of Kuahini [sic] (LCA 4127, Land Board Aw. Bk. 5:43). The school there may have been the first in Waimea, started by Maua'e, a young man from Puna who had been in charge of the canoe that Kuakini had furnished for the Ellis party of 1823. Maua'e was among the native teachers trained at the Kailua mission station and in 1825 was assigned to Waimea (Bishop 1825, 1828), where he remained until his death by drowning in 1840 (*The Polynesian* 6/6/1840) (Barrere *In Clark and Kirch 1983:32*).

FIELD METHODS

The inventory survey was conducted July 30-31, and August 1-2, 2007 by PHRI Supervisory Archaeologist Alan B. Corbin, M.A. The project area was surveyed by a series of transects running east-west, with the surveyor walking transects spaced approximately 20.00 m apart, except for the sides of Hale'aha Stream, which was surveyed by walking along the bank of the stream. Ground visibility in the project area was generally excellent due to the low grass and lack of vegetation.

FINDINGS

SURFACE SURVEY

During the surface survey of the project area two sites were newly identified, and one previously identified site was relocated. The newly identified sites were two historic boundary or ranching walls. These sites were assigned PHRI temporary numbers (2694-1 and 2694-2); permanent State numbers have been requested from the SHPD and will be assigned to the sites when PHRI receives them. The previously identified site (State Site 19644) was initially identified by Bonk (1989) and was reidentified during a previous archaeological survey (Franklin et al. 1994). Only the northern portion of Site 19644, as originally identified by Bonk (1989) and re-identified by Franklin et al. (1994), remains intact, the southern portion having been affected by earth-moving equipment, modern landscaping, and placement of fill.

Site 2694-1

This is a historic stone ranching or boundary wall, composed of two segments, situated along the south bank of Hale'aha Stream (*Figures 2, 6, and 7*). One segment is about 69.0 m long (east-west). At the site datum, the wall height is 0.70 m and the wall width is 0.90, but this varies slightly along the length of the wall. The segment is four to five courses high, and is not core-filled. The stream rocks composing it range in size from 0.20-0.35-0.60 m in diameter, with most being 0.35 to 0.50 m. At the west end of the wall is a fencepost. Running east from the site datum, the wall curves slightly to the south. The eastern end of the wall is 1.20 m in height and a portion approximately two meters from the end is slightly tumbled. There are two fenceposts at the eastern end of this segment. At the eastern end there is a very short, 1.0 m long wall that connects to the main wall to form a short leg that extends perpendicular, away from the stream.

The second segment is a very short distance from the first, and it probably originally was connected to the first segment (*Figure 6*). The second segment is 3.5 m in length and 0.60 to 0.70 wide. At the east end of this segment is a large bedrock boulder. This segment is composed of large basal rocks, c. 0.70 to 0.80 m in diameter, with slightly smaller rocks above it. The segment is generally three courses high, and the rocks range from 0.25 to 0.50 m in diameter, with most being 0.30 to 0.40. On top of the wall are smaller rocks, approximately 0.10 to 0.20 m in diameter. The wall is almost flush with the ground surface on the south side. The ground surface on the south side of the segment is disturbed; it looks as if boulders and earth have been pushed from the south and heaped against the segment. On top of the heap are 17 small fragments of unidentifiable glass.

Site 2694-2

This is a historic stone ranching/boundary wall situated approximately 20.0 m south of Hale'aha Stream (*Figures 8 and 9*). The wall is about 80.7 m long, 0.70 to 0.90 m high, and 0.70 m wide. The wall is lower as it proceeds toward Hale'aha Stream, being approximately 0.70 to 0.80 m high. The wall consists of field rocks and is stacked seven to eight courses high. The wall has no core-filling. At the site datum (*Figure 8*), several large bedrock boulders are incorporated into the wall. Some portions of the wall are tumbled.

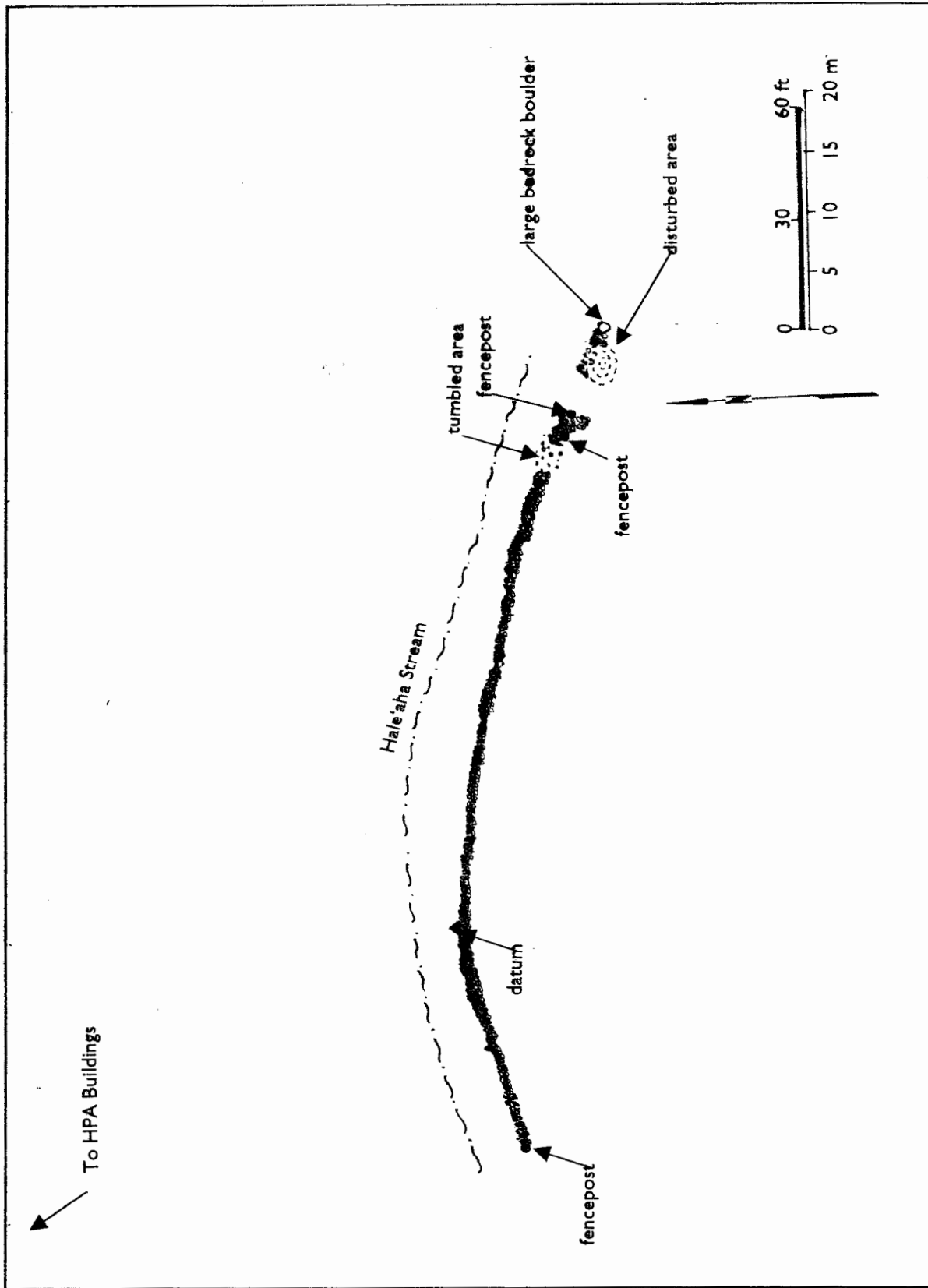


Figure 6. Plan View of Site 2694-I

Figure 7. Site 2694-I, View to South



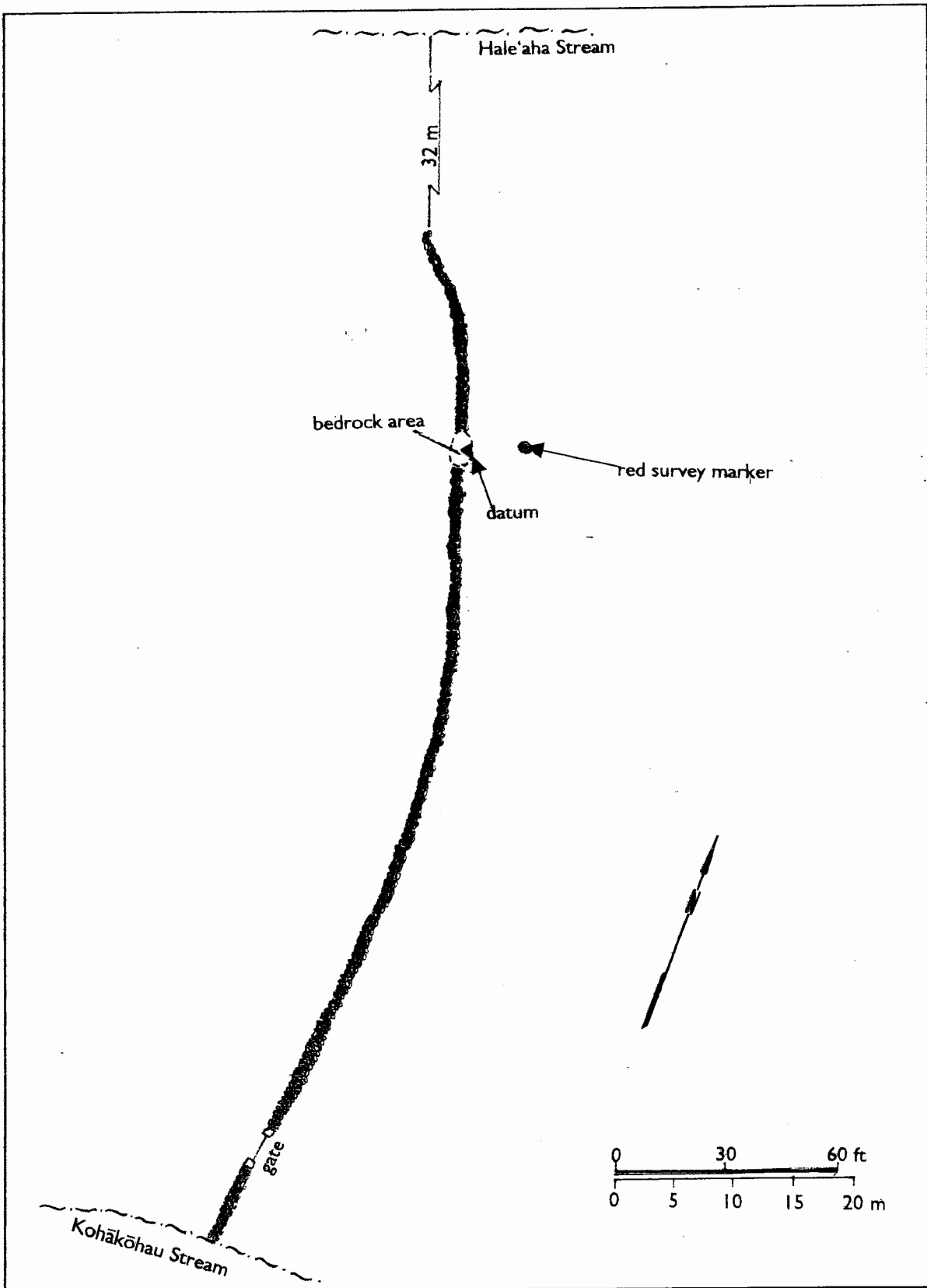


Figure 8. Plan View of Site 2694-2

Figure 9. Site 2694-2, View to Southwest



SUBSURFACE SURVEY

Site 19644

This site was initially identified by Bonk (1989) and subsequently re-identified by Franklin et al. (1994). It originally consisted of six soil terraces c. 34 m apart, running perpendicular to the slope. Within HPA lands the terraces were c. 100 to 140 m long and they continued outside of HPA property. Since that time, erosion perhaps has made the terraces less discernible (*Figures 2, 10, and 11*). The terraces were assessed by Franklin et al. (1994) as functioning for prehistoric agriculture.

During the current project four backhoe trenches were excavated within the project area, within the northeastern portion of Site 19644 (as defined during earlier surveys)(*Figure 11*). The southern portion was not trenched as it has been greatly modified by earthmoving equipment, landscaping, and placement of fill. All trenches were excavated 3.6 to 4.5 m in depth. Trenches A and D were approximately 15.0 m long, and Trenches C and D were approximately 10.0 m long and roughly a meter wide. No cultural matrices, subsurface horizontal features, or other cultural remains were observed in the trenches. No charcoal samples were recovered. Due to the negative results, the trenching was discontinued after four trenches had been placed.

The stratigraphy in every trench was identical; the trenches contained two layers (Layers I and II). Representative trench profiles are shown in *Figures 12 through 15*. Soils are described below.

Soil Descriptions

Trench A

- Layer I 0.30 m-0.35 m thick; brown (7.5 YR 4/3) loam; strong, medium, coarse crumb, non-sticky, non-plastic, many fine roots, gradual boundary. Peds formed by pasturage activities.
- Layer II 4.0 m-4.5 m thick; brown (7.5 YR 5/3) aeolian silt loam; weak; fine crumb, granular, non-sticky, non-plastic, few to no roots.

Trench B

- Layer I 0.25 m-0.31 m thick; brown (7.5 YR 4/3) loam; strong, medium, coarse crumb, non-sticky, non-plastic, many fine roots, gradual boundary. Peds formed by pasturage activities.
- Layer II 3.5 m-3.55 m thick; brown (7.5 YR 5/3) aeolian silt loam; weak; fine crumb, granular, non-sticky, non-plastic, few to no roots.

Figure 10. Site 19644, View to Northwest



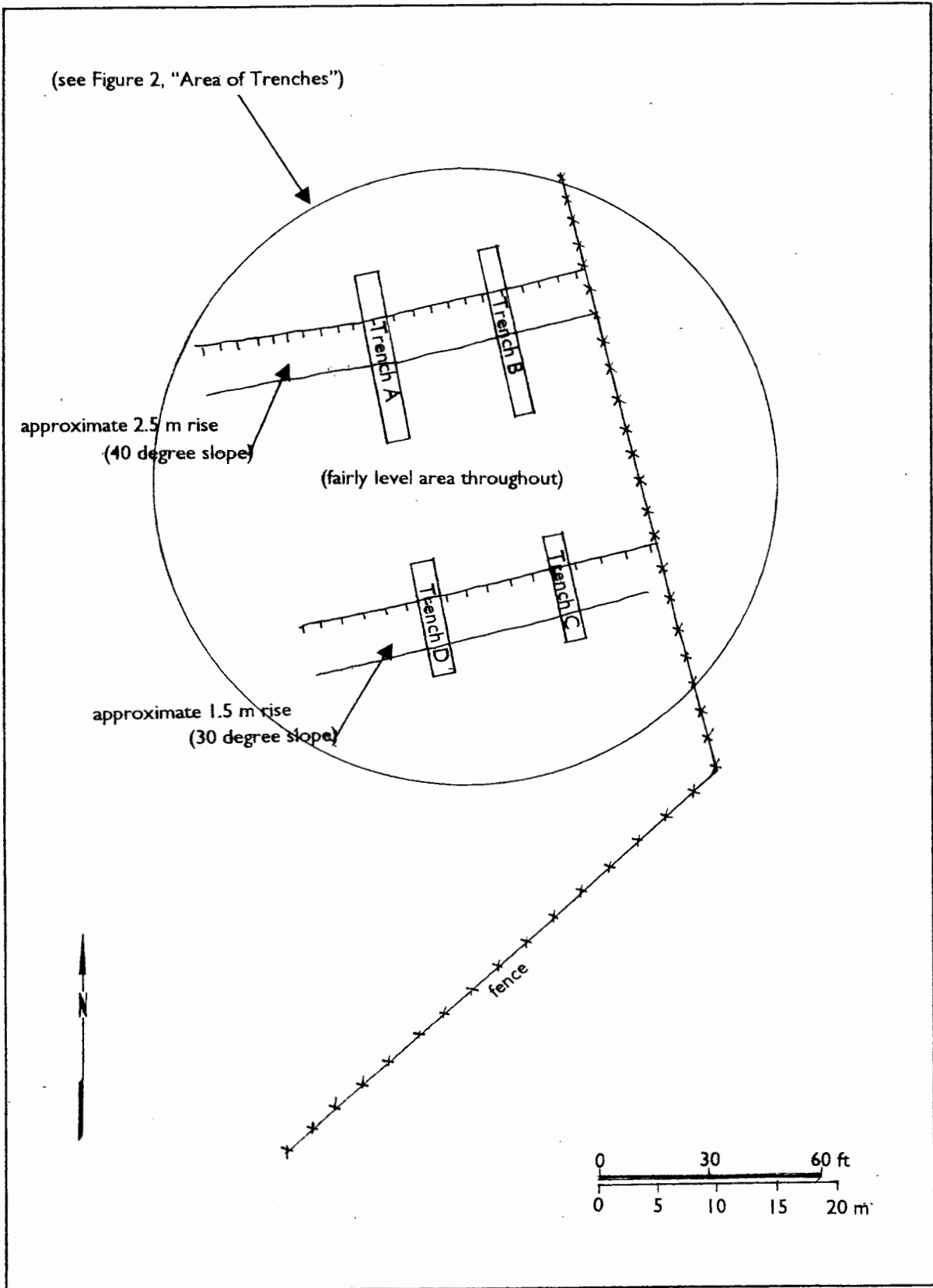


Figure 11. Site 19644, Location of Backhoe Trenches Placed at Site 19644

Trench A, East Face

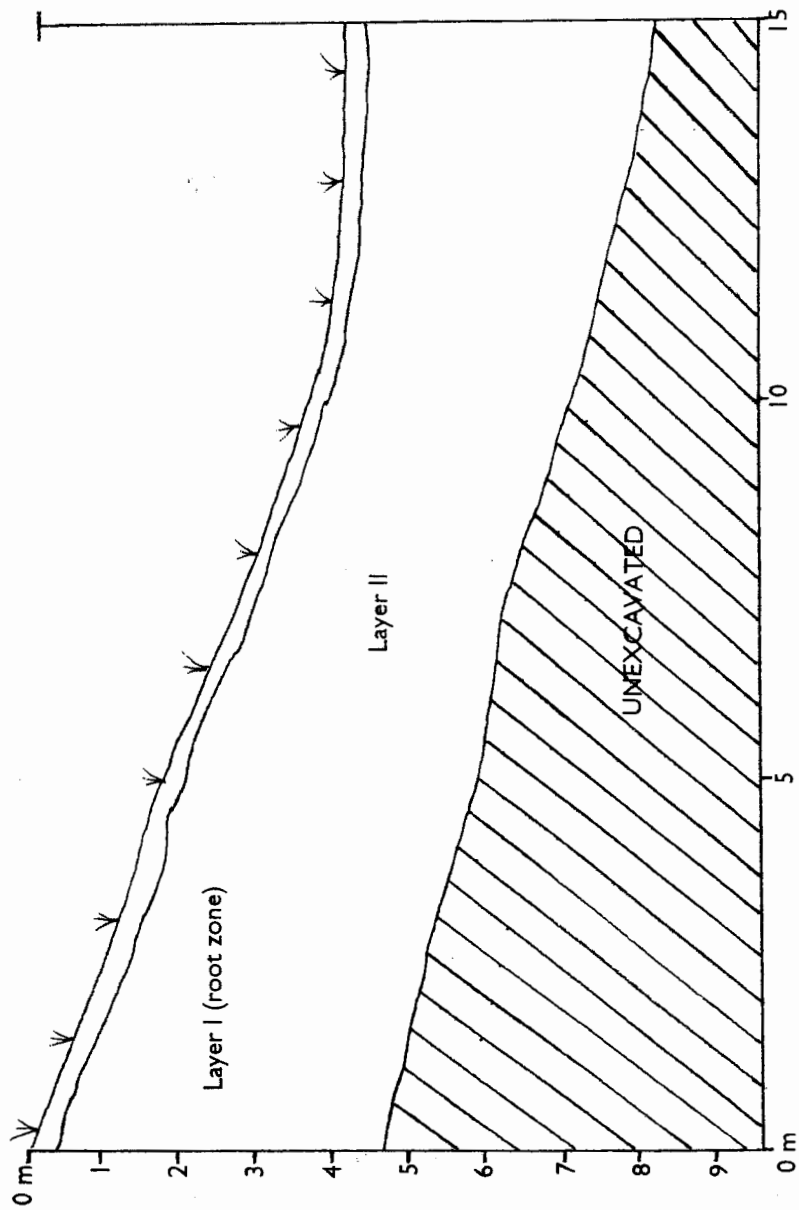


Figure 12. Site 19644, Trench A Profile, East Face

Trench B, East Face

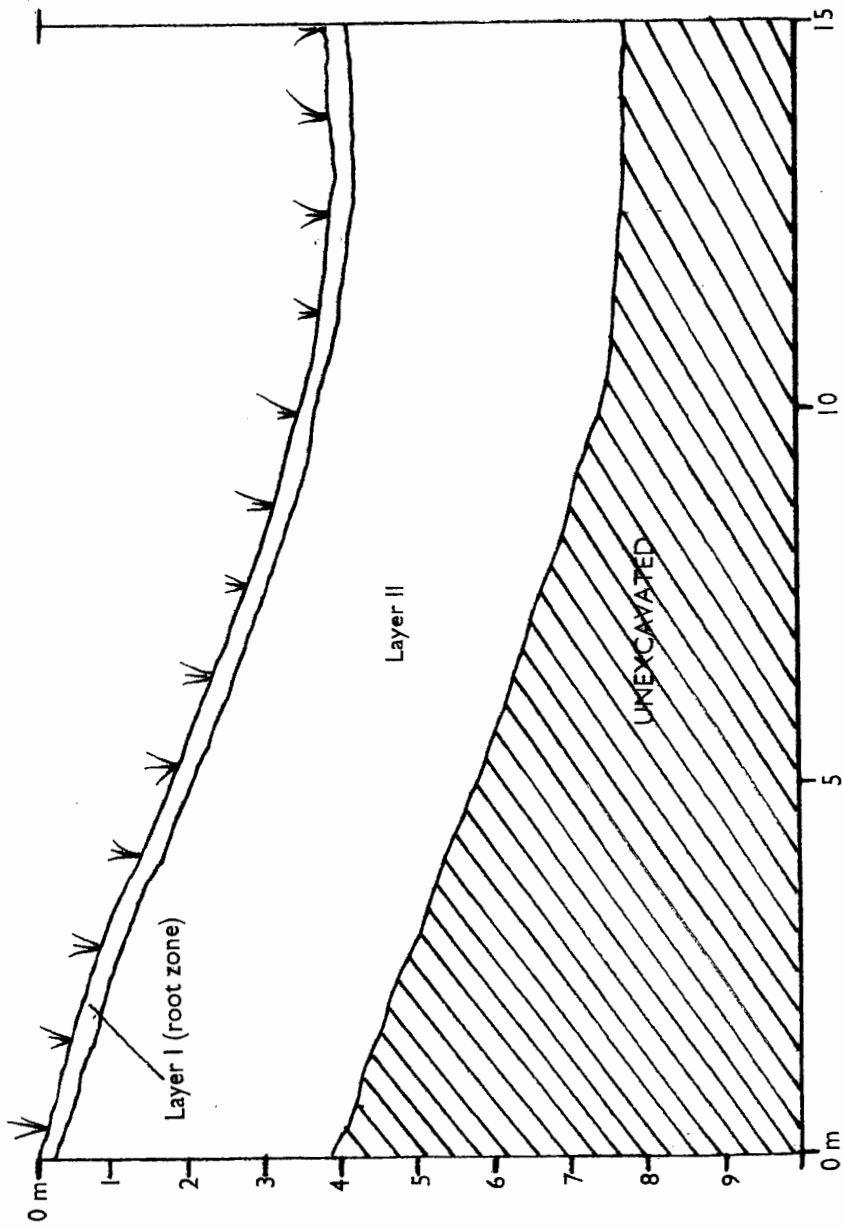


Figure 13. Site 19644, Trench B Profile, East Face

Trench C, East Face

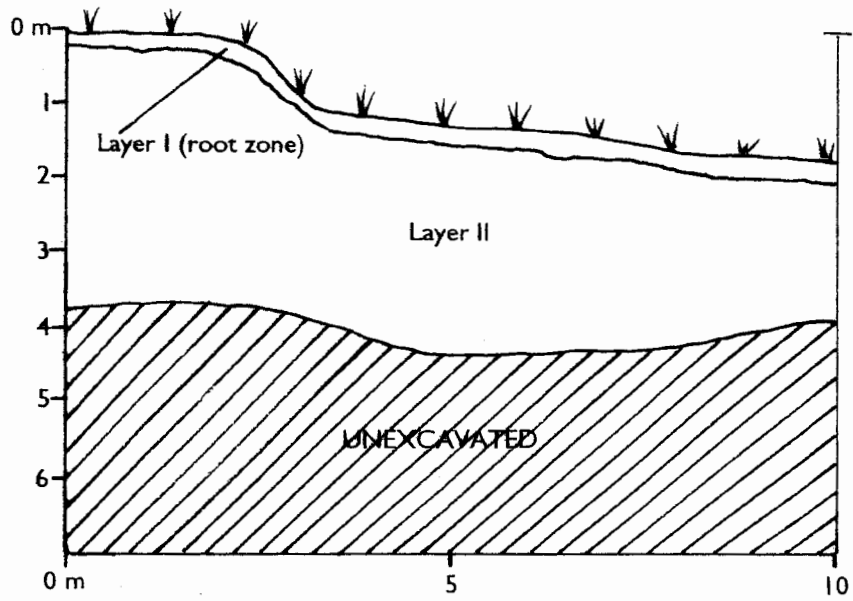


Figure 14. Site 19644, Trench C Profile, East Face

Trench D, East Face

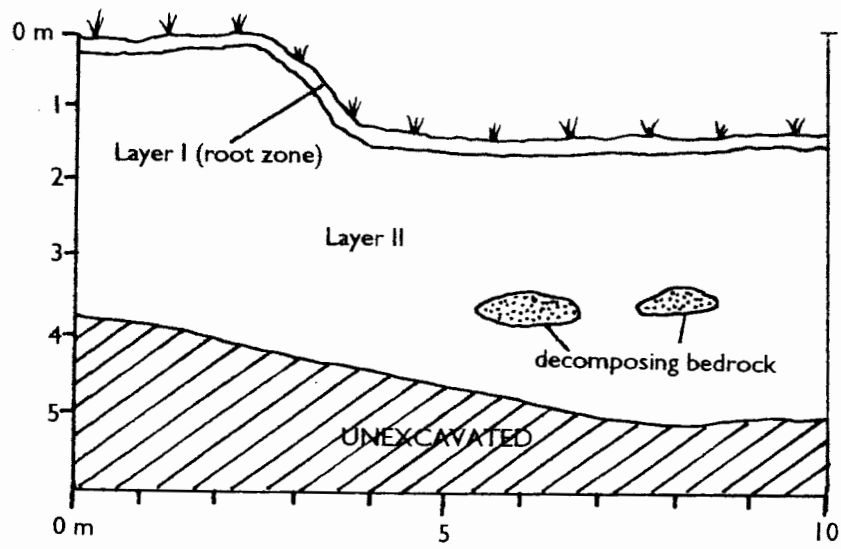


Figure 15. Site 19644, Trench D Profile, East Face

Trench C

Layer I 0.13 m-0.15 m thick; brown (7.5 YR 4/3) loam; strong, medium, coarse crumb, non-sticky, non-plastic, many fine roots, gradual boundary. Peds formed by pasturage activities.

Layer II 2.18 m-3.47 m thick; brown (7.5 YR 5/3) aeolian silt loam; weak; fine crumb, granular, non-sticky, non-plastic, few to no roots.

Trench D

Layer I 0.09 m-0.11 m thick; brown (7.5 YR 4/3) loam; strong, medium, coarse crumb, non-sticky, non-plastic, many fine roots, gradual boundary. Peds formed by pasturage activities.

Layer II 3.71 m-3.80 m thick; brown (7.5 YR 5/3) aeolian silt loam; weak; fine crumb, granular, non-sticky, non-plastic, few to no roots.

CONCLUSION

DISCUSSION

The two newly identified sites, Sites 2694-1 and 2694-2 are historic boundary or ranching walls. The walls may have existed prior to the modern housing in the project area, and may be remnants of cattle ranching walls. Site 19644 comprises prehistoric agricultural terraces initially identified by Franklin et al. (1994). No archaeological data or evidence obtained during the current project offers contrary evidence; the previous assessment is considered valid.

GENERAL SIGNIFICANCE ASSESSMENTS AND RECOMMENDED GENERAL TREATMENTS

General significance assessments and recommended general treatments for sites identified in the project area are summarized in *Table 2*. Significance categories used in the site evaluation process are based on Rules Governing Procedures for Historic Preservation Review to Comment on Chapter 6E-42, Hawaii Revised Statutes, Hawai'i Administrative Rules; Title 13, Department of Land and Natural Resources; Subtitle 13, State Historic Preservation Division Rules (2001). The DLNR-SHPD uses these criteria for evaluating cultural resources. The sites were assessed for integrity of location, design, setting, materials, workmanship, feeling, and association and in terms of the following criteria:

1. Criterion A. Be associated with events that have made an important contribution to the broad patterns of our history;
2. Criterion B. Be associated with the lives of persons important in our past;
3. Criterion C. Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
4. Criterion D. Have yielded or is likely to yield, information important for research in prehistory or history; or
5. Criterion E. Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional cultural practices, beliefs, events or oral accounts.

Based on the above significance criteria, all of the project sites are assessed as significant for solely for information content (Criterion D). The information content at the sites has been adequately collected during the current project, and the sites require no further archaeological work.

It is possible that significant, unidentified cultural remains could be encountered in the course of future construction in the project area. In this situation, archaeological consultation should be sought immediately.

Table 2. Summary of General Significance Assessments and Recommended General Treatments

SHIP Site Number	Formal Site Type	Tentative Functional Interpretation	Significance Category					General Recommendations			
			A	B	C	D	E	FDC	NFW	PID	PAI
19644	Terrace	Agriculture	-	-	-	+	-	-	+	-	-
2694-1	Wall	Ranching/Boundary	-	-	-	+	-	-	+	-	-
2694-2	Wall	Ranching/Boundary	-	-	-	+	-	-	+	-	-

General Significance Categories:

- A = Important for historical contribution to significant events and/or broad patterns of history
- B = Important for association with the lives of important individuals in history
- C = Excellent example of site type at local, region, island, State, or National level
- D = Important for information content
- E = Culturally significant

Recommended General Treatments:

- FDC = Further data collection necessary (detailed recording, surface collections, and limited excavations, and possibly subsequent data recovery/mitigation excavations)
- NFW = No further work of any kind necessary, sufficient data collected, archaeological clearance recommended, no preservation potential
- PID = Preservation with some level of interpretive development recommended (including appropriate related data recovery work)
- PAI = Preservation "as is", with no further work (and possible inclusion into landscaping), or possibly minimal further data collection necessary

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