

**ARCHAEOLOGICAL SURVEY AND SUBSURFACE  
TESTING OF A RESIDENTIAL PARCEL,  
KEALAKEKUA BAY, HAWAI'I  
(TMK 3-8-2-05:16)**

by

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## ABSTRACT

Archaeological survey and testing was conducted on a nearly one-acre parcel (TMK 3-8-2-05:16) within the Kealahou Bay region. This work was done in accordance with a recommendation made by L. Soehren (Letter dated Feb. 8, 1988). The study area is located near the intersection of the Napoopoo Beach Road and the main road leading down into Kealahou Bay. Several historic period structural features were observed including foundations, walls and a walled roadway. Three test pits were excavated in the east, central and western portions of the property.

No pre-historic (pre A.D.1778) cultural layer(s) were observed. Two of the three units contained historic material (i.e. glass and metal) down to bedrock with the third unit containing no cultural material. The parcel contained a historic roadway, a boulder and mortar house foundation, mortared slope and plentiful historic refuse, including modern trash. The degree of historic disturbance appears to have obliterated presumably pre-existing traditional Hawaiian residential features. No further archaeological work is recommended, except it is suggested that the walled roadway be incorporated, if possible, into the residential landscaping. If buried pre-historic materials are encountered during grading, a qualified archaeologist should be consulted.

## ACKNOWLEDGEMENTS

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## I. ENVIRONMENTAL SETTING

The project parcel (Figs 1-3) (TMK 3-8-2-05:16), a nearly one-acre lot (40,176 sq.ft.) is located near the intersection of the Napoopoo Beach Road and the "Lower Government Road" in the Kealakekua Bay region. This parcel, in Waipunaula Ahupua'a, lies within the boundaries of the Kealakekua Bay Historical District (HRHP 10-47-7000) and, in part is directly across the road (Lower Government Road) from a portion of the "proposed Kealakekua Bay State Historical Park" (Yent, 1985).

The project area receives approximately 35 inches of rain per year, which falls mainly during the summer months (Armstrong et al., 1973). The vegetation is dominated by introduced species which include koa haole, opium, monkey pod, various grasses and vines, mango, and a few coffee trees. The soil is classified as "Kainaliu, very stony silty clay loam" (Sato et al.: 1973). The terrain specific to the project area is characterized by a low, relatively flat makai (western) portion, a steeply sloping bed-rock bluff central section, and a gradual sloping (west to east) mauka portion.

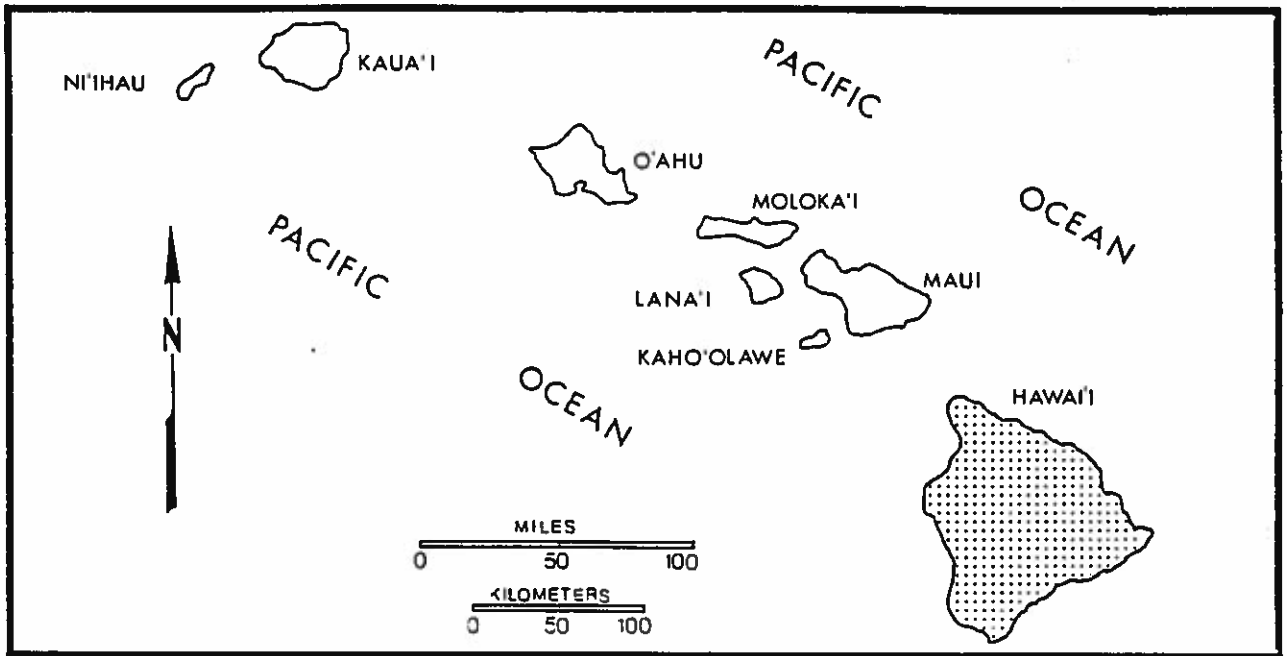


FIGURE 1  
State of Hawai'i

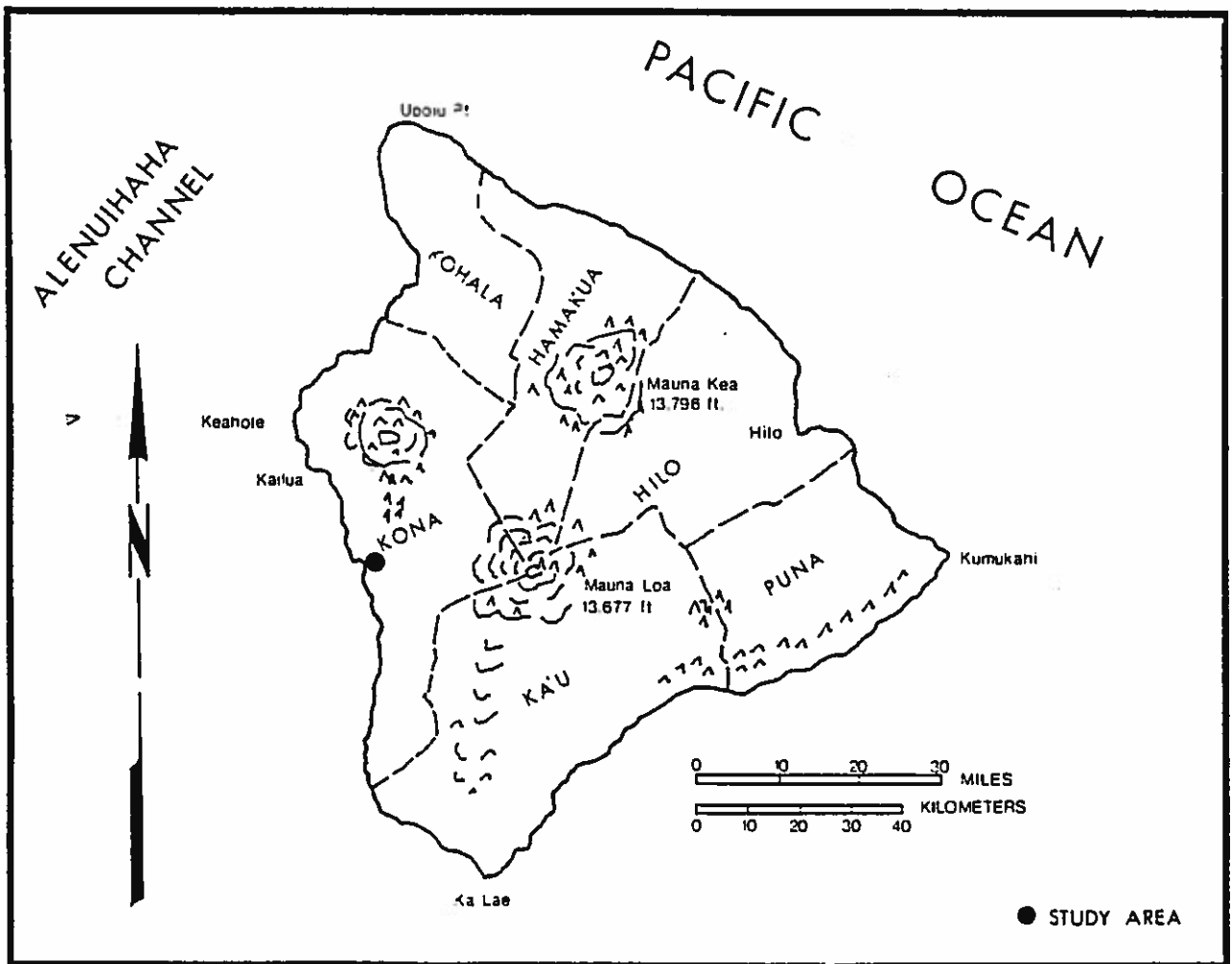
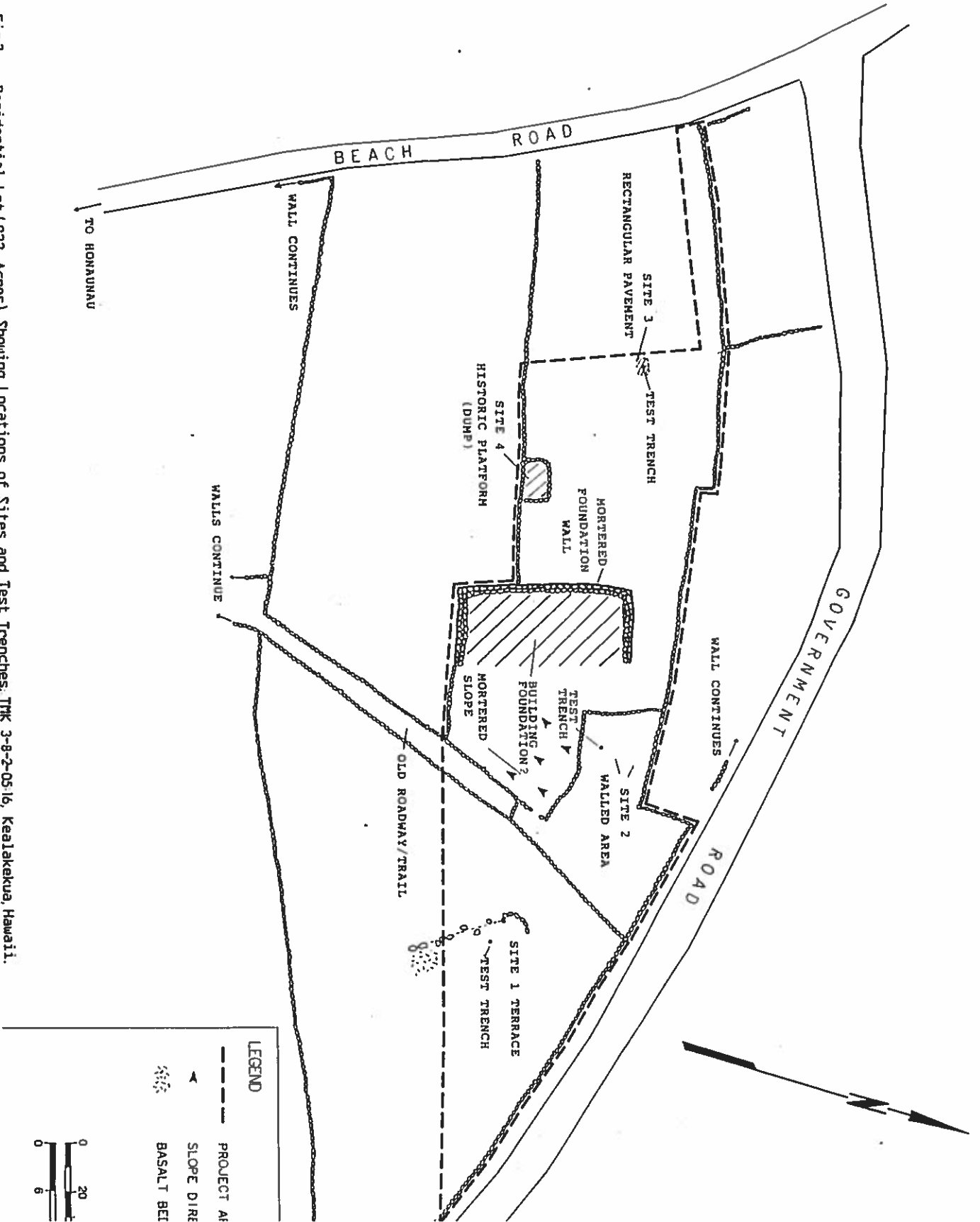


FIGURE 2  
General Location Map, Hawai'i Island

Fig 3 Residential Lot (.922 Acres) Showing Locations of Sites and Test Trenches. TMK 3-8-2-05-16, Kealahakua, Hawaii.





## II. HISTORIC SETTING

Recent archaeological work by staff members of the Department of Land and Natural Resources, State Parks Division (Yent, 1985) and Historic Sites Section (Cordy, 1985) have summarized historical information relating to Kealakekua Bay. The following is a brief sketch based on their research.

### A. Early Historic Period (ca. A.D. 1778-1820)

At the time of the first western contact at Kealakekua (Jan. 1779) general land use patterns apparently consisted of a fairly dense occupational area along the coast; "The Beach area and the section of Napoopoo south of Hikiau (heiau) appear to have been the major occupational areas for the Hawaiian population circa 1779 on the south side of Kealakekua Bay" (Yent, 1985:9). The area just described would include the project parcel.

The agricultural land use patterns, as suggested by Cook's expedition and recently discussed as part of the "Kona Field System, HRHP 6601" (Newman, 1972; Kelly, 1983; Schilt, 1984) would include the following zones:

- 0-500' El. Sweet potatoes and paper mulberry grown in rocky areas.
- 500-1,000' Breadfruit with sweet potatoes, paper mulberry.
- 1,000-2,500' Sweet potatoes and taro in walled fields with ti, sugar cane on walls.
- 2,500-3,000' Bananas and plantains just below and within the forest. (Newman, 1972)

The project area falls within the lowest zone, 0-500 feet elevation, but because of its presumed residential nature, it probably contained "cocoanut and other trees interspersed

artificially among the houses" (Ledyard, 1963:129 in Cordy, 1985:7).

The general importance of Kealakekua Bay during this era is also evidenced by the number of recorded heiau and its being a place of residence (at least part-time) of paramount chiefs. The heiau include: "Hikiau in Kealakekua Ahupua'a, Kamaiko in Keei, Puhina o Lono in upper Kaawaloa Ahupua'a where Cook's remains were prepared (Soehren & Newman, 1968:12-13), Helehelekalani near Hikiau, and nine other such heiau were present in the Kaawaloa area in 1804 (Lisiansky, 1814:109)"(Cordy 1985:6). The paramount chiefs who resided part-time within the Kealakekua area during this era were Kalaniopu'u and Kamehameha I. "During Kalaniopu'u's reign, he occasionally resided in Kaawaloa. And this is where he stayed during Cook's visit. During Kamehameha's reign, he occasionally lived on the south side of the bay in the Kealakekua-Kiloa Ahupua'a area - just south of Hikiau Heiau (Menzies, 1970:72, 95; Lisiansky, 1814:105; Golovin, 1979:179)" (in Cordy, 1985:6).

Land use patterns concerning the Kealakekua Bay area during the early historic period (A.D. 1779-1820) are relatively well documented. This is mainly due to the description by members of the Cook and Vancouver expeditions 1779 and 1793 respectively. The descriptions indicate that the project parcel was in the area of relatively dense residential units on the south side of the bay which was called the "Village" or "Town" of "Kireekakooa" (Kealakekua).

## B. Missionary Period (1820-1850's)

The traditional Hawaiian religious system (Kapu system) was abolished in 1819, the first missionaries arrived in 1820 and Kealakekua Bay area got its first missionary station in 1824 (at Kaawaloa). The Reverends Ruggles and Ely were the first to preach at Kaawaloa on a somewhat permanent basis. The church was moved (ca. 1840) to the Napoopoo area and was named Kahikolu Church. The Rev. Forbes presided over the move and building of the First Kahikolu Church, a large stone church. The Rev. J.D. Paris took over (ca. 1852) and eventually rebuilt Kahikolu Church, ca. 1854, as the original one had been destroyed by an earthquake (Cordy 1985:16 and Yent, 1985:11).

It was during this era (ca. 1840's, 1850's) that change in land tenure or "The Great Mahele" took place. It does not appear as if an individual L.C.A. was awarded for the project area. However, two L.C.A.'s, 7283-D to Nawaiehu and 9453-F:1 to Papaula, were awarded for lots abutting the parcel on the northern side. Native testimony concerning these lots indicate they were both "house lots" and that the awardee had received them from their "parents" or "parents-in-law in 1819." Papaula (9453-F:1) was a "school teacher" and "his single section" contained "2 house lots." Nawaiehu's (7283-D) house lot (7283-D:4), was one of 4 sections he was awarded, the others being:

1. Pohakulele ili in Kealakekua
2. Haleokane ili of Kiloa 2 ahupua'a
3. Potato Kihapai in Ililoa of Waipunaula"

(L.C.A. information from Native Testimony and Native Registers,

Volume(s) 8, State Archives).

The project parcel became a portion of Grant 867 to Preston Cummings. Cummings purchased this grant in 1852 from the Hawaiian Government and it included some 670 acres in Waipunaula and Kiloa Ahupua'a(s). Preston Cummings was an important figure during this period. In 1847 he was the "Police Captain at Napoopoo" (Int. Dept. Memo 1847, Sept. 9) and built a "prison" in the vicinity of Hikiau Heiau. Using prisoner labor pineapple, sugar cane and coffee were planted. Cummings Enterprises needed better transport and he petitioned for a government road to Napoopoo in 1850. In 1855 he is appointed Road Supervisor for the Kona District. In 1851 Minister of Foreign Affairs, R.C. Wyllie writes to Cummings for a bag of coffee, as Wyllie wants to test it against coffee grown in Hilo and Hanalei (Int. Dept. 1851). By 1861 Cummings is applying "for lease of the upper part of all government lands lying between Kealakekua and Keauhou (Int. Dept. 1861).

This period (1820-1850's) was one of great change for all of Hawai'i, including Kealakekua. The arrival of the missionaries, in 1820, was soon to effect Kealakekua. In 1824 a missionary station was established at Kaawaloa, and by the 1840's a large stone church (Kahikolu) was erected at Napoopoo. Land tenure changed from traditional Hawaiian to private ownership. This included larger and larger tracts being purchased and/or leased by foreigners. The beginnings of market-oriented agriculture included the need for better transportation. At Kealakekua Preston

Cummings purchases large tracts of land, builds a prison, starts coffee production on a commercial scale, along with some pineapple, and gets a government road built to Kealahou (Old Government Road of 1853). However, some things remain unchanged. The coastal area of Napoopoo is still the main focus for residence in the immediate area. The Land Court Awards (LCA's) abutting the project parcel are still described as "house lots" by the awardees, ca. 1850.

### C. Coffee and Ranching

Coffee was brought to the Kealahou area around 1828 by the Rev. Samuel Ruggles. Coffee proved most successful at the higher elevations (ca. 1,000 ft.+), but was grown near the Napoopoo area by the 1840's. Preston Cummings and his partner Charles Hall were well-known coffee growers by the mid-1840's. In the mid 1840's they were able not only to export beans but sent seedlings to Charles Titcomb to start a coffee plantation in Halalei, Kauai (Thrum, 1876:46-52). However, the coffee blight of the 1850's and 60's essentially wiped out Hall's and Cummings' coffee production, with only smaller family-owned farms continuing. "It was these families, many of them Hawaiian, who kept the coffee industry going during the lean years from the 1860's to the mid 1880's" (Goto, 1979 in Kelly, 1983:84). In the 1890's the coffee industry once again began a boom. Hackfeld and Co. (to become American Factors, AMFAC, during WWI) established docks, stores and warehouses, both at Kealahou Bay and Kailua-Kona Bay. At

Kealakekua, Hackfelds also set up a coffee mill which was run by John Gaspar (Yent, 1985:27). There was also another mill, the Captain Cook Coffee Mill, which originally started out as a pineapple cannery. This cannery/mill was started by W.W. Bruner in the 1890's. The Captain Cook Coffee Mill has been renovated a few times and presently is the site of the Captain Cook Coffee Mill and Museum.

The foundations of the AMFAC mill and loading dock are located immediately across the road (to the north) from the project parcel.

The Kealakekua Bay area like Kailua-Kona was a major area of cattle export. Walls and fences were erected including a pen adjoining Hikiau Heiau. During the earlier stages cattle were taken off the beach fronting Hikiau. In 1912 the present wharf at Napoopoo was built for the loading and unloading of cattle and goods for the Kealakekua area (Yent, 1985:27). Large acreage for cattle pasturing by the Greenwell family began to be purchased and/or leased, ca. 1875 by H.N. Greenwell. This developed into three large ranches all controlled by the Greenwell family and totalled approximately 112,000 acres in the 1920's and 30's.

Also during this era there were two stores which furnished goods for the Napoopoo area. One of the stores was located directly makai of the project area. It was originally owned by the Arima family who eventually sold it to the Machado family (Yent, 1985:30).

As the upland communities gradually expanded, mainly because

of coffee production, Kealahou began to lose its importance as a commercial center. Kealahou and Captain Cook towns refer to upcountry areas along the main highway. The 1960's tidal wave destroyed the remaining AMFAC warehouse and the store, neither of which rebuilt.

#### D. Historical Summary

The project parcel located near the intersection of the Napoopoo Beach Road and the main road leading down to Kealahou Bay went through intensive historical modifications. During the early historic period (ca. 1779-1820) it was part of the densely populated coastal strip south of Hikiau Heiau. The missionary period (ca. 1820-1850's) marked the beginning of drastic changes, decrease in population, land tenure change to private ownership with Preston Cummings starting commercial coffee production in the area including the "purchase" of the project area. A road linking the Kailua-Kona area with Kealahou Bay is built (ca. 1853).

The coffee and ranching era (1860's-1940's) includes the most extensive modifications to the area. Coffee is grown on an ever increasing scale. Hackfeld and Co. build warehouses and a mill. A road leading into the mill area still exists within the project area. The stone and mortar house foundation and mortared slope, described as part of site area 2, relates to this era (more specifically, probable construction ca. 1890's). The mortared slope would probably have functioned as water runoff to

a catchment basin for the house. There was also the Arima/-Machado store located on the makai side of the project area which wads functioning during this era.



### III. SITE DESCRIPTIONS

Each of the four sites described below and other historic features are shown on Figure 3.

Site 1 is a boulder-faced terrace built against an exposed bedrock ledge. The facing is generally just one large a'a boulder abutting the low (1 to 1.5 feet high) bedrock ledge. The terrace alignment is 50 feet long; running SE to NW, with only the northern 27 feet being within the project boundaries. The upslope "retained" portion of the terrace is a relatively level rocky surface of pebble and cobbles and averages 10 feet in width. A few water rounded coral pebbles were observed in the alignment and on the downslope side of the terrace.

A 50 cm. by 50 cm. test trench was excavated in the level upslope surface of the terrace. There were two distinct stratigraphic units observed (I, II). Stratum I (0-20 cmbs) consisted of dark brown silt loam with a high percentage of modern organic debris (forest litter) with approximately 40% a'a pebbles and cobbles. Stratum II (20-40 cmbs) consisted of dark greyish brown silt loam and 10-20% rockiness with bedrock encountered at 40 cmbs. There was no cultural material (midden or artifacts) within the test trench and no further excavations were undertaken.

The construction style (one boulder alignment), absence of cultural material, plus informant information of use of this parcel for melon and other modern gardening (per Comm. D. Lucas) indicated that this site was probably of modern age and agricul-

tural function.

Site 2 is a roughly rectangular (30 ft. N/S by 40 ft E/W) partially enclosed area (open to the east, mauka) that is the highest point on the project parcel. The north, west, and south sides are delineated by stacked boulder walls, which range in width and height from 2.5 to 3.5 feet. The interior of this enclosure is a relatively level soil area. The west (makai) and south sides of Site 2 area slope steeply away with the south side being a mortared bedrock face. Lying on top of the central portion of the makai (west) wall is an oblong (1.5 ft. long by 10 in. diameter) water rounded boulder thought to be a possible ku'ula type rock. Within the enclosure is much modern trash including part of a 55 gal. drum, beer bottles, and plastic "Grow" bags.

A 50 cm. by 50 cm. test trench was excavated in the central soil area of the enclosure with just a single stratigraphic unit represented. Soil depth (B.O.E.) was a maximum of 25 cm. to the underlying bedrock surface. The soil was very dark greyish brown to black (10YR 2/1) silt loam and contained fragmented and melted pieces of glass and metal as well as a few pieces of marine shell and one pig tooth. Also observed was charcoal flecking and a few small pieces of coal. The loose soil matrix, fragmented nature of the cultural material, and mix of modern (i.e. broken windshield glass) artifacts throughout the soil layer suggests that the soil present within this enclosure is probably dumped "fill"

from a trash burning area or possibly reworked in situ trash burning.

The enclosure appears to be of historic age, possibly related to an earlier residence located on the property. The mortared slope, by its location, immediately upslope from an old house foundation (of basalt boulder and mortar construction) suggest that the slope was utilized for water catchment purposes. The modern materials within the excavation and enclosure definitely post date the house foundation and mortared slope and as mentioned earlier indicate use of the enclosure for recent dumping and/or trash burning.

Site 3 is a low platform, which was the probable foundation of a shed structure. It measures 20 feet square, 6 to 8 inches high and is paved with cobbles and pebbles, with the perimeter defined by a single alignment of small boulders. The tax key map of the project area showed this site as a small building/shed. However, because of the possibility of its being a prehistoric feature which had been utilized historically, a test trench was excavated in the center of this low platform.

The 50 cm. by 50 cm. unit was excavated to a maximum of 50 cmbs to the underlying bedrock. Modern materials of nails, bottle glass and metal fragments were found all the way to bedrock. The soil was up to 60% rockiness in a matrix of very dark brown silt loam. There was no other cultural material, other

than the recent historic, observed.

Site 4 is a rectangular enclosure abutting the southern boundary wall. The enclosure measures 14 feet E/W by 11 feet N/W with walls 2.5 feet high of stacked boulder construction. The enclosure is an "addition" to the southern boundary wall, being built off the wall, not incorporated into it. The entire interior of the enclosure is filled with trash, both "Hard Trash" (bottles, pots, pans, etc.) and "Organic Trash" (Mangos, branches, lumber, etc.). The enclosure appears to be historic in age, probably specifically built for refuse dumping.

Other features observed on the project parcel include the north and south boundary walls, a faced slope, building/house foundations and a trail/road. The north and south walls are not continuous for the entire north/south boundaries. The walls appear to be historic and/or historically modified to conform to modern lot boundaries. The walls are of stacked boulder construction and range in height and width from 2 to 4 feet. The faced slope appears to be directly related to the house foundations. The steep slope, oriented roughly north/south cuts across the center of the parcel dividing it nearly in half. The slope is approximately 20' high and has two distinct retaining walls or facings. The facings are mostly collapsed, but appear to have been stacked boulder construction with some cementing/mortaring, especially the upper-most facing. The upper-most facing incor-

porates the two house foundations, one on the southern boundary, the other just makai of the Site #2 enclosure. The house foundations are boulder and mortar construction. The trail or old roadway cuts across the mauka portion of the parcel. It is delineated by two parallel walls, except in the vicinity of Site #2, where only the mauka wall remains. The walls are of stacked boulder construction and range up to 4 feet high. The roadway itself is rock paved and averages 10 feet wide. This roadway leads directly into the old AMFAC (Hackfeld) coffee mill area with the old coffee loading dock, a cement structure (Site #46 proposed Kealahou Bay State Historical Park, Yent 1985: 38, Figure #25), located directly across the present Government Road from the project parcel. The roadway also continues southward out of the project area to its intersection with the Napoopoo Beach Road.

#### IV. SUMMARY

The project parcel (TMK 3-8-2-05:16) is within the boundaries of the Kealahou Bay Historical District (HRHP 10-47-7000). Early historical accounts by members of Cook's and Vancouver's expeditions (1779 and 1793) indicate that the project area (coastal strip south of Hikiau Heiau) was relatively densely populated. Land Court records of the Mahele (ca. 1850) show that no specific "kuleana" was awarded for the project parcel. However, two L.C.A.s for "house lots" were awarded for parcels adjoining on the north side of the project parcel. In 1852, a foreigner, Preston Cummings purchases Grant 867, which totaled some 670 acres and included the project area. Cummings began commercial coffee growing in the area and was a catalyst for major changes in the Kealahou region.

As coffee production increased, the project area came under increasing modifications. The high point of intensified use seems to be the early 1900's. In the late 1890's Hackfeld and Co., which became AMFAC in 1918, constructed a dock area with a warehouse, a store, and also built a coffee mill. The mill was located across the road (north side of "Lower Government Road) from the project area. The Captain Cook Pineapple Cannery, which became the Captain Cook Coffee Mill, was erected just up the main road from Hackfeld's about the same time. A store originally owned by the Arima family, then later sold to the Machados, was located on the makai side of the project parcel, at the intersection of the Napoopoo Beach road and Lower Government Road. In

1912, the present cement wharf at Napoopoo was built. The Greenwell family exported cattle, first from the beach, then from the wharf.

The house foundations and mortared slope, described as part of Site 2, and the rock paved roadway, which cuts across the mauka portion of the project and goes into the AMFAC mill area, relate to this period (ca. 1900) of relatively intensive commercial activity in the Napoopoo area. The amount of historical use and modification to the parcel has obliterated any surface remains of pre-historic features such as platforms or other residential type features. Two of the three test units excavated showed historic material down to bedrock with the third containing no cultural material at all.

## V. RECOMMENDATIONS

A previous inspection of the property was made by Lloyd Soehren in February 1988. Soehren observed, "an old road, a broad, low terrace, an extensive area littered with fragments of lime mortar and patches literally plastered with mortar" (Soehren, 1988). Soehren recommended further work based on these observations and the fact that the parcel is within the Kealakekua Bay Archeological and Historic District.

The present survey and subsurface testing, however, indicate that the amount of post 1900 modifications has been intensive enough to destroy presumably pre-existing (i.e. pre-historic, pre A.D. 1779) occupational features. There are relatively large quantities of historic materials present, including a house foundation as well as "trash" type material. However, the mix of modern trash and observed shallow soil deposits would argue against finding any stratified early historic refuse pits. The findings indicate that no further archaeological work is necessary, except it is suggested that the walled and rock paved roadway be preserved if possible and incorporated in the landscaping of the residential lot. If the property is graded a qualified archaeologist should be contacted if pre-historic cultural material is uncovered.



## VI. REFERENCES CITED

- Armstrong, Warwick, Ed.  
1973 Atlas of Hawaii. U.H. Press, Honolulu.
- Cordy, R.  
1985 "Archaeological Date Recovery at C11-27 in Kalamailapala Ahupua'a in the Kealakekua Bay Region," DLNR Historic Site Section.
- Kelly, M.  
1983 Na Mala o Kona: Gardens of Kona, A History of Land Use in Kona, Hawaii, Bishop Museum Dept. Report Series 83-2, Honolulu.
- N.A.  
N.D. Native Register of Kuleana Claims and Native Testimony; To Quiet Land Titles in the Hawaii Islands, N.D. State of Hawaii Archives.
- Soehren, Lloyd J.  
1988 Letter Report on Archaeological Inspection of TMK 3-8-2-05:16 To Donald McIntosh, Feb. 8, 1988.
- Thrum, T.G.  
1907-1938 Hawaiian Annual.
- Yent, Martha  
1985 "Archaeological Survey & Mapping of the Hikiau Complex (Site 1963) and Napoopoo Section of the Proposed Kealakekua Bay State Historical Park, South Kona, Island of Hawaii," State Parks, DLNR, Honolulu.

VII. APPENDIX



Figure 4. Site 1, Low Terrace Wall in East Portion of Property, View to South.



Figure 5. Test Trench at Site 2 Showing Bedrock at Base of Trench.



Figure 6. General View of Property, View to West

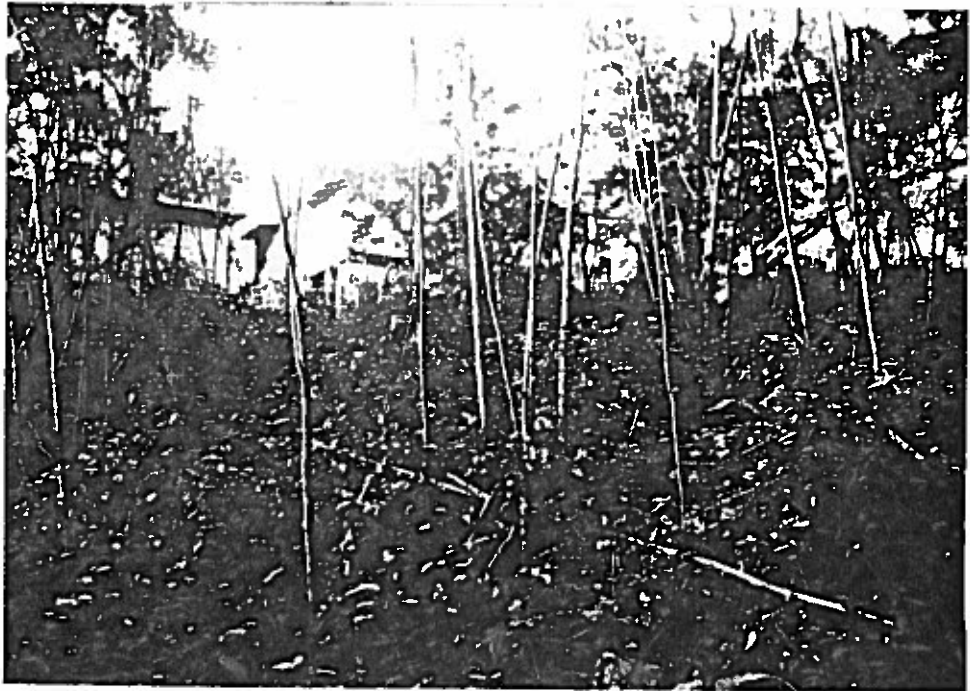


Figure 7. General View of Parcel, View Upslope  
(Northeast) Showing Adjacent Houses.

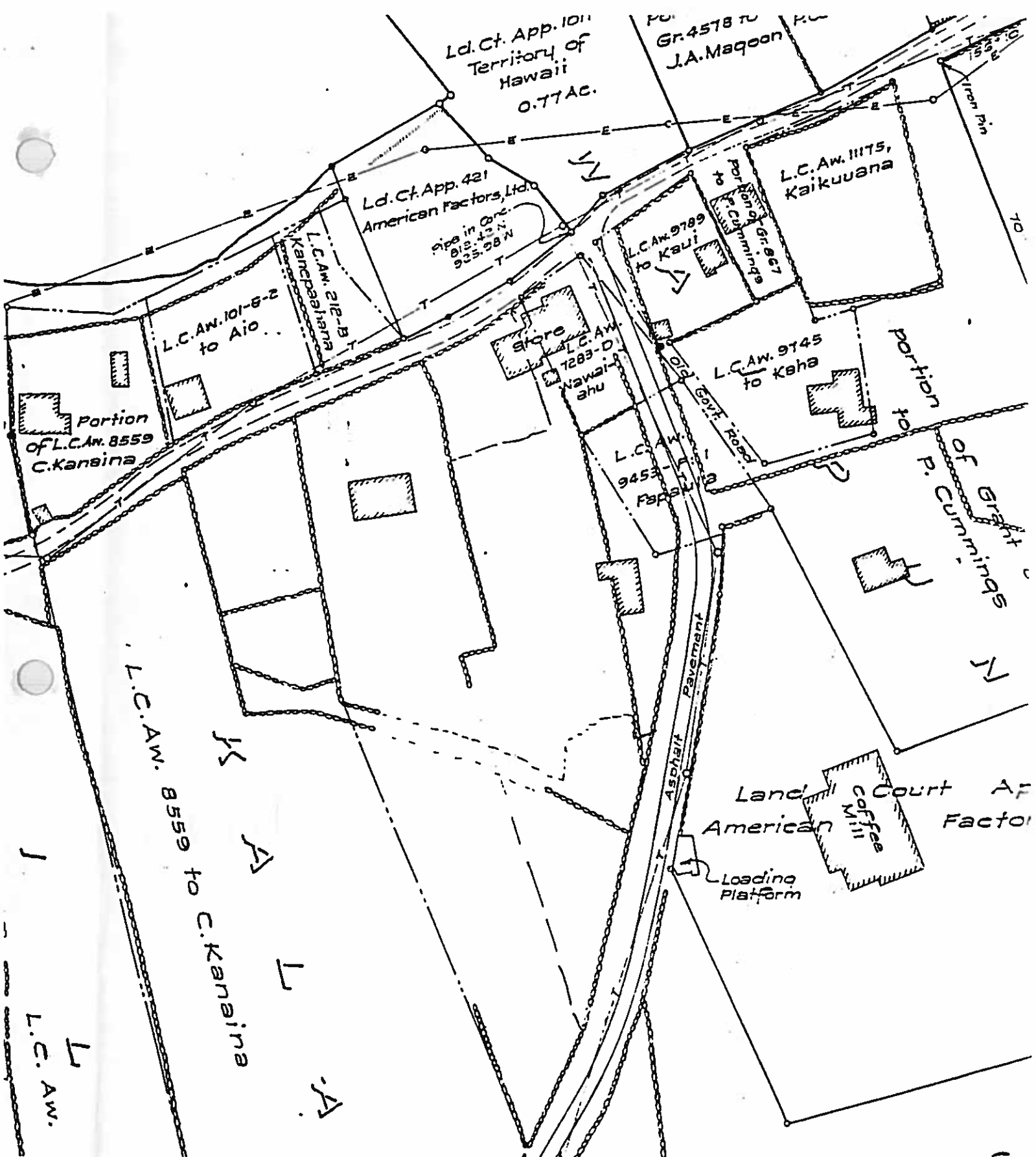


Figure 8. Survey Map by Charles L. Murray, 1943-1944, Showing Study Area & Surrounding Features.