

- Stratum VI (65-90 cmbd) 10 YR 3/2 (very dark greyish brown) silty clay, with mottles of 7.5 YR 5/8 (strong brown) and 10 YR 6/6 (brownish yellow) clay; weak, fine to medium, crumb structure; moist, friable consistency; slightly plastic; terrigenous, on-site; smooth, clear lower boundary; contains decomposing basalt and fine to medium charcoal pieces; likely naturally accumulated sediment and soils from the surrounding site area
- Stratum VII (89-119 cmbd, BOE) 7.5 YR 3/4 (dark brown) silty clay; weak, medium, crumb structure; moist, friable consistency; plastic; terrigenous, on-site; lower boundary not observed; contained charcoal flecking, likely naturally accumulated sediment from the surrounding site area

8.1.11.3 Exploratory Excavation

A small Exploratory Excavation was dug adjacent to the north side of the Feature C stone wall. The excavation was approximately 50 cm x 50 cm and was excavated to approximately 73 cmbd (TU 1 datum) (Figure 125). Sediments from the exploratory excavation were not screened or collected. The purpose of the excavation was to explore a square hole observed within the Feature C stone wall. The excavation found a second square hole in direct alignment, approximately 30 cm below the first. The holes are designated Feature F. The holes were found to be approximately 16 cm x 18 cm x 23 cm deep and 16 cm x 14 cm x 35 cm deep respectively, with thick tree roots found growing through the upper hole and a vertical shaft apparently connecting the two holes. It is likely the two holes and vertical shaft represent the chimney of the kiln. A large Java Plum tree grows from the top of Feature C where the likely top opening of the chimney would be. Figure 126 and Figure 127 show all excavations adjacent to Feature C.



Figure 125. Photo of Exploratory Excavation showing Feature F (poss. chimney), view southeast



Figure 126. Photo showing final extent of excavations for **SIHP # -8241**, Feature C, view to east

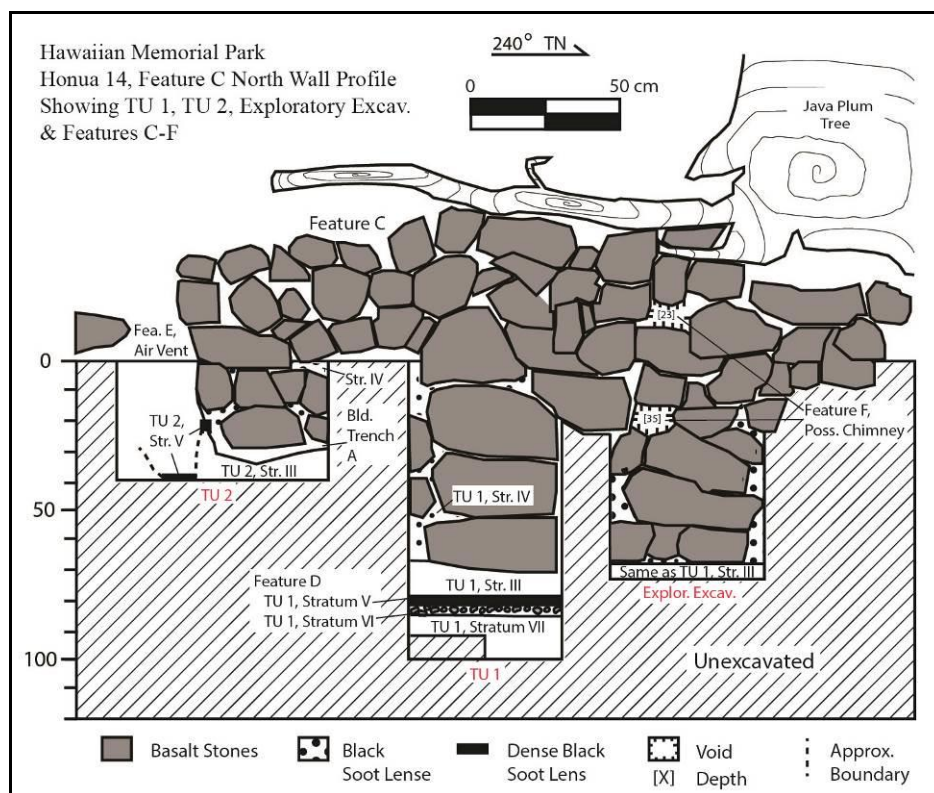


Figure 127. Profile of the north wall of **SIHP # -8241**, Feature C, showing TU 1, TU 2 & Exploratory Excavation stratigraphy

8.2 Historic Properties Not Within the Cultural Preserve

This section details the two previously documented sites (-4680 and -4681) and 11 newly documented sites (SIHP # -8228 to 8230, -8232 to -8239 [Honua 1-3, 5-12]) found outside the CP. The two previously documented sites include:

- SIHP # -4680, a historic terrace, and
- SIHP # -4681, a traditional habitation complex.

During the current investigation both SIHP # -4680 (historic terrace) and -4681 (traditional habitation complex) were expanded to include several additional terrace features. SIHP -4681 was found to be an impressive habitation site in good condition.

Newly documented sites not located within the cultural preserve include:

- SIHP # -8228 to -8229 (Honua 1-2), historic dairy roads,
- SIHP # -8230 (Honua 3), an historic ‘auwai,
- SIHP # -8232 (Honua 5), ‘auwai with associated terraces,
- SIHP # -8233 (Honua 6), SIHP # -8234 (Honua 7), and SIHP # -8237 (Honua 10), terrace remnants,
- SIHP # -8235 (Honua 8) and SIHP # -8238 (Honua 11), possible habitation sites,
- SIHP # -8236 (Honua 9), a historic water diversion terrace, and
- SIHP # -8239 (Honua 12), an earthen pit.

Descriptions of all the above listed sites are presented within this section.

8.2.1 SIHP #50-80-10-4680, Historic Water Retention Terrace

FORMAL TYPE:	Historic Terrace
FUNCTION:	Water Control/ Water Retention
TIME PERIOD:	Historic
# OF FEATURES:	2 Features (A and B) (A1: west portion of terrace, A2: east portion of terrace; B: small terrace)
SITE DIMENSIONS:	6 m N/S x 8 m E/S
CONDITION:	Fair
UTM:	N 2366412, E 625835/ 21°23'44.0"N, -157°47'9.8"W (center point)

SIHP #50-80-10-4680, a historic water retention terrace, has been recorded during two previous archaeological investigations (Szabian et al. 1989 and McCurdy and Hammatt 2009) as well as during the current study.

Szabian et al. (1989:11) described the site as “a rock concentration densely covered with Christmas-berry approximately 5 m long and tumbling approximately 6 m downslope.”

McCurdy and Hammatt (2009:42) added the following description:

It consists of a rock concentration forming a crude terraced structure. The crude terrace retains a large amount of soil runoff that appears to have buried a portion of the site. The terrace forms the top of the hill and is adjacent to a water-cut ditch that drains into the larger drainage at the base of the hill.

SIHP # -4680 is constructed of angular basalt cobbles stacked against a steeply sloping hill. The terrace wall is stacked 5 levels high (maximum height 125 cm) with 20 cm diameter cobbles. A crude alignment of boulders (55 cm diameter) extends east approximately 2 m from the southeast corner. The southeast end is the best preserved with a poor facing exposed.

The plotted location for SIHP # -4680, as shown in the McCurdy and Hammatt (2009) overall site maps, did not correspond with the actual identified location of the site. Rather, the site was found approximately 37 m (121 ft.) directly north. The identified site was found to be similar to that described by McCurdy and Hammatt (2009:42), however, additional details were recorded.

The current investigation found that SIHP # -4680 contains two separate features (A-B) (Figure 128 and Figure 129). Feature A is a historic terrace, approximately 6 m long NW/SE, 4.5 m wide NE/SW, and approximately 115 cm tall, constructed of angular basalt cobbles and

boulders stacked along the top edge of a steeply sloping hillside. The site extends across a steep sided, soil-lined drainage ditch, indicating the purpose of the site was for water control or water retention. The west portion of the feature (Feature A1) is roughly stacked approximately 5 courses high and is in fair condition. A 2-3 course remnant portion of the feature (Feature A2) is observable in the east bank of the ditch and remnants of the foundation of the terrace are observable within the base of the ditch.

Feature B is a small terrace remnant made of basalt boulders and cobbles, measuring approximately 1.5 m long E/W by 40 cm wide N/S and 35 cm tall. Feature B is located approximately 2 m northeast, downslope, of Feature A, within the base of the ditch. Surrounding vegetation includes strawberry guava, octopus tree, Christmas Berry, laua'e fern, and ti.

The ditch continues to the northeast where it becomes very steep and empties into a larger main drainage ditch. Within the main drainage ditch is a wood and metal sluice/drain box situated to divert and measure water flow (indicated by an attached black box with wires). At this drain box, three drainage ditches intersect: 1.) ditch that runs through SIHP # -4680; 2.) separate steeply sided ditch running roughly N/S (appears to drain from SIHP # -4681); and 3.) a narrow informal drainage on the east bank (appears to drain from SIHP # -8231 [Honua 4]). The large drainage basin has extremely steep sides, roughly 25 feet high on the east bank and 10 feet high on the west bank. The west bank and SIHP # -4680 are separated by a wide leveled area and the base of the hillside on which the site is constructed. The main drainage ditch flows northwest to a large concrete and basalt boulder drainage basin located at the end of Lipalu Street, adjacent to a residential area outside the current project area.



Figure 128. Photo Showing -4680 Feature A1 in back right, Feature A2 in back left, and Feature B in foreground; view to west

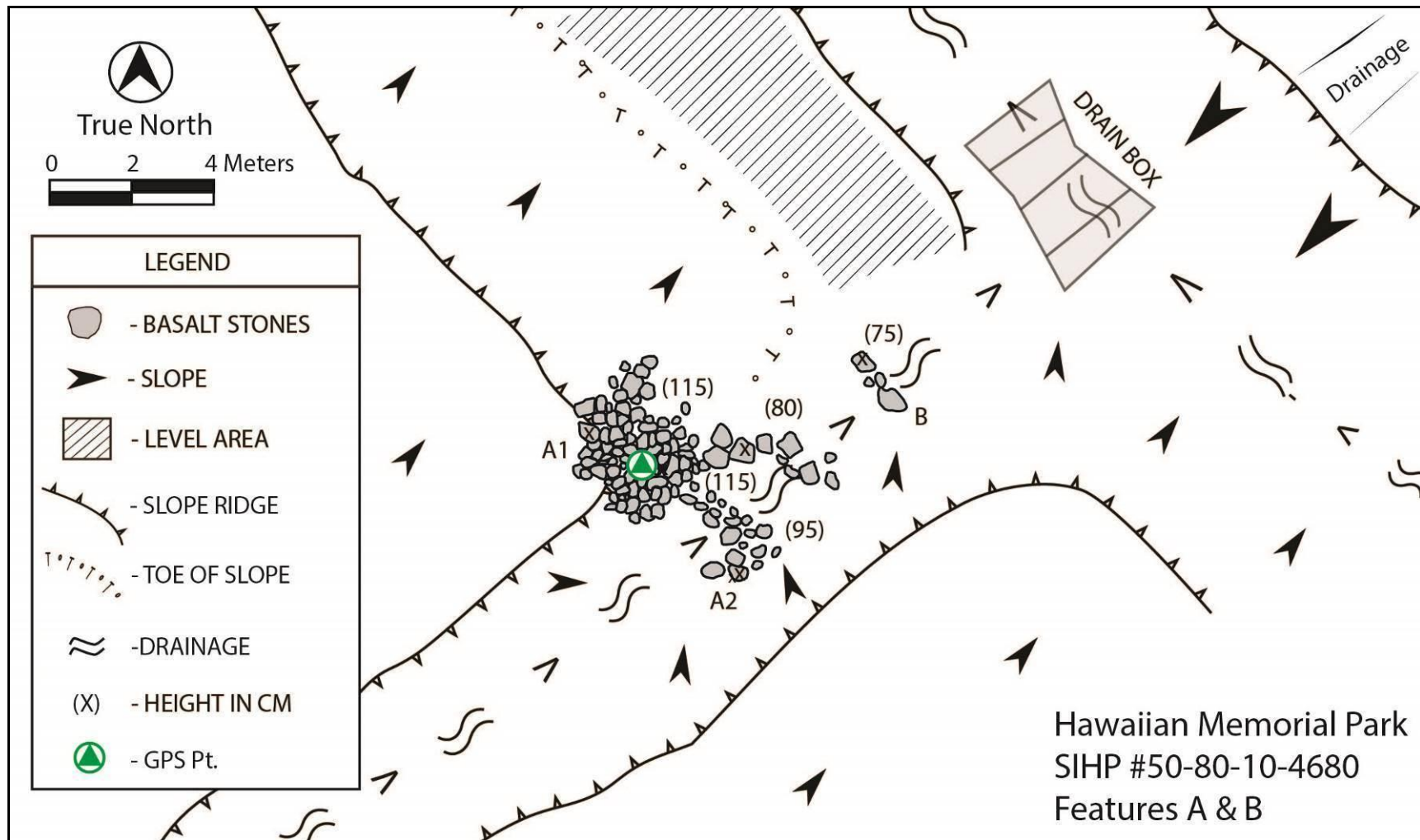


Figure 129. Revised Plan Map of SIHP #50-80-10-4680 (historic water retention terrace) (adapted from McCurdy and Hammatt 2009:43)

8.2.2 SIHP #50-80-10-4681, Traditional Habitation Complex

FORMAL TYPE:	Traditional Habitation Complex
FUNCTION:	Habitation, Agriculture, and Ceremonial Activity
TIME PERIOD:	Likely Pre-Contact to Early Post-Contact
# OF FEATURES:	8 Features (A-H); (A: c-shape structures; B1: circular alignment, B2 & B3: terraces; C1 & C2: terraces; D: terrace; E: c-shape structure; F1: significant boulders (“guardian stones”), F2 & F3: terraced areas potentially associated with a Hale o Papa; G1 & G2: terraces; H1 & H2: terraces)
SITE DIMENSIONS:	Approximately 42 m N/S by 42 m E/W
CONDITION:	Good to Fair
UTM:	N 2366306, E 625954/ 21°23’40.5”N, -157°47’5.7”W (center point)

SIHP #50-80-10-4681, a traditional habitation complex, has been recorded during two previous archaeological investigations (Szabian et al. 1989 and McCurdy and Hammatt 2009) as well as during the current study.

Szabian et al (1989:11) described the site as:

Located in the Lipalu Street drainage area this site is comprised of at least 3 features: Feature A is a depression 3.0 m in diameter and 0.3 m deep. Feature B is a level terraced area approximately 6.0 x 5.0 m with large boulders forming the facing. Feature C is a series of possible terraces up slope of Feature B of indeterminable extent.

McCurdy and Hammatt (2009:87) added the following description:

SIHP #50-80-10-4681 is located approximately 15m (50 feet) southwest of the current petition area. It is a probable pre-Contact habitation site consisting of several C-shaped structures, a terrace wall and a circular rock feature, five features in all. During consultation (Hammatt 2008:55), informants suggested that SIHP #50-80-10-4681 may be interpreted as a *hale ‘o papa* and indicated the presence of two possible guardian stones. The site is situated on the north-facing slope with vegetation consisting of dense canopy, Ti leaf and *laua‘e* fern. Although sufficient data was observed to qualify SIHP #50-80-10-4681 as a site, the vegetation, primarily *hau*, in the area was too dense to definitively establish the site boundaries.

Feature A is a probable c-shaped habitation structure consisting primarily of stacked basalt cobbles. Feature A has experienced some collapse and at one point may have represented two separate rooms sharing a common wall. Feature A measures 7 meters E/W by 5 meters N/S; the south wall is 1 meter wide, the west wall is 35 cm and the east wall is 60 cm.

Feature B is comprised of a ring of 5 large cobbles with a slight opening in the SE end. The ring of stones and soil in the middle of the feature suggests a possible hearth function. Feature B measures 1.5 m in diameter. Downslope are three to four possible terraced walls located NE of Feature A (i.e. Features C and D).

Feature C is a terrace wall consisting of basalt cobbles which measure approximately 35 cm in diameter. The terrace wall is 12.3 m E/W by 1.1 m wide. Some constructed portions have collapsed and the height varies from 30-70 cm.

Feature D is a terrace wall constructed of basalt boulders which measure approximately 50 cm in diameter. The terrace wall is 2-4 courses high but collapsed in several places. The terrace appears to be semi-circular. Feature D is located just downslope from Feature C.

Feature E is a c-shaped feature located about 16 m west of feature C. Feature E measures approximately 5 m N/S and 3 m E/W with a maximum wall height of approximately 50 cm.

No artifacts or midden were observed at SIHP #50-80-10-4681, however the possible hearth (Feature B) and the C-shaped structure (Feature E) suggest a temporary habitation with associated agriculture.

The current investigation relocated the five previously recorded features (A-E) and also found an additional three features (F-H). The previously drawn plan map for the site was found to have several inconsistencies and due to the addition of multiple additional features, a new plan map was drawn (Figure 130). Although the McCurdy and Hammatt (2009) study mentioned the presence of identified guardian stones and a potential Hale o Papa within the site, they were not designated as features during their study. The current investigation mapped and documented the guardian stones (Feature F1) and two associated terraced areas (Feature F2 and F3) as an identified ceremonial activity area. In addition, a complex of two terrace systems, Feature G1-G3 and Features H1-H2, were documented.

In general, the relocated features (A-E) were observed as being in similar condition and description as previously recorded except for several discrepancies. The interpretation of a separation wall within Feature A did not appear to be substantiated. The plan map for the site indicated Features C and D were connected, however, they were found to be separated. The plan map for Feature E showed the opening on the west side, however, it is actually on the north side.

This study found SIHP #50-80-10-4681 to include 8 features (A-H). Feature A is a c-shape structure in fair condition, approximately 5 m N/S by 6 m E/W, constructed of angular basalt cobbles and built into the north-tending hillside (Figure 131). The c-shape is largely constructed by a thick wall, measuring approximately 2.4 m thick along the south side of the feature and a smaller wall, approximately 1.3 m thick, on the west side. The interior, south wall of the structure is approximately 90 cm tall and level with the hillside. Stone paving extends from the top of the south wall onto the relatively level abutting hillside for approximately 1 m. A circular alignment of stones exists within the interior west wall of the structure. The interior ground surface is very level and creates a living space approximately 3 m N/S by 4 m E/W, abutting a large boulder on the north side (Figure 132). To the west side of Feature A is a moderately sloped hillside with an alignment of natural basalt boulders running NE/SW, creating the natural terrace face on which the c-shape is situated. Feature A is downslope (to the NE) of Feature F (ceremonial boulders and terraces), just west of Feature B (circular alignment and terraces), and upslope of Features C-E and G-H (C-D, G-H: terraces, E: c-shape).

Feature B was found to consist of three sub-features (1-3). Feature B1 is an approximately 1.35 m diameter, 20 cm tall ring of basalt cobbles previously documented as a potential hearth by McCurdy and Hammatt (2009) (Figure 133). The interpretation of Feature B1 as a hearth is plausible. Feature B2 is an approximately 3.5 m N/S by 2.5 m E/W low (20-40 cm tall), irregularly-shaped terrace lined with basalt boulders and cobbles situated just east of Feature B1. Feature B3 is a terrace remnant, approximately 3 m long NE/SW and a maximum of 30 cm tall, composed of basalt cobbles to small boulders and built on the naturally sloping hillside. Feature B3 extends between Feature A (c-shape) and B1.

Feature C consists of two separate terraces (1-2) (Figure 134). Feature C1 is an approximately 7.5 m N/S by 13 m long E/W terrace with vertical stacking on the east portion and a potential intentional break for a pathway in the west portion. The east portion of Feature C1 appears to have at one time been a well-stacked, faced stone terrace. However, due to collapse only small portions of the vertical stacking remain, stacked 2-3 courses and 70 cm in height. Feature C2 is a low, stone-lined terrace located just downslope from Feature C1, measuring approximately 1.2 m N/S by 4 m E/W. Feature C2 contains a large amount of basalt pebbles or ‘ili‘ili scattered on the surface and just to the west. Extremely thick hau covers the east portions of Features C1 and C2. Ti trees are growing adjacent to the west side of Feature C1.

Feature D consists of an L-shaped terrace that runs for approximately 1.5 m N/S by 10 m E/W then extends southeast for 2.7 m running upslope under thick hau bush. Feature D is constructed of basalt boulders and angular basalt cobbles and is situated at the base of a hillside, just downslope from terrace features B and C (refer to Figure 134). Feature D ranges from 30-55 cm tall. Hau bushes are growing over the feature.

Feature E is a c-shape structure, approximately 2.5 N/S by 3.5 E/W, in good condition (Figure 135). The south, southeast, and southwest sides are built into the hillside and stacked 2-3 courses high, ranging from 16-43 cm tall. The west side is made of a large flat-faced boulder as well as stones stacked 1-2 courses high. The north side is open and level with the rest of the interior of the structure. The interior creates an approximately 2 m N/S by 2.2 m E/W living space. To the north of Feature E is a natural terrace and the topography slopes downward to the north. Thick hau bushes exist to the north and east, laua‘e fern is growing to the south and west.

Feature F is the highest feature in elevation of the SIHP # -4681 complex and was described in a previous CIA (Hammatt 2008:55-57) as containing pōhaku kia'i or stone guardians and the location of a Hale o Papa. Feature F was documented as containing three sub-features (1-3) and covering an area approximately 13 N/S by 11 m E/W. Feature F1 is an approximately 10.5 m long, largely natural hillside terrace containing basalt boulders with angular basalt cobbles stacked on and between the boulders at the north and south ends of the terrace (Figure 136). Two large basalt boulders, referred to as guardian stones, are located at the north end of Feature F1. Feature F2 is a circular, leveled terrace area measuring approximately 2.5 N/S by 4 m E/W (Figure 137). The north side of Feature F2 is stacked two courses tall, approximately 33 cm high, and is level with the interior of the feature. The interior measures approximately 1.5 m N/S by 2.5 m E/W. Feature F2 is the highest point in elevation of Feature F and is therefore likely a significant area of the potential ceremonial site. Feature F3 is just below Feature F2 and consists of a level area, roughly 3m N/S by 3 m E/W, atop the naturally terraced hillside. Feature F3 likely corresponds with the reported ceremonial activity area associated with the potential Hale o Papa. Thick hau bush is prevalent to the south, southeast, and southwest and a patch of ti trees are located approximately 4 m to the west of Feature F.

Feature G includes three newly documented terraces (1-3) found underneath extremely thick hau bush to the east of Features C and D, encompassing an area approximately 6 m N/S by 17.5 m E/W. Hau was removed from the north side of Feature G1 for documentation. Feature G1 is a 2-4 course vertically-stacked stone terrace face, approximately 83 cm tall (Figure 138). The exposed portion of the terrace extended 6.5 m E/W then continued with a single alignment of stone approximately 4 m NW/SE underneath extremely thick hau, where it was observed to then be two courses high (Feature G2) and veer NE/SW for approximately 3 m under nearly impenetrable hau bush. The Feature G1 terrace face was level with the hillside and dense basalt cobbles extended from the face of the terrace up the hillside for at least 2 m under thick hau, appearing that it is a massively constructed feature. Feature G2 is approximately 2 m N/S by 3 m E/W and 70 cm tall (Figure 139). Feature G3 is a stone-lined, level terrace area measuring approximately 2 m N/S by 2 m E/W and 60 cm tall, located just south of Feature G1 within extremely thick hau (Figure 140). The hau bushes made precise mapping and documentation of the features extremely difficult and it is possible additional sub-features may exist in this area.

Feature H includes two newly documented terraces (1-2), found underneath thick hau bush in an area approximately 4 m N/S by 5 m E/W. Feature H is located just north of Feature G and is the northern-most feature of SIHP # -4681. Feature H1 is a stone-lined, semi-circular terrace at the base of the hillside (Figure 141). It is constructed of a single course of basalt boulders and cobbles, ranging from approximately 26-60 cm tall. Feature H2 is a stone-lined terrace built on top of Feature H1 and measuring approximately 3.3 m long E/W and ranging from 18-40 cm tall (Figure 142).

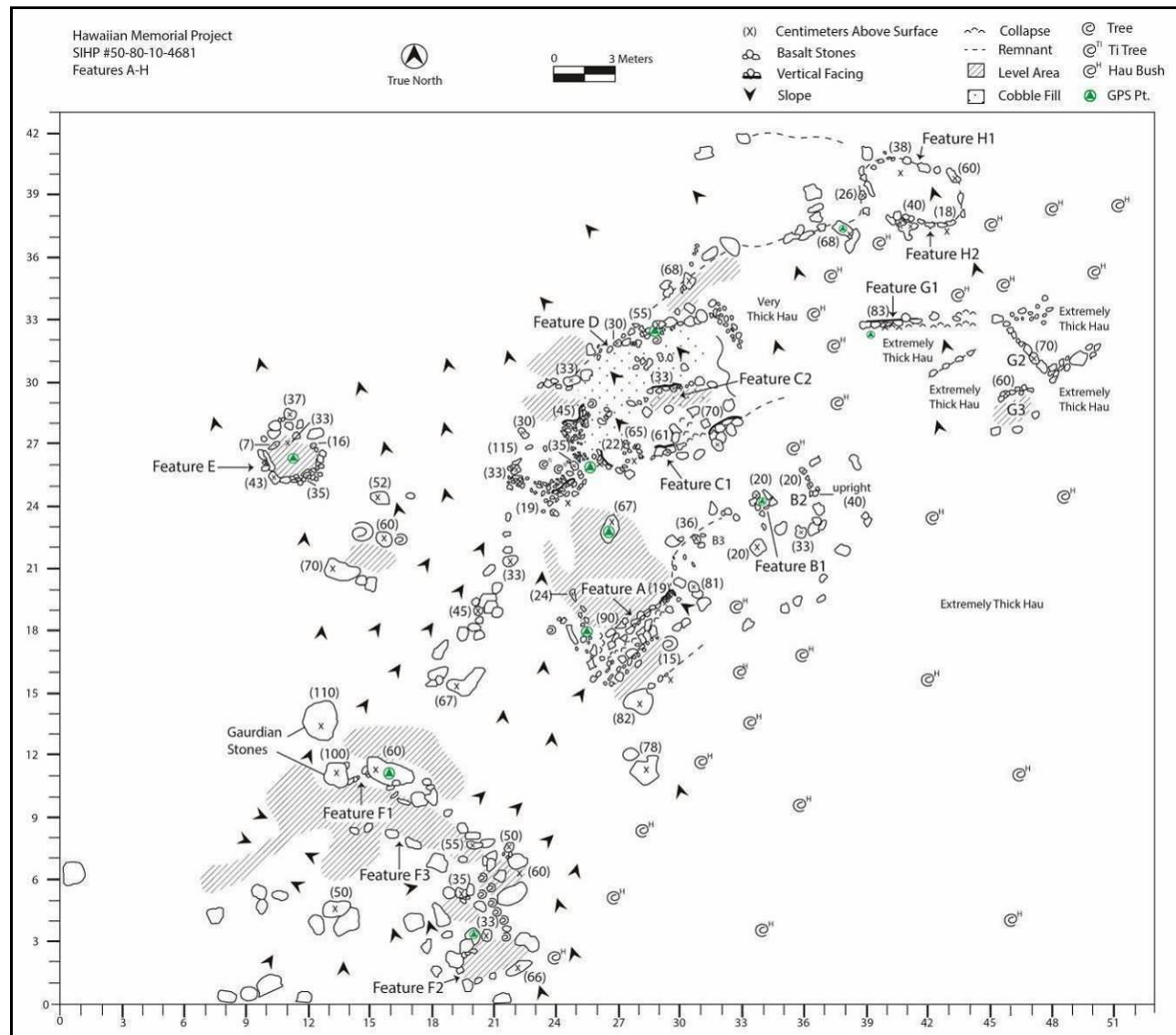


Figure 130. Plan Map showing SIHP # -4681 (traditional habitation complex)



Figure 131. Photo showing SIHP # -4681, Feature A (c-shape), view to south



Figure 132. Photo from above SIHP # -4681, Feature A (c-shape) showing the interior of Feature A and looking towards Feature B (terraces), view to northeast



Figure 133. Photo showing SIHP # -4681, Feature B1 (circular alignment), view to east



Figure 134. Photo showing SIHP # -4681, Feature C1 (background), Feature C2 (left back), and Feature D (foreground), view to south



Figure 135. Photo showing SIHP # -4681, Feature E (c-shape), view to south



Figure 136. Photo showing SIHP # -4681, Feature F1 (terrace of potential Hale o Papa) with guardian stones on left, view to southwest



Figure 137. Photo showing SIHP # -4681, Feature F2 (terrace of potential Hale o Papa), view to south



Figure 138. Photo showing SIHP # -4681, Feature G1 (terrace face), view to south



Figure 139. Photo showing SIHP # -4681, Feature G2 (L-shape terrace, west arm), view to south



Figure 140. Photo showing SIHP # -4681, Feature G3 (terrace), view to southeast



Figure 141. Photo showing SIHP # -4681, Feature H1 (semi-circular terrace), view to south



Figure 142. Photo showing SIHP # -4681, Feature H2 (terrace), view to southeast

8.2.3 SIHP #50-80-10-8228 (Honua 1), Historic Dairy Roads

FORMAL TYPE:	Historic Dirt Roadways
FUNCTION:	Dairy Transportation/ Hauling Operations
TIME PERIOD:	Historic-Era
# OF FEATURES:	3 Features (Roads 1-3)
SITE DIMENSIONS:	Approximately 80 m N/S by 75 m E/W
CONDITION:	Poor
UTM:	N 2366321, E 625606/ 21°23'41.1"N, -157°47'17.8"W (center point)

SIHP #50-80-10-8228 includes three historic dairy roads (Roads 1-3) that extend throughout the west half of the project area (refer to Figure 24). The roads are earthen, relatively level, and damaged by natural tree growth and soil erosion. Vegetation on the roadways include Christmas berry and octopus trees.

Road 1 and Road 2 were found extending from the west project area boundary, parallel to each other. Road 1 extends for approximately 30 m (98 ft.) and has an interior dimension of 2.15 m wide E/W with a 1.3 m thick, 80 cm tall berm on the inland (mauka) or east side and a 1.4 m wide, 35 cm tall berm on the west side (Figure 143). A steep slope descends westward towards Road 2.

Road 2 is divided into Road 2A and Road 2B. Road 2A extends from the west side of the project area and continues for a total of approximately 73 m (240 ft.). The interior of Roads 2A and 2B are approximately 2.4-2.75 m (7.8-9 ft) wide (Figure 144). In general, along the east side of the roads is a cut hillside, exposing basalt bedrock and red silty clay earth ranging from approximately 1.5 m to nearly 2 m (5-6.5 ft.) tall in some areas. On the west side of the roads, the hillside slopes steeply downhill. Modern black rubber tubing was observed on the west surface of Road 2A. Road 2 splits, with one side traveling northeast (Road 2A) to meet with Road 3 and the other side (Road 2B, Figure 145) running eastward to intersect with Road 1 and then continue for approximately 18 m (59 ft.) in distance, first to the east and then northward to the north edge of the current project area where it terminates. Road 2A is in poor condition while Road 2B is in fair to poor condition.

Road 3 extends from Road 2A and runs through SIHP # -8230 (Honua 3), a historic 'auwai. Road 3 is approximately 23 m (75 ft.) long, 2 m wide, and is in poor condition (Figure 146). Road 3 runs along the east side of SIHP # -8230 and then crosses over a section of SIHP # -8230, after which it becomes unobservable.



Figure 143. Photo Showing SIHP # -8228, Historic Dairy Road 1, view to north

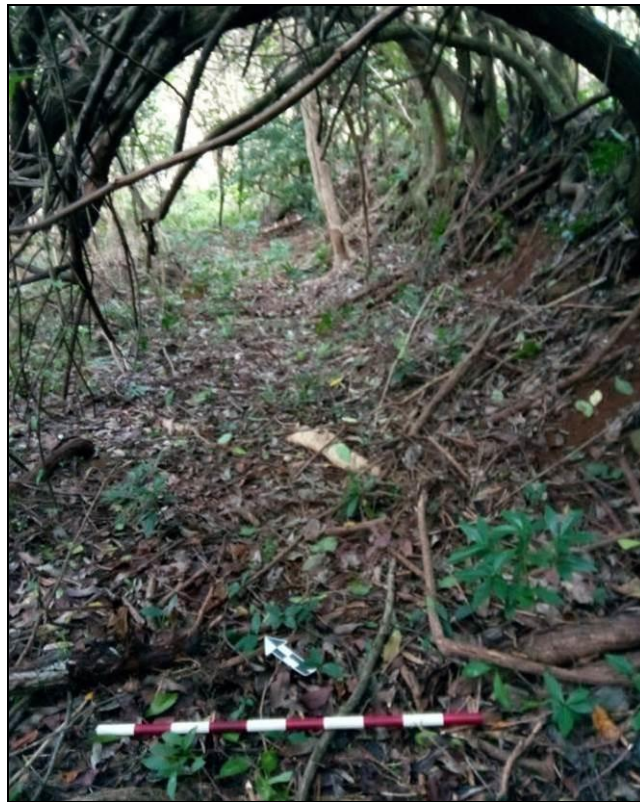


Figure 144. Photo showing SIHP # -8228, Historic Dairy Road 2A, view to north



Figure 145. Photo showing SIHP # -8228, Historic Dairy Road 2B, view to east



Figure 146. Photo showing SIHP # -8228, Historic Dairy Road 3 from near SIHP # -8230 (historic 'auwai), view to northeast

8.2.4 SIHP #50-80-10-8229 (Honua 2), Historic Road

FORMAL TYPE:	Historic Road
FUNCTION:	Transportation
TIME PERIOD:	Historic-Era
# OF FEATURES:	1 Feature
SITE DIMENSIONS:	10 m N/S x 3 m E/W
CONDITION:	Poor
UTM:	N 2366032, E 625588/ 21°23'31.7"N, -157°47'18.5"W (center point)

SIHP #50-80-10-8229 is a short segment of an old dirt roadway. The road segment is 3 m (9.8 ft.) wide and runs roughly north-south for approximately 10 m (33 ft.) (Figure 147, refer to Figure 24). The road is relatively level with a steep slope downward adjacent to the east side. The ends of the roadway have been removed, likely bulldozed, leaving only this short segment. The road is surrounded by grasses, fern, ginger, octopus trees, orchids, and medium-sized Albizia trees.

SIHP # -8229 may correspond with an old road shown on an 1876 Lyons and Alexander map as well as a 1902 Wall map (refer to Figure 11 and Figure 13). Figure 148 shows the location of SIHP # -8229 overlain onto the 1902 Wall map. The locations do not match perfectly, as would be expected due to inherent limitations of GIS and accuracy of turn-of-the-century mapping methods. The placement of the roadway as shown on the historic map, would indicate it traveled over the top of a very steep mountain peak, which seems unfeasible. There is currently a heavily eroded trail that leads over the mountain peak, however, upon investigation of the trail it showed no signs of being an old roadway. Therefore, SIHP # -8229 is the only site found resembling and potentially corresponding with the old road shown on historic maps.



Figure 147. Photo showing **SIHP # -8229** (historic road segment), view to southwest

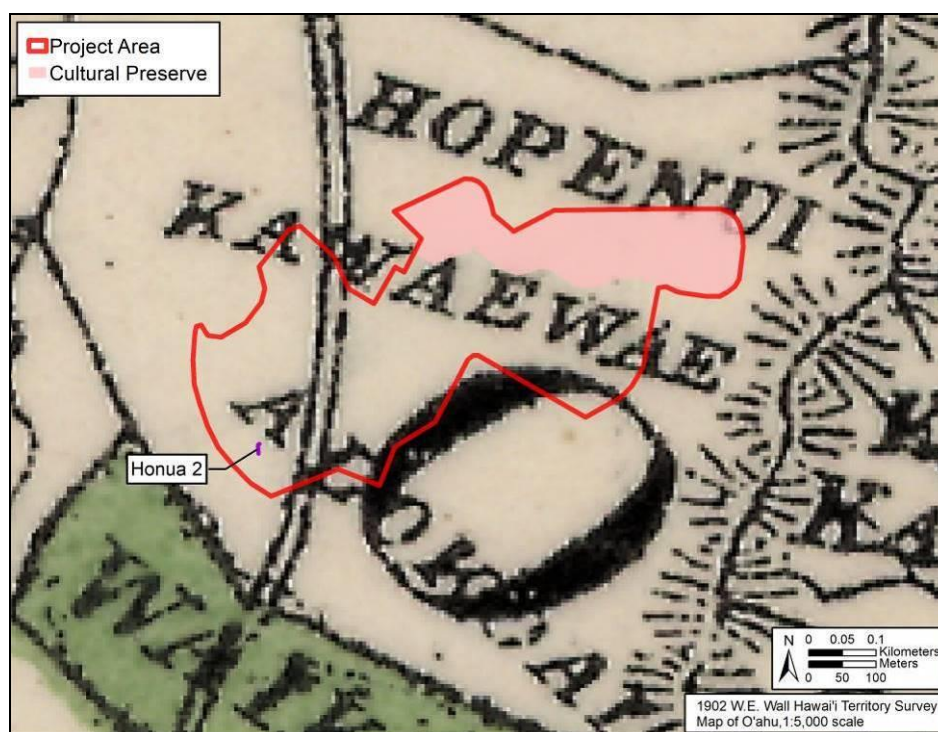


Figure 148. Close-up of a 1902 W.E. Wall map with the **SIHP # -8229** (historic road segment) location overlain

8.2.5 SIHP #50-80-10-8230 (Honua 3), Historic ‘Auwai

FORMAL TYPE:	Historic ‘Auwai
FUNCTION:	Agriculture, Water Catchment
TIME PERIOD:	Historic-Era
# OF FEATURES:	3 Features (A-C) (A: modified ‘auwai, including A1: concrete capped spring, A2: terrace, A3: soil terrace, A4: metal pipe, A5: circular depression, A6: historic road crossing; B: small terrace; C: large terrace)
SITE DIMENSIONS:	55 m N/S by 20 m E/W
CONDITION:	Good to Fair
UTM:	N 2366333, E 625588/ 21°23’41.5”N, -157°47’18.4”W (center)

SIHP # 50-80-10-8230 is a historic ‘auwai located in the northwest portion of the project area on a moderate to steeply sloping hillside. The site extends for approximately 55 m N/S by 20 m E/W (Figure 150). The southern end of the site is situated at the top of the hillside, just downslope from **SIHP # -8228 (Honua 1, Road 2A, historic dirt dairy road)**, where a narrow, 1.1 m wide, level dirt pathway leads E/W from Road 2A to **SIHP # -8230** (Figure 149). Adjacent to the pathway, a colorless glass milk bottle was collected (Acc. #1), dating to either 1937 or 1947. It is likely this site was utilized in the 1950s by the Souza Brothers Dairy as a source of water for grazing cows. The site has also been used for agricultural purposes.

The **SIHP # -8230**, Feature A ‘auwai includes multiple sub-features (Features A1-A6). Feature A1 consists of a concrete capped spring, approximately 1.25 m N/S by 1.25 m E/W, square in shape with a square concrete lid that is broken into two pieces and stands approximately 40 cm above the ground surface (Figure 151). From the top of the concrete cap to the natural spring water below is approximately 60 cm. A spool of rusty barb wire is located just upslope from the feature. The spring water of Feature A1 feed the ‘auwai system which extends downslope from it, supporting taro (*Colocasia esculenta*) saplings, ti plants, and providing an identified native damselfly (*Megalagrion* sp.) habitat. Surrounding vegetation consists mainly of octopus trees.

Downslope from the concrete cap (Feature A1) is a small, 2 m N/S by 1 m E/W by 25 cm tall, terrace (Feature A2) formed of basalt cobbles that retains the spring water, creating a small marshy area (Figure 152). Ti trees and a taro variety grow in this area. On the west side of the ‘auwai is an informal, very wet, level soil terrace (Feature A3), approximately 1.5 m long NW/SE, which also supports a taro variety. The ‘auwai continues downslope, keeping a maximum width of approximately 1 m (Figure 153). The naturally seeping stream waters within the ‘auwai have been tapped by an old, corroded metal pipe (Feature A4) (Figure 154). The

corrosion has created an orange, foamy scum in the water surrounding the metal pipe. At a naturally level area of the hillside, the ‘auwai branches southward creating a small, very wet, marshy ditch leading to a relatively circular pool of water (Feature A5) (Figure 155). This pool of water was likely a historic water source for grazing dairy cattle. Currently, orange, foamy scum from an unobserved metal pipe floats atop the pool of water. The ‘auwai continues downslope where it crosses over an old dairy road (SIHP # -8228, Road 3). At this location (Feature A6) the ground is very wet, there is a concentration of basalt cobbles on the downslope side, likely to provide support for the historic roadway (Figure 156). Several taro plants and a grove of shampoo ginger (‘auwapui, *Zingiber zerumbet*) is growing in this area. On the west side of the ‘auwai, atop the old roadway, are piles of manufactured wood, a telephone pole, and ribbed metal pipes (Figure 157). A relatively short, flat area extends past the piles of rubbish, suggesting the old roadway likely continued at one time, prior to residential development of the adjacent parcel. Near the base of the hillside, the ‘auwai widens under modern brush piles, likely dumped by nearby residential homeowners. The ‘auwai and a separate soil-lined drainage ditch converge and empty into a concrete drainage basin (Figure 158). Narrow concrete drainage ditches from surrounding hillsides also connect to the NE and NW sides of the concrete drainage basin. The drainage basin abuts a residential property.

At the southern end of the site, on top of the hillside, just east of the ‘auwai are two additional terraces of SIHP # -8230 (B-C). Feature B is a small, approximately 2 m N/S by 2 m E/W by 40 cm tall, stone-lined, square-shaped terrace with a soil-filled, level interior surface (Figure 159). An amber glass beer bottle was documented just upslope from Feature B (photographed but not collected, see Lab Analysis section). Feature C is an approximately 2.5 m N/S by 4.5 m E/W and 145 cm tall scattered basalt cobble and boulder terrace face that buttresses the hillside (Figure 160). Feature C extends from where Road 2A and the dirt pathway leading to SIHP # -8230 intersect and continues parallel with the pathway. A modern car battery was observed on the ground surface near the intersection of Road 2A and the dirt pathway.



Figure 149. Photo showing dirt pathway leading from SIHP # -8228 (Honua 1), Road 2A to SIHP # -8230 (Honua 3) (historic ‘auwai); notice the concrete cap (Feature A1) in background; view northwest

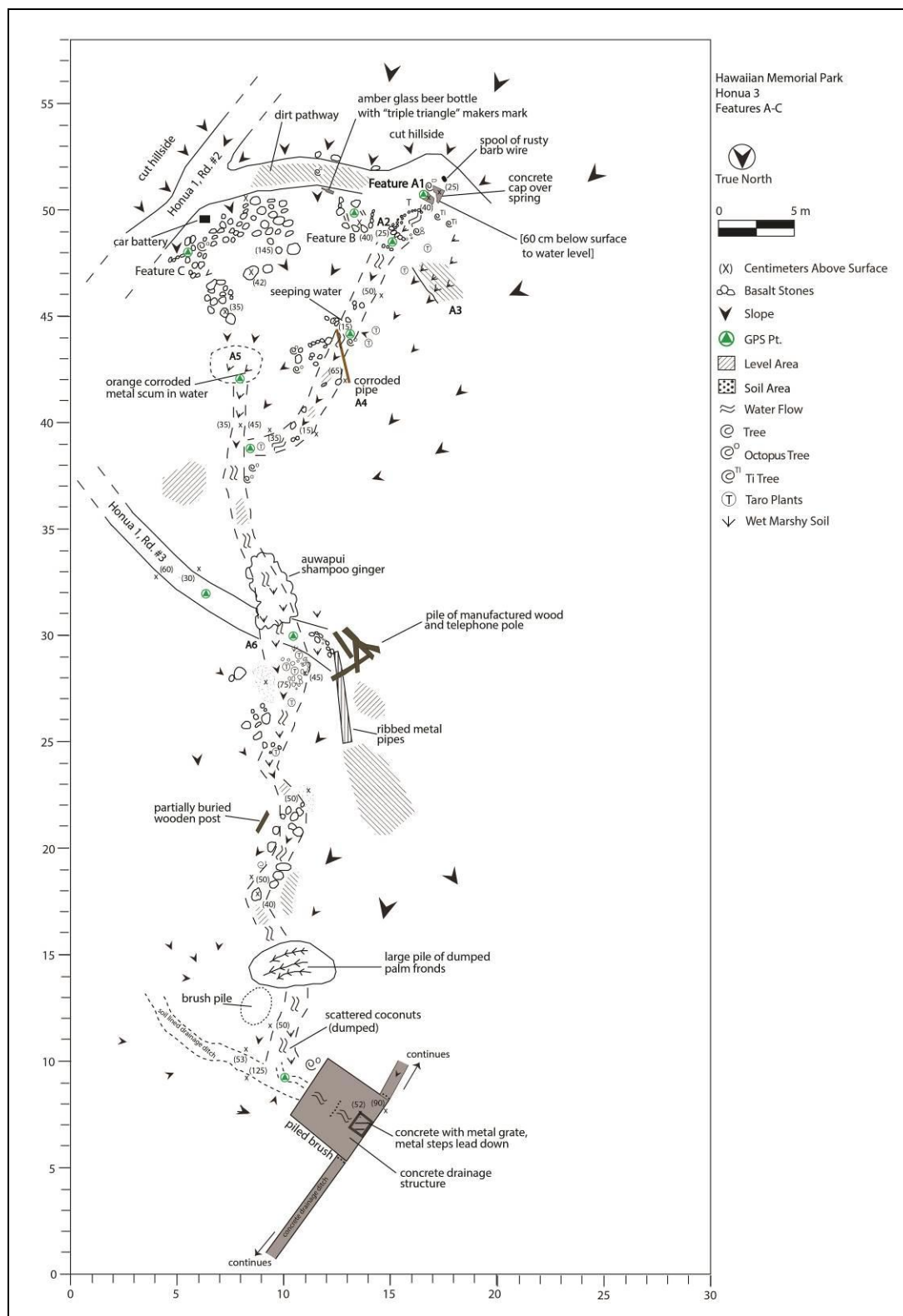


Figure 150. Plan Map of SIHP #50-80-10-8230 (historic 'auwai)



Figure 151. Photo showing SIHP # -8230, Feature A1 (concrete-capped spring), view northwest



Figure 152. Photo showing SIHP # -8230, Feature A2 (small stone-lined terrace) in foreground and Feature A3 (soil terrace) in background (left), view to north; and a close-up of a taro plant growing between the features (right)



Figure 153. Photo showing a representative portion of **SIHP # -8230**, Feature A (historic 'auwai) (left), view to southwest; and a photo of taro growing along the 'auwai (right)



Figure 154. Photo showing **SIHP # -8230**, Feature A4 (old corroded pipe), view to south



Figure 155. Photo showing SIHP # -8230, Feature A5 (possible watering hole), view to south; notice SIHP # -8230, Feature C (large stone terrace) in the background



Figure 156. Photo showing SIHP # -8230, Feature A6 (historic road crossing) where SIHP # -8228, Road 3 crosses the 'auwai, notice the shampoo ginger in background and concentration of basalt stones in foreground, view to south



Figure 157. Photo showing piles of wood and metal just west of SIHP # -8230, Feature A6 (historic road crossing), view to north



Figure 158. Photo showing a concrete drainage at north end of SIHP # -8230, view to north



Figure 159. Photo showing SIHP # -8230, Feature B (small terrace), view to west



Figure 160. Photo showing SIHP # -8230, Feature C (large historic terrace) in background, view to south

8.2.6 SIHP #50-80-10-8232 (Honua 5), Traditional Terrace Remnants

FORMAL TYPE:	Traditional Terrace Remnants
FUNCTION:	Agriculture
TIME PERIOD:	Likely Pre-Contact
# OF FEATURES:	5 Features (A: mounds; B-E: terraces)
SITE DIMENSIONS:	25 m N/S by 22 m E/W
CONDITION:	Poor/Remnant
UTM:	N 2366226, E 622390/ 21°23'38.8"N, -157°49'9.5"W (center point)

SIHP #50-80-10-8232 is a series of basalt cobble-lined terraces (Features A-E) situated on a moderate to steeply-sloped, north-tending hillside (Figure 162). The terraces are placed perpendicular to the hillside slope and are watered by natural hillside runoff and an 'auwai that runs roughly north-south along the west side of the site. Vegetation in the area includes a thick canopy of octopus trees and sparse ti trees. The condition of the features has been greatly affected by natural water erosion and rockfall.

Feature A includes roughly stacked rock piles (A1 and A2) situated along the east side of a small earthen drainage ditch or 'auwai (Figure 161). Feature A1 is approximately 70 cm N/S by 70 cm E/W by 50 cm tall and A2 is approximately 2 m N/S by 1.7 m E/W by 74 cm tall.

Feature B are two low stone terraces (Feature B1 and B2, refer to Figure 161). Feature B1 is the makai-most terrace and runs northeast/southwest. Feature B1 is in remnant condition and measures approximately 5 m N/S by 2.5 m E/W by 30 cm tall. Feature B1 connects to Feature B2. Feature B2 extends from the east side of the 'auwai and runs roughly east/west. Feature B2 is in fair condition and measures approximately 2 m N/S by 6 m E/W by 47 cm tall. Additional terraces continue upslope (Features C-E).

Feature C includes two low stone terraces (Features C1 and C2) in fair condition (Figure 163). Feature C1 is a short segment running northeast/southwest and approximately 2.7 m N/S by 1.2 m E/W by 63 cm tall. Feature C2 is an s-shaped terrace, running parallel to Feature C1 then tending roughly east/west. Feature C2 is approximately 5.5 m N/S by 6 m E/W and ranging from 30-42 cm tall.

Feature D includes three low stone terraces (Featured D1, D2 and D3). Feature D1 consists of an approximately 4 m N/S by 4 m E/W convex-shaped terrace in relatively good condition, ranging from 27-56 cm tall, and a 6 m long arm in very remnant condition running east/west and ending at a ti plant (Figure 164). The convex-shaped terrace is the best preserved and most apparent feature of the entire site. Feature D2 is a terrace remnant with scattered basalt cobbles, approximately 4.8 m N/S by 0.7 m E/W by 30 cm tall (Figure 165). Feature D3 is a short terrace

in fair condition and measures approximately 2.6 m N/S by 0.5 m E/W and approximately 45 cm tall.

Feature E includes three terrace remnants (Features E1-E3) (Figure 166). Feature E1 is a small terrace remnant, approximately 2.6 m N/S by 30 cm E/W and 30 cm tall. Feature E2 abuts the east side of the ‘auwai and is covered in thick ferns and vines. A N/S portion of Feature E2 appears to be composed mostly of natural basalt cobbles and boulders. An E/W arm of Feature E2 contains aligned basalt cobbles approximately 2.5 m in length E/W by 30 cm wide N/S and 18 cm tall. Feature E3 appears to be a natural terrace within the ‘auwai, composed of basalt cobbles and boulders in an approximate 5.5 m N/S by 0.5 m E/W alignment, approximately 33 cm tall. It is possible Feature E3 was a constructed terrace at one time, however, it is in too remnant of condition to currently be certain.



Figure 161. Photo showing SIHP # -8232, Feature A1 (mound, left foreground), Feature A2 (mound, center background), Feature B1 (terrace, left background), Feature B2 (terrace, background) and ‘auwai (center right), view to south

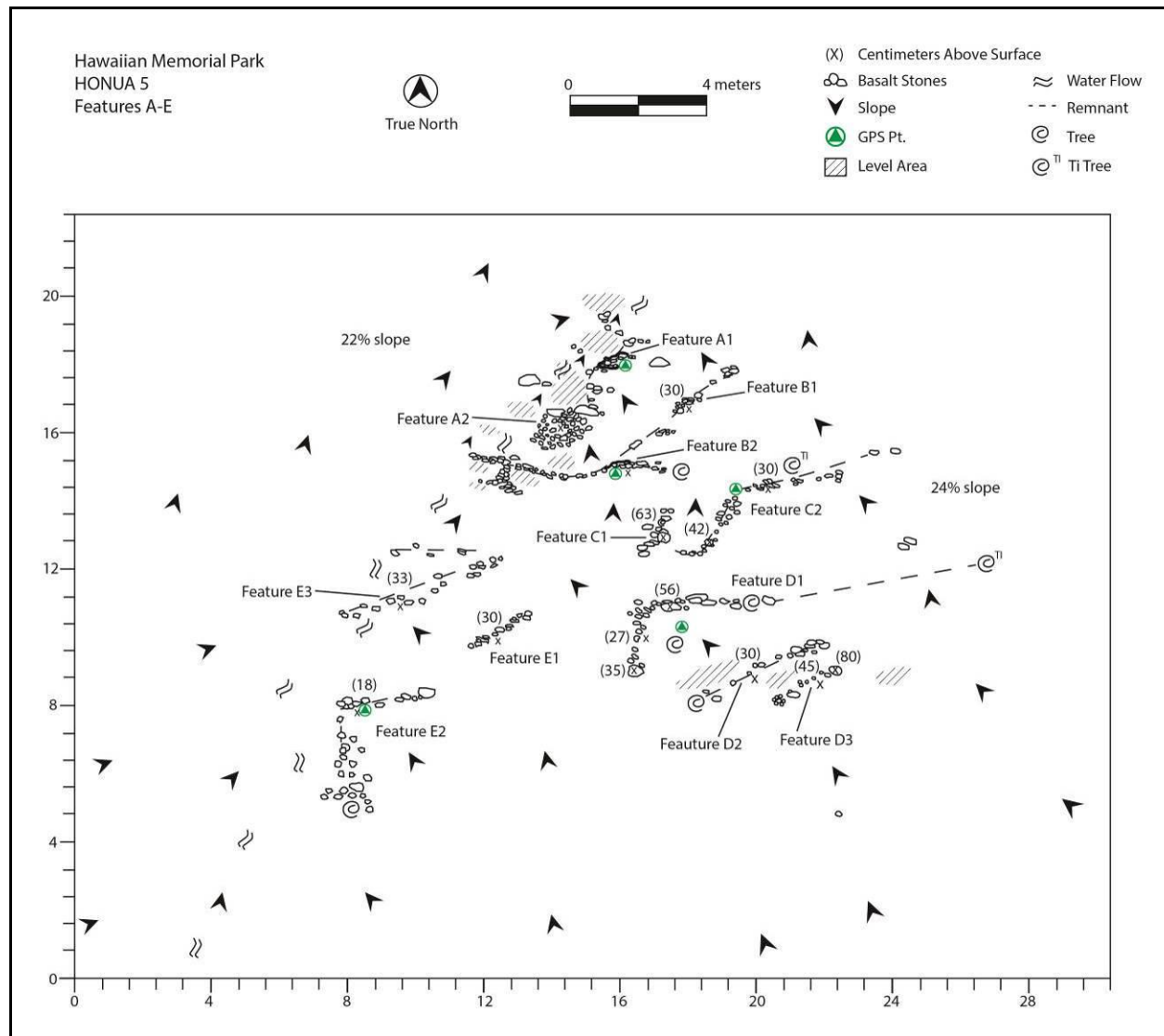


Figure 162. Plan Map of SIHP #50-80-10-8232 (traditional terrace remnants)



Figure 163. Photo showing SIHP # -8232, Feature C1 (terrace, foreground) and Feature C2 (terrace, background), view to east



Figure 164. Photo showing SIHP # -8232, Feature D1 (terrace), view to south



Figure 165. Photo showing **SIHP # -8232**, Feature D2 (terrace remnant, foreground) and Feature D3 (terrace remnant, background), view to southwest



Figure 166. Photo showing **SIHP # -8232**, Feature E1 (terrace remnant, left background), Feature E2 (terrace, right background), and Feature E3 (natural terrace, foreground), view south

8.2.7 SIHP #50-80-10-8233 (Honua 6), Traditional Terrace Remnants (6A) and Modified Outcrop (6B)

FORMAL TYPE:	Traditional Terrace Remnants and Modified Outcrop
FUNCTION:	Agriculture and Possible Habitation
TIME PERIOD:	Likely Pre-Contact to early Post-Contact
# OF FEATURES:	6 Features: Feature 6A, 5 Features (A-E: terraces; Feature C3: mound); Feature 6B, 1 Feature
SITE DIMENSIONS:	Feature 6A: 18 m N/S by 12 m E/W; Feature 6B: 4 m N/S by 4.4 m E/W
CONDITION:	Poor to Fair
UTM:	Feature 6A: N 2366284, E 625891/ 21°23'39.8"N, -157°47'7.9"W (center point); Feature 6B: N 2366317, E 625885/ 21°23'40.9"N, -157°47'8.1"W (center point)

SIHP #50-80-10-8233 includes two features areas (A-B). Feature 6A includes a series of five traditional terrace remnants (Features A-E), located on a moderately sloping, north-tending hillside (Figure 167). The terraces are placed perpendicular to the hillside slope and are watered by natural hillside runoff. The terrace system is in remnant condition and has been heavily disturbed by natural erosion and rock fall. Feature 6B includes a possible modified basalt outcrop with a level surface area. Vegetation within the site areas predominantly consist of octopus and Albizia trees.

SIHP # -8233, Feature 6A, sub-feature A is the makai-most terrace of the site. The west portion of Feature A is the most apparent portion of the feature and consists of a concentration of basalt cobbles. Feature A measures approximately 10.6 m N/S by 60 cm E/W and ranges from 22-30 cm tall (Figure 168). The east port of Feature A includes natural boulders and scattered cobbles extending downslope, with no cobbles remaining in some areas between boulders.

Feature 6A, sub-feature B is a small terrace located 2 m upslope from Feature A. Feature B consists of an alignment of concentrated basalt cobbles and small boulders and measures approximately 4.2 m N/S by 40 cm E/W and 15 cm tall (Figure 169). A dead Christmas berry tree covers a portion of the feature.

Feature 6A, sub-feature C includes two terrace segments (Features C1 and C2) and a mound (Feature C3) (Figure 170). Feature C1 is approximately 3.8 m N/S by 50 cm E/W, in fair condition, and largely constructed of basalt cobbles. The east surface of Feature C1 contains a concentration of basalt cobbles. Feature C1 and C2 are separated by a 1.5 m gap, were a possible

path may have existed at one time. Feature C2 is approximately 2 m long E/W by 40 cm wide N/S by 30 cm tall and is constructed of basalt cobbles. Just south of Feature C2 is a small stone-stacked mound (Feature C3). Feature C3 is approximately 110 cm in diameter and 33 cm tall (Figure 171). The mound is loosely constructed of angular basalt cobbles and is likely an agricultural clearing mound. A dead Christmas berry tree stump and roots are entangled within Feature C3.

Feature 6A, sub-feature D is a remnant terrace consisting of a soil berm containing infrequent concentrations of basalt cobbles (refer to Figure 170). Feature D measures approximately 5 m N/S by 35 cm E/W and 15 cm tall.

Feature 6A, sub-feature E is a terrace remnant, located at the highest elevation of **SIHP # - 8233**. The only remaining apparent portion of Feature E is located underneath the roots of a large octopus tree (see Figure 171). Feature E measures approximately 1 m N/S by 1 m E/W by 52 cm tall.

Approximately 20 m (98 ft.) downslope from Feature 6A is Feature 6B, a modified outcrop. Feature B consists of a natural basalt outcrop with attached basalt boulder terrace constructed of an alignment of cobbles and small boulders and a leveled area on the upslope surface (Figure 172 and Figure 173). The feature measures approximately 4 m N/S by 4.4 m E/W, including the leveled surface area on top. Feature 6B is located at the edge of a steep hillside and presumably would have a view of the ocean if surrounding trees were removed. This feature could have been used as a temporary habitation site. A large, flat boulder is located 6.2 m to the northwest (Figure 174).

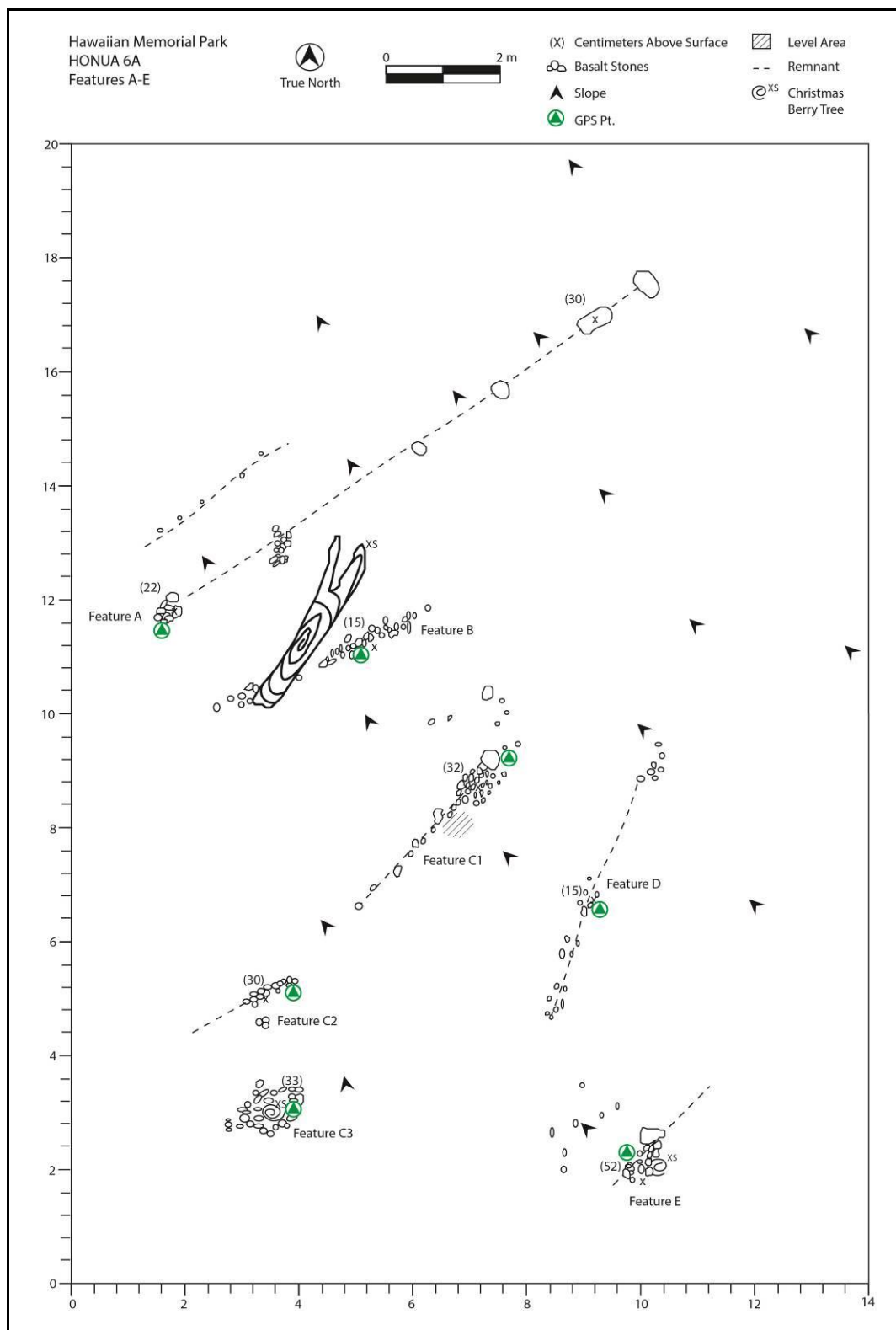


Figure 167. Plan Map of SIHP #50-80-10-8233A (traditional terrace remnants)



Figure 168. Photo showing SIHP # -8233A, Feature A (terrace, foreground and background) view to northeast



Figure 169. Photo showing SIHP # -8233A, Feature B (terrace, foreground) and Feature C1 (terrace, background), view to south



Figure 170, Photo showing **SIHP # -8233A**, Feature C1 (terrace, right foreground), Feature C2 (terrace, right background), Feature C3 (mound, background [furthest photo scale]), and Feature D (left), view to southwest



Figure 171. Photos of **SIHP # -8233A**, Feature E (on left) and Feature C3 (on right), view to southeast and south respectively

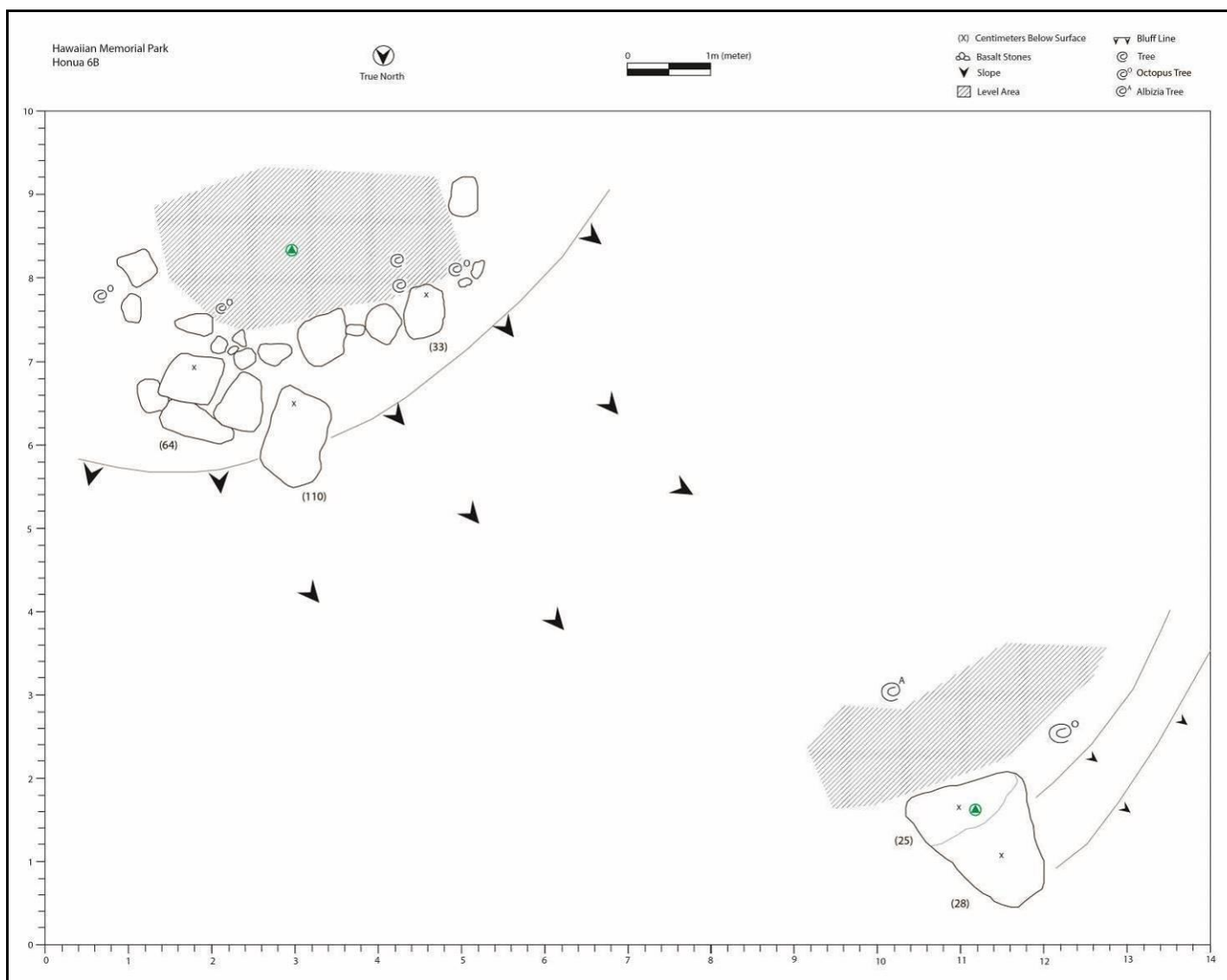


Figure 172. Plan Map of SIHP #50-80-10-8233B (modified basalt outcrop)



Figure 173. Photo showing SIHP # -8233B (modified outcrop), view to east



Figure 174. Photo showing a large, flat boulder near SIHP # -8233B, view southeast