



Figure 23. Photo showing a natural seeping spring located within the eastern end of the Cultural Preserve (GPS: 12-28-SpringSeep), view to northeast

7.2 Survey Results

A total of 24 sites were documented (Figure 24 through Figure 26, Table 6). Ten (10) of the sites were previously identified, eight (8) of which are located within a proposed Cultural Preserve (CP) (SIHP #'s 50-80-10-354, -4683, -4684, -6930 to -6933, and -7079) and two are located on the edges of the current project area boundary (SIHP # -4680 and -4681). All previously identified sites were relocated, with plan maps and descriptions amended to account for current conditions and observations. During this project, three of the previously documented sites were expanded in size to include additional features (Kawa'ewa'e Heiau [-354], -4681, and -7079). Fourteen (14) sites documented during this investigation (Honua 1-14, SIHP # -8228 to -8241) are newly identified, three of which will be included within the proposed CP (Honua 4 [SIHP # -8231], Honua 13 [SIHP # -8240], and Honua 14 [SIHP # -8241]). Two of the documented sites were found to be just outside of the current project area and should not be impacted by the proposed project (-4681 and Honua 8 [-8235]).

The majority of the documented sites are likely associated with the traditional Hawaiian, pre-contact (pre- 1778 AD) and early post-contact eras, while eight of the sites are considered historic (older than 50 years). Documented historic sites include dairy roads (Honua 1, SIHP # -8228), a historic roadway (Honua 2, SIHP # -8229), an 'auwai system (Honua 3, SIHP # -8230), water retention terraces (SIHP # -4680 and Honua 6 [SIHP # -8233]), and earthen pits identified as historic charcoal kilns (-4683, -6933, Honua 14 [SIHP # -8241]). The time period is unknown for one site, an earthen pit (Honua 12, SIHP # -8239) located on top of a steep hillside.

Documented traditional Hawaiian sites include heiau, potential ceremonial sites, habitation sites and complexes, terraced hillsides, and terraced 'auwai. Heiau and potential ceremonial sites include Kawa'ewa'e Heiau (SIHP # -354), a walled enclosure (SIHP # -6930), a hilltop with associated stone alignments (SIHP # -6931), and a potential Hale o Papa (SIHP # -4681, Feature F). During this investigation, an updated plan map of Kawa'ewa'e Heiau was completed which built off eight features (Features 1-8) documented by McAllister (1933) and one feature (Feature A) documented during the previous AIS of the study area (McCurdy and Hammatt 2009). Several exterior terraces (Feature 2A and 2B, Feature 6B, and Feature 7A), an L-shaped interior terrace (Feature 4A), several stone-lined pits (Feature 6A1-6A4), and four exterior earthen pits (Features 8A-D) were added to the Kawa'ewa'e Heiau site map and site boundary.

Four traditional habitation sites and complexes were recorded (SIHP # -4681, -4684, Honua 8 [SIHP # -8235], and Honua 11 [SIHP # -8238]). Previously documented SIHP # -4681 was enlarged from five features (Features A-E) to eight features (Features A-H) to include a potential Hale o Papa (Feature F) and traditional agricultural terraces (Features G-H). One additional feature was added to SIHP # -4684 (Feature H, stone alignment). Honua 8 (SIHP # -8235), a small house site, and Honua 11 (SIHP # -8238), a potential house site with associated agricultural terraces, were newly identified.

Eight agricultural terrace sites were documented. Previously documented SIHP # -7079 was enlarged from one isolated grinding stone (Feature A) to 11 features (A-K), including traditional agricultural terrace remnants, stone alignments, and a mound. Four newly identified sites containing hillside terrace remnants were documented (Honua 5 [SIHP # -8232], Honua 6 [SIHP # -8233], Honua 9 [SIHP # -8236], and Honua 13 [SIHP # -8240]). These hillsides have been modified by construction of low stone terraces running perpendicular to the slope and often

adjacent to natural runoff drainages. Terraces near, adjacent, and within ‘auwai were documented (Honua 4 [SIHP # -8231] and Honua 10 [SIHP # -8237]). Terraces were also documented near unmodified stream beds (Honua 7 [SIHP # -8234]). It is likely many of the streams, intermittent drainages, and hillsides within the project area were utilized for agricultural purposes in the past. Due to natural erosion and rockfall, many of these agricultural systems have become remnants and may now appear to be natural components of the landscape. Terrace sites were only documented when there was clear evidence of cultural modification.

Of additional note, one site potentially located outside of the current project area was not relocated. Szabian et al. (1989) identified SIHP # -4682 as a platform and series of terraces, which according to McCurdy and Hammatt (2009) site maps, would have been situated on the current south-central project boundary or just outside the current project area. The McCurdy and Hammatt (2009) study found SIHP # -4682 to consist only of natural features of the landscape and therefore was determined to be non-cultural. The current study documented and expanded a neighboring site, SIHP # -4681 (habitation complex), which is on the south-central border of the current project area, however, extremely dense hau made survey to the southeast of SIHP # -4681, outside of the project area and in the likely location of SIHP # -4682, to be extremely difficult with very little ground visibility. Therefore, this study did not survey or re-visit the area where SIHP # -4682 may be located.

7.3 Overview of Excavation

Excavation was conducted at one site, Honua 14 (SIHP # -8241, historic guava charcoal kiln) between June 6 and June 22, 2018. Two test units (TU 1 and TU 2) and an exploratory excavation were completed to assess the site type, function, and associated time period. The site was cleared of vegetation, mapped in detail using tape and compass, and photographed prior to excavation. Test units were situated to intentionally encounter artifactual materials within the site interior, to assess the stone-stacked walls, and to gather stratigraphic data to indicate when and how the site was created. Datums and level lines were established for TU 1 and TU2 for obtaining consistent elevational data. Test unit excavations proceeded by removing arbitrary 10 cm levels by hand with trowels, brushes, and shovels. Photographs and a hand-drawn plan maps were completed for each arbitrary level. The test units were excavated to depths in which necessary important stratigraphic data was obtained and feature components could be easily assessed and documented. TU 1 was excavated to natural, sterile soil. TU 2 and the exploratory excavation were excavated until feature components and discrete deposits were clearly identified and understood. Profiles were drawn of test unit sidewalls and sediments were described in full.

Honua 14 (SIHP # -8241) was initially characterized as a walled pit feature, constructed of earth and dry-stacked basalt stones. Excavations revealed the interior stone wall (Honua 14, Feature C) observable on the ground surface, extended approximately 70 cm deeper and was well-constructed of small to large-sized basalt cobbles and boulders. Concentrations of dense soot on the lower portions of the Feature C stone wall and adjacent to intentional voids or openings within the stone wall construction indicated the site was a historic charcoal kiln in good condition, with constructed air vents and a chimney to release smoke. Charcoal identified from the floor of the kiln indicates the site was used to make guava (*Psidium* sp.) charcoal. Detailed excavation results, profiles, and plan maps are included within the Honua 14 (SIHP # -8241) site description (see Section 8.2.15 of this report).

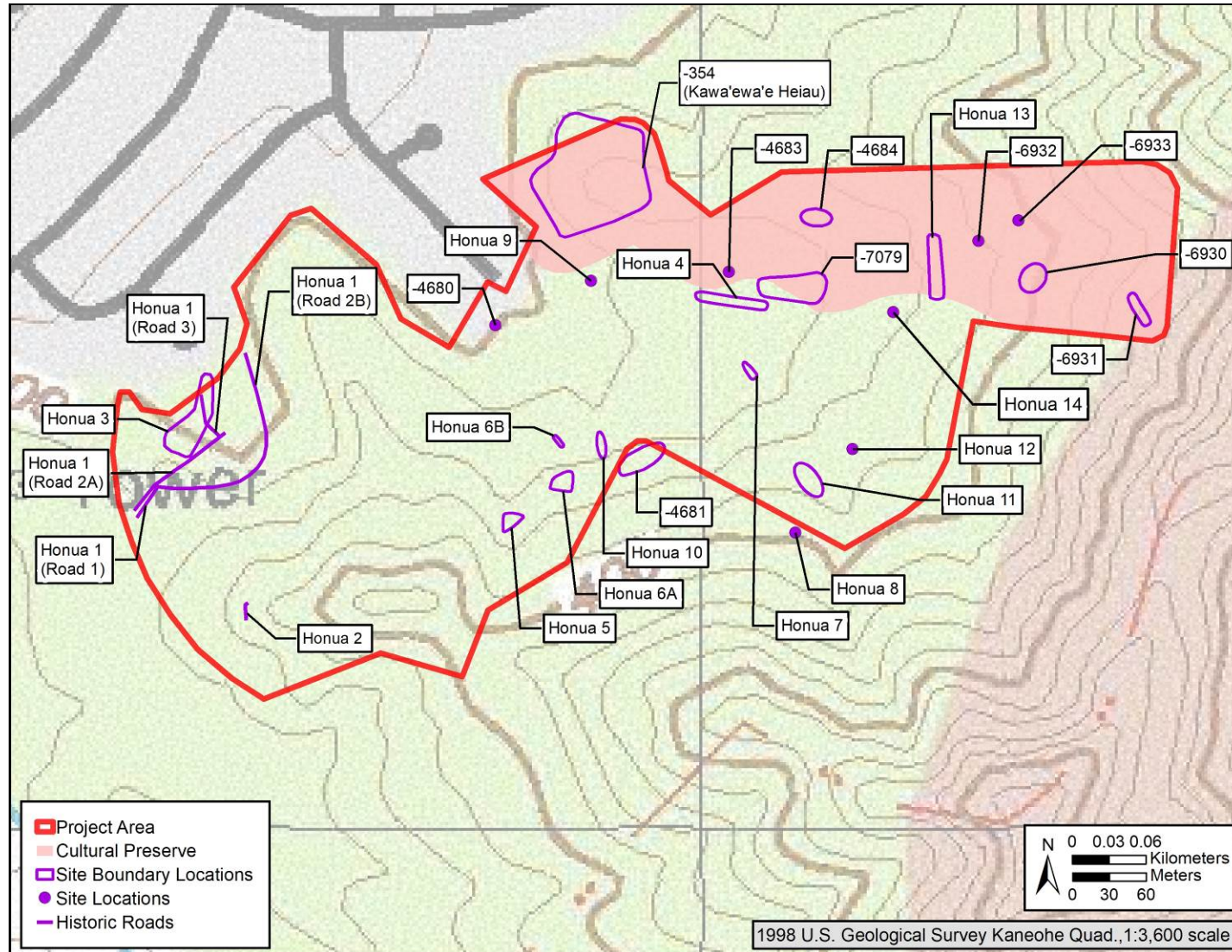


Figure 24. Portion of a 1998 Kaneohe USGS showing all documented sites within the project area (in purple)

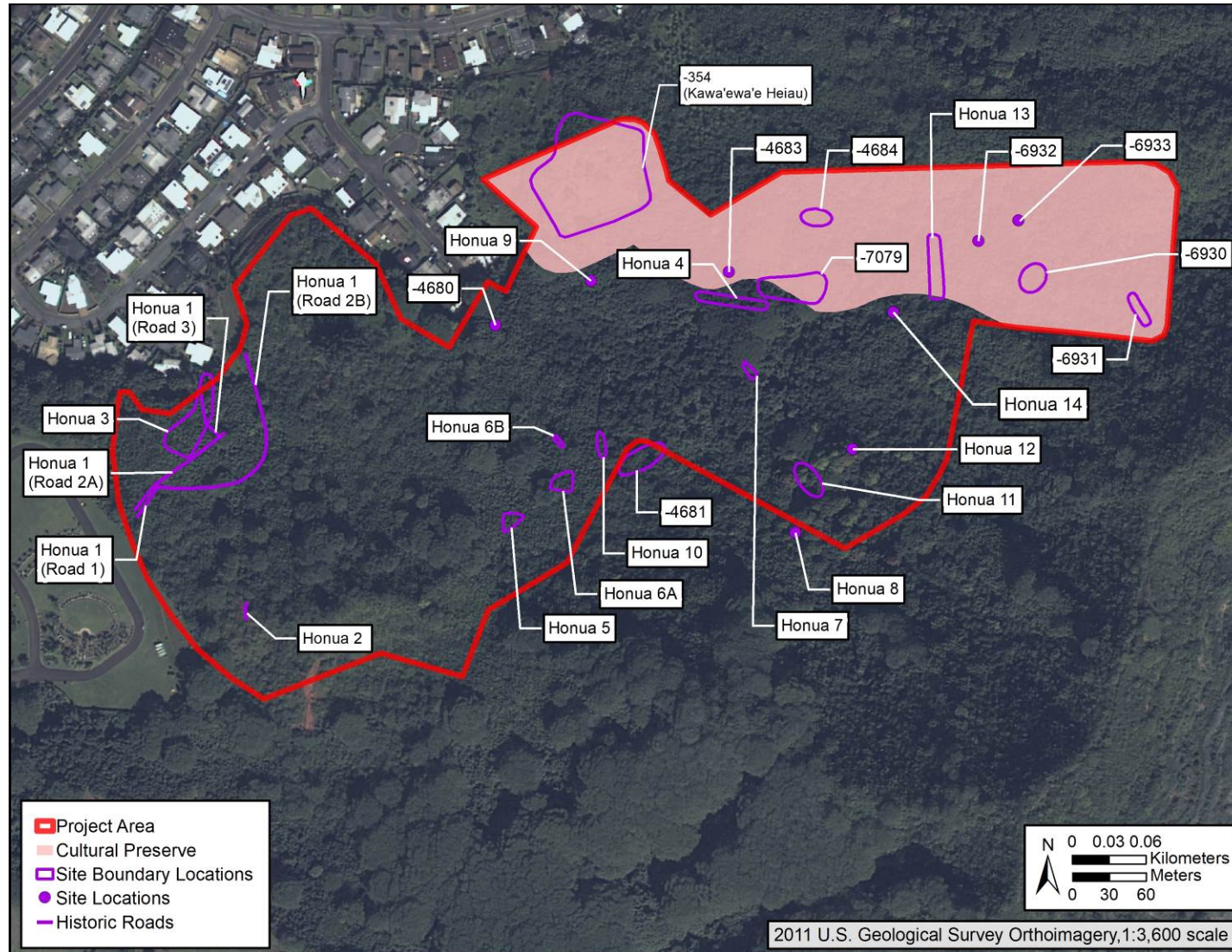
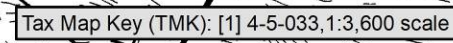


Figure 25. 2011 aerial photograph showing locations of all documented sites (in purple)



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Table 6. Table Listing all Documented Sites

SIHP # 50-80-10	Type (Location)	Location Within or Outside of Cultural Preserve (CP)	# Features	Feature Types (newly identified features are in BOLD)	Condition
-354	Kawa'ewa'e Heiau	Within CP	8 Heiau Features (1-8), 1 Exterior Feature (A)	1: entrance; 2: east end of south wall, 2A: ramped terrace, 2B: exterior terrace ; 3: east wall; 4: interior of heiau, 4A: low L-shaped terrace ; 5: central portion of south wall; 6: western portion of heiau on steep slope, 6A1-6A4: stone-lined pits within southeast interior corner, 6B: large exterior terrace ; 7: north wall, 7A: stepped-wall ; 8: semi-circular earthen terrace, 8A-8D: earthen pits ; Feature A: exterior enclosure	Good
-4680	Historic Water Retention Terrace	Outside CP	2 Features (A-B)	A: large terrace; B: small terrace	Fair
-4681	Traditional Habitation Complex	Outside CP and Outside Project Area	8 Features (A-H)	A: c-shape; B1: hearth, B2-B3: terraces; C1-C2: terraces; D: terrace; E: c-shape; F1-F3: terraces (potential Hale o Papa); G1-G3: terraces; H1-H2: terraces	Good to Fair
-4683	Historic Charcoal Kiln	Within CP	1 Feature (A)	Earthen pit	Fair
-4684	Traditional Habitation Complex	Within CP	7 Features (A-H)	A: enclosure; B: terrace; C: terrace; D: c-shape; E: possible hearth; F: c-shape; G: c-shape; H: alignment	Good to Fair

SIHP # 50-80-10	Type (Location)	Location Within or Outside of Cultural Preserve (CP)	# Features	Feature Types (newly identified features are in BOLD)	Condition
-6930	Traditional Stone Enclosure	Within CP	1 Feature	Enclosure	Good
-6931	Traditional Stone Alignments	Within CP	4 Features (A-D)	A-C: terraces; Feature D: potential ceremonial area	Poor
-6932	Historic Stone Storage	Within CP	1 Feature	Stone storage feature	Good
-6933	Historic Charcoal Kiln	Within CP	2 Features (A-B)	A: earthen pit; B: terrace	Fair
-7079	Traditional Agricultural Complex	Within CP	8 Features (A-K)	A: grinding stone; B-C: terrace remnants; D: mound; E-G: terrace remnants; H-I: alignments; J-K: terrace remnants	Poor
-8228 (Honua 1)	Historic Dairy Roads	Outside CP	3 Features (1-3)	Road 1-3: dirt roadways	Poor
-8229 (Honua 2)	Historic Road	Outside CP	1 Feature	Dirt roadway ; shown on historic maps from 1876 and 1902 (refer to Figure 11 and Figure 13)	Poor
-8230 Honua 3	Historic 'Auwai	Outside CP	3 Features (A-C)	A1: concrete capped spring; A2: terrace; A3: soil terrace; A4: metal pipe; A5: water hole; A6: historic road crossing; B: small terrace; C: large terrace - 'auwai determined to be a native damselfly habitat	Fair

SIHP # 50- 80-10	Type (Location)	Location Within or Outside of Cultural Preserve (CP)	# Features	Feature Types (newly identified features are in BOLD)	Condition
-8231 (Honua 4)	Traditional Terraced 'Auwai	Outside CP, could be included Within CP	7 Features (A-G)	A-C: terraces; D-F: mounds; G: terrace remnant	Good to Fair
-8232 (Honua 5)	Traditional Agricultural Terrace Remnants	Outside CP	5 Features (A-E)	A1-A2: mounds; B-E: terrace remnants	Poor/ Remnant
-8233 (Honua 6A)	Traditional Agricultural Terrace Remnants	Outside CP	5 Features (A-E)	A-E: terraces; Feature C3: mound	Poor to Fair
-8233 (Honua 6B)	Modified Outcrop	Outside CP	1 Feature	Modified outcrop	Fair
-8234 (Honua 7)	Traditional Agricultural Terrace	Outside CP	3 Features (A-C)	A: terrace; B-C: likely natural terraces	Fair
-8235 (Honua 8)	Habitation Structure	Outside CP	1 Feature	Square stone alignment	Fair
-8236 (Honua 9)	Historic Terrace	Outside CP	1 Feature	Water diversion terrace	Good

SIHP # 50-80-10	Type (Location)	Location Within or Outside of Cultural Preserve (CP)	# Features	Feature Types (newly identified features are in BOLD)	Condition
-8237 (Honua 10)	Traditional Agricultural Terrace Remnants	Outside CP	2 (A-B)	A1-A4: terrace remnants, B1-B2: terrace remnants	Poor/Remnant
-8238 (Honua 11)	Possible Habitation and Agricultural Terraces	Outside CP	6 (A-F)	A-F: terraces	Fair to Poor
-8239 (Honua 12)	Earthen Pit	Outside CP	1	Earthen pit	Fair
-8240 (Honua 13)	Traditional Terraced 'Auwai	Within CP	3 (A-C)	A-C: terraces	Fair
-8241 (Honua 14)	Walled Pit	Outside CP, could be included Within CP	3 (A-C)	A-C: stacked-stone walls (observable on ground surface); Subsurface: Feature D (floor & foundation of charcoal kiln [TU 1, Stratum V and VI]), Feature E (air vent , within Feature C [TU 2], Feature F (chimney of kiln , within Feature C [Exploratory Excavation]), Charcoal Pit Feature 1 (TU 1, Stratum II), and Builders Trench A (TU 2, associated with Feature C)	Good

Section 8 Historic Property Description

A total of 24 sites were documented during this investigation. Ten (10) of the sites were previously identified, eight (8) of which are located within a proposed Cultural Preserve (CP) (SIHP #'s -354, -4683, -4684, -6930 to -6933, and -7079) and two are located near the edges of the current project area boundary (SIHP # -4680 and -4681). The remaining fourteen (14) sites documented during this investigation are newly identified (Honua 1-14, SIHP # -8228 to -8241), 11 of which were found outside the CP (Honua 1-3 and 5-12, SIHP # -8228 to -8230 and -8232 to 8239). In coordination with the landowner, three of the newly documented sites will be included within the boundary of the proposed CP (Honua 4 [SIHP # -8231], Honua 13 [SIHP # -8240], and Honua 14 [SIHP # -8241]). Figure 27 is USGS showing the revised CP boundaries which include the three newly identified sites.

This section provides a thorough overview of all documented historic properties. This section is divided into those sites within the CP and those sites found outside the CP. Each site description includes previous archaeological records followed by newly amended site information.

8.1 Historic Properties Within the Cultural Preserve

Eight (8) historic properties were previously documented within the CP. Previously documented sites within the cultural preserve include:

- SIHP # -354, NR #72000427, Kawa'ewa'e Heiau,
- SIHP # -4683 and -6933, historic charcoal kilns,
- SIHP # -4684, a traditional habitation complex,
- SIHP # -6930, a traditional ceremonial stone enclosure,
- SIHP # -6931, a potential ceremonial site with stone alignments,
- SIHP # -6932, a historic stone storage feature, and
- SIHP # -7079, a traditional grinding stone.

During the current investigation three new sites and site features were recorded within the CP. SIHP # -7079 was expanded to include several additional features, including terrace remnants and a mound. One new site was documented near the center of the CP and two new sites were documented along the southern border of the CP:

- Honua 4, SIHP # -8231, a terraced 'auwai,
- Honua 13, SIHP # -8240, a terraced 'auwai where several large 'ekaha plants (*Asplenium nidus*) are growing, and
- Honua 14, SIHP # -8241, a historic guava charcoal kiln.

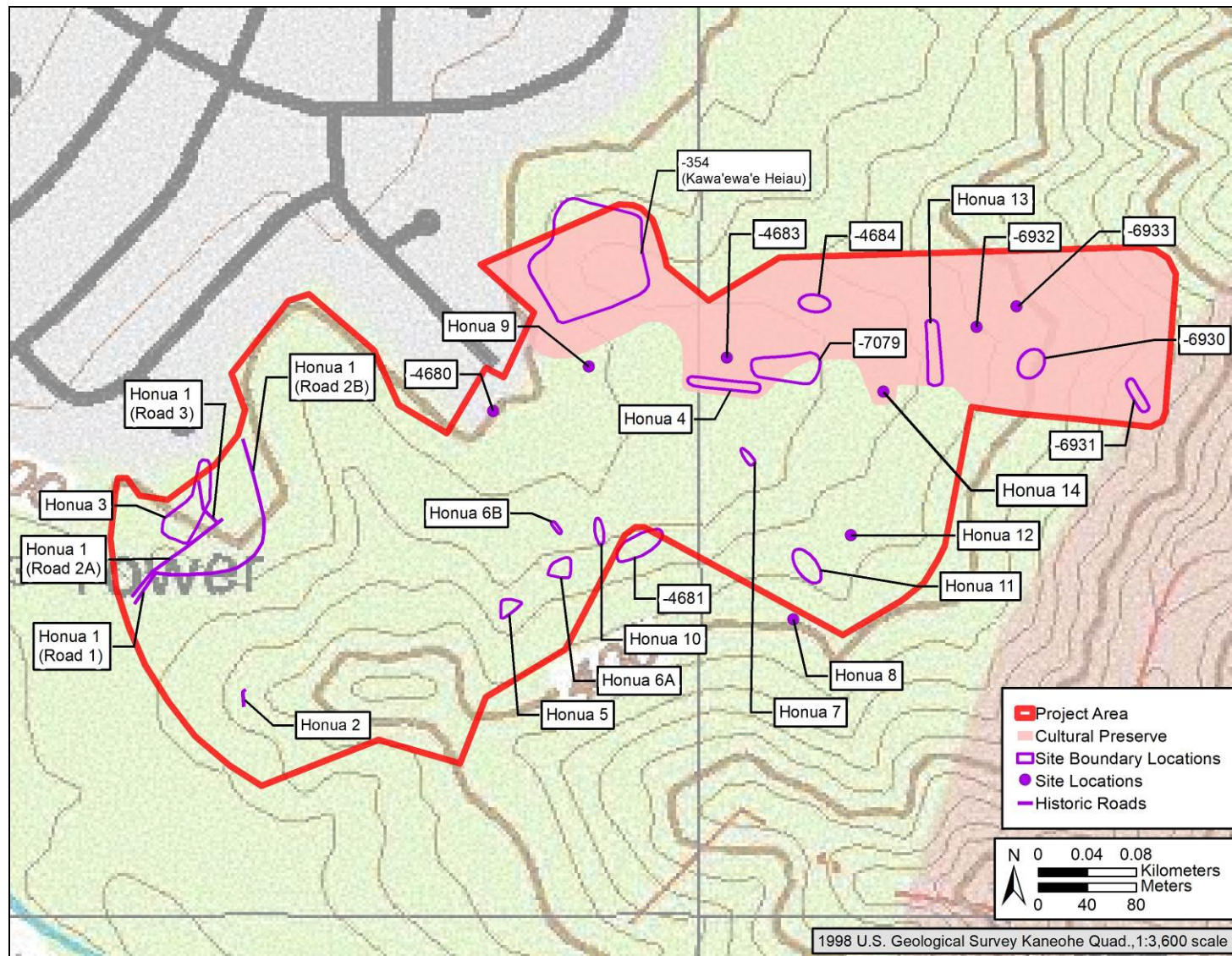


Figure 27. Portion of a 1998 USGS map showing locations of all documented sites and a 2018 Revised Cultural Preserve Boundary

8.1.1 SIHP #50-80-10-354 (NR #72000427), Kawa‘ewa‘e Heiau

FORMAL TYPE:	Heiau
FUNCTION:	Ceremonial
TIME PERIOD:	Pre-Contact
# OF FEATURES:	Heiau (Features 1-8) and Feature A (small enclosure outside of heiau); (Feature 1: entrance; Feature 2: east end of south wall, Feature 2A: ramped terrace, Feature 2B: exterior terrace; Feature 3: east wall; Feature 4: interior of heiau, Feature 4A: low L-shaped terrace; Feature 5: central portion of south wall; Feature 6: western portion of heiau on steep slope, Features 6A1-6A4: stone-lined pits within southeast interior corner, Feature 6B: large exterior terrace; Feature 7: north wall, Feature 7A: stepped-wall; Feature 8: semi-circular earthen terrace, Features 8A-8D: earthen pits; Feature A: exterior enclosure
SITE DIMENSIONS:	36.5 m north/south by 77 m east/west
CONDITION:	Good
UTM:	NE Corner: N 2366553, E 625929; NW Corner: N 2366528, E 625866; SE Corner: N 2366514, E 625945; SW Corner: N 2366492, E 625887; Feature A: N. 2366559.3, E. 625949.4; Center: N 2366514, E 625915/ 21°23'47.3"N, -157°47'7.0"W

Kawa‘ewa‘e Heiau, SIHP #50-80-10-354, National Register (NR) #72000427, is located on the north side of the current project area, within the west portion of the proposed Cultural Preserve (refer to Figure 24). Kawa‘ewa‘e was a luakini type heiau, commissioned by the king and associated with human and animal sacrifice (Malo 1898:159). Thrum (1916:90) described the site’s “famed tradition as built in the time of ‘Olopana by his brother Kahikiula, and credited as being the scene of the demi-god Kamapua‘a’s victory over Oahu’s king [‘Olopana]”. Thrum noted of the site:

We found a walled structure that measured 110 feet by 260 feet, with walls from four to eight feet in height according to the lay of the land. Crowning the hill as it did, it took its contour, with a levelled-out portion at the seaward end for usual temple purposes, showing a slight trace of pavement. Much of the heiau was in a dense jungle of shrub growth..(Thrum 1916:90, cited in Sterling and Summers 1978:219)

8.1.1.1 Previous Archaeological Investigation of Kawa'ewa'e Heiau

McAllister (1933) documented Kawa'ewa'e Heiau as Site 354. McAllister described the site as:

Site 354. Kawaewae Heiau, Kaneohe side of the ridge which divides the district [Ko'olaupoko] and Kailua.

This is one of the five heiaus said by John Bell to have been erected by Olopana. Ahukini, Pahukini, Holomakani, and Puumakani are the other four. It is on top of a small knoll and consists of one large inclosure 120 by 253 feet [35.5 x 77 m] with a small terrace on the north side which follows the contours of the land. As the structure was used as a cattle pen for many years any traces of heiau features have been obliterated, and it is not known where the opening to the heiau is situated. The walls are massive, averaging about 5 feet in width and from 4 feet to 7 feet in height according to the contours of the land. The inside corners of the wall are rounded; the outside corners appear more angular.

Thrum [1906:46] notes that this heiau was 'built by Olopana about the opening of the 12th century.' It is mentioned as one of the heiaus constructed by the menehunes. Lonoaohi is said to have officiated as high priest.

This is the heiau to which Olopana had Kamapuaa brought for sacrifice. Through treachery Kamapuaa is said to have killed Olopana and escaped. (McAllister 1933:179)

McAllister (1933) drew a map of Kawa'ewa'e Heiau (Figure 28). The site map is described in detail:

Kawaewae heiau, Kaneohe, Site 354: a, ground plan; b, perspective plan: 1, line of stones for length of 14 feet, indicating wall, possibly the original opening or an old cattle entrance; 2, the last 20 feet on east end of south wall has appearance of a double wall, the smaller, outer additional wall rising in an incline to height of regular wall, together the walls are 10 feet wide; 3, best-preserved portion of wall, outer side rising 7 feet high from an embankment of rocks which form a 14-foot arc, here wall is 6 feet wide, 5 feet high inside; 4, large inclosure approximately 120 by 253 feet, east 170 feet form the top of a knoll, the remaining 83 feet on a slope to west; 5, wall here resembles wall 3, rising 5 feet high from an embankment of rocks which forms a 7-foot arc, wall here is 5 feet wide, 3 feet high inside; 6, walls on the slope 3 to 4 feet in height inside, a few feet higher outside, average width 5 feet, in bad state of preservation as more easily disturbed; 7, wall 170 feet long between inclosure and terrace, 4 feet wide, 4 feet high inside, 6 feet high outside, with step 2 feet high and 3 to 4 feet

wide running length of terrace; 8. small open terrace 51 feet wide following contours of the land, which has indications of having been stone-faced for several feet down the natural slope. Roman numerals indicate cross sections. (McAllister 1933:180)

Mr. Charlie Ogata was a long-time caretaker of Kawa'ewa'e Heiau; this is discussed in a Cultural Impact Assessment written for the property (Hammatt 2008). In 1992, he mapped, diagramed, and created a model replica of Kawa'ewa'e Heiau (Figure 29 and Figure 30) (Hammatt 2008:65-66).

From the 1990s to early 2000, the site was maintained by local community stewards. Photographs taken in 1995 by historian and photographer Jan Becket provide an unobstructed view from the site towards Kāne'ohe Bay and show stone-paved surface features within the ground surface of the heiau (documented during the current study as Feature 4A) (Figure 31 and Figure 32).

In 2009, during an archaeological inventory survey conducted by McCurdy and Hammatt (2009) an additional feature of the site identified by Mr. Charlie Ogata was documented outside the walls of the heiau (Hammatt 2008). The feature was designated "Feature A" (Figure 38 and Figure 36). McCurdy and Hammatt (2009:84) described the new feature of SIHP # -354 as the following:

A local informant, Mr. Charlie Ogata, member of the Queen Emma Hawaiian Civic Club, mentioned a stone structure outside of the *heiau* at the base of the northern corner. The structure has been designated Feature A. This is [a] rectangular, stacked stone structure that measures approximately 3 m north/south and 6 m east/west. There are three separate sections within the structure. The largest, designated section 1, is oval in shape and makes up the eastern side measuring approximately 4 m by 2.5 m. Section 2, more round than oval, is approximately 1.5 m by 2.5 m and makes up the western portion of the feature. Section 3 is a smaller C shaped portion along the southern boundary of Section 1 measuring approximately 1 m by 0.4 m. The function of this structure is indeterminate.

Another concern of Mr. Ogata was the presence of *lua* (burial pits) in the vicinity of Kawa'ewa'e Heiau as it is a *luakini* type heiau, commissioned by the king and associated with human and animal sacrifice (Malo 1898:159).

During the McCurdy and Hammatt (2009) study, no *lua* pits were observed in the vicinity of the heiau. Additional undocumented features described by Mr. Ogata within the Hammatt (2008:63) CIA include a possible ramped entrance along the southeast exterior of the heiau wall (McAllister's Feature 2), four stone terraces within the sloped heiau interior (McAllister's Feature 6), possible steps leading to the heiau adjacent to the northwest exterior, and a stone alignment to the north of the heiau.

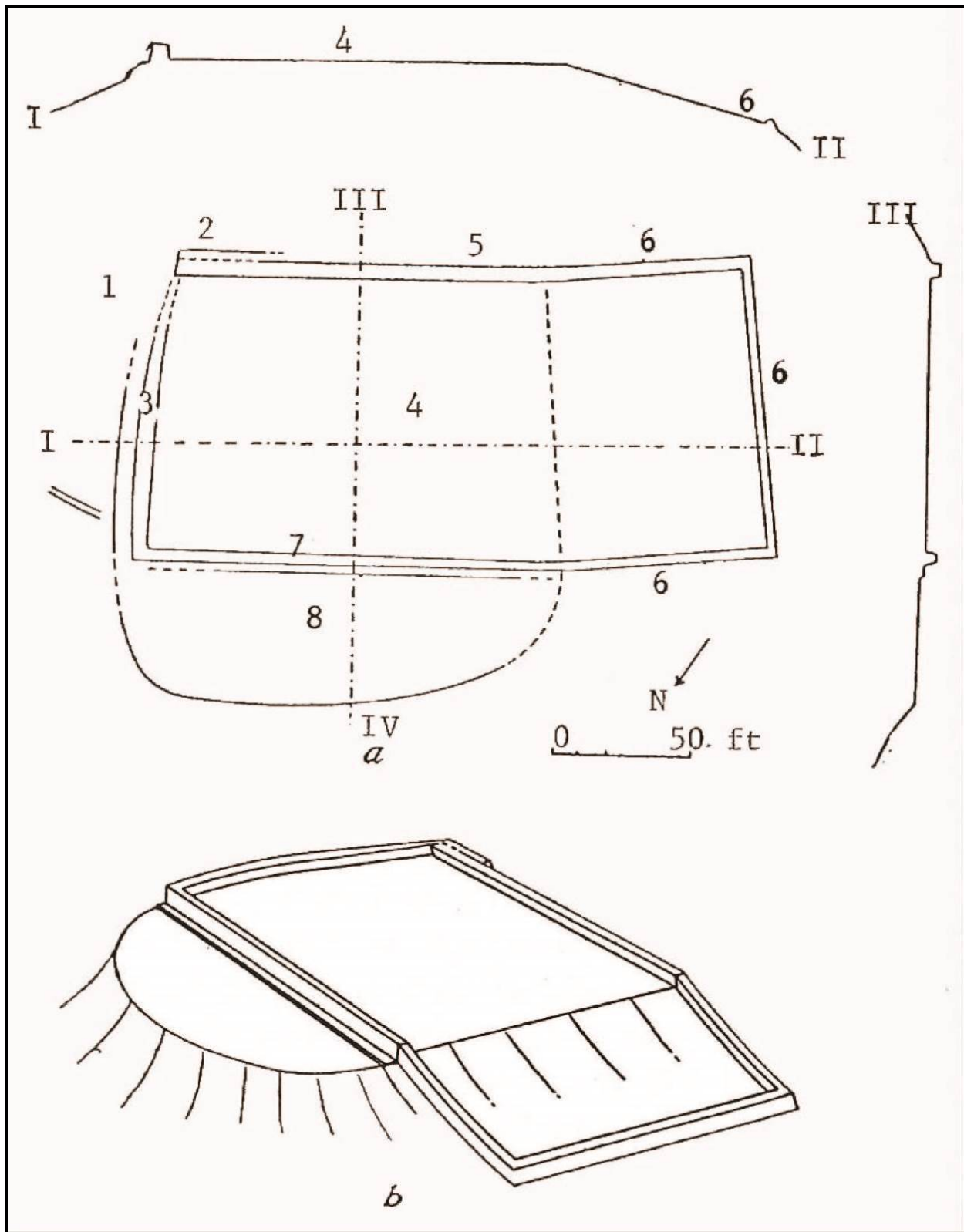


Figure 28. McAllister (1933) map of Kawa'ewa'e Heiau (SIHP # -354) (McAllister 1933:180)

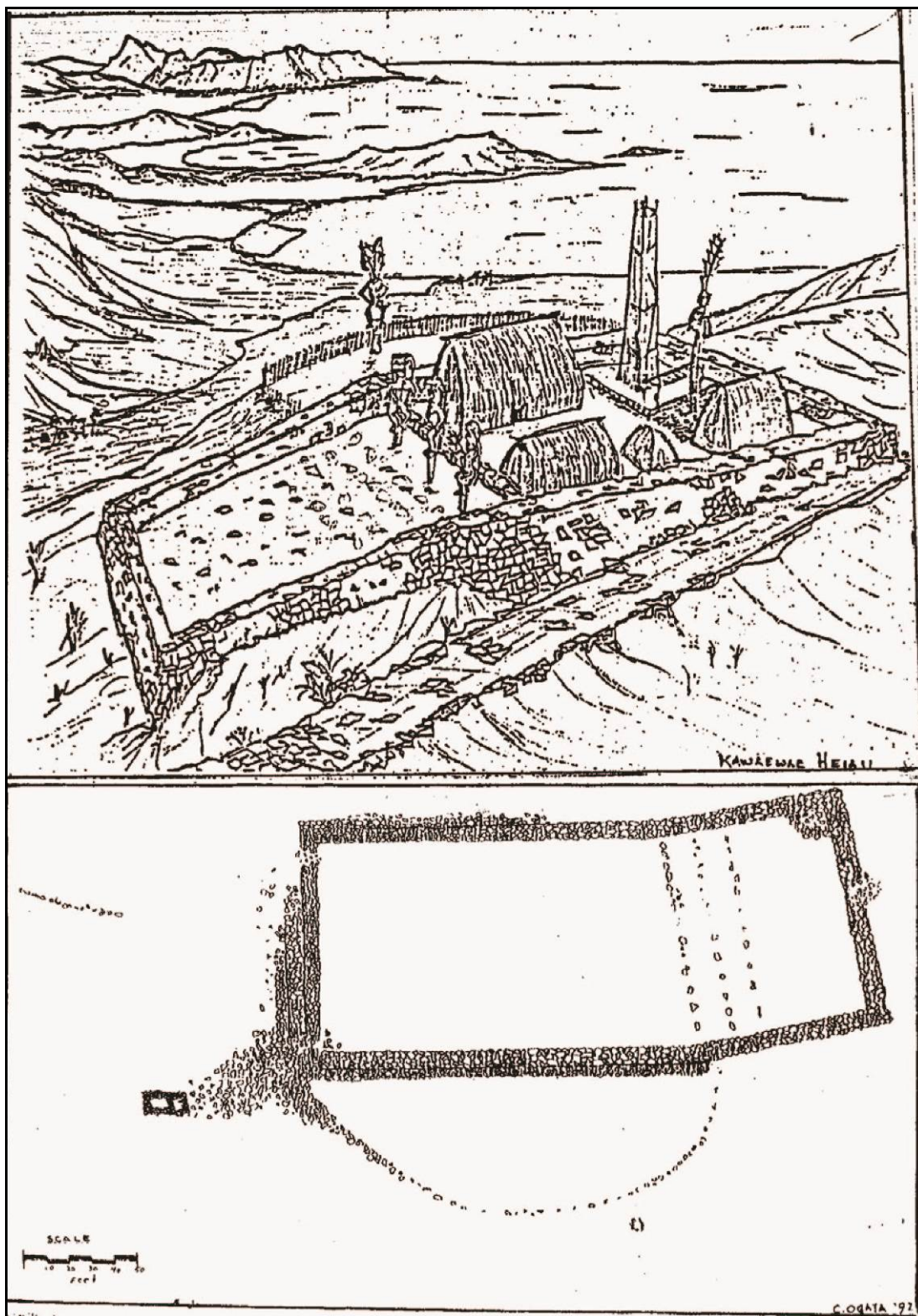


Figure 29. Sketches of Kawa'ewa'e Heiau (SIHP # -354) drawn by Mr. Charlie Ogata (1992) (Hammatt 2008:66)



Figure 30. Model Replica of Kawa'ewa'e Heiau (SIHP # -354) created by Mr. Charlie Ogata; view to east (Hammatt 2008:65)



Figure 31. Photo of Kawa'ewa'e Heiau, view to north (Jan Becket 1995, permission of author)



Figure 32. Photo of Kawa'ewa'e Heiau showing the interior surface of the heiau, view to east (Jan Becket 1995, permission of author)

8.1.1.2 Current Archaeological Investigation

The current investigation found the heiau to be largely covered with low lying vegetation and vines. The current study assessed and ground-truthed Mr. Ogata's (1992) map of the heiau and found it to be quite accurate. The map was amended to include additional features, elevations, and site details (Figure 34). The heiau walls and previously documented Feature A (small enclosure) were observed to be in good condition (Figure 33 through Figure 38). Several additional features were documented and added to the plan map, including terraces (possible ramp) along the southeast exterior of the heiau (Feature 2A & 2B), a low L-shaped stone terrace within the northeast interior of the heiau (Feature 4A), rock-lined, circular pits in the southwest interior corner of the heiau (Features 6A1-6A4), a large stone-faced terrace running parallel to the west exterior heiau wall (Feature 6B), a stepped wall with circular planting alignments on the northwest exterior of the heiau wall (Feature 7A), and several earthen pits located outside the heiau walls on the north side of the site (Features 8A-D). Feature designations are based off McAllister's (1933) site description, with Feature 2 being the southeast wall, Feature 4 being the interior of the heiau, Feature 6 being the west, downslope walls, and Feature 8 being an exterior terrace area on the north side of the heiau (refer to Figure 28).



Figure 33. Photo within Kawa'ewa'e Heiau (SIHP # -354) showing the north interior wall (Feature 7) of the heiau in good condition, view northeast

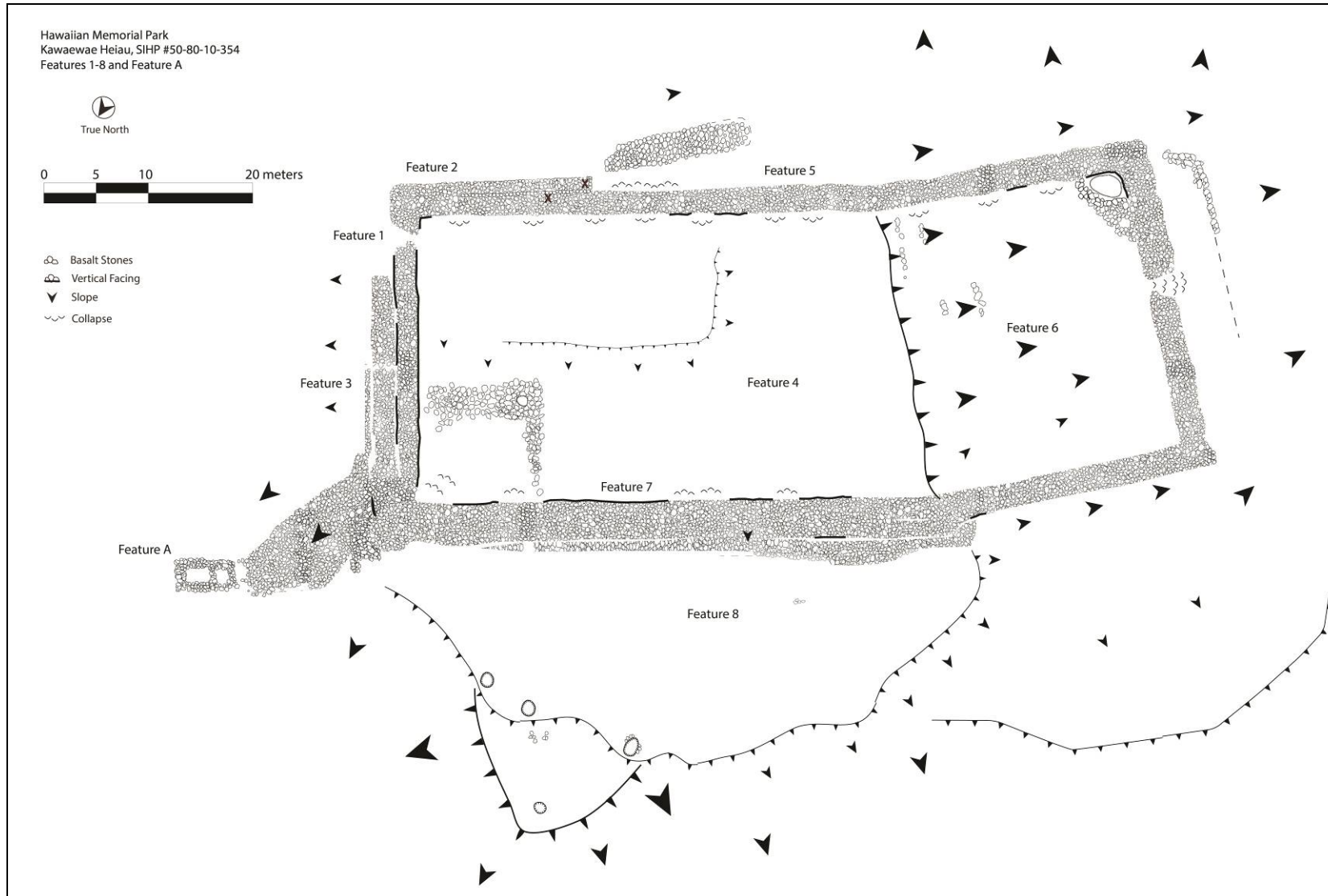


Figure 34. Revised Plan Map of Kawa'ewa'e Heiau (SIHP #50-80-10-354) showing main feature locations (adapted from Ogata 1992)

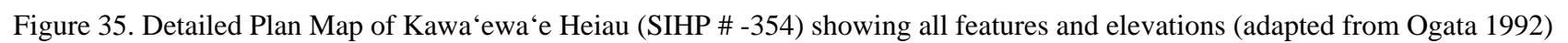




Figure 36. Photo of SIHP -354, Feature A (two-sectioned enclosure) (Section 1), view to west



Figure 37. Photo of SIHP -354, Feature A (two-sectioned enclosure) (Section 2) from inside the feature, view to northwest

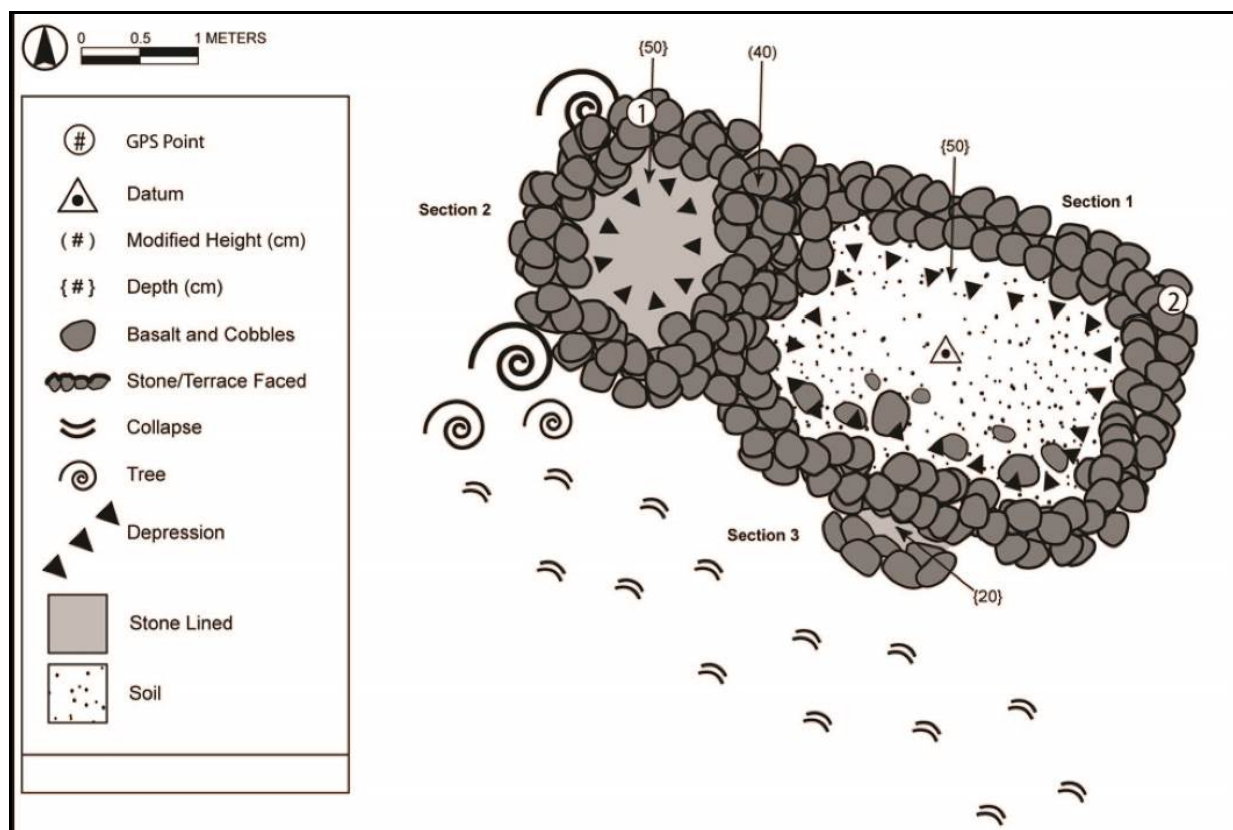


Figure 38. Plan Map of Kawa'ewa'e Heiau (SIHP # -354), Feature A (McCurdy and Hammatt 2009:85)

Feature 2A and 2B are well constructed stone terraces located on the southeast exterior of the heiau. Feature 2A is constructed with a downward incline to the east, similar to a ramp, and is built adjacent to the exterior of the heiau wall (Figure 39 and Figure 40). Feature 2A is constructed of small to medium-sized basalt boulders stacked 3-5 courses high, measuring approximately 160 cm wide N/S, and ranging in height from approximately 76 cm near the west end and 43 cm at the east end. Feature 2A was originally documented by McAllister (1933:180) as “the last 20 feet on [the] east end of [the] south wall has [the] appearance of a double wall, the smaller, outer additional wall rising in an incline to height of regular wall, together the walls are 10 feet wide”. This also matches the account provided by Mr. Ogata recorded within the Hammatt (2008:63) CIA which describes a possible ramped entrance along the southeast exterior of the heiau wall.

Feature 2B is a large terrace that is not continuous with Feature 2A, rather it is approximately 1.5 m to the southwest. Feature 2B consists of small boulders and cobbles piled 3-4 courses in height, measuring between 1.5-2 m in width N/S by approximately 10 m long E/W, and ranging from approximately 20-60 cm tall. The length of Feature 2B is only approximated due to the very dense surrounding vegetation. Feature 2B was photographed without as thick of vegetation during the Hammatt (2008:69) study (see Figure 42).

Feature 4A is an L-shaped, low stone terrace within the northeast interior of Kawa‘ewa‘e Heiau (Figure 43 and Figure 44). The terrace measures approximately 12 m N/S by 12 m E/W by 42 cm tall and stretches from the east wall of the heiau to the north wall. The function of the feature is likely for ceremonial activities. A 75 cm diameter pit, approximately 34 cm deep, is situated within the west corner of the stone-paved terrace surface. The pit may be a refuse feature, fire pit, or have another unknown function. This terrace is the same feature photographed by Jan Becket in 1995 (refer to Figure 32).

Feature 6A includes several stone-lined circular pits within the southwest interior corner of the heiau (Features 6A1-6A4) (Figure 45 and Figure 46). Feature 6A1 is a large, stone-lined pit measuring approximately 120 cm in diameter and ranging from 25-45 cm in depth, situated adjacent to the intersection of the well-constructed and nicely faced, south and west walls of the heiau. Feature 6A1 is discussed by Mr. Ogata in Hammatt (2008: 63, 68) as a lua pit, for disposal of temple offerings. Adjacent to Feature 6A1 and the west wall of the heiau is a stone pavement with several circular, stone-lined features resembling filled pukas (holes) (Features 6A2-6A4). Feature 6A2 is approximately 25 cm in diameter and 30 cm deep. Feature 6A3 is approximately 15 cm in diameter and 22 cm deep. Feature 6A4 is approximately 1 m in diameter and 15 cm deep. The pits may have been used to support carved images.

Feature 6B is a large stone-faced terrace that runs parallel to the exterior of the west heiau wall (Figure 47 and Figure 48). The terrace measures approximately 20 m long N/S by 3 m wide E/W and ranges from approximately 108 cm tall on the south end to 20 cm tall on the north end. The surface of the terrace is relatively flat and covered in thick laua‘e fern.

Feature 7A is a stepped, stone wall on the exterior of the northwest side of the heiau (Figure 49). The step is shown on the McAllister (1933) plan map (refer to Figure 28). The stepped wall is not well defined. However, on the northwest exterior wall (Feature 7A) the step is in relatively good condition and is approximately 60 cm in height, abutting the adjacent northwest wall (Feature 7) which is 160 cm tall. The stepped-wall on the northwest exterior contains a semi-

circular construction containing several circular alignments which appear to be potential planting circles (Figure 50). This area likely corresponds with the account provided by Mr. Ogata, recorded within the Hammatt (2008:63) CIA, which describes possible steps leading to the heiau adjacent to the northwest exterior.

Features 8A-D include four earthen pits located just north of the heiau (Figure 51 through Figure 54). The earthen pits range from 1-1.65 m in diameter and 40-65 cm deep. Similar earthen pits, referred to as lua, are found near heiau throughout Hawai'i and are thought to have been used for disposal of temple offerings (Buck 1957, Shimizu 1980).

In reference to Mr. Ogata's feature observations (Hammatt 2008:63), only sparse stones were observed on the sloped heiau interior (Feature 6), rather than four defined stone terraces, and no stone alignment was found just north of the heiau.

Kawa'ewa'e Heiau, SIHP #50-80-10-354, was placed on the State and National Registers of Historic Places (NRHP) in 1972 (Reference #72000427) (Watts 1971) (Appendix A and B). Using State and National Register significance criteria, the site was previously recommended significant under criterion d. However, the site likely qualifies for all State (a-e) and National (a-d) criteria. Kawa'ewa'e Heiau is maintained by local caretaker groups. A 100-foot buffer was previously recommended for the site (McCurdy and Hammatt 2009).



Figure 39. Photo showing the exterior of Kawa'ewa'e Heiau, SIHP # -354, Feature 2 (heiau wall, in background) and Feature 2A (ramped wall terrace, in foreground), view to northwest (panorama)



Figure 40. Photo showing SIHP # -354, Feature 2 (exterior heiau wall, on left) and Feature 2A (ramped terrace, in center), view to north



Figure 41. Photo showing Feature 2B (terrace), view to west



Figure 42. Photo from Hammatt (2008:69) showing Feature 2B (terrace), view to northeast



Figure 43. Photo within SIHP # -354, showing Feature 4A (low stone terrace, in foreground) and the east interior wall of the heiau (Feature 3) (in background), view to east



Figure 44. Photo within SIHP # -354, showing Feature 4A (low stone terrace) and a circular pit constructed within the feature (at photo scale), view to southeast



Figure 45. Photo showing SIHP # -354, Feature 6A1 (circular alignment), view to south



Figure 46. Photos showing SIHP -354, Feature 6A2-A4 (stone paving containing circular alignments), view to northwest (left photo: notice two circular alignments, Features 6A2 [center of photo] and 6A3 [center left]; right photo: shows one large circular alignment, Feature 6A4)



Figure 47. Photo showing SIHP # -354, Feature 6B (terrace), view to northeast (notice the west wall of Kawa'ewa'e Heiau in background)



Figure 48. Photo showing SIHP # -354, Feature 6B (terrace), view to north



Figure 49. Photo showing SIHP # -354, Feature 7A (stepped heiau wall), view to south



Figure 50. Photo showing SIHP # -354, Feature 7A (circular alignments [center and lower left foreground]), view to east



Figure 51. Photo of SIHP # -354, Feature 8A (earthen pit), view to southwest



Figure 52. Photo showing SIHP # -354, Feature 8B (earthen pit), view to south



Figure 53. Photo showing SIHP # -354, Feature 8C (earthen pit), view to east



Figure 54. Photo showing SIHP # -354, Feature 8D (earthen pit), view to north

8.1.2 SIHP #50-80-10-4683, Historic Charcoal Kiln

FORMAL TYPE:	Historic Pit Feature
FUNCTION:	Charcoal Kiln
TIME PERIOD:	Historic
# OF FEATURES:	1 Feature
SITE DIMENSIONS:	5 m N/S by 5 m E/W
CONDITION:	Fair
UTM:	N 2366457, E 626022/ 21°23'45.4"N, -157°47'3.3"W (center)

SIHP #50-80-10-4683 was described by Szabian et al. (1989) as:

Located on a fairly level area this site is comprised of two features: Feature A is an apparent excavation, rectangular in shape measuring 3.6 m by 2.5 m and approximately 0.7 m deep. Feature B is a series of terraces of undetermined extent. (Szabian et al. 1989:11)

McCurdy and Hammatt (2009:45-48) added the following description to SIHP #50-80-10-4683:

The area shown on the Szabian field map was devoid of anything resembling the previous description. However during the subsequent survey work a rectangular excavation similar to the description of Feature A was observed approximately 80 m (2,062 ft) to the north. The rectangular pit measuring 3.5 m by 2.5 m and 1.5 m deep, resembles a historic charcoal kiln. East of the rectangular pit is [a] concentrated area of large stones and boulders similar to the description for Feature B. Random partial alignments among them may suggest man-made terracing but are most likely natural.

SIHP #50-80-10-4683 is believed to be a historic site as charcoal production was a widespread industry in Windward O'ahu during the later part of the 19th and early part of the 20th century. Remnant charcoal kilns have been extensively documented in a number of archaeological investigations conducted in Kāne'ohe and He'eia. For a thorough discussion of these types of features the reader is referred to Meeker (1995), Dockall (et al. 2003), and Allen ([et al.] 1987).

The following text from Meeker (1995:98-99) describes the construction and firing techniques of earth-covered pit kilns from developing countries and highlights the similarities between Feature A and documented non-industrial charcoal kilns:

The earth-covered pit kiln is another traditional method of charcoal making still practiced in the developing countries. Booth (1983:50) describes it as of the “equivalent of a mound but below ground level.” In size, it could range from an excavated hole of about 1 or 2 m³ to a hillside pit measuring 4 m in diameter. Dug into the slope, the side and rear walls of the pit are formed by vertical cuts in the natural earth. Sometimes the walls are reinforced by a brick or stone lining. There may be an air vent or flue cut into the rear wall. Emrich (1985:24) further notes that “after loading, the pit is covered with a layer of leaves normally 20 cm thick and on top with a layer of soil of the same thickness.”

SIHP #50-80-10-4683 is located in a relatively level area currently utilized by authorized paintball enthusiasts. Makeshift wooden barricades have been constructed; the area is littered with extended air cartridges and colorful splatter patterns on the surrounding vegetation.

McCurdy and Hammatt (2009) recommended preservation of the site within the proposed cultural preserve area and significance under criterion d.

The current investigation re-located SIHP # -4683 and found the site to be quite similar as previously described, except rather than the site being described as in “poor” condition, it was assessed as being in “fair” condition (Figure 55). The plan map for Feature A (historic charcoal kiln) was amended to include slopes, elevations, and level areas (Figure 56).

This study re-evaluated the hillside terraces (Feature B) noted by Szabian et al. (1989) and determined to be “likely natural” by McCurdy and Hammatt (2009). The terraces were found to be traditional remnant features that extend from the SIHP # -7079 (traditional grinding stone) site area. Therefore, it was determined to expand the site boundary of SIHP # -7079 to subsume the hillside terrace remnants. Subsequently, SIHP # -4683 is determined to consist only of a historic kiln (Feature A).



Figure 55. Photo of SIHP # -4683, Feature A (pit feature), view to northeast

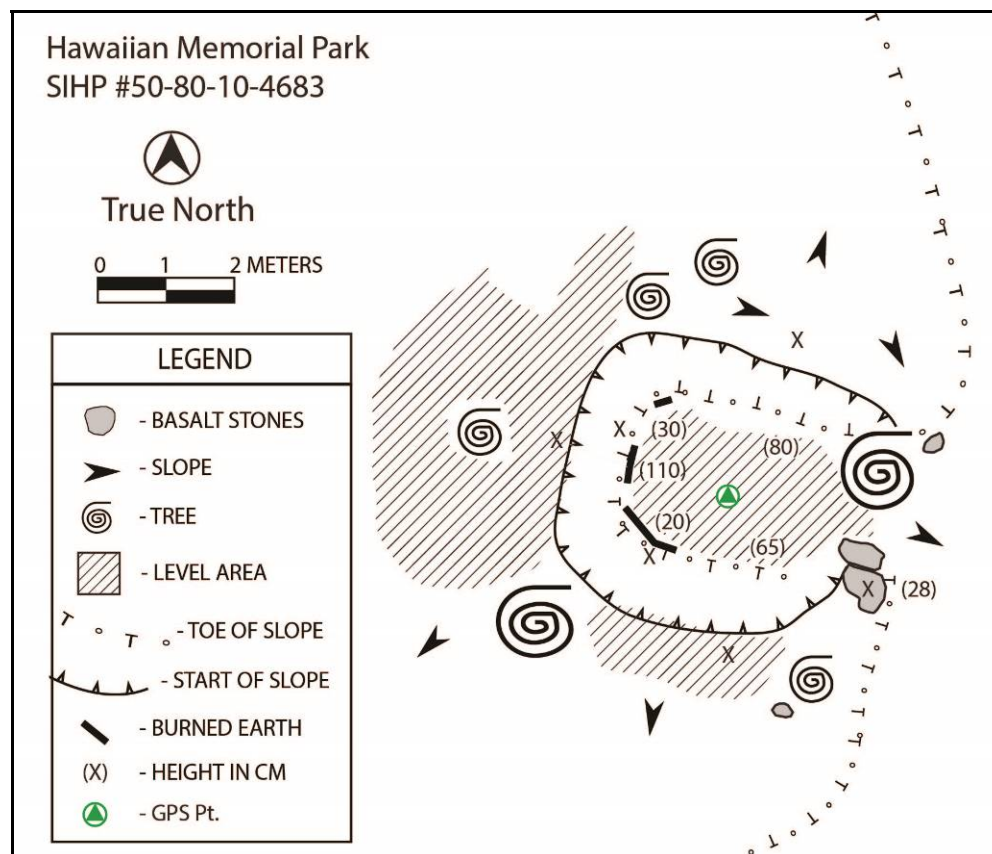


Figure 56. Revised Plan Map of SIHP # -4683 (historic charcoal kiln) (adapted from McCurdy and Hammatt 2009:46)