

**Volume II (Part 3)
Appendices E (AIS Vol. III) and E-1**

**URBAN PHASE III
ARCHAEOLOGICAL
INVENTORY SURVEY
(VOL. III)**

APPENDIX

E



FINAL

ARCHAEOLOGICAL INVENTORY SURVEY
OF URBAN PHASE III PARCEL
LILI'UOKALANI TRUST LANDS
IN KEAHUOLŪ, NORTH KONA
ISLAND OF HAWAII
[TMK: (3) 7-4-008:002 (por.)]

VOLUME III:
APPENDICES
(Newly Documented Sites, Table of Lava
Excavations, Isolated Finds,
GPS Site Locations)



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TABLE OF CONTENTS

APPENDIX C 253
 APPENDIX D 569
 APPENDIX E 617
 APPENDIX F 621



VOLUME III, APPENDICES, LIST OF FIGURES

Figure C.1. GPS-based map of Site 50-10-27-29088 stone mound. 257
 Figure C.2. Site 50-10-27-29088 stone mound (view southwest). 258
 Figure C.3. GPS-based map of Site 50-10-27-29089 stone mound. 260
 Figure C.4. Site 50-10-27-29089 stone mound (view south). 261
 Figure C.5. GPS-based map of Site 50-10-27-29090 trail segments. 263
 Figure C.6. Site 50-10-27-29090, Feature A trail segment (view southwest). 265
 Figure C.7. Site 50-10-27-29090, Feature B trail segment (view southwest). 267
 Figure C.8. GPS-based map of Site 50-10-27-29091 complex. 269
 Figure C.9. Site 50-10-27-29091, Feature A trail segment (view northeast). 271
 Figure C.10. Site 50-10-27-29091, Feature B stone mound (view east). 273
 Figure C.11. GPS-based map of Site 50-10-27-29092 trail segment. 275
 Figure C.12. Site 50-10-27-29092 trail segment (view to the northeast). 276
 Figure C.13. GPS-based map of Site 50-10-27-29093 battering. 278
 Figure C.14. GPS-based map of Site 50-27-29-29094 complex. 280
 Figure C.15. Site 50-27-29-29094, Feature A C-shaped stone alignment (view west). 281
 Figure C.16. Site 50-10-27-29094, Feature B stone mound (view east). 282
 Figure C.17. GPS-based map of Site 50-10-27-29096 stone-edged depression. 285
 Figure C.18. Site 50-10-27-29096 stone-edged depression (view south). 286
 Figure C.19. GPS-based map of Site 50-10-27-29097 stone mound. 288
 Figure C.20. Site 50-10-27-29097 stone mound (view south). 289
 Figure C.21. Plan view map of Site 50-10-27-29098 petroglyphs. 291
 Figure C.22. Site 50-10-27-29098 collapsed lava blister with petroglyphs (view northwest). 292
 Figure C.23. Site 50-10-27-29098 petroglyphs (Stasack and Stasack 2012:II T-015, 4). 293
 Figure C.24. Site 50-10-27-29098 petroglyphs #1-8 (view west). 294
 Figure C.25. Site 50-10-27-29098 petroglyphs #6-8 close-up (view south). 294
 Figure C.26. Site 50-10-27-29098 natural feature resembling a foot with toes (view west). 295
 Figure C.27. GPS-based map of Site 50-10-27-29099 complex. 298
 Figure C.28. Site 50-10-27-29099, Feature A enclosure (view southwest). 300
 Figure C.29. Site 50-10-27-29099, Feature B alignment (view south). 301
 Figure C.30. Site 50-10-27-29099, Feature C C-shaped wall (view west). 302
 Figure C.31. Site 50-10-27-29099, Feature D, one (possibly two) petroglyphs (view northwest). 304
 Figure C.32. Site 50-10-27-29099, Feature E stone mound (view east). 305
 Figure C.33. GPS-based map of Site 50-10-27-29100 battering. 307
 Figure C.34. GPS-based map of Site 50-10-27-29101 stone-edged depression. 309
 Figure C.35. Site 50-10-27-29101 stone-edged depression (view south). 310
 Figure C.36. GPS-based map of Site 50-10-27-29102 stone mound. 312
 Figure C.37. Site 50-10-27-29102 stone mound (view south). 312
 Figure C.38. GPS-based map of Site 50-10-27-29103 stone mound. 314
 Figure C.39. Site 50-10-27-29103 stone mound (view west). 315
 Figure C.40. GPS-based map of Site 50-10-27-29104 complex. 317
 Figure C.41. Site 50-10-27-29104, Feature A C-shaped wall (view southwest). 318
 Figure C.42. Site 50-10-27-29104, Feature B C-shaped alignment (view north). 320
 Figure C.43. Site 50-10-27-29104, Artifact 001, hammerstone. 320



Figure C.44. Site 50-10-27-29104, Feature C remnant stone mound (view southeast)	322
Figure C.45. GPS-based map of Site 50-10-27-29105 enclosure.	324
Figure C.46. Site 50-10-27-29105 remnant enclosure (view east)	324
Figure C.47. GPS-based map of Site 50-10-27-29106 stone alignment.	326
Figure C.48. Site 50-10-27-29106 stone alignment (view southeast)	326
Figure C.49. GPS-based map of Site 50-10-27-29107 battering.	328
Figure C.50. Site 50-10-27-29107 area of heavy battering (view west).....	330
Figure C.51. Site 50-10-27-29107 area of linear battering (view west)	331
Figure C.52. GPS-based map of Site 50-10-27-29108 stone mound	333
Figure C.53. Site 50-10-27-29108 stone mound (view west).....	333
Figure C.54. GPS-based map of Site 50-10-27-29109 rock concentration.	335
Figure C.55. Site 50-10-27-29109 rock concentration (view to the southwest).....	335
Figure C.56. GPS-based map of Site 50-10-27-29110 rock concentration.	337
Figure C.57. Site 50-10-27-29110 rock concentration (view northwest).....	337
Figure C.58. GPS-based map of Site 50-10-27-29111 C-shaped wall.....	339
Figure C.59. Site 50-10-27-29111 C-shaped wall (view south).....	339
Figure C.60. GPS-based map of Site 50-10-27-29112 C-shaped wall.....	341
Figure C.61. Site 50-10-27-29112 C-shaped wall (view southeast).....	342
Figure C.62. GPS-based map of Site 50-10-27-29113 stone mound	344
Figure C.63. Site 50-10-27-29113 stone mound (view northwest).....	344
Figure C.64. GPS-based map of Site 50-10-27-29114 battering.	346
Figure C.65. Site 50-10-27-29114 area of battering (view east).....	347
Figure C.66. Site 50-10-27-29114, Artifact 001 Hammerstone.	348
Figure C.67. GPS-based map of Site 50-10-27-29115 stone cist.....	350
Figure C.68. Site 50-10-27-29115 stone cist (view northwest).....	350
Figure C.69. Site 50-10-27-29115 stone cist detail (view northwest).....	351
Figure C.70. GPS-based map of Site 50-10-27-29116 battering	353
Figure C.71. Site 50-10-27-29116 area of battering (view northeast).....	354
Figure C.72. GPS-based map of Site 50-10-27-29117 stone mound	356
Figure C.73. Site 50-10-27-29117 stone mound (view west).....	356
Figure C.74. GPS-based map of Site 50-10-27-29118 stone-filled crevice.....	358
Figure C.75. Site 50-10-27-29118 stone-filled crevice (view southwest).....	358
Figure C.76. GPS-based map of Site 50-10-27-29119 battering.	360
Figure C.77. Site 50-10-27-29119 area of battering (view southeast).....	361
Figure C.78. GPS-based map of Site 50-10-27-29120 stone mound.	363
Figure C.79. Site 50-10-27-29120 stone mound.....	364
Figure C.80. GPS-based map of Site 50-10-27-29121 stone alignment.....	366
Figure C.81. Site 50-10-27-29121, stone alignment (view south).....	367
Figure C.82. GPS-based map of Site 50-10-27-29122 complex	369
Figure C.83. Site 50-10-27-29122, Feature A, wall segment (view south).....	371
Figure C.84. Site 50-10-27-29122, Feature B, stone mound (view southeast).....	372
Figure C.85. GPS-based map of Site 50-10-27-29123 stone mound	374
Figure C.86. Site 50-10-27-29123 stone mound (view south).....	375
Figure C.87. GPS-based map of Site 50-10-27-29124, stone mound.....	377
Figure C.88. Site 50-10-27-29124 stone mound (view northwest).....	378
Figure C.89. GPS-based map of Site 50-10-27-29185 complex.	380

Figure C.90. Site 50-10-27-29125, Feature A, stone mound (view north).....	382
Figure C.91. Site 50-10-27-29125, Feature B, stone mound (view southwest)	383
Figure C.92. GPS-based map of Site 50-10-27-29126 battering.	385
Figure C.93. GPS-based map of Site 50-10-27-29127 alignment.	387
Figure C.94. Site 50-10-27-29127 alignment (view west).....	388
Figure C.95. GPS-based map of Site 50-10-27-29128 stone mound.....	390
Figure C.96. Site 50-10-27-29128, stone mound (view south).....	391
Figure C.97. Site 50-10-27-29129, enclosure (view west).....	393
Figure C.98. GPS-based map of Site 50-10-27-29129 enclosure and area of battering.....	393
Figure C.99. GPS-based map of Site 50-10-27-29130 stone mound	395
Figure C.100. Site 50-10-27-29130 stone mound (view northwest).....	396
Figure C.101. GPS-based map of Site 50-10-27-29131 complex.	398
Figure C.102. Site 50-10-27-29131, Feature A, C-shape wall (view south).....	400
Figure C.103. Site 50-10-27-29131, Feature B, stone mound (view south).....	401
Figure C.104. GPS-based map of Site 50-10-27-29132 battering.	403
Figure C.105. GPS-based map of Site 50-10-27-29133 complex.	406
Figure C.106. Site 50-10-27-29133, Feature A, stone mound (view northeast).....	407
Figure C.107. Site 50-10-27-29133, Feature B, stone mound (view south).....	408
Figure C.108. GPS-based map of Site 50-10-27-29134 mound.	410
Figure C.109. Site 50-10-27-29134, stone mound (view southwest).....	411
Figure C.110. GPS-based map of Site 50-10-27-29135 mound.	413
Figure C.111. Site 50-10-27-29135, stone mound (view southeast).....	414
Figure C.112. GPS-based map of Site 50-10-27-29136 battering.	416
Figure C.113. GPS-based map of Site 50-10-27-29137 stone-edged depression.	418
Figure C.114. Site 50-10-27-29137, stone-edged depression (view north).....	419
Figure C.115. Site 50-10-27-29137 stone-edged depression, close-up (view north).....	419
Figure C.116. GPS-based map of Site 50-10-27-29138 mound.	421
Figure C.117. Site 50-10-27-29138, badly collapsed stone mound (view north).....	422
Figure C.118. GPS-based map of Site 50-10-27-29139 mound.	424
Figure C.119. Site 50-10-27-29139 stone mound (view southwest).....	425
Figure C.120. GPS-based map of Site 50-10-27-29140 C-shaped wall.....	427
Figure C.121. Site 50-10-27-29140, badly collapsed C-shaped wall (view east).....	428
Figure C.122. GPS-based map of Site 50-10-27-29141 C-shaped wall.....	430
Figure C.123. Site 50-10-27-29141, collapsed C-shaped wall (view southwest).....	431
Figure C.124. GPS-based map of Site 50-10-27-29142 trail segment.	433
Figure C.125. Site 50-10-27-29142, trail segment (view to the southwest).....	434
Figure C.126. GPS-based map of locations of the features within Site 50-10-27-29143 complex.....	437
Figure C.127. Site 50-10-27-29143, Feature A, modified overhang (view northeast).....	439
Figure C.128. Site 50-10-27-29143, Feature B, modified overhang (view east).....	441
Figure C.129. Site 50-10-27-29143, Feature C, modified overhang (view northeast).....	443
Figure C.130. Site 50-10-27-29143, Feature D modified overhang (view north).....	444
Figure C.131. Site 50-10-27-29143, Feature E, modified overhang (view southeast).....	446
Figure C.132. Site 50-10-27-29143, Feature F, modified overhang (view northeast).....	447
Figure C.133. GPS-based map of Site 50-10-27-29144 complex.	449
Figure C.134. Site 50-10-27-29144, Feature A petroglyph.....	450
Figure C.135. Site 50-10-27-29144, Feature B stone mound (view east).....	451

Figure C.136. Site 50-10-27-29144, Feature C, petroglyph.....	452
Figure C.137. GPS-based map of the battered areas within Site 50-10-27-29145.....	454
Figure C.138. Site 50-10-27-29145, Artifact 001, hammerstone.....	460
Figure C.139. Site 50-10-27-29145, Artifact 002, hammerstone.....	461
Figure C.140. GPS-based map of locations of features within Site 50-10-27-29146 complex.....	463
Figure C.141. Site 50-10-27-29146, Feature A enclosure (view northwest).....	464
Figure C.142. Site 50-10-27-29146, Feature B enclosure (view east).....	465
Figure C.143. Site 50-10-27-29146, Feature C enclosure (view northeast).....	466
Figure C.144. Site 50-10-27-29146, Feature D enclosure (view southwest).....	467
Figure C.145. Site 50-10-27-29146, Feature E, rock concentration (view southeast).....	468
Figure C.146. Site 50-10-27-29146, Feature F, enclosure (view northeast).....	469
Figure C.147. Site 50-10-27-29146, Feature G, enclosure (view northwest).....	470
Figure C.148. Site 50-10-27-29146, Feature H, lava tube (view southeast).....	472
Figure C.149. GPS-based map of Site 50-10-27-29147 complex.....	474
Figure C.150. Site 50-10-27-29147, Feature A, badly disturbed enclosure (view west).....	476
Figure C.151. Site 50-10-27-29147, Feature B, rock concentration (view northwest).....	478
Figure C.152. GPS-based map of Site 50-10-27-29148 panel of petroglyphs.....	480
Figure C.153. Site 50-10-27-29148 petroglyph panel (view southeast).....	481
Figure C.154. Site 50-10-27-29148 petroglyphs detail (view east).....	481
Figure C.155. Site 50-10-27-29149, petroglyph (Stasack and Stasack 2012:Vol. II,T-083:2).....	483
Figure C.156. Site 50-10-27-29149, petroglyph (view northwest).....	484
Figure C.157. Site 50-10-27-29150, petroglyph (view east).....	486
Figure C.158. Site 50-10-27-29150, petroglyphs (Stasack and Stasack 2012:II T-084, 4).....	487
Figure C.159. GPS-based map of Site 50-10-27-29151 mound.....	489
Figure C.160. Site 50-10-27-29151, stone mound (view southwest).....	489
Figure C.161. Site 50-10-27-29152, petroglyphs (Stasack and Stasack 2012:II T-087, 5).....	491
Figure C.162. Site 50-10-27-29152, Feature A petroglyph (view to the west).....	493
Figure C.163. Site 50-10-27-29152, Feature B petroglyph (view to the west).....	494
Figure C.164. GPS-based map of Site 50-10-27-29153 mound.....	496
Figure C.165. Site 50-10-27-29153, stone mound (view north).....	496
Figure C.166. GPS-based map of Site 50-10-27-29154 enclosure.....	498
Figure C.167. Site 50-10-27-29154 enclosure (view northwest).....	498
Figure C.168. GPS-based map of Site 50-10-27-29155 mound.....	500
Figure C.169. Site 50-10-27-29155, stone mound (view northeast).....	500
Figure C.170. Site 50-10-27-29156, enclosure (view north).....	502
Figure C.171. Site 50-10-27-29156, petroglyph locations (Stasack and Stasack 2012:II,29156 pg.3).....	503
.....	503
Figure C.172. Site 50-10-27-29156, petroglyph 1 (Stasack and Stasack 2012:II,29156 pg.4).....	504
Figure C.173. Site 50-10-27-29156, petroglyphs 4 thru 7 (Stasack and Stasack 2012:II,29156 pg.5).....	505
.....	505
Figure C.174. GPS-based map of Site 50-10-27-29157 enclosure.....	507
Figure C.175. GPS-based locations of features within Site 50-10-27-29158 complex.....	509
Figure C.176. GPS-based map of Site 50-10-27-29159 complex.....	515
Figure C.177. Site 50-10-27-29160, petroglyphs (Stasack and Stasack 2012:II, 4).....	519
Figure C.178. Site 50-10-27-29160, human figure petroglyph (view southeast).....	520
Figure C.179. GPS-based map of Site 50-10-27-29161 complex.....	522

Figure C.180. Site 50-10-27-29161, Feature A enclosure (view northwest).....	524
Figure C.181. Site 50-10-27-29161, Feature B C-shaped wall (view northwest).....	525
Figure C.182. GPS-based map of Site 50-10-27-29162 C-shaped wall.....	527
Figure C.183. GPS-based map of Site 50-10-27-29163 enclosure.....	529
Figure C.184. GPS-based map of Site 50-10-27-29164 mound.....	531
Figure C.185. Site 50-10-27-29164 stone mound (view north).....	531
Figure C.186. GPS-based map of Site 50-10-27-29165 complex.....	533
Figure C.187. Site 50-10-27-29165, Feature A, stone mound (view north).....	534
Figure C.188. Site 50-10-27-29165, Feature B stone mound (view north).....	535
Figure C.189. GPS-based map of Site 50-10-27-29166 C-shaped wall.....	537
Figure C.190. Site 50-10-27-29166 C-shaped wall (view northeast).....	537
Figure C.191. Petroglyph panel locations at Site 50-10-27-29167 (Stasack and Stasack 2012:II T-109, 4).....	539
Figure C.192. Site 50-10-27-29167, Panel 1 petroglyphs (view east).....	540
Figure C.193. GPS-based map of Site 50-10-27-29168 modified overhang.....	542
Figure C.194. Site 50-10-27-29168 modified overhang (view north).....	543
Figure C.195. Site 50-10-27-29168 modified overhang entrance (view northwest).....	544
Figure C.196. GPS-based map of Site 50-10-27-29169 C-shaped wall.....	546
Figure C.197. Site 50-10-27-29169 C-shaped wall (view south).....	546
Figure C.198. GPS-based map of Site 50-10-27-29170 stone mound.....	548
Figure C.199. Site 50-10-27-29170 stone mound (view north).....	548
Figure C.200. GPS-based map of Site 50-10-27-29171 C-shaped wall.....	550
Figure C.201. Site 50-10-27-29171 C-shaped wall (view southeast).....	550
Figure C.202. GPS-based map of Site 50-10-27-29172 stone mound.....	552
Figure C.203. Site 50-10-27-29172 stone mound (view north).....	552
Figure C.204. Relative locations of features within Site 50-10-27-29173.....	554
Figure C.205. Site 50-10-27-29173 Feature A, remnant stone mound (view southeast).....	555
Figure C.206. Site 50-10-27-29173 Feature B, stone mound (view north).....	556
Figure C.207. Site 50-10-27-29173 Feature C, C-shaped wall (view southwest).....	557
Figure C.208. Site 50-10-27-29173 Feature D, stone mound (view west).....	558
Figure C.209. Site 50-10-27-29173 Feature E, stone mound (view east).....	559
Figure C.210. Site 50-10-27-29173 Feature F, stone mound (view west).....	560
Figure C.211. GPS-based map of Site 50-10-27-29174 rock concentration.....	562
Figure C.212. Site 50-10-27-29174 rock concentration (view southeast).....	562
Figure C.213. GPS-based map of Site 50-10-27-29175 lava excavations. Appendix D contains descriptions and GPS coordinates of all of the lava excavations.....	564
Figure C.214. Lava excavation (083) in pāhoehoe lava (view north).....	565
Figure C.215. Lava excavation (304) in pāhoehoe lava, note waterworn boulder resting atop the rubble removed from the excavation (view northwest).....	565
Figure C.216. GPS-based map of Site 50-10-27-29176 C-shaped wall.....	567
Figure C.217. Site 50-10-27-29176 C-shaped wall (view east).....	567

VOLUME III, APPENDICES, LIST OF TABLES

Table C.1 Site 50-10-27-29099, Table of Battering..... 297
Table C.2 Site 50-10-27-29107, Table of Battering..... 329
Table C.3 Site 50-10-27-29114, Table of Battering..... 347
Table C.4 Site 50-10-27-29116, Table of Battering..... 352
Table C.5 Site 50-10-27-29132, Table of Battering..... 404
Table C.6 Site 50-10-27-29145, Table of Battering..... 455
Table C.7 Site 50-10-27-29150, Table of Battering..... 485
Table D.1 Lava Excavations (Site 50-10-27-29175) within the Urban Phase III Project Area..... 570
Table E.1. Isolated finds in the Urban Phase III Project Area identified during the Current
Survey..... 618
Table F.1 GPS Coordinates of Sites and Features within the Urban Phase III Project Area..... 622

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APPENDIX C

Site Descriptions Newly Documented Sites

The following is a listing of archaeological sites and features identified during the archaeological inventory survey of the Lili'uokalani Trust Urban Phase III survey area. Each site and/or feature has been described based upon the following attributes.

Site Number: All sites have been assigned a Hawaii State Inventory of Historic Places (SIHP) site number. This numbering system employs a four-part numeric code. The first element designates the state. The second specifies the island. The third indicates the U. S. Geological Survey topographic quadrangle within which the site is located. The fourth is a site-specific number designation (i.e. 50-10-27-13280).

Field Number: During initial recording, all archaeological sites were assigned a temporary field number to facilitate identification. This consisted of a T (for temporary) followed by a consecutively assigned number (e.g., T-001). Since, at the time of the survey, SIHP number had not been assigned to newly identified sites, the metal site tags left at each site were marked with the temporary field number.

Feature: Individual elements within a specific site were assigned consecutive letter designations to aid in recording and mapping.

Site/Feature Type: Each archaeological site or feature was identified as belonging to a specific type based upon its structural morphology and/or cultural contents. Site/Feature types include Enclosures, Terraces, Platforms, C-shapes, etc. When features of different structural types are clustered within a single site, the site type was referred to as a Complex.

Artifacts: If one or more artifact was observed within or adjacent to an archaeological site or feature, the relative age of the artifact was noted. Artifacts were dated according to the following broad historic periods:

- 1) **Traditional:** This designation was assigned to artifacts manufactured in a traditional style using indigenous cultural materials (stone, coral, shell, etc.). Such artifacts may have been made and utilized during either the pre-Contact or early historic periods.
- 2) **Historic:** This designation includes artifacts made of foreign materials or manufactured using modern technology dating from the 1778 to 1958 period (metal, glass, etc.). These were initially imported into the islands, but later manufactured here.
- 3) **Modern:** This designation was assigned to artifacts manufactured in the last 50 years [this includes artifacts manufactured of local materials using traditional techniques].

Midden: If food remains (marine shell, bone, or plant remains) were identified in a context indicating food production or consumption at a site or feature, the presence of midden was noted.

Coral: If unmodified coral was discovered at a site or feature, its presence was noted.

Human Skeletal Remains: In the relatively rare instances when human skeletal remains were observed at a site or feature, their presence was noted.

Possible Age: Due to the difficulties inherent in determining the age of a structure based solely on its visible morphology, the sites and features within the survey area were only tentatively dated to a broad historic period. These periods include the following:

- 1) Pre-Contact and/or early post-Contact: This designation was assigned to sites or features exhibiting traditional styles of construction or possessing indigenous cultural materials (traditional artifacts, marine shell midden, etc.). Such features may have been constructed and utilized during either the pre-Contact or early historic periods.
- 2) Historic: This designation was assigned to sites or features exhibiting foreign-introduced styles of construction or materials. Such features may include ranching walls, etc., constructed between 1778 and 1958.
- 3) Modern: This designation was assigned to sites or features that were constructed in the last 50 years.
- 4) Uncertain: This designation was assigned to sites and features for which it was not possible to assess possible age.

Possible Function: These designations are based on visual observation and comparison with previously identified sites or features within the project area and/or vicinity during prior archaeological studies.

Condition: The relative condition of the site was also noted. The condition was recorded as either: Destroyed, Poor, Fair, Good, or Excellent. Observations regarding the condition of each site are subjective in nature and are intended to provide the reader with a relative measure of condition for each site that was documented in the project area during the current AIS.

SIHP Number: 50-10-27-29088

Site Type: Mound

Field Number: T-001

Site Measurements: 1.8 m by ca. 0.56 m by ca. 0.57 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: Present

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29088 is a roughly constructed stone mound that is linear in shape (Figure C.1 and Figure C.2). It is located near the northern boundary of the project area, northwest of the Queen Lili'uokalani Children's Center (QLCC) fence line. The site is situated approximately 130 meters northeast (65°) from the Site 29089 stone mound. The terrain in this area consists of undulating and somewhat rough *pāhoehoe* lava. The mound is situated atop and relatively in the center of a slightly raised area of broken up *pāhoehoe*. The immediate area consists of small to medium broken *pāhoehoe* slabs. The surrounding vegetation is composed of a ground cover of fountain grass with a scattering of *koa haole* trees and klu shrubs.

The mound is roughly linear in shape and constructed of loosely piled small to medium *pāhoehoe* boulder slabs that have been removed from the surrounding lava surface. It measures approximately 1.8 meters in length (northwest to southeast) by ca. 0.56 meters in width (northeast to southwest) and has a maximum height of ca. 0.57 meters.

Small fragments of Porites coral were found scattered in the general area. These coral fragments may, however, be associated with the adjacent QLCC buildings rather than with the mound itself. The stone mound is in fair condition, with some tumble along its northwest end.

Site 29088 may possibly have served as a marker due to its location atop a slightly raised area of broken up *pāhoehoe* lava. It is not clear, however, what the mound was intended to mark. The construction style of the mound suggests that it may be pre-Contact and/or early post-Contact in age.

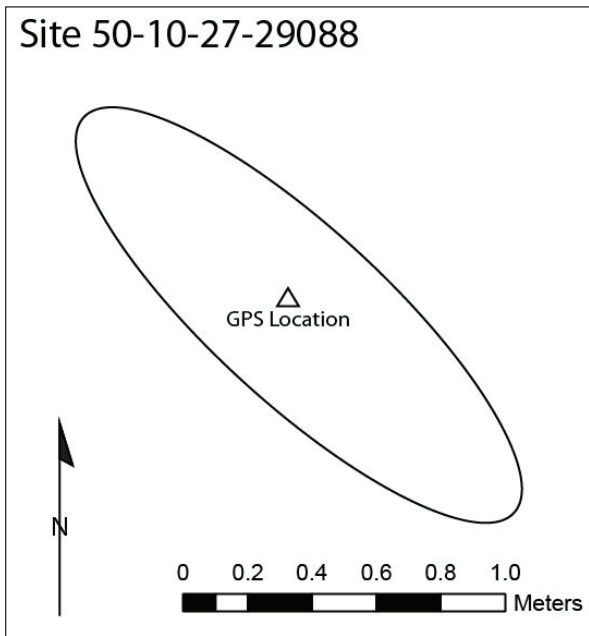


Figure C.1. GPS-based map of Site 50-10-27-29088 stone mound.



Figure C.2. Site 50-10-27-29088 stone mound (view southwest).

SIHP Number: 50-10-27-29089

Site Type: Mound

Field Number: T-002

Site Measurements: 1.96 m by ca 1.18 m by ca. 0.23 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29089 consists of the remnants of a badly disturbed stone mound (Figure C.3 and Figure C.4). It is located along the northern boundary of the project area, northwest of the Queen Lili'uokalani Children's Center fence line. The site is situated approximately 130 meters southwest (245°) from the Site 29088 stone mound. It is located in an area of undulating *pāhoehoe* lava, roughly 10 meters west of an isolated 'a'ū lava flow. The stone mound is situated on relatively level *pāhoehoe* lava that is clear of vegetation. The vegetation of the surrounding area consists of a ground cover of fountain grass with a scattering of *koa haole* and 'uhaloa shrubs.

The remnants of the mound appear irregular in shape, comprising a scatter of small to medium sub-angular boulders and cobbles. The scatter of tumbled stones measures approximately 1.96 meters in length (north to south) by ca. 1.18 meters in width (east to west) with a maximum height of ca. 0.23 meters. No cultural material was observed in or around the site. The structure appears to be badly disturbed and its original shape indeterminate. Due to its disturbed condition, it is difficult to determine the mound's original function. It is likely, however, that it may have served as a marker. Site 29089 appears to be pre-Contact and/or early post-Contact in age.

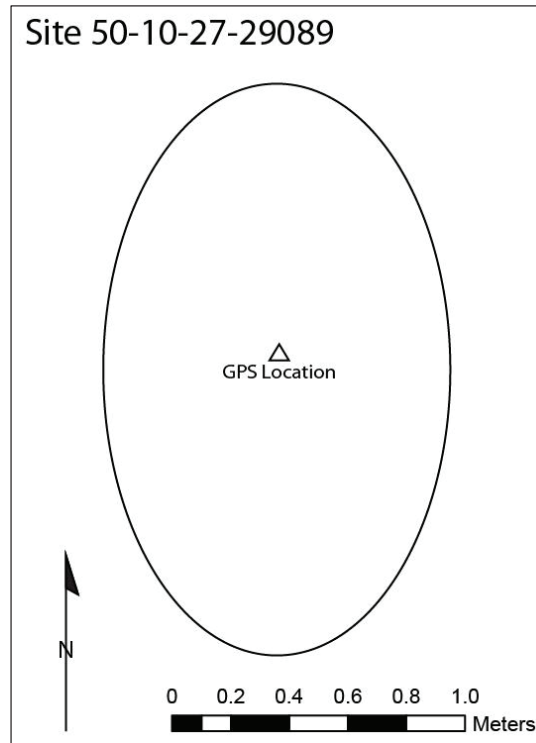


Figure C.3. GPS-based map of Site 50-10-27-29089 stone mound.



Figure C.4. Site 50-10-27-29089 stone mound (view south).

SIHP Number: 50-10-27-29090

Site Type: Trail Segment

Field Number: T-003

Site Measurements: 18 m by ca 3.4 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel

Condition: Fair to Good

Description: Site 50-10-27-29090 consists of two separate trail segments (Features A and B) situated roughly parallel to each other (Figure C.5). The site is located in the central eastern portion of the project area, approximately 40.0 meters east from the paved entrance road to the Queen Lili'uokalani Children's Center (QLCC) and ca. 410 meters southeast (126°) from Site 29088. Both trail segments are situated on a stretch of 'a'ā lava flow with some surrounding areas of *pāhoehoe*. The terrain to the north of the site has been bulldozed. The central portion of Feature B also appears to have been impacted by bulldozing. The vegetation present includes a ground cover of fountain grass with some scattered *noni* and Christmasberry trees.

Both Features A and B are roughly linear trail segments that cross over a finger of rough 'a'ā lava connecting one area of *pāhoehoe* lava with another area of *pāhoehoe*. The trails are narrow and are constructed of crushed 'a'ā clinkers with some *pāhoehoe* slabs placed as stepping stones. Features A and B run roughly parallel but are oriented at a slight angle from each other. Both trails run roughly northeast to southwest. The northeast end of Feature A is approximately 3.39 meters south (170°) from the northeast end of Feature B. No surface cultural material was observed at or around the trail segments. Site 29090 is fair to good condition. Some lava excavations were noted to the southwest and northeast of the trail segments, but these do not appear to be directly associated with the trail. Additional trail segments (Sites 29091 and 29092) have been recorded on the western (opposite) side of the QLCC entrance road. These appear to roughly align with Site 29090 and may possibly form part of the same trail system.

Site 29090 was most likely constructed and used during the pre-Contact and/or early post-Contact periods to allow easy access across this rough area of 'a'ā lava. Both trail segments may extend beyond the 'a'ā, but their courses are not visible on the smoother *pāhoehoe*.

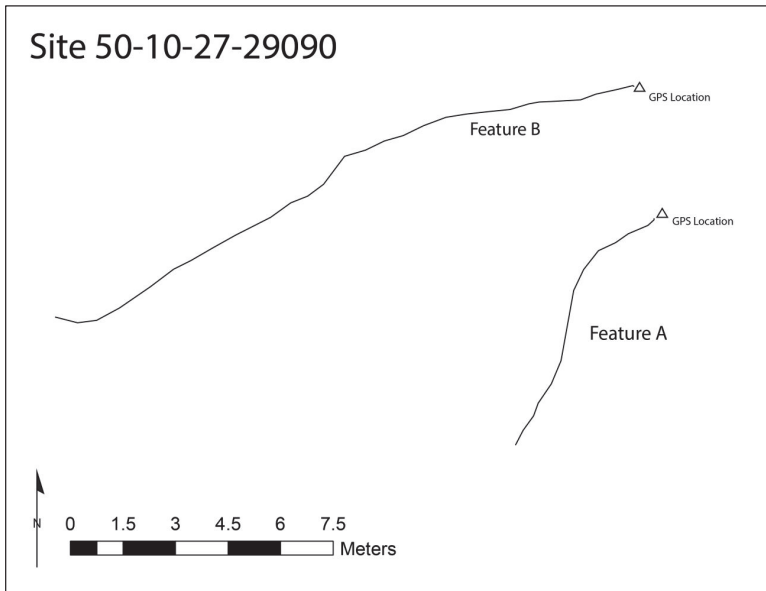


Figure C.5. GPS-based map of Site 50-10-27-29090 trail segments.

Feature: A

Feature Type: Trail Segment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early Post-Contact

Possible Function: Travel

Condition: Good

Description: Site 50-10-27-29090, Feature A consists of a linear trail segment (Figure C.6). The trail is located along the eastern edge of the site. Its northeastern end is situated approximately 4.0 meters southeast (160°) from the northeastern end of the Feature B trail. Feature A is a northeast to southwest running trail constructed across an 'a'ā flow connecting two areas of smoother *pāhoehoe* lava. The narrow trail crosses a raised ridge of 'a'ā lava. The Feature A trail segment measures approximately 6.50 meters in length, by ca. 0.69 meters in width. The trail bed consists of leveled 'a'ā clinkers. These clinkers are comprised of small to large sub-angular basalt cobbles. A few small sub-angular *pāhoehoe* slabs are set into the surface of the trail and likely served as stepping stones. These slabs are concentrated toward the southwestern end of the trail.

No cultural material was observed in or around the feature. Feature A is in good condition. A few large sub-angular 'a'ā cobbles have tumbled into the central stretch of the trail from the surrounding 'a'ā flow. Its location, in a rough 'a'ā flow between two relatively smooth stretches of *pāhoehoe*, suggests that Feature A may have functioned as a foot path used to travel more easily across the rougher 'a'ā lava. The surface of the trail has been crushed and leveled by foot traffic. Based upon its construction style, Feature A may have been built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.6. Site 50-10-27-29090, Feature A trail segment (view southwest).

Feature: B

Feature Type: Trail Segment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel

Condition: Fair

Description: Site 50-10-27-29090, Feature B consists of a trail segment extending over a stretch of rough 'a'ā lava that connects two patches of smoother pāhoehoe (Figure C.7). The northeast end of Feature B is situated approximately 3.3 meters from the northeast end of Feature A. The trail forms a shallow linear depression within the surrounding 'a'ā flow. Feature B runs roughly northeast to southwest and is paved with crushed 'a'ā clinkers. This trail bed of clinkers appears to have been created in part by the passage of foot traffic. Pāhoehoe slabs and sub-angular medium pāhoehoe boulders have been set into the surface of the trail at irregularly spaced intervals to serve as stepping stones. Feature B measures ca. 18.6 meters in length and ca. 0.66 meters in width. No cultural material was observed on or near the feature. The trail is in fair condition. However, a portion of the trail near its southwestern end has been partially destroyed by bulldozing.

It is probable that the Feature B trail was used for travel across a stretch of rough 'a'ā lava. Its construction style suggests that this footpath was built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.7. Site 50-10-27-29090, Feature B trail segment (view southwest).

SIHP Number: 50-10-27-29091

Site Type: Complex

Field Number: T-006

Site Measurements: 13.8 m by ca 16 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel/Marker

Condition: Poor to Fair

Description: Site 50-10-27-29091 is a complex composed of two features: a trail segment (Feature A) and a badly disturbed stone mound (Feature B) (Figure C.8). This site is located in the eastern half of the project area, west of the paved entry road to the Queen Lili'uokalani Children's Center (QLCC), and approximately 6.0 meters south (160°) from the QLCC parking lot. It is situated ca. 283 meters northwest (281°) of Site 50-10-27-13257. The surrounding vegetation consists of a dense amount of fountain grass with a few Christmasberry trees.

Feature A is a trail segment running roughly northeast to southwest, with a smaller trail segment branching off in a southerly direction. Both trail sections run across a finger of 'a'ā lava connecting two *pāhoehoe* outcrops. The beds of the two trail segments are composed of crushed 'a'ā clinkers. *Pāhoehoe* slabs have been set along the main trail segment and possibly used as stepping stones. The main trail segment measures approximately 13.8 meters in length (northeast to southwest), with a maximum width of ca. 0.78 meters. The smaller side trail measures ca. 5.2 meters in length (southeast to northwest) with a width of ca. 0.6 meters. The Feature A trail segment appears to be roughly aligned with other trail segments located at Sites 50-10-27-29090 and 50-10-27-29092 and may form part of a larger trail which is only visible where it crosses rougher 'a'ā lava.

Feature B is a badly disturbed stone mound. It is situated atop level *pāhoehoe* lava and located roughly 4.0 meters northeast (65°) of the northeast section of the Feature A trail. The mound is constructed with *pāhoehoe* boulders and large *pāhoehoe* cobble slabs.

Site 29091 is adjacent to previously recorded Site 50-10-27-13279, which consists of a complex of four *pāhoehoe* excavations. The present survey identified six lava excavations (002 to 007) just east of the site along a *pāhoehoe* lava ridge. Four of these probably represent Site 50-10-27-13279.

No cultural material was observed in or around the site. Site 29091 is in fair to poor condition. The Feature A trail segment is in fair condition and contains a few boulders that have tumbled in from previous bulldozing along the southwestern end of the trail. The Feature B stone mound is in poor condition and contains tumble in all directions.

Based on its construction and location, Site 29091 appears to have been built and utilized during the pre-Contact and/or early post-Contact periods. Considering the close proximity of Feature B to Feature A, it is possible that the stone mound may have served as a marker for the trail.

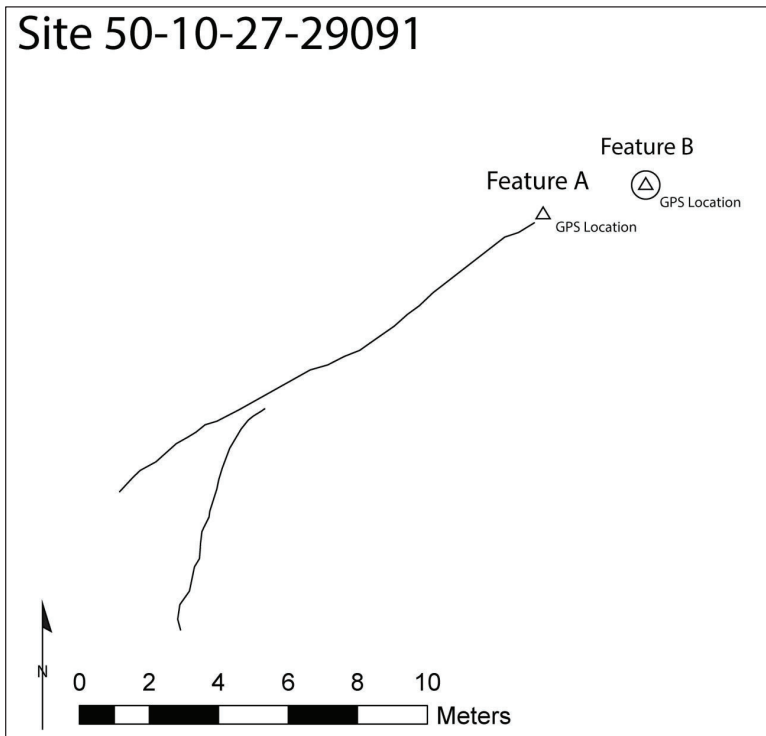


Figure C.8. GPS-based map of Site 50-10-27-29091 complex.

Feature: A

Feature Type: Trail Segment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel

Condition: Fair

Description: Site 50-10-27-29091, Feature A is a linear trail segment. The trail is situated approximately 4.0 meters southwest (245°) from the Feature B mound. The trail segment runs roughly northeast to southwest, crossing a finger of 'a'ia lava and connecting two areas of *pāhoehoe* lava. The trail bed is relatively level and composed of small to medium crushed 'a'ia clinkers. A few small to medium *pāhoehoe* slabs and boulders have been set intermittently along the trail, and possibly used as stepping stones (Figure C.9). There appears to be a smaller side trail that branches off from the center of the main trail in a southerly direction, where it connects to an area of *pāhoehoe* lava. The bed of this smaller and narrower trail is comprised of only 'a'ia clinkers. The main trail segment measures approximately 13.8 meters in length (northeast to southwest), with a maximum width of ca. 0.78 meters. The smaller side trail measures ca. 5.2 meters in length (northeast to southwest) with a width of ca. 0.6 meters. The Site 29091, Feature A trail appears roughly aligned with the Site 50-10-27-29090 and 50-10-27-29092 trail segments.

No cultural material was observed in or around the feature. The trail is in fair condition. However, there are a few small boulders that have tumbled onto the trail due to bulldozing at the southwestern end of the main trail.

Feature A was most likely constructed to allow for travel across a stretch of rough 'a'ia lava. Its construction style suggests that this footpath was built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.9. Site 50-10-27-29091, Feature A trail segment (view northeast).

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29091, Feature B consists of the remnants of a badly disturbed stone mound (Figure C.10). It is located at the northern end of the site, and it is approximately 4.0 meters northeast (65°) of the northeastern end of Feature A. The stone mound is situated directly on top of a smooth *pāhoehoe* outcrop.

The remnants of the stone mound consist of a scatter of small to medium sub-angular basalt boulders and large *pāhoehoe* cobble slabs. The original mound appears to have measured approximately 0.75 meters (north to south) by ca. 0.70 meters (east to west). The original height of the mound could not be determined, but its current maximum height measures ca. 0.29 meters. No cultural material was observed in or around the feature. Feature B is in poor condition and the mound has been badly tumbled in all directions, with the majority of tumble on the south side.

Due its close proximity to the Feature A trail segment, it is likely that the mound may have served as a marker for the trail. This association suggests that the Feature B mound was built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.10. Site 50-10-27-29091, Feature B stone mound (view east).

SIHP Number: 50-10-27-29092

Site Type: Trail Segment

Field Number: T-007

Site Measurements: 9.1 m by ca 1.1 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel

Condition: Good

Description: Site 50-10-27-29092 is a trail segment (Figure C.11 and Figure C.12). It is located in the central eastern portion of the project area and is approximately 100.0 meters northeast (55°) from the Site 50-10-27-29091 complex. The site is situated in an 'a'ā lava flow with some surrounding areas of pāhoehoe lava. The terrain to the northwest of the site has been bulldozed, probably for the construction of the Queen Lili'uokalani Children's Center. The surrounding vegetation consists of a ground cover of fountain grass and some sparse Christmasberry trees.

The trail segment is linear and oriented in a northeast to southwest direction. It crosses over a rough section of 'a'ā lava, connecting two areas of pāhoehoe lava. The trail bed is narrow and consists of small to large 'a'ā clinkers set with some large pāhoehoe cobble slabs. These pāhoehoe slabs are placed occasionally and sporadic throughout the trail segment and probably served as stepping stones. The trail measures approximately 9.1 meters in maximum length by ca. 1.1 meters in maximum width. Approximately 2.0 meters southwest from the northeastern end of the main trail is a side trail, which extends south, ending at an area of pāhoehoe bedrock. This side trail is narrow and constructed of 'a'ā clinkers and with occasionally set large pāhoehoe slabs. The side trail measures ca. 7.8 meters in maximum length and is ca. 1.0 meters wide.

No surface cultural material was observed at or around the Site 29092 trails, which are both in good condition. The main Site 29092 trail appears to be aligned with the Site 29090 and Site 29091 trail segments, which are located to the northeast and southwest respectively. These three trail segments may form part of a single larger trail which is only visible where it crosses stretches of rougher 'a'ā lava. It appears that these trail segments were most likely constructed and utilized during the pre-Contact and/or early post-Contact periods for travel over rough sections of 'a'ā lava.

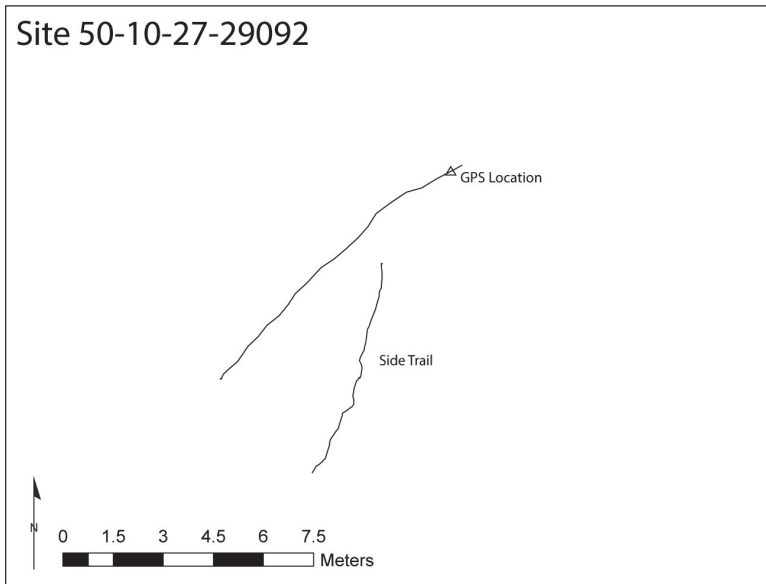


Figure C.11. GPS-based map of Site 50-10-27-29092 trail segment.



Figure C.12. Site 50-10-27-29092 trail segment (view to the northeast).

SIHP Number: 50-10-27-29093

Site Type: Battering

Field Number: T-010

Site Measurements: 4.5 m by ca 4.0 m

No. Features: 1

Artifacts: None Observed

Midden: Present

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29093 is comprised of four areas of distinct battering atop a stretch of *pāhoehoe* lava (Figure C.13). It is located in the eastern section of the project area, approximately 31.0 meters southeast (138°) of the Site 13274 complex. The site is situated on a roughly level to slightly undulating area of *pāhoehoe* lava. The vegetation in the immediate area is sparse, consisting of fountain grass and a scatter of klu and Christmasberry shrubs.

The total site area, which consists of four concentrations of battering marks, measures approximately 4.5 meters in length (northwest to southeast) by ca. 4.0 meters in width (northeast to southwest).

The first area of battering (B-001) is located at the northern end of the site and is ca. 2.0 meters west of Lava Excavation 528. The concentration of battering is oval in shape and measures ca. 0.33 meters in length (north to south) by ca. 0.29 meters in width (east to west).

B-002 is located in the western most portion of the site and is ca. 4.0 meters west of B-001. B-002 is roughly oval in shape and contains a dispersed to moderate amount of battering. It measures 0.42 meters in length (north to south) by ca. 0.33 meters in width (east to west).

B-003 is ca. 0.5 meters southeast of B-002 and consists of an area with a dispersed to moderate amount of battering. It measures ca. 0.43 meters (north to south) by ca. 0.36 meters in width (east to west).

B-004 is located at the southeasternmost portion of the site area, ca. 3 meters south of Lava Excavation 528 and consists of very light incipient battering. It measures ca. 0.46 meters in length (north to south) by ca. 0.26 meters in width (east to west).

A fragment of a *Cypraeidae* shell was observed at the northeastern boundary of the site area. Site 29093 is in fair condition.

The battering present at Site 29093 is likely associated with some form of processing activity conducted during the pre-Contact and/or early post-Contact periods. It is uncertain, however, what kind of processing activity took place here.

Site 50-10-27-29093 was not photographed during the current survey.

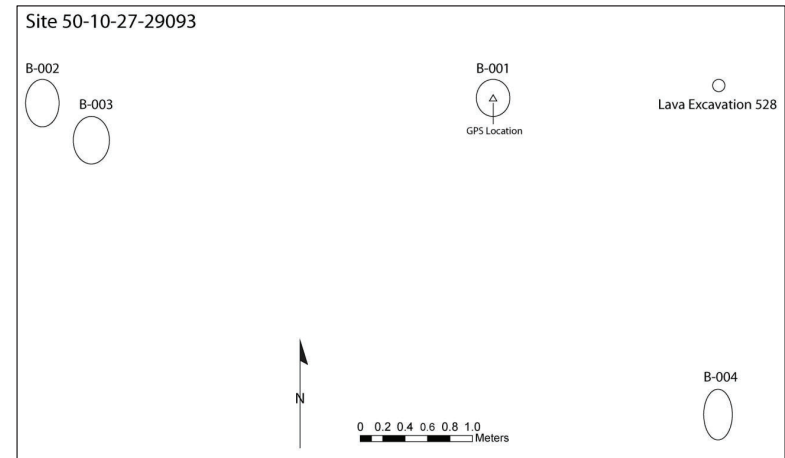


Figure C.13. GPS-based map of Site 50-10-27-29093 battering.

SIHP Number: 50-10-27-29094

Site Type: Complex

Field Number: T-011

Site Measurements: 10 m by ca 2 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker/Uncertain

Condition: Poor

Description: Site 50-10-27-29094 is a complex consisting of two features: a remnant C-shaped alignment (Feature A) and a badly disturbed stone mound (Feature B) (Figure C.14). The site is located in the eastern portion of the project area, in the center of a large depression caused by the collapse of a large lava tube. It is situated approximately 44 meters northwest (286°) from Site 50-10-27-29093. The surrounding terrain consists of sloping *pāhoehoe* lava with a ground cover of fountain grass.

Feature A is a C-shaped alignment of stones located in the southeastern end of the site. It is constructed of small to medium sub-angular boulders that have been loosely aligned to form a rough C. The structure measures ca. 3.10 meters in length (north to south) by ca. 1.90 meters in width (east to west) with a maximum height of ca. 0.23 meters.

Feature B is a badly disturbed and irregularly shaped stone mound located approximately 6.3 meters (335°) northwest of Feature A. The remnants of the mound consist of a *pāhoehoe* boulder slab balanced against a small sub-angular boulder with a scatter of basalt cobbles around the edges.

No cultural material was observed in or around the site. Site 29094 is in poor condition and both Features A and B appear tumbled and disturbed.

The function of Feature A is uncertain. The alignment strongly resembles temporary windbreak shelters located elsewhere in the project area. The ground surface within the C-shape alignment, however, is somewhat broken and uneven, making it an uncomfortable area for a shelter. It is possible that the fracturing of the underlying lava took place during seismic activities, which occurred after the abandonment of the feature. In this case, Feature A may well have served as a very crude windbreak shelter. Based on its construction style, Feature B may have functioned as a possible marker. However, what the mound was marking remains unclear. It appears likely that both features of Site 29094 may have been built and utilized during the pre-Contact and/or early post-Contact periods.

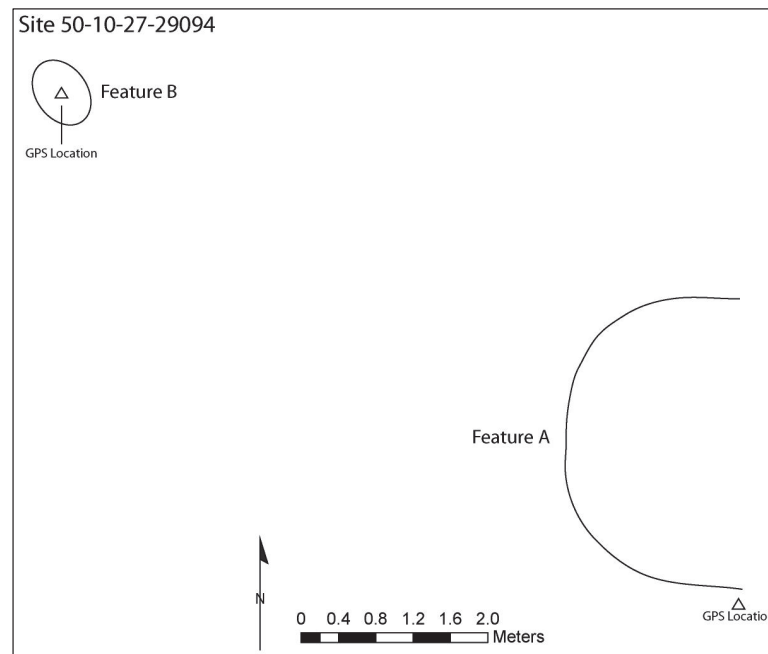


Figure C.14. GPS-based map of Site 50-27-29-29094 complex.

Feature: A

Feature Type: C-Shaped Alignment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Poor

Description: Site 50-27-29-29094, Feature A is a C-shaped stone alignment (Figure C.15). It is located in the southeastern portion of the site. The center of the alignment is approximately 6.3 meters southeast (155°) of the Feature B mound. Feature A is constructed of small to medium sub-angular *pāhoehoe* boulders aligned in a rough and extended C-shape. It measures ca. 3.10 meters in length (north to south) by ca. 1.90 meters in width (east to west) with a maximum height of ca. 0.23 meters.

No cultural material was observed in or around the feature. Feature A is in poor condition and has been badly disturbed. Portions of the rock alignment have tumbled downslope to the east and south. The location of this feature, on a sloping and broken-up lava surface, would make the structure an uncomfortable shelter for temporary habitation. For this reason, the purpose of Feature A remains unclear. It is possible, however, that the fracturing of the underlying lava took place during seismic activities, which occurred after the abandonment of the feature. In this case, Feature A may well have served as a very crude windbreak shelter, possibly composing the base stones holding in place a shelter of matting or some other perishable material. Its construction style suggests that the feature may have been built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.15. Site 50-27-29-29094, Feature A C-shaped stone alignment (view west).

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29094, Feature B consists of a badly disturbed and irregularly shaped stone mound (Figure C.16). The mound is located approximately 6.3 meters northwest (335°) of the Feature A C-shaped wall. It is situated atop a sloping *pāhoehoe* lava surface and is partially covered by fountain grass.

Feature B is comprised of a medium-sized boulder slab that rest against a small sub-angular basalt boulder, with some cobbles scattered around its edges. The mound measures ca. 0.70 meters in length (northwest by southeast) by ca. 0.54 meters in width (northeast by southwest) with a maximum height is ca. 0.34 meters.

No cultural material was observed in or around the feature. Feature B is in poor condition and appears to have been badly disturbed. The mound is tumbled along all of its edges, making its original shape and construction style unclear. It is likely, that it served as a marker during the pre-Contact and/or early post-Contact periods. However, what the mound may have marked is unknown.



Figure C.16. Site 50-10-27-29094, Feature B stone mound (view east).

SIHP Number: 50-10-27-29095

Site Type: Petroglyph

Field Number: T-012

Site Measurements: unknown

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Poor

Description: Site 50-10-27-29095 is a sloping slab of *pāhoehoe* bedrock that appears to contain a small cluster of petroglyphs. The site is located approximately 207.0 meters northwest (286°) from Site 50-10-27-29102 in an area of undulating *pāhoehoe*. Surrounding vegetation consists of fountain grass and *'uhaloa*.

The possible petroglyphs are too faint to determine either the total number of images (though there appear to be more than one) or to make out their shapes. A detailed examination under good light may reveal something more, but for now all that can be said of Site 29095 is that it appears to consist of a panel of very faint possible petroglyphs.

Site 50-10-27-29095 was not photographed and no measurements were recorded during the current survey.

SIHP Number: 50-10-27-29096

Site Type: Stone-Edged Depression

Field Number: T-013

Site Measurements: 2 m by ca 1 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Fair

Description: Site 50-10-27-29096 is a stone-edged depression (Figure C.17 and Figure C.18). It is located in the central-eastern portion of the project area, approximately 30.0 meters north (ca. 345°) of Site 29094. The site is situated on the southwest side of a low *'a'ā* ridge surrounded by rough *'a'ā* and intermittent patches of smooth *pāhoehoe*. Surrounding vegetation consists of a ground cover of dense patches of fountain grass, and sparse *kiawe*, *klu*, and Christmasberry trees.

The stone-lined depression is circular in shape and relatively deep. It appears that the depression was created by the excavation of an area of rough *'a'ā* lava. The upper edge of the depression is lined with medium to large *pāhoehoe* slab boulders that have been removed from nearby *pāhoehoe* flows. The outer rim of the stone edging is approximately 2.0 meters in diameter. The interior of the depression is somewhat conical in shape and measures ca. 1.0 meters in diameter, with a maximum depth of ca. 1.0 meters. The base of the depression has a diameter measuring ca. 0.55 meters.

No cultural material was found in or around the site. Site 29096 is in fair condition with some of the edging stones having been disturbed.

The function of the Site 29096 depression is uncertain. It seems too exposed to have served as a storage area, and too formal in shape to have been simply a lava excavation. The site is likely to have been constructed and utilized during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29096

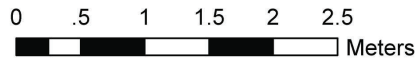
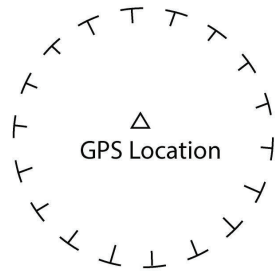


Figure C.17. GPS-based map of Site 50-10-27-29096 stone-edged depression.



Figure C.18. Site 50-10-27-29096 stone-edged depression (view south).

SIHP Number: 50-10-27-29097

Site Type: Mound

Field Number: T-014

Site Measurements: .9 m by ca .87 m by .33 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29097 consists of a badly disturbed mound (Figure C.19 and Figure C.20). This site is located in the central portion of the project area and is approximately 79.0 meters southwest (256°) of the Site 29096 stone-edged depression. It is situated atop a level outcrop of *pāhoehoe* lava. The surrounding vegetation consists largely of fountain grass and one klu shrub.

The Site 29097 stone mound is constructed of very loosely piled small to medium sub-angular basalt *pāhoehoe* boulders. The original shape of the mound could not be determined due to its poor condition. In its present condition, the mound measures approximately 0.90 meters in length (east to west) by ca. 0.87 meters in width (north to south) with a maximum height of ca. 0.33 meters. No cultural material was observed in or around the site. Site 29097 is in poor condition. The mound is badly disturbed, and many stones have tumbled to the south and southwest. The Site 29097 stone mound may have functioned as a marker that was built and utilized during the pre-Contact and/or early post-Contact period.

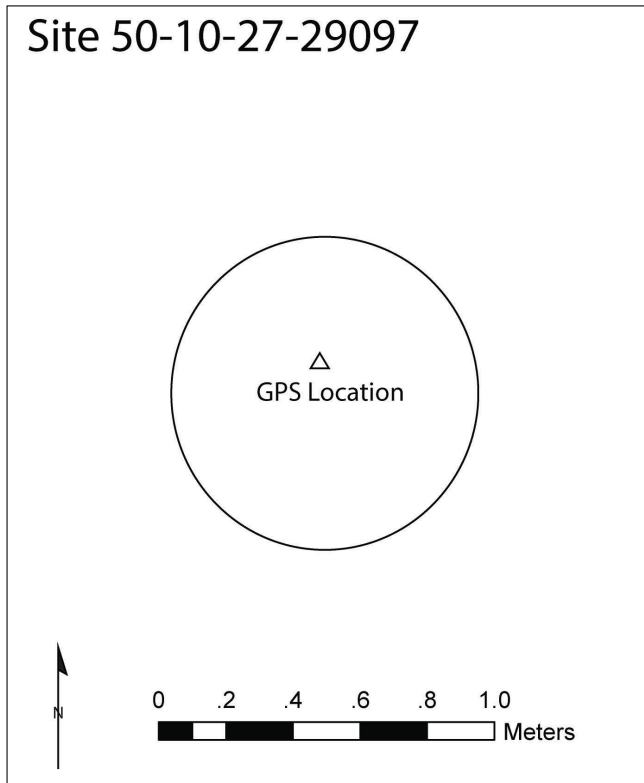


Figure C.19. GPS-based map of Site 50-10-27-29097 stone mound.



Figure C.20. Site 50-10-27-29097 stone mound (view south).

SIHP Number: 50-10-27-29098

Site Type: Petroglyph

Field Number: T-015

Site Measurements: 10 m by ca 7.5 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Good

Description: Site 50-10-27-29098 consists of a group of 11 petroglyphs, all of which are depictions of human footprints (*wāwae*). The site is located near the center of the project area, approximately 14.0 meters south of the Queen Lili'uokalani Children's complex and ca. 19.0 meters southeast (146°) of the Site 29097 stone mound. The petroglyphs are located around the edges of a collapsed lava blister (Figure C.21 and Figure C.22). The collapsed blister rests at the western edge of a large depression in the landscape surrounded by lava ridges. The surrounding vegetation consists of fountain grass and sword fern.

The collapsed lava blister that forms this site measures roughly 5.0 meters in diameter. A low overhang is located along the northwestern edge of the collapsed blister and a low-ceilinged lava tube extends northwest from the opening for approximately 4.6 meters. The lava tube does not appear to have been modified and no cultural material was noted within it. There is also a smaller overhang on the eastern outer rim of the collapsed lava blister.

A total of 11 petroglyphs were identified at the site. All of these images appear to be representations of human feet with toes (Figure C.23). The feet possess varied orientations. The petroglyphs are located on angled slabs of *pāhoehoe* lava that form the outer rim of the depression. Most are located along the south and southeastern portion of the rim (numbers 1 to 8; Figure C.24 and Figure C.25). Two images (numbers 9 and 10) are located on a slab near the northeast rim, and one additional possible image (number 11) is located along the southwest rim. Along the outer southeastern rim of the depression is a natural lava formation that strongly resembles a toed foot and may have served as the initial catalyst for the creation of the site (Figure C.26).

No surface cultural material was noted at the site. Site 29098 is in good condition, and the images are somewhat faint, but fairly visible. The subject matter and style of execution suggest that the petroglyphs at Site 29098 were created during the pre-Contact and/or early post-Contact periods. Why the images at this site consist solely of representations of feet is uncertain, though it may be in some way related to the natural feature that resembles a foot with toes.



Figure C.22. Site 50-10-27-29098 collapsed lava blister with petroglyphs (view northwest).

Archaeological Inventory Survey – Volume III, Appendices
 Lilī‘uokalani Trust Urban Phase III
 Keahuna, North Kona, Hawaii
 July 2019

292

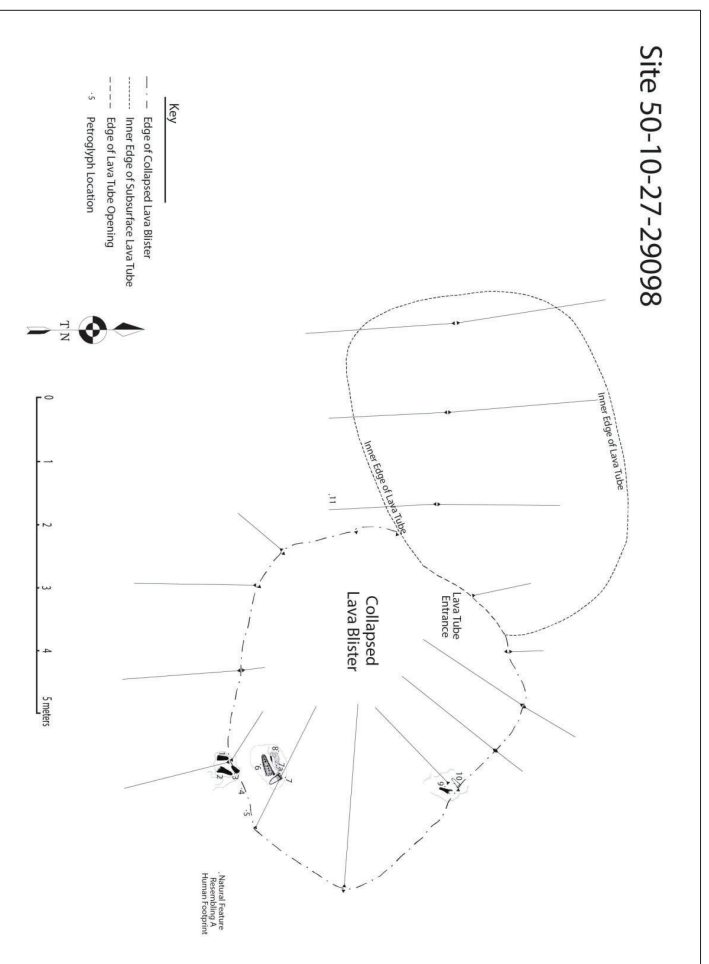


Figure C.21. Plan view map of Site 50-10-27-29098 petroglyphs.

Archaeological Inventory Survey – Volume III, Appendices
 Lilī‘uokalani Trust Urban Phase III
 Keahuna, North Kona, Hawaii
 July 2019

291

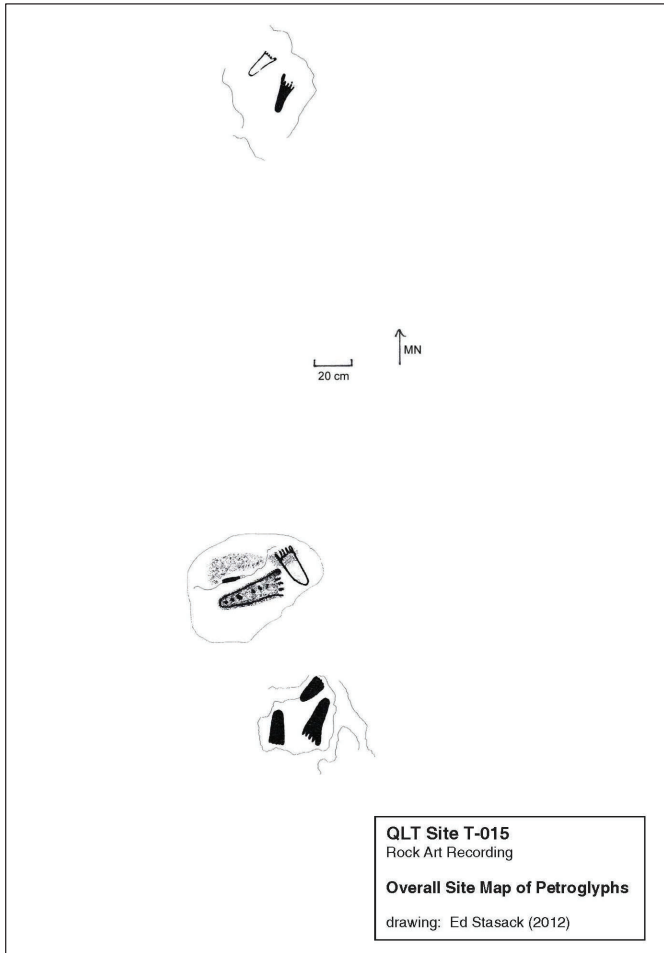


Figure C.23. Site 50-10-27-29098 petroglyphs (Stasack and Stasack 2012:II T-015, 4).



Figure C.24. Site 50-10-27-29098 petroglyphs #1-8 (view west).



Figure C.25. Site 50-10-27-29098 petroglyphs #6-8 close-up (view south).



Figure C.26. Site 50-10-27-29098 natural feature resembling a foot with toes (view west).

SIHP Number: 50-10-27-29099

Site Type: Complex

Field Number: T-016

Site Measurements: ca. 40 m by ca. 30 m

No. Features: 5

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Processing

Condition: Fair

Description: Site 50-10-27-29099 is a complex consisting of five features: an enclosure (Feature A), a stone alignment (Feature B), a C-shaped wall (Feature C), one (possibly two) petroglyphs (Feature D), and a stone mound (Feature E), as well as 14 areas of battering (Table C.1 and Figure C.27). The site is located in the central-eastern portion of the project area, approximately 64.0 meters west (270°) from Site 29098. The terrain consists of a gentle undulating *pāhoehoe* lava flow covered with a dense ground cover of fountain grass and a few scattered Christmasberry, klu, and *noni* trees.

The five features within Site 29099 are all situated on small, flat open areas of *pāhoehoe* bedrock. Feature A is a small, somewhat disturbed and roughly oval shaped enclosure at the northern edge of the site. The southern half of Feature A is constructed of larger cobbles and small boulders, while its northern half is composed of small cobbles. This might suggest that the structure's southern wall was originally somewhat higher and may have served as a rough windbreak. The exterior of the enclosure measures ca. 2.0 m (N to S) by ca. 2.2 m (E to W), with a maximum height of 0.35 m. The interior of the structure is ca. 1.5 m in diameter.

Feature B is a linear alignment of *pāhoehoe* stones situated between Features A and C. It runs roughly east to west and measures ca. 1.49 meters in length and ca. 0.48 meters in width. It stands at approximately ca. 0.18 meters in height.

Feature C is a low, badly disturbed C-shaped wall that opens to the northeast. The structure appears to have originally consisted of loosely stacked small sub-angular basalt boulders and cobbles, with a few small *pāhoehoe* slabs. The wall has collapsed and is presently only one stone high. The feature is ca. 2.34 meters in length (northeast to southwest) by ca. 2.30 meters in width (northwest to southeast), with a maximum height of ca. 0.3 meters. There are two areas of battering (B-001 and B-002, see table) located within the C-shaped wall.

Feature D consists of at least one (possibly two) geomorphic petroglyphs. The most visible image is a small, roughly oval-shaped depression with two deeply pecked linear grooves extending off of it to form a rough "V". A possible second image that is much fainter is located approximately 0.3 meters northwest from the first image.

Feature E is a badly disturbed stone mound. It is constructed of small to medium sub-angular basalt *pāhoehoe* boulders and slabs that have been loosely piled.

The mound measures ca. 1.22 meters in length (east to west) by ca. 0.50 meters in width (north to south), with a maximum height of ca. 0.35 meters. Seven areas of battering (B-008 through B-014) are located adjacent to the mound.

In addition to the five features within Site 29099, there are a total of 14 areas of battered *pāhoehoe* surfaces (B-001 thru B-014, see Table C.1). These are located along the southern edge of the site stretching from Feature C to Feature E.

No surface cultural material was observed at the site. The features of Site 29099 are in poor to fair condition.

The Site 29099 complex may have served as a place of temporary habitation. Features A, B, and C appear to have functioned as small windbreak shelters. The Feature D petroglyphs were most likely related to the occupation of the shelters and may have been created by their residents. The stone mound (Feature E) likely served as a marker for this area of multiple temporary shelters. It is probable that this site was constructed and utilized during the pre-Contact and/or early post-Contact periods.

Table C.1 Site 50-10-27-29099, Table of Battering.

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (m)	Width (m)
B-001	Triangular	Heavy	Concentrated	Circular	0.21 (NW/SE)	0.17 (NE/SW)
B-002	Triangular	Heavy	Concentrated	Circular	0.34 (NW/SE)	0.29 (NE/SW)
B-003	Irregular	Moderate	Dispersed	Circular	0.27 (NW/SE)	0.11 (NE/SW)
B-004	Circular	Moderate to Heavy	Concentrated	Circular	0.43 diameter	--
B-005	Irregular	Moderate to Heavy	Dispersed	Circular	0.40 (E/W)	0.38 (N/S)
B-006	Triangular	Light	Concentrated	Circular	0.30 (NE/SW)	0.20 (NW/SE)
B-007	Irregular	Heavy	Concentrated	Circular	0.61 (E/W)	0.50 (N/S)
B-008	Rectangular	Moderate	Dispersed	Circular	0.19 (E/W)	0.09 (N/S)
B-009	Irregular	Heavy	Concentrated	Linear	0.68 (SW/NE)	0.51 (SE/NW)
B-010	Irregular	Heavy	Concentrated	Linear	0.40 (NE/SW)	0.32 (NW/SE)
B-011	Circular	Moderate	Dispersed	Circular	0.20 diameter	--
B-012	Triangular	Heavy	Concentrated	Linear	0.37 (N/S)	0.22 (E/W)
B-013	Rectangular	Heavy	Concentrated	Linear	0.60 (N/S)	0.30 (E/W)
B-014	Irregular	Heavy	Dispersed	Linear	0.35 (NE/SW)	0.33 (NW/SE)

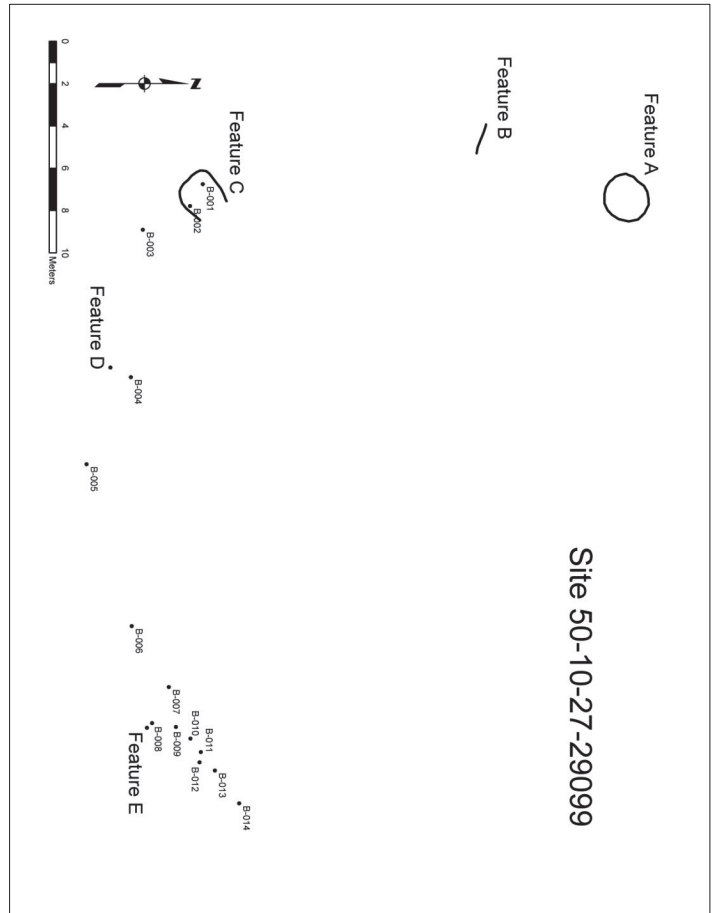


Figure C.27. GPS-based map of Site 50-10-27-29099 complex.

Feature: A

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29099, Feature A is a somewhat disturbed oval-shaped enclosure (Figure C.28). It is located at the north end of the site and is approximately 6.0 meters north (15°) from Feature B. The Feature A enclosure is built on top of a smooth *pāhoehoe* surface. The southern portion of the enclosure wall is badly tumbled, and now consists of a single course of small to medium sub-angular basalt boulders. This section of the enclosure wall may originally have been loosely stacked. The northern half of the enclosure wall is formed by jumbled cobbles and small boulders. The interior ground surface of the enclosure is weathered and exfoliated *pāhoehoe* lava. The interior of structure measures ca. 1.50 meters in diameter. Its exterior measures ca. 2.0 meters (north to south) by ca. 2.2 meters (east to west). The maximum height of the enclosing wall is 0.35 meters.

No surface cultural material was observed at this feature. Site 29099, Feature A is in poor condition.

Feature A was most likely built and occupied as a temporary shelter during the pre-Contact and/or early post-Contact periods. The larger stones along its southern edge may originally have been loosely stacked to serve as a windbreak or may have held down the edge of a mat or other perishable shelter.



Figure C.28. Site 50-10-27-29099, Feature A enclosure (view southwest).

Feature: B

Feature Type: Alignment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29099, Feature B is an alignment of *pāhoehoe* stones (Figure C.29). It is located approximately 6.0 meters south (195°) of Feature A. The alignment is built over a level *pāhoehoe* lava surface. It is constructed of small *pāhoehoe* boulders and cobbles that have been roughly placed into a linear alignment. This alignment is oriented roughly east to west, and measures ca. 1.49 meters in length and ca. 0.48 meters in width. It stands at approximately ca. 0.18 meters in height.

No cultural material was observed in or around the alignment. Feature B is in fair condition and appears to be slightly disturbed with some stones scattered around it. The Feature B alignment may have been used as a small, temporary windbreak shelter or the base of a perishable shelter during the pre-Contact and/or early post-Contact periods.



Figure C.29. Site 50-10-27-29099, Feature B alignment (view south).

Feature: C

Feature Type: C-Shaped Wall

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29099, Feature C is a low C-shaped wall (Figure C.30). It is located approximately 16.5 meters south (163°) from Feature B. The C-shaped wall is built on of a level *pāhoehoe* lava surface. Feature C is a badly disturbed C-shaped wall that is open to the northeast. It appears to have originally consisted of loosely stacked small sub-angular basalt boulders and cobbles, with a few small boulder slabs. The wall has collapsed and is presently only one stone high. The structure measures ca. 2.34 meters in length (northeast to southwest) by ca. 2.30 meters in width (northwest to southeast), with a maximum height of ca. 0.3 meters. There are two areas of heavy battering (B-001 and B-002) located within the C-shape.

No cultural material was observed in or around the feature. Feature C is in fair condition with tumble located around all of its edges. Based on its construction style, Feature C was probably utilized as a temporary windbreak shelter (or the base of one) during the pre-Contact and/or early post-Contact periods.



Figure C.30. Site 50-10-27-29099, Feature C C-shaped wall (view west).

Feature: D

Feature Type: Petroglyphs

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Fair

Description: Site 50-10-27-29099, Feature D consists of one (possibly two) petroglyphs (Figure C.31). The petroglyphs are located approximately 7.0 meters east (109°) from Feature C. These images are pecked into the surface of a roughly level area of *pāhoehoe* lava. The most visible image is a small, roughly oval-shaped depression that measures ca. 0.60 meters by ca. 0.40 meters and is ca. 2 to 3 centimeters deep. Extending out from the western edge of this dimple, are two deeply pecked linear grooves that form a rough “V”. This portion of the petroglyph measures ca. 0.13 meters by ca. 0.11 meters.

Approximately 0.3 meters northwest of this image is a possible second image. This image consists of a faint and shallow line that runs roughly ca. 0.30 meters east to west, and an attached shorter line that extends towards the northeast, measuring ca. 0.10 meters. These two lines may have originally formed part of a linear human figure. An area of battering (B-004) is situated just north and between the two petroglyph images.

No cultural material was observed at Feature D. The petroglyphs are in fair condition. It is unclear exactly what the deeper of the two images represents, although the fainter image may have originally been a portion of a human figure. Both images may possibly date from the pre-Contact and/or early post-Contact periods.



Figure C.31. Site 50-10-27-29099, Feature D, one (possibly two) petroglyphs (view northwest).

Feature: E

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29099, Feature E consists of a badly disturbed stone mound (Figure C.32). Feature E is located along the southeastern edge of the site, approximately 18 meters east (90°) of the Feature D petroglyph. The stone mound is constructed of small to medium sub-angular basalt *pāhoehoe* boulders and slabs that have been loosely piled on to a level *pāhoehoe* lava surface. Due to its poor condition, the original shape of the mound could not be determined. In its present condition, the mound measures ca. 1.22 meters in length (east to west) by ca. 0.50 meters in width (north to south), with a maximum height of ca. 0.35 meters. Nine areas of battering (B-006 through B-014) are located adjacent to the mound. Six of these (B-009 through B-014) extend away from it in a southwestern to northeastern direction.

No cultural material was observed in or around the feature. This feature is in poor condition as stones have tumbled in all directions. The Feature E mound appears to be pre-Contact and/or early post-Contact in age and may have served as a marker, possibly to mark the location of the cluster of temporary habitation shelters.



Figure C.32. Site 50-10-27-29099, Feature E stone mound (view east).

SIHP Number: 50-10-27-29100

Site Type: Battering

Field Number: T-017

Site Measurements: 7 m by ca 4 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early post-Contact

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29100 is comprised of three distinct areas of battering located on a stretch of roughly level *pāhoehoe* lava (Figure C.33). This site is located in the central portion of the project area approximately 100 meters south (196°) of the Queen Lili'uokalani Children's Center parking lot. It is ca. 29.0 meters northwest (320°) of Site 29099. The surrounding vegetation consists of fountain grass, *koa haole*, and *klu*.

The total site area, which consists of 3 distinct areas of battering (B-001, B-002 and B-003), measures approximately 6.0 meters (north to south) by ca. 1.75 meters (east to west).

The first area of battering (B-001) is located in the center of the site and is ca. 1.71 meters northwest of Lava Excavation 529. It consists of a concentration of battering marks that are light and widely dispersed. The battered area is irregular in shape and measures ca. 0.57 meters in length (northeast to southwest) by ca. 0.30 meters in width (northwest to southeast).

B-002 is an area of battering located in the northwestern area of the site. It is roughly circular in shape and consists of battering marks that are light and dispersed. It measures ca. 0.53 meters in length (north to south) by ca. 0.48 meters in width (east to west).

B-003 is located in the southeastern area of the site. It is irregular in shape and consists of light and dispersed battering. The area of battering measures ca. 0.6 meters in length (northeast to southwest) by ca. 0.3 meters in width (northwest to southeast).

No cultural material was observed in or around this site. Site 29100 is in fair condition. The concentrations of battering marks present at Site 29100 are likely to be associated with some form of processing activity conducted during the pre-Contact and/or early post-Contact periods. It is uncertain, however, exactly what kind of processing activity took place here.

Site 50-10-27-29100 was not photographed during the current survey.

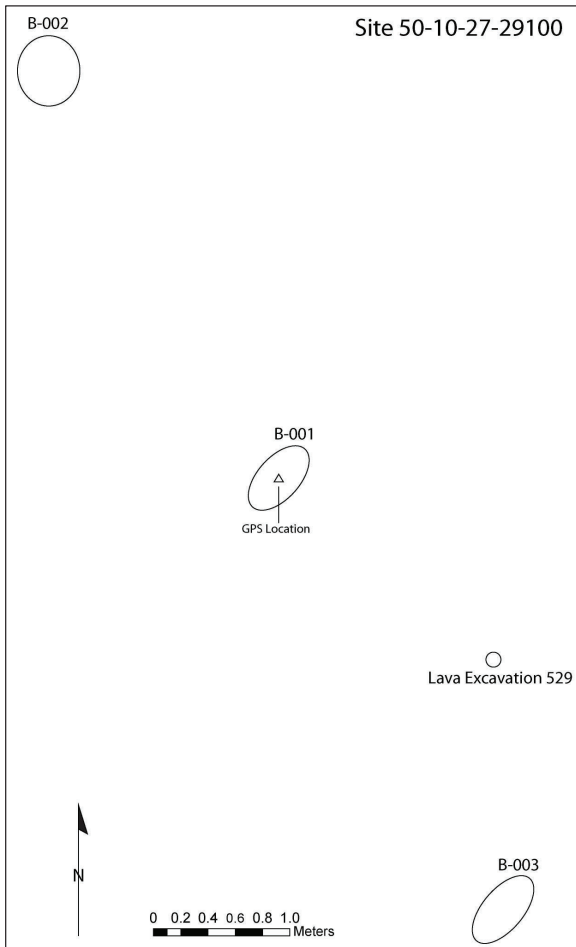


Figure C.33. GPS-based map of Site 50-10-27-29100 battering.

SIHP Number: 50-10-27-29101

Site Type: Stone-Edged Depression

Field Number: T-018

Site Measurements: .74 m by ca. .47 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Fair

Description: Site 50-10-27-29101 is an oval-shaped stone-edged depression (Figure C.34 and Figure C.35). It is located in the eastern portion of the project area, approximately 80.0 meters southwest (219°) from the Queen Lili'uokalani Children's Center parking lot and ca. 60.0 meters northwest (301°) from Site 29100. The stone-edged depression is situated within a sink formed by a collapsed lava blister located at the northern end of a low *pāhoehoe* ridge. The surrounding terrain is a gentle undulating *pāhoehoe* lava flow covered with dense fountain grass and some scattered *noni* and *klu* trees.

The Site 29101 stone-edged depression is located on the floor of the collapsed lava blister. The floor of the blister is covered in loose rubble comprised of small to large sub-angular basalt cobbles, small sub-angular basalt boulders, and a few tabular *pāhoehoe* slabs. These stones appear to represent naturally occurring roof collapse from the ceiling of the blister, as well as some loose slabs from the surface of the surrounding lava ridge. The depression itself appears to have been intentionally created by the removal of a portion of the loose rubble within the floor of the collapsed lava blister, forming a roughly cylindrical pit that is lined with boulders. There appears to be no exterior edge to the stones lining the lip of the depression. Instead, they blend with the surrounding rubble covering the floor of the lava blister. The interior floor of the depression consists of loose cobbles. The interior of the depression measures approximately 0.74 meters in length (northwest to southeast) by ca. 0.47 meters in width (northeast to southwest). It is ca. 0.60 meters in maximum depth. Three natural shelves are located along the interior northern edge of the collapsed lava blister. A single lava excavation is located ca. 3.7 meters northwest from the blister.

No surface cultural material was observed within or around the site. Site 29101 is in fair condition. The original function of this stone-edged depression is uncertain. It is possible that an object, such as a gourd calabash, could have been placed within the depression to catch and hold rainwater. The sides of the depression, and the sinkhole formed by the collapsed blister, would have sheltered the water container from the rays of the sun for much of the day and served to slow evapotranspiration. The natural shelving around the edges of the collapsed lava blister could have served as a good place for storage. It is probable that Site 29101 was modified and utilized during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29101

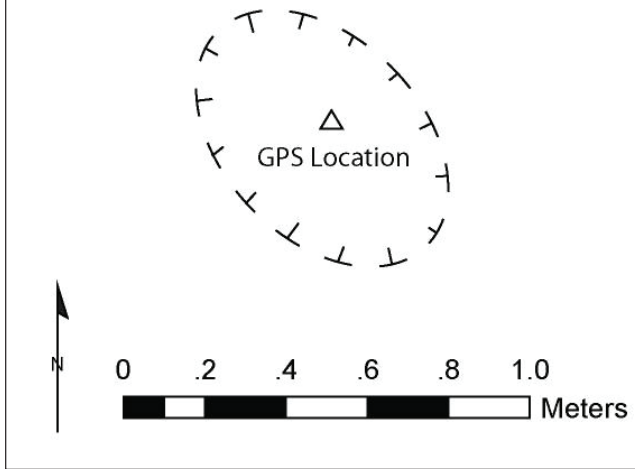


Figure C.34. GPS-based map of Site 50-10-27-29101 stone-edged depression.



Figure C.35. Site 50-10-27-29101 stone-edged depression (view south).

SIHP Number: 50-10-27-29102

Site Type: Mound

Field Number: T-019

Site Measurements: 1.75 m by ca 1.3 m by 0.15 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29102 consists of a badly disturbed stone mound (Figure C.36 and Figure C.37). It is situated in the central portion of the project area, approximately 66.0 meters (262') west from Site 29101. The surrounding terrain consists of level undulating *pāhoehoe* lava. The vegetation in the area is comprised of a ground cover of fountain grass and a scatter of Christmasberry and lantana shrubs.

The remnants of the mound are comprised of a scatter of sub-angular basalt boulders and cobbles. Its original shape and construction could not be determined due to its poor condition. At present, the mound measures approximately 1.75 meters (northeast to southwest) by ca. 1.3 meters (northwest to southeast). Its maximum height is ca. 0.15 meters.

No cultural material was observed in or around the mound. Site 29102 is in poor condition and appears to have completely tumbled in all directions. Due to its disturbed condition it is difficult to determine the mound's original function. It is possible that Site 29102 may have served as a marker during the pre-Contact and/or early post-Contact periods. It is not clear, however, what the mound may have been intended to mark.

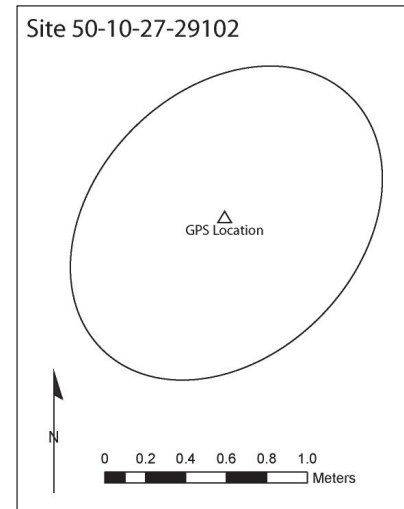


Figure C.36. GPS-based map of Site 50-10-27-29102 stone mound.



Figure C.37. Site 50-10-27-29102 stone mound (view south).

SIHP Number: 50-10-27-29103

Site Type: Mound

Field Number: T-020

Site Measurements: 3.5 m by ca 2 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker/Processing

Condition: Poor

Description: Site 50-10-27-29103 is comprised of an irregularly shaped stone mound and two areas of distinct battering (Figure C.38). The site is located in the center of the project area and is approximately 44.0 meters southeast (150°) from Site 29102. The surrounding terrain consists of relatively smooth and level *pāhoehoe* lava with a ground cover of fountain grass.

The remnants of the mound appear irregular in shape, comprising a scatter of small sub-angular basalt boulders and small to large cobbles (Figure C.39). The scatter of tumbled stones measures approximately 2.2 meters in length (northeast to southwest) by ca. 2.0 meters in width (northwest to southeast), with a maximum height of ca. 0.19 meters.

An area of concentrated heavy battering (B-001) is located ca. 1.0 meters south (170°) from the mound. B-001 is somewhat triangular in shape. This area of battering measures ca. 0.4 meters in length (northeast to southwest) and ca. 0.38 meters in width (northwest to southeast).

B-002 is located adjacent to the southern end of the mound. It consists of a concentration of light dispersed battering that is irregular in shape. The area of battering measures ca. 0.4 meters (north to south) in length by ca. 0.38 meters (east to west) in width.

No cultural material was observed in or around the feature. The Site 29103 mound is in poor condition and appears to be completely collapsed, with tumbling in all directions. Due to its disturbed condition, it is difficult to determine the mound's original function. It is likely, however, that it may have served as a marker. The two areas of battering may be associated with a processing activity conducted at the site during the Pre-Contact and/or early Post-Contact periods, although it is uncertain as to what was being processed.

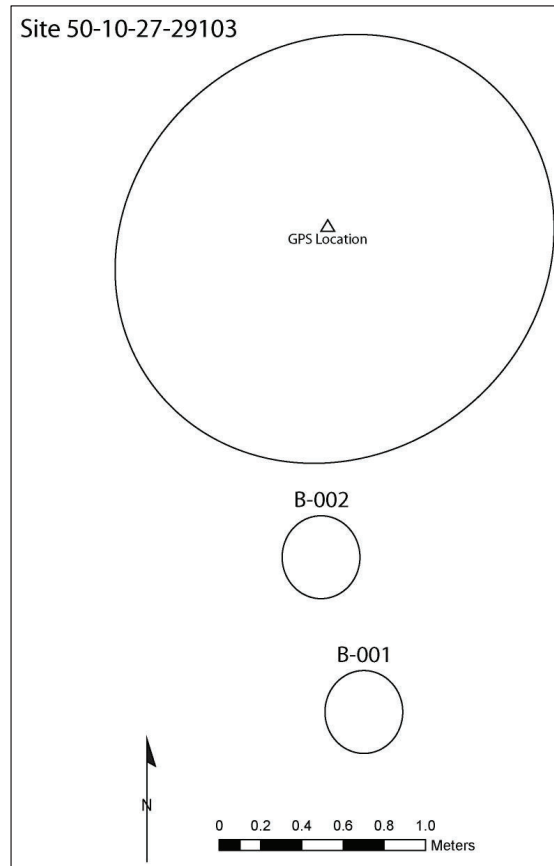


Figure C.38. GPS-based map of Site 50-10-27-29103 stone mound.



Figure C.39. Site 50-10-27-29103 stone mound (view west).

SIHP Number: 50-10-27-29104

Site Type: Complex

Field Number: T-021

Site Measurements: 30 m by ca 45 m

No. Features: 3

Artifacts: Traditional

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Marker/Art/Processing

Condition: Poor/Fair

Description: Site 50-10-27-29104 is a complex of three features: a disturbed C-shaped wall (Feature A), a C-shaped alignment (Feature B), and one stone mound (Feature C) (Figure C.40). The site is located in the central portion of the project area and is ca. 108 meters southeast (157°) from Site 29103. It is situated in a gentle undulating *pāhoehoe* lava flow that is covered with dense patches of fountain grass and scattered *koa haole*, Christmasberry, klu, and *noni* trees.

Feature A is a C-shaped wall located at the southern end of the site. It is loosely piled with small to large *pāhoehoe* slabs and a few large sub-angular basalt cobbles. The structure measures ca. 2.5 m in length (N to S) by ca. 2.7 m in width (E to W), with a maximum height of ca. 0.3 m. One possible petroglyph was noted on the lava surface in the center of Feature A.

Feature B is a C-shaped alignment located ca. 20.0 meters north (341°) from the Feature A C-shaped wall. It is constructed of medium sub-angular *pāhoehoe* boulders and a few basalt cobbles that have been placed into a rough C. Feature B opens to the southwest and measures ca. 2.7 meters in length (north to south) and ca. 2.08 meters in width (east to west), with a maximum height ca. 0.26 meters. A waterworn basalt hammerstone (Artifact 001) was identified approximately 13.0 meters south (180°) of Feature B.

Feature C is a collapsed stone mound located at the northeastern end of the site. The mound remnants are irregular in shape and composed of a scatter of small sub-angular basalt boulders and cobbles. Their extent measures approximately 1.49 meters in length (northeast to southwest) by ca. 1.1 meters in width (northwest to southeast), with a maximum height of ca. 0.25 meters. An area of battering (B-001) was recorded immediately adjacent to the stone mound, as well as two possible petroglyphs located just southwest.

A second area of battering (B-002) was located between Features A and C. The basalt waterworn hammerstone (Artifact 001) located ca. 13.0 meters south (188°) of Feature B, was the only cultural material identified at the site. Site 29104's features are in poor to fair condition.

It appears that Features A and B (C-shapes) most likely functioned as temporary shelters, and the Feature C mound may have served as a marker for these shelters. The possible petroglyphs may have been created by the occupants of the shelter. The battering marks and hammerstone could be associated with some kind of processing activity conducted by the residents. It is likely that Site 29104 was utilized during the Pre-Contact and/or early Post-Contact periods.

Feature: A

Feature Type: C-Shaped Wall

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/ Art

Condition: Poor

Description: Site 50-10-27-29104, Feature A is a collapsed C-shaped wall with a possible associated petroglyph image (Figure C.41). It is located in the southern portion of the site and is approximately 20.0 meters south (161°) from the Feature B C-shaped wall. Feature A is built directly on a level and smooth *pāhoehoe* surface and opens to the west. The C-shaped wall is constructed of loosely piled small to large *pāhoehoe* slabs and a few large sub-angular basalt cobbles. The stones along the eastern portion of the structure are larger in size. The interior of the C-shape measures ca. 2.1 meters in length (north to south) by ca. 1.6 meters in width (east to west). The overall exterior dimensions are ca. 2.5 meters in length (north to south) by ca. 2.7 meters in width (east to west). The maximum height of the wall is ca. 0.3 meters along its interior eastern edge. One possible petroglyph was noted on the center of the floor surface of Feature A. The petroglyph appears to be a rough "L" that may represent a torso and arm of a linear bodied human figure. This partial image, however, is too faint to determine its true shape. No surface cultural material was observed in or around the structure. Feature A is in poor condition and badly tumbled. Site 29104, Feature A was most likely built and used as a temporary shelter during the pre-Contact and/or early post-Contact periods.



Figure C.41. Site 50-10-27-29104, Feature A C-shaped wall (view southwest).

Archaeological Inventory Survey – Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

318

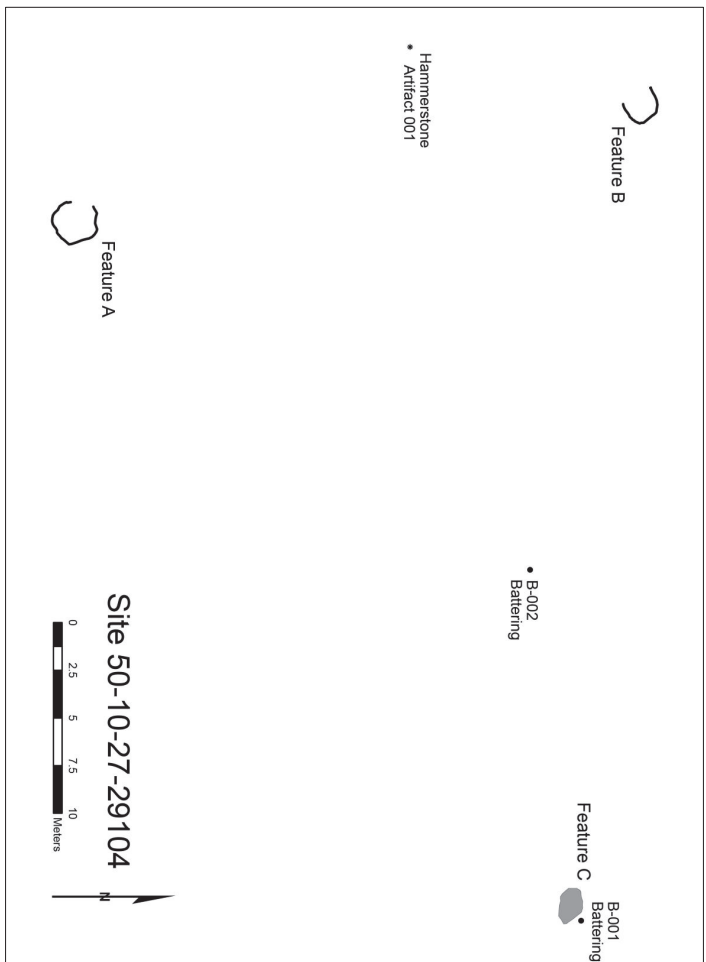


Figure C.40. GPS-based map of Site 50-10-27-29104 complex.

Archaeological Inventory Survey – Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

317

Feature: B

Feature Type: C-Shape Alignment

Artifacts: Traditional

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29104, Feature B is a C-shaped alignment (Figure C.42). It is located at the northwestern end of the site approximately 20.0 meters north and slightly west of the Feature A C-shaped wall. This C-shaped alignment is situated on a level area of *pāhoehoe* lava and opens to the southwest. It is constructed of medium sub-angular *pāhoehoe* boulders and a few basalt cobbles that have been placed into a rough C-shape. It measures ca. 2.7 meters in length (north to south) and ca. 2.08 meters in width (east to west), and ca. 0.26 meters in height.

No cultural material was observed in or immediately around the structure. However, a waterworn basalt hammerstone (Artifact 001) was found approximately 13.0 meters south (188°) of Feature B. Artifact 001 is a fine-grained basalt waterworn boulder with battering on one end (Figure C.43). It measures approximately 21.0 centimeters in length by 13.0 centimeters in width, and 11.0 centimeters in thickness. The battering at one end suggests that it was utilized as a hammerstone, probably during the pre-Contact and/or early post-Contact periods.

Feature B is in poor condition and has been badly disturbed. The eastern portion of the C-shaped alignment appears to have stones that are scattered and jumbled, impacting its true shape. It is likely that Feature B was used for temporary habitation, possibly as a windbreak during the pre-Contact and/or early post-Contact periods.



Figure C.42. Site 50-10-27-29104, Feature B C-shaped alignment (view north).



Figure C.43. Site 50-10-27-29104, Artifact 001, hammerstone.

Feature: C

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker/ Art/ Processing

Condition: Fair

Description: Site 50-10-27-29104, Feature C consists of the remnants of an irregularly shaped collapsed mound (Figure C.44). It is located at the northeastern end of the site, approximately 43.0 meters east (94°) of the Feature B C-shaped alignment. The stone mound is built atop slightly sloping and undulating *pāhoehoe* lava. The remnants of the mound appear irregular in shape and the feature is composed of a scatter of small sub-angular basalt boulders and cobbles. It measures approximately 1.49 meters in length (northeast to southwest) by ca. 1.1 meters in width (northwest to southeast), and it has a maximum height of ca. 0.25 meters.

An area of battering (B-001) is located adjacent to and southeast of Feature C. It consists of a concentration of dispersed and light battering marks, measuring ca. 1.2 meters in length by ca. 0.9 meters in width. There are possibly two very faint petroglyphs just southwest of the battering. The images, however, are too faint to distinguish their true shapes.

No cultural material was observed in or around Feature C. The mound is in poor condition and appears to be badly disturbed, possibly as a result of seismic activity. Due to its disturbed condition, it is difficult to determine the mound's original function. It is likely that it may have served as a marker. It is not clear, however, what the mound was intended to mark. The area of battering may have been associated with some form of processing activity. Feature C appears to have been constructed and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.44. Site 50-10-27-29104, Feature C remnant stone mound (view southeast).

SIHP Number: 50-10-27-29105

Site Type: Enclosure

Field Number: T-022

Site Measurements: 3.4 m by ca 2.12 m by 0.3 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29105 is comprised of the remnants of a single, badly disturbed stone-walled enclosure (Figure C.45 and Figure C.46). The site is located within the central-eastern portion of the project area, approximately 54.0 meters east (110°) of Site 29104, Feature C. It is situated on slightly sloping and undulating *pāhoehoe* lava. The vegetation of the surrounding area consists of a ground cover of fountain grass with a scattering of *noni* and Christmasberry trees.

The enclosure may originally have been oval or roughly rectangular, but it is now so badly tumbled that it is impossible to determine its original shape. At present, the enclosure consists of a scatter of small to large *pāhoehoe* slabs, all of which appear to be resting flat on their sides. It is likely that these slabs were originally removed from a lava excavation nearby, and then set on edge to create a windbreak shelter. The enclosure's exterior measures ca. 3.24 meters in length (north to south) by ca. 2.12 meters in width (east to west). Its interior measurements are ca. 2.12 meters in length (north to south) by ca. 1.5 meters in width (east to west), with a maximum height of ca. 0.3 meters.

No cultural material was observed in or around the site. Site 29105 is in poor condition and is badly tumbled, possibly as a result of seismic activity. The enclosure was most likely constructed and utilized as a windbreak shelter during the pre-Contact and/or early post-Contact periods.

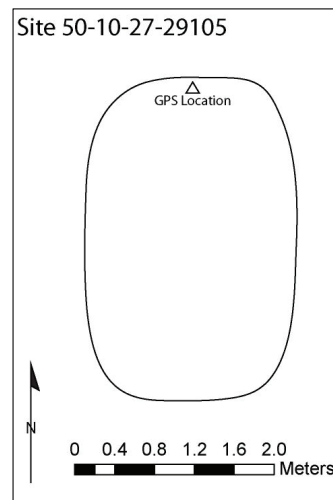


Figure C.45. GPS-based map of Site 50-10-27-29105 enclosure.



Figure C.46. Site 50-10-27-29105 remnant enclosure (view east).

SIHP Number: 50-10-27-29106

Site Type: Alignment

Field Number: T-023

Site Measurements: 1.91 m by ca. 0.37 m by ca. 0.32 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29106 consists of a single short and badly disturbed linear stone alignment (Figure C.47 and Figure C.48). The site is situated within the central portion of the project area, approximately 66.0 meters south (177°) of the Site 50-10-27-29105 enclosure. The terrain is a gentle undulating *pāhoehoe* lava flow covered with dense patches of fountain grass and scattered Christmasberry, *noni*, and *klu* trees. The stone alignment is constructed of five small sub-angular basalt boulders, two of which have been pushed aside. A few scattered small to large sub-angular basalt cobbles are also present but do not appear to be part of the alignment. The stone alignment is built on level, smooth, slightly ropy *pāhoehoe* bedrock. It measures ca. 1.91 meters in length (northwest to southeast) by ca. 0.37 meters in width (northeast to southwest) and has a maximum height of ca. 0.32 meters.

No surface cultural material was observed at this site. The Site 29106 stone alignment is in poor condition. It appears that this stone alignment most likely functioned as a temporary windbreak shelter during the pre-Contact and/or early post-Contact periods. The *pāhoehoe* surface on the northeast side of the alignment is very level and smooth, while the lava on the southwest side is ropy. This might suggest that the northeast side of the structure served as a more comfortable space for habitation.

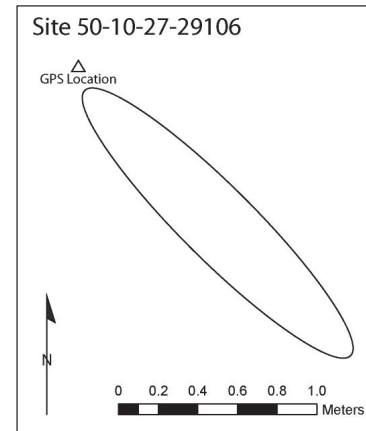


Figure C.47. GPS-based map of Site 50-10-27-29106 stone alignment.



Figure C.48. Site 50-10-27-29106 stone alignment (view southeast).

SIHP Number: 50-10-27-29107

Site Type: Battering

Field Number: T-027

Site Measurements: 94 m by 39 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact/Historic

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29107 consists of 42 distinct areas of battering (B-001 to B-042; Table C.2). This site is located in the southeastern portion of the project area. Its southern most concentration of battering (B-001) is located approximately 56.0 meters east (114°) of the Site 25646 C-shaped wall. The site sits on a relatively level *pāhoehoe* flow. The adjacent vegetation includes fountain grass with a few klu shrubs and one Christmasberry tree. The site area is surrounded by rougher and more broken areas of *pāhoehoe* lava with heavier shrub vegetation.

The stretch of lava covered by the battering is irregular in shape and measures approximately 94.1 meters in length (north to south) by ca. 39.0 meters in width (east to west). The 42 areas of distinct battering are spread intermittently throughout the site area (Figure C.49 and Figure C.50). Many of the battering marks appear to have been chiseled with a modern, linear-edged iron tool (Figure C.51). The table below lists and describes the 42 areas of battering in detail.

Adjacent to the south end of B-004 is a mound that appears to be modern in construction. The mound is roughly circular in shape and constructed of loosely piled small sub-angular basalt boulders. It measures ca. 0.95 meters in length (north to south) by ca. 0.90 meters in width (east to west) with a height of ca. 0.43 meters. Bulldozing tracks are present on the *pāhoehoe* bedrock in between B-004 and the apparently modern mound.

No cultural material was observed within the site area. However, fragments of fine-grained, dense, angular (fractured) basalt cobbles and small boulders that did not show any obvious evidence of battering were present in and amongst the battered *pāhoehoe* lava. Site 29107 is in fair condition. Bulldozing tracks have scarred the *pāhoehoe* bedrock within the central to southern site area. The former Swing Zone driving range has also impacted the southern portion of the area.

The more circular battering marks suggests that this site was utilized in the pre-Contact and/or early post-Contact periods, while the more linear tool marks indicate that it may possible have been in use up into the historic period. The substantial amount of battering present in the area suggests that Site 29107 was the focus of a relatively intense and concentrated processing activity, though what was being processed is unclear.



Figure C.49. GPS-based map of Site 50-10-27-29107 battering.

Table C.2 Site 50-10-27-29107, Table of Battering.

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-001	Circular	Moderate	Concentrated	Circular	0.13 (NW/SE)	0.11 (NE/SW)
B-002	Oval	Heavy	Concentrated	Circular	0.60 (N/S)	0.4 (E/W)
B-003	Irregular	Heavy	Dispersed	Linear	0.89 (NW/SE)	0.06 (NE/SW)
B-004	Irregular	Heavy	Concentrated	Circular	0.62 (N/S)	0.60 (E/W)
B-005	Irregular	Moderate	Concentrated	Circular	0.32 (E/W)	0.30 (N/S)
B-006	Irregular	Heavy	Dispersed	Linear	0.69 (N/S)	0.86 (E/W)
B-007	Irregular	Heavy	Dispersed	Linear	0.52 (N/S)	0.37 (E/W)
B-008	Irregular	Heavy	Concentrated	Linear	0.57 (NE/SW)	0.49 (NW/SE)
B-009	Irregular	Moderate	Dispersed	Circular	0.70 (E/W)	0.43(N/S)
B-010	Irregular	Heavy	Concentrated	Linear	0.69 (N/S)	0.61 (E/W)
B-011	Oval	Heavy	Concentrated	Linear	0.91 (E/W)	0.67 (N/S)
B-012	Irregular	Heavy	Dispersed	Linear	1.10 (N/S)	0.52 (E/W)
B-013	Circular	Moderate	Concentrated	Circular	0.27 (N/S)	0.21 (E/W)
B-014	Oval	Heavy	Dispersed	Linear	0.92 (N/S)	0.70 (E/W)
B-015	Irregular	Heavy	Dispersed	Linear	1.10 (NE/SW)	0.51 (NW/SE)
B-016	Irregular	Moderate	Dispersed	Circular	1.4 (E/W)	0.52 (N/S)
B-017	Irregular	Moderate	Dispersed	Linear	0.96 (N/S)	0.65 (E/W)
B-018	Irregular	Light	Concentrated	Circular	0.14 (N/S)	0.10 (E/W)
B-019	Irregular	Light	Concentrated	Linear	0.56 (NW/SE)	0.52 (NE/SW)
B-020	Oval	Moderate	Concentrated	Circular	0.26 (NW/SE)	0.22 (E/W)
B-021	Irregular	Moderate	Concentrated	Circular	0.40 (NW/SE)	0.15 (NE/SW)
B-022	Square	Moderate	Concentrated	Linear	0.54 (E/W)	0.52 (N/S)
B-023	Irregular	Moderate	Dispersed	Linear and Circular	0.68 (NW/SE)	0.48 (NE/SW)
B-024	Irregular	Heavy	Concentrated	Circular	1.70 (NW/SE)	0.88 (NE/SW)
B-025	Irregular	Light	Dispersed	Linear	0.60 (E/W)	0.50 (N/S)
B-026	Irregular	Moderate	Concentrated	Circular	0.38 (NE/SW)	0.23 (NW/SE)
B-027	Circular	Light	Concentrated	Linear	0.52 (NW/SE)	0.50 (NE/SW)
B-028	Irregular	Moderate	Dispersed	Linear	0.60 (N/S)	0.52 (E/W)
B-029	Irregular	Moderate	Concentrated	Linear	0.44 (E/W)	0.30 (N/S)
B-030	Irregular	Heavy	Dispersed	Linear	0.89 (NW/SE)	0.52 (NE/SW)
B-031	Irregular	Light	Dispersed	Linear	0.45 (E/W)	0.37 (N/S)
B-032	Oval	Light	Concentrated	Circular	0.54 (N/S)	0.39 (E/W)
B-033	Irregular	Light	Concentrated	Circular	0.40 (N/S)	0.40 (E/W)
B-034	Irregular	Heavy	Dispersed	Linear	0.70 (N/S)	0.70 (E/W)

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-035	Irregular	Moderate	Dispersed	Linear	1.00 (NW/SE)	0.70 (NE/SW)
B-036	Irregular	Heavy	Concentrated	Circular	0.79 (E/W)	0.62 (N/S)
B-037	Oval	Heavy	Concentrated	Circular	1.00 (NW/SE)	0.69 (NE/SW)
B-038	Irregular	Heavy	Dispersed	Circular	0.97 (NE/SW)	0.82 (NW/SE)
B-039	Irregular	Moderate	Dispersed	Linear	0.74 (N/S)	0.67 (E/W)
B-040	Irregular	Heavy	Dispersed	Linear	1.20 (E/W)	0.60 (N/S)
B-041	Irregular	Moderate	Concentrated	Circular	0.54 (E/W)	0.32 (N/S)
B-042	Oval	Moderate	Concentrated	Linear	0.63 (E/W)	0.53 (N/S)



Figure C.50. Site 50-10-27-29107 area of heavy battering (view west).



Figure C.51. Site 50-10-27-29107 area of linear battering (view west).

SIHP Number: 50-10-27-29108

Site Type: Mound

Field Number: T-028

Site Measurements: 1.3 m by ca. 0.81 m by ca. 0.34 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Good

Description: Site 50-10-27-29108 consists of a single rectangular stone mound (Figure C.52 and Figure C.53). The site is located in the eastern portion of the project area, approximately 228 meters northeast (48°) of Site 25646, and ca. 23.0 meters southwest (225°) of the Queen Lili'uokalani Children's Center access road. The Site 29108 stone mound is situated on a low *pāhoehoe* ridge, running northeast to southwest, with an area of naturally broken up *pāhoehoe* lava located just downslope of the mound. The surrounding vegetation includes fountain grass and klu.

The Site 29108 mound is constructed of loosely piled small to medium sub-angular basalt *pāhoehoe* slabs that have been removed from the area of broken up lava. The mound measures approximately 1.03 meters in length (northwest to southeast) by ca. 0.81 meters in width (northeast to southwest) and is ca. 0.34 meters in height. Approximately 3.0 meters southwest of the mound are scattered *pāhoehoe* slabs, which presently do not form a structure. It is possible, however, that these slabs may once have formed a mound somewhat similar to the surviving mound at Site 29108.

No cultural material was observed in or around the mound. Site 29108 is in good condition, with only slight tumble to the west. Its construction style and location suggest that the mound may have served as a marker during the pre-Contact and/or early post-Contact periods.

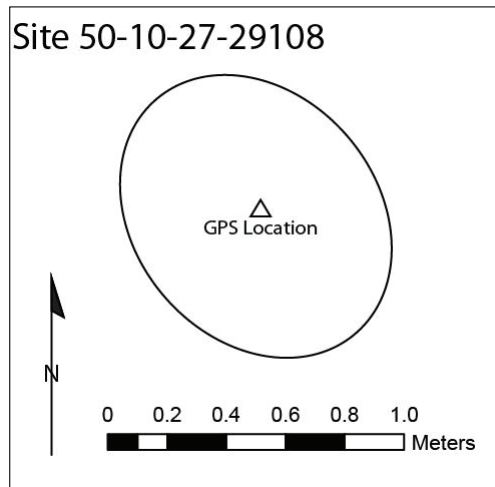


Figure C.52. GPS-based map of Site 50-10-27-29108 stone mound.



Figure C.53. Site 50-10-27-29108 stone mound (view west).

SIHP Number: 50-10-27-29109

Site Type: Rock Concentration

Field Number: T-029

Site Measurements: 0.97 m by ca. 0.87 m by ca. 0.31 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29109 consists of a concentration of stones that appears to represent a single, badly collapsed stone mound (Figure C.54 and Figure C.55). It is located in the eastern portion of the project area, approximately 38.0 meters southwest (225°) of the Queen Lili'uokalani Children's Center access road. The site is ca. 16.5 meters northwest (287°) of Site 29108. The mound is situated atop a smooth to undulating *pāhoehoe* lava ridge. The surrounding vegetation consists of a ground cover of fountain grass, with a grouping of *noni* trees and a scatter of *klu* shrubs.

Due to its poor condition, the original shape and construction of the structure could not be determined. In its present condition the mound consists of a scatter of small sub-angular boulders and cobbles. This scatter measures ca. 0.97 meters in length (northeast to southwest) by ca. 0.87 meters in width (northwest to southeast), with a maximum height of ca. 0.31 meters.

No cultural material was noted at this site. The mound is in poor condition and appears to be badly collapsed, possibly as a result of seismic activity. Some stones have tumbled downslope into a natural fissure that runs across the surface of the *pāhoehoe* lava. It is difficult to determine the mound's original function because of its collapsed state. Site 29109 may have possibly served as a marker due to its location atop of a lava ridge. It is not clear, however, what the mound was intended to mark. The mound appears to be pre-Contact and/or early post-Contact in age.

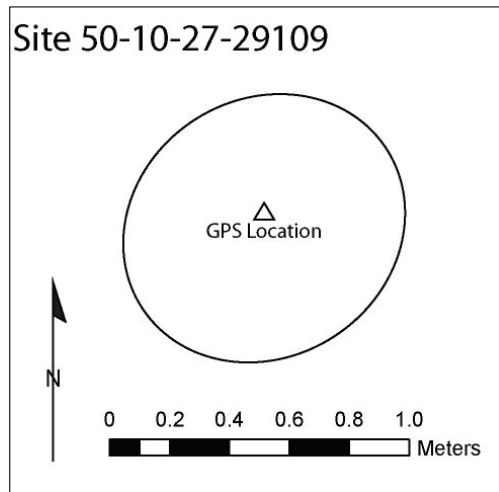


Figure C.54. GPS-based map of Site 50-10-27-29109 rock concentration.



Figure C.55. Site 50-10-27-29109 rock concentration (view to the southwest).

SIHP Number: 50-10-27-29110
Site Type: Rock Concentration
Field Number: T-030
Site Measurements: 3.02 m by ca. 2.37 m by ca. 0.20 m
No. Features: 1
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Uncertain
Condition: Poor

Description: Site 50-10-27-29110 is a concentration of scattered stones (Figure C.56 and Figure C.57). It is located in the northeastern portion of the project area, approximately 31.0 meters southwest (236°) of Site 29109. The site is situated on a relatively level *pāhoehoe* lava surface, atop a broad *pāhoehoe* ridge. The surrounding vegetation consists of dense patches of fountain grass with a scattering of *uhaloa* shrubs, Christmasberry, *koa haole* and *noni* trees.

Site 29110 consists of a grouping of dense, small to medium sub-angular basalt *pāhoehoe* boulders and cobbles. The stones are spread across a wide area of *pāhoehoe* lava, with some boulders scattered downslope. The rock concentration covers an area measuring approximately 3.02 meters in length (northwest to southeast), and ca. 2.37 meters in width (northeast to southwest) and is ca. 0.20 meters in height.

No cultural material was observed at this site. Site 29110 is in extremely poor condition. Due to its disturbed condition, it is difficult to determine either the original shape or function of the rock scatter. It is possible, however, that it may have once formed a stone mound, or a small C-shaped alignment that would have served as a temporary windbreak shelter during the pre-Contact and/or early post-Contact periods.

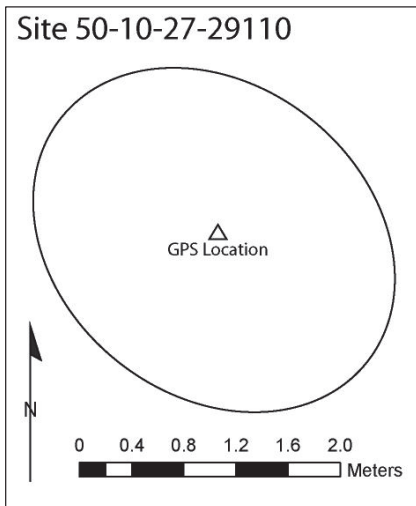


Figure C.56. GPS-based map of Site 50-10-27-29110 rock concentration.



Figure C.57. Site 50-10-27-29110 rock concentration (view northwest).

SIHP Number: 50-10-27-29111

Site Type: C-Shaped Wall

Field Number: T-031

Site Measurements: ca. 3.01 m by ca. 1.40 m by ca. 0.22 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29111 is a single, collapsed C-shaped wall (Figure C.58 and Figure C.59). It is situated near the southeastern portion of the project area, approximately 50.0 meters west (261°) from the current entrance to the Queen Lili'uokalani Children's Center. The site is located ca. 83.0 meters southeast (135°) of Site 29110. The surrounding terrain consists of undulating *pāhoehoe* lava flow covered with dense patches of fountain grass and a scattering of Christmasberry, klu, opiuma, and *noni* trees. The structure is located on the higher point of the lava flow overlooking a shallow gully to the northwest and the west.

The collapsed C-shaped wall is constructed of loosely piled small to medium *pāhoehoe* slabs, which probably were originally set on edge. Several slabs are concentrated together at the center of the wall, with the number of slabs thinning out towards its ends. The C-shape is built directly on a smooth and slightly weathered *pāhoehoe* surface and opens to the northeast. The interior surface is fairly level, and the interior dimensions are ca. 2.60 meters in length (northwest to southeast) by ca. 0.97 meters wide (northeast to southwest). The exterior dimensions are ca. 3.01 meters in length (northwest to southeast), by ca. 1.40 meters wide (northeast to southwest). The maximum thickness of the wall is ca. 0.99 meters and its maximum height is ca. 0.22 meters.

No cultural material was observed at this site. Site 29111 is in poor condition. The C-shaped wall was probably built during the pre-Contact and/or early post-Contact periods and utilized as a temporary windbreak shelter.

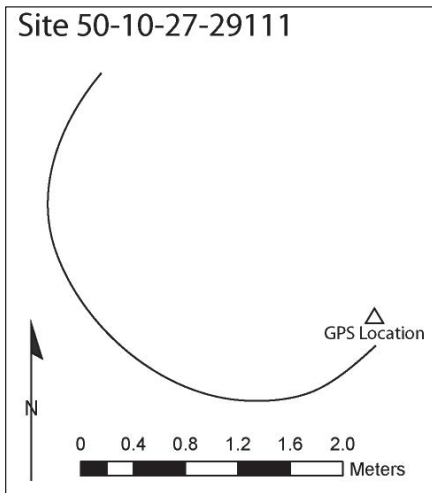


Figure C.58. GPS-based map of Site 50-10-27-29111 C-shaped wall.



Figure C.59. Site 50-10-27-29111 C-shaped wall (view south).

SIHP Number: 50-10-27-29112

Site Type: C-Shaped Wall

Field Number: T-032

Site Measurements: 2.2 m by ca 1.9 m by ca. 0.31 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Processing

Condition: Fair

Description: Site 50-10-27-29112 is a collapsed C-shaped wall (Figure C.60 and Figure C.61). It is located in the eastern portion of the project area, approximately 68.0 meters south (191°) of Site 29110. The site is situated on the slightly sloping surface of a low outcrop of undulating *pāhoehoe* lava. The surrounding vegetation includes fountain grass, *uhaloa*, and lantana shrubs with a scattering of Christmasberry trees.

The C-shaped wall is almost circular in shape and may have originally been an enclosure. The northwest portion of the structure is collapsed, and it appears that stones have tumbled downslope. As a result, the C-shape is open to the northwest. It is constructed of small to medium sub-angular basalt cobbles and boulders, which may have originally been loosely stacked to form a wall. This wall, however, has collapsed and is presently only one stone high. The interior of the C-shape measures ca. 1.8 meters in length (northwest to southeast) by ca. 1.1 meters in width (northeast to southwest). The overall exterior dimensions are ca. 2.2 meters in length (northwest to southeast) by ca. 1.9 meters in width (northeast to southwest). The current wall is ca. 0.31 meters thick and ca. 0.31 meters in height.

Three areas of battering (B-001 through B-003) were observed south of the C-shaped wall. The first area of battering (B-001) is irregular in shape and consists of a moderate amount of battering marks made with a circular tool. It measures ca. 0.42 meters in length (northwest to southeast) by ca. 0.38 meters in width (northeast to southwest). B-002 is located nearest to the C-shaped wall. B-002 is roughly oval in shape and consists of a light to moderate amount of battering marks made with a circular tool. The area of battering measures ca. 0.60 meters in length (northwest to southeast) by ca. 0.35 meters in width (northeast to southwest). B-003 is an irregularly shaped area with a heavy amount of battering marks made with circular tool. It measures ca. 0.50 meters in length (north to south) by ca. 0.30 meters in width (east to west).

No cultural material was observed in or around the site. Site 29112 is in fair condition. The structure appears to be collapsed with possible tumble on its northwest edge.

The C-shaped wall may have served as a temporary windbreak shelter, and the areas of battering may have resulted from some sort of processing activity. It is uncertain, however, what kind of processing activity took place here. Site 29112 appears to be pre-Contact and/or early post-Contact in age.

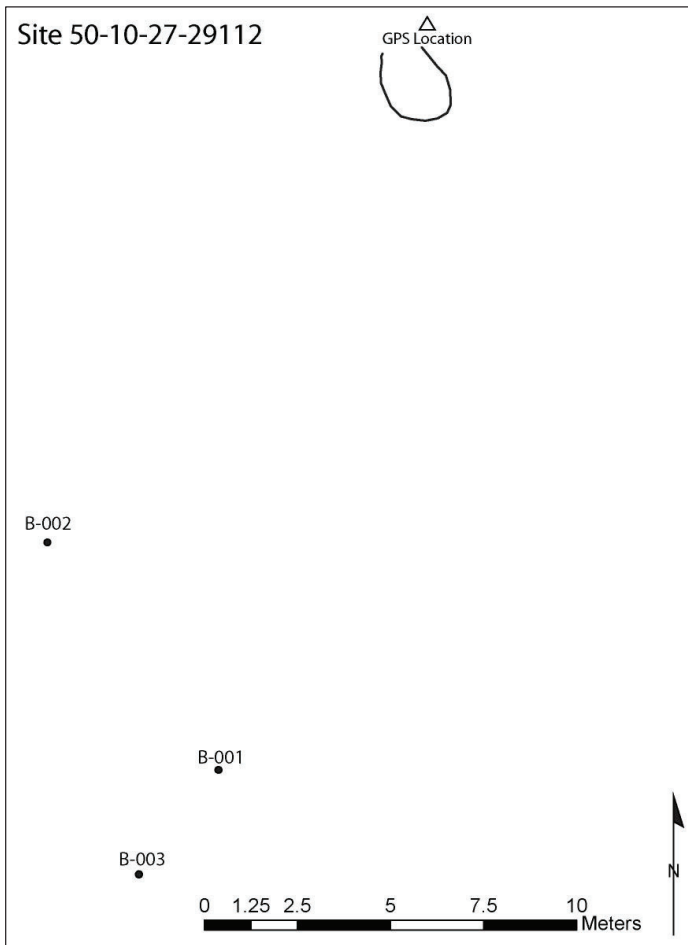


Figure C.60. GPS-based map of Site 50-10-27-29112 C-shaped wall.

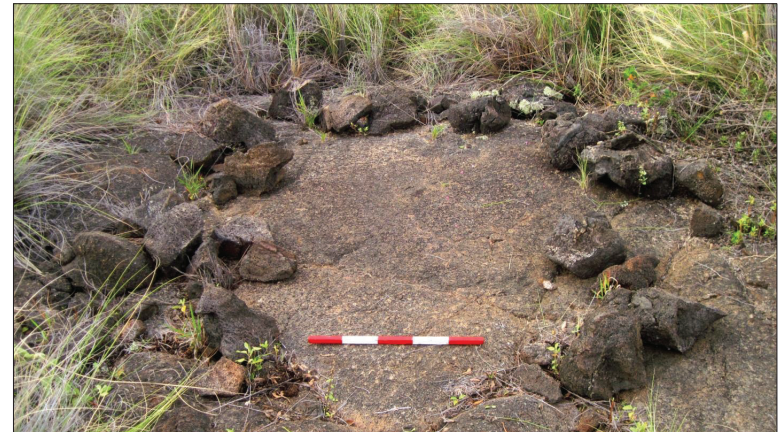


Figure C.61. Site 50-10-27-29112 C-shaped wall (view southeast).

SIHP Number: 50-10-27-29113

Site Type: Mound

Field Number: T-034

Site Measurements: 1.24 m by ca 0.94 m by ca. m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29113 is a single badly collapsed stone mound that is irregular in shape (Figure C.62 and Figure C.63). The site is located near the eastern boundary of the project area, and approximately 69.0 meters southeast (142°) from Site 13271 Feature A. The mound is situated on slightly sloping, ropey *pāhoehoe* lava. The surrounding vegetation consists of a ground cover of fountain grass with a scattering of klu shrubs.

Due to its poor condition, the original shape of the mound could not be determined. At present, it appears to be a scatter of small boulder slabs, and some small sub-angular boulders and cobbles. It measures ca. 1.24 meters in length (east to west) by ca. 0.94 meter in width (north to south), with a maximum height is ca. 0.3 meters.

Southeast (125°) of the Site 29113 mound is a concentration of four boulder slabs and one sub-angular boulder that may possibly have once formed a mound. These stones might, however, also represent loose rock moved from an adjacent area of disturbed *pāhoehoe*. A similarly badly disturbed concentration of stone is located ca. 14.0 meters east (94°) of the site.

No cultural material was observed in or around Site 29113. The mound is in poor condition and appears complete collapsed, possibly as a result of seismic activity. Due to its disturbed condition, it is difficult to determine the mound's original function. It is likely, however, that it may have served as marker. Site 29113 appears to be pre-Contact and/or early post-Contact in age.

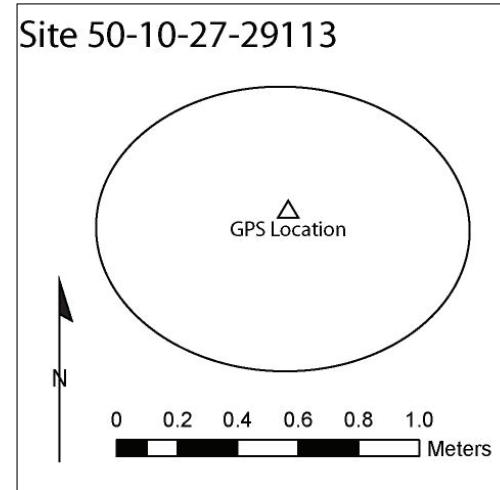


Figure C.62. GPS-based map of Site 50-10-27-29113 stone mound.



Figure C.63. Site 50-10-27-29113 stone mound (view northwest).

SIHP Number: 50-10-27-29114

Site Type: Battering

Field Number: T-035

Site Measurements: 17.6 m by ca 7.0 m

No. Features: 1

Artifacts: Traditional

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact/Historic

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29114 consists of 16 areas of distinct battering (B-001 to B-016). It is located in the southern portion of the project area, northwest of the former Swing Zone driving range. The site is approximately 54.0 meters southeast (115°) of Site 29113. It is situated on a low area of undulating *pāhoehoe* lava. The surrounding vegetation is comprised of fountain grass, klu shrubs, and Christmasberry trees.

The 16 battered areas are spread fairly evenly throughout the site (Figure C.64). The battering marks observed at this site are both circular and linear (Figure C.65 and Table C.3). The linear marks appear to have been made with a linear tool, possibly an iron chisel. The total site area measures approximately 17.6 meters in length (northeast to southwest) by ca. 7.0 meters in width (northwest to southeast). The table below describes the 16 areas of battering in detail.

One hammerstone (Artifact 001) was observed at Site 29114 (Figure C.66). It was found approximately ca. 0.95 meters east (113°) of battering area B-007. Artifact 001 is a dense, fine-grained, waterworn basalt boulder with battering on one end. The hammerstone is irregular in shape and measures ca. 15.0 centimeters in length by ca. 14.0 centimeters wide by ca. 10.5 centimeters thick. No other artifacts were observed, however, small sub-angular basalt boulders of varying densities are scattered throughout the site area and could have been used as hammerstones, though they show no direct evidence of battering.

Site 29114 is in fair condition. Bulldozer tracks have scarred the *pāhoehoe* bedrock in the northeastern area of the site. The former Swing Zone driving range has also impacted the southeastern portion of the site. The presence of both circular battering and linear chisel tool marks suggests that Site 29114 was utilized during both the pre-Contact and/or early post-Contact and historic periods. The vast amount of battering and the presence of a boulder hammerstone suggest that the site may be associated with some processing activity. It is uncertain, however, what kind of processing took place here. It is possible that during the pre-Contact and/or early post-Contact periods, endemic plants used for fish poisoning grew in the vicinity, and this area served as a place for processing the fish poison plant by pounding it. This, however, would not appear to account for the linear chisel marks.

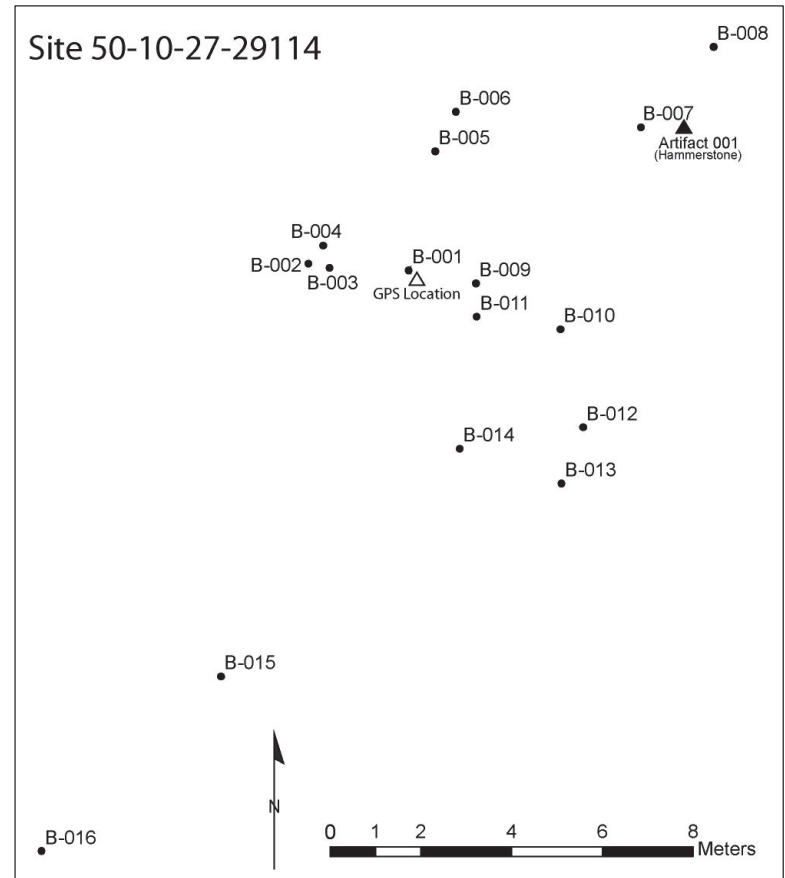


Figure C.64. GPS-based map of Site 50-10-27-29114 battering.

Table C.3 Site 50-10-27-29114, Table of Battering.

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-001	Irregular	Heavy	Concentrated	Linear and Circular	0.63 N/S	0.50 E/W
B-002	Irregular	Moderate	Somewhat Dispersed	Circular	0.33 N/S	0.22 E/W
B-003	Irregular	Light	Somewhat Dispersed	Circular	0.26 N/S	0.22 E/W
B-004	Irregular	Moderate to Heavy	Somewhat Concentrated	Circular	0.53 E/W	0.32 N/S
B-005	Oval	Heavy	Concentrated	Circular	0.83 E/W	0.32 N/S
B-006	Irregular	Moderate	Concentrated	Circular	0.36 N/S	0.25 E/W
B-007	Oval	Moderate	Dispersed	Circular	0.43 E/W	0.34 N/S
B-008	Oval	Heavy	Concentrated	Circular and Linear	0.56 N/S	0.40 E/W
B-009	Oval	Heavy	Concentrated	Linear	0.39 N/S	0.28 E/W
B-010	Somewhat Triangular	Light	Somewhat Dispersed	Circular	0.34 NW/SE	0.26 NE/SW
B-011	Irregular	Heavy	Dispersed	Linear	0.47 NW/SE	0.17 NE/SW
B-012	Irregular	Heavy	Dispersed	Linear	0.50 NW/SE	0.42 NE/SW
B-013	Triangular	Heavy	Concentrated	Linear	0.76 N/S	0.74 E/W
B-014	Irregular	Moderate	Concentrated	Circular	0.22 E/W	0.12 N/S
B-015	Oval	Light	Concentrated	Circular	0.17 N/S	0.10 E/W
B-016	Irregular	Moderate	Dispersed	Linear	0.40 N/S	0.38 E/W



Figure C.65. Site 50-10-27-29114 area of battering (view east).



Figure C.66. Site 50-10-27-29114, Artifact 001 Hammerstone.

SIHP Number: 50-10-27-29115

Site Type: Stone Cist

Field Number: T-036

Site Measurements: 0.49 m by ca. 0.43 m by ca. 0.28 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Storage

Condition: Fair

Description: Site 50-10-27-29115 is a stone cist located in the southern portion of the project area, approximately 25.0 meters east (108°) from Site 29113. This site is situated on top of undulating *pāhoehoe* near a large collapsed sink hole filled with broken *pāhoehoe* slab boulders. The surrounding vegetation consists of dense patches of fountain grass, scattered 'uhaloa, koa haole, klu, and Christmasberry trees.

Site 29115 is a stone cist that is roughly rectangular in shape (Figure C.67). It is comprised of two *pāhoehoe* slab boulders set on edge over a natural crack in the *pāhoehoe* lava, with a larger *pāhoehoe* slab boulder resting atop them (Figure C.68 and Figure C.69). These three set slabs form a rectangular box shape with an opening facing south. The cist is backed to the north by an undulation in the lava. Smaller *pāhoehoe* cobble and boulder slabs are balanced atop and around the cist. Immediately to the southeast of the opening is a large *pāhoehoe* boulder slab that may possibly have served as a cover to the opening. The cist measures approximately 0.49 meters in length (north to south) by ca. 0.43 meters in width (east to west), and ca. 0.28 meters in height. There is a small scatter of *pāhoehoe* slab boulders located ca. 3.3 meters south (199°) of the cist that may at one time have possibly been a mound. The scattered state of these stones, however, makes it difficult to determine their original shape or structure.

No cultural material was observed in or around the stone cist. Site 29115 is in fair condition. Some of the smaller cobble slabs that were stacked on top the cist appear to have tumbled. It is possible this stone cist may have served as a cupboard for storage that was built and utilized during the pre-Contact and/or early post-Contact periods.

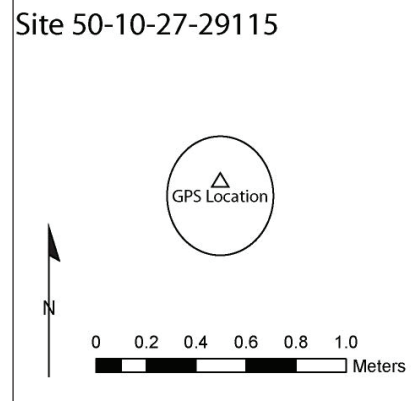


Figure C.67. GPS-based map of Site 50-10-27-29115 stone cist.



Figure C.68. Site 50-10-27-29115 stone cist (view northwest).



Figure C.69. Site 50-10-27-29115 stone cist detail (view northwest).

SIHP Number: 50-10-27-29116

Site Type: Battering

Field Number: T-037

Site Measurements: 2 m by ca 1.0 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29116 consists of three distinct areas of battering (B-001 to B-003). The site is located in the southern portion of the project area, approximately 28 meters north (7") of Site 29115. It is situated on level *pāhoehoe* on top of a very low and broad *pāhoehoe* ridge. The surrounding vegetation is comprised of dense patches of fountain grass and scattered *'uhaloa* and *klu* shrubs, and Christmasberry and *nomi* trees.

Site 29116 consists of three distinct areas of battering on a single panel of level *pāhoehoe* (Figure C.70 and Figure C.71). Table C.4 describes the three areas of battering in detail.

No cultural material was observed at the site. This site appears to be in fair condition, however, areas of the *pāhoehoe* lava exhibit scarring from bulldozer tracks.

The battering within Site 29116 may be associated with a processing activity conducted during the pre-Contact and/or early post-Contact periods. It is uncertain what kind of processing took place. It is possible, however, that this area was used for the preparation of fish poison from the *'ākia* shrub.

Table C.4 Site 50-10-27-29116, Table of Battering.

Battering No.	Shape	Density	Intensity	Tool Mark Shape	Length (M)	Width (M)
B-001	Linear	Concentrated	Moderate	Circular	0.7 (E/W)	0.28 (N/S)
B-002	Oval	Concentrated	Heavy	Circular	0.9 (NW/SE)	0.5 (NE/SW)
B-003	Irregular	Concentrated	Moderate	Linear and Circular	0.58 (E/W)	0.36 (N/S)

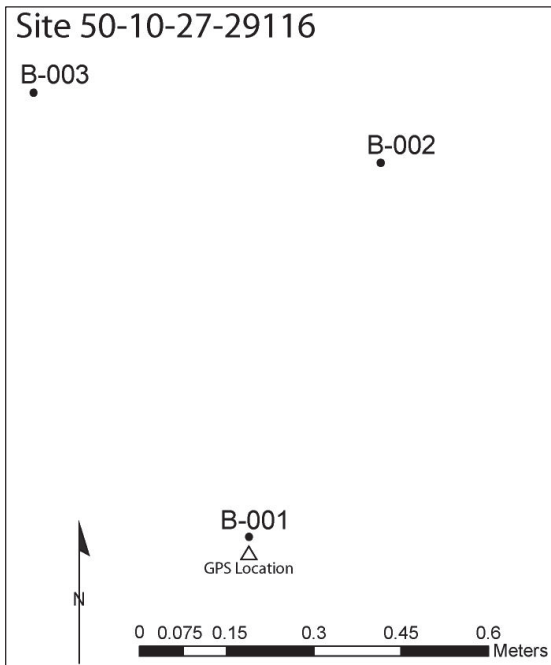


Figure C.70. GPS-based map of Site 50-10-27-29116 battering.



Figure C.71. Site 50-10-27-29116 area of battering (view northeast).

SIHP Number: 50-10-27-29117

Site Type: Mound

Field Number: T-040

Site Measurements: 14 m by ca 4.0 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker/Processing

Condition: Fair

Description: Site 50-10-27-29117 consists of a single collapsed stone mound and one area of battering (Figure C.72). The site is located in the southern portion of the project area, approximately 84.0 meters southwest (204°) of Site 29115. This site is situated on a slightly sloping area of undulating *pāhoehoe* lava. The surrounding vegetation consists of fountain grass with one klu shrub and some lantana shrubs.

The Site 29117 mound has been badly disturbed, and it is difficult to determine its original shape. The mound is constructed of loosely piled large sub-angular basalt *pāhoehoe* cobbles and small to medium sub-angular basalt *pāhoehoe* boulders (Figure C.73). It presently measures ca. 0.84 meters in length (east to west) by ca. 0.70 meters in width (north to south), with a height of ca. 0.30 meters.

An area of battering, B-001, is located ca. 13.0 meters east (78°) of the mound. B-001 is irregularly shaped, heavy and dispersed, and displays circular tool marks. The battered area measures ca. 0.30 meters in length (northwest to southeast) by ca. 0.28 meters (northeast to southwest).

No cultural material was observed in or around the site. Site 29117 is in poor to fair condition. The mound is badly collapsed with tumbled in all directions.

The mound is located near a historic fence line and may be of recent construction, but it is more likely that it may have served as a marker during the pre-Contact and/or early post-Contact periods. The battering may be associated with a processing activity in the area. It is uncertain, however what kind of processing activity took place here.

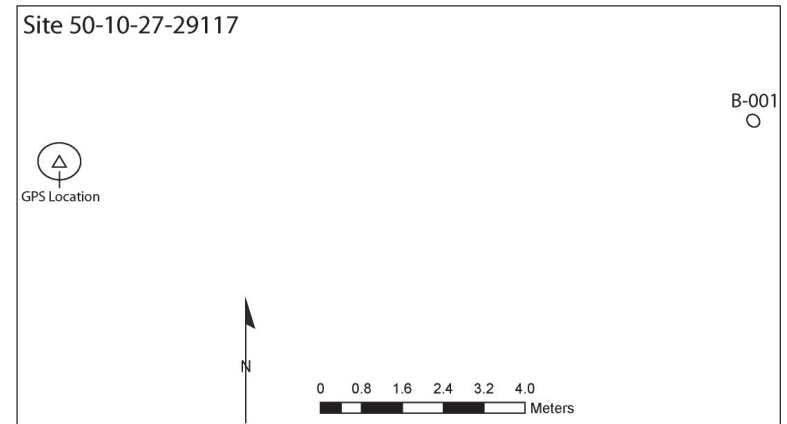


Figure C.72. GPS-based map of Site 50-10-27-29117 stone mound.



Figure C.73. Site 50-10-27-29117 stone mound (view west).

SIHP Number: 50-10-27-29118

Site Type: Stone-Filled Crevice

Field Number: T-041

Site Measurements: 1.3 m by ca 0.8 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: Present

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Fair

Description: Site 50-10-27-29118 consists of a stone-filled crevice (Figure C.74 and Figure C.75). It is located at the southwestern corner of the project area, and approximately 34.0 meters west (257°) of Site 29117. The site is situated on an area of sloping, undulating *pāhoehoe* lava where two flows converged. The surrounding vegetation consists of klu shrubs and Christmasberry trees.

Site 29118 consists of a naturally occurring fissure that has been intentionally filled with small boulder slabs, small sub-angular boulders and cobbles. The fissure runs roughly north to south for approximately 5.0 meters and opens to a narrow and shallow lava tube. The stones appear to have been intentionally set to fill a crevice at the southern end of the fissure. A large cobble and pebble of weathered waterworn coral were also observed atop the fill. The filled crevice measures ca. 1.3 meters (northeast to southwest) by ca. 0.8 meters (northwest to southeast).

Adjacent and west of the Site 29118 filled crevice are two areas that also appear to be smaller filled crevices with two cobbles of waterworn coral.

No cultural material was observed in or around the site. The site is in fair condition. There is evidence of modern disturbance. A piece of PVC pipe, some rubbish and dozer tracks are located south of the site. This disturbance may account for the presence of coral.

The construction style of Site 29118 is similar to that of a causeway, built to cross a gap in the lava, however, immediately north and adjacent to the filled crevice is a natural lava outcrop that would allow for easy crossing. The construction style may also suggest that this site could possibly be associated with a burial. It is possible that the crevice was intentionally filled to cap an opening of a lava tube and to seal a burial chamber, though there is no direct evidence for this. It appears that this site is pre-Contact and/or early post-Contact in age, however, its function remains unclear.

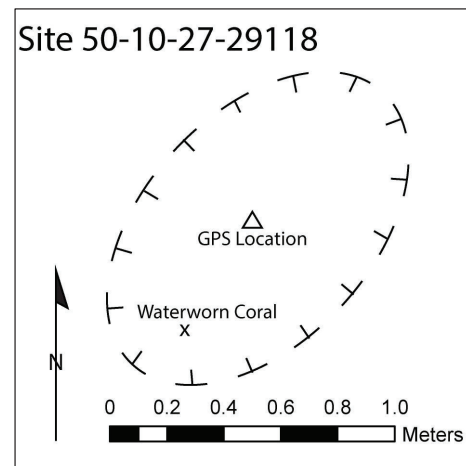


Figure C.74. GPS-based map of Site 50-10-27-29118 stone-filled crevice.



Figure C.75. Site 50-10-27-29118 stone-filled crevice (view southwest).

SIHP Number: 50-10-27-29119

Site Type: Battering

Field Number: T-043

Site Measurements: ca. 4.9 m by ca 4.3 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Historic

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29119 consists of three areas of battering (B-001 through B-003; Figure C.76 and Figure C.77). The site is located in the southern portion of the project area, and immediately west to the former Swing Zone driving range. Its first area of battering (B-001) is approximately 20.0 meters southeast (123°) of Site 29118. This site is situated atop a roughly northeast to southwest running ridge of slightly sloping, undulating *pāhoehoe* lava. The surrounding vegetation includes fountain grass, Christmasberry trees, and *noni* trees.

The three areas are located in an overall site area measuring approximately ca. 4.9 meters in length (east to west) by ca. 4.3 meters in width (north to south). B-001 is irregular in shape and consists of heavy, concentrated battering with linear tool marks. It measures approximately ca. 0.49 meters in length (east to west) by ca. 0.40 meters in width (north to south). B-002 is an irregularly shaped area of heavy, concentrated battering with linear tool marks. The area measures ca. 0.52 meters in length (northeast to southwest) by ca. 0.38 meters in width (northwest to southeast).

B-003 is an irregularly shaped area of heavy, concentrated battering with linear tool marks. The area measures ca. 0.58 meters in length (northeast to southwest) by ca. 0.32 meters in width (northwest to southeast).

No cultural material was observed in or around the site. Site 29119 is in fair condition. Due to the presence of linear tool marks, Site 29119 was likely associated with a processing activity during the historic period. It is uncertain, however what kind of processing activity took place here.

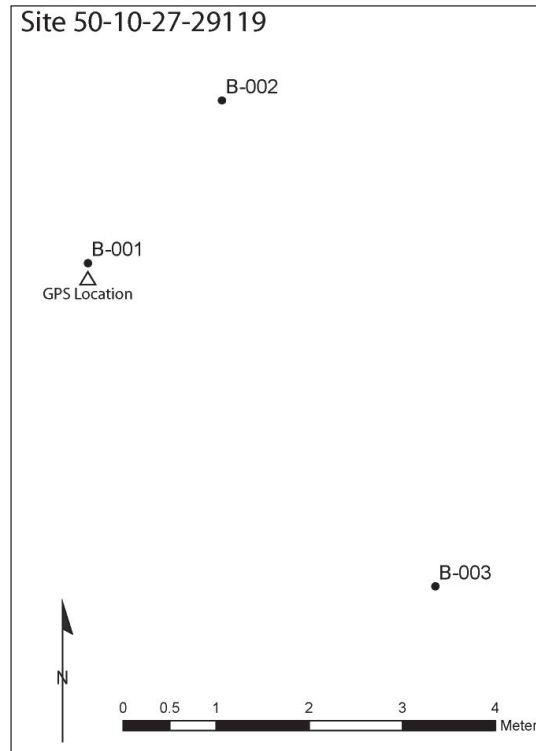


Figure C.76. GPS-based map of Site 50-10-27-29119 battering.



Figure C.77. Site 50-10-27-29119 area of battering (view southeast).

SIHP Number: 50-10-27-29120

Site Type: Mound

Field Number: T-044

Site Measurements: ca. 14.5 m by ca 5.6 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker/Processing

Condition: Poor

Description: Site 50-10-27-29120 consists of one badly disturbed stone mound and two distinct areas of battering (B-001 and B-002). This site is located in the southern portion of the project area, approximately 45.0 meters northwest (302°) of Site 25649. It sits atop a low-lying *pāhoehoe* lava outcrop completely surrounded by fountain grass with few klu shrubs.

The mound and areas of battering are located within a total site area measuring approximately 14.5 meters in length (northeast to southwest) by ca. 5.6 meters in width (northwest to southeast).

The stone mound is constructed of loosely piled large sub-angular basalt *pāhoehoe* cobbles and small sub-angular basalt *pāhoehoe* boulders on a level bedrock surface (Figure C.78, Figure C.79). Due to its poor condition, it is difficult to determine the original shape and size of the mound. It presently measures approximately 1.12 meters long (east to west) by ca. 0.90 meters (north to south) and ca. 0.25 meters in height.

The first battering area (B-001) is located approximately 11.0 meters north of the mound. B-001 is irregular in shape and consists of a moderate amount of circular battering marks. B-001 measures ca. 0.50 meters in length (east to west) by ca. 0.45 meters in width (north to south).

The second battering area (B-002) is a triangular-shaped area of heavy, concentrated battering comprised of circular tool marks. B-002 measures ca. 0.58 meters in length (east to west) by ca. 0.53 meters wide (north to south).

No cultural material was observed in or around the site. Site 29120 is in poor condition. The mound appears to be collapsed and badly tumbled.

The construction style and location of the mound suggest that it may have served as a marker during the pre-Contact and/or early post-Contact periods. The battering within Site 29120 may be associated with a processing activity. It is uncertain, however, what kind of processing activity took place here.

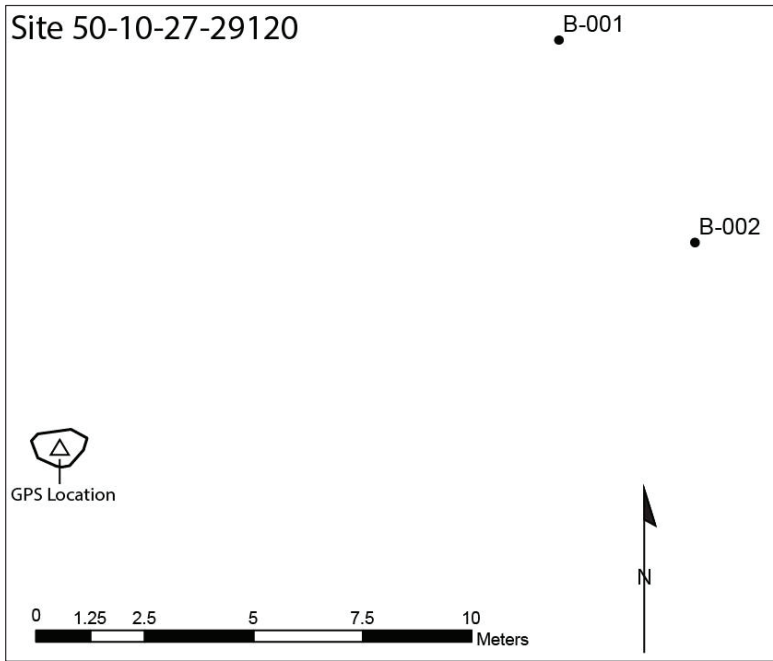


Figure C.78. GPS-based map of Site 50-10-27-29120 stone mound.



Figure C.79. Site 50-10-27-29120 stone mound.

SIHP Number: 50-10-27-29121

Field Number: T-045

Site Measurements: ca. 3.34 m by ca. 0.4 m by ca. 0.31 m

No. Features: 1

Site Type: Alignment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29121 is a possible linear-shaped stone alignment (Figure C.80, Figure C.81). This site is located in the southern portion of the project area, approximately 46.0 meters northwest (334°) of Site 29120. It is situated on top of an area of relatively level *pāhoehoe* lava. The surrounding vegetation consists of dense patches of fountain grass, scattered *kiawe*, lantana, klu, *koa haole*, and Christmasberry trees.

This site consists of a roughly linear alignment of small to medium basalt *pāhoehoe* slab boulders and cobbles. It appears that the larger boulder slabs would have been set on edge but have since collapsed to the east. The alignment may have originally measured approximately 3.34 meters in length (northwest to southeast) by ca. 0.40 meters in width (northeast to southwest), and ca. 0.31 meters in height.

Two rock concentrations were also noted within the site area. The first rock concentration is located approximately 10.0 meters southwest (210°) of the linear alignment, and the second rock concentration is located ca. 14.0 meters south of the first rock concentration.

No cultural material was observed. Site 29121 is in poor condition and appears to have been badly disturbed. Due to its poor condition, it is difficult to determine the original shape of this structure. It is likely, however, that this linear alignment may have served as a temporary windbreak shelter during the pre-Contact and/or early post-Contact periods.

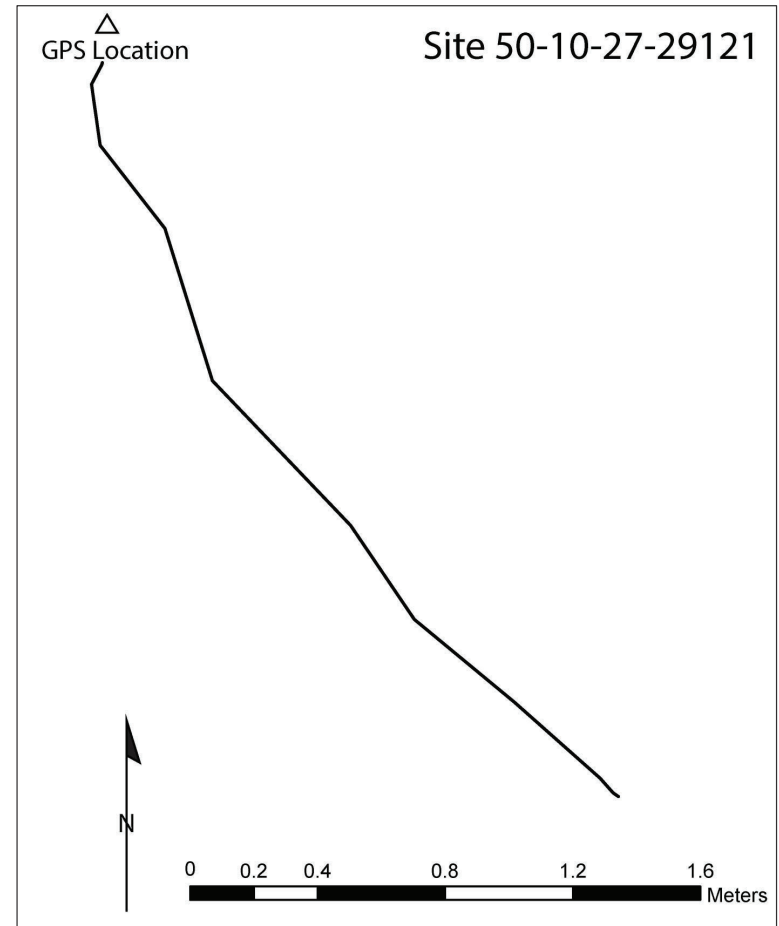


Figure C.80. GPS-based map of Site 50-10-27-29121 stone alignment.



Figure C.81. Site 50-10-27-29121, stone alignment (view south).

SIHP Number: 50-10-27-29122

Site Type: Complex

Field Number: T-046

Site Measurements: ca. 21.0 m by ca 7.2 m

No. Features: 2

Artifacts: Traditional

Midden: None Observed

Coral: Present

Skeletal Remains: None Observed

Possible Age: Pre-Contact/Historic

Possible Function: Habitation/Marker/Processing

Condition: Poor

Description: Site 50-10-27-29122 is comprised of an area of battering and two features: a collapsed stone wall segment (Feature A), and a badly disturbed mound (Feature B). This site is located in the southern portion of the project area, approximately 64.0 meters west (257°) of Site 29121 (Figure C.82). It is located atop level areas of undulating *pāhoehoe* lava, roughly running east to west. An area of naturally broken up *pāhoehoe* is in the central area of the site, between Features A and B, and may have served as a source of material to construct both features. The surrounding vegetation primarily consists of fountain grass with klu shrubs and Christmasberry trees.

The overall site area measures approximately 21.0 meters long (northeast to southwest) by ca. 7.2 meters wide (northwest to southeast). Feature A is a collapsed wall segment. The remnants of the wall are roughly linear and appear to be a scatter comprised of small to medium sub-angular basalt boulders and cobbles. The structure originally may have been a low-lying wall segment, standing one to two courses high. It is collapsed and presently only one stone high. Feature B consists of a badly disturbed stone mound located approximately 21.0 meters northeast (33°) of Feature A. It is constructed of loosely stacked medium to large *pāhoehoe* basalt boulder and cobble slabs, and currently stands two to three courses high. Due to its disturbance, it is impossible to determine the original shape of the mound.

An area of battering, B-001, was located ca. 9.0 meters northwest (302°) of the Feature A wall segment. B-001 is irregular in shape and consists of heavy and dispersed battering marks made with a linear tool. The battered area measures ca. 0.60 meters in length (north to south) by ca. 0.30 meters in width (east to west). One small pebble of waterworn coral was observed in between Features A and B, just north of the naturally broken up areas of *pāhoehoe*. This coral pebble does not appear to be modified. A hammerstone (Artifact 001) was located at the northeast end of Feature A. It is a small, waterworn, fine-grained basalt boulder with battering at one end measuring ca. 25.0 centimeters in length by ca. 18.0 centimeters in width and ca. 17.0 centimeters in thickness. Site 29122 is in poor condition. The Feature A wall and the Feature B mound have collapsed and tumbled. The construction style and location of the features and presence of traditional artifacts/coral suggest that the site was built and utilized during the pre-Contact and/or early post-Contact periods. The linear marks found in B-001 suggest historic period battering. The wall segment may have served as a windbreak shelter, the mound may have functioned as a marker, and the battered area suggest that the site is associated with some kind of processing activity. It is uncertain, however, what kind of processing took place here.

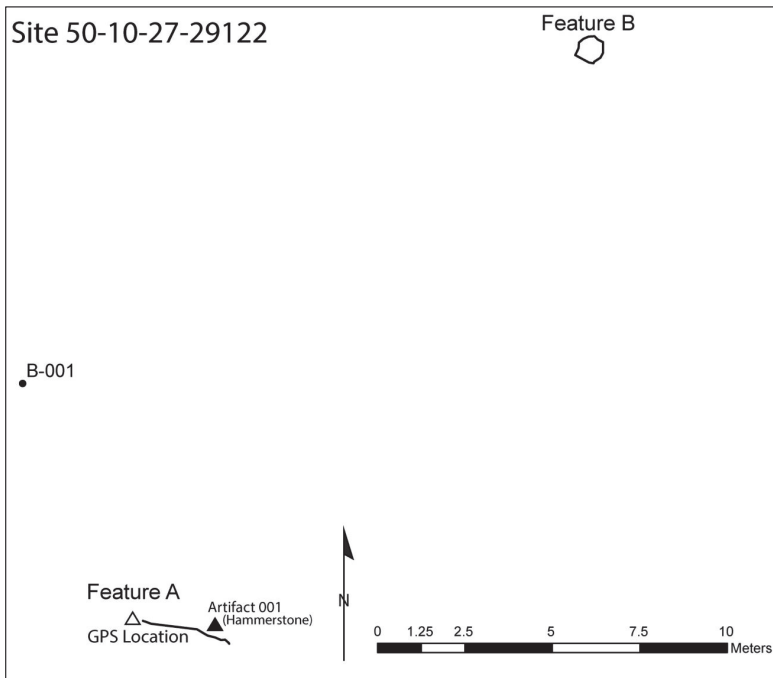


Figure C.82. GPS-based map of Site 50-10-27-29122 complex.

Feature: A
Feature Type: Wall Segment
Artifacts: Traditional
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Habitation
Condition: Poor

Description: Site 50-10-27-29122, Feature A consists of a collapsed roughly linear stone wall segment. It is approximately 21.0 meters southwest (213°) from the Feature B stone mound. The feature is situated on slightly sloping *pāhoehoe* lava.

Feature A is presently a scatter comprised of small *pāhoehoe* boulder slabs, small sub-angular basalt boulders and some cobbles. It appears to have originally been constructed to form a low-lying wall, which is presently collapsed and only one stone high (Figure C.83). The feature measures approximately 2.0 meters in length (east to west), ca. 1.0 meters in thickness (north to south) and 0.30 meters in height. It appears that it originally may have been 0.40 meters thick.

A hammerstone, Artifact 001 was located amongst the tumble of the northeastern end of the structure. Artifact 001 is a small, vesicular waterworn boulder that appears to have a small amount of battering at one end. It measures approximately 25.0 centimeters in length by ca. 18.0 centimeters in width and ca. 17.0 centimeters in thickness. No other cultural material was located in or around the feature. Feature A is in poor condition. The wall segment has tumbled in all directions and appears to be completely collapsed.

Due to its poor condition, it is difficult to determine its original function. Its location and size, however, suggest that the Site 29122 Feature A wall segment may have been utilized as a temporary windbreak shelter during the pre-Contact and/or early post-Contact periods.



Figure C.83. Site 50-10-27-29122, Feature A, wall segment (view south).

Feature: B
Feature Type: Mound
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Marker
Condition: Poor

Description: Site 50-10-27-29122, Feature B is a collapsed stone mound (Figure C.84). It is approximately 21.0 meters northeast (33°) from the Feature A wall segment. The mound is irregular in shape and constructed of loosely stacked medium to large *pāhoehoe* basalt boulder and cobble slabs. It currently stands two to three courses high, and measures approximately 0.75 meters in length (northwest to southeast) by ca. 0.66 meters in width (northeast to southwest), and ca. 0.30 meters in height.

No cultural material was found in or around this feature. It is in poor condition and partially collapsed. Site 29122, Feature B may have possibly served as a marker during the pre-Contact and/or early post-Contact periods. It is not clear, however, what the mound was intended to mark.



Figure C.84. Site 50-10-27-29122, Feature B, stone mound (view southeast).

SIHP Number: 50-10-27-29123

Site Type: Mound

Field Number: T-047

Site Measurements: ca. 0.96 m by ca 0.87 m by ca. 0.28 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29123 consists of single badly disturbed stone mound (Figure C.86). The mound is located in the southern portion of the project area, approximately 47.0 meters northeast (33°) from Site 29122 (Figure C.85). It is situated atop an area of smooth, relatively level *pāhoehoe* lava. The surrounding vegetation consists of a ground cover of fountain grass with a scattering of klu and lantana shrubs.

The remnants of the mound appear to be a scatter comprising small *pāhoehoe* boulder slabs, medium sub-angular basalt boulders, and some cobbles. It presently measures ca. 0.96 meters in length (east to west) by ca. 0.87 meters in width (north to south), with a maximum height is ca. 0.28 meters.

Located ca. 2.0 meters northeast of the mound, is a scatter of coconut shell fragments that appear to be relatively recent in age. No other cultural material was observed in or around the site. Site 29123 is in poor condition, being completely collapsed. Due to its poor condition, it is difficult to determine the mound's original function. It may, however, have served as a marker during the pre-Contact and/or early post-Contact periods.

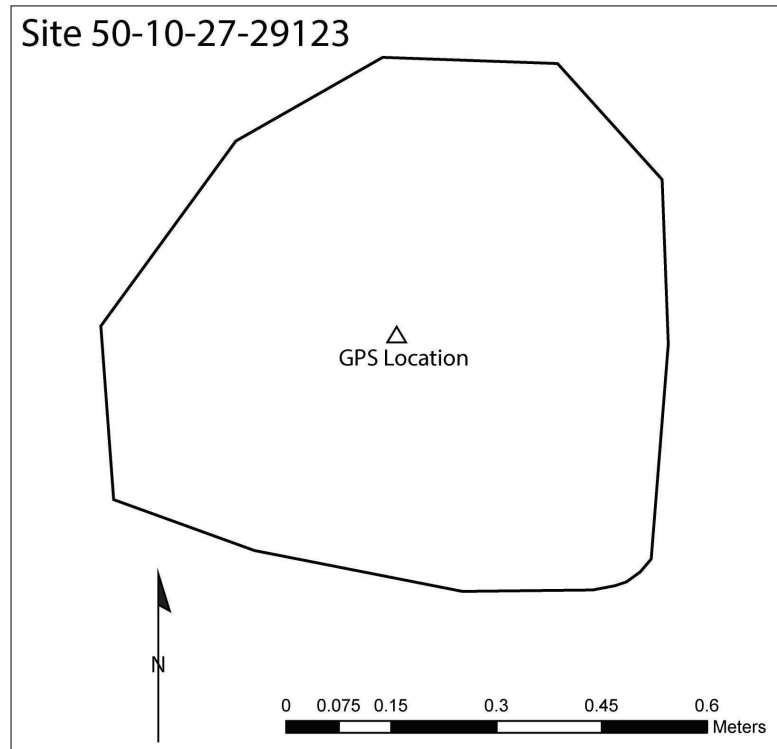


Figure C.85. GPS-based map of Site 50-10-27-29123 stone mound.



Figure C.86. Site 50-10-27-29123 stone mound (view south).

SIHP Number: 50-10-27-29124

Site Type: Mound

Field Number: T-049

Site Measurements: ca. 1.6 m by ca 0.81 m by ca. 0.39 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Uncertain

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29124 consists of a stone mound (Figure C.88). It is located in the southern portion of the project area, approximately 15.0 meters north of the fence line that separates the Urban Phase III survey area from the Old Kona Airport Park. The site is ca. 80.0 meters southwest (220°) of Site 25648. It situated on a level area of *pāhoehoe* lava, which is surrounded by fountain grass with klu shrubs and Christmasberry trees.

The mound is somewhat linear in shape (Figure C.87). It is constructed of small to medium sub-angular *pāhoehoe* boulders and slabs, which are loosely and neatly piled against each other. The structure measures approximately 1.60 meters in length (northeast to southwest) by ca. 0.81 meters (northwest to southeast) by ca. 0.39 meters in height.

No traditional cultural material was observed in or around the site, though a modern plastic pest trap was observed next to and immediately northwest of the mound. Site 29124 is in fair condition. Some stones have tumbled along its northern and western edges, but the mound remains intact.

Due to its construction style and location, it is difficult to determine the possible age of this site. The mound appears too well-preserved to be a pre-Contact and/or early post-Contact structure. Its location near the historic fence line, as well as the presence of a plastic pest trap, may suggest it is modern in construction. The mound could possibly have served as marker, though this is also uncertain.

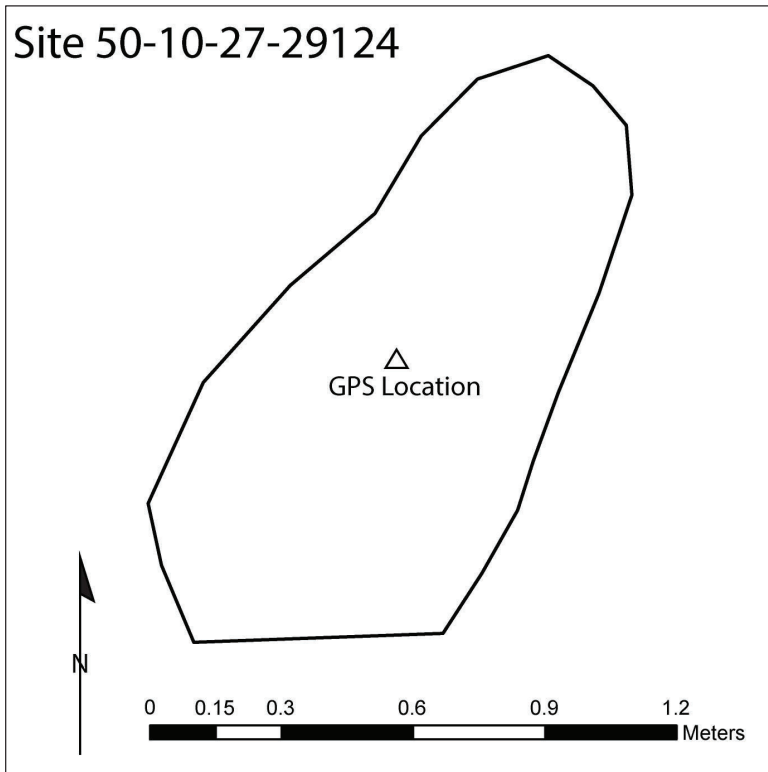


Figure C.87. GPS-based map of Site 50-10-27-29124, stone mound.



Figure C.88. Site 50-10-27-29124 stone mound (view northwest).

SIHP Number: 50-10-27-29125

Site Type: Complex

Field Number: T-050

Site Measurements: ca. 12 m by ca 2 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Modern

Possible Function: Uncertain

Condition: Good

Description: Site 50-10-27-29125 is a complex consisting of two modern mounds. It is located at the central southern boundary of the project area, approximately 12.0 meters northeast (50°) of the fence line that separates the survey area from the Old Kona Airport park. The site is ca. 167.0 meters northwest (295°) from Site 29124, Feature A. Site 29125 is situated atop a level undulating *pāhoehoe* lava, with surrounding vegetation grass, and a scatter of klu and Christmasberry shrubs.

Feature A is the northernmost feature within the site area. It is a loosely piled, jumbled mound constructed of small to large sub-angular basalt boulders, basalt slabs and waterworn basalt boulders. These stones are not present in the surrounding area of the site and suggest that the material was brought in.

Feature B is a similar constructed mound, but smaller in size. It is situated ca. 10.0 meters south (150°) of Feature A (Figure C.89). Bulldozer tracks were observed adjacent to the feature.

Modern rubbish was also observed scattered around the site, including a large amount of glass and bottles and long strands of wires. Site 29125 is in good condition. The mounds are not necessarily tumbled but are jumbled in their construction.

The close proximity of these two structures to the Old Kona Airport jogging trail and the presence of bulldozer tracks, as well as the jumbled nature of the mounds themselves, suggest that they be modern in age, though their exact function is uncertain.

Site 50-10-27-29125

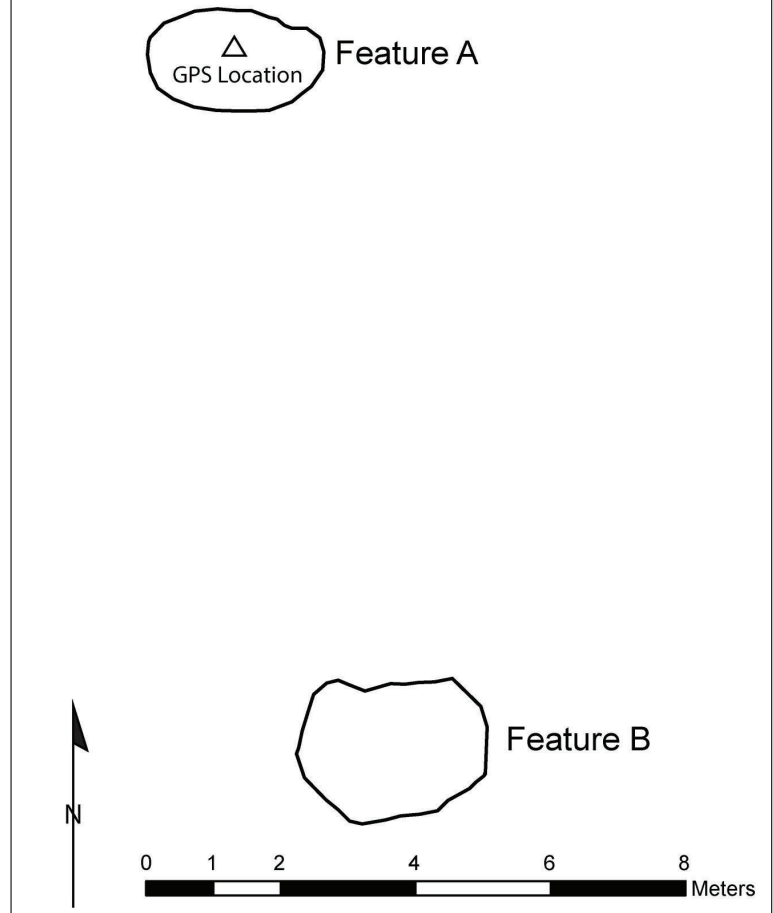


Figure C.89. GPS-based map of Site 50-10-27-29185 complex.

Feature: A

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Modern

Possible Function: Uncertain

Condition: Good

Description: Site 50-10-27-29125, Feature A consists of a modern stone mound (Figure C.90). It is located approximately 10.0 meters north (346°) of the Feature B stone mound. Feature A is situated on a wide, shallow, naturally broken up area of *pāhoehoe* lava, running roughly north to south.

The mound is comprised of small to medium sub-angular basalt boulders, which have been loosely piled and are jumbled. The stones appear to have been brought in from another source and may possibly be the result of bulldozing. It measures approximately 2.8 meters in length (east to west) by ca. 2.1 meters in width (north to south) by ca. 0.84 meters in height.

No cultural material was observed around the site, but modern rubbish is present throughout the area. Feature A is in good condition, and the mound appears to be jumbled as opposed to collapsed or tumbled. There is evidence of high amount of bulldozing just southwest of the site area. The close proximity to the dozing activity and non-local material of the mound, with the presence of modern rubbish, suggest that this mound is modern, though its function remains unclear.



Figure C.90. Site 50-10-27-29125, Feature A, stone mound (view north).

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Modern

Possible Function: Uncertain

Condition: Good

Description: Site 50-10-27-29125, Feature B is a modern mound (Figure C.91). It is located at the southern end of the site and approximately 10.0 meters south (166°) of the Feature A stone mound. The Feature B mound is loosely piled of large sub-angular basalt *pāhoehoe* boulders on level *pāhoehoe*. These stones appear to have come from an area outside of the complex of features. It measures ca. 3.1 meters in length (east to west) by ca. 2.5 meters in width (north to south) and ca. 0.85 meters in height.

No cultural material is present at this feature. This mound is in good condition. Feature B is in close proximity to a nearby jeep road and the lava surface surround the mound exhibits bulldozer tracks. This mound is more characteristic of a modern construction, perhaps the result of bulldozer push.



Figure C.91. Site 50-10-27-29125, Feature B, stone mound (view southwest).

Archaeological Inventory Survey – Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

383



SIHP Number: 50-10-27-29126

Site Type: Battering

Field Number: T-051

Site Measurements: ca. 1.1 m by ca 1.0 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29126 consists of a single area of battering, B-001. This site is located in the central portion of the project area, approximately 34.5 meters northeast (36°) of the fence line that separates the project area from the Old Kona Airport park. It is ca. 14.5 meters northeast (51°) of Site 29125. It is situated on a fairly level area of *pāhoehoe* lava and completely surrounded by fountain grass, klu shrubs, and Christmasberry trees.

Site 29126 consists of an irregular-shaped area of battering (B-001). The battering is composed of heavy, somewhat dispersed battering marks made with a circular tool. The battered area measures approximately 1.10 meters in length (northeast to southwest) by ca. 1.00 meters in width (northwest to southeast) (Figure C.92).

No cultural material was observed in or around the site. Site 29126 is in fair condition. The circular tool marks observed suggest that this site may have been associated with a processing activity undertaken during the pre-Contact and/or early post-Contact periods, though it is uncertain, however, what kind of processing activity took place here.

Site 50-10-27-29126 was not photographed during the current survey.

Archaeological Inventory Survey – Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

384



Site 50-10-27-29126

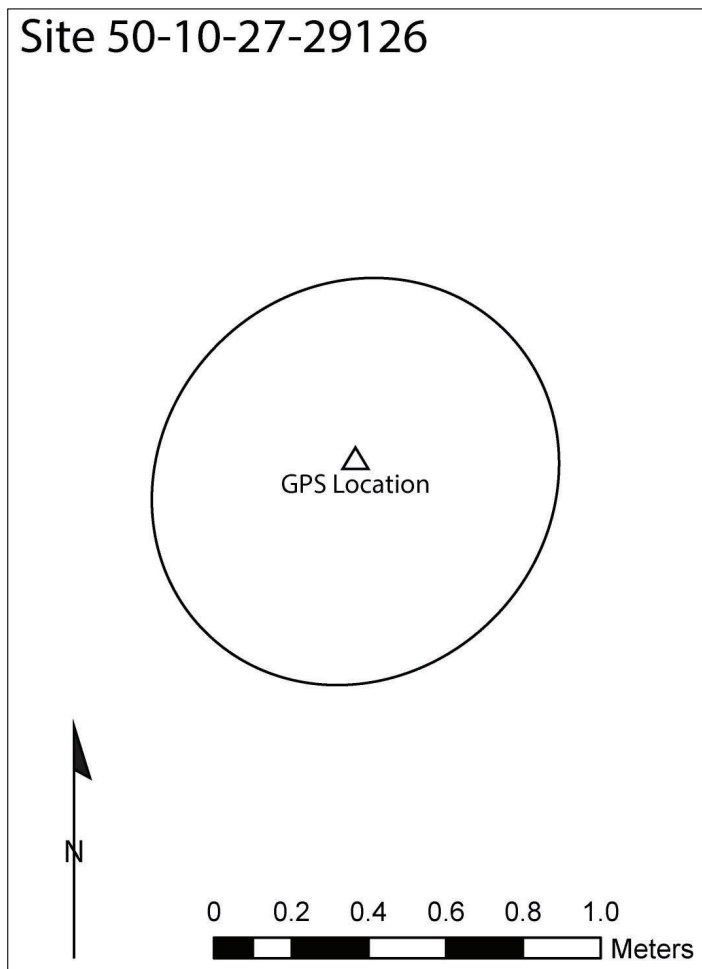


Figure C.92. GPS-based map of Site 50-10-27-29126 battering.

SIHP Number: 50-10-27-29127

Site Type: Alignment

Field Number: T-052

Site Measurements: ca. 1.37 m by ca 0.27 m by 0.25 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29127 is a linear-shaped alignment of stones (Figure C.94). This site is located in the central southern portion of the project area, approximately 27.0 meters north (352°) of Site 29126. It is situated in a small clearing of level *pāhoehoe* lava. The surrounding vegetation consists of dense patches of fountain grass with scattered *'uhaloa*, *klu*, and Christmasberry trees.

Site 29127 is an alignment comprised of five medium sub-angular basalt *pāhoehoe* boulders oriented roughly north to south (Figure C.93). Some medium-sized boulders are also scattered to the side. It measures approximately 1.37 meters in length (north to south), by ca. 0.27 meters in width (east to west), and ca. 0.25 meters in height.

No cultural material was observed at this site. Site 29127 is in poor condition and appears to have been badly disturbed. Due to its poor condition, it is difficult to determine the alignment's original shape and function. It is likely, however, that it may have served as a temporary windbreak shelter, or as the anchor stones for a mat or other perishable shelter, utilized during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29127

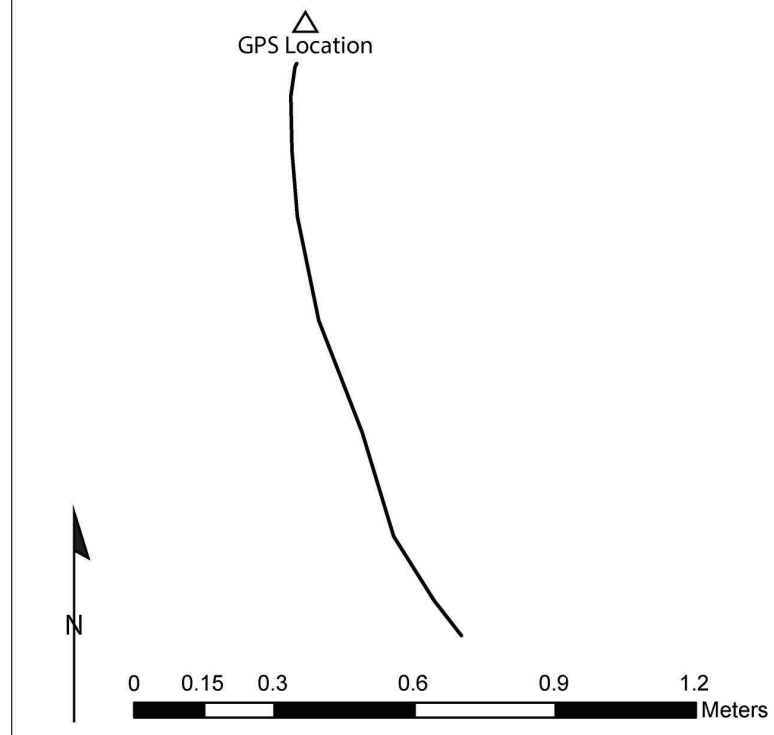


Figure C.93. GPS-based map of Site 50-10-27-29127 alignment.

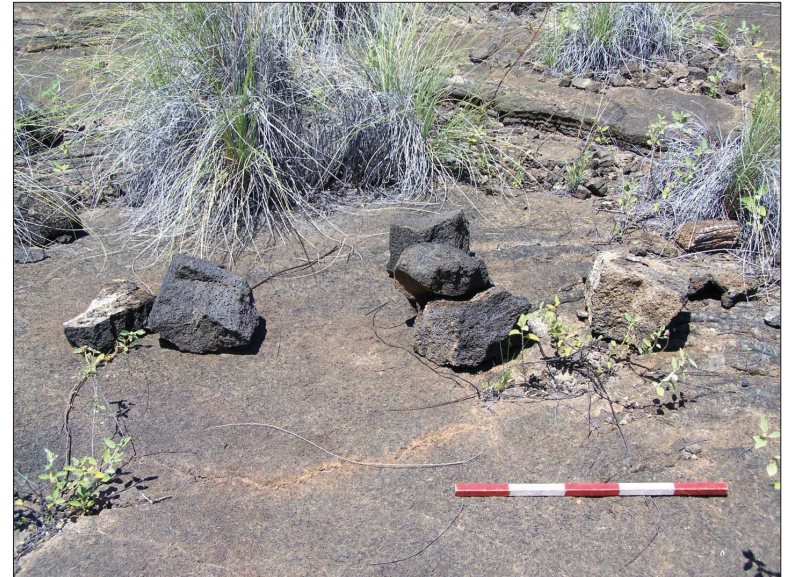


Figure C.94. Site 50-10-27-29127 alignment (view west).

SIHP Number: 50-10-27-29128

Site Type: Mound

Field Number: T-053

Site Measurements: ca. 0.28 m by ca 0.23 m by ca. 0.25 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Historic

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29128 consists of a single stone mound (Figure C.95 and Figure C.96). It is located in the southern central portion of the project area, approximately 19.0 meters west (249°) of Site 29127. The mound is situated on roughly level undulating *pāhoehoe* lava. The surrounding vegetation consists of a ground cover of fountain grass and a klu shrub.

The mound consists of four small *pāhoehoe* boulder slabs that have been stacked atop each other to form a column. It measures ca. 0.28 meters in length (northwest to southeast) by ca. 0.23 meters in width (northeast to southwest), and ca. 0.25 meters in height. No cultural material was observed at the site. The mound is in fair condition. Four small boulder slabs appear to have tumbled to the southeast of the mound, which suggests that the mound may have originally been a taller column. The somewhat unstable construction style of the Site 29128 mound suggests that it may have been constructed during the more recent period. It likely served as a marker, though it is not clear what the mound was intended to mark.

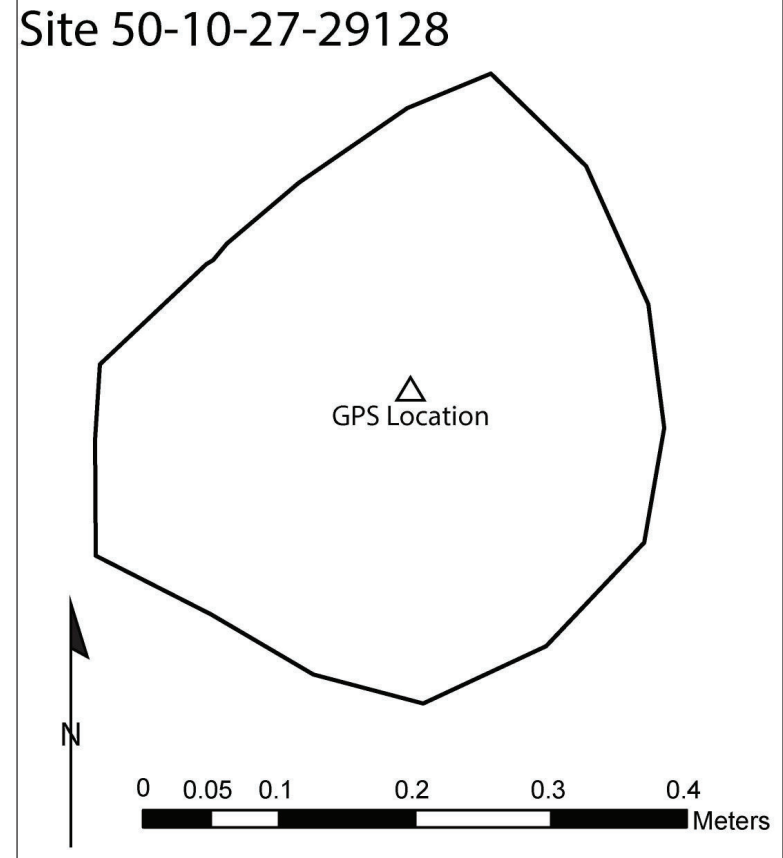


Figure C.95. GPS-based map of Site 50-10-27-29128 stone mound.



Figure C.96. Site 50-10-27-29128, stone mound (view south).

SIHP Number: 50-10-27-29129

Site Type: Enclosure

Field Number: T-054

Site Measurements: ca. 2.8 m by ca. 1.95 m by ca. 0.26 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Processing

Condition: Poor

Description: Site 50-10-27-29129 consists of a collapsed roughly oval stone enclosure and one area of battering (B-001). It is located in the southern central project area, approximately 71.0 meters northeast (30°) of the fence line that separates the project area from the Old Kona Airport park. The site is ca. 25.0 meters northeast (26°) of Site 29128. It is situated atop of a roughly north to south running, low-lying, relatively flat *pāhoehoe* lava flow. Surrounding vegetation includes fountain grass, klu shrubs, and lantana shrubs.

The Site 29129 stone enclosure is constructed of small to large sub-angular basalt *pāhoehoe* boulders and cobbles, as well as *pāhoehoe* slabs, which have been arranged into a rough oval shape on the bedrock. A single-coursed alignment of stones defines the northern half of the oval alignment, with one *pāhoehoe* slab still on edge at the northernmost end of the structure. The southern half of the oval is built up to a much greater degree. The enclosure is currently collapsed to the height of a single course, but its stones appear to have originally been piled higher, with some of its slabs likely set on edge (Figure C.97).

The enclosure currently measures approximately 2.8 meters in external length and ca. 0.9 meters in internal length (north to south) by ca. 1.95 meters in external width and ca. 0.8 meters in internal width (east to west). The enclosure is currently ca. 0.26 meters in height and ca. 1.2 meters in thickness at its maximum. The original height and thickness were not determined due to the collapse of its walls.

An area of battering, B-001, was located approximately 10.0 meters east (70°) of the enclosure (Figure C.98). B-001 consists of an irregular-shaped area of heavy, concentrated battering marks made with a circular tool. The battered area measures ca. 0.96 meters long (east to west) by 0.42 meters wide (north to south).

No cultural material was observed in or around the site. Site 29129 is in poor condition. The enclosure wall is collapsed, and stones have tumbled in all directions. The construction style of this site suggests that it may have been built and utilized during the pre-Contact and/or early post-Contact periods. The enclosure could have served as a temporary windbreak shelter, and the battered area suggest that the site may be associated with a processing activity. It is uncertain, however, what kind of processing activity took place here.



Figure C.97. Site 50-10-27-29129, enclosure (view west).

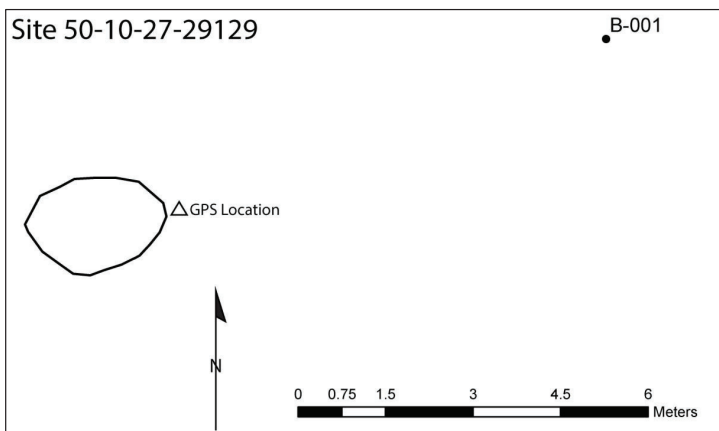


Figure C.98. GPS-based map of Site 50-10-27-29129 enclosure and area of battering.

SIHP Number: 50-10-27-29130

Site Type: Mound

Field Number: T-055

Site Measurements: ca. 3.2 m by ca. 2.6 m by ca. 0.7 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Modern

Possible Function: Uncertain

Condition: Fair

Description: Site 50-10-27-29130 is a stone mound (Figure C.100). It is located in the southern central portion of the project area, approximately 11.0 meters west of the Queen Lili'uokalani Children's Center. The site is 18.0 meters northeast (59°) of Site 29129. The mound is situated on slightly sloping undulating *pāhoehoe* lava. The surrounding vegetation consists of a ground cover of fountain grass with a scatter of klu and lantana shrubs.

The mound consists of a jumbled pile of small to large sub-angular boulders. The boulders appear to be brought in from another location, as the material used in the mound is not found in the area surrounding the site. The mound measures ca. 3.2 meters in length (east to west) by ca. 2.6 meters in width (north to south) (Figure C.99), its maximum height is ca. 0.7 meters.

Located at the southeastern end of the mound is a medium sized sub-angular boulder that has a core sample drilled through it. This also suggests that the boulders were brought in from a different location. Many bulldozer tracks were located immediately east of the mound, which further suggests that the rock material may have been brought in from a bulldozer.

No cultural material was observed in or around the site. The mound is in fair condition and has not suffered that much tumble. The presence of bulldozer tracks and the mound's proximity to the road, as well as its jumbled appearance, suggest that the Site 29130 mound may have been created in modern times. It likely served as some sort of marker, though this is uncertain.

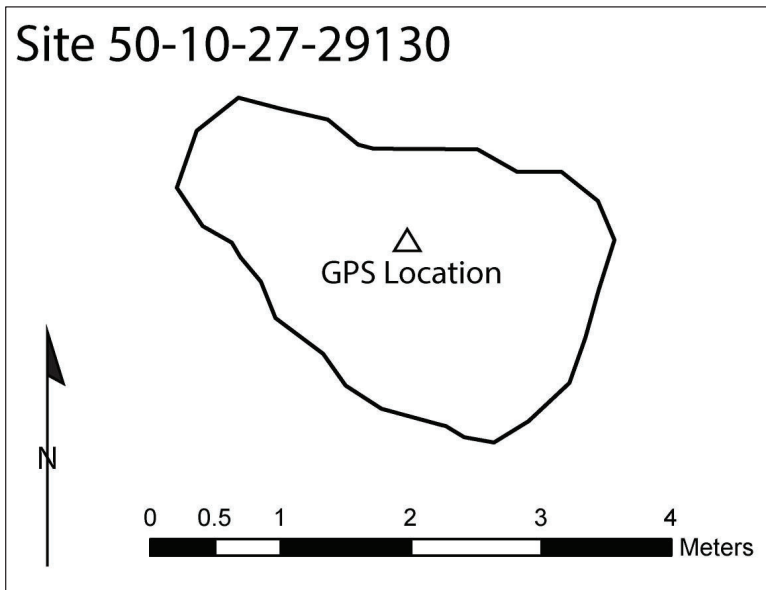


Figure C.99. GPS-based map of Site 50-10-27-29130 stone mound.



Figure C.100. Site 50-10-27-29130 stone mound (view northwest).

SIHP Number: 50-10-27-29131

Site Type: Complex

Field Number: T-056

Site Measurements: ca. 11 m by ca. 1 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker/ Uncertain

Condition: Poor

Description: Site 50-10-27-29131 is a complex that consists of two features, a small collapsed C-shaped wall (Feature A) and a collapsed stone mound (Feature B). The site is located in the south-central portion of the project area and is approximately 48.0 meters (20°) north from the boundary fence and the Old Kona Airport jogging trail. It is also situated ca. 40.0 meters (268°) west of Site T-054. The site is situated atop roughly level undulating *pāhoehoe* lava. Surrounding vegetation consists of a ground cover of fountain grass, klu, and Christmasberry shrubs.

Feature A is situated in the northern area of the site and consists of a collapsed C-shaped wall. It is constructed of small to medium sub-angular boulders and some cobbles. Feature B is located ca. 9.0 meters southeast (140°) of Feature A. Feature B appears to be collapsed mound constructed of a few small to medium sub-angular basalt boulders and cobbles (Figure C.101).

The site is in poor condition; both features are badly tumbled and collapsed, possibly due to seismic activity. No cultural material was observed in or around the site. It is difficult to determine the site's original function due to its collapsed state. Feature A's construction suggests that it may have functioned as a C-shaped windbreak, while Feature B may have functioned as a marker. The site appears to have been constructed during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29131

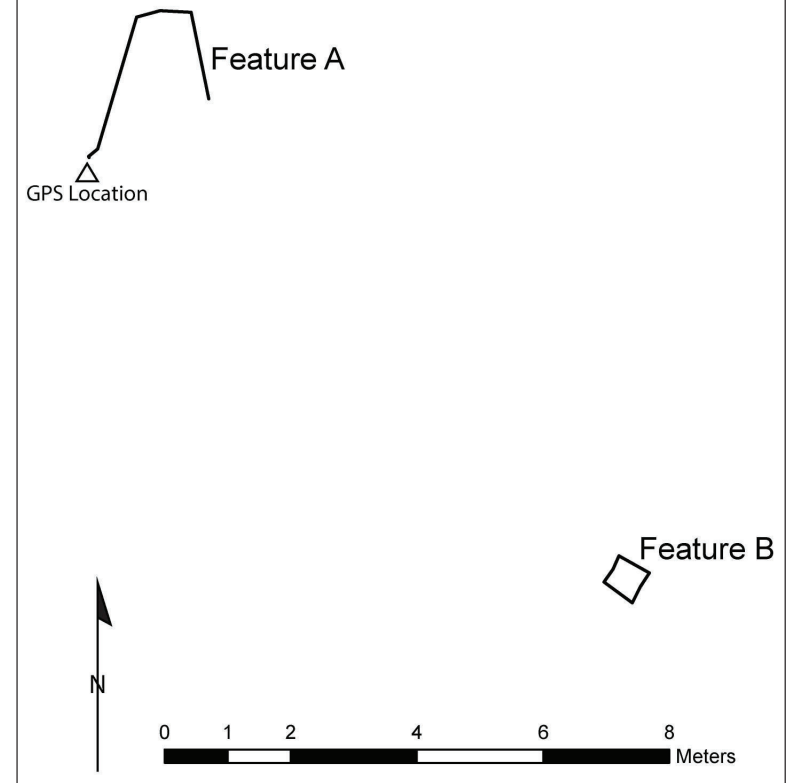


Figure C.101. GPS-based map of Site 50-10-27-29131 complex.

Feature: A

Feature Type: C-Shaped Wall

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Poor

Description: Site 50-10-27-29131, Feature A consists of a collapsed C-shaped wall. It is located at the northwestern end of the site area, approximately 9.0 meters northwest (324°) of Feature B mound. This feature is situated on top of sloping and rough *pāhoehoe* bedrock.

Feature A is constructed of large sub-angular basalt cobbles and small to medium basalt boulders that have been placed into a roughly circular C (Figure C.102). The wall of the C-shape is collapsed and presently one stone high. It appears that the stones could have originally been set on edge and stacked but has since tumbled downslope to the southeast and east. The C-shape currently opens to the southwest. A medium-sized boulder is located approximately 0.50 meters southwest of this opening and possibly could have tumbled from structure's wall, suggesting that the feature may possibly have originally been an enclosure.

The overall exterior dimensions of the feature are ca. 1.12 meters in length (northwest to southeast) by ca. 1.10 meters in width (northeast to southwest). The interior of the C-shape measures ca. 0.87 meters in length northwest to southeast) by ca. 1.10 meters in width (northeast to southwest). The wall is currently ca. 0.26 meters high and ca. 0.38 meters thick.

No cultural material was observed in or around the feature. Feature A is in poor condition. This C-shaped wall is collapsed, and some stones have tumbled downslope to the southeast and east. No cultural material was observed in or around the feature. In its present condition, it appears that Feature A was a C-shaped wall, possibly constructed during the pre-Contact and/or early post-Contact periods, which could have served as windbreak shelter. The ground surface within the C-shape, however, is rough and sloping, making it an uncomfortable area for a shelter.



Figure C.102. Site 50-10-27-29131, Feature A, C-shape wall (view south).

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29131, Feature B is a possible collapsed mound (Figure C.103). It is located on the southeastern end of the site, approximately 9.0 meters southeast (144°) of the Feature A collapsed C-shape wall.

Feature B is comprised of medium to large basalt boulders and one large basalt cobble, with some boulders scattered to the south. The mound is irregular in shape, and measures roughly ca. 0.7 meters in length (north to south) by ca. 0.45 meters in width (east to west) and is ca. 0.24 meters in height. No cultural material was found at this feature. Feature B is in poor condition and has been badly tumbled. Due to its poor condition and scattered state, it is difficult to determine the mound's original function. It is likely, however, that it may have served as a marker constructed and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.103. Site 50-10-27-29131, Feature B, stone mound (view south).

Archaeological Inventory Survey – Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

401



SIHP Number: 50-10-27-29132

Site Type: Battering

Field Number: T-057

Site Measurements: ca. 35 m by ca. 20 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact/Historic

Possible Function: Processing

Condition: Poor/Fair

Description: Site 50-10-27-29132 consists of 16 areas of battering (B-001 to B-016). This site is located in the southern central project area, just inland of the ocean. The northern portion of the site is located approximately 43.0 meters northeast (76°) of Site 29131, Feature A. This site is situated atop relatively level patches of low-lying *pāhoehoe* lava, surrounded by a ground cover of fountain grass with a slight presence of *klu* shrubs and Christmasberry trees.

The 16 areas of battering are spread intermittently throughout the site (Figure C.104). The total site area measures approximately 35.0 meters long (north to south) by ca. 20.0 meters wide (east to west). Table C.0.5 describes the 16 areas of battering in detail.

No cultural material was observed in or around the site area. Small basalt boulders of varying densities and grains are spread throughout the site area and may have been used as hammerstones, but no obvious battering was observed on these stones. This site is in poor to fair condition. A modern homeless camp is located in the southwestern portion of the site with modern trash spreading from the camp to the rest of the site area. It is possible that the homeless camp is situated on and obscuring more areas of battering.

The presence of both circular battering and linear chisel tool marks suggests that Site 29132 was utilized both in the pre-Contact and historic periods, possibly continuously. The vast amount of battering suggests that the site may be associated with a processing activity. It is uncertain, however, what kind of processing took place here.

Site 50-10-27-27132 was not photographed during the current survey.

Archaeological Inventory Survey – Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

402



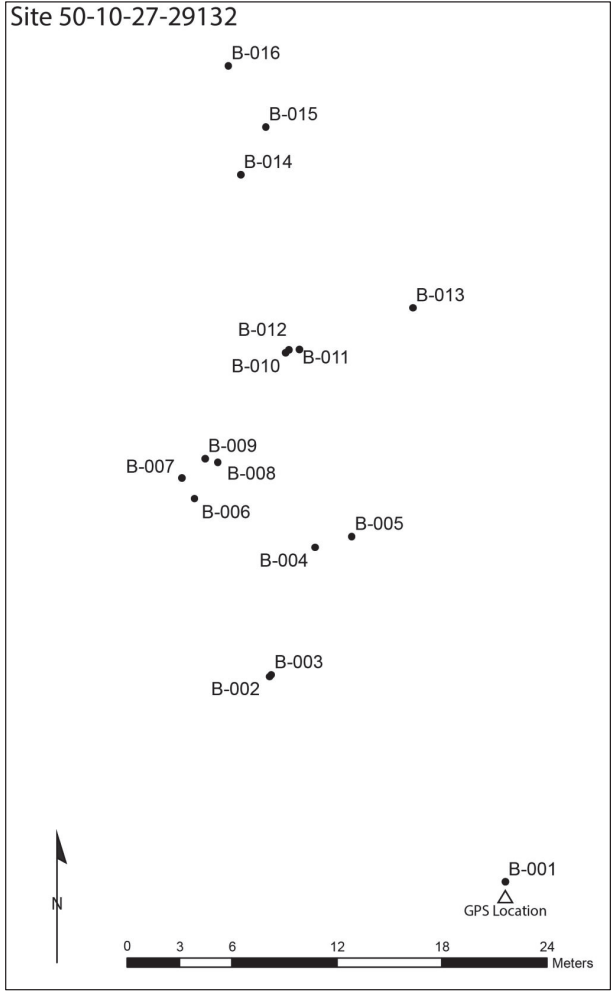


Figure C.104. GPS-based map of Site 50-10-27-29132 battering.

Table C.5 Site 50-10-27-29132, Table of Battering.

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-001	Irregular	Moderate	Dispersed	Circular	0.80 (E-W)	0.60 (N-S)
B-002	Circular	Moderate	Concentrated	Circular	0.40 (E-W)	0.36 (N-S)
B-003	Irregular	Heavy	Dispersed	Circular	0.60 (N-S)	0.50 (E-W)
B-004	Irregular	Moderate	Concentrated	Circular	0.40 (N-S)	0.30 (E-W)
B-005	Irregular	Moderate	Dispersed	Circular	0.98 (N-S)	0.55 (E-W)
B-006	Irregular	Moderate	Dispersed	Circular	0.55 (NE-SW)	0.30 (NW-SE)
B-007	Irregular	Heavy	Concentrated	Circular	0.46 (N-S)	0.43 (E-W)
B-008	Irregular	Very Heavy	Concentrated	Circular	0.34 (N-S)	0.30 (E-W)
B-009	Irregular	Light	Concentrated	Circular	0.24 (E-W)	0.20 (N-S)
B-010	Irregular	Light	Dispersed	Circular	0.59 (N-S)	0.22 (E-W)
B-011	Irregular	Moderate	Dispersed	Linear	0.80 (N-S)	0.80 (E-W)
B-012	Irregular	Moderate	Dispersed	Circular	0.50 (N-S)	0.30 (E-W)
B-013	Linear	Heavy	Concentrated	Linear	0.80 (N-S)	0.28 (E-W)
B-014	Irregular	Moderate	Dispersed	Linear and Circular	1.70 (N-S)	0.88 (E-W)
B-015	Rectangular	Light	Dispersed	Circular	0.52 (E-W)	0.25 (N-S)
B-016	Irregular	Heavy	Concentrated	Circular	0.54 (NW-SE)	0.30 (NE-SW)

SIHP Number: 50-10-27-29133

Site Type: Complex

Field Number: T-058

Site Measurements: ca. 8.6 m by ca. 2.6 m by ca. 0.7 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29133 is a complex consisting of two features, both of which are badly disturbed stone mounds. It is located in the central portion of the project area, approximately 140 meters northwest (311°) of Site 29132. The site is situated on relatively level *pāhoehoe* lava with a ground cover of fountain grass and a scatter of Christmasberry, klu, and *noni* shrubs.

The site runs roughly northwest to southeast and measures a total length of ca. 8.6 meters (Figure C.105). Feature A and B are both collapsed and appear to be constructed of loosely piled small to medium sub-angular basalt boulders, as well as some small *pāhoehoe* boulder slabs and cobbles. Feature A is located at the northern portion of the site and measures ca. 1.0 meters in length (east to west), ca. 0.92 meters in width (north to south), and ca. 0.3 meters in height. Feature B is located approximately 6.8 meters south (212°) of Feature A. This mound measures ca. 1.30 meters in length (east to west), by ca. 0.60 meters in width (north to south) by ca. 0.28 meters in height.

No cultural material was observed in or around the site. Site 29133 is in poor condition. Due to its disturbed condition, it is difficult to determine either mound's original shape or exact function. It is likely, however, that the mounds served as markers, possibly constructed during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29133

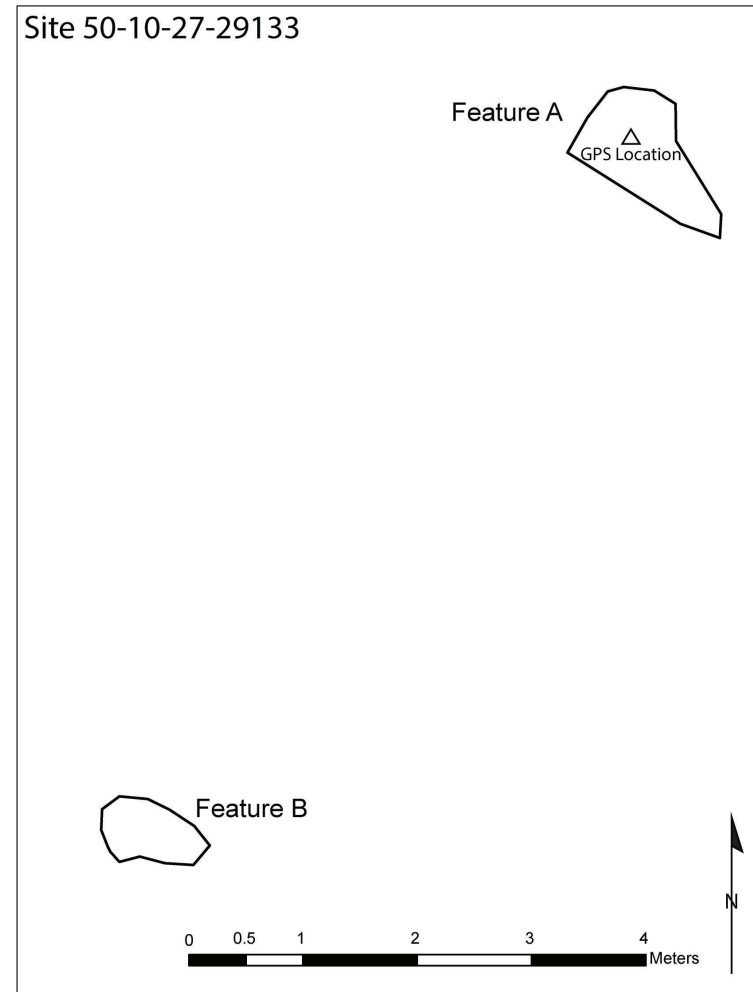


Figure C.105. GPS-based map of Site 50-10-27-29133 complex.

Feature: A

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29133, Feature A is a possibly collapsed mound (Figure C.106). It is located approximately 8.6 meters to the northeast (32°) of the Feature B stone mound. Feature A is constructed of medium to large sub-angular *pāhoehoe* basalt boulders and few *pāhoehoe* cobble slabs. It measures approximately 1.0 meter in length (east to west), ca. 0.92 meters in width (north to south), and ca. 0.3 meters in height.

No cultural material was observed in or around this feature. It is in poor condition with a few boulders and cobbles tumbled to the side. The Feature A mound may have served as a marker constructed during the pre-Contact and/or early post-Contact periods. It is not clear, however, what the mound was intended to mark.



Figure C.106. Site 50-10-27-29133, Feature A, stone mound (view northeast).

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29133, Feature B consists of a collapsed stone mound (Figure C.107). This feature is located in the western portion of the site, approximately 8.6 meters southwest (212°) of the Feature A stone mound. The stone mound is constructed of large sub-angular basalt *pāhoehoe* cobbles and small sub-angular basalt *pāhoehoe* boulder slabs that have been loosely piled on to a relatively flat *pāhoehoe* surface. Due to its poor condition, the original shape of the mound could not be determined. In its present condition, the mound measures approximately 1.30 meters in length (east to west), by ca. 0.60 meters in width (north to south) by ca. 0.28 meters in height.

No cultural material was observed in or around the mound. Feature B is in poor condition, as it is collapsed with tumble to the east and west. It is likely that the Feature B mound served as a marker, possibly constructed during the pre-Contact and/or early post-Contact periods. It is unclear, however, what the mound was intended to mark.

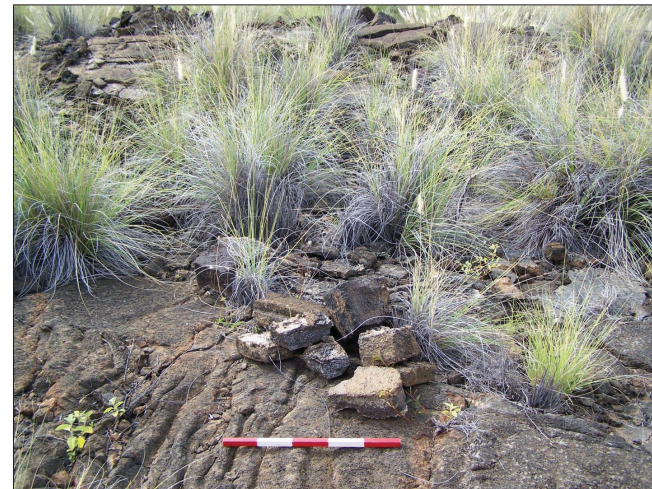


Figure C.107. Site 50-10-27-29133, Feature B, stone mound (view south).

SIHP Number: 50-10-27-29134

Site Type: Mound

Field Number: T-059

Site Measurements: ca. 1 m by ca. 0.90 m by ca. 0.23 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Modern

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29134 consists of a single stone mound (Figure C.109). The site is located in the southern central portion of the project area, approximately 45.0 meters northeast (64°) from Site 29133, Feature A. Site 29134 is situated on an exposed area of slightly sloping undulating *pāhoehoe* lava, surrounded by a ground cover of fountain grass with klu shrubs and Christmasberry trees nearby.

The mound is roughly circular in shape and is constructed of loosely piled small to medium sub-angular *pāhoehoe* boulders (Figure C.108). A small area of lava in the center of the mound is exposed where an iron nail has been hammered in the bedrock. A tall wooden stake that appears to have originally been set vertically within the mound has fallen and now rests partially atop the northwest side of the mound. The mound measures approximately 1.00 meters in length (northwest to southeast) by 0.90 in width (northeast to southwest), and ca. 0.23 meters in height.

No cultural material was observed. This site is in fair condition. Although the stake has collapsed and the nail has rusted, the mound itself remains fairly intact. Bulldozer tracks are noted east of the northeastern portion of the site. The construction style of the Site 29134 mound, the presence of the wooden stake, and the iron nail all indicate that it was built and utilized during the modern period. The site likely functioned as a survey marker.

Site 50-10-27-29134

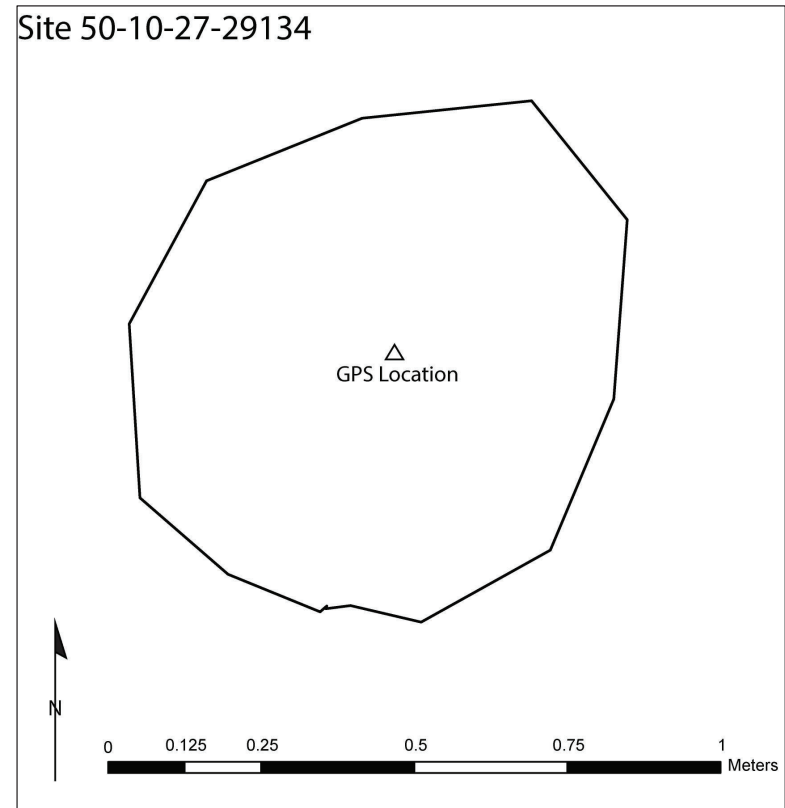


Figure C.108. GPS-based map of Site 50-10-27-29134 mound.



Figure C.109. Site 50-10-27-29134, stone mound (view southwest).

SIHP Number: 50-10-27-29135

Site Type: Mound

Field Number: T-060

Site Measurements: ca. 1.1 m by ca. 0.8 m by ca. 0.4 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Modern

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29135 is a stone mound (Figure C.111). This site is located near the central portion of the project area approximately 34.0 meters northeast (46°) of Site 29134. It is situated on slightly undulating broken up *pāhoehoe* lava. The surrounding vegetation consists of dense patches of fountain grass and scattered klu, Christmasberry, and *koa haole* trees.

The Site 29135 mound is constructed of loosely piled medium to large *pāhoehoe* cobbles and some cobble slabs. It is built around a metal pin that has been hammered into the *pāhoehoe* bedrock. The site is also located in close proximity to a modern jeep road. The mound measures approximately 1.1 meters in length (east to west), ca. 0.8 meters in width (north to south), and ca. 0.4 meters in height (Figure C.110).

A modern wooden fence post with an attached metal strip was found roughly 6.3 meters north of the site. Also, a small waterworn pebble was found less than 1.0 meter from the northeast end of the mound. The structure is in fair condition, with some stones scattered to the north.

The modern, possibly historic materials found in and around Site 29135, as well as the site's close proximity to the jeep road, suggest that this mound is modern in age and may have functioned as a survey marker.

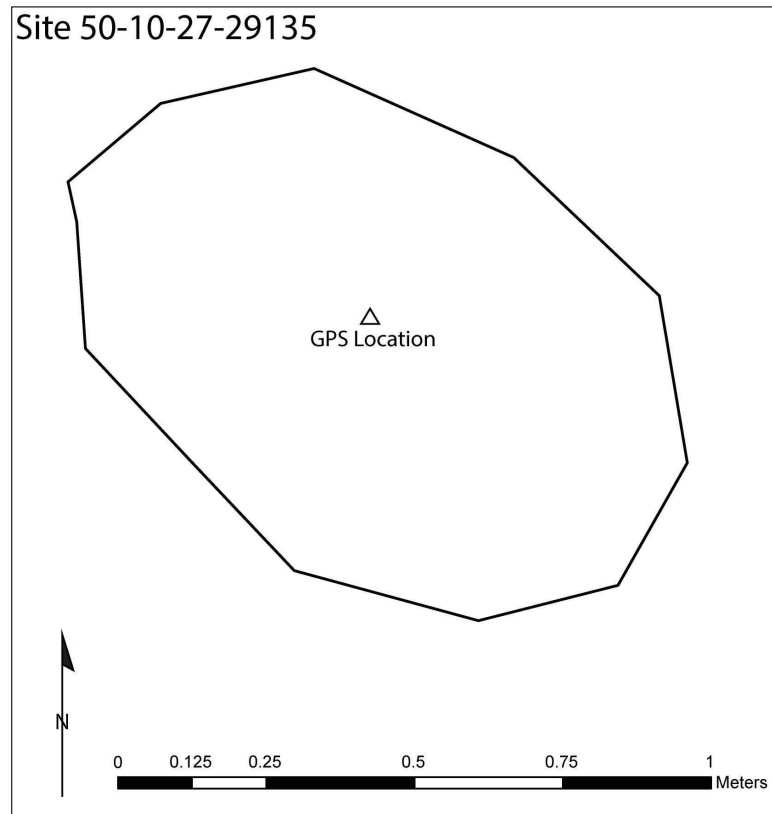


Figure C.110. GPS-based map of Site 50-10-27-29135 mound.



Figure C.111. Site 50-10-27-29135, stone mound (view southeast).

SIHP Number: Site 50-10-27-29136

Site Type: Battering

Field Number: T-061

Site Measurements: ca. 9.5 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29136 consists of two distinct areas of battering (B-001 and B-002). It is located in the central portion of the project area, approximately 69.0 meters south (170°) of Site 29135. The surrounding terrain consists of level undulating *pāhoehoe* lava, with a ground cover of fountain grass.

The first area of battering, B-001, is irregular in shape. It consists of light to moderate dispersed battering marks made with a circular tool. B-002 is located ca. 9.5 meters southeast (150°) from B-001 (Figure C.112). It is oval in shape and consists of moderate, dispersed battering marks that appear to be made with circular tool. The overall site measures ca. 9.5 meters in length (northwest to southeast). A few small fine-grained dense basalt boulders are located throughout the site area, however, these exhibit no evidence of battering. The battering marks at B-001 and B-002 appear to have been a result of circular stone tool. This suggests that the battering was created during the pre-Contact and/or early post-Contact periods and that the site may be associated with some kind of traditional processing activity. It is uncertain, however, what kind of processing took place here.

Site 50-10-27-29136 was not photographed during the current survey.

Site 50-10-27-29136

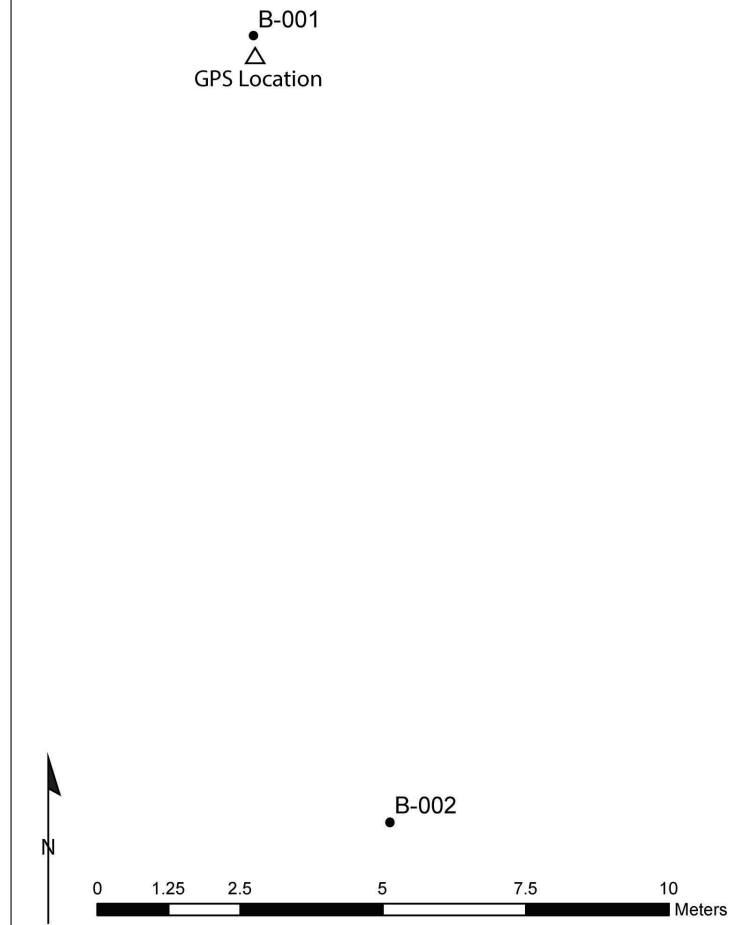


Figure C.112. GPS-based map of Site 50-10-27-29136 battering.

SIHP Number: 50-10-27-29137

Field Number: T-062

Site Measurements: ca. 0.33 m by ca. 0.32 m by ca. 0.64 m

No. Features: 1

Site Type: Stone-Edged Depression

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Fair

Description: Site 50-10-27-29137 consists of a small stone-edged depression within a *pāhoehoe* excavation. The site is located near the central portion of the project area, approximately 30.0 meters west (260°) of the bulldozed access road. The site is ca. 56.0 meters east (74°) of Site 29137, B-001. The stone-edged depression is situated adjacent to the southern edge of a roughly east to west running lava ridge. Many *pāhoehoe* excavations are present to the east and north of the site. The surrounding vegetation includes fountain grass, *noni* trees, klu shrubs, and Christmasberry trees.

The site is constructed primarily of large sub-angular basalt boulders, and a few small sub-angular basalt cobbles that have been loosely piled to form the east, south, and west edges of a roughly circular depression that abuts a natural *pāhoehoe* bedrock outcrop/ridge to the north. This outcrop forms the northern edge of the depression. The narrow interior of the depression is floored with uneven bedrock and few small sub-angular basalt cobbles. No soil is present. The depression measures approximately 0.33 meters in length (north to south) by ca. 0.32 meters (east to west) and is ca. 0.64 meters deep (Figure C.113, Figure C.114, Figure C.115).

No cultural material was observed in or around the site. This site appears to be in fair condition with a small presence of tumble to the south. The construction style of this site suggests it may have been built and utilized during the pre-Contact and/or early post-Contact periods, though its function is uncertain.

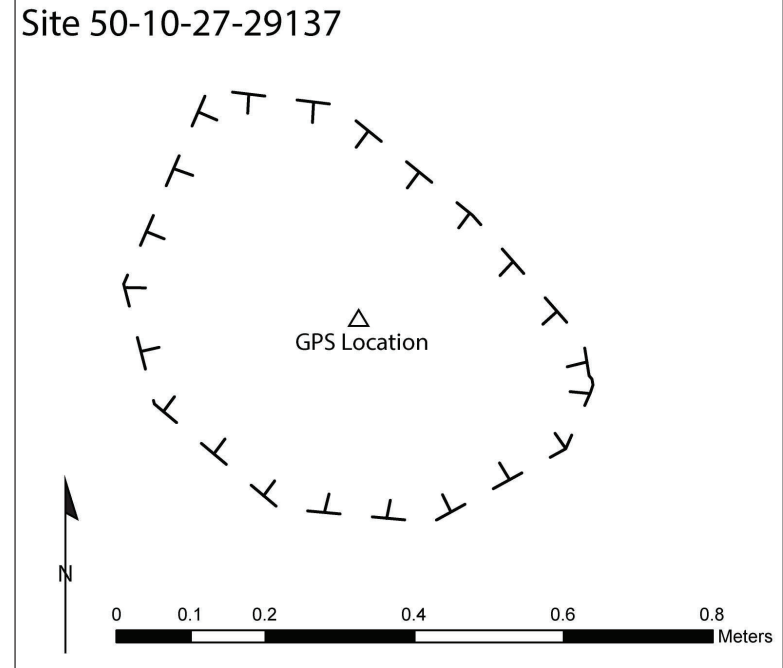


Figure C.113. GPS-based map of Site 50-10-27-29137 stone-edged depression.



Figure C.114. Site 50-10-27-29137, stone-edged depression (view north).



Figure C.115. Site 50-10-27-29137 stone-edged depression, close-up (view north).

SIHP Number: 50-10-27-29138

Site Type: Mound

Field Number: T-063

Site Measurements: ca. 1.01 m by ca. 0.64 m by ca. 0.3 m

No. Features: 1

Artifacts: None Observed

Midden: Present

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29138 is a collapsed stone mound. It is located in the central portion of the project area, approximately 12 meters northeast of the access road into the Queen Lili'uokalani Children's Center. The site is approximately 125.0 meters northwest (306°) of Site 29137. It is situated on fairly level *pāhoehoe* lava. The surrounding vegetation includes dense patches of fountain grass with scattered 'uhaloa, Christmasberry, and klu trees.

The mound presently appears to be a scatter of medium to large sub-angular basalt *pāhoehoe* boulders, which may have originally stood two to three courses high before its collapse. The scatter of stones that may have formed the base of the mound is rectangular in shape. It currently measures ca. 1.01 meters in length (north to south), ca. 0.64 meters in width (east to west), and ca. 0.3 meters in height (Figure C.116, Figure C.117).

Some faint areas of possible battering were on the open panels of *pāhoehoe* surrounding the mound. These possible battering marks were, however, too faint to record. Near the southern end of the site, are roughly three areas of scattered rock concentrations. These rock concentrations, however, are located near bulldozing scars and appear to be road debris from the construction of the nearby access road.

One piece of cowry shell was found ca. 3.84 meters north (340°) from the mound. The mound is in poor condition, and fully collapsed. This collapsed mound may possibly have served as a marker during the pre-Contact and/or early post-Contact periods.

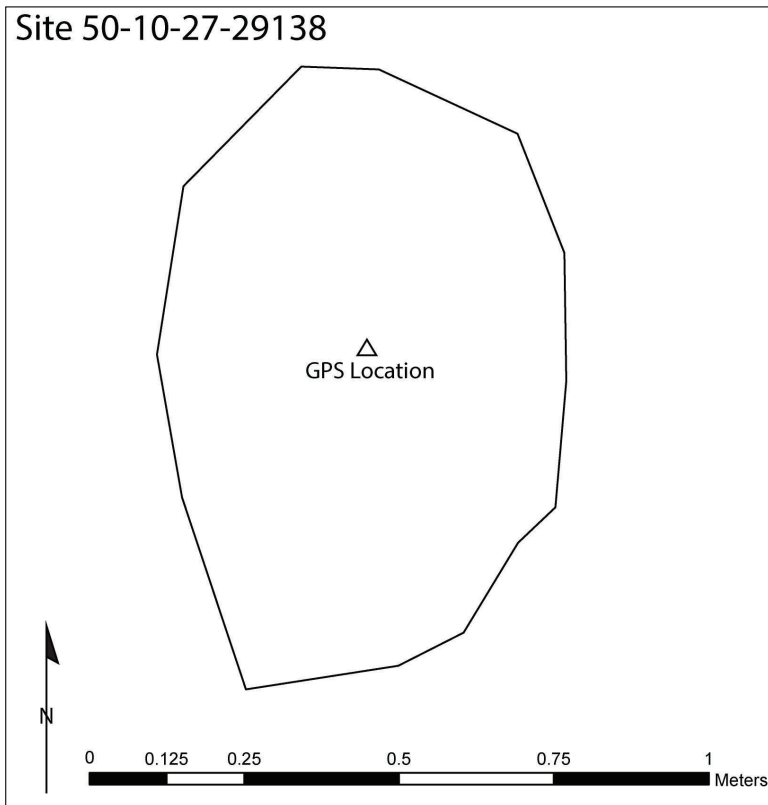


Figure C.116. GPS-based map of Site 50-10-27-29138 mound.



Figure C.117. Site 50-10-27-29138, badly collapsed stone mound (view north).

SIHP Number: 50-10-27-29139

Site Type: Mound

Field Number: T-064

Site Measurements: ca. 1 m by ca. 0.57 m by ca. 0.33 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29139 consists of a single stone mound (Figure C.118, Figure C.119). This site is located in the central portion of the project area, approximately 61.0 meters west (281°) of Site 29138. The mound is situated on an area of level *pāhoehoe* lava, surrounded by a ground cover of fountain grass with *kū* shrubs. The mound is constructed of small sub-angular *pāhoehoe* boulder slabs, which have been loosely piled atop bedrock and have tumbled to the northwest. Due to its poor condition, it is difficult to determine the mound's original shape. It currently measures ca. 1.00 meters in length (northwest to southeast) by ca. 0.57 meters in width (northeast to southwest), and ca. 0.33 meters in height. A dispersed rock scatter of *pāhoehoe* slabs are located roughly 10.0 meters northwest (312°) of the site. It appears too dispersed to determine any age, function, or dimension.

No cultural material was observed in or around the site. The site is in poor condition, as stones have tumbled from the mound. Modern wire fencing and wood scraps are located just to the east of the site, suggesting a possible modern homeless habitation. The construction style of the mound suggests that Site 29139 may have served as a marker during the pre-Contact and/or early post-Contact periods. It is not clear, however, what the mound was intended to mark.

Site 50-10-27-29139

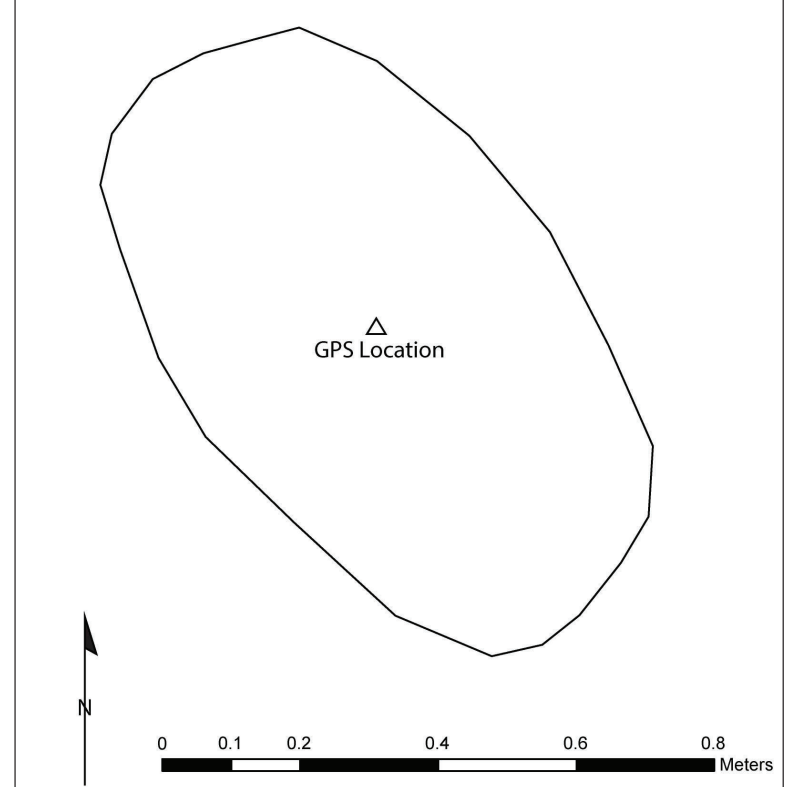


Figure C.118. GPS-based map of Site 50-10-27-29139 mound.



Figure C.119. Site 50-10-27-29139 stone mound (view southwest).

SIHP Number: 50-10-27-29140

Site Type: C-Shaped Wall

Field Number: T-065

Site Measurements: ca. 2.2 m by ca. 1.7 m by ca. 0.6

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29140 is a badly disturbed C-shaped wall (Figure C.120, Figure C.121). The site is located in the central portion of the project area, approximately 30.0 meters west (267°) of Site 29139. The surrounding terrain consists of roughly level *pāhoehoe* lava and areas of naturally broken up *pāhoehoe*. The vegetation is comprised of a ground cover of fountain grass with a scatter of Christmasberry shrubs.

The C-shaped wall is situated adjacent to an area of broken up *pāhoehoe* lava. It is constructed of small to medium *pāhoehoe* boulder slabs that appear to have been removed from the surrounding area of broken up lava. The slabs were used to form a rough C-shape that opens to the northeast. It is difficult to determine the construction of original structure due to its collapsed state. It is likely, however, that the boulder slabs may have originally been set on edge to form a wall. The slabs currently are relatively scattered, with the majority of slabs concentrated on the eastern edge. The site measures ca. 2.2 meters in length (northwest to southeast) by ca. 1.7 meters in width (northeast to southwest). The original thickness of the wall is difficult to determine. It may have been ca. 0.6 meters.

No cultural material was observed in or around this site. Site 29140 is in poor condition. The structure is heavily impacted, possibly as a result of seismic activity. It presently appears to be collapsed and scattered. Site 29140 may possibly have served as a temporary windbreak shelter, built and used during the pre-Contact and/or early post-Contact periods. Several of its slab wall stones were likely originally set on edge.

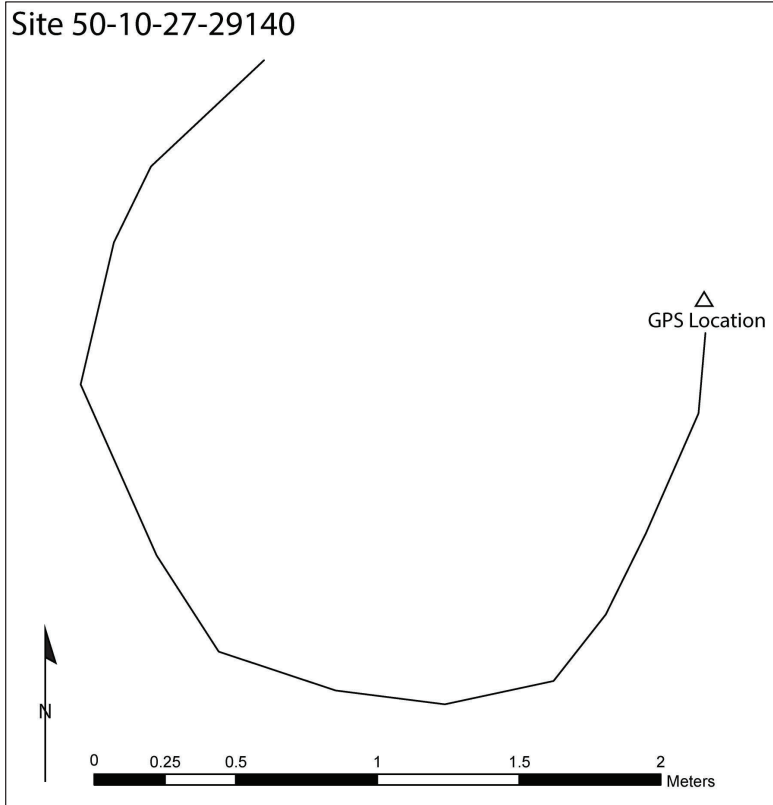


Figure C.120. GPS-based map of Site 50-10-27-29140 C-shaped wall.



Figure C.121. Site 50-10-27-29140, badly collapsed C-shaped wall (view east).

SIHP Number: 50-10-27-29141

Field Number: T-066

Site Measurements: ca. 2.05 m by ca. 1.89 m

No. Features: 1

Site Type: C-Shaped Wall

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29141 is a badly disturbed roughly C-shaped wall (Figure C.122, Figure C.123). It is located in the central portion of the project area, approximately ca. 31.0 meters northwest (303°) of Site 29140. The surrounding terrain consists of level *pāhoehoe* lava, with a ground cover of fountain grass and a scatter of klu shrubs.

The site appears to be constructed of small sub-angular boulders and cobbles that have been roughly set into a low C-shape. The wall has collapsed and is presently only one course high. Based on the amount of material present, however, the wall may have originally been built to form a two-course high wall. Its collapsed and scattered state makes it unclear as to what its internal measurements would have been. The C-shape currently opens to the southeast. The site's overall exterior length is ca. 2.05 meters (northwest to southeast) by ca. 1.89 meters in width (northeast to southwest).

No cultural material was observed in or around the site. The site is in poor condition and is collapsed, possibly as a result of seismic activity. Site 29141 may have possibly served as low windbreak shelter due to its location atop level *pāhoehoe* lava. The construction style of the C-shape suggests that it may be pre-Contact and/or early post-Contact in age.

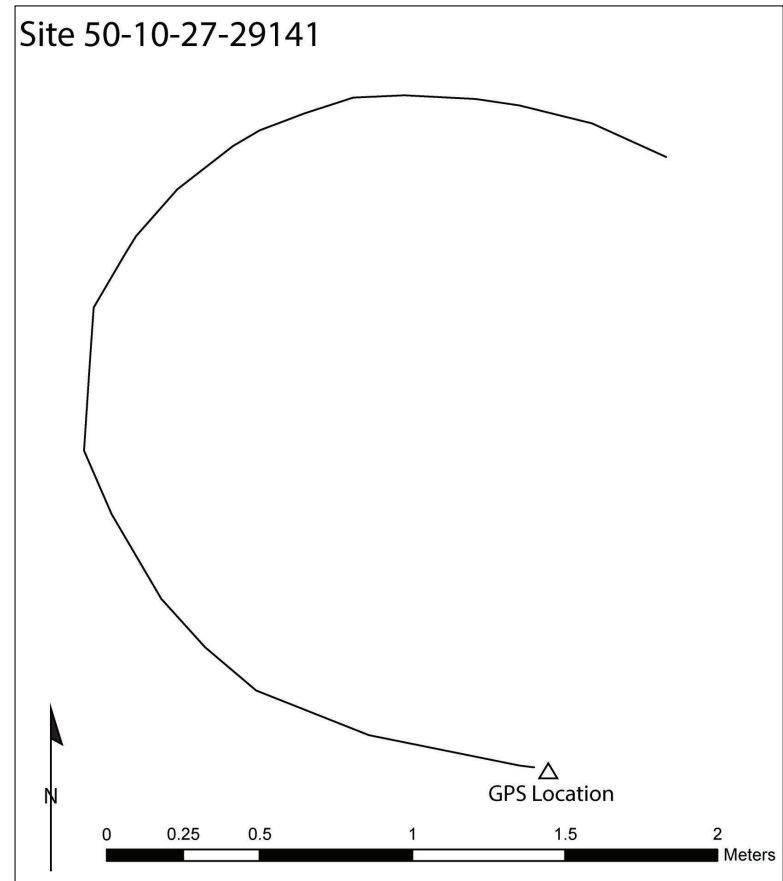


Figure C.122. GPS-based map of Site 50-10-27-29141 C-shaped wall.



Figure C.123. Site 50-10-27-29141, collapsed C-shaped wall (view southwest).

SIHP Number: 50-10-27-29142

Field Number: T-067

Site Measurements: ca. 4.80 m by ca. 0.51 m

No. Features: 1

Site Type: Trail Segment

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel

Condition: Fair

Description: Site 50-10-27-29142 consists of a trail segment (Figure C.124, Figure C.125). The site is located in the central portion of the project area, approximately 36.5 meters northwest (325°) of Site 29141. It is situated atop a stretch of rough 'a'ā lava running roughly east to west and connecting areas of relatively flat *pāhoehoe* lava. The surrounding vegetation includes a ground cover of fountain grass with a few klu shrubs.

The trail is constructed of sub-angular basalt *pāhoehoe* slabs set into a finger of 'a'ā lava, connecting areas of natural *pāhoehoe* bedrock. The trail runs roughly northeast to southwest and measures approximately 4.80 meters in complete length.

The northeast end of the trail consists of four *pāhoehoe* slabs set at even intervals across the 'a'ā lava, leading roughly to the center of the trail that consists of an area of natural, flat *pāhoehoe* bedrock. This portion of the trail measures ca. 1.70 meters long by ca. 0.49 meters wide.

The southwest portion is less clearly defined but consists of three *pāhoehoe* slabs reaching a maximum width of ca. 0.51 meters, connecting the natural bedrock in the center of the trail to an outcrop of smooth *pāhoehoe* at the southwestern end.

No cultural material was observed in or around the site area. Site 29142 is in fair condition. The stepping stone trail follows a defined path, but its course is not visible on the smoother *pāhoehoe*.

Its location, in a rough 'a'ā flow between relatively smooth stretches of *pāhoehoe* suggests that Site 29142 may have functioned as a stepping stone trail used to travel more easily across the jagged 'a'ā lava. This trail was most likely built and utilized during the pre-Contact and/or early post-Contact periods.

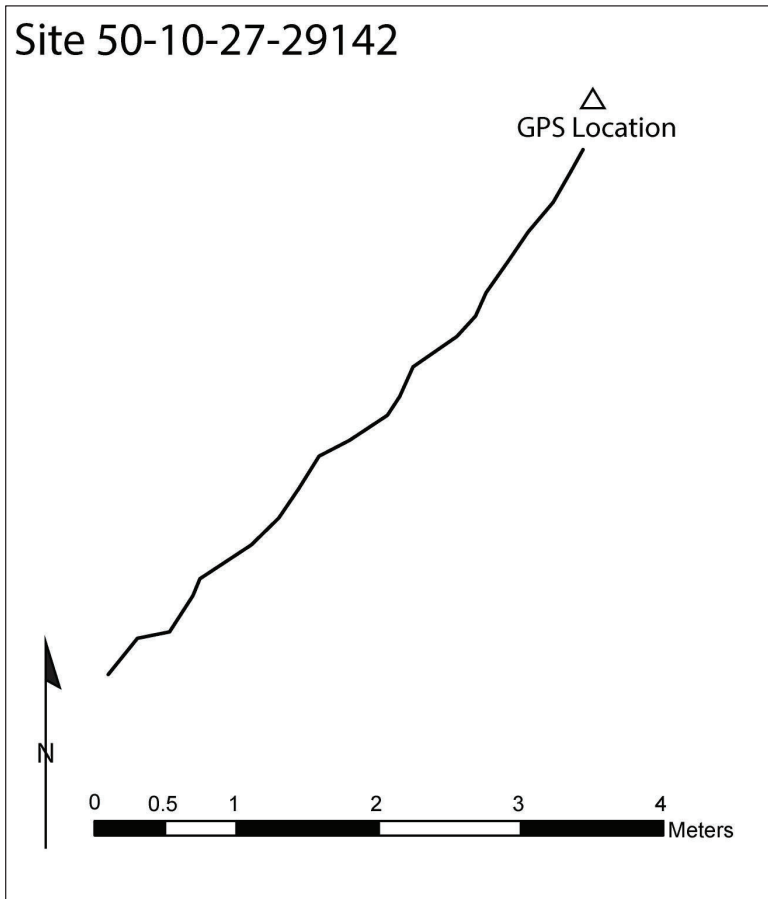


Figure C.124. GPS-based map of Site 50-10-27-29142 trail segment.



Figure C.125. Site 50-10-27-29142, trail segment (view to the southwest).

SIHP Number: 50-10-27-29143

Site Type: Complex

Field Number: T-071

Site Measurements: ca. 37.5 m by ca. 35 m

No. Features: 6

Artifacts: Historic

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact/Historic

Possible Function: Storage/Water Catchment/Processing

Condition: Good to Fair

Description: Site 50-10-27-29143 is a complex composed of six modified overhangs (Features A thru F; Figure C.126). This irregularly shaped site is located in the southern portion of the project area, approximately 35.0 meters west (290°) of the golfers' driving range. The Site 29143, Feature F overhang is ca. 19.0 meters southwest (241°) from Site 13271. This complex of features is situated in a large natural *pāhoehoe* depression formed by a collapsed lava tube, which runs roughly northeast to southwest. Within this depression are numerous small collapsed lava blisters, which form natural overhangs. The surrounding vegetation includes a ground cover of fountain grass with a scatter of klu shrubs and Christmasberry trees.

Feature A is a modified overhang. Stones have been placed at the edges of the overhang to seal these edges and narrow the opening. Small to medium sub-angular *pāhoehoe* slabs have been placed on the floor of an exposed and naturally collapsed lava blister. One slab has been placed under the dripline and may have been used to support a water catchment vessel (gourd or coconut shell). The top of the Feature A lava blister has a natural crack which appears to have been filled to complete the overhang area.

Feature B is located just south of Feature A along the same area of natural collapse. Feature B consists of a natural overhang with stones piled at one end. Small to medium sub-angular boulders have been loosely piled at the north end creating an apparently bound overhang area. Its south end is naturally closed by bedrock. Features A and B are located at the southern end of the site.

Features C and D are located adjacent to each other in the southwestern portion of the site, approximately 5.5 meters northwest (303°) of Feature A. Feature C is a modified overhang with a floor filled and leveled with small to medium *pāhoehoe* slabs. The opening of Feature C has been narrowed with a medium *pāhoehoe* at one end. Feature D is a natural overhang located just south of Feature C. The overhang has been modified on its eastern and western edges. Small to medium *pāhoehoe* slabs have been loosely piled to narrow the opening. The floor of Feature D consists of bedrock and *pāhoehoe* slabs, but it is not clear if these slabs were set in place or the result of natural roof collapse.

Features E and F are located in the northeastern portion of the site. Feature E is located ca. 30.0 meters northeast of Feature D and consists of a modified overhang with a floor that has been roughly paved with small sub-angular *pāhoehoe* slabs. Small sub-angular *pāhoehoe* cobbles and

boulders are built up along one side of the opening to narrow its effective size.

Feature F is located approximately 9.0 meters northeast of Feature E and consists of a slightly modified overhang. Two small to medium sub-angular *pāhoehoe* boulders have been set under the overhang, effectively dividing the space into two areas.

In addition to the six features, one area of distinct battering was observed on site, located approximately 13.0 meters northeast (61°) of Features C and is ca. 18.0 meters southwest (224°) of Feature E. The irregularly shaped area consists of heavy, somewhat concentrated battering made with what appears to be a triangular tool. The area measures approximately 0.50 meters north to south by ca. 0.40 meters east to west.

One artifact was observed in the Feature B overhang. The artifact consists of an historic rusted milk can. The measurements and attributes of the can suggest it was manufactured sometime between 1917 and 1945. The broad range in date is due to the degradation of the can and the inability to detect the presence or absence of embossing. No other cultural material was observed on-site. Site 29143 is in fair to good condition, with some tumble present at Features B and F.

The modifications to the six natural overhangs suggest that the site was utilized in the pre-Contact and/or early post-Contact periods, however, the presence of the historic milk can, and the geometric battering tool marks suggest a possible historic period use as well. The six modified overhang features may have served as storage areas, or in some cases water-catchment. The battering area suggests that the site was associated with some kind of processing activity. It is uncertain, however, what kind of processing took place here.

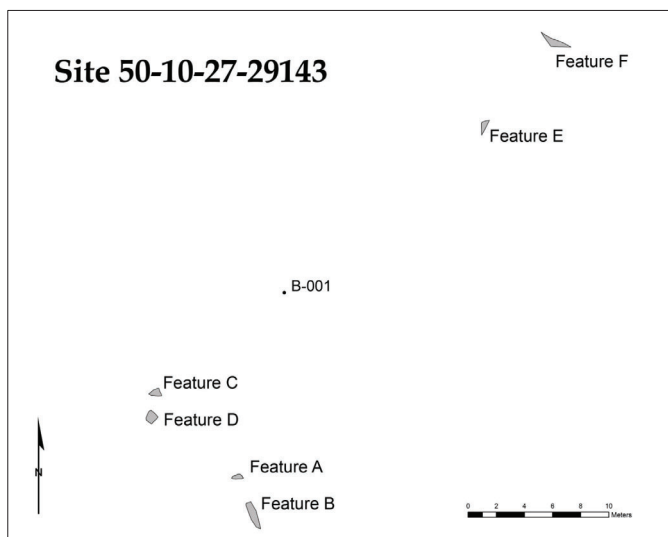


Figure C.126. GPS-based map of locations of the features within Site 50-10-27-29143 complex.

Feature: A

Feature Type: Modified Overhang

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Storage/Water Catchment

Condition: Good

Description: Site 50-10-27-29143, Feature A is a modified overhang that was created from a natural opening in a collapsed lava blister (Figure C.127). This feature is located at the southern end of the site area, approximately 1.8 meters north (337°) of the Feature B modified overhang. The overhang of Feature A opens to the north and is relatively shallow in height. Modifications have been made to its eastern and western exterior edges. These modifications consist of loosely piled small sub-angular boulders and cobbles that appear to have been placed to fill a narrow crevice extending off the overhang's exterior edges. The interior of the overhang has been cleared of rocks, however, its floor consists of exposed bedrock and some small *pāhoehoe* boulder slabs. These slabs may have been used to help level the floor. Atop the overhang on its eastern edge, small cobbles and pebbles appear to have been loosely piled to possibly seal a small skylight into the overhang.

The opening of the overhang measures ca. 0.7 meters in length (east to west), by ca. 0.44 meters in width (north to south). Its maximum depth is ca. 2.1 meters. The feature's interior measurements are ca. 3.2 meters in length (east to west) by ca. 2.1 meters in width (north to south). Its maximum interior height is ca. 0.75 meters.

No cultural material was observed in or around the feature. Site 29143, Feature A is in good condition, and does not appear to be tumbled. The construction and location of Feature A suggest that the overhang was modified to possibly have functioned as a storage area. One small boulder slab is located in the feature's interior below the dripline. This suggests that the feature may have also been utilized for water catchment, although it remains unclear. Feature A was most likely built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.127. Site 50-10-27-29143, Feature A, modified overhang (view northeast).

Feature: B

Feature Type: Modified Overhang

Artifacts: Historic

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Storage

Condition: Fair

Description: Site 50-10-27-29143, Feature B is a modified overhang (Figure C.128). The feature is located within a collapsed lava blister, approximately 1.8 meters south (157°) of the Feature A modified overhang. Feature B consists of a natural overhang that opens to the east, with modifications along its northern end. These modifications consist of some loosely piled small sub-angular basalt boulders that appear to be sealing a crevice at the northern edge of the overhang. No other modifications were observed. Natural collapse from the roof of the overhang has narrowed the entrance, however, further back, the interior widens, and the floor of the overhang is cleared of rock. Feature B measures ca. 2.1 meters in length (north to south) by ca. 0.4 meters in width (east to west). The overhang's depth is ca. 2.0 meters.

Located at the entrance of Feature B is a badly degraded, possible condensed milk tin can. The can measures ca. 9.84 centimeters in length, and ca. 7.47 centimeters in diameter. It has stamped ends and a crimped side seam and a "hole-in-one" filing method (ca. 2.54 centimeters in diameter) and a punch hole opening. According to the "Simonis Milk Can Guide" by Jamie Palmer (http://www.academia.edu/4810446/Simonis_Milk_Can_Guide), this type of can was manufactured either between 1917 and 1929 or 1935 and 1945, the latter only if embossing is present. Due to the can's degraded state, it is impossible to read the embossing. No other cultural material was observed at the site. Site 29143, Feature B is in fair condition, it does not appear to have suffered tumble besides the natural roof collapse.

The close proximity of Feature B to Feature A and its modifications suggest it may have been used as a storage area during the pre-Contact and/or early post-Contact periods.



Figure C.128. Site 50-10-27-29143, Feature B, modified overhang (view east).

Feature: C

Feature Type: Modified Overhang

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Storage

Condition: Good

Description: Site 50-10-27-29143, Feature C consists of a modified overhang (Figure C.129). This feature is located in the southeastern portion of the site area, approximately 2.5 meters north (340°) of the Feature D modified overhang. The Feature C overhang opens to the northeast and is the result of a naturally collapsed and opened lava blister. The floor of the blister is filled and leveled with small to medium sub-angular *pāhoehoe* slabs. The northwestern end of the opening has a medium sub-angular *pāhoehoe* slab set into it, narrowing the opening size. Small to large sub-angular basalt boulders are present to the southwest but appear to be natural collapse and tumble of the bedrock. The opening of the modified overhang measures ca. 0.80 meters in length (northwest to southeast) by ca. 0.6 meters in height. The internal depth is ca. 1.35 meters (northeast to southwest), ca. 1.2 meters in internal width and ca. 0.6 meters in internal height.

No cultural material was observed in or around this feature. Site 29143, Feature C is in good condition. Its construction style and location of Feature C in a natural overhang, suggests that it was built and utilized during the pre-Contact and/or early post-Contact periods for storage.



Figure C.129. Site 50-10-27-29143, Feature C, modified overhang (view northeast).

Feature: D
Feature Type: Modified Overhang
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or early Post-Contact
Possible Function: Storage
Condition: Good

Description: Site 50-10-27-29143, Feature D consists of a modified overhang (Figure C.130). The feature is located in the southwestern portion of the site area, approximately 5.1 meters northwest (303°) of the Feature A modified overhang. The Feature D overhang is set in to a *pāhoehoe* lava ridgeline and opens to the north. Modifications have been made to its western and eastern edges. This consists of two small sub-angular boulders that have been placed on the eastern edge, and two small sub-angular boulders have also been placed on the western edge. These modifications have narrowed the entrance of the overhang. The floor of the overhang's interior consists of exposed bedrock and some small boulder slabs that may have been placed to level the floor. The opening of the overhang measures ca. 0.6 meters in length (east to west) by ca. 0.46 meters in width (north to south) with a depth of ca. 1.6 meters. No cultural material was observed in or around the feature. Feature D is in good condition, it does not appear to have tumbled. The construction of the Feature D modified overhang suggests that it may have functioned as a storage area during the pre-Contact and/or early post-Contact period.



Figure C.130. Site 50-10-27-29143, Feature D modified overhang (view north).

Feature: E

Feature Type: Modified Overhang

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Storage

Condition: Good

Description: Site 50-10-27-29143, Feature E consists of a modified overhang (Figure C.131). It is located in the northeastern portion of the site area, approximately 30.0 meters northeast (51°) of the Features C overhang. The overhang is set at the base of a low *pāhoehoe* ridge and opens to the southwest. It appears to be a naturally collapsed lava blister that naturally opened into an overhang. Modifications have been made to the overhang entrance and its interior floor. Small sub-angular boulders and cobbles appear to have been loosely piled along the overhang's western edge, narrowing the opening. Small *pāhoehoe* boulder slabs and cobbles appear to have been placed in the interior of the overhang along its floor and may have been used to form a rough paving along the floor. The feature measures ca. 1.0 meter in length (east to west) by ca. 0.4 meters in width (north to south), and ca. 1.1 meters in depth.

Two golf balls were observed inside of the feature's interior, this is due to its close proximity to the Swing Zone driving range. No other cultural material was observed in or around the feature.

Feature E is in good condition; it appears to have suffered some tumble along its western edge. The construction of Feature E is similar to that of the other modified overhangs in the area, suggesting that it was likely used as a storage area during the pre-Contact and/or early post-Contact periods.



Figure C.131. Site 50-10-27-29143, Feature E, modified overhang (view southeast).

Feature: F

Feature Type: Modified Overhang

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early Post-Contact

Possible Function: Storage

Condition: Fair

Description: Site 50-10-27-29143, Feature F consists of a modified overhang (Figure C.132). This feature is located in the northeastern portion of the site, approximately 9.0 meters northeast (53°) of the Feature E modified overhang. Feature F is a collapsed lava blister that naturally opened into an overhang. The overhang opens to the north and has very slight modifications. Two medium to large sub-angular *pāhoehoe* boulders are set on end onto the level bedrock floor in a line perpendicular to the opening and beneath the overhang, effectively dividing it into two distinct areas. The opening of the overhang measures approximately 1.9 meters east to west by ca. 0.57 meters in height, with a depth of ca. 1.1 meters. The placed boulders exist 0.8 to 1.05 meters in from the west end of the opening. No cultural material was observed in or around the feature. Feature F is in fair condition. Small to medium boulders have collapsed and tumbled into the eastern end of the overhang. Due to its construction, and its location in a natural overhang, Feature F appears to have been built and utilized in the pre-Contact and/or early post-Contact periods, possibly for storage.



Figure C.132. Site 50-10-27-29143, Feature F, modified overhang (view northeast).

SIHP Number: 50-10-27-29144

Site Type: Complex

Field Number: T-073

Site Measurements: ca. 24 m by ca. 3.5 m

No. Features: 3

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art/Marker/Processing

Condition: Poor/Fair/Good

Description: Site 50-10-27-29144 consists of two petroglyphs (Features A and C) and one stone mound (Feature B). It is located in the southeastern portion of the project area, approximately 31.0 meters south (172°) of Site 13262. This site is situated across two level areas of a roughly east to west running flow of *pāhoehoe* lava. The surrounding vegetation consists primarily of a thick ground cover of fountain grass.

Feature A is located in the eastern portion of the site area and consists of a single oval-shaped petroglyph with a pecked dot in the center. Some battering is present in between the ellipse line and the dot. Feature B is located in the central portion of the site and consists of a badly tumbled mound constructed of small sub-angular basalt *pāhoehoe* boulders and cobbles. Feature C is a small, fainter oval-shaped petroglyph located adjacent to and southwest of the Feature B mound. The Feature A and C petroglyphs were recorded in detail during the Keahuolū petroglyph documentation project (Stasack and Stasack 2012:II, T-073, 1-4).

Three areas of distinct battering (B-001 to B-003) are also present at the site (Figure C.133). All three areas appear to have been battered with a tool that left behind circular tool marks, most likely a stone rather than a steel tool. B-001 is located at the center of the site, approximately 3.0 meters west (278°) of the Feature A petroglyph. B-001 is an irregularly shaped area of moderate, concentrated circular battering marks. It measures ca. 0.30 meters in length (north to south), by ca. 0.22 meters in width (east to west). B-002 is ca. 13.0 meters north (350°) of the Feature B mound. B-002 is an irregularly shaped area of concentrated heavy battering that appears to have been made with circular tool. B-002 measures roughly ca. 0.3 meters in length (north to south) by ca. 0.27 meters in width (east to west). B-003 is situated 22.0 meters west (258°) of the Feature C petroglyph. It consists of an irregularly shaped area of light, dispersed circular battering marks. The area of battering measures ca. 1.27 meters in length (east to west) by 0.76 meters in width (north to south).

Site 29144 is in poor to good condition. The Feature B mound has been badly collapsed, and weathering has affected the Feature C petroglyph. The Feature A petroglyph is, however, deeply pecked and relatively distinct. No cultural material was observed in or around the site. The style of the two petroglyphs, the presence of circular battering marks, and the construction and location of the stone mound, all that this site was utilized during the pre-Contact and/or early post-Contact periods.

The mound most likely served as a marker, possibly indicating the location of the petroglyphs. The two petroglyphs themselves are similar to images found at Pu'uloa in Puna and Anaeho'omalū in South Kohala. The dot and circle that forms Feature A may be associated with ceremonies related to the deposition of a child's *piko* (umbilical stump). The presence of battering areas suggests that some kind of processing activity was also carried out at the site. It is unclear, however, what kind of processing may have taken place here.

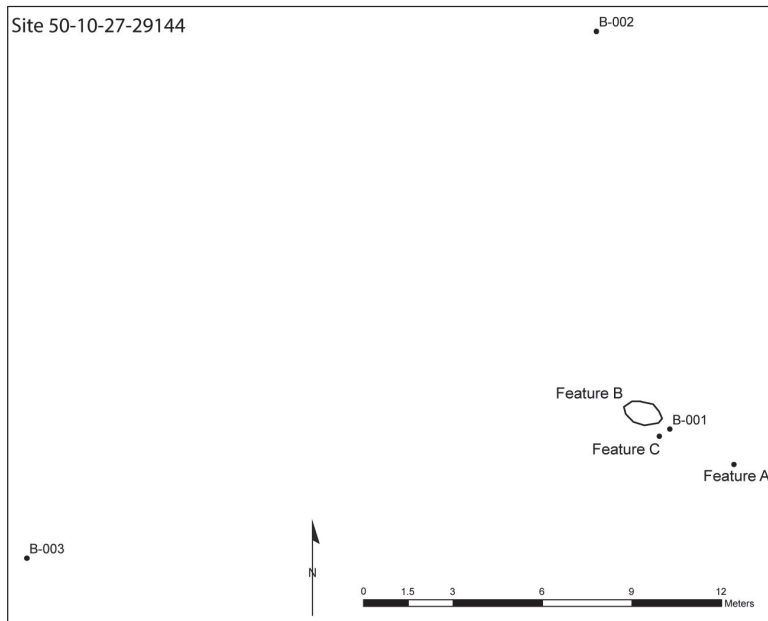


Figure C.133. GPS-based map of Site 50-10-27-29144 complex.

Feature: A

Feature Type: Petroglyph

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Good

Description: Site 50-10-27-29144, Feature A consists of a petroglyph (Figure C.134). Feature A is located in the eastern portion of the site, approximately 3.0 meters east (112') of the Feature B mound and the Feature C petroglyph. Feature A is a clearly defined broad oval-shaped petroglyph with a large pecked dot in the center. The petroglyph is located on a level area of a roughly east to west running flow of undulating *pāhoehoe* lava. The eastern portion of the petroglyph ellipse follows a natural crack. In addition to the defined petroglyph, some battering is present between the petroglyph's ellipse line and the central dot, and it appears to be made with circular tool marks, and likely predates the petroglyph. The petroglyph measures approximately 0.33 meters on its long axis (east to west), and ca. 0.30 meters along its short axis (north to south). The central, circular dot measures ca. 0.04 meters in diameter. No cultural material was observed in or around the site. The Feature A petroglyph is in good condition. The petroglyph appears to have been created during the pre-Contact and/or early post-Contact periods.



Figure C.134. Site 50-10-27-29144, Feature A petroglyph.

Archaeological Inventory Survey — Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

450

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29144, Feature B consists of a disturbed stone mound (Figure C.135). It is situated atop relatively level *pāhoehoe* lava, approximately 3.0 west (292°) of the Feature A petroglyph. The mound is constructed of small sub-angular basalt boulders and cobbles that at present lie scattered on the ground surface. The mound measures approximately 1.4 meters in length (east to west) by ca. 0.76 meters in width (north to south). It has a maximum height of ca. 0.25 meters.

No cultural material was observed in or around the feature. The mound is in poor condition and appears badly disturbed, possibly due to seismic activity or other natural causes. The Feature B mound may have served as a marker, most likely built during the pre-Contact and/or early post-Contact periods. Its close proximity to Features A and C may indicate that the mound served to mark the location of the petroglyphs.



Figure C.135. Site 50-10-27-29144, Feature B stone mound (view east).

Feature: C

Feature Type: Petroglyph

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Fair

Description: Site 50-10-27-29144, Feature C consists of a single petroglyph (Figure C.136). It is situated approximately 2.5 meters west (281°) of the Feature A petroglyph, and adjacent of the Feature B mound. Feature C consists of a small oval-shaped petroglyph that is shallowly pecked and relatively faint. It measures 8.5 centimeters (east to west) along its long axis, and ca. 7.0 centimeters (north to south) along its short axis.

No cultural material was observed in or around the feature. Feature C is in fair condition, though somewhat naturally weathered. The Feature C petroglyph appears to have been created during the pre-Contact and/or early post-Contact periods.



Figure C.136. Site 50-10-27-29144, Feature C, petroglyph.

SIHP Number: 50-10-27-29145

Site Type: Complex

Field Number: T-078

No. Features: 208

Site Measurements: ca. 74.0 m by ca. 62.0 m

Artifacts: Traditional

Midden: Present

Coral: Present

Skeletal Remains: None Observed

Possible Age: Pre-Contact/Historic

Possible Function: Processing

Condition: Fair

Description: Site 50-10-27-29145 consists of 208 distinct areas of battering (B-001 to B-208; Figure C.137). This site is located in the central portion of the project area and extends north and west of the Queen Lili'uokalani Children's Center gravel access roads. The datum of Site 29145 (B-001) is approximately 93.0 meters south (165°) of Site 13287, Feature A. The total site area extends across undulating flow of *pāhoehoe* lava running roughly east to west, overlapping with a large depression made naturally from a collapsed lava tube in which Site 13287 is distributed. The surrounding vegetation includes a ground cover of fountain grass with klu shrubs and *noni*, Christmasberry, and *kiawe* trees. The total site area measures ca. 74.0 m in length (NE to SW) and 62.0 m in width (NW to SE). Table C.6 describes the 208 areas of battering in detail. Site 50-10-27-29145 was not photographed during the current survey.

Cultural material observed within the site includes four manuports and two artifacts. Two of the manuports are small, dense, medium gray waterworn pebbles that were found in the central portion of the site. The other two manuports and the two artifacts are located in the southwestern corner of the site, near battering areas B-191 and B-192. One manuport is a small, spherical waterworn coral pebble, and the other is a large waterworn vesicular basalt cobble. Artifact 001 is a vesicular waterworn basalt hammerstone with battering on one end. Artifact 002 is a hammerstone. This hammerstone is large and a dense waterworn basalt cobble with battering along two edges and one end. Artifact 002 measures ca. 21.0 cm in length by ca. 15.0 cm wide by ca. 14.0 cm thick (Figure C.139). In addition to the artifacts and manuports, midden including Cypraeidae, Conidae and a large fragment of possible Isognomonidae was observed.

Two mounds, Site 29138 and Site 29155 are situated within the Site 29145 area. The Site 29138 mound is located along the southern edge of the site, and the Site 29155 is located at the border to the Site 13287 complex.

Site 29145 is in fair condition. It is possible that the areas of battering may have extended further south, however, due to the gravel access road that is adjacent to the southern edge of the site, it is impossible to determine. It may have been associated with a processing activity. It is uncertain, however, what kind of processing activity took place here. The presence of both circular and linear tool marks suggests the site may have been utilized in the pre-Contact and historic periods. The higher concentration of circular tool marks and traditional artifacts may imply a more extended use of the site in the pre-Contact and/or early post-Contact periods.

Archaeological Inventory Survey — Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolu, North Kona, Hawai'i

July 2019

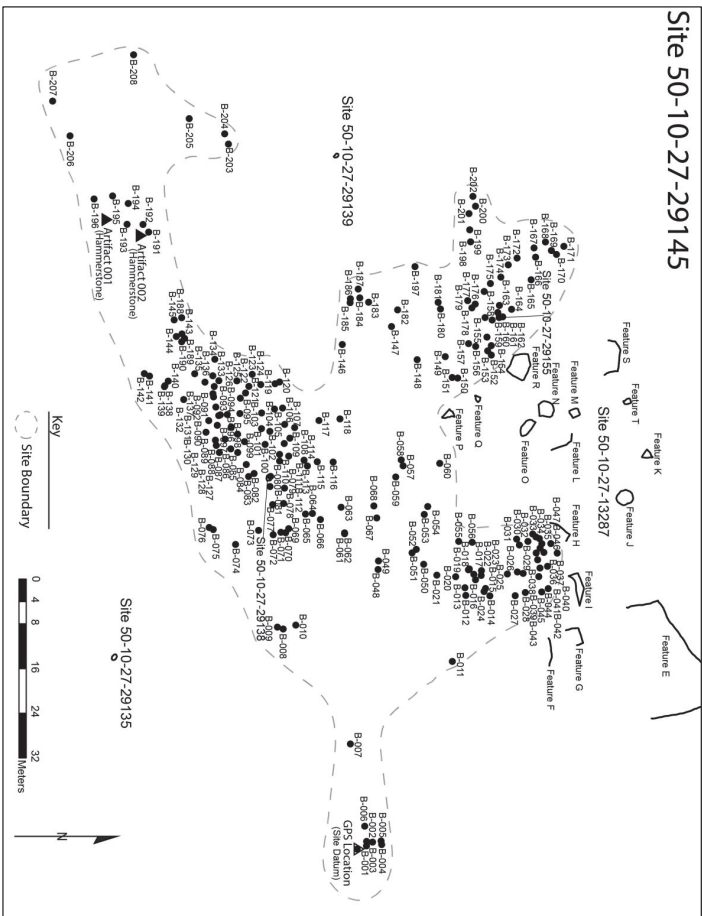


Figure C.137. GPS-based map of the battered areas within Site 50-10-27-29145.

Archaeological Inventory Survey — Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolu, North Kona, Hawai'i

July 2019



Table C.6 Site 50-10-27-29145, Table of Battering.

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-001	Circular	Heavy	Dispersed	Circular	0.32 (N/S)	0.32 (E/W)
B-002	Irregular	Moderate	Dispersed	Linear	0.40 (NE/SW)	0.35 (NW/SE)
B-003	Irregular	Moderate	Concentrated	Circular	1.10 (NW/SE)	0.65 (NE/SW)
B-004	Oval	Moderate	Concentrated	Circular	0.72 (NW/SE)	0.61 (NE/SW)
B-005	Circular	Light	Dispersed	Circular	0.72 (N/S)	0.70 (E/W)
B-006	Oval	Moderate	Dispersed	Circular	0.55 (NW/SE)	0.43 (NE/SW)
B-007	Irregular	Heavy	Concentrated	Circular	0.25 (E/W)	0.21 (N/S)
B-008	Irregular	Heavy	Concentrated	Circular and Linear	0.57 (N/S)	0.45 (E/W)
B-009	Irregular	Moderate	Concentrated	Circular	0.50 (N/S)	0.47 (N/S)
B-010	Oval	Moderate	Concentrated	Circular	0.28 (NE/SW)	0.17 (NW/SE)
B-011	Circular	Moderate	Concentrated	Circular	0.32 (N/S)	0.32 (E/W)
B-012	Oval	Heavy	Concentrated	Circular	0.56 (NE/SW)	0.45 (NW/SE)
B-013	Oval	Heavy	Concentrated	Circular and Linear	0.90 (NE/SW)	0.67 (NW/SE)
B-014	Irregular	Heavy	Concentrated	Circular and Linear	0.93 (E/W)	0.67 (N/S)
B-015	Oval	Moderate	Concentrated	Circular	0.47 (N/S)	0.32 (E/W)
B-016	Circular	Moderate	Concentrated	Circular	0.50 (NW/SE)	0.48 (NE/SW)
B-017	Oval	Moderate	Concentrated	Circular	0.30 (NW/SE)	0.24 (NE/SW)
B-018	Circular	Moderate	Concentrated	Circular	0.23 (N/S)	0.23 (E/W)
B-019	Oval	Moderate	Concentrated	Circular	0.94 (N/S)	0.77 (E/W)
B-020	Irregular	Heavy	Concentrated	Circular	0.73 (N/S)	0.70 (E/W)
B-021	Irregular	Heavy	Dispersed	Linear	0.67 (N/S)	0.50 (E/W)
B-022	Circular	Moderate	Concentrated	Circular	0.48 (N/S)	0.48 (E/W)
B-023	Circular	Moderate	Concentrated	Circular	0.14 (N/S)	0.14 (E/W)
B-024	Irregular	Heavy	Concentrated	Linear	1.00 (E/W)	0.74 (N/S)
B-025	Oval	Light	Dispersed	Circular	1.45 (N/S)	0.74 (E/W)
B-026	Irregular	Moderate	Concentrated	Circular	1.54 (N/S)	1.13 (E/W)
B-027	Irregular	Moderate	Dispersed	Linear	1.19 (E/W)	1.03 (N/S)
B-028	Irregular	Moderate	Concentrated	Circular	0.93 (NE/SW)	0.57 (NW/SE)
B-029	Oval	Light	Concentrated	Circular	0.77 (N/S)	0.32 (E/W)
B-030	Irregular	Heavy	Concentrated	Circular and Linear	1.34 (E/W)	0.70 (N/S)
B-031	Circular	Heavy	Concentrated	Circular and Linear	0.55 (N/S)	0.55 (E/W)
B-032	Oval	Heavy	Concentrated	Circular	0.84 (N/S)	0.80 (E/W)
B-033	Oval	Heavy	Concentrated	Circular	0.53 (NE/SW)	0.39 (NW/SE)
B-034	Irregular	Heavy	Concentrated	Linear	0.75 (E/W)	0.64 (N/S)
B-035	Oval	Heavy	Dispersed	Circular and Linear	1.57 (E/W)	0.92 (N/S)
B-036	Irregular	Heavy	Concentrated	Circular	0.50 (NW/SE)	0.46 (NE/SW)
B-037	Oval	Heavy	Concentrated	Linear	1.15 (E/W)	1.10 (N/S)
B-038	Irregular	Heavy	Concentrated	Circular	0.80 (E/W)	0.77 (N/S)

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-039	Oval	Heavy	Concentrated	Circular and Linear	1.38 (NE/SW)	1.15 (NW/SE)
B-040	Irregular	Moderate	Concentrated	Circular and Linear	1.30 (NE/SW)	0.90 (NW/SE)
B-041	Irregular	Heavy	Concentrated	Linear	0.80 (N/S)	0.80 (E/W)
B-042	Irregular	Moderate	Concentrated	Linear	0.24 (N/S)	0.23 (E/W)
B-043	Irregular	Moderate	Dispersed	Circular	1.45 (N/S)	1.00 (E/W)
B-044	Oval	Moderate	Concentrated	Circular	1.00 (NE/SW)	0.56 (NW/SE)
B-045	Irregular	Moderate	Dispersed	Circular	0.90 (E/W)	0.60 (N/S)
B-046	Oval	Moderate	Concentrated	Linear	0.37 (NW/SE)	0.28 (NE/SW)
B-047	Irregular	Heavy	Concentrated	Linear	0.80 (NW/SE)	0.47 (NE/SW)
B-048	Oval	Heavy	Concentrated	Linear	0.50 (N/S)	0.37 (E/W)
B-049	Irregular	Heavy	Concentrated	Linear	0.42 (E/W)	0.34 (N/S)
B-050	Irregular	Heavy	Concentrated	Circular	0.42 (N/S)	0.31 (E/W)
B-051	Irregular	Heavy	Concentrated	Circular	0.52 (NE/SW)	0.42 (NW/SE)
B-052	Irregular	Moderate	Concentrated	Circular	1.50 (NW/SE)	1.25 (NE/SW)
B-053	Circular	Moderate	Concentrated	Circular	0.40 (N/S)	0.40 (E/W)
B-054	Oval	Moderate	Concentrated	Circular	0.42 (NE/SW)	0.27 (NW/SE)
B-055	Irregular	Heavy	Concentrated	Circular	0.75 (N/S)	0.52 (E/W)
B-056	Irregular	Heavy	Concentrated	Circular	0.60 (E/W)	0.24 (N/S)
B-057	Irregular	Heavy	Concentrated	Circular	0.40 (NW/SE)	0.30 (NE/SW)
B-058	Irregular	Heavy	Concentrated	Circular	0.47 (NE/SW)	0.44 (NW/SE)
B-059	Oval	Heavy	Concentrated	Circular	0.43 (NE/SW)	0.31 (NW/SE)
B-060	Irregular	Moderate	Concentrated	Circular	0.70 (E/W)	0.62 (N/S)
B-061	Irregular	Moderate	Concentrated	Circular	1.10 (N/S)	0.60 (E/W)
B-062	Irregular	Moderate	Concentrated	Circular	0.40 (NW/SE)	0.37 (NE/SW)
B-063	Oval	Heavy	Concentrated	Linear	0.70 (NE/SW)	0.37 (NW/SE)
B-064	Irregular	Moderate	Concentrated	Circular and Linear	1.27 (NE/SW)	0.53 (NW/SE)
B-065	Irregular	Heavy	Concentrated	Circular	0.56 (N/S)	0.56 (E/W)
B-066	Irregular	Moderate	Concentrated	Circular	1.15 (NW/SE)	0.57 (NE/SW)
B-067	Irregular	Light	Concentrated	Circular	0.52 (E/W)	0.47 (N/S)
B-068	Irregular	Moderate	Concentrated	Circular	1.65 (NW/SE)	1.05 (NE/SW)
B-069	Irregular	Moderate	Concentrated	Circular	0.64 (N/S)	0.58 (E/W)
B-070	Triangular	Moderate	Concentrated	Circular	0.55 (N/S)	0.46 (E/W)
B-071	Irregular	Moderate	Concentrated	Circular	0.60 (NE/SW)	0.45 (NW/SE)
B-072	Oval	Moderate	Concentrated	Circular	0.42 (N/S)	0.26 (E/W)
B-073	Irregular	Moderate	Concentrated	Circular	0.65 (N/S)	0.50 (E/W)
B-074	Irregular	Moderate	Concentrated	Circular	1.10 (NE/SW)	0.70 (NW/SE)
B-075	Oval	Moderate	Concentrated	Circular	0.65 (N/S)	0.53 (E/W)
B-076	Oval	Moderate	Concentrated	Circular	0.47 (N/S)	0.40 (E/W)
B-077	Irregular	Heavy	Concentrated	Linear	0.42 (NE/SW)	0.40 (NW/SE)

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-078	Irregular	Moderate	Concentrated	Circular and Linear	1.35 (NE/SW)	0.56 (NW/SE)
B-079	Irregular	Moderate	Concentrated	Circular	2.45 (E/W)	2.30 (N/S)
B-080	Irregular	Heavy	Concentrated	Circular	1.45 (N/S)	1.07 (E/W)
B-081	Oval	Moderate	Concentrated	Circular	0.95 (NW/SE)	0.67 (NE/SW)
B-082	Irregular	Heavy	Concentrated	Circular	1.85 (NE/SW)	0.93 (NW/SE)
B-083	Irregular	Heavy	Concentrated	Circular	1.30 (N/S)	1.10 (E/W)
B-084	Irregular	Moderate	Concentrated	Circular	1.70 (N/S)	1.20 (E/W)
B-085	Oval	Heavy	Concentrated	Circular	1.35 (N/S)	0.87 (E/W)
B-086	Irregular	Heavy	Concentrated	Circular	1.23 (N/S)	1.23 (E/W)
B-087	Crescent	Moderate	Concentrated	Circular	1.20 (N/S)	0.60 (E/W)
B-088	Irregular	Heavy	Concentrated	Circular	1.05 (E/W)	0.65 (N/S)
B-089	Oval	Heavy	Concentrated	Circular	1.15 (N/S)	0.78 (E/W)
B-090	Irregular	Heavy	Concentrated	Circular and Linear	2.20 (NE/SW)	1.20 (NW/SE)
B-091	Oval	Moderate	Concentrated	Circular	1.00 (N/S)	0.74 (E/W)
B-092	Oval	Heavy	Concentrated	Circular	0.64 (N/S)	0.37 (E/W)
B-093	Oval	Heavy	Concentrated	Circular	0.80 (N/S)	0.63 (E/W)
B-094	Irregular	Moderate	Concentrated	Circular	1.40 (E/W)	1.15 (N/S)
B-095	Oval	Heavy	Concentrated	Circular	1.20 (NW/SE)	0.65 (NE/SW)
B-096	Irregular	Heavy	Concentrated	Circular	0.70 (N/S)	0.56 (E/W)
B-097	Irregular	Moderate	Dispersed	Circular	1.40 (NE/SW)	0.80 (NW/SE)
B-098	Oval	Moderate	Concentrated	Circular	1.20 (E/W)	1.15 (N/S)
B-099	Oval	Moderate	Concentrated	Circular	0.85 (NW/SE)	0.60 (NE/SW)
B-100	Irregular	Heavy	Concentrated	Circular	2.10 (N/S)	1.00 (E/W)
B-101	Oval	Moderate	Concentrated	Circular	1.05 (E/W)	0.90 (N/S)
B-102	Irregular	Moderate	Concentrated	Circular	1.30 (N/S)	1.20 (E/W)
B-103	Irregular	Moderate	Concentrated	Circular	1.20 (E/W)	1.15 (N/S)
B-104	Irregular	Heavy	Concentrated	Circular	0.50 (E/W)	0.40 (N/S)
B-105	Irregular	Heavy	Dispersed	Circular	1.06 (E/W)	0.57 (N/S)
B-106	Oval	Heavy	Concentrated	Linear	1.00 (E/W)	0.65 (N/S)
B-107	Oval	Moderate	Concentrated	Circular	1.25 (N/S)	0.80 (E/W)
B-108	Irregular	Moderate	Dispersed	Circular and Linear	1.40 (E/W)	0.55 (N/S)
B-109	Crescent	Moderate	Concentrated	Circular	1.62 (E/W)	1.33 (N/S)
B-110	Oval	Heavy	Concentrated	Circular	1.30 (E/W)	0.93 (N/S)
B-111	Irregular	Moderate	Concentrated	Circular	1.95 (E/W)	1.70 (N/S)
B-112	Oval	Moderate	Dispersed	Circular	0.50 (N/S)	0.35 (E/W)
B-113	Irregular	Moderate	Concentrated	Circular and Linear	1.90 (E/W)	1.40 (N/S)
B-114	Irregular	Light	Concentrated	Circular	0.70 (E/W)	0.55 (N/S)
B-115	Oval	Light	Concentrated	Circular	1.35 (E/W)	0.75 (N/S)
B-116	Irregular	Moderate	Concentrated	Circular	1.80 (E/W)	1.40 (N/S)

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-117	Oval	Moderate	Concentrated	Circular	0.40 (N/S)	0.40 (E/W)
B-118	Oval	Light	Concentrated	Circular	0.63 (N/S)	0.58 (E/W)
B-119	Irregular	Moderate	Concentrated	Circular	0.48 (E/W)	0.47 (N/S)
B-120	Triangular	Heavy	Concentrated	Circular	0.29 (E/W)	0.26 (N/S)
B-121	Irregular	Moderate	Concentrated	Circular	0.65 (N/S)	0.54 (E/W)
B-122	Irregular	Moderate	Concentrated	Circular	0.62 (N/S)	0.39 (E/W)
B-123	Irregular	Heavy	Concentrated	Circular	1.30 (NE/SW)	0.87 (NW/SE)
B-124	Irregular	Moderate	Dispersed	Circular	0.60 (N/S)	0.33 (E/W)
B-125	Irregular	Moderate	Concentrated	Circular	0.76 (E/W)	0.72 (N/S)
B-126	Oval	Heavy	Concentrated	Circular	0.43 (E/W)	0.40 (N/S)
B-127	Irregular	Moderate	Dispersed	Circular	1.00 (NW/SE)	0.60 (NE/SW)
B-128	Irregular	Moderate	Dispersed	Circular and Linear	1.60 (NW/SE)	0.60 (NE/SW)
B-129	Irregular	Moderate	Concentrated	Circular	0.47 (N/S)	0.40 (E/W)
B-130	Irregular	Moderate	Dispersed	Circular	1.10 (NW/SE)	0.50 (NE/SW)
B-131	Irregular	Moderate	Concentrated	Circular	1.40 (NE/SW)	1.10 (NW/SE)
B-132	Irregular	Moderate	Dispersed	Circular	1.00 (NE/SW)	0.91 (NW/SE)
B-133	Irregular	Moderate	Dispersed	Circular	1.00 (E/W)	0.62 (N/S)
B-134	Irregular	Moderate	Dispersed	Circular	0.81 (E/W)	0.51 (N/S)
B-135	Irregular	Moderate	Dispersed	Circular	0.72 (NE/SW)	0.60 (NW/SE)
B-136	Oval	Heavy	Concentrated	Circular	0.63 (E/W)	0.55 (N/S)
B-137	Irregular	Moderate	Dispersed	Linear	0.80 (N/S)	0.44 (E/W)
B-138	Irregular	Moderate	Concentrated	Circular	0.60 (N/S)	0.50 (E/W)
B-139	Irregular	Moderate	Dispersed	Circular and Linear	0.90 (NE/SW)	0.42 (NW/SE)
B-140	Irregular	Light	Dispersed	Circular and Linear	0.78 (E/W)	0.34 (N/S)
B-141	Irregular	Heavy	Concentrated	Circular	0.64 (N/S)	0.56 (E/W)
B-142	Oval	Moderate	Concentrated	Circular	0.50 (N/S)	0.31 (E/W)
B-143	Irregular	Moderate	Dispersed	Circular	0.64 (E/W)	0.43 (N/S)
B-144	Irregular	Moderate	Concentrated	Circular	0.41 (N/S)	0.28 (E/W)
B-145	Irregular	Moderate	Concentrated	Circular	1.07 (N/S)	0.56 (E/W)
B-146	Irregular	Moderate	Concentrated	Circular	0.62 (E/W)	0.49 (N/S)
B-147	Oval	Moderate	Concentrated	Circular	0.77 (N/S)	0.42 (E/W)
B-148	Irregular	Heavy	Concentrated	Circular	0.45 (N/S)	0.36 (E/W)
B-149	Irregular	Heavy	Concentrated	Circular	1.63 (N/S)	0.72 (E/W)
B-150	Irregular	Heavy	Concentrated	Circular	0.90 (N/S)	0.73 (E/W)
B-151	Oval	Heavy	Concentrated	Linear	0.40 (N/S)	0.40 (E/W)
B-152	Oval	Moderate	Concentrated	Circular	0.70 (E/W)	0.56 (N/S)
B-153	Irregular	Moderate	Concentrated	Circular	0.87 (E/W)	0.7 (N/S)
B-154	Oval	Moderate	Concentrated	Circular	0.90 (E/W)	0.70 (N/S)
B-155	Irregular	Moderate	Concentrated	Circular	3.80 (E/W)	2.90 (N/S)

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-156	Irregular	Moderate	Concentrated	Circular	1.85 (N/S)	1.40 (N/S)
B-157	Oval	Moderate	Concentrated	Circular and Linear	1.40 (N/S)	0.57 (E/W)
B-158	Irregular	Heavy	Concentrated	Circular	0.70 (E/W)	0.55 (N/S)
B-159	Irregular	Moderate	Concentrated	Circular	0.54 (N/S)	0.38 (E/W)
B-160	Oval	Heavy	Concentrated	Circular	1.20 (E/W)	0.34 (N/S)
B-161	Circular	Moderate	Concentrated	Circular	0.40 (N/S)	0.30 (E/W)
B-162	Oval	Light	Concentrated	Circular	0.83 (E/W)	0.81 (N/S)
B-163	Irregular	Light	Concentrated	Circular	0.53 (E/W)	0.42 (N/S)
B-164	Oval	Heavy	Concentrated	Circular	2.20 (E/W)	2.10 (N/S)
B-165	Irregular	Moderate	Concentrated	Circular	1.25 (N/S)	0.70 (E/W)
B-166	Irregular	Moderate	Concentrated	Circular	0.62 (E/W)	0.50 (N/S)
B-167	Oval	Heavy	Concentrated	Circular	0.45 (N/S)	0.30 (E/W)
B-168	Irregular	Moderate	Concentrated	Circular	0.6 (E/W)	0.54 (N/S)
B-169	Irregular	Heavy	Concentrated	Circular	1.00 (N/S)	0.80 (E/W)
B-170	Oval	Moderate	Concentrated	Circular	0.85 (N/S)	0.60 (E/W)
B-171	Irregular	Heavy	Concentrated	Circular and Linear	1.30 (E/W)	0.70 (N/S)
B-172	Irregular	Heavy	Concentrated	Circular	0.54 (N/S)	0.48 (E/W)
B-173	Irregular	Heavy	Dispersed	Circular	0.40 (E/W)	0.30 (N/S)
B-174	Irregular	Heavy	Concentrated	Circular	1.57 (E/W)	0.77 (N/S)
B-175	Oval	Heavy	Concentrated	Circular and Linear	0.88 (E/W)	0.66 (N/S)
B-176	Oval	Heavy	Concentrated	Circular	1.33 (E/W)	0.63 (N/S)
B-177	Irregular	Moderate	Concentrated	Circular	0.90 (N/S)	0.70 (E/W)
B-178	Oval	Heavy	Concentrated	Circular	0.80 (E/W)	0.78 (N/S)
B-179	Irregular	Moderate	Concentrated	Circular	0.90 (E/W)	0.48 (N/S)
B-180	Irregular	Moderate	Concentrated	Circular	0.90 (E/W)	0.65 (N/S)
B-181	Irregular	Moderate	Concentrated	Circular	0.60 (E/W)	0.51 (N/S)
B-182	Irregular	Heavy	Concentrated	Circular	0.63 (N/S)	0.50 (E/W)
B-183	Oval	Moderate	Concentrated	Circular	0.90 (E/W)	0.58 (N/S)
B-184	Oval	Heavy	Concentrated	Circular	0.78 (E/W)	0.53 (N/S)
B-185	Irregular	Heavy	Concentrated	Circular	0.65 (N/S)	0.37 (E/W)
B-186	Oval	Moderate	Concentrated	Circular	1.30 (E/W)	0.60 (N/S)
B-187	Irregular	Heavy	Concentrated	Circular	1.20 (N/S)	0.90 (E/W)
B-188	Oval	Moderate	Concentrated	Circular	0.72 (E/W)	0.35 (N/S)
B-189	Irregular	Moderate	Concentrated	Circular	0.82 (N/S)	0.47 (E/W)
B-190	Oval	Light	Concentrated	Circular	0.37 (N/S)	0.30 (E/W)
B-191	Irregular	Light	Concentrated	Circular	0.80 (E/W)	0.50 (N/S)
B-192	Irregular	Moderate	Concentrated	Circular	0.94 (E/W)	0.50 (N/S)
B-193	Irregular	Moderate	Concentrated	Circular	0.90 (N/S)	0.60 (E/W)
B-194	Oval	Moderate	Dispersed	Linear	0.70 (E/W)	0.40 (N/S)

Battering No.	Shape	Intensity	Density	Tool Mark Shape	Length (M)	Width (M)
B-195	Oval	Heavy	Concentrated	Circular	0.35 (E/W)	0.30 (N/S)
B-196	Oval	Light	Concentrated	Circular	0.81 (E/W)	0.50 (N/S)
B-197	Irregular	Moderate	Concentrated	Circular	1.72 (N/S)	0.60 (E/W)
B-198	Oval	Moderate	Concentrated	Circular	1.30 (N/S)	0.69 (E/W)
B-199	Oval	Moderate	Concentrated	Circular	1.00 (N/S)	0.59 (E/W)
B-200	Irregular	Light	Concentrated	Circular	1.67 (E/W)	1.60 (N/S)
B-201	Oval	Moderate	Concentrated	Circular	1.00 (N/S)	0.50 (E/W)
B-202	Oval	Moderate	Dispersed	Circular	2.00 (N/S)	0.84 (E/W)
B-203	Irregular	Moderate	Dispersed	Circular	0.80 (N/S)	0.70 (E/W)
B-204	Irregular	Moderate	Dispersed	Circular	0.80 (E/W)	0.44 (N/S)
B-205	Oval	Moderate	Dispersed	Circular	1.50 (E/W)	1.00 (N/S)
B-206	Irregular	Light	Concentrated	Circular	1.10 (E/W)	0.60 (N/S)
B-207	Irregular	Moderate	Dispersed	Circular	0.53 (E/W)	0.50 (N/S)
B-208	Serpentine	Heavy	Concentrated	Circular	0.60 (N/S)	0.30 (E/W)



Figure C.138. Site 50-10-27-29145, Artifact 001, hammerstone.



Figure C.139. Site 50-10-27-29145, Artifact 002, hammerstone.

SIHP Number: 50-10-27-29146

Field Number: T-079

Site Measurements: ca. 375 m by ca. 165 m

No. Features: 8

Site Type: Complex

Artifacts: Traditional

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Storage/Uncertain

Condition: Poor to Fair

Description: Site 50-10-27-29146 is a complex consisting of eight features: six small enclosures (Features A, B, C, D, F, G), one rock concentration (Feature E), and one lava tube containing a single artifact (Feature H). The complex of features is located in the north-central portion of the project area, approximately 236 meters north (339°) from Site 13287, Feature A. The features that compose this site are situated within and around the edges of a large, relatively shallow depression in a *pāhoehoe* lava flow. This depression appears to have been caused by the collapse of a sizable lava blister. The surrounding vegetation consists of a few scattered *kiawe* trees, occasional bushes of Christmasberry, *klu*, and *koa haole*, and a patchy carpet of fountain grass.

The six enclosures (Features A, B, C, D, F, G) are scattered randomly within and just outside of the depression (Figure C.140). They have all been built atop level or slightly sloping *pāhoehoe* lava. Although most of these structures are badly disturbed, possibly due to seismic activity, they all seem to originally have formed small oval to circular enclosures comprised of small boulders and cobbles. The interior of these structures consists of smooth *pāhoehoe* bedrock.

The rock concentration at Feature E is so badly disturbed that it is impossible to determine its original shape or function. The final feature of the site is a lava tube (Feature H), containing a waterworn small boulder hammerstone.

A similar lava tube entrance is located ca. 14.0 meters south (170°) of Feature D. An examination of the tube revealed no modifications or recognizable cultural material. The tube is relatively sizable, although it has a low roof. Two side chambers extend off from a main central chamber (one extending south and the other east). Both possess shallow deposits of fine dark soil ranging from 0.5 to 5.0 centimeters and averaging 2.0 centimeters in depth. No cultural material was observed within the deposit. The only suggestion of possible human presence was a scatter of charcoal and small fragments of burnt wood in the central section of the southern side chamber. This charcoal does not appear to represent a hearth, for there was no evidence of ash. It probably represents the remains of a burnt stick, although whether this stick was intentionally brought in to serve as a fire stick or was naturally deposited in the tube is unknown. Due to lack of modifications or cultural remains, the lava tube was not assigned a feature designation. It is possible, however that the tube may have been utilized by the individuals who built the nearby surface structures.

Most of the surface structures at Site 50-10-27-29146 are in relatively disturbed condition, probably due to seismic activity. The only cultural material noted at the site was the waterworn boulder hammerstone found in Feature H lava tube and two large waterworn pebbles located next to each other is a narrow crevice ca. 3.0 meters northeast (26°) from the opening to Feature H. The features of Site 29146 were apparently never very substantial structures. The stone enclosures are very similar in appearance to enclosures formed elsewhere in the project area, and within coastal Keahuolū as a whole. They may have served as temporary habitation shelters, though they are low-walled and relatively small in size. The purpose of the Feature E rock concentration is unclear, though it may have originally formed a small mound that served as a marker of some kind. It was located on the slightly raised rim of the depression. The Feature H lava tube is too low in ceiling height to have been a practical habitation feature. It may simply have served as a storage area. All of these features were likely utilized during the pre-Contact and/or early post-Contact periods.

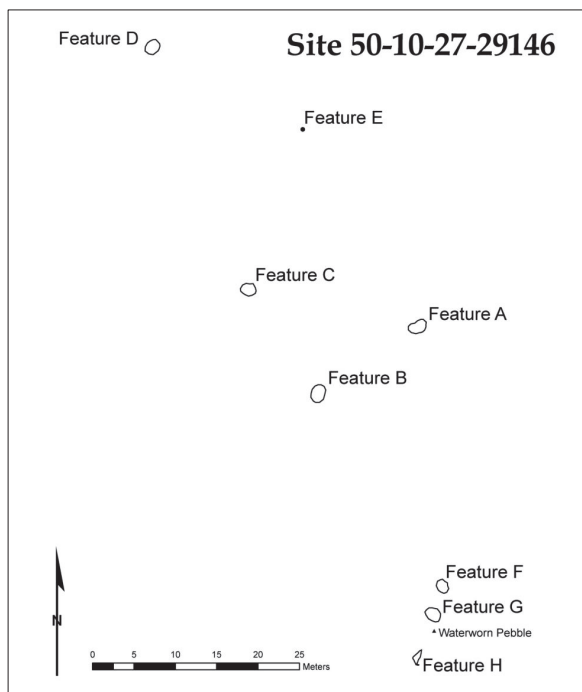


Figure C.140. GPS-based map of locations of features within Site 50-10-27-29146 complex.

Feature: A
Feature Type: Enclosure
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Habitation
Condition: Poor

Description: Site 50-10-27-29146, Feature A is a badly disturbed, roughly oval enclosure (Figure C.141). It is located 15.0 meters northeast (54°) of the Feature B enclosure, towards the center of the shallow *pāhoehoe* bedrock depression in which the site is located. The enclosure is built on roughly level *pāhoehoe* bedrock and is constructed of a rough alignment of small to large sub-angular basalt cobbles and boulders. The structure has been disturbed on its western, northern and eastern edges, making the original dimensions of the enclosure obscure. In its present condition, the mound's exterior measures ca. 2.9 meters in length (east to west), by ca. 2.0 meters in width (north to south). It is impossible to determine the interior length but the present interior width measures ca. 1.0 meters. The maximum height of the enclosure measures ca. 0.35 meters in height along the southern edge.

No surface cultural material was observed at this feature. Site 29146, Feature A is in poor condition. The Feature A enclosure most likely served as a temporary habitation shelter during the pre-Contact and/or early post-Contact periods.



Figure C.141. Site 50-10-27-29146, Feature A enclosure (view northwest).

Feature: B

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29146, Feature B consists of a badly disturbed remnant of what appears to have been a small oval-shaped enclosure (Figure C.142). It is located toward the southwestern edge of the *pāhoehoe* lava depression. The enclosure is approximately 15.0 meters southwest (234°) from the Feature A enclosure. The enclosure is formed by a rough alignment of small to large basalt cobbles and some small basalt boulders, resting directly on a roughly level *pāhoehoe* bedrock surface. Due to its poor condition, it is difficult to determine the original dimensions of the enclosure. In its present condition, the overall exterior dimensions appear to be ca. 2.3 meters in length (northeast to southwest), by ca. 1.4 meters in width (northwest to southeast). The internal dimensions may have been ca. 1.7 meters in length, by ca. 0.9 meters in width. The maximum height of the enclosure is ca. 0.2 meters. No surface cultural material was observed at this feature. Site 29146, Feature B is in poor condition. The northern and western edges of the enclosure appear to have tumbled into a narrow crack to the west, possibly due to seismic activity. Although heavily disturbed, it appears that Feature B may have served as a temporary habitation shelter during the pre-Contact and/or early post-Contact periods.



Figure C.142. Site 50-10-27-29146, Feature B enclosure (view east).

Feature: C

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29146, Feature C is a badly disturbed, small, roughly oval-shaped enclosure (Figure C.143). It is located toward the western edge of the shallow *pāhoehoe* depression. This enclosure is ca. 16.0 meters northwest (324°) from the Feature B enclosure. Feature C is constructed of a rough alignment of small to large sub-angular basalt cobbles and small basalt boulders. The stones are resting directly on a slightly sloping *pāhoehoe* bedrock surface. Due to its poor condition, the overall original dimensions of the enclosure are difficult to determine. The original exterior may have measured ca. 1.8 meters in length (north to south), by ca. 1.7 meters in width (east to west). The original interior may have measured ca. 1.5 meters in length (north to south) by ca. 1.3 meters in width. The maximum height of this enclosure currently measures ca. 0.24 meters along its interior southern edge. Site 29146, Feature C is in poor condition. Portions of the northern and western edges of the enclosure have tumbled into a narrow crack just to the northwest, possibly due to seismic activity. No surface cultural material was observed at this feature. It appears that Feature C most likely functioned as a temporary habitation shelter during the pre-Contact and/or early post-Contact periods.

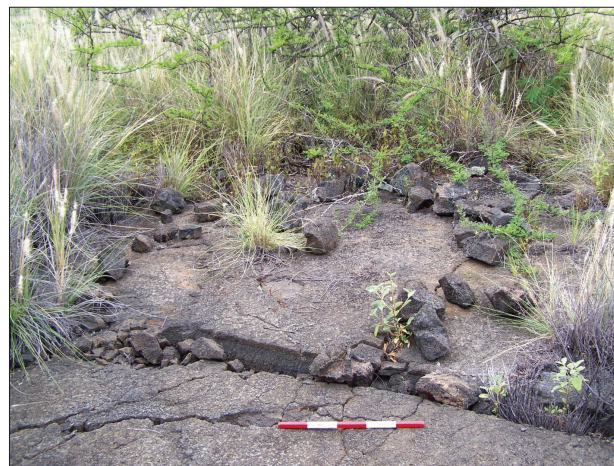


Figure C.143. Site 50-10-27-29146, Feature C enclosure (view northeast).

Feature: D

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29146, Feature D consists of a badly disturbed roughly oval-shaped enclosure (Figure C.144). It is situated approximately 31.0 meters north (338°) from the Feature C enclosure. The Feature D enclosure is located along the exterior northwest edge of the *pāhoehoe* depression. It is constructed of an alignment of small sub-angular basalt boulders and some small to large sub-angular basalt cobbles. The stones are resting directly on top of slightly sloping *pāhoehoe* bedrock surface. Due to its poor condition, the overall original dimensions of the enclosure are difficult to determine. The original exterior may have measured ca. 2.5 meters in length (northeast to southwest) by ca. 1.8 meters in width (northwest to southeast). The original interior may have measured ca. 1.7 meters in length by ca. 1.1 meters in width. The maximum height of the enclosure measures ca. 0.27 meters. Site 29146, Feature D is in poor condition. The northeast edge appears to have tumbled slightly to the north, probably due to seismic activities. It appears that Feature D most likely functioned as a temporary habitation shelter during the pre-Contact and/or early post-Contact periods.



Figure C.144. Site 50-10-27-29146, Feature D enclosure (view southwest).

Feature: E

Feature Type: Rock Concentration

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Poor

Description: Site 50-10-27-29146, Feature E is a small rock concentration (Figure C.145). The concentration of stones is located along the northern edge of the shallow *pāhoehoe* depression. It is located ca. 20.6 meters southeast (114°) from the Feature D enclosure. This small rock concentration consists of small to large sub-angular basalt cobbles and small sub-angular boulders. The stones are resting directly on top of roughly level *pāhoehoe* bedrock surface. The structure is so badly disturbed that it is impossible to determine its original shape and dimensions. The overall present dimensions of this rock concentration are ca. 1.5 meters in length (northeast to southwest) by ca. 1.1 meters in width (northwest to southeast), and it has a maximum height of ca. 0.25 meters. No surface cultural material was observed at this feature. Site 29146, Feature E is in poor condition. It is unclear exactly what structure this rock concentration may have originally formed, a short stone alignment or a low, stone mound. Site 29146, Feature E was most likely built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.145. Site 50-10-27-29146, Feature E, rock concentration (view southeast).

Feature: F

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29146, Feature F is a badly disturbed, roughly oval-shaped enclosure (Figure C.146). It is located just outside the southern edge of the shallow *pāhoehoe* depression. This enclosure is situated approximately 26.0 meters southeast (144°) from Feature B enclosure. Site 29146, Feature F is constructed of small to large sub-angular basalt cobbles and small sub-angular basalt boulders. The enclosure is built on slightly sloping *pāhoehoe* bedrock. The northern edge is the most intact, where one boulder is actually stacked on top of another. The stones along the southern and western edges appear to have tumbled and are slightly scattered. The overall exterior dimensions of this enclosure are ca. 1.7 meters in diameter. The overall interior dimensions are ca. 1.2 meters in length (north to south) by ca. 1.0 meter in width (east to west). No surface cultural material was observed at this feature. Site 29146, Feature F is in poor condition. It appears that Feature F was most likely built and utilized during the pre-Contact and/or early post-Contact periods and may have functioned as a temporary habitation shelter.



Figure C.146. Site 50-10-27-29146, Feature F, enclosure (view northeast).

Feature: G

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29146, Feature G consists of a badly disturbed, roughly oval-shaped enclosure (Figure C.147). It is situated ca. 5.0 meters south (182°) from the Feature F enclosure. The enclosure is located just outside the southern edge of the shallow *pāhoehoe* depression. Site 29146, Feature G is constructed of small to large sub-angular basalt cobbles and small to medium-sized basalt boulders. The stones are placed on top of slightly sloping *pāhoehoe* bedrock. Due to its poor condition, it is difficult to determine the enclosure's original dimensions. The exterior may have originally measured ca. 1.9 meters in length (east to west) by ca. 1.6 meters in width (north to south). Its interior may have originally measured ca. 1.2 meters in length (east to west) by ca. 1.0 meter in width (north to south). The maximum height of this enclosure is ca. 0.40 meters. No surface cultural material was observed at this site. Site 29146, Feature G is in poor condition. The enclosure is heavily tumbled along its northern and western edges. It is most likely that this enclosure functioned as a temporary habitation shelter during the pre-Contact and/or early post-Contact periods.



Figure C.147. Site 50-10-27-29146, Feature G, enclosure (view northwest).

Feature: H

Feature Type: Lava Tube

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Storage

Condition: Fair

Description: Site 50-10-27-29146, Feature H is a small, unmodified lava tube, which contains one artifact, a small waterworn boulder hammerstone with battering on one end (Figure C.148). The lava tube is situated ca. 5.3 meters southwest (192°) from Feature G enclosure. It is located along the southern edge of the shallow *pāhoehoe* depression. The lava tube and its entrance are quite small, and the entrance of the lava tube measures ca. 1.0 meter in width, by ca. 0.90 meters in height. Just within the entrance is the main chamber, which measures ca. 4.3 meters in length, by ca. 2.9 meters in width, and ca. 0.7 meters in maximum height. The floor of the main chamber is fairly level and consists of bedrock with some scattered roof fall. A second chamber contains no cultural material. It extends to the northwest and measures ca. 6.7 meters in length, by ca. 2.0 meters in width and ca. 0.9 meters in maximum height. The floor of this chamber is steeply sloping and consists of bedrock with some roof collapse.

The only cultural material noted within the tube is a hammerstone with one battered end. It is located just within the dripline of the main chamber. This artifact measures ca. 26.0 centimeters in length by ca. 12.0 centimeters in diameter. No additional cultural material was observed. Site 29146, Feature H is in fair condition. Given its small size and the limited accessibility into its two chambers, the lava tube would not have provided a comfortable shelter. Instead, this small tube may have functioned as a storage area utilized by the occupants of the multiple enclosures located nearby. Site 29146, Feature H was most likely utilized during the pre-Contact and/or early post-Contact periods.



Figure C.148. Site 50-10-27-29146, Feature H, lava tube (view southeast).

SIHP Number: 50-10-27-29147

Site Type: Complex

Field Number: T-080

Site Measurements:

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Uncertain

Condition: Poor

Description: Site 50-10-27-29147 consists of a complex containing two surface structures, a stone enclosure (Feature A), and a rock concentration (Feature B) (Figure C.149). The site is located in the northern central portion of the project area, approximately 43.0 meters southwest (229°) from the Site 29146, Feature H lava tube. It is situated in an area of relatively level *pāhoehoe* lava flow. The surrounding vegetation consists primarily of fountain grass with occasional *koa haole* and *'uhaloa* shrubs.

Feature A is the most recognizable feature within the site. It consists of remnants of a roughly oval enclosure constructed primarily of small to medium *pāhoehoe* boulders and cobble slabs. Though now scattered, these slabs may originally have been set on edge. The number of tumbled slabs along the southwestern edge of the enclosure suggests that this section of the enclosure wall may have been stacked somewhat higher than the other edges. The enclosure rests atop roughly level lava and strongly resembles other similar enclosures within the project area. Roughly 5.0 meters to the south of the Feature A enclosure is a scatter of small to medium *pāhoehoe* boulder slabs that forms the Feature B rock concentration. Due to the badly disturbed condition of this feature, it is impossible to determine the structure's original shape or function.

No surface cultural material was noted within the site area. Both of the structures that compose Site 29147 are badly disturbed and in relatively poor condition. While the original appearance and function of Feature B is impossible to determine, the Feature A enclosure appears to have served as a small windbreak shelter. It was probably constructed and utilized during the Pre-Contact and/or early Post-Contact periods.

Site 50-10-27-29147

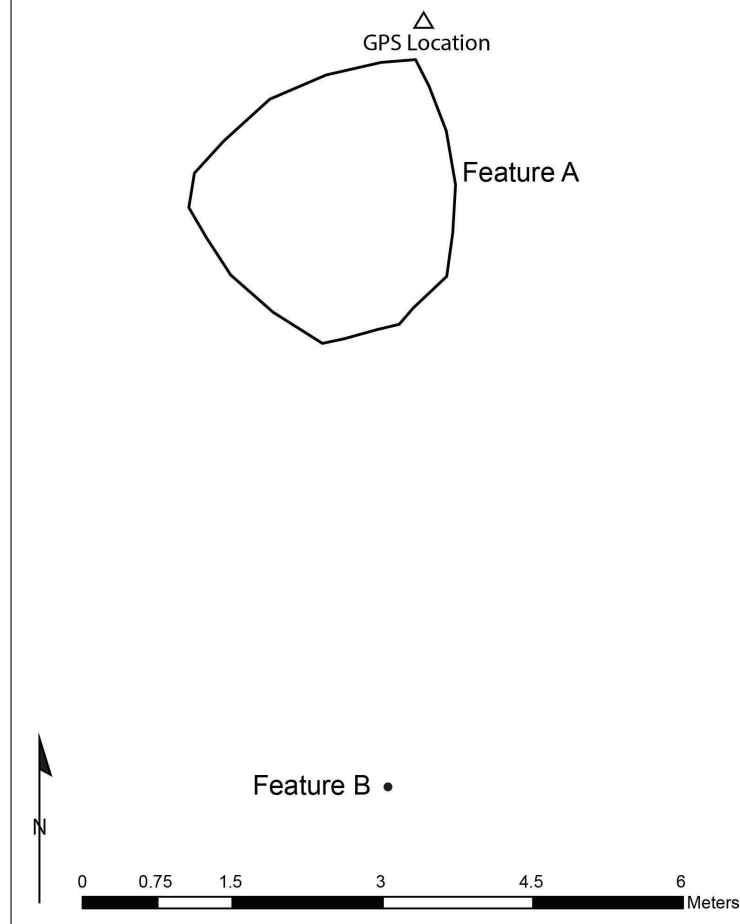


Figure C.149. GPS-based map of Site 50-10-27-29147 complex.

Feature: A

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29147, Feature A consists of a badly disturbed, oval-shaped enclosure (Figure C.150). The enclosure is located at the northern end of the site, approximately 7.3 meters north (0°) from the Feature B rock concentration. The enclosure is constructed of mostly small to medium *pāhoehoe* slabs and some small basalt cobbles. The stones are placed directly on slightly sloping *pāhoehoe* bedrock surface and may originally have been set on end. Currently all edges of the enclosure are tumbled. Given the amount of stones along the southwest edge, it appears that this portion of the enclosure may have been taller in height than all the other edges. This southwest edge appears to have tumbled inward toward the interior of the enclosure. The exterior measures ca. 3.3 meters in length (northeast to southwest) by ca. 2.5 meters in width (northwest to southeast) by ca. 0.25 meters in maximum height. The interior of the enclosure measures ca. 2.7 meters in length (northeast to southwest) by ca. 1.6 meters in width (northwest to southeast).

No surface cultural material was observed at this site. Site 29147, Feature A is in poor condition. It appears that this enclosure most likely served as a temporary habitation shelter during the pre-Contact and/or early post-Contact periods.



Figure C.150. Site 50-10-27-29147, Feature A, badly disturbed enclosure (view west).

Feature: B

Feature Type: Rock Concentration

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Poor

Description: Site 50-10-27-29147, Feature B consists of a rock concentration (Figure C.151). This feature is located ca. 7.3 meters south (180°) from the Feature A enclosure. The rock concentration consists of both small *pāhoehoe* slabs and small sub-angular basalt boulders. The stones are placed directly on top of slightly sloping *pāhoehoe* bedrock. It is not possible to determine the original shape or size of this concentration of stones. It may originally have been a possible stone alignment or a possible C-shape. This enclosure is in close proximity to the Feature A enclosure but does not incorporate as many stones. Currently the area of stones measures ca. 3.0 meters in length (north to south), by ca. 2.5 meters in width (east to west).

No surface cultural material was observed in or around this feature. Site 29147, Feature B is in poor condition. Due to the feature's disturbed condition, it is impossible to determine the original shape or function of the structure. Given its similarity to similar and more intact structures within the survey area, it appears to have most likely been built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.151. Site 50-10-27-29147, Feature B, rock concentration (view northwest).

SIHP Number: 50-10-27-29148

Site Type: Petroglyphs

Field Number: T-082

Site Measurements: ca. 4.6 m by ca. 2.6 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Fair

Description: Site 50-10-27-29148 consists of a panel of petroglyphs (Figure C.152, Figure C.153, and Figure C.154). It is located near the southwestern boundary of the project area, approximately 24.0 meters northeast (25°) of the Old Kona Airport park fence line. This site is situated ca. 340 meters south (185°) of Site 13351, Feature B. The surrounding vegetation consists of a ground cover of fountain grass and some scattered *koa haole*.

The petroglyphs appear to be pecked into level, smooth and somewhat broken up *pāhoehoe* lava. The majority of the images occupy two large *pāhoehoe* slabs. The petroglyphs are all relatively faint, and very light in the intensity of their pecking. Most appear to be linear human figures with their heads oriented to the east. The overall area covered by the images measures ca. 4.6 meters in length (east to west) by ca. 2.6 meters in width (north to south).

No cultural material was observed at the site. The Site 29148 petroglyphs are in fair condition. Bulldozing push piles are situated on the western edge of the site area and may have impacted the original extent of the site. The site requires additional investigation to determine the exact number and shape of the images. The style of the petroglyphs suggests that they were created during the traditional period. Site 29148 does not appear to have been recorded by the Stasacks during their survey of petroglyphs in coastal Keahuolū (Stasack and Stasack 2012).

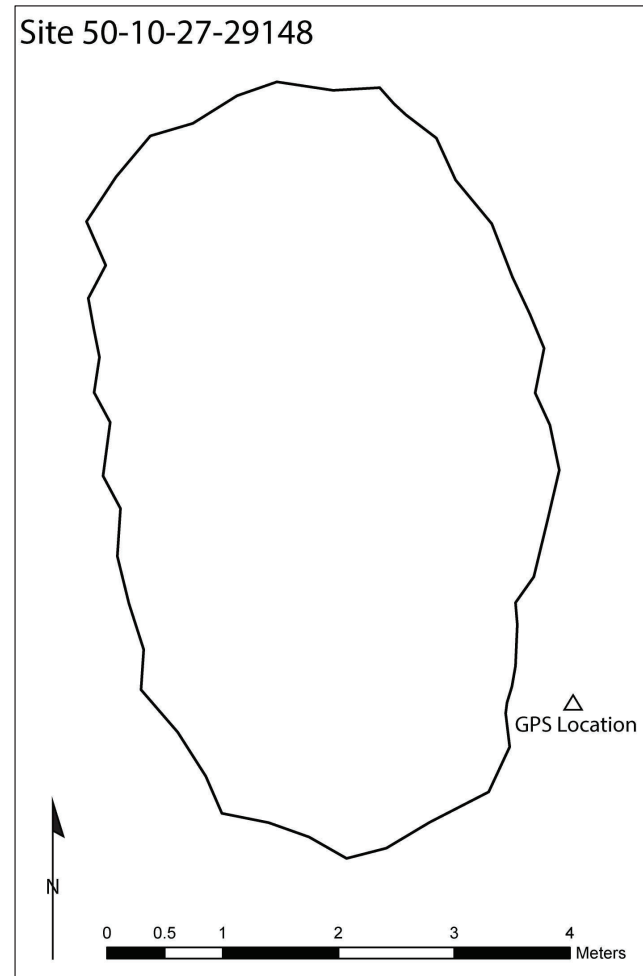


Figure C.152. GPS-based map of Site 50-10-27-29148 panel of petroglyphs.



Figure C.153. Site 50-10-27-29148 petroglyph panel (view southeast).



Figure C.154. Site 50-10-27-29148 petroglyphs detail (view east).

SIHP Number: 50-10-27-29149

Site Type: Petroglyphs

Field Number: T-083

Site Measurements: ca. 2.3 m by ca. 2.0 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Art

Condition: Good

Description: Site 50-10-27-29149 consists of a single petroglyph (Figure C.155 and Figure C.156). The site is located in the southern, central portion of the project area. It is situated approximately 80.0 meters north (359°) from Site 29148. The terrain consists of a gently undulating *pāhoehoe* lava flow. Surrounding vegetation includes a ground cover of dense fountain grass with some scattered Christmasberry, klu, and *noni* trees.

The petroglyph consists of a single, small circular depression on the surface of a low *pāhoehoe* lava bubble. Shallow battering marks appear to have created this circular petroglyph. The petroglyph measures ca. 6.0 centimeters in diameter and is less than a ca. 1.0 centimeter in depth. The *pāhoehoe* lava panel on which this petroglyph is located measures ca. 2.3 meters in length by ca. 2.0 meters in width.

The Site 29149 image was documented during the Keahuolū petroglyph recording project (Stasack and Stasack 2012:Vol. II, T-083:1-2). The report of the project noted that, "This site is comprised of one single *poho* on good-to-fair *pāhoehoe*, placed between and not adjacent to naturally occurring cracks" (Stasack and Stasack 2012:Vol. II, T-083:1). "The *poho* has been well worked and measures 5.5 x 5 cm with a semi-quantitative depth of 2 (0.5-1.0 cm in measured depth), which is consistent with most of the *poho* in the project area" (Stasack and Stasack 2012:Vol. II, T-083:1).

No surface cultural material was observed at the site. The Site 29149 petroglyph is in good condition. It appears that this shallow circular depression (*poho*) may possibly represent a repository for a baby's *piko*, but this is uncertain. The image at Site 29149 was most likely created during the pre-Contact and/or early post-Contact periods.

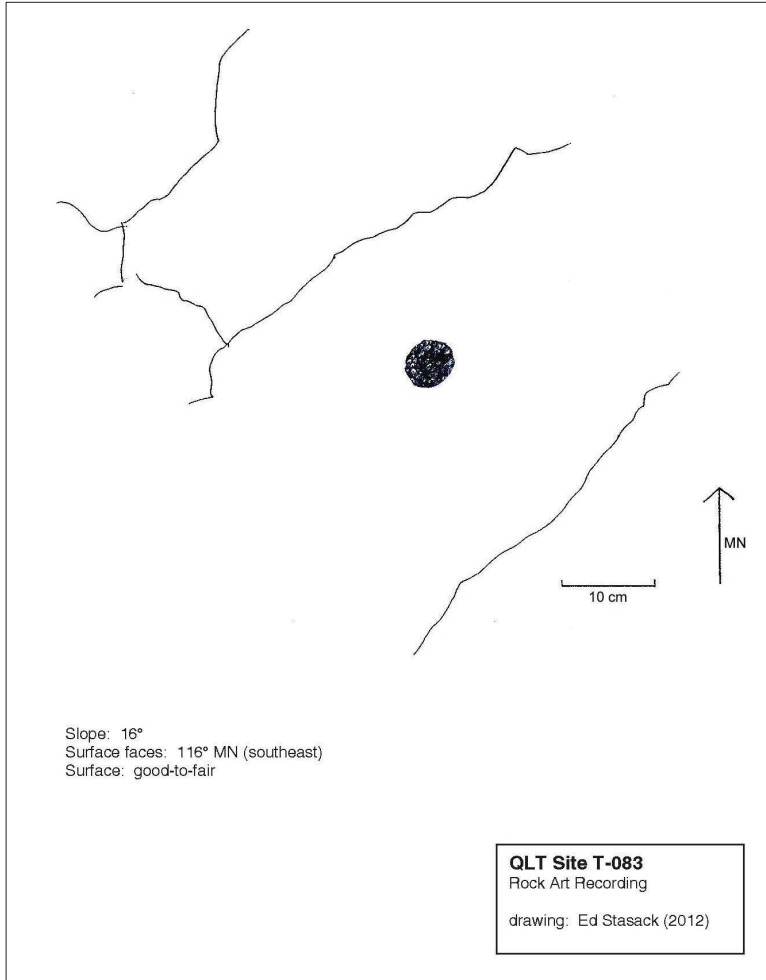


Figure C.155. Site 50-10-27-29149, petroglyph (Stasack and Stasack 2012:Vol. II, T-083:2).



Figure C.156. Site 50-10-27-29149, petroglyph (view northwest).

Archaeological Inventory Survey — Volume III, Appendices
 Lili'uokalani Trust Urban Phase III
 Keahuolū, North Kona, Hawai'i
 July 2019

SIHP Number: 50-10-27-29150
Site Type: Petroglyph
Field Number: T-084
Site Measurements: ca. 14.8 m by ca. 5.0 m
No. Features: 1
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact/Historic
Possible Function: Art/Processing
Condition: Fair

Description: Site 50-10-27-29150 consists of at least one historic petroglyph and five areas of battering (Figure C.157 and Figure C.158). The site was recorded and drawn during the Keahuolū petroglyph documentation project (Stasack and Stasack 2012:II T-085, 1-4). Site 29150 is located in the southern central portion of the project area, near the southwestern project boundary, and approximately 65.0 meters northwest (330°) of Site 29149. The site is situated on a flat, slightly sloping area of *pāhoehoe* lava. The surrounding vegetation includes a ground cover of fountain grass, *koa haole* trees, and klu shrubs.

The total site area measures approximately 14.8 meters in length (northeast to southwest) by ca. 5.0 meters in width (northwest to southeast). The main constituent of this site is a historic serif style petroglyph. The petroglyph appears to read: "UAMI" when observing from its eastern side. In addition to this fairly prominent historic petroglyph, two possible petroglyphs were located roughly 7.0 meters west. Upon further examination, however, the two possible petroglyphs appeared to be two distinct areas of battering or possibly the start of two unfinished petroglyphs (B-001 and B-002). Three additional areas of battering were also located and described Table C.7 below.

No cultural material was observed in or around the site. Site 29150 is in fair condition. The style of the single petroglyph suggests that this site dates to the early historic period. The presence of circular battering marks, however, suggest a traditional component to the site. The petroglyph may have functioned as art and the battering may have been associated with a processing activity of some kind. It is uncertain, however, what that processing activity may have been.

Table C.7 Site 50-10-27-29150, Table of Battering.

Battering No.	Shape	Density	Intensity	Tool Mark Shape	Length (M)	Width (M)
B-001	Linear	Moderate	Concentrated	Circular	0.30 (NE/SW)	0.07 (NW/SE)
B-002	Irregular	Moderate	Concentrated	Circular	0.40 (NE/SW)	0.25 (NW/SE)
B-003	Irregular	Moderate	Concentrated	Circular	0.80 (E/W)	0.40 (N/S)
B-004	Irregular	Moderate	Dispersed	Circular	0.64 (NE/SW)	0.40 (NW/SE)
B-005	Irregular	Moderate	Dispersed	Circular	0.90 (N/S)	0.30 (E/W)



Figure C.157. Site 50-10-27-29150, petroglyph (view east).

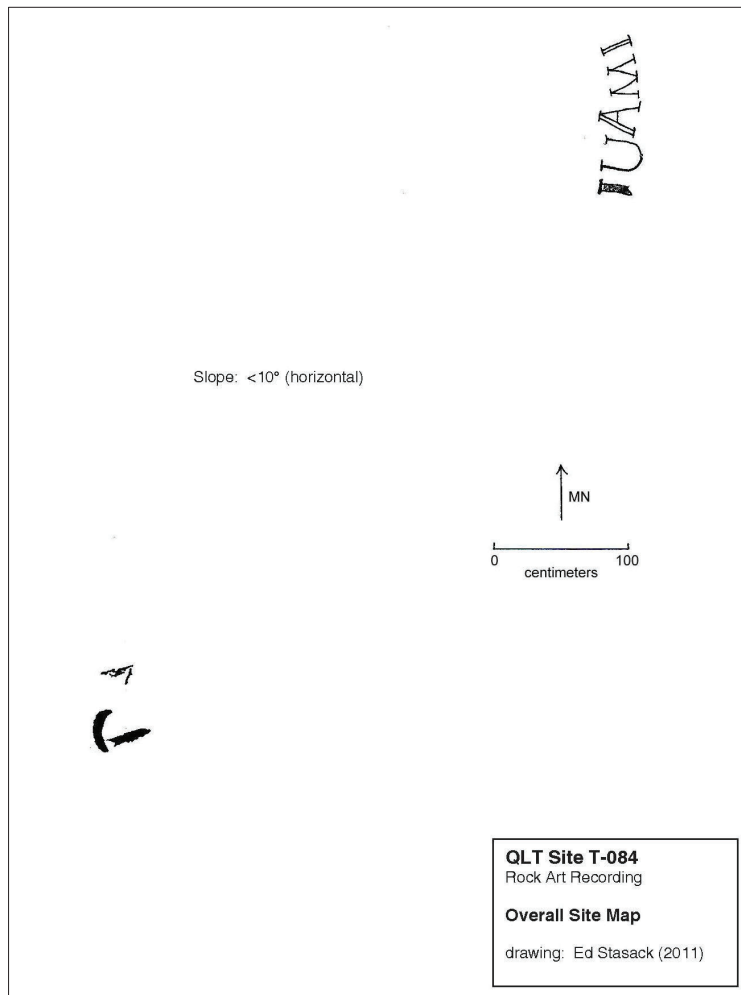


Figure C.158. Site 50-10-27-29150, petroglyphs (Stasack and Stasack 2012:II T-084, 4).

SIHP Number: 50-10-27-29151
Site Type: Mound
Field Number: T-086
Site Measurements: ca. 2.3 m by ca. 2.3 m by ca. 0.25 m
No. Features: 1
Artifacts: Traditional
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Marker
Condition: Poor

Description: Site 50-10-27-29151 consists of a stone mound (Figure C.160). It is located in the central portion of the project area, approximately 81.0 meters north (340°) of Site 13293 C-shaped wall. The site is situated in an area of low, undulating *pāhoehoe* lava. The surrounding vegetation includes a ground cover of fountain grass with a few *noni* and Christmasberry trees.

The mound is constructed of small to medium sub-angular basalt boulders and cobbles that have been loosely piled on the bedrock to form low mound. A nearby excavation appears to be a possible source for the boulders and cobbles used to construct the mound. Due to its disturbed condition, it is difficult to determine the mound's original dimensions and shape. In its present condition, the mound is roughly circular and measures approximately 2.3 meters in diameter by ca. 0.25 meters in height (Figure C.159).

Approximately 2.0 meters east of the mound are two hammerstones (Artifact 001 and 002) and two manuports, which were left *in situ*. These cultural materials are clustered together and appear to be moved out of context; they may possibly be associated with a nearby lava excavation. Artifact 001 is a small, slightly dense, vesicular waterworn basalt boulder fragment with battering on one end. This hammerstone has been fractured in half along its axis and only half remains. Artifact 001 measures ca. 29.0 centimeters in length by ca. 26.0 centimeters in width by ca. 7.0 centimeters thick. Artifact 002 is a large, dense gray waterworn basalt cobble with possible battering along one edge and one end. Artifact 002 measures ca. 25.5 centimeters long by ca. 21.0 centimeters wide by ca. 18.0 centimeters thick. The two manuports are both waterworn cobble fragments. One manuport is dense basalt, and the other is much more vesicular. No other cultural material was observed at this site.

Site 29151 is in poor condition and has tumbled in all directions. Based on its construction style, location, and its proximity to traditional artifacts, Site 29151 may have been built and utilized during the pre-Contact and/or early post-Contact periods. It is likely that it served as a marker, possibly for the Site 29152 petroglyphs located just southwest of the mound.

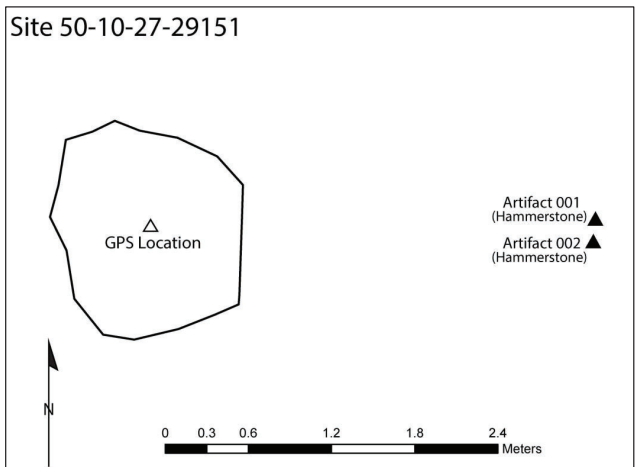


Figure C.159. GPS-based map of Site 50-10-27-29151 mound.



Figure C.160. Site 50-10-27-29151, stone mound (view southwest).

SIHP Number: 50-10-27-29152
Site Type: Petroglyphs
Field Number: T-087
Site Measurements: ca. 23.0 m by ca. 2.0 m
No. Features: 2
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Uncertain
Possible Function: Art
Condition: Good to Fair

Description: Site 50-10-27-29152 consists of two distinct petroglyphs, both of which are images of fish (Features A and B; Figure C.161). This site is located in the central portion of the project area. Feature B is approximately 8.0 meters southwest (227°) of Site 29151. Site 29152 is situated on the surface of a low-lying flow of undulating *pāhoehoe* lava. The surrounding vegetation includes a ground cover of fountain grass with *noni* and *alahe'e* trees and *klu* bushes.

Feature A is located at the northwestern end of the site, and Feature B at its southeastern end. Both features are petroglyphs of fish. Each one is oriented with its nose pointing north, dorsal fin west, and ventral fins east. Two different undetermined species of fish appear to be represented. Both are shown in profile view, have one dorsal fin, two ventral fins, and a prominent eye. Both images have been deeply pecked into the bedrock, forming clearly defined petroglyphs. The overall site area measures approximately 23.0 meters in length (northwest to southeast) by ca. 2.0 meters in width (northeast to southwest).

The rock art at Site 29152 was documented during the Keahuolū petroglyph recording project (Stasack and Stasack 2012:II, T-087 1-8). The Stasacks suggested that the fish depicted were likely to be *awa* (milkfish, *Chanos chanos*) based upon their distinctive tails.

No cultural material was observed within the site area. Site 29152 is in good condition. The petroglyphs are located in close proximity to a modern, bulldozed access road. There is a modern drilled hole bored into the lava adjacent to Feature A. Due to the unusual style of the petroglyphs, it is unclear whether they date from the traditional period or are more recent.

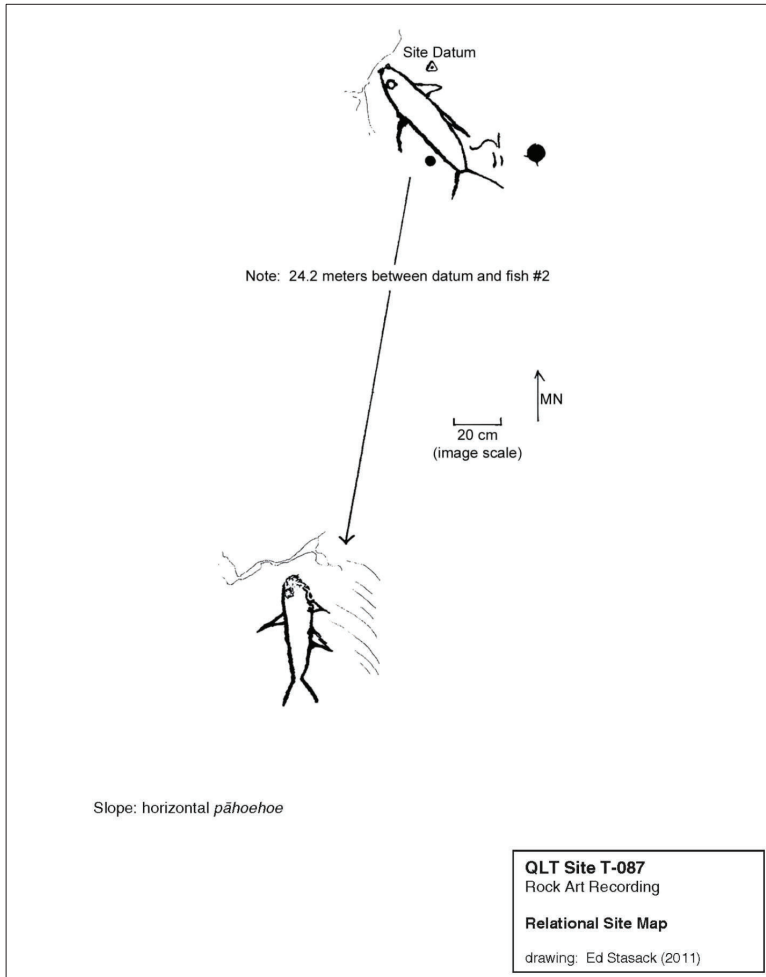


Figure C.161. Site 50-10-27-29152, petroglyphs (Stasack and Stasack 2012:II T-087, 5).

Feature: A

Feature Type: Petroglyph

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Uncertain

Possible Function: Art

Condition: Fair

Description: Site 50-10-27-29152, Feature A is a large petroglyph of an unknown species of fish (Figure C.162). The petroglyph is located at the northwestern edge of the site, approximately 23.0 meters northwest (327°) of the Feature B fish petroglyph. It is situated on roughly level and smooth *pāhoehoe* lava. The surrounding vegetation consists of a ground cover of fountain grass with some *koa haole* and *klu* shrubs.

The petroglyph is heavily pecked into the lava and consists of the image of a single large fish, with its head oriented northwest and its tail oriented to the southeast. The fish has a dorsal fin pointing west and two ventral fins on its east side. The tail of the fish is relatively long in comparison to its body. The fish has a large ringed eye measuring ca. 4.0 centimeters in diameter. The petroglyph measures ca. 0.79 meters in length (northwest to southeast) and ca. 0.32 meters in width (northeast to southwest).

No cultural material was observed around the feature. The petroglyph fish is in fair condition. A modern core hole has been drilled adjacent to the fish's southeastern end but appears not to have directly impacted the petroglyph itself. Due to the unusual style of the image, it is difficult to determine the age of Feature A.



Figure C.162. Site 50-10-27-29152, Feature A petroglyph (view to the west).

Feature: B

Feature Type: Petroglyph

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Uncertain

Possible Function: Art

Condition: Good

Description: Site 50-10-27-29152, Feature B consists of a single, well-defined petroglyph of a fish (Figure C.163). Feature B is located at the southeastern end of the site, approximately 23.0 meters southeast (147°) of the Feature A petroglyph. It is situated on top of a low, smooth flow of undulating *pāhoehoe* lava.

Feature B consists of a petroglyph of an unknown species of fish, which has been pecked into a fairly level bedrock surface. The image measures approximately 0.58 meters in length (north to south) by ca. 0.37 meters in width (east to west). The fish appears to be pointed north with its single dorsal fin pointing roughly west and its two ventral fins to the east. It has a fairly long and narrow body, with one prominent eye (ca. 5.0 centimeters in diameter).

No cultural material was observed at the feature. The Feature B petroglyph is in good condition and remains well-defined and visible. Due to the unusual style of the image, it is difficult to determine the age of Feature B.



Figure C.163. Site 50-10-27-29152, Feature B petroglyph (view to the west).

SIHP Number: 50-10-27-29153

Site Type: Mound

Field Number: T-088

Site Measurements: ca. 1.35 m by ca. 0.90 m by ca. 0.55 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Uncertain

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29153 consists of a single stone mound (Figure C.164, Figure C.165). The site is located near the central portion of the project area, approximately 83.0 meters northeast (57°) from Site 29152 petroglyphs. The terrain consists of an undulating *pāhoehoe* lava flow. The surrounding vegetation includes a dense ground cover of fountain grass and scattered *koa haole*, *klu*, and *noni* trees.

The stone mound is constructed of loosely piled small to large *pāhoehoe* slabs some of which are stacked on edge. The mound is built directly on the *pāhoehoe* bedrock, and tumbled downslope on its east end. The original size of the mound is difficult to determine, in its present condition the mound measures ca. 1.35 meters in length (east to west), by ca. 0.90 meters (north to south) and it is ca. 0.55 meters in maximum height. A small concentration of small to medium *pāhoehoe* slabs are located ca. 28.0 meters west (286°) from the site. This concentration of slabs may have once formed a low stone mound similar to the intact stone mound at Site 29153. The area of stones measures ca. 1.4 meters in length (north to south) by ca. 1.1 meters in width (east to west) and it has a maximum height of ca. 0.15 meters. No surface cultural material was observed at this site. Site 29153 is in poor condition. It appears that the Site 29153 stone mound may have served as a marker. It is not clear, however, what the mound was intended to mark. Due to its rough construction, the age of the mound cannot be determined.

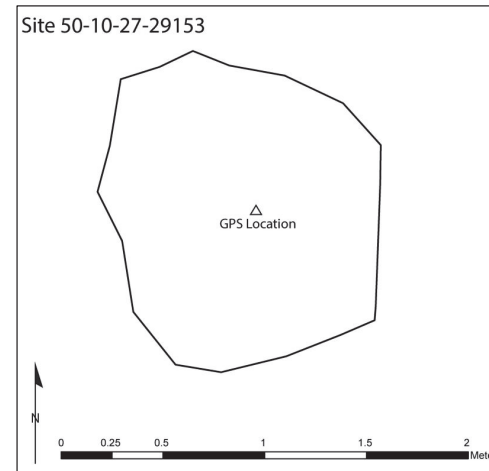


Figure C.164. GPS-based map of Site 50-10-27-29153 mound.



Figure C.165. Site 50-10-27-29153, stone mound (view north).

SIHP Number: 50-10-27-29154

Site Type: Enclosure

Field Number: T-090

Site Measurements: ca. 3.2 m by ca. 2.7 m by ca. 0.25 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29154 consists of a badly disturbed stone-walled enclosure (Figure C.166, Figure C.167). It is located in the central portion of the project area, approximately 89.0 meters northeast (68°) of Site 29153. This site is situated on a smooth, level area of low-lying *pāhoehoe* lava. The surrounding vegetation includes a ground cover of fountain grass with *klu* and *'ilima* shrubs, as well as *koa haole* trees.

The structure is roughly oval in shape. Its walls are constructed of small to medium basalt boulders and cobbles, and *pāhoehoe* slabs. The structure is built atop relatively level *pāhoehoe* bedrock. The enclosure is very badly collapsed and presently only one stone high. It is possible the slabs may have stood on end or edge, but due to the severe damage to the site, it is impossible to determine the enclosure's original dimensions or construction. In its current condition, it measures approximately 3.2 meters in length (northeast to southwest) by ca. 2.7 meters in width (northwest to southeast) by ca. 0.25 meters in height.

No cultural material was observed in or around the site. Site 29154 is in poor condition and badly collapsed in all directions. The construction style and location on level *pāhoehoe* bedrock, suggests that Site 29154 may have served as a traditional windbreak shelter during the pre-Contact and/or early post-Contact periods.

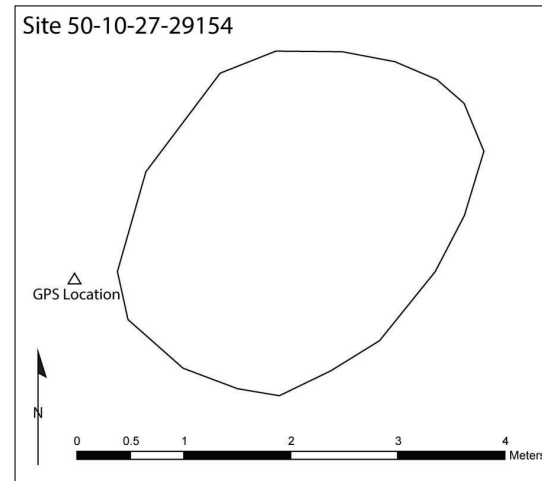


Figure C.166. GPS-based map of Site 50-10-27-29154 enclosure.

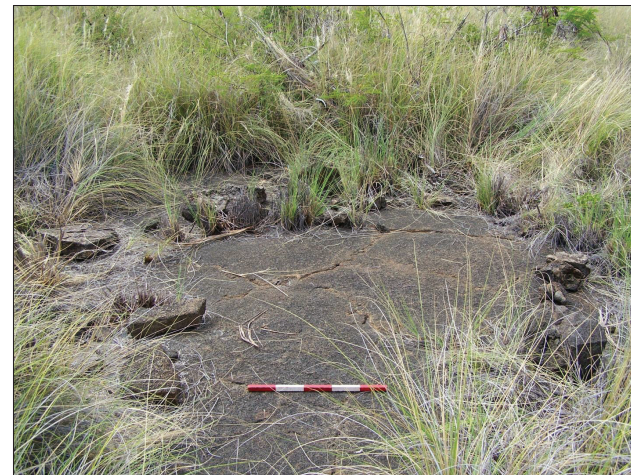


Figure C.167. Site 50-10-27-29154 enclosure (view northwest).

SIHP Number: 50-10-27-29155

Site Type: Mound

Field Number: T-091

Site Measurements: ca. 1.5 m by ca. 1.0 m by ca. 0.37 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29155 consists of a single, roughly rectangular stone mound (Figure C.137, Figure C.169). It is situated in the central portion of the project area, approximately 7.2 meters southwest (248°) of Site 13287, Feature R. The mound is situated along the tip of a *pāhoehoe* ridgeline. The surrounding vegetation consists of a ground cover of fountain grass and *koa haole* trees.

Site 29155 appears to be somewhat tumbled and collapsed. It is constructed of loosely piled small to medium sub-angular basalt boulders and cobbles. Four small boulders rest along the edges of the mound. Due to its collapsed state, it is difficult to determine its original construction. It appears that the mound may have originally been edged with small boulders and filled with cobbles and pebbles. The mound measures ca. 1.5 meters in length (east to west) by ca. 1.0 meter in width (north to south). It has a maximum height of ca. 0.37 meters.

A lava excavation (excavation number 132) is located adjacent to the stone mound. The mound, however, does not appear to be associated because its construction is more formal than that of the rock pile of discarded material from the lava excavation.

No cultural material was observed in or around the mound. Site 29155 is in fair condition. The structure has suffered some tumble yet has retained some of its original edging. The mound's location atop a ridgeline and its proximity to the Site 13287 complex suggests that it may have served as a marker for the habitation site. Site 29155 was likely constructed during the pre-Contact and/or early post-Contact periods.

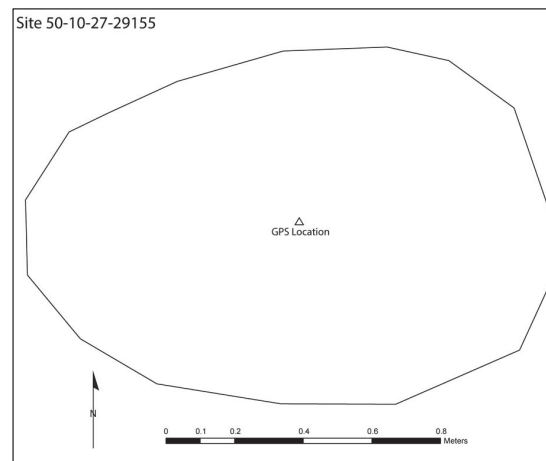


Figure C.168. GPS-based map of Site 50-10-27-29155 mound.



Figure C.169. Site 50-10-27-29155, stone mound (view northeast).

SIHP Number: 50-10-27-29156

Site Type: Enclosure

Field Number: T-092

Site Measurements: ca. 2.6 m, ca. 2.0 m, ca. 0.3 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Art

Condition: Poor

Description: Site 50-10-27-29156 consists of a badly disturbed, roughly oval-shaped stone-walled enclosure (Figure C.170). It is located in the central portion of the project area, approximately 53.0 meters northwest (318°) of Site 13287, Feature A. The enclosure is situated on top of a fairly level area of a roughly east to west trending flow of undulating *pāhoehoe*. The surrounding vegetation includes a ground cover of fountain grass with one *koa haole* tree.

Site 29156 is collapsed and badly tumbled. The enclosure appears to be constructed of small sub-angular basalt boulders, cobbles and pebbles which have been set on the bedrock to form a roughly oval-shaped enclosure whose long axis is roughly north to south. Due to its disturbed condition, it is impossible to determine the original height of the structure. The original enclosure may have measured approximately 2.6 meters in exterior length (north to south) by ca. 2.0 meters in exterior width (east to west). The interior of the enclosure measures ca. 1.9 meters in length (north to south) by ca. 1.3 meters in width (east to west). The current maximum height is ca. 0.3 meters.

Approximately 8 meters southeast of the enclosure, on a small upthrust of lava, is located a cluster of petroglyphs. These rock art images have been documented by the Stasacks (Stasack and Stasack 2012:II, 29156 pg.1-6). They consist of a single staple-shaped line that may represent the arms of an uncompleted human figure, and four *poho*, or cup-shaped depressions (Figure C.171, Figure C.172, and Figure C.173). The proximity of these petroglyphs to the enclosure suggest that they may possibly have been created by the structure's occupants.

No cultural material was observed in or around the site. The enclosure is in poor condition, and badly tumbled. Site 29156 may have been built and utilized during the pre-Contact and/or early post-Contact periods as a windbreak shelter for temporary habitation. The nearby petroglyphs could possibly be associated with it.



Figure C.170. Site 50-10-27-29156, enclosure (view north).

Archaeological Inventory Survey — Volume III, Appendices

Lili'uokalani Trust Urban Phase III

Keahuolū, North Kona, Hawai'i

July 2019

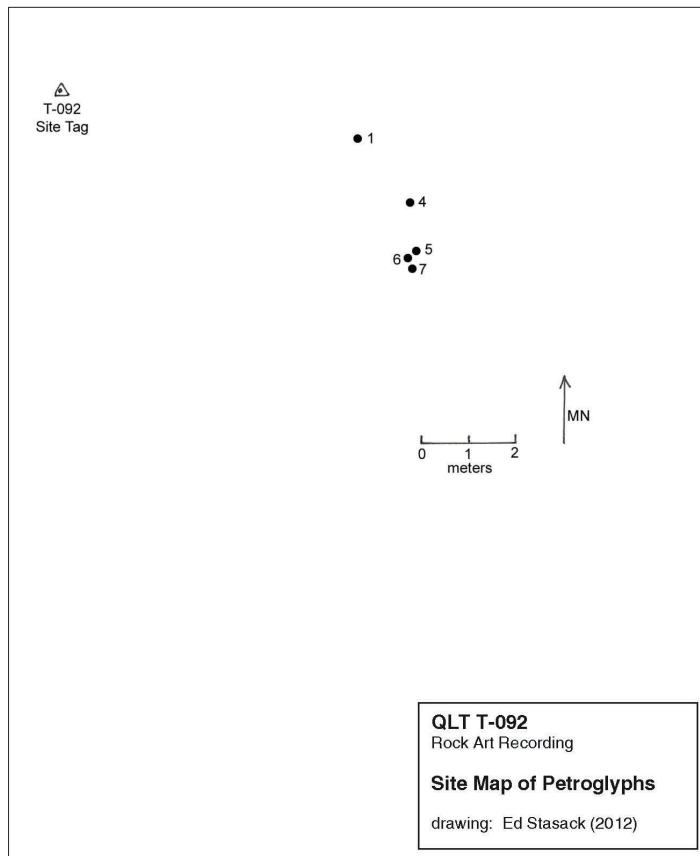


Figure C.171. Site 50-10-27-29156, petroglyph locations (Stasack and Stasack 2012:II,29156 pg.3).

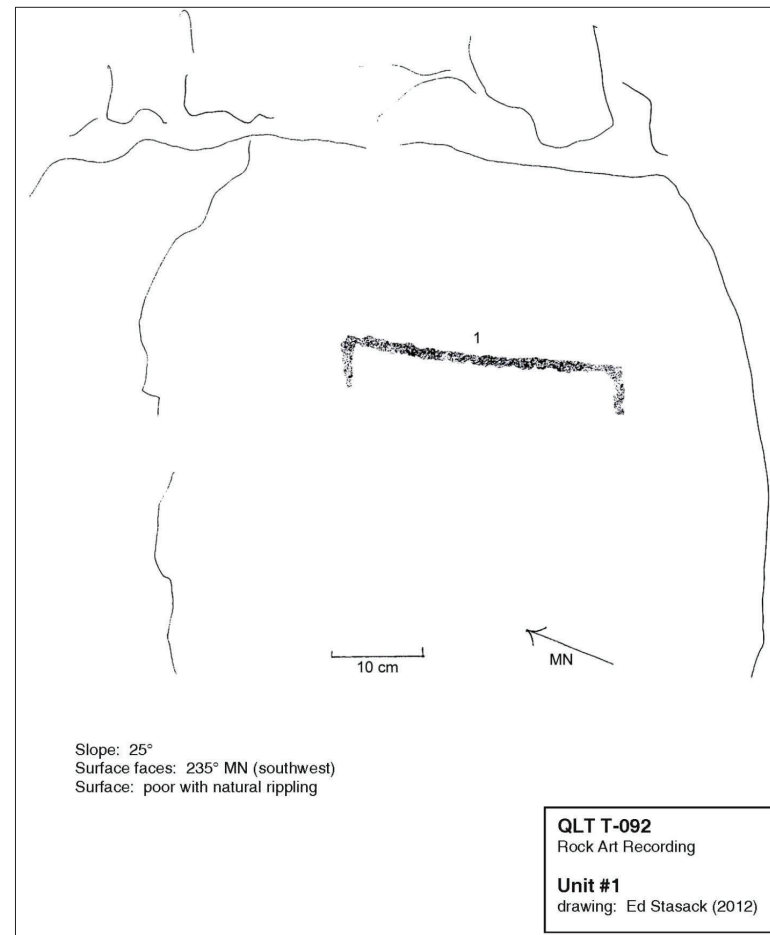


Figure C.172. Site 50-10-27-29156, petroglyph 1 (Stasack and Stasack 2012:II,29156 pg.4).

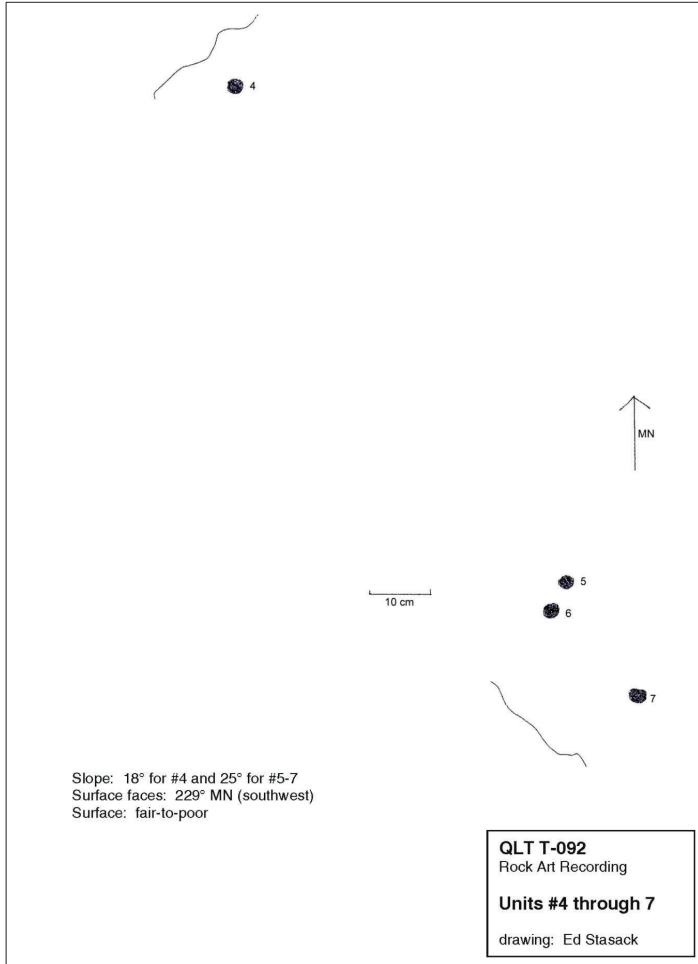


Figure C.173. Site 50-10-27-29156, petroglyphs 4 thru 7 (Stasack and Stasack 2012:II,29156 pg.5).

SIHP Number: 50-10-27-29157

Site Type: Enclosure

Field Number: T-093

Site Measurements: ca. 1.43 m by ca. 1.4 m, ca. 0.42 m

No. Features: 1

Artifacts: None Observed

Midden: Present

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29157 consists of a stone-walled enclosure. It is located in the northwestern portion of the project area, approximately 214 meters southwest (216°) of Site 29152, Feature B. The enclosure is situated atop a high, protruding flow of roughly east to west trending, undulating *pāhoehoe* lava flow. The surrounding vegetation includes a ground cover of fountain grass with *noni* trees.

The Site 29157 enclosure is roughly circular in shape and constructed of small sub-angular basalt *pāhoehoe* boulders and cobbles. The enclosure is collapsed and badly tumbled. It appears, however, to be one to two courses high with a higher amount of stones set into the northeast portion of the enclosure wall. The exterior measurements of the wall are approximately 1.43 meters in length (northeast to southwest) and ca. 1.4 meters in width (northwest to southeast). The interior of the enclosure measures ca. 0.9 meters in length (northeast to southwest) by ca. 0.94 meters in width (northwest to southeast) (Figure C.174). The current height is ca. 0.42 meters, and the thickness of the walls appears to have possibly been ca. 0.35 meters.

The cultural material on site includes one fragment of a Cypraeidae shell. Site 29157 is in poor condition, impacted by collapse and tumble. Based upon its style of construction, this site may have been built and utilized in the pre-Contact and/or early post-Contact periods as a temporary windbreak shelter.

Site 50-10-27-29157 was not photographed during the current survey.

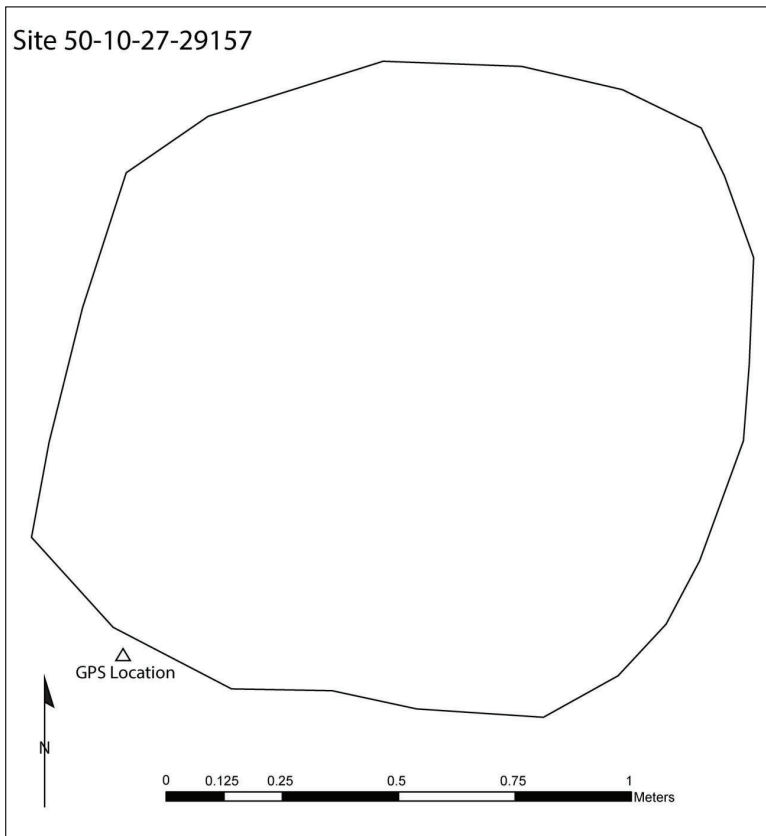


Figure C.174. GPS-based map of Site 50-10-27-29157 enclosure.

SIHP Number: 50-10-27-29158

Site Type: Complex

Field Number: T-096

Site Measurements: ca. 21.7 m, by ca. 31.7 m

No. Features: 4

Artifacts: Traditional

Midden: Present

Coral: Present

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Good

Description: Site 50-10-27-29158 is a complex consisting of four features: one modified lava sink (Feature A), two modified overhangs (Features B and C), and a roughly circular stone mound (Feature D) (Figure C.175). The site is located in the northwestern portion of the project area, approximately 142.0 meters north (356°) from the Site 29157. The complex of features is situated on undulating *pāhoehoe* lava. The surrounding vegetation included a ground cover of fountain grass, thickets of Christmasberry and *koa haole* trees, and several *klu* and *noni* trees.

The majority of the site is located at the base of the undulating *pāhoehoe* flows. Feature A is a modified lava sink located at the northwest end of the site, within the more recent lava flow. The center of the sink contains a fairly large depression where stones appear to have been cleared from the floor. Feature B is a modified overhang containing marine shell midden (cowrie) and coral (porities), and two waterworn basalt cobbles. Feature C is a modified overhang, which also contains marine shell midden and a small pool of brackish water. The water level appears to fluctuate with the tides. Feature D is a low, small stone mound located at the southeast end of the complex of features. Features B through D are all situated on the older *pāhoehoe* flow.

One waterworn basalt hammerstone was located near the entrance to the Feature B modified overhang. This hammerstone was designated Artifact 001. Other than this artifact the marine shell midden, the coral fragments, and unmodified waterworn basalt stones, no additional cultural material was observed. Site 29158 is in good condition.

Features A through C all appear to have most likely functioned as temporary habitation shelters during the pre-Contact and/or early post-Contact periods. Their entrances have all been modified for purposes such as easier access into the shelter (Feature C) and added protection from natural elements such as sunshine (Feature B). Both modified overhangs and the modified sinkhole appear to provide good shelter from the sun and all three contained marine shell midden. Although the Feature D stone mound is relatively low and small in size, it may have functioned as a marker designating the location of these habitation features.

Site 50-10-27-29158 was not photographed during the current survey.

Feature: A
Feature Type: Modified Lava Sink
Artifacts: None Observed
Midden: Present
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Habitation
Condition: Fair

Description: Site 50-10-27-29158, Feature A consists of a relatively large modified lava sink. It is on the northwestern edge of the site, approximately 13.0 meters northwest (311°) of Feature B. The sinkhole is situated at the base of a steep ridgeline and contains two low overhangs located on the southern and northern edges, with a low linear alignment edging its eastern edge. There is a stone-edged depression near the center of the sink. The sink's overall measurements are ca. 8.0 meters in length (east to west) by ca. 6.0 meters in width (north to south).

Overhangs are located at the north and south edges of the sinkhole. Both unmodified but contain marine shell midden. They are low with narrow openings, however, the northern overhang is longer and has a greater depth. The northern overhang opens to the south, and measures ca. 10.0 meters in length (northeast to southwest) and ca. 1.44 meters from the dripline to the floor and extends back to the north with a depth of ca. 2.8 meters. Fragments of cowry and sea urchin shell were observed on the floor. The second smaller overhang located on the southern edge of the sinkhole opens to the north and measures ca. 9.2 meters in length (east to west) and ca. 1.3 meters from the dripline to the floor. It extends back to the south with a depth of ca. 2.3 meters. A fragment of sea urchin shell was observed on the overhang's floor.

Located in the center of the sinkhole is a large, oval-shaped stone-edged depression. It appears to be naturally edged and faced with crumbling bedrock; however, the southwestern edge of the depression appears to possibly have been modified with small to medium-sized boulders and boulder slabs that have been loosely stacked atop the natural bedrock to create a rough facing. The floor of the depression is level and clear of rubble and at present has a large Christmasberry tree growing out of its floor. The stone-edged depression measures ca. 3.2 meters in length (north to south) by ca. 2.4 meters in width (east to west) and has a maximum depth of ca. 1.2 meters. No cultural material was observed in the depression.

Atop and along the sinkhole's eastern and lowest edge is a low linear alignment constructed of small to medium sub-angular boulders. The alignment measures ca. 2.0 meters long (north to south) by ca. 0.5 meters in thickness (east to west) and has a maximum height of ca. 0.4 meters.

The fragments of marine shell previously described were the only cultural material observed in this feature. Feature A is in fair condition. It does not appear to have suffered collapse or tumble, however the large Christmasberry tree may have disturbed the stone-edged depression. The presence of midden in the overhangs suggests that the lava sink may have been utilized for temporary habitation during the pre-Contact and/or early post-Contact periods. It is uncertain, however, what purpose the stone alignment served. The stone-edged depression may alternatively have been used as storage or as a planting area, however this also remains unclear.

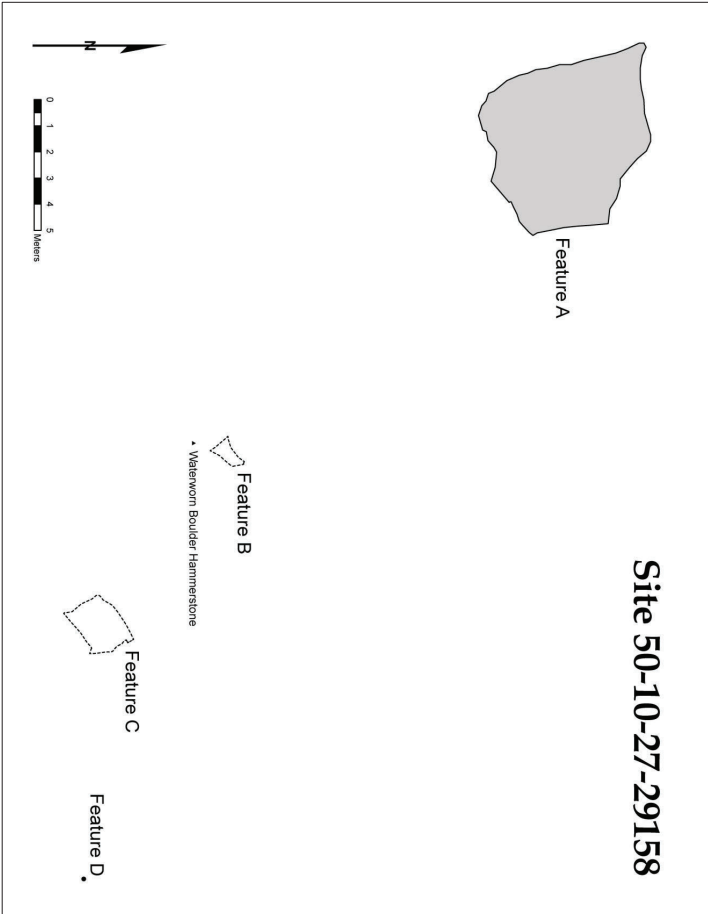


Figure C.175. GPS-based locations of features within Site 50-10-27-29158 complex.

Feature: B**Feature Type:** Modified Overhang**Artifacts:** Traditional**Midden:** Present**Coral:** Present**Skeletal Remains:** None Observed**Possible Age:** Pre-Contact and/or Early Post-Contact**Possible Function:** Habitation**Condition:** Good

Description: Site 50-10-27-29158, Feature B consists of a modified overhang. Feature B is located in the central portion of the site, approximately 13.0 meters southeast (131°) of Feature A. This feature is located along a roughly east to west running flow of undulating *pāhoehoe* lava. The modified overhang has a skylight entrance leading into a low, level overhang with midden, coral, and waterworn stones. This skylight entrance appears to have been created from natural collapse but may have been the result of a *pāhoehoe* lava excavation.

The skylight entrance has been modified and is currently roughly rectangular in shape. The entrance measures ca. 1.25 meters in length (northeast to southwest) by ca. 0.80 meters in width (northwest to southeast) by ca. 0.90 meters in height to the dripline. The skylights modifications are primarily at the east corner, where one triangular-shaped medium sub-angular basalt boulder slab and some sub-angular boulders and cobbles have been set and wedged into an exposed crack, narrowing the skylight opening and increasing the sheltered overhang area. A couple of small sub-angular stones are also wedged into the west corner of the skylight and appear to have a similar function. The entrance leads into a roughly oval-shaped exposed lava blister, which extends roughly north. The exposed lava blister measures ca. 3.1 meters in length (north to south) by ca. 2.75 meters in width (east to west) by ca. 0.70 meters in height to the dripline. The floor is relatively clear of rubble with a few roof fall stones present. A small layer of soil is present on the floor and is at least one centimeter deep. A scatter of Cypraeidae (cowry) shell fragments were observed on the floor of the overhang, and a dispersed scatter of porities coral fragments were also observed. Two waterworn stones were observed in the overhang. One is a small waterworn pebble located ca. 1.0 meters northeast of the opening and the other is a medium waterworn basalt cobble located ca. 0.70 meters northwest of the opening.

One hammerstone was observed in Feature B (Artifact 001), ca. 0.40 meters northeast of the north corner of the opening. Artifact 001 is a small, waterworn, dense, light gray basalt boulder with battering on three ends and two edges. The hammerstone measures ca. 26.6 centimeters long by ca. 22.5 centimeters wide by ca. 11.1 centimeters thick. Feature B is in good condition. Its construction style and location suggest that Feature B may have been built during the pre-Contact and/or early post-Contact periods as a shelter for temporary habitation.

Feature: C**Feature Type:** Modified Overhang**Artifacts:** None Observed**Midden:** Present**Coral:** Present**Skeletal Remains:** None Observed**Possible Age:** Pre-Contact and/or Early Post-Contact**Possible Function:** Habitation**Condition:** Good

Description: Site 50-10-27-29158, Feature C consists of a modified overhang. Feature C is located approximately 8.7 meters southeast (125°) of Feature B. The feature is located within a roughly east to west running *pāhoehoe* flow. A large skylight exposed by a *pāhoehoe* lava excavation leads into a narrow overhang terminating at a pool of brackish water that was found to contain red shrimp (*ʻōpae ʻula*). The excavated area measures ca. 2.65 meters long (northeast to southwest) by ca. 2.0 meters in wide (northwest to southeast) by ca. 2.0 meters wide (northwest to southeast) by ca. 1.7 meters deep. The excavated large sub-angular basalt cobbles and boulders have been set into the exposed area, creating a roughly filled and leveled surface leading to the entrance of the overhang, which is at the northeast end of the excavation. The set excavated stones effectively narrow the opening to the overhang and terminate with a three-course facing directly below the dripline. The modified opening measures ca. 1.0 meters in length (northwest to southeast) by ca. 0.70 meters in height from the top of the facing to the dripline and is ca. 1.15 meters from the floor of the overhang to the dripline.

The entrance leads to a roughly northeast to southwest running chamber that measures ca. 4.0 meters in length, by ca. 2.2 meters in width by ca. 1.0 meters high. This chamber has an uneven bedrock floor, which is visibly wet and appears to have been cleared of rock with stones nicely piled at the northwest end and along the northwestern and northeastern edge of the chamber. Midden, coral, and one waterworn basalt pebble were observed in this chamber. Multiple fragments of Cypraeidae (cowry) were observed with lower volumes of Patellidae (*ʻōpīhi*) and Conidae shell and one unidentified shell. At least five waterworn coral pebbles were also scattered throughout the chamber, the chamber bends roughly to the south, running for ca. 3.0 meters and terminating at shallow brackish water with some presence of *ʻōpae ʻula* (red shrimp).

The chamber leading to the water is very low, only ca. 0.50 meters tall and extends roughly ca. 2.0 meters in width. One waterworn small basalt cobble and a few fragments of Cypraeidae and Conidae were observed along the wet, uneven and rough floor surface. Additionally, modern rubbish was observed, including some ribbon and a gallon plastic jug with a rusted lip, which appears to be wedged into the very back end of the chamber. No other cultural material was observed. Feature C is in good condition, only visibly impacted by modern rubbish; all of its structural components appear intact.

Its construction style and location suggest that Feature C appears to have been built and utilized during the pre-Contact and/or early post-Contact periods. The presence of traditional midden and the use of the lava overhang suggest that Feature C may have been used for habitation, and the access to a small pool of brackish water with *ʻōpae ʻula* suggests that fishing-related activities may have been occurring.

Feature: D

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29158, Feature D consists of a roughly circular stone mound. It is located approximately 8.0 meters east (96°) from the Feature C modified overhang. The stone mound is situated on a low northeast to southwest running *pāhoehoe* ridge. It is constructed of four stones, two of which are small sub-angular basalt boulders, the other two sub-angular basalt cobbles. The mound is built directly on top of the natural bedrock. The maximum dimensions are ca. 0.64 meters in length (northeast to southwest) by ca. 0.46 meters in width (northwest to southeast) and has a maximum height of ca. 0.60 meters.

No surface cultural material was observed at this feature. Feature D is in fair condition. It appears that Feature D most likely functioned as a marker for the location of Features A through C during the pre-Contact and/or early post-Contact periods.

SIHP Number: 50-10-27-29159

Site Type: Complex

Field Number: T-097

Site Measurements:

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Travel/Storage

Condition: Good

Description: Site 50-10-27-29159, is a complex consisting of two features, the Feature A stepping stone trail, and the Feature B modified overhang (Figure C.176). It is located in the northwestern portion of the project area, approximately 38.0 meters east (70°) from Site 29158, Feature A. The terrain consists of an *'a'ā* lava flow at the base of a north to south running *pāhoehoe* lava ridge. Within the *'a'ā* flow are small areas of exposed *pāhoehoe* bedrock. Surrounding vegetation consists of a ground cover of scattered fountain grass and low thickets of *koa haole* and Christmasberry trees. Several *noni* trees are also present.

The two features within the complex of features immediately abut each other. Feature A is a trail segment located at the southern end of the site. It appears that the Feature A trail segment provides an access over the rough and sharp *'a'ā* lava flow and connecting two areas of exposed *pāhoehoe* bedrock. The trail also connects a *pāhoehoe* bedrock lava flow to the Feature B overhang.

Feature B is a modified overhang, which contains no cultural material. It is located immediately at the northern end of the trail segment on exposed *pāhoehoe* bedrock. A low discontinuous stone wall edges the opening that leads into the overhang.

Two waterworn basalt cobbles were located near the Feature B overhang. Other than the two waterworn cobbles, no additional cultural material was observed near or around the site. Site 29159 is in fair to good condition.

Given that no cultural material was observed within Feature B, it does not appear likely that this overhang was utilized as a temporary habitation shelter. The interior of the overhang is also rather narrow and small and does not provide a comfortable area for resting. Instead, Feature B may have functioned as a storage area. Feature A would have provided access to the lava flow within the storage area. It is most likely that Site 29159 was constructed and utilized during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29159 was not photographed during the current survey.

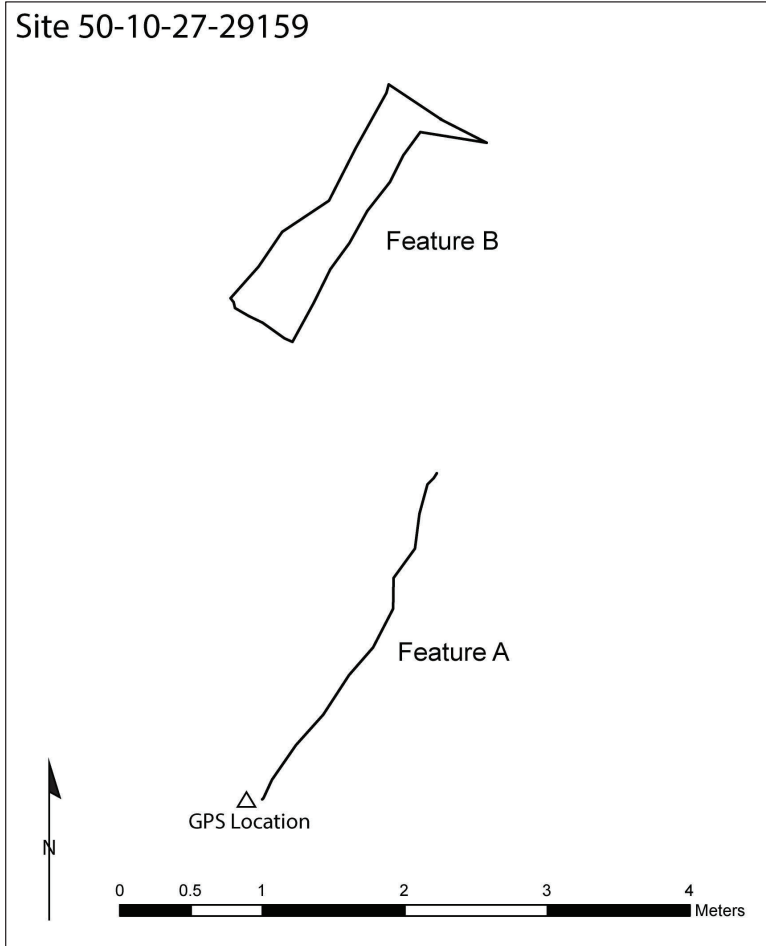


Figure C.176. GPS-based map of Site 50-10-27-29159 complex.

Feature: A

Feature Type: Trail

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early Post-Contact

Possible Function: Travel

Condition: Good

Description: Site 50-10-27-29159, Feature A consists of a stone slab trail. The trail runs roughly north to south and abuts the Feature B modified overhang at its northern end. The trail is constructed on top of a stretch of *a'ā* lava flow, then crosses into a *pāhoehoe* lava flow to the south, and then runs north, where it meets Feature B. Essentially, it appears that the trail connects two areas of smooth *pāhoehoe* lava and allows easy access over the sharp *a'ā* lava to Feature B.

The trail consists of six small *pāhoehoe* boulder slabs that have been placed into the *a'ā* clinkers and forms a roughly linear trail. The trail is relatively level, however, at its southern end it drops gently down to the *pāhoehoe* lava. The trail measures ca. 2.8 meters in length (north to south) by ca. 0.4 meters in width (east to west). No cultural material was observed in or around the feature. Feature A is in good condition and does not appear to be disturbed.

The construction style of Feature A suggests that it was built and utilized during the pre-Contact and/or early post-Contact periods and may have been used as an access trail to cross the rough *a'ā* lava to gain access to the Feature B storage area.

Feature: B**Feature Type:** Modified Overhang**Artifacts:** None Observed**Midden:** None Observed**Coral:** None Observed**Skeletal Remains:** None Observed**Possible Age:** Pre-Contact and/or Early Post-Contact**Possible Function:** Storage**Condition:** Fair

Description: Site 50-10-27-29159, Feature B consists of a modified overhang. It is located at the northern end of the site and abuts the north end of the Feature A trail segment. Feature B is situated at the base of a tumulus of *pāhoehoe* lava running roughly east to west. It is also surrounded by a more recent 'a'ā lava flow.

The entrance to the Feature B overhang consists of a roughly rectangular skylight that appears to be the result of natural collapse, though it may be a *pāhoehoe* lava excavation. Sub-angular basalt small to medium boulders and cobbles are piled below the skylight, concentrated at the southern end, and appear to be the result of collapse. The skylight measures ca. 2.0 meters in length (north to south), by ca. 0.70 meters in width (east to west) by ca. 1.23 meters in height.

The only modifications to Feature B consist of low walls built up at the northern and southern ends of the skylight, along the perimeter. The low walls are constructed with small to medium sub-angular basalt boulders and cobbles, which have been set in one to three courses on bedrock. The wall segments at each end of the skylight measure ca. 0.49 meters in maximum height by ca. 0.48 meters in maximum thickness.

An exposed lava blister extends ca. 2.2 meters west of the opening with a height of ca. 0.72 meters at the dripline. No cultural material or modifications were observed in this exposed lava blister.

Cultural material identified around Feature B include two waterworn cobbles. One waterworn cobble was located ca. 7.5 meters northeast of the Feature B overhang, and the other located ca. 1.7 meters southwest of the overhang. Neither waterworn cobbles have evidence of battering, but they may have insipient use. The Feature B overhang is in fair condition. Based upon its location and construction style, Feature B appears to have been built and utilized during the pre-Contact and/or early post-Contact periods, possibly for storage.

SIHP Number: 50-10-27-29160**Site Type:** Petroglyph**Field Number:** T-098**Site Measurements:** ca. 5.5 m by ca. 5.5 m**No. Features:** 1**Artifacts:** None Observed**Midden:** None Observed**Coral:** None Observed**Skeletal Remains:** None Observed**Possible Age:** Pre-Contact and/or Early Post-Contact**Possible Function:** Art**Condition:** Good

Description: Site 50-10-27-29160 consists of a panel of three linear-bodied human figure petroglyphs and two small *poho*, or cup-like depressions (Figure C.177). The site is located in the western central portion of the project area, approximately 60.0 meters southeast (152°) from the Site 29158 Feature D stone mound. The terrain consists of undulating *pāhoehoe* lava. The surrounding vegetation includes *kiawe*, Christmasberry, and *noni* trees with a ground cover of fountain grass.

The rock art at Site 29160 was documented in detail during the Keahuolū petroglyph recording project (Stasack and Stasack 2012:II, T-098 1-7). A total of five petroglyphs were identified (though the Stasack's map indicates the presence of five rather than the two *poho* that they note in their text). The petroglyphs are pecked into the surface of a slightly sloping slab of *pāhoehoe* bedrock. The three images are all linear-bodied human figures placed one above the other in a line (Figure C.178). They are oriented in a roughly northwest (feet) to southeast (head) direction. The images cover an area of ca. 0.75 to 0.24 meters. The three human figures are in good condition. Although somewhat faint, all three are clearly discernible. They appear to be the only images in the area. The images are traditional in subject matter and style, and the site may represent the outliers of the Site 13353 petroglyph complex.

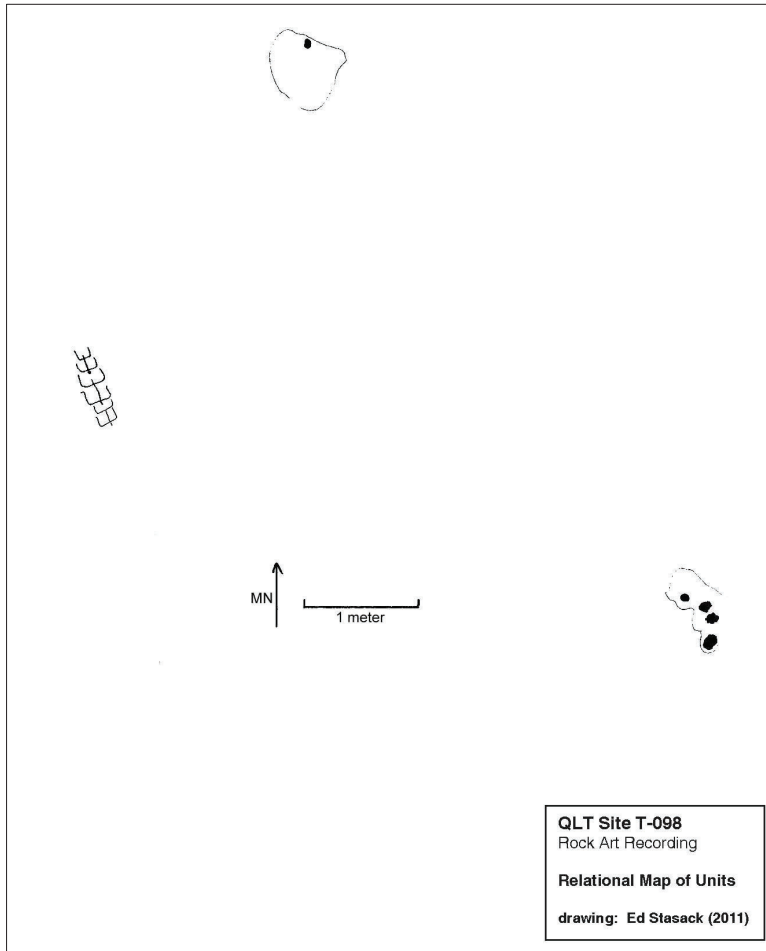


Figure C.177. Site 50-10-27-29160, petroglyphs (Stasack and Stasack 2012:II, 4).



Figure C.178. Site 50-10-27-29160, human figure petroglyph (view southeast).

SIHP Number: 50-10-27-29161

Site Type: Complex

Field Number: T-099

Site Measurements: ca. 5m by ca. 5 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Fair to Poor

Description: Site 50-10-27-29161 consists of a very crude *pāhoehoe* slab enclosure (Feature A) and a nearby low C-shaped wall (Feature B) (Figure C.179). The site is located in the northwestern corner of the project area, approximately 163 meters northwest (328°) from Site 29160. It is situated on the southwestern end of a lava ridge, and both structures are built on a sloping area of *pāhoehoe* lava. The surrounding vegetation includes fountain grass and *'uhaloa* shrubs.

Feature A, the more southerly of the two structures is a collapsed, roughly oval-shaped enclosure that appears to have originally consisted of small to medium *pāhoehoe* slab boulders set on edge. Approximately 3.0 meters northwest of Feature A is the Feature B C-shaped wall.

The two structures are in fair condition. No cultural material was noted at the site. The Feature A enclosure and the Feature B C-shaped wall appear to have served as temporary habitation windbreak shelters constructed and utilized during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29161

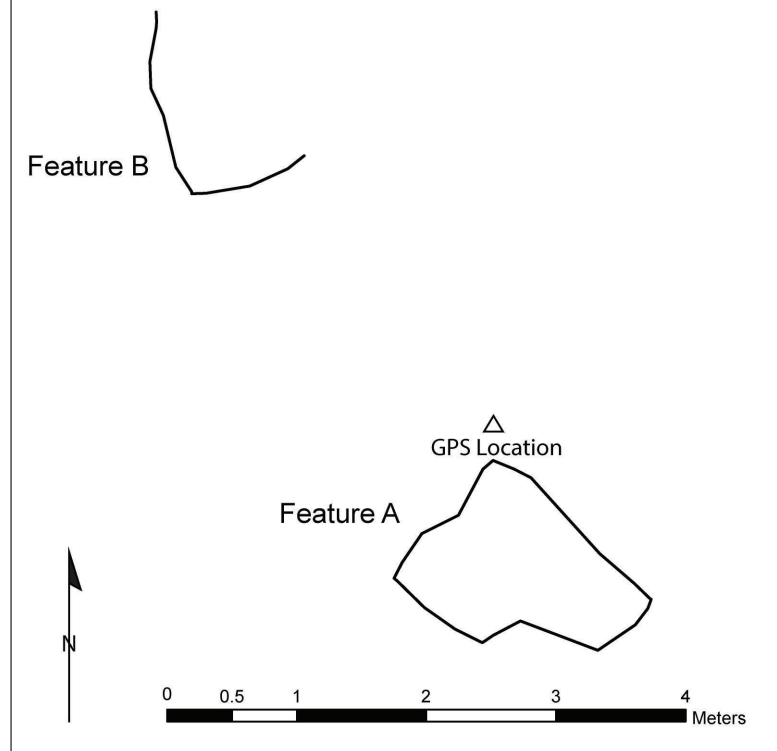


Figure C.179. GPS-based map of Site 50-10-27-29161 complex.

Feature: A

Feature Type: Enclosure

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29161, Feature A is a stone-walled enclosure (Figure C.180). It is located approximately 3.0 meters southeast (146°) of Feature B, a C-shaped wall. Feature A consists of a collapsed roughly oval-shaped enclosure that appears to have been constructed of small to medium *pāhoehoe* slab boulders set on edge. The wall of the enclosure is presently collapsed. The Feature A enclosure measures ca. 1.5 meters in length (northeast to southwest) by ca. 1.2 meters in width (northwest to southeast). Due to the collapsed nature of the structure, it is difficult to estimate the interior measurements, but they are approximately 1.3 meters in length by ca. 0.8 meters in width. The walls of the enclosure probably originally averaged ca. 0.2 meters in thickness and stood ca. 0.3 meters to 0.5 meters high.

No cultural material was observed in the feature. Feature A is in poor condition and is badly tumbled. The enclosure's size and construction style suggest that it may have been built and utilized during the pre-Contact and/or early post-Contact periods to serve as a temporary windbreak shelter.



Figure C.180. Site 50-10-27-29161, Feature A enclosure (view northwest).

Feature: B

Feature Type: C-Shaped Wall

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29161, Feature B consists of a low C-shaped wall (Figure C.181). It is located approximately 3.0 meters northwest (326°) of the Feature A enclosure. The C-shape opens to the northeast and appears to have been constructed of a combination of small to medium *pāhoehoe* slab boulders set on edge, and small slab boulders that are loosely stacked. Some of these boulders have collapsed inwards. The structure measures ca. 1.0 meter in length, by ca. 0.9 meters in width. Due to the wall collapse, estimates of the walls thickness are difficult to determine, but may originally have been ca. 0.25 meters in thickness.

No cultural material was observed in or around the feature. Feature B is in fair condition. The feature's size and construction style suggest that it may have served as a crude and low windbreak shelter and was likely constructed during the pre-Contact and/or early post-Contact periods.



Figure C.181. Site 50-10-27-29161, Feature B C-shaped wall (view northwest).

SIHP Number: 50-10-27-29162

Site Type: C-Shaped Wall

Field Number: T-100

Site Measurements: ca. 2.0 m by ca. 1.9 m by ca. 0.35 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29162 consists of a C-shaped wall. It is located atop a ridgeline, approximately 59.0 meters southeast (140°) of Site 29161, Feature A. This site appears to correspond with Site 50-10-27-6537, recorded during the Archaeological Research Center Hawaii reconnaissance survey conducted 1978 (Ching 1978). The 1978 survey report describes Site 6537 as a, "Boulder alignment on pahoehoe flow; 2 meters square; forms U-shaped outline opening west" (Ching 1978:6).

Site 29162 is constructed of small to medium basalt boulders and *pāhoehoe* slabs that have been arranged to form a rough C. The wall opens to the southwest and measures ca. 2.0 meters in length (east to west), and ca. 1.9 meters in width (north to south) with a maximum height of ca. 0.35 meters.

A large basalt boulder that has been placed on end is located ca. 10.0 meters northwest of the C-shape and may have been used as a marker for the site, however this is uncertain. A small waterworn boulder was also observed ca. 6.0 meters to the north of the site. The manuport did not show any evidence of battering. No other cultural material was observed in or around the site. Site 29162 is in fair condition and does not appear to have suffered significant tumble.

The construction style and location of the C-shaped wall suggests that it may have been built to serve as a small windbreak shelter during the pre-Contact and/or early post-Contact periods.

Site 50-10-27-29162 was not photographed during the current survey.

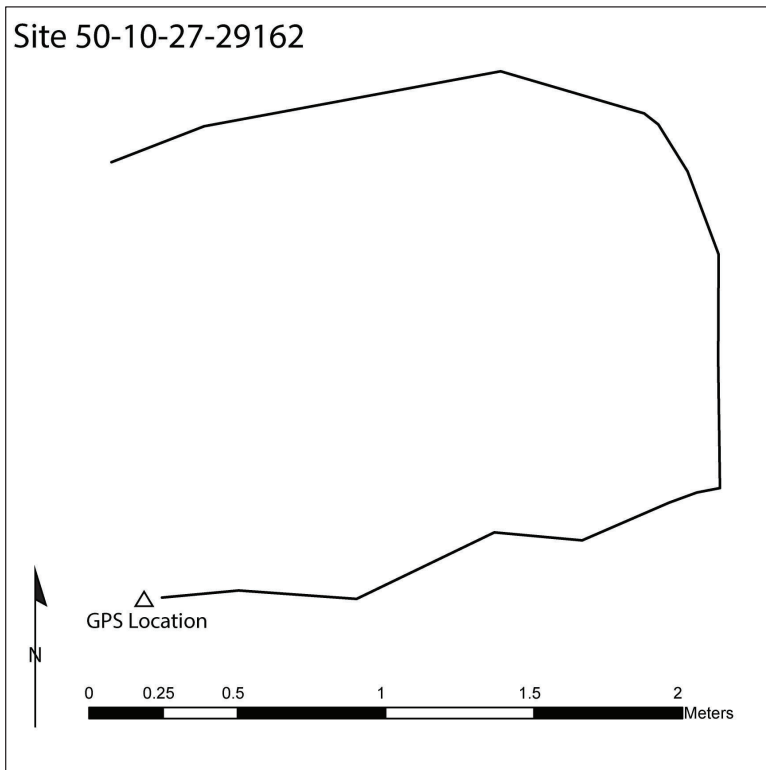


Figure C.182. GPS-based map of Site 50-10-27-29162 C-shaped wall.

SIHP Number: 50-10-27-29163

Site Type: Enclosure

Field Number: T-102

Site Measurements: ca. 2.3 m by 1.75 m by ca. 0.23 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29163 consists of a roughly oval-shaped stone walled enclosure (Figure C.183). This site is located in the northwest portion of the project area, approximately 93.0 meters north (3°) of Site 13298. The enclosure is situated on a relatively level area of undulating *pāhoehoe* lava flow, roughly running east to west. The surrounding vegetation of the site includes a ground cover of fountain grass with a scatter of *noni* and Christmasberry trees.

The enclosure is constructed of small sub-angular basalt boulders and *pāhoehoe* slabs that have been set on the bedrock to form a rough oval shape. These slabs may have been set on edge originally but are presently tumbled. The enclosure overall exterior measures ca. 2.3 meters in length (east to west) by ca. 1.75 meters in width (north to south). The interior measures ca. 1.3 meters in length (east to west) by ca. 0.9 meters in width (north to south), with a maximum height of ca. 0.23 meters.

No cultural material was observed in or around the enclosure. Site 29163 is in poor condition, as it is collapsed and badly tumbled. The construction style and location of Site 29163 suggest that it was most likely constructed during the pre-Contact and/or early post-Contact periods and served as a temporary windbreak shelter.

Site 50-10-27-29163 was not photographed during the current survey.

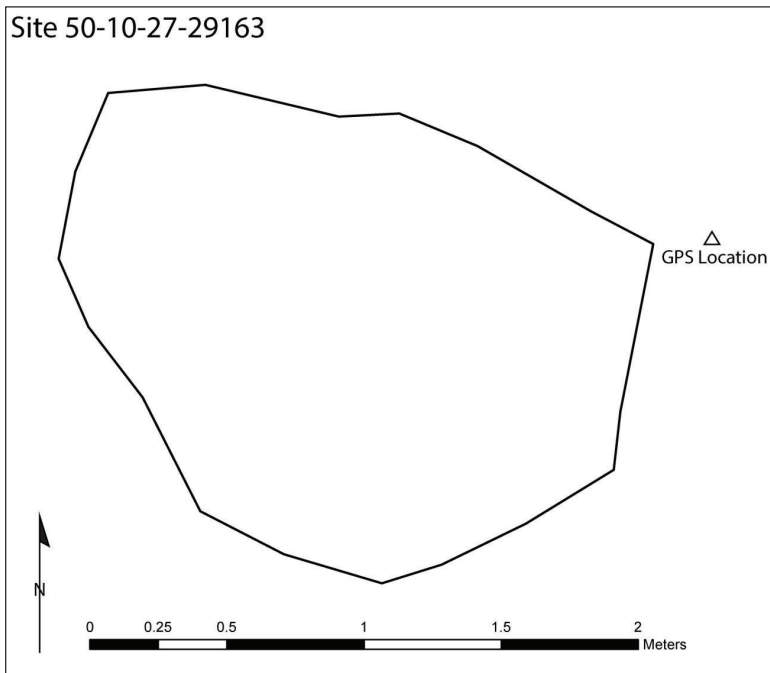


Figure C.183. GPS-based map of Site 50-10-27-29163 enclosure.

SIHP Number: 50-10-27-29164

Site Type: Mound

Field Number: T-103

Site Measurements: ca. 1.6 m by ca. 1.4 m by ca. 0.12 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29164 consists of a roughly circular stone mound (Figure C.184, Figure C.185). It is located in the northwestern portion of the project area, approximately 182.0 meters southwest (217°) of Site 29163. The mound is constructed within a large, naturally formed depression that appears to have been created by a collapsed lava blister. The surrounding vegetation consists of a ground cover of fountain grass, with a few Christmasberry, klu, *kiawe*, and *koa haole* trees.

The mound is constructed of small *pāhoehoe* slabs that have been set directly onto exposed bedrock. At present, however, it appears to be badly tumbled and collapsed, making its original construction style difficult to determine. Currently the mound measures ca. 1.6 meters in length (northwest to southeast) by ca. 1.4 meters in width (northeast to southwest), with a maximum height of ca. 0.12 meters.

No cultural material was observed in or around the mound. Site 29164 is in poor condition and is badly tumbled. The construction style of the mound suggests that it was built during the pre-Contact and/or early post-Contact periods and may have served as a marker. It is not clear, however, what the mound was intended to mark.

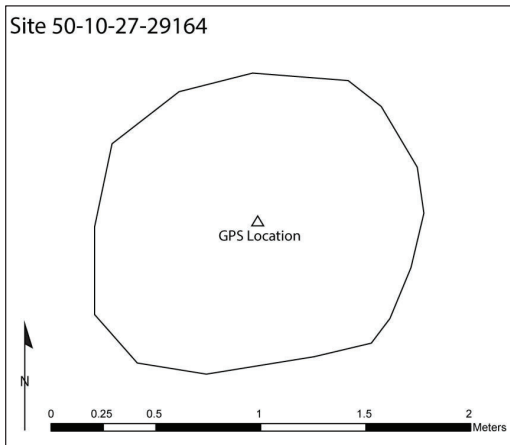


Figure C.184. GPS-based map of Site 50-10-27-29164 mound.



Figure C.185. Site 50-10-27-29164 stone mound (view north).

SIHP Number: 50-10-27-29165

Site Type: Complex

Field Number: T-104

Site Measurements: ca. 13.2 m x ca. 1.5 m

No. Features: 2

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29165 is a complex consisting of two distinct stone mounds (Feature A and B) (Figure C.186). This site is located in the northwestern portion of the project area, approximately 59.0 meters northeast (49°) of Site 29164. The two mounds are situated at the top of a protruding ridge of undulating *pāhoehoe* lava, approximately 6.6 meters apart from each other. The surrounding vegetation includes a ground cover of fountain grass, klu bushes and some *kiaue* trees.

The two stone mounds are similar in construction, Feature B being the larger of the two. Feature A and B are constructed of loosely piled small to medium sub-angular basalt boulders and cobbles, with some *pāhoehoe* slabs.

No cultural material was noted in or around the site. The site is in poor condition, with both mounds badly collapsed and tumbled in all directions. Based on the construction style of its features and their location atop of a lava ridge, the Site 29165 mounds were most likely constructed during the pre-Contact and/or early post-Contact periods to serve as markers. It is not clear, however, what the mounds were intended to mark.

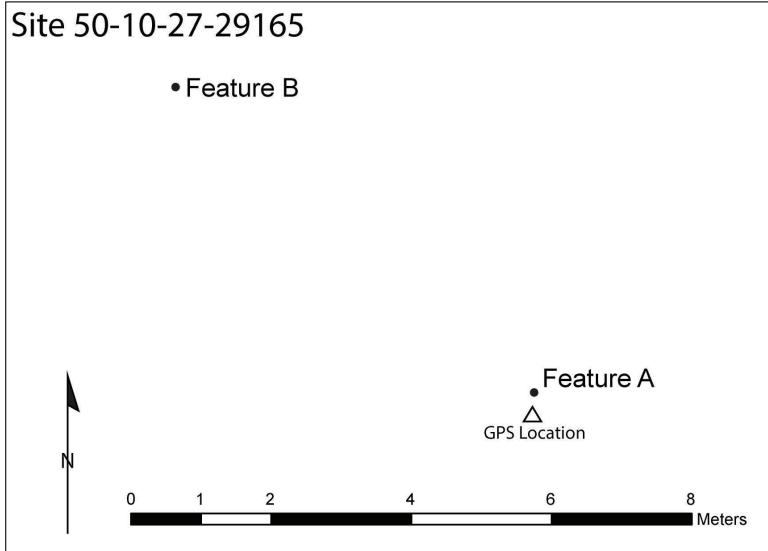


Figure C.186. GPS-based map of Site 50-10-27-29165 complex.

Feature: A
Feature Type: Mound
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Marker
Condition: Poor

Description: Site 50-10-27-29165, Feature A is a collapsed low stone mound (Figure C.187). It is approximately 6.7 meters southeast (129°) of the Feature B stone mound. Feature A is located atop a ridgeline of undulating lava. The mound is roughly circular in shape and constructed of loosely piled small sub-angular boulder and cobbles, with some *pāhoehoe* slabs. Due to its collapsed state, it is difficult to determine the mound's original construction or measurements. It may have originally measured ca. 1.4 meters in diameter, and presently has a height of ca. 0.3 meters.

No cultural material was noted in or around the mound. Site 29165, Feature A is in poor condition and has suffered extensive tumble. The mound's construction style and location suggest that it was built during the pre-Contact and/or early post-Contact periods and may have served as a marker. It is unclear, however, what the mound was intended to mark.



Figure C.187. Site 50-10-27-29165, Feature A, stone mound (view north).

Feature: B

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29165, Feature B is a collapsed stone mound that is irregular in shape (Figure C.188). It is approximately 6.7 meters northwest (309°) from the Feature A stone mound and is located atop the same ridgeline. Feature B is constructed of small sub-angular basalt boulders and *pāhoehoe* boulder slabs, as well as some sub-angular basalt cobbles. Due to its collapsed state it is difficult to determine the mound's original construction and measurements. In its present condition, it measures ca. 2.9 meters in length (northwest to southeast) by ca. 2.8 meters in width (northeast to southwest), with a height of ca. 0.25 meters.

No cultural material was observed in or around the feature. The Site 29165, Feature B mound is in poor condition. The construction style and location of the mound suggest that it was built during the pre-Contact and/or early post-Contact periods and may have served as a marker. It is not clear, however, what the mound was intended to mark.



Figure C.188. Site 50-10-27-29165, Feature B stone mound (view north).

SIHP Number: 50-10-27-29166

Site Type: C-Shaped Wall

Field Number: T-106

Site Measurements: ca. 1.9 m by ca. 1.7 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29166 is a collapsed C-shaped wall (Figure C.189, Figure C.190). It is located in a large depression formed by a collapsed lava blister, approximately 17.0 meters west (267°) of Site 13299. The surrounding vegetation consists of fountain grass, klu, Christmasberry, *koa haole*, and *noni* trees. The C-shape opens to the southeast and is built directly on to the exposed bedrock. It is constructed of loosely piled small to large sub-angular basalt cobbles and some small sub-angular basalt boulders. The overall exterior dimensions are ca. 1.9 meters in length (northwest to southeast) by ca. 1.7 meters in width (northeast to southwest). Its interior measures ca. 1.2 meters in length (northwest to southeast) by ca. 1.0 meter in width (northeast to southwest).

No cultural material was observed in or around the site. Site 29166 is in poor condition and appears to have suffered extensive tumble and is currently collapsed. The location and construction style of the C-shape suggests that it was constructed during the pre-Contact and/or early post-Contact periods and may have served as a temporary windbreak shelter.

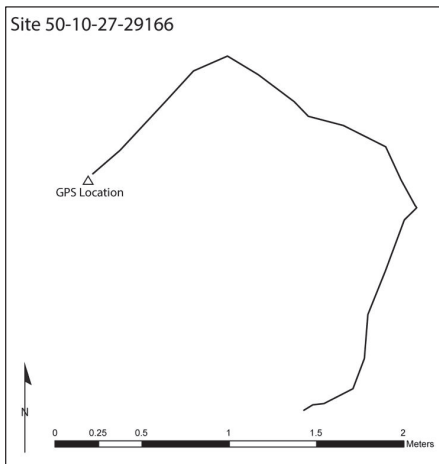


Figure C.189. GPS-based map of Site 50-10-27-29166 C-shaped wall.



Figure C.190. Site 50-10-27-29166 C-shaped wall (view northeast).

SIHP Number: 50-10-27-29167
Field Number: T-109
Site Measurements: ca. 18 m by ca. 30 m
No. Features: 1
Site Type: Petroglyph
Artifacts: None Observed
Midden: None Observed
Coral: None Observed
Skeletal Remains: None Observed
Possible Age: Pre-Contact and/or Early Post-Contact
Possible Function: Art
Condition: Poor

Description: Site 50-10-27-29167 consists of a spread of petroglyphs (Figure C.191 and Figure C.192). The site is located in the northwest corner of the project area, approximately 24.0 meters north (9°) of the Site 13353 petroglyph complex and may be the outlier of that site. The terrain in this area consists of undulating *pāhoehoe* lava. The petroglyphs are located on a sloping *pāhoehoe* slab of smooth *pāhoehoe* bedrock that forms the southwestern end of a low lava ridge. The vegetation consists of fountain grass, *kona haole*, and Christmasberry bushes and a small opiuma tree.

The rock art at Site 29167 was documented during the Keahuolū petroglyph recording project. A total of 28 images were recorded, 14 of which were anthropomorphs (linear, triangular, and shield-shaped bodied human figures), 12 were geometric images, 10 were cup-like depressions (*poho*) and two were indeterminate.

No surface cultural material was noted near the petroglyphs. Site 29167 appears to be in poor condition. The style and subject matter of the images is traditional, suggesting that the petroglyphs were made during the pre-Contact and/or early post-Contact periods. As mentioned, these images may be outliers of the larger Site 13353 petroglyph complex.

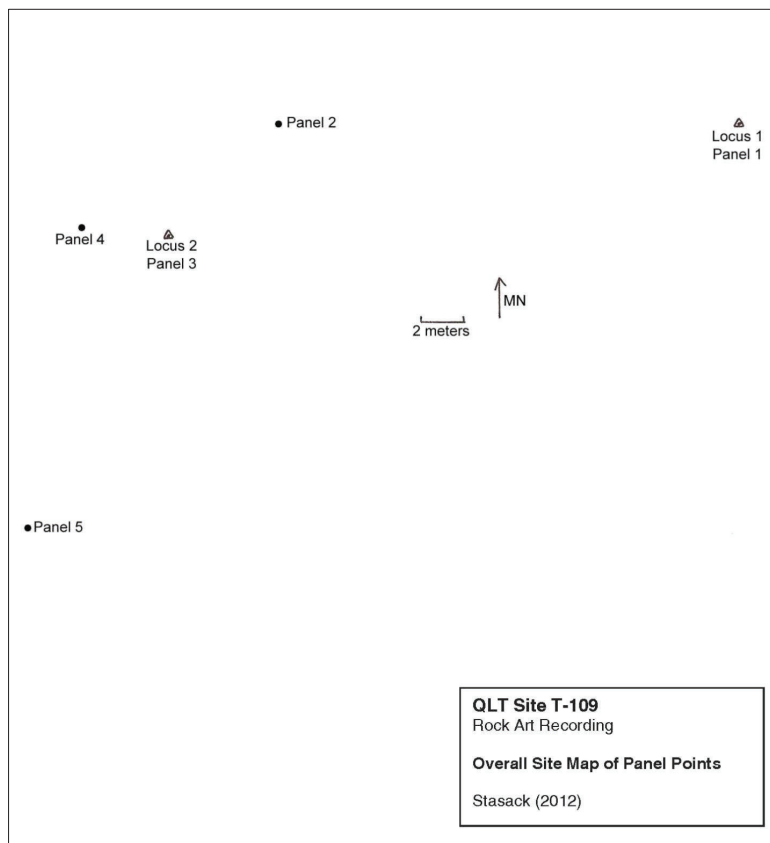


Figure C.191. Petroglyph panel locations at Site 50-10-27-29167 (Stasack and Stasack 2012:II T-109, 4).



Figure C.192. Site 50-10-27-29167, Panel 1 petroglyphs (view east).

SIHP Number: 50-10-27-29168

Site Type: Modified Overhang

Field Number: T-110

Site Measurements: ca. 7.5 m by ca. 3.4 m by ca. 1.2 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact

Possible Function: Habitation

Condition: Good

Description: Site 50-10-27-29168 consists of a modified overhang situated along the southeastern edge of a raised lava ridge (Figure C.193, Figure C.194, and Figure C.195). The site is located in the northwest corner of the project area, approximately 14.0 meters west (260°) from Site 29158, Feature A. The surrounding terrain is relatively broken by a series of raised lava ridges. Vegetation in the area consists of a ground cover of fountain grass with *koa haole*, Christmasberry trees, and a few *noni* shrubs.

The site consists of a natural overhang along the southeastern edge of one of the lava ridges. Along the southwestern edge of the overhang, small to medium *pāhoehoe* boulder slabs and some sub-angular basalt boulders have been set on edge and balanced between the lower bedrock and the dripline of the overhang. This appears to have been done to narrow the overhang's entrance and provide greater protection for its interior. Boulder slabs have also been placed on its ground surface at the entrance of the overhang to form a filled and leveled entrance path.

The entrance of the overhang has a maximum width of ca. 1.8 meters and a height of ca. 1.2 meters. The slab-paved entrance path is ca. 2.5 meters in length and ca. 0.8 meters in width. The entire overhang measures ca. 7.5 meters in length (northeast to southwest), but the set slabs at the dripline curve slightly under the overhang toward the northwest, forming a visible interior chamber that is ca. 5.8 meters in length. This interior area has a maximum depth of ca. 3.4 meters and a maximum height of ca. 1.0 meter. The floor of the overhang interior consists of relatively level *pāhoehoe* bedrock. There are some loose stones on the floor and some slabs appear to have been set at low points in the floor to help level it.

No cultural material was noted in the overhang. Site 29168 is in relatively good condition with the slabs that run along the edge of the overhang still balanced in place. These modifications as well as the filling and leveling of the entrance path appear to have been done to make the overhang more suitable as an occupation shelter. The balanced slabs certainly serve to block the sun from the interior and make it much cooler. It would appear that Site 29168 was possibly used as a temporary habitation shelter during the pre-Contact or early post-Contact periods.

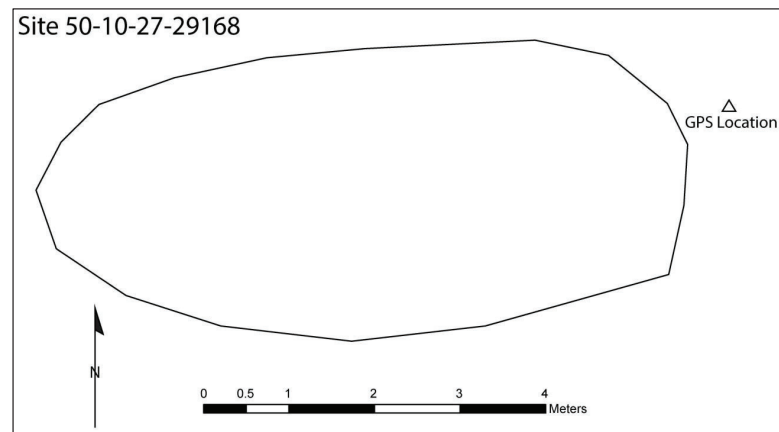


Figure C.193. GPS-based map of Site 50-10-27-29168 modified overhang.



Figure C.194. Site 50-10-27-29168 modified overhang (view north).

Archaeological Inventory Survey – Volume III, Appendices
 Lili'uokalani Trust Urban Phase III
 Keahuolu, North Kona, Hawai'i
 July 2019

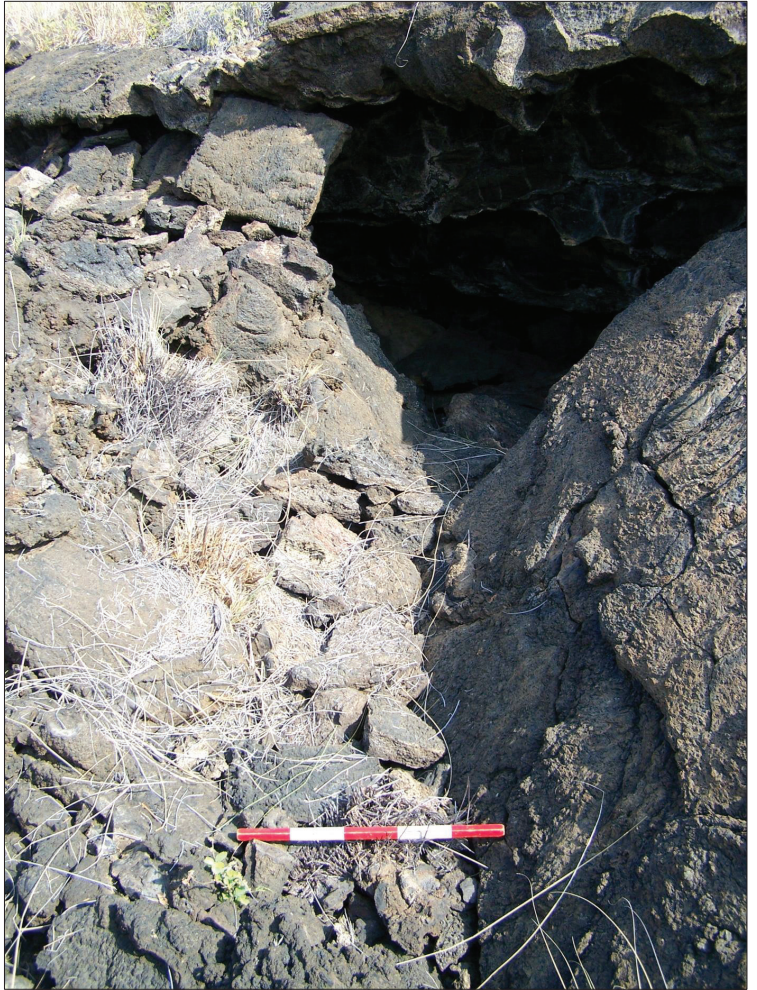


Figure C.195. Site 50-10-27-29168 modified overhang entrance (view northwest).

Archaeological Inventory Survey – Volume III, Appendices
 Lili'uokalani Trust Urban Phase III
 Keahuolu, North Kona, Hawai'i
 July 2019

SIHP Number: 50-10-27-29169

Site Type: C-Shaped Wall

Field Number: T-111

Site Measurements: ca. 4.0 m by ca. 1.3 m by ca. 0.3 m

No. Features: 1

Artifacts: None Observed

Midden: Present

Coral: Present

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29169 is a collapsed C-shaped wall (Figure C.196 and Figure C.197). It is located in the northwestern portion of the project area, and approximately 3.2 meters northeast (62°) of the Site 29168 modified overhang shelter. The C-shape is built on a high point of undulating *pāhoehoe* lava, sparsely covered with fountain grass.

The C-shaped wall is constructed of small to large sub-angular basalt cobbles, small to large *pāhoehoe* slabs, and one small basalt boulder that have been loosely piled directly onto the exposed bedrock. The overall exterior dimensions are ca. 4.0 meters in length (east to west) by ca. 1.3 meters in width (north to south). The interior of the C-shape measures ca. 2.3 meters in length (east to west) by ca. 0.8 meters in width (north to south), with a wall thickness of ca. 0.5 meters and a maximum height of ca. 0.3 meters.

Fragments of porites coral and Cypraeidae marine shell were observed around the site. No other cultural material was noted. Site 29169 is in fair condition. The C-shaped wall has suffered some tumble and at present appears to be somewhat collapsed.

The presence of marine shell midden and coral, as well as the location and construction style of Site 29169, suggests that the C-shaped wall was built during the pre-Contact and/or early post-Contact periods and may have served as a temporary windbreak habitation shelter.

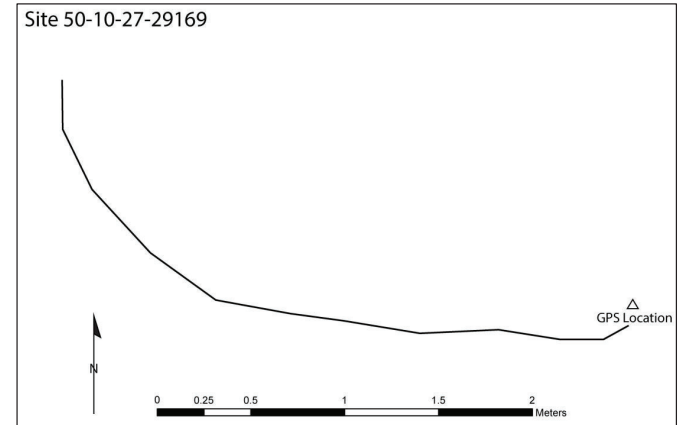


Figure C.196. GPS-based map of Site 50-10-27-29169 C-shaped wall.



Figure C.197. Site 50-10-27-29169 C-shaped wall (view south).

SIHP Number: 50-10-27-29170

Site Type: Mound

Field Number: T-114

Site Measurements: ca. 1.8 m by ca. 1.7 m ca. by ca. 0.37 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29170 consists of a single, roughly circular stone mound (Figure C.198 and Figure C.199). It is located in the northwest corner of the project area just along the northwest boundary, approximately 138.0 meters northwest (301°) of Site 13300. The site is situated on a level area of bedrock, within an undulating *pāhoehoe* lava flow. A large shallow depression naturally formed by a collapsed lava blister is located ca. 10.0 meters to the east of this site. The surrounding vegetation consists of scattered fountain grass and *'uhaloa*, one shrub of lantana, and one Christmasberry tree.

The mound is constructed of small to large sub-angular basalt cobbles and small basalt boulders built directly onto bedrock. The mound measures ca. 1.8 meters in length (north to south) by ca. 1.7 meters in width (east to west) by ca. 0.37 meters in height.

A waterworn basalt cobble was observed at the base of the mound near its center. This manuport does not show evidence of battering. Besides the waterworn cobble, no other cultural material was observed. Site 29170 is in fair condition. It is somewhat tumbled, but still has retained its original shape.

The location and construction style of the Site 29170 suggest that it was built during the pre-Contact and/or early post-Contact periods. It is likely that the mound served as a marker, possibly used to indicate the location of the Site 13299 shrine, which is situated within the large depression to the east.

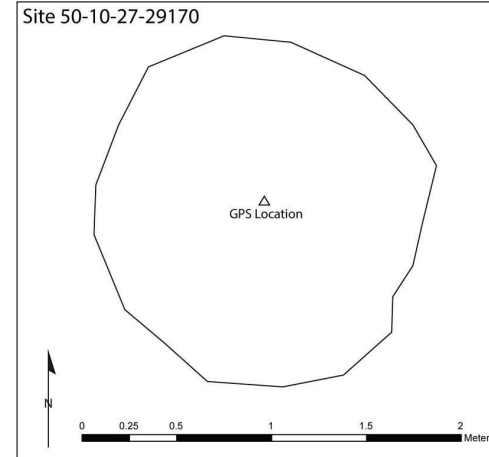


Figure C.198. GPS-based map of Site 50-10-27-29170 stone mound.



Figure C.199. Site 50-10-27-29170 stone mound (view north).

SIHP Number: 50-10-27-29171

Site Type: C-Shaped Wall

Field Number: T-115

Site Measurements: ca. 1.45 m by ca. 1.1 m by ca. 0.2 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Poor

Description: Site 50-10-27-29171 is a single badly disturbed C-shaped wall remnant (Figure C.200 and Figure C.201). The site is located near the northwest corner of the project area, approximately 43.0 meters east (109°) of Site 29170. The terrain consists of a mix of undulating *pāhoehoe* and 'a'ā lava, sparsely covered in fountain grass, *koa haole*, and scattered Christmasberry trees. The site is located atop a low *pāhoehoe* ridge on an area of roughly level lava. The C-shaped structure is open to northwest and consists of a low, badly tumbled wall (now little more than an alignment) of small 'a'ā boulders and cobbles with a few *pāhoehoe* slabs. The structure measures ca. 1.45 meters in length (northeast to southeast) by ca. 1.1 meters deep (northwest to southeast). The C-shape's interior measures ca. 0.95 meters long by ca. 0.85 meters deep. The tumbled wall averages ca. 0.25 meters thick with a maximum height of ca. 0.2 meters. No cultural material was noted in or around the site. The structure is in poor condition and has suffered extensive tumble. Despite its small size, the structure may have served as a traditional windbreak shelter.

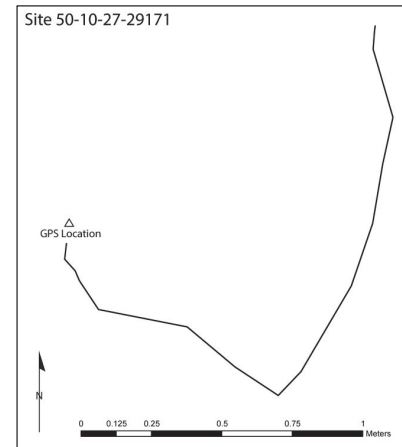


Figure C.200. GPS-based map of Site 50-10-27-29171 C-shaped wall.



Figure C.201. Site 50-10-27-29171 C-shaped wall (view southeast).

SIHP Number: 50-10-27-29172

Site Type: Mound

Field Number: T-116

Site Measurements: ca. 1.5 m by ca. 1.5 m by ca. 0.3 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29172 consists of a single roughly circular stone mound (Figure C.202 and Figure C.203). The site is located at the southern end of a large shallow depression formed by a collapsed lava blister. It is approximately 20.0 meters southwest (222°) from the Site 29171 C-shaped wall. The surrounding vegetation consists of dense fountain grass, *kiawe*, Christmasberry, *noni*, and lantana. The mound is constructed of small to large sub-angular basalt cobbles and small basalt boulders that have been built directly on exposed *pāhoehoe* bedrock. It measures ca. 1.5 meters in diameter with a maximum height of ca. 0.3 meters. No cultural material was observed in or around the mound. Site 29172 is in fair condition and only slightly collapsed. The mound is not in an ideal location for visibility purposes, however, it may be marking the Site 29171 C-shape wall, which is located to the northeast of the site. Site 29172 appears to be pre-Contact and/or early post-Contact in age.

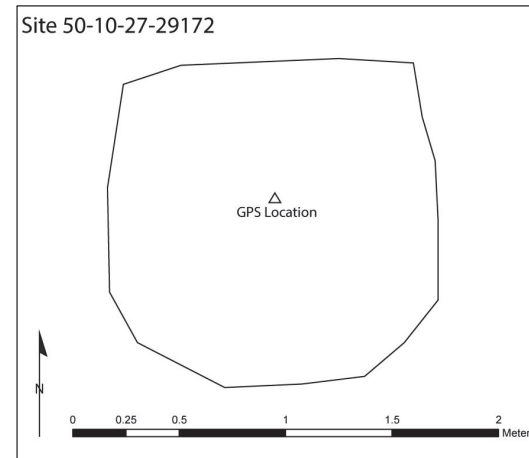


Figure C.202. GPS-based map of Site 50-10-27-29172 stone mound.



Figure C.203. Site 50-10-27-29172 stone mound (view north).

SIHP Number: 50-10-27-29173

Site Type: Complex

Field Number: T-119

Site Measurements: ca. 37.5 m by ca. 24.3 m

No. Features: 6

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation/Marker

Condition: Poor

Description: Site 50-10-27-29173 is a complex consisting of six features: five stone mounds (Features A, B, D, E, F), and a C-shaped wall (Feature C). It is located near the northern edge of the project area, approximately 239 meters west (268°) from Site 13288. The features of the complex are situated along a roughly north to south running lava ridge. The surrounding vegetation consists of fountain grass, *koa haole* shrubs and the occasional *kiawe* trees.

The features that compose Site 29173 bear a strong resemblance in their style of construction to those within Site 13286, and the two adjacent sites may be associated in some way. Feature A, which rests on the southern end of the site, consists of a scatter of *pāhoehoe* slab boulders that appear to have originally formed a stacked stone mound. Approximately 16.0 meters to the north is Feature B, is a similar scatter of slabs that may once have formed a mound. Feature C, located ca. 6.5 meters northwest of Feature B, is a badly tumbled C-shaped wall open to the north. Approximately 7.0 meters southwest of Feature B is Feature D, another scattered stone mound. Only Features E and F, at the northern edge of the site remain intact. While Feature F is a single low stacked slab mound, Feature E consists of five *pāhoehoe* slab mounds and four large *pāhoehoe* slabs clustered together on the lava bedrock.

No surface cultural material was noted at any of these features. The Site 29173 complex is in fair to poor condition.

The five mounds located within Site 29173 may once have served as markers. They seem to delineate the western edge of a large swale in the lava, but for what purpose is not certain. The Feature C C-shaped wall may have been constructed and utilized as a windbreak shelter. All of the features within the site appear to date from the pre-Contact and/or early post-Contact periods.

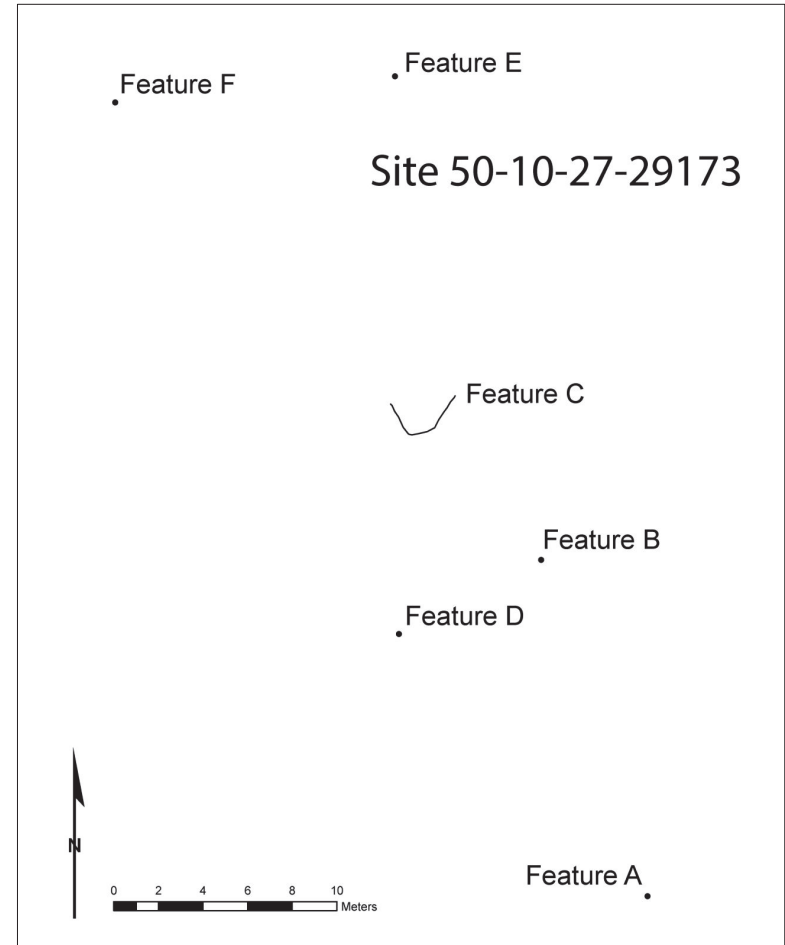


Figure C.204. Relative locations of features within Site 50-10-27-29173.

Feature: A

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29173, Feature A is the remnants of a badly disturbed mound (Figure C.205). It is located at the southern end of the site, approximately 16.0 meters south (161°) from the Feature B stone mound. Feature A is situated on a roughly north to south running lava ridge. It consists of a scatter of small to medium *pāhoehoe* boulder slabs that appear to once have been stacked atop each other but are now scattered. This scatter measures roughly 1.3 meters in diameter. Only two slabs still remain stacked atop each other. They rise to no more than 0.2 meters in height. No cultural material was noted at the feature. Site 29173, Feature A is in poor condition. The Feature A mound may have served as a marker. It is not clear, however, what the mound was intended to mark. It was most likely built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.205. Site 50-10-27-29173 Feature A, remnant stone mound (view southeast).

Feature: B

Feature Type: Stone Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29173, Feature B is a badly collapsed stone mound (Figure C.206). It is located approximately 16.0 meters north (341°) of Feature A along the same ridgeline. The mound consists of six medium *pāhoehoe* slab boulders, which appear to have originally been stacked atop each other. They now rest in a scatter measuring approximately 1.0 meter in diameter and ca. 0.2 meters in maximum height.

No cultural material was noted at the feature. Site 29173, Feature B is in poor condition. The Feature B mound may have served as a marker. It is not clear, however, what the mound was intended to mark. It was most likely built and utilized during the pre-Contact and/or early post-Contact period.



Figure C.206. Site 50-10-27-29173 Feature B, stone mound (view north).

Feature: C

Feature Type: C-shaped Wall

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29173, Feature C consists of a somewhat disturbed C-shaped wall of *pāhoehoe* slabs (Figure C.207). It is located approximately 6.5 meters northwest (330°) of the Feature B mound. Feature C is built of small to medium *pāhoehoe* slab boulders that appear to have originally been loosely stacked, but now are collapsed into a roughly C-shaped alignment. The structure measures ca. 3.0 meters across the wings (east to west) and is ca. 1.9 meters deep. It is open to the north. The wall measures ca. 0.20 meters wide and is no more than 0.10 meters in height.

No surface cultural material was noted at the structure. Feature C is in fair condition, though its wall is somewhat tumbled. Site 29173, Feature C may possibly have served as a windbreak shelter constructed and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.207. Site 50-10-27-29173 Feature C, C-shaped wall (view southwest).

Feature: D

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Poor

Description: Site 50-10-27-29173, Feature D is a badly collapsed stone mound (Figure C.208). It is located approximately 7.0 meters southwest (243°) of the Feature B mound. Feature D appears to have been constructed of small to medium boulder slabs that may originally have been stacked, but now are loosely scattered over a ca. 1.4-meter diameter area.

No cultural material was noted at the feature. The Feature D mound is in poor condition. Site 29173, Feature D may originally have been a low stone mound, built and utilized as a marker during the pre-Contact and/or early post-Contact periods.



Figure C.208. Site 50-10-27-29173 Feature D, stone mound (view west).

Feature: E

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29173, Feature E consists of a tight cluster of at least five *pāhoehoe* slab mounds, as well as four adjacent large *pāhoehoe* slabs (Figure C.209). It is located approximately 16.0 meters north (346°) of the Feature C C-shaped wall. Feature E is unusual in that instead of being a stacked stone slab mound, it contains at least five distinct mounds, each composed of two to three stacked medium *pāhoehoe* slabs. Placed around these mounds are four larger *pāhoehoe* slab boulders. The general cluster, which measures ca. 2.8 meters in length (northeast to southwest) by ca. 1.8 meters in width (southeast to northwest), has no distinct shape. The mounds are staggered, running down the gentle (ca. 20°) slope of the lava ridge in a southwest to northeast direction. They are flanked to the north, west, and south by the larger slab. It is not clear what purpose this arrangement served. No cultural material was noted in or around the feature. Site 29173, Feature E is in fair condition. The Feature E mounds may have served as markers. It is not clear, however, what these mounds were intended to mark. It appears to have been constructed during the pre-Contact and/or early post-Contact periods.



Figure C.209. Site 50-10-27-29173 Feature E, stone mound (view east).

Feature: F

Feature Type: Mound

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Marker

Condition: Fair

Description: Site 50-10-27-29173, Feature F consists of a single stacked *pāhoehoe* slab stone mound (Figure C.210). It is located approximately 13.0 meters west (263°) of the Feature E mounds. The Feature F mound consists of four medium *pāhoehoe* boulders that have been stacked atop each other to a height of ca. 0.3 meters. Next to the stack are an additional two slabs that appear to have tumbled off. The intact mound measures ca. 0.55 meters in diameter.

No cultural material was noted at the feature. Site 29173, Feature E is in fair condition. The stacked slab mound may have served as a marker. It is not clear, however, what the mound was intended to mark. It appears to have been built and utilized during the pre-Contact and/or early post-Contact periods.



Figure C.210. Site 50-10-27-29173 Feature F, stone mound (view west).

SIHP Number: 50-10-27-29174

Site Type: Rock Concentration

Field Number: T-120

Site Measurements: ca. 3.8 m by ca. 1.2 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Uncertain

Condition: Poor

Description: Site 50-10-27-29174 consists of a scattered spread of small to medium sub-angular basalt boulders (Figure C.211 and Figure C.212). It is located near the center of the project approximately 63.0 meters southwest (217°) from Site 13351, Feature A. The site is located on a low rise in an area of undulating *pāhoehoe* lava. The surrounding vegetation consists of fountain grass with occasional *noni* and Christmasberry trees. The site is an irregularly shaped scatter of small to medium boulders covering an area of ca. 3.8 meters in length (northwest to southeast) by ca. 1.2 meters in width (southwest to northeast). No surface cultural material was observed at this site. Site 29174 is in poor condition. Due to the site's disturbed condition, it is impossible to determine the original shape, age or function of the structure. A small natural lava blister is located immediately northeast of the rock concentration.

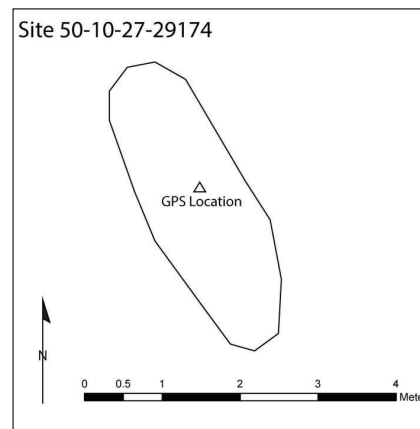


Figure C.211. GPS-based map of Site 50-10-27-29174 rock concentration.



Figure C.212. Site 50-10-27-29174 rock concentration (view southeast).

SIHP Number: 50-10-27-29175

Site Type: Lava Excavations

Field Number: None

Site Measurements: ca. 990 m by ca. 1,375 m (1.375 kilometers, km)

No. Features: 1

Artifacts: Present

Midden: None Observed

Corral: None Observed

Skeletal Remains: None Observed

Possible Age: Uncertain

Possible Function: Uncertain

Condition: Poor to Good

Description: Site 50-10-27-29175 is the designation given to the 540 lava excavations documented during the present survey (Figure C.213, Figure C.214, and Figure C.215). The sheer number of these lava excavations made it impractical for them to be recorded as distinct sites and given individual SIHP numbers. Instead, each was assigned an individual Exc. number for identification purposes (e.g., 001) and all of the lava excavations located were assigned the collective site number 50-10-27-29175.

Lava excavations were found scattered throughout the survey area, either isolated or in clusters. These relatively shallow excavations into the surface of the lava are often associated with loose piles or scatters of lava boulders that appear to represent the material removed during the excavation. While the majority of excavations were encountered in the vicinity of other archaeological features, some were found well away from any surviving surface structures.

The typical lava excavation consists of a patch of *pāhoehoe* (or, in rarer cases, 'a'ā) lava that has been battered until the surface layer fractures. The broken pieces, which often take the form of angular or tabular blocks, can then be extracted, leaving a shallow, flat bottomed depression. On occasion small lava blisters have been broken open to create a shallow depression in the lava. Excavations also occurred along the base of lava ridges where the breaking up of the lava revealed shallow overhangs. The resulting loose rubble has often been removed from the excavation and either piled around its edges or apparently taken away for use elsewhere. In some cases, at least some of this rubble has fallen or been placed back into the excavation, partially covering the floor. It is not unusual to encounter one or more waterworn basalt boulders within or near a lava excavation. Such stones usually exhibit signs of battering at one or both ends. It seems likely that these boulders were utilized as large hammerstones to break up the lava so that blocks of it could be removed.

The documented lava excavations varied greatly in their size and condition. Their exact age and purpose are uncertain, though it seems likely that most were created during the pre-Contact and/or early post-Contact periods.

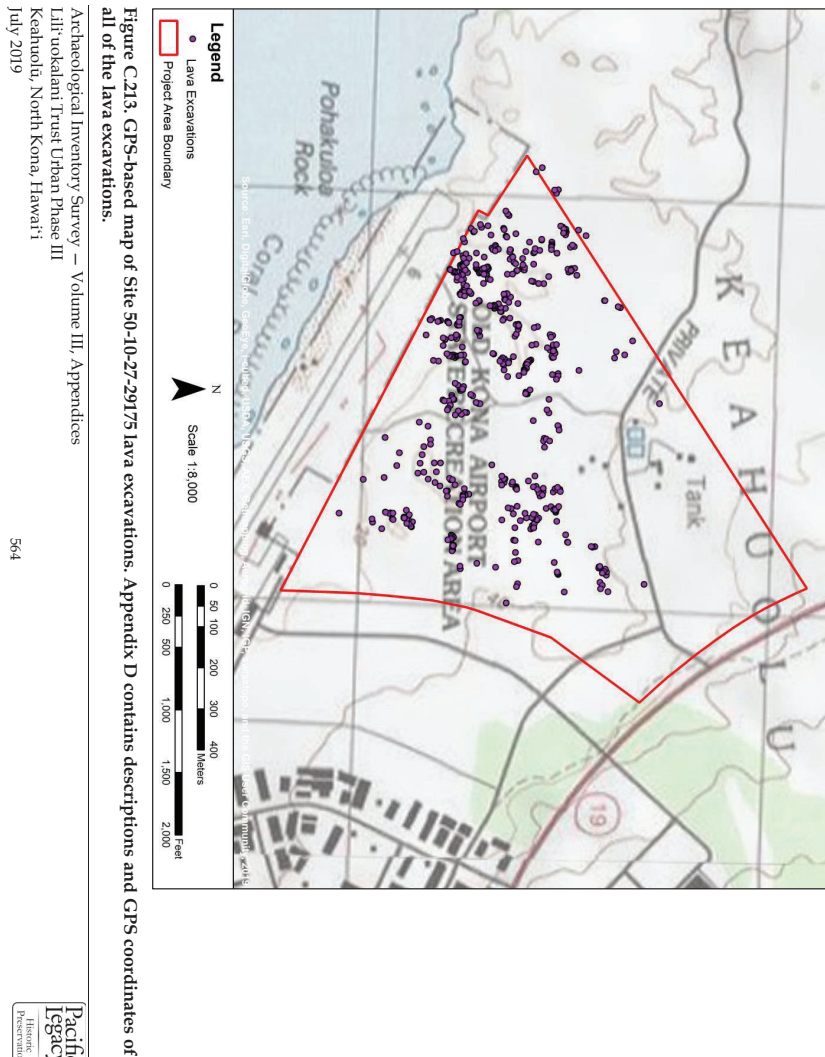




Figure C.214. Lava excavation (083) in pāhoehoe lava (view north).



Figure C.215. Lava excavation (304) in pāhoehoe lava, note waterworn boulder resting atop the rubble removed from the excavation (view northwest).

SIHP Number: 50-10-27-29176

Site Type: C-Shaped Wall

Field Number: T-108

Site Measurements: ca. 2.6 m by ca. 1.6 m by ca. 0.3 m

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact and/or Early Post-Contact

Possible Function: Habitation

Condition: Fair

Description: Site 50-10-27-29176 consists of a single low C-shaped wall (Figure C.216 and Figure C.217). The site is located in the northwest corner of the project area, approximately 36.0 meters north (350°) from Site 13294, Feature A. The surrounding terrain consists of relatively level *pāhoehoe* lava, sparsely covered in fountain grass with occasional Christmasberry bushes. The C-shaped wall is built atop a level area of relatively smooth *pāhoehoe* lava. It is open to the west and constructed of a single course of sub-angular small boulders and cobbles with a few boulder slabs. The wall may originally have been somewhat higher. The structure measures ca. 2.6 meters in length (north to south) across the wings by ca. 1.6 meters deep (east to west). Its interior dimensions are ca. 1.5 meters in length (north to south) by ca. 1.2 meters in depth (east to west). The wall averages ca. 0.5 meters in thickness by ca. 0.3 meters in height. The northern portion of the wall has tumbled outward, while most of the wall appears somewhat collapsed. Despite this, the site is in fair condition. No cultural material remains were visible. The C-shaped wall probably served as a windbreak shelter constructed and utilized during the pre-Contact and/or early post-Contact periods.

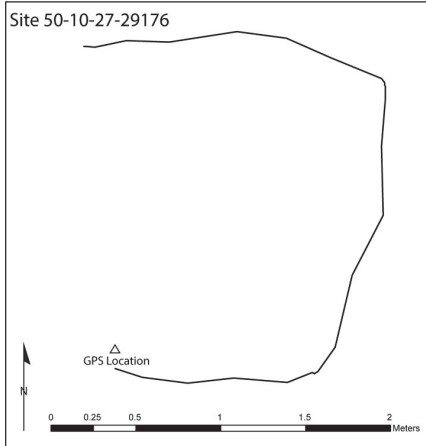


Figure C.216. GPS-based map of Site 50-10-27-29176 C-shaped wall.

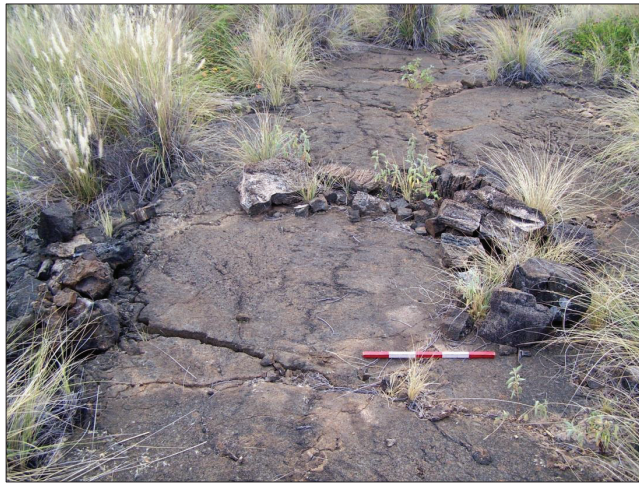


Figure C.217. Site 50-10-27-29176 C-shaped wall (view east).

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Table D.1 Lava Excavations (Site 50-10-27-29175) within the Urban Phase III Project Area.

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con- dition	Function	Narrative
001		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe, exposing lava blister, level bedrock floor
002	13297	Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe, exposing lava blister, uneven bedrock floor
003		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level to undulating pahoehoe, exposing lava blister, level bedrock floor
004	13279	Pahoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on level pahoehoe, small to medium boulders cover floor, some soil observed in the southeastern end
005	13279	Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe, cobbles completely cover floor
006	13279	Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe, exposing lava blister, small boulders present in southern end
007		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe
008		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe, exposing lava blister, boulders cover floor
009		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe, rubble covers floor
010		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe, exposing lava blister, boulders cover floor
011		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe, exposing lava blister
012		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pahoehoe, exposing lava blister
013		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe, exposing lava blister excavated cobbles to small boulders present in opening
014		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on the side of an edge of undulating pahoehoe, exposing lava blister
015		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on level pahoehoe near a ridge, small boulders present in excavated interior
016	13277	Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on level pahoehoe, exposing lava blister, uneven bedrock floor
017		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on level pahoehoe, small to medium boulders cover floor
018	13277	Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on level pahoehoe, exposing lava blister, boulders cover floor
019		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on level pahoehoe, exposing lava blister, boulders cover floor; flagging tape present near opening
020	13277	Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on level pahoehoe
021	13277	Pahoehoe	Traditional	None Observed	None Observed	Present	Fair	Uncertain	located on a face of a low pahoehoe lava ridge; a fragment of a water-worn cobble, (F-003, is located ca. 1.4 meters north (340°) of the excavation; a small water-worn boulder, (F-002, with some evidence of battering is located ca. 3.0 meters north (335°) of the excavation
022		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Exposing lava blister
023		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	located on undulating pahoehoe, exposing lava blister

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolu, North Kona, Hawaii'i
July 2019

APPENDIX D
Table of Lava Excavations

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con- dition	Function	Narrative
048		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located northeast of the main paved road to the Queen Lili'uokalani Children's Center, near Site T-003, PHRI 50-10-27-13256; floor is bedrock with some boulders
049	13256	Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located northwest of the main paved road to the Queen Lili'uokalani Children's Center on level pāhoehoe, interior is filled with small to medium boulders; boulders are piled and mounded immediately east of excavation
050	13256	Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating, broken up pāhoehoe, excavated boulders and large cobbles are present in the southwestern portion of excavation
051		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located at the base of a lava blister; modern trash (plastic garbage bags) observed within excavation
052		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of upthrust pāhoehoe, interior of excavation filled with both vesicular and dense large basalt cobbles and small to medium basalt boulders
053		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, large cobbles to small boulders present within interior of excavation; IF-005, a basalt hammerstone, is located on the north side of the excavation
054		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Exposing lava blister, small cobbles and medium boulders cover floor, thin layer of soil present
055		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on undulating pāhoehoe, pāhoehoe boulders slabs are scattered around the excavation, with some slabs stacked in the southeastern area of the excavation; it is possible that some of the excavated slabs were used as construction material for nearby C-shaped structures located northwest of the excavation
056		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on undulating pāhoehoe, floor is relatively clear with few pāhoehoe slabs covering opening; located 4 meters south of 055; excavated boulder slabs may have been source of construction material for nearby C-shaped structure
057		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, decomposed plant matter and some small cobbles cover floor, excavated boulders present just west of the excavation
058		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a pāhoehoe ridge, exposing overhang, floor littered with small to medium boulders, relatively deep opening
059		Pāhoehoe	Traditional	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; IF-006 and IF-007, two hammerstones, are present near the excavation
060		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at top of large lava blister, adjacent to a crevice
061		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Good	Uncertain	Located within excavation. Excavation located at base of two large blisters. IF-008 (hammerstone) located within excavation.
062		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at base of two large lava blisters
063		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on level pāhoehoe lava, boulder rubble present on floor
064		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Floor is clear bedrock. Presence of traditional artifact(s) noted, but type(s) not documented.

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

572



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con- dition	Function	Narrative
024		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a pāhoehoe lava ridge; floor consists of small to medium boulders
025		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe, exposing lava blister which has been filled in with excavated large cobbles
026		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up, undulating pāhoehoe, in an area of high volume gravel and cobbles
027		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up, undulating pāhoehoe, in an area of high volume gravel and cobbles; some large cobble to small boulder fill
028		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up, undulating pāhoehoe, in an area of high volume gravel and cobbles
029		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, large boulders on floor
030		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on southern side of a low ridge; minimal rock debris
031		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Quarry	Located on side of pāhoehoe ridge, irregular floor; large amounts of stones are piled to the southeast
032		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Quarry	Located on side of pāhoehoe ridge, irregular floor; large amounts of stones are piled to the south
033		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located northeast of a large pāhoehoe tumulus
034	A'a	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on the side of an a'a ridge, floor consists of uneven small to medium boulder rubble
035	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on edge of a pāhoehoe ridge; cobbles fill excavation opening; uneven rubble a'a surrounds excavation
036	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, rubble and small boulders cover floor
037	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, exposing lava blister, excavated boulders present on floor
038	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; slightly sloping bedrock floor contains some small boulders
039	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe, rubble and cobbles cover floor
040	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Level bedrock floor
041	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on level pāhoehoe; level bedrock floor
042	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, exposing lava blister; boulders from lava blister present on floor
043	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on southeastern edge of a pāhoehoe ridge
044	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, exposing lava blister; boulders from lava blister present on floor
045	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, abuts an a'a flow; exposing side face of pāhoehoe flow, rubble on floor
046	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the side face of a slope; cobbles cover floor
047	Pāhoehoe	None Observed	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating, broken up pāhoehoe; uneven, collapsed floor, cobbles and small boulders cover floor

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

571



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
084		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southern edge of an undulating pāhoehoe ridge; exposed bedrock floor with cobbles
085		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating, broken up pāhoehoe, exposing lava blister; floor filled with rubble
086		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, exposing lava blister; level bedrock floor with some boulders
087		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe lava flow that abuts with a'a lava flow. Appears that the edge of the pāhoehoe flow has been excavated
088		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on the edge of a pāhoehoe lava flow and is bordered to the south by p-039 causeway; stones were most likely taken from the excavation to use for the causeway
089		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located in between two different pāhoehoe lava flows; near to the p-039 causeway; floor consists of small boulders and rubble
090		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located between a pāhoehoe flow to the northeast and an a'a flow to the southwest. Excavation filled with large pāhoehoe cobbles and small sized boulders; located ~5 meters from 13275 burial cave
091		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of undulating pāhoehoe; large cobbles to small boulders excavated off south lip of lava flow; floor filled with excavated cobbles and boulders
092		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on edge of undulating pāhoehoe; cobbles to small boulders excavated off north lip of lava flow, floor filled with excavated cobbles and boulders
093		'A'a	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located atop an 'a'a lava flow; floor consists of rubble; 2 mounds are located 6-10 meters away from the excavation
094		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on the northeast of a large pāhoehoe ridge; very deep; interior filled with a'a cobbles and pāhoehoe boulders
095		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located atop an undulating pāhoehoe lava ridge and appears to be an exposed lava blister; level exposed bedrock floor
096		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat pāhoehoe area on top of a ridge; excavation is very long and linear, running north to south; anthro petroglyph located on pāhoehoe at southern end; majority of interiors filled with medium size boulders
097		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe lava; exposing lava blister; level bedrock floor with cobbles and small boulders; located north and 2 meters of the excavation is a mound constructed of pāhoehoe lava
098		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe ridge and north of an upthrust of lava; relatively level floor filled in with subangular medium size boulders

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
065		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Floor of excavation consists of small boulders and cobbles.
066		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Floor of excavation consists of small boulders.
067		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; relatively deep opening with medium pāhoehoe boulders wedged between both sides of the opening near the floor; IF-009 (hammerstone) located within excavation opening; excavated large pāhoehoe boulders present just east of opening
068		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe
069		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the north end of a pāhoehoe ridge, irregular floor, small to medium size boulders are stacked just to the north of the excavation.
070		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the northern ridge of undulating pāhoehoe, floor consists of slightly sloping bedrock and some rubble.
071		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a pāhoehoe ridge in the side; floor consists of exposed slanting bedrock and rubble
072		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, exposing lava blisters, floor sloping bedrock with rubble. Manuport (M-001) just west of excavation.
073		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the northwestern end of a large pāhoehoe tumulus, unlevel and flat floor with two medium size boulders within the interior of excavation.
074		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, floor is bedrock and somewhat sloping.
075		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a steep lava ridgeline, floor consists of rubble
076		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up, undulating pāhoehoe, floor slightly sloping bedrock with rubble
077		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the east end of a very long pāhoehoe tumulus; floor not visible; excavation filled with small to medium size boulders
078		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on roughly level pāhoehoe; floor consists of exposed bedrock; small boulders lie in a rough c-shape formation on the southern side of the excavation
079		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along the north side of undulating pāhoehoe outcrop, exposing shallow overhang; sloping bedrock floor with small boulders on east floor surface; lichen present on excavated boulders
080		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening up lava blister; level bedrock floor with some small rubble
081		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located east of a large pāhoehoe ridge; floor not observed, filled in with medium size boulders; subregular boulders are stacked to the north east
082		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; rubble and cobble floor
083		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; exposing shallow lava blister; level bedrock floor covered in small rubble

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con-dition	Function	Narrative
112		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe flow; exposing lava blister; sloping cleared bedrock floor in northern end; deeper excavated area in southern end has rubble covered floor; excavated boulders loosely piled downslope and just north of excavation
113		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing lava blister; sloping bedrock floor covered in rubble and some excavated cobbles to small boulders
114		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on undulating pāhoehoe; exposing lava blister; undulating bedrock floor has some presence of rubble and small boulders; boulders from excavation appear to be used to make a mound 0.5 m west of excavation
115		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe; exposing slight lava blister; floor filled with rubble and some excavated boulders
116		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe ridge fissure; irregular floor filled with small to medium size boulders; medium to large size boulders are stacked to the northeast of excavation; P#043 is located 0.55 meters to the east
117		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; southeastern side of pāhoehoe ridge exposing shallow overhang; uneven bedrock floor with rubble and cobbles
118		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe excavating the top edge of pāhoehoe ridge; scattered cobbles and small boulders
119		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on edge of a low pāhoehoe ridge; irregular floor with small to medium size boulders
120		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing lava blister; floor covered with rubble and few medium boulders
121		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; opening small lava blister; relatively clear uneven bedrock floor with some cobbles
122		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located south of a large pāhoehoe ridge; irregular floor with small to large cobbles and small to medium size boulders
123		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; abutting broken up pāhoehoe; opening up lava blister; floor covered with rubble
124		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the southeast portion of a large pāhoehoe ridge
125		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating, broken up pāhoehoe; opening up lava blister; floor covered with rubble
126		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located south of pāhoehoe upthrust; uneven floor covered with cobbles and small boulders
127		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating, broken up pāhoehoe; exposing lava blister; level bedrock floor covered in rubble and boulders
128		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Good	Uncertain	Located in a flat pāhoehoe area, north of a ridge; flat floor with medium boulders piled within the interior and western side; IF#23 located at the southwest edge

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

576



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con-dition	Function	Narrative
099		Pāhoehoe	Traditional	None Observed	None Observed	Present	Fair	Quarry	Located at the top of pāhoehoe lava ridgeline; small to medium subangular boulders have been removed and placed in a somewhat crescent shape along the northern edge of the excavation; level floor consists of some soil, exposed bedrock and rubble; two hammerstones were located in the excavation IF#017 and IF#18
100		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located in a flat pāhoehoe area on top of a ridge; very deep; sloping floor with small to medium size boulders
101		Pāhoehoe	None Observed	Present	None Observed	Absent	Good	Uncertain	Located in center of pāhoehoe ridge fissure; floor irregular, filled with loose small to large boulders; one single cowry shell found to the northwest of excavation
102		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on top of pāhoehoe ridge fissure; floor irregular, filled with loose medium to large sized boulders
103		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the southern portion of the base a long pāhoehoe ridge; irregular floor with angular cobbles; hammerstone IF#019 located 3.4 meters south of excavation
104		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; broken lava blister; floor uneven covered with cobbles and small boulders
105		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the northwest portion of the pāhoehoe ridge; irregular floor with small and large pāhoehoe boulders; subangular medium sized boulders stacked to the northeast of excavation
106		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of undulating pāhoehoe; sloping floor covered completely with rubble and excavated cobbles and boulders; IF#020 hammerstone
107		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; broken lava blister exposing very shallow overhang; level floor covered with cobbles and small to medium size boulders
108		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; southeastern side of pāhoehoe ridge; exposing shallow overhang; uneven bedrock floor with some rubble and cobbles
109		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southeastern edge of a large pāhoehoe ridge; irregular floor; filled with medium size boulders; medium to large size boulders stacked to the northwest of excavation
110		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing lava blister; level bedrock floor with medium excavated boulders present on south floor
111		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating, broken up pāhoehoe; exposing shallow lava blister; slightly sloping bedrock floor covered with rubble and few excavated medium boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

575



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
145		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the downslope side of undulating pāhoehoe flow; sloping bedrock floor covered in rubble
146		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; atop small pāhoehoe ridge opening small lava blister exposing very shallow overhang; uneven bedrock floor covered with rubble and medium boulders. Hammerstone (IF-024) located 23 cm northwest of opening.
147		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe ridge fissure; irregular floor with small to large size loose boulders
148		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe ridge on the northern side; flat floor with some cobbles to the west
149		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located between two pāhoehoe ridges; flat bedrock floor with some loose pebbles; medium size boulders are stacked to the north of excavation
150		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposed lava blister; level bedrock floor covered with rubble and few small excavated boulders
151		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, exposing lava blisters; level, clear bedrock floor. IF-025, a hammerstone, documented at this excavation.
152		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; floor completely covered by rubble; appears to slightly expose lava blister
153		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; southwest of large pāhoehoe ridge; opening a small lava blister exposing a shallow overhang; level bedrock floor scattered with rubble and small boulders
154		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat pāhoehoe area; flat floor with bedrock with some loose cobbles; large cobbles and small boulders are piled loosely on the southern end
155		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat pāhoehoe area; flat floor; top layer of pāhoehoe is removed and some pāhoehoe slabs are stacked to the north of excavation
156		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; on east side face pāhoehoe ridge; opening a small lava blister; exposing a relatively deep overhang; level bedrock floor with small presence of rubble and few cobbles
157		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on ridge of undulating pāhoehoe; floor consists of rubble only
158		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe east of large pāhoehoe edge; opening a small lava blister; exposing a very shallow overhang; boulders scattered on surface east of opening; floor covered with boulders
159		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; floor consists of rubble
160		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; atop small pāhoehoe upthrust; irregular bedrock floor full of rubble and cobbles; slab mound present ~6 meters north of opening

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
129		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; slightly slanting bedrock floor with some cobbles and small boulders
130		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the side of an undulating pāhoehoe flow; floor not visible, covered with rubble; excavated pāhoehoe boulder slabs on surface, east of excavation opening
131		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; level bedrock floor with small presence of rubble
132		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe; exposing overhang; sloping bedrock floor, covered with lichen covered rubble and few excavated boulders
133		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small blister; north of a large pāhoehoe ridge; uneven floor covered with rubble and small boulders
134		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; exposing lava blister; level floor with few excavated boulders
135		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; excavating the side of a pāhoehoe face west of a large pāhoehoe ridge; floor covered cobbles and small boulders
136		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe; exposing lava blister/overhang; floor covered with medium excavated boulders
137		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; east of a large pāhoehoe ridge' level floor with relative clear with some cobbles; small to medium boulders on surface northwest of opening
138		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; level bedrock floor
139		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on fissure of undulating pāhoehoe; sloping floor covered with rubble
140		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top a pāhoehoe ridge; opening small blister; exposing shallow overhang; medium to large boulders scattered on west and east side of opening on surface; floor covered with decomposed plant matter and some large boulders
141		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on top of a pāhoehoe ridge; level bedrock floor; small to medium size boulders are stacked to the south and southeast
142		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a pāhoehoe ridge; large cobbles and small boulders are stacked to the south
143		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; opening lava blister on east side of large pāhoehoe ridge exposing a small overhang; slightly sloping bedrock floor contains some soil with decomposed plant material and rubble
144		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on downward slope of undulating pāhoehoe flow; exposing lava blister; sloping bedrock floor with few medium to large size excavated boulders

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
177		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; irregular floor with large boulders; small waterworn boulder hammerstone
178		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located along the edge of low pāhoehoe blister
179		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Fairly level bedrock floor
180		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along an exposed ridgeline of pāhoehoe lava; excavation extends slightly into the ridgeline of the flow; floor consists of some exposed bedrock and rubble
181		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small lava blister; level pāhoehoe bedrock floor with medium to large boulders; waterworn Fine-grained basalt hammerstone found in opening
182		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along an undulating pāhoehoe ridgeline; floored with broken bedrock
183		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; collapsed lava blister; level pāhoehoe bedrock floor with pebbles and large pāhoehoe slabs; large pāhoehoe slab boulders overturned but not pulled out
184		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small lava blister; exposing shallow overhang; level pāhoehoe bedrock floor covered with cobbles and small boulders
185		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe and atop a pāhoehoe ridge; excavation is relatively small; floor consists of level exposed bedrock
186		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the side of a pāhoehoe lava ridge; sloping exposed bedrock floor with some rubble
187		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on top surface of pāhoehoe lava blister
188		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a pāhoehoe ridgeline; exposed bedrock floor with rubble
189		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the south side of a small lava blister; opening a small overhang; excavation opening is relatively deep; uneven floor covered in cobbles with large boulders scattered to the south of the opening
190		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top surface of low pāhoehoe ridge
191		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Small, shallow, adjacent to excavation 190
192		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along the edge of a pāhoehoe ridgeline; sloping bedrock floor with rubble
193		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating broken up pāhoehoe; excavating the north face of a large vertical pāhoehoe upthrust; along the side of pāhoehoe ridge; the excavation opening is 0.21 meters from the ground in front of the opening and is excavating horizontally into the side of the upthrust
194		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along a pāhoehoe ridgeline; floor consists of exposed bedrock and some rubble

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

580



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
161		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a collapsed lava tube; exposing the side of an overhang; exposed bedrock floor with loose cobbles
162		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a collapsed lava tube on an undulating pāhoehoe; exposing a small overhang; floor consists of rubble
163		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping undulating pāhoehoe; small boulders and cobbles have been piled along its eastern edge; floor consists of rubble
164		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; floor consists of rubble
165		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; exposing shallow overhang; floor not visible, covered with cobbles and small to medium boulders
166		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; uneven pāhoehoe floor, covered with cobbles and small to medium size boulders
167		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located in a collapsed lava blister; exposing a small overhang to the northwest; floor consists of rubble and some soil
168		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a collapsed lava tube along with excavation 169, 170 and 171; is in the side of a pāhoehoe ridge; exposing very small overhang; floor consists of rubble
169		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located in a collapsed lava tube along with excavation 168, 170 and 171; is in the side of a pāhoehoe ridge; floor consists of level soil with some rubble
170		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a collapsed lava tube along with excavation 168, 169 and 171; is in the side of a pāhoehoe ridge; floor consists of level soil and some exposed bedrock
171		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located in a collapsed lava tube along with excavation 168, 169 and 170; is in the side of pāhoehoe ridge; small natural overhang is located right above it; exposing a small overhang; small to medium size boulders have been loosely piled along its northwestern edge; floor is relatively level and consists of some soil and rubble
172		Pāhoehoe	Modern	None Observed	None Observed	Present	Fair	Uncertain	Located northwest of a collapsed lava tube; irregular floor with medium to large boulders; located west to an overhang with 3 cm of soil on the floor; remnants of a plastic water bottle are scattered within boulders
173		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located northwest of a collapsed lava tube; irregular floor with loose small to large boulders; the edges of the excavation seem to be stacked with boulders
174		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on top of a pāhoehoe ridge; 5.20 meters at 50 northeast to 13260, feature B overhang; floor is flat with exposed bedrock
175		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat pāhoehoe area just northeast of collapsed blister; floor exposed bedrock with small boulders
176		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; irregular floor with large boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

579



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
214		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop on undulating pāhoehoe ridgeline; floor consists of rubble of small boulders
215		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop on undulating pāhoehoe ridgeline; floor consists of level bedrock with some rubble; IF#032 situated northwest of excavation
216		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; exposing lava blister in northeastern excavated area; level bedrock floor covered in excavated boulders which are also piled in southwestern to western to northwestern edges of excavation
217		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; irregular floor with small to medium size boulders loosely piled; very little soil; small overhang on the southeastern edge
218		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; exposing shallow overhang on south end of opening; level floor with some soil and decomposed plant matter covered with cobbles and small boulders
219		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located atop on undulating pāhoehoe ridgeline; floor consists of exposed bedrock and some soil
220		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, sloping bedrock floor is clear of rubble
221		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; excavating the east face of a pāhoehoe ridge near the top; sloping floor covered with rubble and small to medium size boulders
222		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the northeastern side of pāhoehoe ridge; irregular and sloping floor with small to large size boulders piled to the east
223		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; undulating bedrock floor covered in some rubble and few excavated cobbles and boulders
224		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area at the base of a pāhoehoe ridge; level bedrock floor with some small to medium size boulders
225		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; irregular bedrock floor with cobbles
226		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on top of a low pāhoehoe ridge; irregular floor with some loose rubble and a small overhang that could possibly be used for storage
227		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; exposing a very shallow overhang; level pāhoehoe bedrock floor with some pebbles and few large boulders
228		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe; opening up a narrow overhang; bedrock floor covered with rubble; some bedrock is exposed; hammerstone IF#033 located 1.2 meters to the northeast

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

582



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
195		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top surface of low pāhoehoe ridge
196		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; floor consists of soil and exposed bedrock
197		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on fairly level pāhoehoe flow; right on southern boundary of project area immediately adjacent to "swing zone"; minimal rock excavated
198		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located along edge of a low pāhoehoe blister
199		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located on top surface of fairly level pāhoehoe surface
200		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe south of a small pāhoehoe ridge; opening a small lava blister exposing a shallow overhang; floor covered with cobbles and small boulders
201		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe within a fissure; irregular floor with some loose cobbles
202		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a smooth pāhoehoe ridge; three medium size boulders lie on the eastern edge of the excavation; floor consists of exposed level bedrock
203		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; exposing a shallow overhang; level bedrock floor covered with rubble and few small boulders
204		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing lava blister; level bedrock floor with small rubble
205		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the side of an undulating pāhoehoe ridge; some battering is visible on the surrounding rocks; floor consists of rubble and sloping bedrock
206		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located in an area on top of a pāhoehoe ridge; level bedrock floor with loose rubble
207		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located at the base of an undulating pāhoehoe ridge; floor consists of small to medium size boulder rubble and some exposed bedrock
208		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top a small pāhoehoe ridge; floor consists of rubble and small boulders
209		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in area on the base of pāhoehoe ridge; floor is irregular with loose rubble; medium to large size boulders are stacked to the west
210		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; sloping bedrock floor; slightly exposing lava blister in northeastern corner
211		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing lava blister; level bedrock floor
212		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; exposing lava blister; level bedrock floor is clear of rubble; boulders piled along south end
213		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a pāhoehoe ridge; floor consists of rubble and patches of exposed bedrock

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

581



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
243		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located along the edge of low pāhoehoe blister; excavation exposed two layers of lava removed
244		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Good	Uncertain	Located along edge of low pāhoehoe blister, immediately and to the south adjacent to excavation 243; IF#039 hammerstone located 1.4 meters south from eastern edge
245		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of pāhoehoe lava; irregular floor; small boulders stacked to the northwest
246		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a large pāhoehoe blister; floor consists of exposed bedrock and some rubble; small boulders completely edge the outside of the excavation
247		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slightly sloping pāhoehoe; exposed bedrock floor clear of rock
248		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing shallow lava blister; level bedrock floor with few excavated large cobbles to small boulders
249		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the top of an undulating pāhoehoe lava ridge; exposed bedrock floor with some rubble
250		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe ridge; exposing an overhang along the southern and western edge; level floor with medium size boulders
251		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of an undulating pāhoehoe; small shallow overhang excavated (not lava blister); level bedrock floor clear of rubble
252		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southern edge of a pāhoehoe lava ridge; excavation 253 and 254 are located immediately northeast; floor consists of exposed bedrock and rubble
253		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on the eastern edge of a pāhoehoe ridge; exposing a deep pocket; bedrock floor with some pebbles and cobbles; possible that the excavation was used for storage
254		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southern edge of a pāhoehoe lava ridge; floor consists of exposed sloping bedrock and some small boulders
255		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the eastern portion of a pāhoehoe ridge; floor is sloping bedrock with medium size boulders which are piled to the west; overhang is located on the western edge of the excavation
256		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe slightly on the ridge; level bedrock floor with little rubble; exposing lava blister
257		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top surface of ropy pāhoehoe; blister removed; stones have been cleared from the floor
258		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at top of pāhoehoe blister; boulder size material removed
259		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at base of pāhoehoe blister; slight overhang exposed

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

584



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
229		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along a pāhoehoe ridge; exposing an overhang that may have been used for storage; sloping bedrock floor with medium size boulders loosely piled on the north portion of the floor
230		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on center of an exposing lava blister; level bedrock floor with few excavated boulders; IF#034, a hammerstone, on the northeastern end
231		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a pāhoehoe lava flow; exposing a lava blister; floor consists of exposed bedrock with one medium size boulder roughly in the center of the excavation
232		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on a low pāhoehoe ridge; exposing a small overhang on the west edge; level bedrock floor with some cobbles and medium size boulders; waterworn hammerstone IF#035 located on the floor
233		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on a low pāhoehoe ridge; exposing an overhang; possible that the excavation may have been used as a storage; bare bedrock floor
234		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating broken up pāhoehoe; exposing shallow lava blister; floor covered with collapse and excavated boulders
235		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, level bedrock floor.
236		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a sloping pāhoehoe lava flow; excavation relatively large; floor consists of mostly small boulder rubble and some exposed bedrock
237		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the ridge of gently sloping pāhoehoe; floor consists of some exposed bedrock and rubble
238		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the top of undulating pāhoehoe ridge; rubble from the excavation appears to have been tumbled downslope; floor consists of rubble and bedrock
239		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up undulating pāhoehoe; opening a lava blister; exposing a shallow overhang; uneven pāhoehoe bedrock floor with pebbles; smaller opening within the floor
240		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe fissure ridge; irregular floor sloping into a deep pocket with loose rubble; medium size boulders are stacked on the south edge of the excavation; possible that the excavation was used for storage
241		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; exposing a shallow overhang; level pāhoehoe bedrock floor with few cobbles
242		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; open lava blister; exposing shallow overhang; level pāhoehoe bedrock floor with rubble, cobbles and small boulders; fine grained waterworn basalt hammerstone found in south end of opening IF#037

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

583



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
275		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on an undulating pāhoehoe ridge; floor consists of exposed bedrock, some soil and rubble
276		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on fairly level pāhoehoe; appears to be a natural crevice where 5 boulders have been removed
277		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in area of flat pāhoehoe, in a natural crack; irregular floor with a deep crack
278		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; floor consists of bedrock and some rubble; no lava blister exposure
279		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe, no lava blister exposure; level bedrock floor with some rubble
280		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on level to slightly sloping pāhoehoe; floor consists of some soil and exposed bedrock; the southeastern end of the excavation consists of rubble
281		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on ridge of undulating pāhoehoe; exposing lava blister; floor covered with large excavated boulders
282		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe ridge; floor consists of rubble and some vegetation
283		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small lava blister; exposing a very shallow overhang on the south side of the opening; sloping bedrock floor covered in rubble, cobbles and small boulders
284		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on fissure of level pāhoehoe; level bedrock floor with small presence of rubble
285		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small blister on west side of large pāhoehoe upthrust; exposing very shallow overhang; sloping pāhoehoe bedrock floor with small cobbles and small boulders
286		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the north slope of a pāhoehoe bubble ridge; irregular floor with bedrock and large angular boulders stacked to the north
287		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located at the base of a large pāhoehoe lava blister; floor consists of some rubble exposed bedrock and some soil; the north-east edge opens a small overhang
288		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat area of pāhoehoe, south of large pāhoehoe ridge; irregular floor and medium size boulders piled to the north
289		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; level bedrock floor is covered in excavated small to large boulders; stones piled to northwest
290		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on edge of undulating pāhoehoe; uneven bedrock floor has small presence of rubble
291		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe ridge; floor is covered with pāhoehoe cobbles
292		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating broken up pāhoehoe on top of pāhoehoe ridge near natural cracking; opening up lava blister; uneven sloping bedrock floor with cobbles and small boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

586



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
260		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a blister to expose shallow overhang on the east side of a small pāhoehoe ridge; floor covered with cobbles and medium to large size boulders
261		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening lava blister; exposing overhang; level bedrock floor with large boulder
262		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the top on undulating pāhoehoe ridge; rubble filled; IF#040 is located in the northwest
263		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a pāhoehoe fissure ridge; irregular floor with loosely piled boulders on the eastern end; large angular boulders are stacked on the southern edge
264		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the top of undulating pāhoehoe; floor consists of exposed bedrock and some rubble; large pāhoehoe slab appears to have been upturned on the north edge
265		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up undulating pāhoehoe on top of small ridge; floor not visible, filled with small to medium size boulders
266		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; exposing two overhangs; one overhang is located on the southeast edge and the second on the northwest edge; irregular floor with loose cobbles and stacking to the east
267		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister; exposing shallow overhang on the southern side of a small ridge, sloping bedrock floor with cobbles
268		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located along the base of low pāhoehoe blister; mostly small to medium boulders size material has been broken and excavated
269		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located on broken up undulating pāhoehoe on the east side of a small ridge; uneven bedrock floor covered with rubble, cobbles and medium to large boulders; bulldozing road nearby
270		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop on undulating pāhoehoe lava ridge; floor consists of exposed bedrock and rubble
271		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southeast slope of a pāhoehoe ridge; exposing an overhang on the southern edge; irregular floor with small to medium size boulders; boulders stacked to the northeast of the excavation
272		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening lava blister; level bedrock floor has some rubble and one excavated small boulder, hammerstone IF#041
273		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening lava blister; sloping bedrock floor with few cobbles; cleared floor
274		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in area of a western edge of a collapsed blister; exposing an overhang on the western edge; floor irregular with small to medium size boulders; boulders piled to the west; it is possible that the overhangs were used for storage

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

585



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con-dition	Function	Narrative
310		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop an undulating pāhoehoe ridge; floor consists of some exposed bedrock and rubble
311		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe on top of a ridge; some soil present with crack in the floor; uneven sloping bedrock floor with few small boulders and cobbles
312		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a ridge adjacent to 311; floor consists of bedrock.
313		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located in an area of undulating pāhoehoe; bedrock floor with loose cobbles and small boulders; located 3 meters at 169 south of P#133 fish petroglyph and 2.7 meters at 131 southeast from IF#154 hammerstone
314		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a gently sloping pāhoehoe ridge; floor consists of exposed sloping bedrock
315		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe excavating the side of a large fissure in a pāhoehoe ridge; floor is uneven covered in cobbles and medium to large size boulders
316		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing shallow lava blister; sloping bedrock floor has few large boulders
317		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe ridge; floor consists of exposed bedrock; appears that the ridge has tumbled naturally into the excavation
318		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of an undulating pāhoehoe; floor consists of exposed bedrock and rubble
319		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a lava blister; exposing an overhang; level bedrock floor with few cobbles; dense fine-grained basalt hammerstone found 0.5 meters south of opening
320		Pāhoehoe	Traditional	None Observed	None Observed	Present	Fair	Uncertain	Located on a low pāhoehoe tumulus with a level floor and 1 cm of soil; a hammerstone IF#059 was found under an overhang on the western portion of the excavation
321		Pāhoehoe	Traditional	None Observed	None Observed	Present	Good	Uncertain	Level bedrock floor covered with cobble and boulders; cowrie shell lure present within excavation; lots of battering surrounding excavation
322		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located atop of large blister; floor is roughly level and contains rubble; small to medium subangular boulders have been piled along the northeastern edge
323		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on northeast end of low pāhoehoe ridge; uneven sloping bedrock floor with few large cobbles; opening lava blister; exposing very shallow overhang
324		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Quarry	Located west of a large pāhoehoe tumulus; excavation is on a pāhoehoe fissure with an irregular floor; very little amount of small boulders; appears that the stones have been removed

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con-dition	Function	Narrative
293		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping undulating pāhoehoe; exposing lava tube; level bedrock floor devoid of any cobbles, boulders or rubble; exposed lava tube connects to excavation 295
294		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small lava blister, near the side of a pāhoehoe ridge; uneven pāhoehoe bedrock floor covered with small to medium boulders
295		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping undulating pāhoehoe; exposing a lava tube; floor consists of exposed bedrock and some rubble
296		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in area on top of a pāhoehoe ridge; bedrock floor with loose rubble, ranging from small cobbles to large boulders; medium size boulders are stacked to the east
297		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the east side of a pāhoehoe ridge; irregular floor with some loose rubble; subangular boulders are stacked to the northeast
298		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the top of a pāhoehoe ridge; opening a lava blister; uneven bedrock floor covered with small to medium size boulders
299		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a small lava blister on top of large pāhoehoe ridge; level bedrock floor with large cobbles
300		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop an undulating pāhoehoe lava ridge; floor consists of rubble
301		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top surface of a low ridge, within a natural fissure; excavation appears to expose fissure
302		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat area, at the base of a pāhoehoe ridge; bedrock floor with medium to large size boulders
303		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; does not appear to expose lava blister; floor consists of rubble and few excavated boulders; M#004 waterworn cobble located adjacent to northeast
304		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating textured pāhoehoe; opening the side of a pāhoehoe upthrust; exposing a loge overhang; near the edge of a converging pāhoehoe a'ā flow; floor uneven covered with small to medium boulders; two waterworn basalt hammerstones found on excavated material east of the open overhang
305		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Good	Uncertain	Located on side edge of low pāhoehoe ridge; fairly large in size; one hammerstone present IF#053
306		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping undulating pāhoehoe; floor consists of large excavated boulders and some rubble
307		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe ridge; floor consists of rubble
308		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a pāhoehoe lava ridge; floor consists of exposed bedrock
309		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on top of pāhoehoe fissure ridge; level floor with 0.7 cm of soil; small boulders are stacked to the north

Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
340		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a pāhoehoe ridge; level bedrock floor with some cobbles
341		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping side of undulating pāhoehoe ridge; exposing lava blister; level bedrock floor has few excavated cobbles and boulders
342		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of undulating pāhoehoe ridge; undulating bedrock floor; excavated cobbles and small and medium boulders present on the floor
343		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a large pāhoehoe ridge; floor consists of exposed bedrock and some small boulder rubble; some battering and midden scatter is present around the excavation
344		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on a large pāhoehoe ridge; floor consists of exposed bedrock and small rubble; a small cobble of solidified sand was located in the excavation
345		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located immediately adjacent and to the northeast of excavation 34; level floor with cobbles and boulders
346		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Large boulder debris removed from excavation; some cobbles and boulders within the excavation
347		Pāhoehoe	Traditional	None Observed	None Observed	Present	Fair	Uncertain	Located atop an undulating pāhoehoe ridge; floor consists of level exposed bedrock and some rubble; small amount of soil is also present; IF#061 fractured hammerstone located at the southern corner of the excavation
348		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping undulating pāhoehoe ridge; floor consists of slanting exposed bedrock with some rubble
349		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in side of broken up undulating pāhoehoe outcrop; creating overhang; rubble floor
350		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop an upthrust pāhoehoe ridge; floor consists of exposed basalt boulders
351		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating broken up pāhoehoe; uneven rubble filled floor
352		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; excavating the edge of a pāhoehoe ridge; opening a blister on the ridge face along the side of a natural fissure; floor covered with cobbles and small boulders
353		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the upthrust pāhoehoe ridge; floor consists of rubble; small overhang that has been exposed into the ridge
354		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the western side of a pāhoehoe ridge; irregular floor and medium sized boulders stacked to the north
355		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located northwest of a pāhoehoe ridge; irregular floor with small boulders; quarried rock is piled to the south of excavation
356		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening lava blister; exposing very shallow overhang; uneven bedrock floor covered with rubble and large boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

590



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
325		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on side of pāhoehoe outcrop undulating pāhoehoe; level rubble floor; stones have been removed from immediate area (enclosure located south of outcrop - made from quarried stones?)
326		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Quarry	Located on the southwestern slope of a large tumulus; sloping bedrock floor; appears that the quarried stones are removed from the excavation
327		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Quarry	Located at the base of a large pāhoehoe blister; floor consists of exposed bedrock with some cobble rubble; no rubble is present around the excavation; an anthropomorphic petroglyph is situated above the excavation on the northeastern edge
328		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Quarry	Located on undulating pāhoehoe at the southwestern base of a pāhoehoe ridge; sloping bedrock floor covered in pebbles and cobbles; opening exhibits battering on three sides; excavation near petroglyphs
329		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on sloping side of undulating pāhoehoe outcrop; level bedrock floor has some small presence of rubble; stones have been removed from immediate area implying quarrying
330		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Large boulder stones and cobbles on floor; large battering marks near excavation (2 meters) and along the east edge
331		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on sloping side of undulating pāhoehoe outcrop; opening lava blister; sloping bedrock floor is devoid of rubble or cobbles; stones appear to have been removed from immediate area implying quarrying
332		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on undulating pāhoehoe; excavating the southwestern sloping face of a pāhoehoe ridge; floor covered in pebbles
333		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Quarry	Located on the southeastern slope of a large tumulus; irregular floor; appears that the quarried stones are removed from the excavation; basalt core located on the floor
334		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Quarry	Located on sloping side of undulating pāhoehoe outcrop; sloping bedrock floor is cleared
335		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; rubble and boulder floor are uneven
336		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe sinkhole; floor consists of exposed bedrock
337		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe sinkhole; floor consists of rubble
338		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located north of pāhoehoe ridge; level bedrock floor with some cobbles and small boulders; there are boulders stacked on all sides of the excavation
339		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the southeast side of a low pāhoehoe ridge; slightly sloping bedrock floor covered with pebbles, small cobbles and medium to large boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

589



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
375		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe fissure ridge; irregular floor with cobbles
376		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of undulating pāhoehoe outcrop; floor filled with rubble and few excavated small boulders
377		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; floor consists of level pāhoehoe with some rubble
378		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; floor consists of exposed sloping bedrock and rubble
379		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe ridge; level bedrock floor has small presence of rubble
380		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of a pāhoehoe ridge; exposing an overhang at the eastern end; irregular floor with medium size boulders and large cobbles; medium size boulders piled to the east of excavation
381		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe outcrop; uneven bedrock floor has slight rubble presence and few small boulders
382		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on the northwestern slope of a pāhoehoe ridge; irregular floor with small to medium size boulders; large cobbles and small to medium size boulders piled to the northwest of the excavation
383	-	-	-	-	-	-	-	-	-
384		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe outcrop; exposing lava blister; level bedrock floor has large cobbles and some rubble and small to medium boulders
385		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; exposing lava blister; level bedrock floor has very little rubble present
386		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on a sloping pāhoehoe ridge; floor consists of some exposed bedrock and some soil
387		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on somewhat level pāhoehoe; floor consists of excavated boulders and rubble
388		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating broken up pāhoehoe ridge; exposing lava blister; level bedrock floor covered in large cobbles and small boulders
389		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top of low ridge; exposing shallow overhang on all sides; level bedrock floor covered in rubble, cobbles and medium to large boulders; some coral present in excavated material outside of opening
390		Pāhoehoe	None Observed	Present	None Observed	Absent	Fair	Uncertain	Located on a low pāhoehoe lava ridge; floor consists of exposed bedrock and rubble; fragment of a cowry shell was observed in the excavation
391		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southern slope of pāhoehoe ridge; irregular floor with bedrock and medium to large size boulders
392		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping undulating pāhoehoe; floor consists of exposed bedrock and small cobbles

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

592



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
357		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; irregular floor with loose cobbles
358		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; level bedrock floor with a boulder piled to the southeast
359		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing shallow lava blister; level bedrock floor with slight presence of rubble
360		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up undulating pāhoehoe; level bedrock floor covered in rubble and large excavated boulders
361		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the base of pāhoehoe ridge on the north side; level floor with loose cobbles; medium to large size boulders are piled to the southwest
362		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of pāhoehoe ridge on the northwest side; irregular floor with loose cobbles; large to medium size boulders are piled to the northwest
363		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe at the edge of a low pāhoehoe ridge; sloping floor with small and medium cobbles
364		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on surface of pāhoehoe lava blister; fairly level floor; cobbles and boulders within the excavation
365		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on level pāhoehoe; floor consists of level bedrock and some excavated boulders
366		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located adjacent to excavation 365 on level pāhoehoe; floor consists of excavated cobbles and a small boulder
367		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; exposing shallow lava blister; undulating bedrock floor with few excavated small and medium boulders
368		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a flat area of pāhoehoe; exposing an overhang along the northeastern edge; level floor with loose rubble
369		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top of low pāhoehoe ridge; exposing very shallow overhang; slightly sloping uneven bedrock floor with rubble and medium to large size boulders
370		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top of low pāhoehoe ridge; exposing very shallow overhang; slightly sloping uneven bedrock floor with rubble and medium to large size boulders
371		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping undulating pāhoehoe; one edge of a small lava ridge has been excavated; floor consists of excavated boulders
372		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe ridge; irregular floor with some cobbles; two large boulders are piled to the north of the excavation
373		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Shallow, small excavation; IF#063 located along western edge
374		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the southeastern side of a low ridge; sloping uneven floor with few large cobbles and medium boulders; Fine-grained basalt hammerstone found 1.08 meters southwest of opening

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

591



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
407		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a low sloping pāhoehoe ridge; the ridgeline itself has been excavate; floor consists of rubble
408		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a pāhoehoe fissure; irregular floor with some medium to large size boulders
409		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on gently sloping pāhoehoe surface; floor consists of rubble with small boulders placed around the excavation
410		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a gently sloping pāhoehoe surface; floor consists of rubble and small boulders; small overhang is exposed on the southern edge
411		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located atop a gently sloping pāhoehoe ridge which abuts an a'a flow to the southwest; overhang is exposed on the southeastern edge; floor consists of rubble and soil
412		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe abutting excavation 404; slight shallow lava blister exposure; uneven bedrock floor partially filled with rubble and excavated large cobbles and small boulders
413		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the edge of a low pāhoehoe ridge; abutting excavation 415; separated by large boulders; floor opening is separated by a small section of bedrock that was not excavated; exposed sloping uneven floor with rubble and medium boulders
414		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; level bedrock floor with roughly 50% surface coverage of excavated cobbles and small boulders
415		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; floor consists of level bedrock and rubble; excavation abuts excavation 413 at the north end at a pile of excavated small to large boulders
416		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; floor consists of slanting exposed bedrock and some rubble; small overhang is located on the northern and southern edge
417		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; exposing an overhang on the southeastern end; bedrock floor filled with medium size boulders
418		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Cobbles and boulders within the excavation
419		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe and appears to be on exposed lava blister; floor consists of rubble
420		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; appears to be a broken lava blister; floor consists of excavated rubble
421		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening very small lava blister; exposing shallow overhang
422		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing shallow lava blister; level bedrock floor has some rubble and one large excavated boulder

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

594



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
393		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on low slightly undulating pāhoehoe; exposing shallow lava blister; level bedrock floor roughly 50% covered in large cobbles and small and medium boulders; small waterworn cobble in excavated area, no modification
394		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side edge of a low undulating pāhoehoe outcrop; rubble filled floor has few small and medium boulders
395		Pāhoehoe	None Observed	Present	None Observed	Absent	Fair	Uncertain	Located on undulating sloping pāhoehoe; small marine shell present within opening; sloping uneven floor covered in rubble, cobble and medium to large size boulders
396		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing shallow lava blister; uneven bedrock floor with one small boulder and very little rubble
397		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating sloping pāhoehoe; large opening is separated by a small section of pāhoehoe bedrock that was not removed; level exposed bedrock floor covered with cobbles and medium to large boulders
398		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; level and sloping bedrock exposed floor with few small boulders and large cobbles
399		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe lava ridge; floor consists of exposed bedrock with some rubble on the northeastern edge; northeastern end exposes a small overhang
400		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; slightly sloping bedrock is clear except for small amounts of rubble and few small boulders
401		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located at the base of lava blister; cobbles and boulders within the excavation
402		Pāhoehoe	None Observed	Present	Present	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the top of a very low pāhoehoe ridge; some coral and shell fragments in opening; exposed sloping uneven bedrock floor covered with cobbles and medium to large boulders
403		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; floor consists of patches of exposed bedrock and rubble consisting of large boulders
404		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping level pāhoehoe; exposed bedrock floor has roughly 40% surface coverage by excavated large cobbles and small boulders
405		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top of a very low ridge; exposing shallow overhang on east side of opening; exposed uneven bedrock floor covered with rubble, cobbles and medium to large boulders; two waterworn basalt hammerstones found on surface above overhang on east side of opening
406		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Good	Uncertain	Very large boulder material and some small boulders within the excavation and along the east edge; battering marks evident along south edge. Presence of traditional artifact(s) noted, but type(s) not documented.

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

593



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
439		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Immediately adjacent and to the southwest of excavation 438; fairly level floor
440		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Water storage?	Located on undulating pāhoehoe; exposing lava blister that appears to contain tidal water due to its wet state during recording; level floor is filled with rubble; very little excavation present
441		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe ridge; exposing slight ridges; floor consists of rubble and large cobbles with few boulders
442		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe ridge; exposing slight lava blister; cobble and boulder filled floor with very little bedrock exposed; irregular shape is comprised of wide ends which narrow to the minimum width in the center
443		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on undulating pāhoehoe on top of a low ridge; slightly sloping exposed bedrock floor with few medium to large boulders
444		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the edge of a low ridge; slightly sloping, uneven bedrock floor with medium to large size boulders; waterworn basalt hammerstone found 0.78 meters southeast of opening
445		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposed level bedrock has some presence and few large cobbles
446		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening shallow blister; floor of the opening is separated by a large portion of bedrock that wasn't excavated; uneven floor with medium size boulders
447		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on highest point of a low pāhoehoe ridge; fairly level floor; cobbles and boulders within excavation
448		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; floor consists of slanting exposed bedrock; rubble from the excavation has been completely removed from the excavation and the area around it
449		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a pāhoehoe ridge; floor consists of slanting bedrock and rubble
450		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe ridge; floor consists of exposed bedrock and rubble
451		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on the northeastern slope of a pāhoehoe ridge; exposing a deep overhang; level floor with small cobbles and large pebbles
452		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top of pāhoehoe ridge; opening is along a natural fissure; level bedrock floor with some rubble
453		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the side of a pāhoehoe ridge; extends into the lava ridge 1.5 meters; floor consists of rubble
454		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; exposing shallow lava blister; bedrock floor covered in rubble and large boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

596



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
423		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; irregular floor with some loose rubbles; some boulders piled to the northeast of the excavation
424		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on the edge of a pāhoehoe upthrust; uneven floor filled with medium to large boulders
425		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe ridge; cleared bedrock floor shows battering
426		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on lava crevice; exposing slight ridges; floor filled with small to large boulders
427		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe ridge; floor consists of rubble
428		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located northwest of a crumbling pāhoehoe ridge; exposing an overhang at the southern end; small boulders piled to the northwest and boulders stacked into a mound to the southwest of the excavation
429		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a low pāhoehoe ridge; fairly level interior
430		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on a sloping pāhoehoe; floor consists of rubble and soil
431		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe ridge; excavated boulders have been stacked along the entire east of the excavation; floor consists of rubble
432		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a sloping pāhoehoe ridge; floor is irregular with loose medium size boulders; boulders piled to the east and west side of excavation
433		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on the eastern slope of a pāhoehoe ridge; exposing a small overhang on the southwest end; irregular floor with small to medium size boulders; boulders piled into a mound to the south of the excavation
434		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe lava; floor consists of a large pāhoehoe slab that appears to have tumbled from the excavation immediately to the north; 3 shallow circular depressions are located on the northern edge
435		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the southwestern slope of pāhoehoe ridge; floor is sloping bedrock and the quarried pāhoehoe slab was placed in excavation 434
436		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a sloping pāhoehoe ridge; floor consists of exposed bedrock and excavated rubble; a small waterworn boulder hammerstone is located on the south end of the excavation
437		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on low pāhoehoe ridge; immediately adjacent and the southeast of excavation 438
438		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located in an area of undulating pāhoehoe; floor is exposed bedrock with some medium size boulders; boulders piled to the north end eastern edges

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

595



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
473		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a pāhoehoe fissure ridge; floor is flat bedrock with no quarried rock within or around the excavation
474		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of undulating pāhoehoe low ridge; exposing lava blister; level bedrock floor cleared of rubble with one medium boulder
475		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a low pāhoehoe ridge; large boulders and cobbles within excavation
476		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; level bedrock floor has 75% surface coverage by small and medium boulders
477		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe excavation; irregular floor with loose cobbles; boulders piled to the east of excavation
478		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small blister; floor not visible covered on cobbles and large boulders; coral stone found 0.57 meters northwest of opening on surface
479		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; sloping bedrock floor covered in small and medium excavated boulders
480		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along edge of a low pāhoehoe blister
481		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; sloping bedrock floor covered with large cobbles and small boulders
482		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a low pāhoehoe ridge; exposing a small overhang on the western edge; medium size boulders stacked into a mound northwest of the excavation
483		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping pāhoehoe; appears to be a broken-up lava blister; floor consists of excavated rubble and some bedrock
484		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on sloping side of undulating pāhoehoe; level to sloping bedrock floor has excavated stones piled in northeast end; large cobbles to medium boulders; one piece of small coral cobble
485		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on gently sloping pāhoehoe; floor consists of exposed slanting bedrock with no rubble
486		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe on top of a low pāhoehoe ridge; sloping broken bedrock floor with some cobbles
487		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a low pāhoehoe fissure; irregular floor with boulders piled to the southeast
488		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; rock has been very excavated and has been piled to the southeast and west ends in large piles; 4 hammerstones
489		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of low pāhoehoe ridge; boulder debris within excavation
490		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a crumbling pāhoehoe ridge; some pebbles and cobbles
491		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe ridge; floor consists of rubble and some exposed bedrock

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolu, North Kona, Hawai'i
July 2019

598



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
455		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a low pāhoehoe blister within narrow crevice; very deep
456		Pāhoehoe	None Observed	None Observed	None Observed	Absent		Uncertain	Located on a low pāhoehoe fissure ridge; irregular floor filled with loose cobbles and boulders
457		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up undulating pāhoehoe; exposing very slight overhang; floor consists of excavated small to large boulders
458		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating sloping pāhoehoe; uneven floor with small boulders; shallow overhang
459		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe ridge; exposing slight overhang; bedrock floor has some rubble
460		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe within a crevasse on top of a pāhoehoe ridge; floor filled with medium to large boulders
461		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on pāhoehoe crevice; inside of undulating pāhoehoe outcrop; slight overhang exposed; floor consists of rubble and few excavated small boulders
462		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on side of undulating pāhoehoe ridge; exposing slight overhang; uneven bedrock floor exposed with few medium boulders
463		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a narrow ravine; floor consists of rubble
464		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top ridge of pāhoehoe outcrop; level bedrock floor with large boulders
465		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located along base of pāhoehoe blister; cleared floor
466		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on a pāhoehoe fissure ridge; bedrock floor with large boulders; large boulders piled to the west and stacked to the southeast of excavation
467		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Possible quarry	Located on undulating pāhoehoe opening a lava blister within a large collapsed blister exposing a shallow overhang; floor covered with cobbles and small boulder slabs; possible quarry for stone enclosure nearby P#152
468		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on slope of undulating pāhoehoe; exposed sloping bedrock floor has 40% coverage of rubble large cobbles and small boulders; IF#067 hammerstone is located in west end of excavation
469		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; bedrock floor and filled with loose boulders; boulders piled to the north and south and stacked to the east of the excavation
470		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along base of low pāhoehoe ridge; immediately adjacent to excavation 471
471		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along edge of pāhoehoe ridge
472		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening a lava blister; exposing an overhang; floor is level bedrock covered with rubble and medium boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolu, North Kona, Hawai'i
July 2019

597



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
509		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on a pāhoehoe fissure ridge; irregular floor with loose boulders
510		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located at the base of a pāhoehoe ridgeline; floor consists of shallow soil and rubble
511		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a sinkhole on undulating pāhoehoe; floor consists of exposed slanting bedrock and rubble
512		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a sinkhole; floor consists of exposed bedrock and some rubble
513		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on sloping side edge of undulating pāhoehoe ridge; exposing overhang; floor consists of excavated large boulders; other excavated stones appear to be piled east of an excavated lava
514		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of the southern portion of a pāhoehoe ridge; irregular floor with loose cobbles and boulders
515		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located at the base of a pāhoehoe ridge; floor consists of rubble ; a small overhang is located on the southwestern edge
516		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on base slope of undulating pāhoehoe; unlevel floor consists of large cobbles and small to large boulders
517		Pāhoehoe	Traditional	None Observed	None Observed	Present	Fair	Uncertain	Located on the base of an undulating pāhoehoe ridge; floor relatively level, consists of soil, rubble and some exposed bedrock; IF#074 was found in the southern part of the excavation
518		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located at the base of a pāhoehoe ridge; excavation is in an overhang on the eastern portion of the ridge; irregular floor with loose rubble on the floor and piled on to the east of the excavation
519		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of low ridge
520		A'a	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of an a'a ridgeline; floor consists of rubble; small overhang into the ridgeline has been exposed
521		A'a	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on base of a'a slope; rubble and large a'a cobble floor
522		A'a	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on an undulating a'a flow; rubble and large a'a cobble floor; excavated stones piled to the west
523		A'a	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located at the base of an a'a ridgeline; floor consists of exposed bedrock and some soil
524		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of undulating pāhoehoe; rubble and large cobble floor; stones piled to south; exposing lava blister
525		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe at the base of a pāhoehoe ridge on the east side; excavating the ridge face; floor covered with medium to large boulders
526		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of a pāhoehoe ridge; excavation is in an overhang on the northeastern portion of the ridge; deep and irregular floor with loose rubble and small boulders piled to the northeast of excavation
527		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located along the edge of a low pāhoehoe blister

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

600



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Condition	Function	Narrative
492		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on a low pāhoehoe fissure ridge; irregular floor; two waterworn coral were located on the floor of the excavation; small overhang was exposed on the northwest edge
493		Pāhoehoe	Traditional	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating textured pāhoehoe opening a large blister; floor is filled with medium to large boulders; large dense waterworn basalt hammerstone cobble was found within the opening IF#072
494		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pāhoehoe at base of pāhoehoe ridge on southwest side of ridge; floor not visible, covered with rubble, cobbles and medium to large boulders
495		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; exposing an overhang on the southwestern edge; irregular floor with loose rubble; boulder stacked to the southeast
496		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in an area of undulating pāhoehoe; exposing an overhang at the southeast; irregular floor with loose rubble and boulders piled to the east and north of excavation
497		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at low point of undulating pāhoehoe flow
498		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a smooth pāhoehoe ridge; small c-shape is located to the southwest of the excavation; floor consists of exposed bedrock; all rubble has been removed from the excavation
499		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Good	Uncertain	Located on a pāhoehoe fissure ridge; flat quarried pāhoehoe slabs stacked to the southeast; floor is flat bedrock; exposing a layer of pāhoehoe
500		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on slightly sloping undulating pāhoehoe; floor consists of exposed bedrock and some rubble
501		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on undulating pāhoehoe; floor consists of exposed bedrock some rubble and some soil
502		Pāhoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located in an area of flat pāhoehoe on a small shelf; exposing a small overhang on the western edge; floor has 5 cm of soil with loose cobbles; boulders piled to the east of excavation
503		Pāhoehoe	None Observed	None Observed	None Observed	Present	Good	Uncertain	Located in an area of undulating pāhoehoe; irregular floor filled with loose boulders
504		Pāhoehoe	None Observed	None Observed	Present	Absent	Fair	Uncertain	Located on undulating pāhoehoe; opening small blister on top of very low ridge; sloping bedrock floor covered with large cobbles and medium boulders; battering present on edges of opening
505		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located at the base of ridge
506		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Poor	Uncertain	Located at the base of ridge
507		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located at the base of blister
508		Pāhoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on broken up textured pāhoehoe on edge of a small ridge on the northwest side; floor is covered with medium to large boulders

Archaeological Inventory Survey – Volume III, Appendices
Lili'uokalani Trust Urban Phase III
Keahuolū, North Kona, Hawai'i
July 2019

599



Table D.2 Lava Excavations Within the Urban Phase III Project Area.

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
001	2.05	0.8	0.37	Rectangular	S End	2175714.91	184717.36
002	2.2	1.24	0.56	Oval	S End	2175493.83	184492.47
003	1.3	0.9	0.6	Rectangular	S End	2175498.42	184484.6
004	3.3	1.3	0.3	Rectangular	N End	2175503.51	184487.43
005	1.4	1.1	0.4	Irregular	N End	2175510.15	184486.33
006	4.01	3.32	0.69	Rectangular	S End	2175511.17	184491.44
007	3	1.1	0.5	Irregular	N End	2175504.46	184481.23
008	2.42	1.25	0.66	Irregular	N End	2175595.27	184625.76
009	2	1	0.5	Irregular	N End	2175589.33	184627.03
010	2.1	1.8	0.64	Irregular	S End	2175586.27	184625.38
011	1	0.71	0.59	Rectangular	S End	2175605.36	184674.54
012	0.76	0.42	0.81	Triangular	S End	2175604.63	184677.6
013	1.22	0.89	0.8	Rectangular	N End	2175607.08	184674.8
014	0.55	0.28	0.64	Irregular	N End	2175607.36	184673.59
015	1	0.6	0.4	Rectangular	S End	2175622.75	184688.75
016	1.3	0.3	0.8	Irregular	S End	2175620.53	184686.77
017	3.2	2.5	0.35	Irregular	N End	2175623.43	184694.94
018	2	1.7	0.4	Irregular	N End	2175623.75	184687.19
019	0.9	0.6	0.7	Rectangular	S End	2175620.61	184680.46
020	0.54	0.36	0.53	Irregular	S End	2175617.42	184686.06
021	1.6	0.57	0.57	Irregular	S End	2175613.55	184689.77
022	0.5	0.45	0.38	Oval	N End	2175607.75	184712.72
023	1.23	0.6	0.5	Triangular	N End	2175613.5	184719.82
024	3	0.8	0.85	Irregular	S End	2175609.02	184728.2
025	1.54	1.46	0.53	Rectangular	N End	2175626.91	184735.47
026	0.7	0.6	0.5	Rectangular	S End	2175467.13	184489.59
027	0.77	0.7	1.4	Circular	N End	2175468.51	184490.35
028	1.32	0.64	0.95	Irregular	SW End	2175469.26	184491.42
029	1.7	1.24	0.59	Oval	N End	2175469.7	184483.44
030	1	0.7	0.8	Irregular	S End	2175461.66	184493.67
031	1.8	1.5	1	Circular	E End	2175461.77	184502.22
032	1.04	0.74	0.7	Circular	N End	2175458.99	184495.01
033	0.85	0.4	1.05	Rectangular	S End	2175467.54	184499.5
034	2	1	1	Oval	S End	2175476.65	184532.36
035	1.1	1.1	1.4	Circular	W End	2175488.61	184528.35
036	1.9	1.1	0.38	Irregular	NE End	2175494.58	184535.02
037	2.1	1.2	0.5	Oval	SE End	2175500.15	184541.93

Archaeological Inventory Survey – Volume III, Appendices
 Lili'uokalani Trust Urban Phase III
 Keahuolu, North Kona, Hawai'i
 July 2019



Exc. No.	Site No.	Lava Type	Artifacts	Midden	Coral	Soil	Con-dition	Function	Narrative
528		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on fairly level pahoehoe; exposed lava blister; sloping bedrock floor has some rubble and few large excavated cobbles; small to large excavated boulders are piled to the southern end of the excavation.
529		Pahoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on level pahoehoe in an area of battering; floor consists of an area of exposed bedrock and some soil.
530		Pahoehoe	None Observed	None Observed	None Observed	Present	Fair	Uncertain	Located on slightly sloping pahoehoe floor; is clear of rubble and consists of some soil and exposed bedrock; large amount of rubble located on the eastern and southern edges of the excavation.
531		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located in a collapsed lava blister; floor consists of level exposed bedrock.
532		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on the edge of a pahoehoe ridge; floor consists of rubble.
533		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe; boulder covered floor.
534		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe; bedrock floor.
535		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe; rubble covered floor.
536		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located along the edge of a ridge; floor consists of bedrock and some rubble.
537		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe; boulder to rubble cover floor; excavated stones piled on southwestern edge.
538		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on undulating pahoehoe; boulder to cobble rubble cover floor; excavated stones piled on northeastern edge.
539		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located on top of pahoehoe tumulus; roughly level bedrock floor with cobble rubble.
540		Pahoehoe	None Observed	None Observed	None Observed	Absent	Fair	Uncertain	Located atop a ridge and in a crevice; floor of the crevice consists of rubble; some rubble has been removed from the crevice and placed along the ridge.



Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
038	1.1	0.9	0.5	Irregular	NE End	2175500.22	184538.12
039	1.86	0.91	0.32	Irregular	NW End	2175498.4	184533.44
040	1.1	0.9	0.4	Rectangular	N End	2175499.12	184535.78
041	0.9	0.6	0.5	Circular	E End	2175502.76	184533.94
042	1.9	1.1	0.9	Oval	N End	2175507.14	184528.08
043	1.3	0.7	0.3	Irregular	S End	2175502.29	184563.98
044	2.31	1.44	0.44	Oval	S End	2175524.18	184596.78
045	1.47	1.45	1.12	Oval	NE End	2175528.5	184614.58
046	1.4	1.14	1.15	Irregular	SE End	2175529.48	184615.5
047	0.77	0.43	1.37	Irregular	W End	2175520.52	184736.15
048	0.67	0.37	0.41	Irregular	SW End	2175505.74	184693.46
049	4.4	1.35	0.6	Linear	E End	2175504.19	184690.64
050	2	1.2	0.3	Irregular	NW End	2175503.57	184687.73
051	1.1	0.7	0.6	Rectangular	N End	2175378.99	184762.65
052	1.8	1	1.13	Linear	NW End	2175404.31	184723.07
053	1.02	0.6	0.84	Irregular	SE End	2175406.87	184716.02
054	1.35	1.1	0.6	Rectangular	N End	2175752.8	184277.32
055	1.2	0.98	0.12	Irregular	N End	2175657.63	184043.85
056	1.7	1	0.08	Irregular	W End	2175652.05	184041.27
057	1.38	0.51	0.29	Rectangular	NE End	2175619.8	184026.47
058	2.3	0.7	1.7	Irregular	W Corner	2175545.08	183894.89
059	1.1	0.7	0.6	Oval	N End	2175573.9	183868.27
060	1.4	1.4	0.8	Irregular	W End	2175523.6	183866.44
061	2.2	2.2	0.7	Circular	SE End	2175525.71	183859.7
062	2.6	2.3	1.68	Circular	SW End	2175523.15	183856.78
063	2.4	1.58	1	Rectangular	W End	2175516.87	183847.51
064	1.9	0.93	0.52-0.95	Oval	E End	2175506.4	183756.46
065	1.44	1	0.63	Irregular	W End	2175501.56	183765.21
066	0.88	0.32	0.68	Irregular	E End	2175497.41	183757.34
067	2.1	0.9	1.2	Oblong	W End	2175452.43	183712.79
068	1.6	1.1	0.4	Irregular	NW End	2175467.02	183702.78
069	2.5	1.3	5.2	Oval	SE Corner	2175470.36	184367.77
070	2.8	1.13	0.9	Irregular	SW Edge	2175472.07	184361.93
071	-	-	-	Triangular	N End	2175476.77	184363.55
072	1.68	0.94	0.42	Oval	N End	2175485.17	184368.32
073	1.3	0.86	0.38	Oval	W End	2175506.7	184332.66
074	1.2	8.6	0.3	Irregular	W End	2175505.12	184331.13
075	1.22	1.2	0.76	Irregular	E End	2175508.02	184341.9

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
076	3	1.12	0.3	Semi-circular	E End	2175483.39	184299.88
077	1.5	1.71	0.59	Irregular	S End	2175478.62	184292.72
078	0.76	0.4	0.3	Oval	SW End	2175445.25	184318.78
079	3.1	1.1	1.23	Rectangular	N End	2175483.52	184266.99
080	0.68	0.42	0.75	Triangular	W End	2175449.16	184453.42
081	1.94	1.9	0.86	Irregular	S End	2175433.33	184465.83
082	0.8	0.3	0.38	Linear	E End	2175452.15	184479.08
083	1.84	0.77	0.34	Uncertain	NE End	2175445.61	184480.12
084	1.5	0.8	0.97	Irregular	N End	2175455.51	184486.35
085	1.16	0.53	0.82	Uncertain	S End	2175496.2	184664.1
086	2.3	1.8	0.5	Rectangular	N End	2175457.25	184614.25
087	3.3	2.6	0.75	Irregular	NE End	2175442.71	184574.19
088	1.9	1.1	0.96	Irregular	E Side	2175446.88	184572.3
089	2.1	1.5	0.5	Circular	SW End	2175447.82	184569.5
090	1.85	0.75	0.33	Rectangular	NE End	2175438.96	184582.68
091	1.8	0.3	0.4	Uncertain	N Corner	2175444.46	184580.43
092	4.3	2.3	0.68	Uncertain	S Corner	2175446.65	184579.94
093	1.37	0.75	1.1	Rectangular	SW End	2175458.28	184556.12
094	1.12	0.74	1.36	Rectangular	S End	2175454.17	184561.04
095	1.32	2.05	0.45	Irregular	N End	2175453.74	184559.49
096	6.5	2.5	0.55	Linear	S End	2175443.66	184555.84
097	0.5	0.5	0.54	Square	SE End	2175445.85	184550.7
098	3.4	1.65	0.38	Oval	N End	2175441.42	184554.63
099	4.6	3.5	1.5	Irregular	S End	2175428.48	184555.41
100	2.2	1.7	1.7	Oval	N End	2175413.73	184562.25
101	2	1.4	1.7	Oval	N End	2175450.28	184548.02
102	1.7	1.2	1.2	Oval	N End	2175445.89	184546.55
103	1.2	0.81	0.79	Rectangular	E End	2175425.33	184544.45
104	1	0.7	0.5	Triangular	N End	2175405.74	184527.49
105	1.7	1	0.45	Irregular	N End	2175396.77	184545.54
106	1.7	0.97	1.42	Uncertain	SW End	2175391.45	184532.8
107	3	1.6	0.6	Rectangular	W End	2175383.9	184531.22
108	2.16	0.61	0.68	Uncertain	N End	2175403.52	184479.48
109	1	0.58	0.56	Rectangular	S End	2175402.62	184483.5
110	1.45	1.02	0.67	Irregular	NE End	2175393.02	184473.3
111	2.2	1.4	0.3	Irregular	S End	2175374.46	184469.63
112	1.95	1.3	0.7	Irregular	E End	2175367.99	184467.12
113	1.6	1.35	0.44	Triangular	NE End	2175376.53	184460.64

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
114	1.35	1.2	0.57	Irregular	N End	2175373.8	184460.46
115	1.75	0.88	0.8	Irregular	NE End	2175368.61	184454.05
116	1.46	0.6	0.56	Irregular	NW End	2175403.82	184481.85
117	0.82	0.74	0.54	Rectangular	N End	2175404.45	184484.09
118	1.97	0.7	0.66	Irregular	NW End	2175404.9	184485.95
119	2.1	0.6	0.4	Irregular	SE Edge	2175394.55	184468.07
120	1.35	1.1	0.45	Irregular	S End	2175344.28	184426.33
121	1.2	0.7	0.4	Rectangular	SW End	2175397.44	184609.63
122	1.94	1	0.6	Oval	NW End	2175401.07	184610.84
123	1.59	1	1.12	Irregular	W End	2175401.8	184639.66
124	2.5	1.2	1.16	Irregular	SE End	2175408.01	184659.47
125	1.55	1	1.54	Irregular	SE End	2175399.03	184662.26
126	2.8	1.6	0.6	Irregular	N End	2175368.74	184560.69
127	0.97	0.92	0.78	Irregular	SE End	2175288.1	184497.99
128	3	1.9	0.4	Rectangular	SW End	2175167.5	184322.65
129	1.4	0.95	0.4	Rectangular	NE End	2175188.63	184332.26
130	2.77	1.04	0.5	Oval	NE Edge	2175195.03	184365.36
131	1.6	1.3	0.46	Irregular	N Edge	2175194.85	184376.43
132	1.5	1.12	1	Irregular	W Edge	2175178.47	184382.03
133	0.77	0.69	0.6	Triangular	NW Edge	2175174.63	184401.61
134	1.2	1	0.5	Square	W End	2175178.78	184444.4
135	2.6	1.9	0.8	Irregular	SE End	2175203.95	184421.56
136	1.6	0.96	0.86	Triangular	N End	2175219.35	184421.87
137	1.07	0.75	0.5	Rectangular	N End	2175209.02	184443.25
138	0.65	0.54	0.54	Triangular	NW End	2175164.21	184446.32
139	1.3	0.95	1.38	Rectangular	SW End	2175189.2	184461.01
140	1.6	0.9	0.4	Rectangular	SE End	2175205.64	184469.51
141	2.9	2.2	0.8	Irregular	SE End	2175218.02	184477.86
142	0.9	0.3	0.3	Irregular	N End	2175241.15	184459.36
143	1.32	1.21	0.69	Circular	NE End	2175243.81	184462.83
144	2.4	1.7	0.6	Rectangular	SE End	2175248.39	184462.58
145	0.95	0.9	0.55	Irregular	E End	2175254.5	184474.93
146	1.5	0.7	0.55	Triangular	N End	2175232.73	184490.13
147	1.3	1.44	0.93	Circular	NW End	2175235.75	184489.81
148	1	0.8	0.56	Irregular	SW End	2175235.75	184502.67
149	1.3	0.9	0.7	Circular	NE End	2175277.34	184484.49
150	0.9	0.33	0.8	Rectangular	SE End	2175278.75	184497.14
151	0.6	0.5	0.5	Triangular	E Edge	2175279.32	184500.28

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
152	1.5	1.1	0.35	Irregular	SW Edge	2175274.07	184499.17
153	1.1	0.7	0.4	Irregular	NW Edge	2175273.46	184502.61
154	1.7	1.1	0.3	Irregular	SW Edge	2175273.57	184503.86
155	1.1	1.1	0.16	Square	W Edge	2175273.33	184511.32
156	0.58	0.3	0.55	Rectangular	W Edge	2175264.12	184520.23
157	2.1	1	0.75	Irregular	SW Edge	2175267.29	184522.75
158	1.1	0.7	0.5	Irregular	W Edge	2175307.66	184666.21
159	1.8	1.6	0.5	Circular	N Edge	2175353.35	184675.78
160	2.8	0.7	0.85	Irregular	N Edge	2175266.56	184673.13
161	1.8	0.6	0.6	Irregular	SW Edge	2175267.4	184679.48
162	1.5	1	0.7	Oval	N Edge	2175249.07	184633.63
163	1.9	0.9	0.7	Oval	NE Edge	2175247.35	184635.73
164	1.7	1.3	0.7	Oval	SE Edge	2175250.98	184622.51
165	1.4	1	0.53	Rectangular	NE Edge	2175248.86	184620.87
166	2.2	1.4	0.64	Triangular	SW Edge	2175245.2	184597.52
167	2.7	1.2	0.7	Oval	SW Edge	2175248.24	184599.35
168	1.6	0.7	1.2	Irregular	S Edge	2175251.14	184602.83
169	-	-	-	Irregular	S Edge	2175247.7	184605.58
170	2	1.2	0.6	Irregular	NE Edge	2175244.13	184606.77
171	2.5	1.5	1.17	Irregular	W Edge	2175248.43	184625.93
172	1.55	1.64	1.04	Oval	Center	2175249.25	184623.28
173	1.8	1.87	0.4	Oval	N Edge	2175237.29	184608.87
174	1.08	0.63	0.19	Rectangular	E Edge	2175119.11	184396.92
175	0.76	0.76	0.29	Irregular	SW Corner	2175112.72	184428.2
176	1.1	0.83	0.15	Irregular	W Edge	2175084.17	184359.58
177	1.2	1.2	0.4	Irregular	SW Edge	2175081.94	184457.22
178	1.05	0.64	0.25	Irregular	S Edge	2175084.88	184541.43
179	1.4	0.7	0.3	Irregular	E Edge	2175150.71	184565.17
180	0.95	0.65	0.5	Irregular	N Edge	2175148.55	184577.53
181	1.57	0.75	0.38	Rectangular	SE Edge	2175140.8	184559.95
182	0.6	0.7	0.3	Irregular	Center	2175146.84	184575.86
183	2.11	1.64	0.14	Irregular	SE Edge	2175142.28	184570.39
184	0.69	0.4	0.42	Irregular	SW Edge	2175136.99	184559.56
185	0.8	0.4	0.5	Triangular	SE Edge	2175132.84	184553.35
186	0.82	0.51	0.57	Oval	N Edge	2175130.13	184553.44
187	0.72	0.45	0.53	Rectangular	NE Edge	2175129.99	184555.77
188	1.3	0.8	0.45	Triangular	NW Edge	2175130.77	184555.91
189	1.5	0.7	1.2	Rectangular	W Edge	2175097.18	184543.25

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
190	1.1	0.6	0.8	Rectangular	SW Edge	2175094.34	184544.49
191	0.6	0.4	0.25	Irregular	N Edge	2175101.88	184557.71
192	0.9	0.61	0.4	Irregular	N Edge	2175103.67	184559.45
193	0.9	0.7	0.45	Oval	NE Edge	2175135.81	184536.74
194	1.7	0.7	0.42	Irregular	S Edge	2175143.11	184548.15
195	1.3	0.6	0.55	Irregular	S Edge	2175085.28	184541.95
196	1.1	0.91	0.47	Irregular	NE Edge	2175076.05	184581.98
197	1	0.75	0.44	Rectangular	SE Edge	2175053.62	184565.93
198	1.54	0.8	0.4	Irregular	N Edge	2175052.16	184558.14
199	0.45	0.3	0.35	Circular	N Edge	2174972.2	184543.83
200	1.3	0.8	0.4	Oval	Center	2175312.17	184277.12
201	1.32	0.37	0.48	Linear	W End	2175315.47	184277.41
202	1.4	0.9	0.5	Oval	N End	2175305.82	184274.72
203	1.1	0.6	0.65	Triangular	E Edge	2175283.08	184299.23
204	1	0.86	0.65	Uncertain	E End	2175278.42	184298.63
205	0.95	0.36	0.6	Irregular	N End	2175269.91	184303.06
206	1.75	1.09	0.45	Irregular	E End	2175262.59	184295.11
207	2.45	1.74	0.45	Irregular	E End	2175297.57	184258
208	1.6	1	0.8	Irregular	N End	2175292.83	184254.98
209	1.8	0.9	0.3	Rectangular	E End	2175279.19	184176.68
210	2.5	2	0.5	Irregular	NE End	2175275.38	184235.88
211	1.35	0.7	0.6	Irregular	E End	2175270.59	184239.09
212	2.05	1.75	0.55	Irregular	NW End	2175273.27	184242.81
213	2.1	1.2	0.52	Irregular	N End	2175268.14	184245.4
214	1.4	0.94	0.79	Irregular	S End	2175267.01	184241.18
215	1.15	0.9	0.55	Irregular	NE Edge	2175268.82	184239.82
216	2.1	0.55	0.5	Irregular	NE End	2175261.16	184232.04
217	5.2	1.8	0.55	Linear	S End	2175254.92	184227.62
218	2.8	1.38	0.35	Irregular	NE End	2175275.25	184235.74
219	1.1	1.1	0.6	Square	E End	2175272.7	184241.44
220	0.5	0.35	0.2	Irregular	S End	2175246.84	184257.45
221	1.4	0.79	0.54	Irregular	N Edge	2175247.28	184262.13
222	1.7	1.1	0.6	Irregular	SE End	2175252.28	184267.2
223	1.4	0.7	0.4	Irregular	S End	2175250.25	184266.33
224	1.78	0.76	0.35	Rectangular	E End	2175239.32	184271.15
225	1.2	0.61	0.86	Linear	SW Edge	2175243.38	184281.31
226	0.97	0.61	0.52	Irregular	E End	2175237.82	184288.94
227	1.59	1.43	0.5	Circular	S End	2175255.1	184304.76

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
228	2	0.3	0.6	Irregular	SW End	2175235.86	184292.64
229	3.43	1.13	0.69	Irregular	E End	2175225.04	184268.43
230	1.2	0.9	0.4	Oval	SE End	2175228.45	184270.73
231	2.77	1.18	0.33	Oblong	SE Edge	2175254.41	184165.25
232	2.7	0.99	0.34	Oblong	SE End	2175258.55	184161.56
233	0.51	0.45	0.49	Circular	E End	2175256.99	184161.05
234	1.45	0.89	0.36	Irregular	SE End	2175268.01	184159.16
235	1.2	0.93	0.42	Irregular	SE End	2175270.86	184158.9
236	5.7	3.7	0.5	Oblong	S End	2175275.68	184158.8
237	1.5	1	0.3	Irregular	NE End	2175272.53	184139.56
238	2	0.8	0.5	Irregular	E Edge	2175253.91	184160.06
239	0.75	0.39	0.47	Irregular	N End	2175250.09	184158.42
240	0.83	0.9	0.7	Triangular	E End	2175248.77	184161.85
241	0.83	0.64	0.41	Rectangular	N End	2175246.66	184162.23
242	1.5	1.5	0.37	Irregular	S End	2175243.36	184158.87
243	2.6	1.1	0.7	Rectangular	SE End	2175240.01	184160.9
244	3	0.8	0.5	Rectangular	NW End	2175234.87	184155.73
245	0.77	0.38	0.17	Irregular	E End	2175280.11	184175.21
246	2.3	2	0.43	Oval	E Edge	2175268.68	184159.24
247	1.03	1.12	0.46	Square	E Corner	2175268.09	184067.27
248	1.05	1.05	0.47	Square	SW End	2175265.94	184070.02
249	1.6	1	0.4	Rectangular	W End	2175263.41	184083.26
250	1.3	0.73	0.51	Oval	NE Edge	2175265.72	184068.66
251	0.86	0.73	0.47	Irregular	NE Edge	2175260.69	184083.18
252	0.8	0.6	0.3	Triangular	NE Edge	2175260.35	184085.26
253	0.72	0.53	0.6	Circular	NW Edge	2175260.86	184086.47
254	3.3	0.83	0.9	Oblong	W End	2175264.66	184086.59
255	1.54	0.64	0.44	Oval	E End	2175264.62	184078.06
256	0.8	0.67	0.3	Irregular	E End	2175260.95	184112.71
257	1.4	0.9	0.45	Triangular	E End	2175258.86	184115.8
258	1.7	1.7	0.45	Square	W Edge	2175258.19	184118.92
259	1.5	1	0.9	Oval	SW End	2175254.26	184115.05
260	2.3	0.55	0.61	Linear	W End	2175245.25	184117.07
261	1.04	0.83	0.78	Oval	SW End	2175257.44	184109.91
262	2.3	1.4	0.24	Irregular	S End	2175236.36	184077.15
263	3.2	1	1.03	Oblong	W End	2175238.69	184079.3
264	1.2	0.9	0.6	Irregular	SE End	2175239.39	184080.62
265	0.75	0.55	0.85	Irregular	N End	2175219.57	184074.46

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
266	1.11	0.57	0.6	Irregular	NW Corner	2175215.1	184075.91
267	1.33	0.91	0.64	Kidney	SE End	2175213	184077.24
268	2.7	1	0.4	Irregular	E Corner	2175193.66	184072.94
269	1.77	1	0.47	Irregular	NE End	2175197.98	184070.03
270	1.85	1.28	1.19	Rectangular	NE End	2175195	184073.51
271	1.7	1.1	0.7	Circular	N End	2175230.45	184121.28
272	0.75	0.55	0.33	Irregular	N End	2175230.36	184120
273	1.6	1	0.67	Rectangular	SW End	2175225.56	184117.19
274	4.2	1.9	0.8	Irregular	S End	2175225.56	184135.84
275	0.65	0.5	0.45	Irregular	N End	2175214.06	184173.9
276	1.05	0.7	0.48	Irregular	N End	2175202.07	184172.1
277	0.63	0.54	0.4	Rectangular	E Edge	2175184.1	184110.23
278	2.56	1	0.5	Irregular	Center	2175687.45	184124.67
279	0.6	0.46	0.47	Triangular	N End	2175667.89	184158.74
280	3.7	1	0.4	Irregular	NW End	2175647.32	184151.05
281	1.12	1.2	0.49	Irregular	E End	2175643.18	184166.23
282	0.65	0.65	0.9	Square	NE End	2175556.62	184196.66
283	1.61	0.76	0.59	Irregular	NE Edge	2175618.66	184026.37
284	1.34	0.7	0.5	Rectangular	NW End	2175505.86	184204.29
285	2.13	1.25	0.27	Oval	SW End	2175505.92	184209.72
286	1.35	0.95	1.35	Irregular	SW End	2175501.69	184218.21
287	1.83	1.33	0.74	Rectangular	W End	2175491.98	184206.69
288	1.22	0.9	0.54	Irregular	NW Corner	2175431.03	184253.7
289	2.3	1.5	0.42	Irregular	N Corner	2175429.06	184254.01
290	1.3	0.4	0.37	Irregular	SW Corner	2175427.09	184249.44
291	2.86	2.45	0.59	Irregular	W Corner	2175426.46	184253.21
292	1.2	0.7	0.34	Triangular	E End	2175491.85	184165.43
293	1.3	0.75	0.85	Rectangular	S End	2175490.54	184162.09
294	2.3	0.8	0.43	Irregular	SW End	2175494.54	184164.55
295	1.1	0.6	0.7	Oval	SW End	2175488.37	184145.46
296	2.32	1.31	0.42	Oblong	SW End	2175486.41	184147.04
297	1.07	0.84	0.54	Rectangular	W Edge	2175498.39	184154.39
298	2.69	2	0.41	Circular	S End	2175495.77	184147.99
299	0.8	0.43	0.48	Irregular	S End	2175494.29	184148.95
300	0.52	0.44	0.5	Circular	S End	2175479.85	184141.14
301	2.2	1.5	1.65	Rectangular	S End	2175493.92	184134.2
302	3.5	2.8	0.38	Irregular	F End	2175501.67	184133.49
303	2.37	1.23	0.5	Oval	N End	2175551.6	183964.84

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
304	3.65	2.65	1.96	Oval	E Edge	2175531.75	183956.99
305	2.1	1.6	0.6	Oval	SW End	2175534.23	183951.57
306	1.75	1.2	0.8	Irregular	SW End	2175529.83	183949.86
307	1.6	1.2	0.9	Oval	W End	2175538.79	183948.64
308	1.85	1.65	0.6	Rectangular	N End	2175537.58	183954.54
309	1.86	1.05	0.42	Oblong	NW End	2175546.15	183947.93
310	3.65	2.8	1	Irregular	N Edge	2175537.87	183952.12
311	1.04	0.7	0.62	Rectangular	N Edge	2175537.09	183953.1
312	1.2	1.1	0.45	Triangular	N End	2175482.75	183968.07
313	2.37	0.81	0.45	Oblong	NW Edge	2175492.67	184111.37
314	1.5	1.2	0.3	Irregular	W End	2175455.63	184089.84
315	2.08	1.24	1.8	Rectangular	SE End	2175447.63	184092.2
316	1.5	1.2	0.8	Oval	SW End	2175486.02	184109.51
317	2.35	1	0.7	Irregular	NW End	2175488.57	184115.41
318	1	0.45	0.4	Oblong	W End	2175451.65	184132.8
319	0.86	0.56	0.64	Rectangular	SW-Edge	2175441.77	184135.02
320	0.6	0.6	0.8	Square	NW End	2175396.77	184162.98
321	3	1.2	0.5	Rectangular	NE End	2175428.41	184191.5
322	5	2.5	1.95	Rectangular	SW End	2175439.44	184171.17
323	1.94	1.15	0.58	Triangular	SE End	2175435.98	184173.28
324	1.7	1.03	0.75	Circular	N End	2175434.21	184176.57
325	1.5	0.7	0.3	Rectangular	E End	2175428.91	184179.25
326	2.2	1.21	0.85	Trapezoid	NW Edge	2175432.24	184176.14
327	1.6	1.3	0.4	Rectangular	NW End	2175426.92	184183.79
328	0.68	0.36	0.49	Rectangular	NW End	2175430.05	184181.86
329	4.2	0.82	0.3	Rectangular	N End	2175382.73	184211.3
330	4.4	2.9	0.45	Rectangular	S End	2175422.92	184194.35
331	0.6	0.6	0.8	Irregular	E End	2175423.95	184195.43
332	1.54	0.83	0.19	Oval	E End	2175423.19	184197.48
333	1.75	1	0.9	Irregular	SW End	2175422.58	184201.32
334	0.6	0.56	0.4	Rectangular	W End	2175374.13	184195.64
335	1.65	1.4	0.4	Rectangular	W End	2175372.4	184182.75
336	1.6	0.8	0.5	Irregular	W End	2175373.56	184183.09
337	0.89	0.6	0.5	Irregular	W End	2175371.34	184180
338	1.29	0.89	0.46	Oval	W End	2175375.45	184168.56
339	4.96	1.52	0.42	Irregular	W End	2175370.25	184165.52
340	1.33	1.14	0.52	Triangular	S End	2175366.73	184169.76
341	1.28	0.85	0.65	Irregular	SW End	2175364.01	184173.93

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
342	2.3	1.25	0.4	Irregular	W End	2175385.58	184174.55
343	2.3	1.6	0.7	Rectangular	E End	2175384.84	184178.29
344	1.46	1.3	0.43	Irregular	N End	2175348.83	184156.59
345	1.6	0.8	0.6	Rectangular	N End	2175346.67	184155.03
346	2.5	1.3	0.5	Irregular	E End	2175400.66	184113.23
347	2.3	1.5	0.7	Irregular	NW End	2175403.96	184107.99
348	1.7	1.3	0.7	Irregular	Center	2175408.18	184096.14
349	0.9	0.5	0.65	Irregular	W End	2175409.37	184089.42
350	1.2	0.7	0.4	Irregular	Center	2175403.18	184084.84
351	1.05	0.5	0.6	Irregular	Center	2175410.12	184087.74
352	0.9	0.8	0.77	Circular	Center	2175408.68	184083.68
353	1.48	2	0.85	Irregular	Center	2175388.22	184069.25
354	0.69	0.31	0.56	Rectangular	E Edge	2175409.72	184086.92
355	0.57	0.53	0.85	Irregular	NE End	2175470.85	183985.24
356	4.36	2.93	0.53	Irregular	W End	2175458.16	183984.98
357	1.72	0.65	0.42	Rectangular	W End	2175445.08	183980.21
358	0.86	0.72	0.15	Irregular	S End	2175441.07	183978.85
359	1.9	0.9	0.6	Irregular	W End	2175390.09	184017.85
360	1.4	0.7	0.4	Triangular	-	-	-
361	1.25	0.91	0.53	Oval	N End	2175380.78	184009.2
362	1	0.64	0.8	Irregular	N End	2175382.3	184010.24
363	0.8	0.8	0.34	Triangular	NW End	2175375.14	184013.68
364	1.3	1	0.4	Rectangular	N End	2175373.69	184010.42
365	2.28	0.92	0.43	Rectangular	W End	2175375.49	184023.58
366	0.95	0.6	0.3	Oval	W End	2175377.57	184025.26
367	2.06	0.8	0.82	Irregular	E End	2175385.67	184030.42
368	0.83	0.58	0.5	Irregular	NE End	2175377.27	184045.48
369	2.64	1.47	0.48	Oval	N End	2175367.22	184053.65
370	2	0.74	0.45	Rectangular	N End	2175365.35	184052.63
371	3.3	0.6	0.54	Irregular	S End	2175362.76	184043.88
372	1.9	1.13	0.44	Oval	N End	2175366.07	184043.1
373	1.3	0.9	0.35	Irregular	S End	2175360.65	184034.34
374	2.2	1.12	0.61	Triangular	W End	2175350.57	184045.58
375	2.04	0.81	0.45	Irregular	S End	2175351.27	184044.22
376	1.3	0.87	0.45	Triangular	NE End	2175352.09	184040
377	1.6	1.1	0.3	Oval	N End	2175349.56	184037.74
378	-	-	-	Irregular	E End	2175345.99	184039.41
379	1.7	0.65	0.6	Rectangular	N End	2175341.59	184039.1

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
380	1.68	0.82	0.6	Rectangular	W End	2175339.89	184038.82
381	1.17	0.95	0.65	Irregular	N End	2175308.87	184031.18
382	1.42	1.12	1.2	Circular	N Edge	2175313.97	184027.95
383	-	-	-	-	N End	2175312.7	184026.2
384	1.2	0.75	1.15	Irregular	N End	2175305.26	184032.53
385	0.5	0.5	0.75	Square	N End	2175373.76	184070.55
386	1.38	0.9	0.7	Irregular	NW End	2175371.12	184074.36
387	2.1	1.8	0.4	Irregular	N End	2175315.18	184112.21
388	1.33	1.1	0.45	Oval	S End	2175312.02	184103.68
389	3.1	1.25	0.52	Irregular	N Corner	2175313.5	184099.91
390	2.2	0.7	0.3	Circular	NW End	2175308.52	184098.78
391	2.8	1.4	0.42	Irregular	S End	2175259.16	183976.83
392	7	3.25	0.5	Oblong	E End	2175251.7	183957.71
393	2.5	1.6	0.5	Rectangular	NE Corner	2175242.03	183950.06
394	1.7	0.7	0.4	Irregular	S End	2175243.5	183951.63
395	4.32	2.99	0.2	Irregular	W End	2175254.01	183955.49
396	1	0.9	0.4	Triangular	W End	2175257.34	183957.4
397	4.73	1.53	0.31	Irregular	N End	2175261.43	183960.15
398	6.8	6.45	0.27	Irregular	E End	2175262.07	183957.86
399	6.43	4.28	0.56	Irregular	NW End	2175265.96	183956.04
400	4.15	2.3	0.26	Irregular	W Corner	2175267.95	183945.18
401	1.1	0.9	0.25	Rectangular	W End	2175267.3	183940.44
402	4.22	1.12	0.85	Irregular	NW End	2175272.53	183956.31
403	6.5	3.8	0.7	Irregular	W End	2175277.84	183956.21
404	9	1.6	0.23	Irregular	E End	2175268.8	183944.98
405	3.21	1.54	0.88	Irregular	N End	2175279.33	183950.32
406	3.6	3.6	0.75	Irregular	W End	2175276.02	183953.56
407	6.6	3.4	0.9	Linear	E End	2175272.65	183967.44
408	1.99	1.16	0.56	Triangular	SW End	2175275.59	183973.97
409	1	0.96	0.3	Irregular	NW End	2175272	183963.74
410	2.74	2.71	0.35	Rectangular	NW Edge	2175263.48	183967.13
411	3.1	1.5	1.2	Irregular	NW Edge	2175260.13	183969.5
412	3	2.5	0.36	Oval	E End	2175272.52	183937.36
413	3.43	1.7	0.74	Irregular	S End	2175274.25	183940.17
414	1.2	0.9	0.23	Irregular	S End	2175272.97	183941.19
415	3.1	2.4	0.5	Oval	N End	2175275.96	183942.39
416	5.2	3.1	0.6	Rectangular	W Corner	2175270.43	183976.22
417	1.73	0.57	0.7	Linear	SW End	2175277.94	183991.71

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
418	2.3	1.6	0.5	Rectangular	SE Edge	2175276.32	183987.09
419	2.3	1.4	0.7	Oval	E End	2175276.36	183997.47
420	1.55	0.99	0.68	Irregular	E End	2175277.95	184000.91
421	4.25	0.8	0.46	Linear	W End	2175284.83	183958.07
422	3	0.7	0.53	Linear	S End	2175279.71	183951.92
423	1.16	0.47	0.37	Oval	SW End	2175282.9	183990.66
424	1.71	1.04	0.7	Oval	SW End	2175253.45	183909.45
425	2.6	2.1	1.55	Irregular	W End	2175250.7	183910.33
426	4.76	2.8	2	Irregular	SE End	2175259.87	183907.07
427	1.4	0.94	0.67	Irregular	N End	2175305.96	183947.05
428	1.21	0.66	0.5	Irregular	S End	2175308.58	183949.95
429	2	1.1	0.5	Irregular	S End	2175311.61	183953.02
430	0.77	0.61	0.4	Triangular	S End	2175313.13	183956.84
431	6.3	1.78	1.2	Circular	S End	2175314.01	183959.61
432	1.53	0.68	0.38	Irregular	S End	2175317.43	183957.33
433	4.01	1.84	0.4	Rectangular	E End	2175321.67	183957.83
434	1.3	1.1	0.7	Irregular	SE Edge	2175327.8	183958.18
435	1.13	1.1	0.72	Irregular	S End	2175329.17	183958.67
436	1.4	1.37	0.5	Circular	NW End	2175326.9	183951.63
437	1.4	0.6	1	Irregular	SE End	2175332.76	183952.74
438	2.35	2.26	0.48	Oval	NW Edge	2175336.18	183947.91
439	4	1.5	0.7	Irregular	S Edge	2175334.05	183944.28
440	2.46	1.67	0.94	Oval	NE End	2175273.78	183916.91
441	2.4	0.8	1	Irregular	E End	2175280.08	183917.14
442	7.14	0.69-2.72	1.14	Irregular	E End	2175281.31	183912.74
443	2.65	1.85	0.34	Triangular	NE End	2175275.46	183923.1
444	3.29	1.64	0.36	Irregular	W End	2175288.94	183923.65
445	2.2	1.75	0.37	Oval	SE End	2175282.5	183934.51
446	2.5	1.2	0.4	Irregular	S End	2175305.87	183938.65
447	3.3	2.3	0.5	Irregular	S End	2175321.54	183949.01
448	1	0.7	0.7	Irregular	S End	2175331.01	183945.69
449	1.34	1.69	0.81	Triangular	SE End	2175325.77	183947.13
450	1.7	1.5	0.35	Irregular	N End	2175331.63	183963.64
451	1.46	1.22	0.5	Triangular	NE End	2175330.39	183963.5
452	1.82	0.96	0.56	Linear	S End	2175325.73	183960.81
453	1.7	0.56	1.3	Triangular	Center	2175324.81	183962.17
454	5.9	4.3	0.9	Irregular	S End	2175335.9	183973.5
455	2.5	1.7	1.3	Irregular	W End	2175340.39	183975.42

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
456	2.2	1.8	1.05	Oval	W End	2175277.74	183883.65
457	2.05	0.6	1	Irregular	NE End	2175274.97	183875.37
458	0.71	0.7	0.61	Square	SW Corner	2175294.21	183851.16
459	2.3	0.5	0.58	Irregular	SW Edge	2175299.81	183859.2
460	1.2	1	1.4	V-shaped	E End	2175301.67	183857.62
461	1.35	0.62	0.6	Irregular	N Edge	2175386.18	183819.13
462	2.43	2.37	1.5	Triangular	E Edge	2175382.77	183815.53
463	2.1	0.7	0.76	Oval	SW Edge	2175378.4	183808.49
464	3.46	3.43	0.7	Irregular	E Edge	2175372.86	183850.44
465	1.8	1.4	1	Rectangular	NW Corner	2175374.48	183853.4
466	4.4	1.3	1.04	Oblong	S End	2175342.11	183866.59
467	0.65	0.31	0.55	Oval	NW End	2175334.78	183844.23
468	6.4	1.15	0.46	Rectangular	E End	2175344.7	183898.36
469	5.2	1.73	0.25	Irregular	E End	2175352.94	183891.93
470	3.5	1.1	0.9	Irregular	NW Edge	2175380.71	183871.58
471	1.2	0.4	0.7	Irregular	NW Edge	2175378.63	183869.52
472	1.02	0.63	0.45	Triangular	E End	2175347.05	183902.25
473	1.85	0.37	0.39	Linear	S End	2175354.78	183895.81
474	1.02	0.7	0.34	Oval	W End	2175357.37	183900.62
475	1.9	1	0.7	Rectangular	N End	2175360.13	183901.48
476	2.67	1.22	0.6	Rectangular	S Corner	2175352.52	183905.18
477	2.8	1.25	0.2	Irregular	E Edge	2175325.63	183920.37
478	1.9	1.22	0.23	Square	NE End	2175306.77	183910.56
479	2.48	2.4	0.35	Triangular	S Corner	2175271.05	184005.55
480	1.4	0.5	0.5	Triangular	S Corner	2175276.2	184006.9
481	1.4	1.2	0.35	Irregular	N End	2175266.65	184009.91
482	1.29	0.94	0.39	Oval	SW End	2175268.4	184012.68
483	3.46	1.96	0.9	Irregular	NE End	2175277.8	184015.08
484	2.03	1.65	0.5	Irregular	SW End	2175293.54	184009.68
485	1.2	0.9	0.56	Oval	NE End	2175293.38	184008.59
486	1.17	1.1	0.35	Triangular	SE End	2175290.13	184004.08
487	2.07	0.72	0.27	Linear	N End	2175324.01	183984.48
488	2.4	1.1	1.1	Irregular	NW End	2175390.04	183902.8
489	3	1.7	0.8	Irregular	S Edge	2175388.54	183925.54
490	0.93	0.79	0.48	Irregular	E End	2175394.25	183918.85
491	1.7	1.45	0.4	Square	SW Edge	2175395.52	183920.33
492	2.26	0.99	-	Irregular	SW End	2175387.98	183907.54
493	1.67	1.64	0.86	Circular	NW End	2175388.94	183902.11

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
494	1.8	1.1	1.3	Irregular	E End	2175402.86	183863.68
495	1.5	1.1	0.9	Irregular	SW Edge	2175512.13	183844.81
496	3.65	2.15	0.83	Oval	W End	2175436.16	183883.85
497	1.5	1.5	0.9	Circular	N Edge	2175465.98	183879.28
498	2.6	0.92	0.53	Linear	NW End	2175427.13	183906.87
499	1.25	1.06	0.23	Rectangular	SW End	2175419.41	183924
500	1.02	0.87	0.37	Square	N End	2175398.01	183932.9
501	1	0.7	0.55	Irregular	E End	2175402.08	183936.37
502	0.82	0.42	0.63	Irregular	N End	2175418.49	183947.57
503	4.6	1.25	0.53	Oblong	S Edge	2175420.56	183950.32
504	1.51	1.32	0.58	Irregular	NE End	2175423.44	183952.16
505	3.4	1	0.5	Irregular	NE End	2175424.17	183945.79
506	3.5	1.3	0.5	Irregular	SW End	2175419.95	183939.37
507	1.88	0.81	0.81	Triangular	SW End	2175404.35	183954.52
508	1.6	1.57	0.8	Irregular	S. End	2175382.17	183962.32
509	2.03	0.54	0.81	Linear	S End	2175394.77	183961.93
510	2.05	1.1	1.15	Oblong	SW End	2175406.12	183952.88
511	1.2	0.8	0.8	Triangular	E End	2175446.01	183910.18
512	2.1	1	1	Irregular	NW Edge	2175448.82	183907.79
513	2.5	1.8	1.55	Irregular	W End	2175450.06	183899.77
514	2.3	0.98	1.07	Irregular	N End	2175460.99	183904.22
515	1.9	1.3	1.2	Irregular	W End	2175465.67	183877.07
516	1.9	1.5	1.3	Oval	W End	2175524.49	183852.36
517	2.2	2.1	0.58	Circular	SE Edge	2175521.09	183855.37
518	1.95	1.7	1.46	Circular	W Edge	2175519.56	183852.24
519	2.3	1.5	0.8	Irregular	N Edge	2175518.96	183861.76
520	3.7	1	0.6	Oblong	SW End	2175490.45	183883.8
521	0.84	0.84	0.6	Circular	NW Edge	2175490.94	183889.76
522	1.4	1.35	0.55	Irregular	W End	2175489.47	183892.9
523	1.6	1.4	1.2	Irregular	NE End	2175489.64	183896.24
524	0.85	0.65	0.5	Oval	E End	2175489.49	183902.07
525	1.7	1.2	0.65	Triangular	SW End	2175536.09	183896.52
526	2.1	0.8	1.58	Irregular	S End	2175540.68	183891.24
527	4.8	2.64	1.25	Oval	SW End	2175502.95	183910.93
528	1.2	0.6	0.35	Triangular	NE Edge	2175400.63	184579.44
529	0.63	0.57	0.57	Square	SW End	2175472.69	184383.38
530	2.19	1.71	0.35	Rectangular	SE End	2175030.87	184461.71
531	1.8	1.2	0.2	Oval	NE End	2175137.05	184569.06

Exc. No.	Measurements (m)			Shape	GPS Point Location	Northing	Easting
	Length	Width	Depth				
532	0.7	0.6	0.6	Irregular	SW End	2175103.05	184543.9
533	1.2	1.5	0.8	Irregular	N Edge	2175169.57	184422.38
534	0.9	0.83	0.6	Irregular	SE Edge	2175437.36	184243.92
535	1.5	1.2	0.7	Irregular	E Edge	2175410.42	184209.33
536	1.3	0.9	0.5	Irregular	N Edge	2175408.05	184033.74
537	4.9	2.7	0.82	Irregular	N Edge	2175319.02	183848.1
538	3.7	3.5	0.58	Irregular	W Edge	2175316.48	183841.12
539	3	1.5	0.3	Triangular	N End	2175446.03	183937.85
540	-	-	-	Linear	W Edge	2175555.48	183854.91

APPENDIX E

Isolated Finds

Table E.1. Isolated finds in the Urban Phase III Project Area identified during the Current Survey.

Isolated Find No.	Artifact Type	Material Type	Length (cm)	Width (cm)	Height/ Thick (cm)	Possible Age	Easting	Northing
IF-001	Waterworn Fragment	Basalt	14	10	10	Traditional	184733.8	2175645.8
IF-002	Waterworn	Fine-grained Basalt	29	26	10-23	Traditional	184688.5	2175617.1
IF-003	Hammerstone	Fine-grained Basalt	10	10	5	Traditional	184688.7	2175615.8
IF-004	Hammerstone	Fine-grained Basalt	31	27	18	Traditional	184702.0	2175420.4
IF-005	Hammerstone	Fine-grained Basalt	25	20	12	Traditional	184714.0	2175409.1
IF-006	Hammerstone	Basalt	16	10	5	Traditional	183866.98	2175572.25
IF-007	Hammerstone	Basalt	26	18	19	Traditional	183868.77	2175571.07
IF-008	Hammerstone	Basalt	34	27	27	Traditional	183859.69	2175525.86
IF-009	Hammerstone	Basalt	22	17	13	Traditional	183712.38	2175451.66
IF-010	Hammerstone	Fine-grained Basalt	30	31	15	Traditional	183665.58	2175429.81
IF-011	Hammerstone	Fine-grained Basalt	18	14	12	Traditional	183663.6	2175430.75
IF-012	Hammerstone	Basalt	24	16	13	Traditional	183673.93	2175422.61
IF-013	Hammerstone	Basalt	23	20	7	Traditional	183659.44	2175498.86
IF-014	Hammerstone Fragment	Basalt	4.5	3.5	2.0	Traditional	184336.86	2175463.45
IF-015	Adze Fragment	Basalt	7	4	3	Traditional	184496.1	2175456.9
IF-016	Hammerstone	Basalt	18	18	10.5	Traditional	184579.04	2175439.8
IF-017	Hammerstone	Fine-grained Basalt	36	24	26	Traditional	184554.55	2175429.14
IF-018	Hammerstone	Fine-grained Basalt	24	23	18	Traditional	184553.78	2175430.95
IF-019	Hammerstone	Basalt	28	16	10.5	Traditional	184541.76	2175420.38
IF-020	Hammerstone	Fine-grained Basalt	26	22	15	Traditional	184534.06	2175394.66
IF-021	Hammerstone	Fine-grained Basalt	9	8	6	Traditional	184541.76	2175420.38
IF-022	VOIDED							
IF-023	Hammerstone	Basalt	33	29	16	Traditional	184498.13	2175287.76
IF-024	Hammerstone	Fine-grained Basalt	26	15	11	Traditional	184474.82	2175255.70
IF-025	Hammerstone	Med-grained Basalt	29	21	22	Traditional	184497.98	2175279.06
IF-026	Hammerstone	Basalt	21	18	10	Traditional	184361.30	2175085.16
IF-027	Hammerstone	Basalt	30	12	10	Traditional	184577.33	2175148.42
IF-028	Hammerstone	Basalt	18	17	16	Traditional	184536.52	2175135.83
IF-029	Hammerstone	Vesicular	21.5	13.5	12.5	Traditional	184296.11	2175308.54

Isolated Find No.	Artifact Type	Material Type	Length (cm)	Width (cm)	Height/ Thick (cm)	Possible Age	Easting	Northing
IF-030	Hammerstone	Basalt	19.5	19	11	Uncertain	184247.68	2175310.19
IF-031	Hammerstone	Vesicular Basalt	9.5	8.5	7	Traditional	184247.68	2175310.19
IF-032	Hammerstone	Fine-grained Basalt	13.5	10.5	8	Traditional	184241.79	2175268.61
IF-033	Hammerstone	Fine-grained Basalt	18	13	13	Traditional	184302.70	2175257.81
IF-034	Hammerstone	Fine-grained Basalt	23	22	15	Traditional	184268.22	2175225.20
IF-035	Hammerstone	Med-grained Basalt	17	12	8.5	Traditional	184164.65	2175252.72
IF-036	Hammerstone	Vesicular Basalt	22	19	0.9	Traditional	184137.69	2175273.61
IF-037	Hammerstone	Basalt	5	4.5	2	Traditional	184158.70	2175247.24
IF-038	Hammerstone	Fine-grained Basalt	25.5	23	19	Traditional	184162.94	2175244.66
IF-039	Hammerstone	Basalt	34	29	21	Traditional	184160.37	2175238.47
IF-040	Hammerstone	Fine-grained Basalt	16.5	11.5	8	Traditional	184110.96	2175258.17
IF-041	Hammerstone	Fine-grained Basalt	30	19	13	Traditional	184121.22	2175231.37
IF-042	Hammerstone	Fine-grained Basalt	12	8	6.5	Traditional	184107.98	2175205.30
IF-043	Hammerstone	Fine-grained Basalt	29	16	11	Traditional	184117.18	2175197.16
IF-044	Hammerstone	Fine-grained Basalt	20	18	10	Traditional	184269.20	2175173.69
IF-045	Hammerstone	Fine-grained Basalt	10	9	3	Traditional	184262.44	2175098.72
IF-046	Hammerstone	Med-grained Basalt	22	17	11.5	Traditional	184269.21	2175651.99
IF-047	Bottle	Glass	16.51 (6 3/4")	6.09 (2 1/4")	-	Historic	184280.05	2175587.61
IF-048	Bottle	Glass	16.51 (7 1/8")	6.09 (2 1/4")	-	Historic	184280.30	2175587.74
IF-049	Hammerstone	Fine-grained Basalt	9	5	4.5	Traditional	184211.56	2175481.01
IF-050	Hammerstone	Fine-grained Basalt	33	18	20	Traditional	183982.83	2175558.24
IF-051	Hammerstone	Basalt	24	22	15	Traditional	183965.67	2175549.99
IF-052	Hammerstone	Fine-grained Basalt	24	23	21	Traditional	183964.67	2175547.99
IF-053	Hammerstone	Fine-grained Basalt	24	23	12	Traditional	183954.67	2175533.38
IF-054	Hammerstone	Fine-grained	23.5	21	10	Traditional	183966.75	2175484.75

Isolated Find No.	Artifact Type	Material Type	Length (cm)	Width (cm)	Height/ Thick (cm)	Possible Age	Easting	Northing
IF-055	Hammerstone	Basalt	21	18	14.5	Traditional	184019.18	2175487.48
IF-056	Hammerstone	Med-grained Basalt	15	8.5	7.5	Traditional	184105.36	2175452.20
IF-057	Hammerstone	Fine-grained Basalt	23	16	13	Traditional	184133.21	2175450.49
IF-058	Hammerstone	Coral	11	10	4	Traditional	184157.94	2175466.29
IF-059	Hammerstone	Basalt	26	20	17.5	Traditional	184135.00	2175442.79
IF-060	Hammerstone	Basalt	29.5	29	26	Traditional	184151.74	2175353.34
IF-061	Hammerstone Fragment	Fine-grained Basalt	13	9.5	5.5	Traditional	184112.88	2175399.80
IF-062	Hammerstone	Basalt	11.5	10	7.5	Traditional	184098.41	2175375.49
IF-063	Hammerstone	Fine-grained Basalt	17	14	12.5	Traditional	184033.81	2175361.60
IF-064	Hammerstone	Fine-grained Basalt	20	19.5	12.5	Traditional	184046.32	2175351.00
IF-065	Hammerstone	Basalt	25	22	13	Traditional	184041.95	2175311.72
IF-066	Hammerstone	Fine-grained Basalt	27.5	13	12.5	Traditional	183759.57	2175390.45
IF-067	Hammerstone	Basalt	35	27	26	Traditional	184892.79	2175346.22
IF-068	Hammerstone	Fine-grained Basalt	19	18	14	Traditional	183904.66	2175387.04
IF-069	Hammerstone	Fine-grained Basalt	15	14	13	Traditional	183904.66	2175387.04
IF-070	Hammerstone	Vesicular Basalt	24	18	11	Traditional	183904.66	2175387.04
IF-071	Hammerstone	Vesicular Basalt	29.5	28	18.5	Traditional	183903.91	2175387.11
IF-072	Hammerstone	Fine-grained Basalt	15	13.5	8.5	Traditional	183903.24	2175388.91
IF-073	Hammerstone	Basalt	18.5	18	9	Traditional	183904.82	2175389.44
IF-074	Hammerstone	Basalt	33	32	25	Traditional	183855.39	2175521.68
IF-075	Hammerstone	Basalt	28	26	24	Traditional	n/a	n/a
IF-076	Hammerstone	Basalt	16	15	8	Traditional	n/a	n/a
IF-077	Hammerstone	Basalt	24	21	18	Traditional	183712.04	2175445.88

APPENDIX F

GPS Site Locations

Table F.1 GPS Coordinates of Sites and Features within the Urban Phase III Project Area.

SIHP No. (50-10-27-)	Field No.	Feature	Site / Feature Type	GPS Location	Northing	Easting
13256	T-004		Stone Mound	Center	2175505,109	184691,188
13257	T-005		Filled Crevice	Center	2175450,088	184761,903
13258	T-068	A	Modified Lava Blister	East End	2175404,733	184666,587
	T-068	B	Modified Depression	Center	2175416,689	184647,438
13260	T-069	A	Modified Collapse Sink	Southeast Corner	2175234,341	184625,877
	T-069	B	Modified Collapse Sink	Southeast Edge	2175238,314	184614,671
	T-069	C	Modified Collapse Sink	Northwest Corner	2175242,042	184628,861
13261	T-070		Enclosure	Southwest Corner	2175163,181	184592,944
13262 (Site 25650 = Features B & C only)	T-038	A	Enclosure	Northwest Corner	2174981,68	184520,961
	T-038	B	Stone Mound	South End	2174985,936	184532,832
	T-038	C	Stone Mound	South End	2174991,644	184533,938
13269	T-039		C-Shaped Wall	West End	2174980,431	184444,372
13271 (2006 T-387 = Fe. B only) (2006 T-388 = Fe. A only)	T-033	C	Stone Mound	Center	2175107,58	184491,534
	T-033	D	Stone Mound	Center	2175092,757	184492,714
	T-033	B	Stone Mound	Southwest Edge	2175118,554	184478,181
	T-033	A	Enclosure	Center	2175105,434	184478,014
13272	T-074	A	Terrace	Southeast Corner	2175211,075	184377,394
	T-074	B	Petroglyph	Center	2175190,713	184400,965
	T-074	C	Stone Mound	South Edge	2175159,838	184408,162
	T-074	D	Modified Lava Tube	Center	2175187,379	184363,394
	T-074	E	Stone Mound	Center	2175167,524	184452,113
13274	T-008	A	Stone Mound	Center	2175452,543	184550,388
	T-008	B	Stone Mound	Center	2175447,469	184551,166
	T-008	C	C-Shaped Alignment	East End	2175423,087	184557,768
	T-008	D	Causeway	Center	2175451,197	184567,393
	T-008	E	Petroglyph	Center	2175447,461	184554,421
13275	T-009		Modified Lava Tube	East Edge of Opening	2175433,879	184578,314
13280	T-075	A	Enclosure	Southwest End	2175392,99	184440,312
	T-075	B	Stone Mound	Center	2175389,848	184445,366
	T-075	C	Petroglyphs	Fish, East End	2175389,839	184439,07
	T-075	D	Stone Mound	Center	2175378,573	184458,825
13281	T-072	A	Enclosure	Northwest Corner	2175165,164	184423,756
	T-072	B	Enclosure	South End	2175168,59	184427,334
	T-072	C	Stone Edged Depression	North Edge	2175166,22	184417,685
13282	T-076		Alignment	Southwest End	2175186,461	184359,977

SIHP No. (50-10-27-)	Field No.	Feature	Site / Feature Type	GPS Location	Northing	Easting
13286	T-089	A	Stone Mounds (2)	Center	2175569,895	184062,511
	T-089	B	Stone Mound	Center	2175581,428	184057,306
	T-089	C	Stone Mound	Center	2175575,255	184067,661
	T-089	D	Stone Mound	Center	2175579,975	184069,688
	T-089	E	Stone Mounds (2)	Center of North Mound	2175576,448	184078,968
	T-089	F	Stone Mound	Center	2175583,623	184089,58
	T-089	G	Stone Mound	Center	2175587,987	184070,944
13287	T-077	A	Modified Lava Tube	South End	2175460,455	184236,075
	T-077	B	Enclosure	North Corner	2175454,733	184243,04
	T-077	C	Platform	Southeast Corner	2175445,371	184247,04
	T-077	D	Terrace	Northwest Corner	2175439,979	184239,022
	T-077	E	Enclosure	South End	2175422,559	184235
	T-077	F	L-Shaped Wall	East End	2175404,395	184225,502
	T-077	G	Wall	South End	2175407,026	184219,712
	T-077	H	Terrace	Northwest Corner	2175409,223	184209,203
	T-077	I	Paving	Northwest Corner	2175406,585	184203,619
	T-077	J	Stone Mound	North End	2175419,061	184195,924
	T-077	K	Stone Mound	North End	2175422,299	184188,035
	T-077	L	L-shaped Wall	South End	2175404,515	184186,97
	T-077	M	Terrace	Southwest Corner	2175407,499	184180,311
	T-077	N	Terraces (2)	East Corner	2175404,734	184180,845
	T-077	O	Filled Crevice	Northwest Edge	2175401,192	184181,978
	T-077	P	Filled Crevice	Northwest Edge	2175386,702	184180,383
	T-077	Q	Filled Crevice	Southwest End	2175390,946	184177,514
	T-077	R	Terrace	Northwest Corner	2175400,498	184170,084
	T-077	S	Wall	Northeast Corner	2175416,714	184172,137
	T-077	T	Modified Lava Blisters (2)	South End	2175417,217	184178,37
T-077	U	Petroglyphs	Southeast Corner	2175440,635	184232,72	
13288	T-118		Terrace	Southeastern Corner	2175592,638	184276,05
13293	T-085		C-shaped Wall	North End	2175391,561	184016,107
13294	T-094	A	Stone Mound	Center	2175260,87	183960,5
	T-094	B	Stone Mound	Center	2175253,6	183952,873
	T-094	C	Stone Mound	Center	2175251,639	183954,332
	T-094	D	Stone Mound	Center	2175255,345	183952,241
	T-094	E	Petroglyphs	Panel 2	2175249,998	183954,819
13298	T-101		Causeway	Center	2175487,075	183866,172
13299	T-105		Terraces (2)	North Corner	2175445,928	183802,023
13300	T-113		Modified Overhang	South End of Entrance	2175374,312	183821,357

SIHP No. (50-10-27-)	Field No.	Feature	Site / Feature Type	GPS Location	Northing	Easting
13301	T-112		Modified Overhang	South End of Entrance	2175379,662	183812,912
13302	T-107	A	Modified Overhang	Southwest Edge	2175399,905	183812,75
	T-107	B	Overhang	North Edge	2175400,059	183821,37
13351	T-081	A	Lava Tube	Southwest Edge of Opening	2175505,529	184171,249
	T-081	B	Enclosure	South End	2175499,915	184157,793
13353	T-095	A	Petroglyphs	Panel 2	2175257,71	183904,818
	T-095	B	Modified Pond	Northeast Edge	2175264,182	183884,511
13386	T-117		Modified Overhang	Southeast End of Wall	2175349,312	183920,886
25645	T-024		C-Shaped Wall	East End	2175253,406	184444,991
25646	T-026		C-Shaped Wall	Northwest End	2175208,006	184498,551
25647	T-025	A	C-Shaped Wall	Northeast End	2175146,927	184479,282
	T-025	B	C-Shaped Wall	Feature A, Northeast End	2175146,884	184479,034
25648	T-048		Stone Mound	Center	2175070,304	184468,841
25649	T-042		Enclosure	Northeast Edge	2175013,609	184484,343
29088	T-001		Stone Mound	Center	2175863,085	184346,886
29089	T-002		Stone Mound	Center	2175812,319	184228,203
29090	T-003	A	Trail Segment	Northeast End	2175609,602	184675,577
	T-003	B	Trail Segment	Northeast End	2175613,957	184674,736
29091	T-006	A	Trail Segment	Northeast End	2175509,887	184484,659
	T-006	B	Stone Mound	Center	2175510,774	184487,685
29092	T-007		Trail Segment	Northeast End	2175550,852	184587,701
29093	T-010		Battering	Center of B-001	2175400,36	184577,527
29094	T-011	A	C-Shaped Alignment	South End	2175412,157	184531,58
	T-011	B	Stone Mound	Center	2175419,13	184529,449
29095	T-012		Petroglyph	Center	2175646,853	184130,789
29096	T-013		Stone Edged Depression	South Edge	2175462,799	184526,831
29097	T-014		Stone Mound	Center	2175445,785	184449,474
29098	T-015		Petroglyphs	Panel 1	2175429,986	184459,452
29099	T-016	A	Enclosure	Southwest Edge	2175439,651	184396,516
	T-016	B	Alignment	West End	2175433,237	184393,663
	T-016	C	C-Shaped Wall	East End	2175417,269	184398,127
	T-016	D	Petroglyph	Center	2175415,637	184405,354
	T-016	E	Stone Mound	Center	2175417,605	184422,189
29100	T-017		Battering	Center of B-001	2175474,897	184383,405
29101	T-018		Stone Edged Depression	Center	2175503,458	184338,222
29102	T-019		Stone Mound	Center	2175495,878	184272,417
29103	T-020		Stone Mound	Center	2175461,446	184290,998

SIHP No. (50-10-27-)	Field No.	Feature	Site / Feature Type	GPS Location	Northing	Easting
29104	T-021	A	C-Shaped Wall	Southwest End	2175357,759	184329,696
	T-021	B	C-Shaped Alignment	Northwest End	2175388,432	184324,042
	T-021	C	Stone Mound	Center	2175384,221	184366,991
29105	T-022		Enclosure	North End	2175359,779	184413,174
29106	T-023		Alignment	Northwest End	2175289,816	184417,001
29107	T-027		Battering	B-001, Center	2175182,523	184549,757
29108	T-028		Stone Mound	Center	2175355,914	184670,89
29109	T-029		Rock Concentration	Center	2175361,264	184656,146
29110	T-030		Rock Concentration	Center	2175344,589	184629,38
29111	T-031		C-Shaped Wall	Southeast End	2175284,287	184685,853
29112	T-032		C-Shaped Wall	Northeast End	2175278,54	184614,664
29113	T-034		Stone Mound	Center	2175049,955	184519,054
29114	T-035		Battering	Center of B-001	2175025,595	184567,914
29115	T-036		Stone Cist	Center	2175041,659	184543,728
29116	T-037		Battering	Center of B-001	2175070,272	184548,217
29117	T-040		Stone Mound	Center	2174964,793	184506,962
29118	T-041		Filled Crevice	South End	2174971,96	184540,338
29119	T-043		Battering	Center of B-001	2174960,256	184556,689
29120	T-044		Stone Mound	Center	2175039,272	184446,767
29121	T-045		Alignment	Northwest End	2175083,675	184425,964
29122	T-046	A	Wall Segment	West End	2175070,964	184362,748
	T-046	B	Stone Mound	Center	2175087,599	184374,778
29123	T-047		Stone Mound	Center	2175126,289	184400,207
29124	T-049		Stone Mound	Center	2175010,854	184414,768
29125	T-050	A	Stone Mound	Center	2175084,032	184265,797
	T-050	B	Stone Mound	Center	2175073,318	184268,657
29126	T-051		Battering	Center	2175092,805	184277,869
29127	T-052		Alignment	North End	2175121,633	184274,627
29128	T-053		Stone Mound	Center	2175115,902	184257,014
29129	T-054		Enclosure	East End	2175137,701	184268,182
29130	T-055		Stone Mound	Center	2175130,792	184290,363
29131	T-056	A	C-Shaped Wall	West End	2175143,109	184218,681
	T-056	B	Stone Mound	Feature A, West End	2175143,463	184218,373
29132	T-057		Battering	Center	2175153,067	184262,492
29133	T-058	A	Stone Mound	Center	2175284,5	184158,703
	T-058	B	Stone Mound	Center	2175277,408	184153,981
29134	T-059		Stone Mound	Center	2175302,775	184199,444
29135	T-060		Stone Mound	Center	2175326,097	184224,227
29136	T-061		Battering	Center, B-001	2175260,517	184233,198
29137	T-062		Stone Edged Depression	Center	2175274,541	184288,123

SIHP No. (50-10-27-)	Field No.	Feature	Site / Feature Type	GPS Location	Northing	Easting
29138	T-063		Stone Mound	Center	2175353,312	184192,008
29139	T-064		Stone Mound	Center	2175365,954	184134,068
29140	T-065		C-Shaped Wall	East End	2175366,734	184105,125
29141	T-066		C-Shaped Wall	South End	2175384,72	184079,138
29142	T-067		Trail Segment	Northeast End	2175415,825	184057,462
29143	T-071	A	Modified Overhang	Center	2175124,553	184552,462
	T-071	B	Modified Overhang	South End	2175121,112	184553,792
	T-071	C	Modified Overhang	Northeast Edge	2175130,892	184546,071
	T-071	D	Modified Overhang	Northwest Edge	2175128,397	184546,905
	T-071	E	Modified Overhang	Southeast Edge	2175149,033	184569,662
	T-071	F	Modified Overhang	North Edge	2175154,513	184576,383
29144	T-073	A	Petroglyph	Center	2174950,369	184524,62
	T-073	B	Stone Mound	Center	2174951,774	184521,679
	T-073	C	Petroglyph	Center	2174951,101	184522,024
29145	T-078		Battering	B-001	2175369,753	184258,562
29146	T-079	A	Enclosure	South Edge	2175683,306	184157,562
	T-079	B	Enclosure	Southwest End	2175674,862	184145,07
	T-079	C	Enclosure	West End	2175688,065	184136,02
	T-079	D	Enclosure	Southwest End	2175716,859	184124,762
	T-079	E	Rock Concentration	Center	2175707,908	184143,503
	T-079	F	Enclosure	Northwest End	2175653,327	184160,082
	T-079	G	Enclosure	Southeast End	2175648,38	184159,772
	T-079	H	Lava Tube	South End	2175643,184	184158,563
29147	T-080	A	Enclosure	North End	2175616,244	184125,105
	T-080	B	Rock Concentration	Northwest End	2175608,897	184124,902
29148	T-082		Petroglyphs	Southeast Edge	2175162,97	184116,053
29149	T-083		Petroglyph	Center	2175242,734	184117,317
29150	T-084		Petroglyph	Panel 1, West End	2175298,45	184089,11
29151	T-086		Stone Mound	Center	2175467,868	183987,255
29152	T-087	A	Petroglyph	Northwest End	2175482,215	183967,954
	T-087	B	Petroglyph	North End	2175484,372	183967,063
29153	T-088		Stone Mound	Center	2175529,636	184038,05
29154	T-090		Enclosure	West Edge	2175560,98	184121,345
29155	T-091		Stone Mound	Center	2175395,386	184163,494
29156	T-092		Enclosure	Southwest End	2175501,255	184199,927
29157	T-093		Enclosure	Southwest Corner	2175294,283	183848,345

SIHP No. (50-10-27-)	Field No.	Feature	Site / Feature Type	GPS Location	Northing	Easting
29158	T-096	A	Modified Collapse Sink	Southeast Edge	2175400,065	183899,822
	T-096	B	Modified Overhang	North Corner of Opening	2175391,757	183909,991
	T-096	C	Modified Overhang	Northeast Edge of Opening	2175386,59	183917,065
	T-096	D	Stone Mound	Center	2175385,505	183925,721
29159	T-097	A	Trail	South End	2175411,767	183934,285
	T-097	B	Modified Overhang	Northwest Corner	2175415,946	183935,58
29160	T-098		Petroglyph	South End	2175331,36	183952,153
29161	T-099	A	Enclosure	North Corner	2175471,361	183867,886
	T-099	B	C-Shaped Wall	Southeast End	2175474,634	183865,828
29162	T-100		C-shaped Wall	Southwest End	2175425,261	183905,001
29163	T-102		Enclosure	Northeast Corner	2175579,634	183873,896
29164	T-103		Stone Mound	Center	2175436,033	183760,061
29165	T-104	A	Stone Mound	Center	2175473,736	183805,784
	T-104	B	Stone Mound	Center	2175478,167	183800,609
29166	T-106		C-shaped Wall	West End	2175445,484	183783,729
29167	T-109		Petroglyph	Center	2175281,406	183909,363
29168	T-110		Modified Overhang	Northeast End of Entrance	2175398,061	183885,662
29169	T-111		C-shaped Wall	East End	2175399,931	183889,841
29170	T-114		Stone Mound	Center	2175448,923	183706,226
29171	T-115		C-shaped Wall	Southwest End	2175433,646	183746,001
29172	T-116		Stone Mound	Center	2175419,133	183730,935
29173	T-119	A	Stone Mound	Center	2175592,511	184036,502
	T-119	B	Stone Mound	Center	2175607,601	184031,731
	T-119	C	C-Shaped Wall	Northeast End	2175613,311	184028,681
	T-119	D	Stone Mound	Center	2175604,272	184025,336
	T-119	E	Stone Mound	Center	2175629,327	184025,167
	T-119	F	Stone Mound	Center	2175628,144	184012,608
29174	T-120		Rock Concentration	Center	2175456,215	184132,733
29175	-		Lava Excavations	-	Various	Various
29176	T-108		C-shaped Wall	Southwest End	2175296,422	183955,576



**SHPD ACCEPTANCE LETTER
FOR URBAN PHASE III
ARCHAEOLOGICAL
INVENTORY SURVEY,
DATED SEPTEMBER 9, 2019**

APPENDIX

E-1



DAVID Y. IGE
GOVERNOR OF
HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
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CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

September 9, 2019

Michael Shibata, Development Manager
Lili'uokalani Trust
1100 Alakea Street Suite 1100
Honolulu HI 96813
Email: mshibata@onipaa.org

IN REPLY REFER TO:
Log No.: 2019.01679
Doc. No.: 1909AM05
Archaeology

Dear Mr. Shibata:

**SUBJECT: Hawaii Revised Statutes (HRS) Chapter 6E-42 Historic Preservation Review –
Archaeological Inventory Survey of Urban Phase III Parcel
Lili'uokalani Trust Lands
Keahuolū Ahupua'a North Kona District Island of Hawai'i
TMK: (3) 7-4-008:002 por.**

This letter provides the State Historic Preservation Division's (SHPD's) review comments concerning the report titled *Revised Draft Archaeological Inventory Survey of Urban Phase III Parcel Queen Lili'uokalani Trust Lands in Keahuolū, North Kona Island of Hawai'i [TMK: (3) 7-4-008:002 por.]* (Reeve et al., July 2019). The SHPD received this revised draft on July 31, 2019. Previously, the SHPD requested revision of the initial draft in a letter dated August 16, 2018 (Log No. 2016.00071, Doc. No. 1808SL04).

Pacific Legacy, Inc., conducted the archaeological inventory survey (AIS) in support of the of the Lili'uokalani Trust (LT) Urban Phase III project, for which a master plan is being prepared for future residential, commercial, and civic/community areas, and open space. The Urban Phase III project area, totaling 213 acres, is owned by LT, a non-profit organization dedicated to the welfare of Hawai'i's children. The Urban Phase III project will involve grubbing, grading, and trench excavation for building construction and installation of utilities.

The letter that accompanies this revised draft AIS report also mentions a separate project, the Makalapua Project District (MPD) project, whose project area totals approximately 67.2 acres and includes multiple TMK parcels. An *Environmental Impact Statement* is being prepared for the MPD, which will create residential, hotel, retail, commercial, office, and civic/community areas.

The 213-acre Urban Phase III project area is bounded on the southwest by the old Kona Airport, now a State Recreation Area; on the northwest by a 628-acre conservation parcel belonging to LT; on the northeast by Queen Ka'ahumanu Highway; and on the southeast by the Kona Commons Shopping Center and undeveloped land along Makala Boulevard. The project area begins a short distance north of the north edge of the Kailua-Kona town core.

Previous correspondence concerning earlier, related projects, cited and summarized in the current AIS report (page 100) includes the following, concerning the Keahuolū project, as proposed at the time of Paul H. Rosendahl, Ph.D., Inc.'s AIS (PHRI 1994) and AMP (PHRI 1993):

- March 5, 1993 – SHPD to PHRI (Log No. 6851, Doc. No. 9303RC03), limiting data recovery to two sample blocks plus a few sites outside the project area;
- June 10, 1993 – PHRI to SHPD (not available);

- July 28, 1993 – DLNR to Belt, Collins & Associates (Log No. 8976, Doc. No. 9307RC40), stating that June 10, 1993, addendum to mitigation plan was not received; and
- December 21, 1993 – DLNR to PHRI (Log No. 10383, Doc No. 9312RC30), accepting sampling strategy for mitigation phase.

More recent correspondence in SHPD's files concerns archaeological studies conducted in support of shoreline-improvement removal in the LT Keahuolū campgrounds. The following letters were sent to Pacific Legacy:

- March 15, 2012 – SHPD's review letter (Log No. 2010.2686, Doc. No. 1203TD09) accepting campgrounds AIS report, and agreeing with recommendations for preservation of 87 sites, and data recovery for 235 sites;
- April 2, 2014 – SHPD's review letter (Log No 2014.0913, Doc. No. 1404MV01), accepting an archaeological monitoring plan for the campgrounds project; and
- June 3, 2015 – SHPD's review letter (Log No. 2015.01602, Doc. No. 1506MV14), accepting archaeological monitoring report for campgrounds project.

One additional letter, also to Pacific Legacy, concerns an AIS of the 25-acre LT Historic Preserve Area, adjacent to the current project area:

- March 23, 2012 – SHPD's review letter (Log No. 2012.0682, Doc. No. 1203MV33), accepting an AIS report that documents 96 archaeological sites containing 489 features. Twenty-three of the sites had been recorded earlier; 73 are newly identified. Significance is recommended for the entire preserve under Criteria a, c, d, and e; listing on the National Register of Historic Places (NRHP) is also recommended.

The current AIS identified 121 sites, 36 previously recorded and 85 newly identified. These consist of State Inventory of Historic Places [SIHP] Sites 50-10-27-13256 through 13258, 13260 through 13262, 13269, 13271, 13272, 13274, 13275, 13280 through 13282, 18286 through 13288, 13293, 13294, 13298 through 13302, 13351, 13353, 13386, 25655, 25644, 25646 through 25649, and 29088 through 29176. Of these, one site, Site 29175, consists of 540 excavated lava pits.

The 121 historic sites documented during the current AIS survey are assessed for site integrity and for significance according to Hawaii Administrative Rules (HAR) §13-284-6 Criteria a-e. All the sites are considered significant for their information content (Criterion d). Six sites are considered significant for their distinctive characteristics or high artistic value (Criterion c). Twenty-one sites are considered significant for their cultural importance to the Native Hawaiian community (Criterion e). The four sites considered significant under Criterion e include probable small shrines, a lava tube containing human skeletal remains, possible burial mounds, and 17 petroglyph fields.

SHPD agrees with the project effect determination of "Effect, with agreed upon mitigation commitments." The agreed upon mitigations includes no further work for 83 sites (120 features), mitigative archaeological data recovery for 28 sites (40 features), preservation (conservation) for 20 sites (55 features), and burial treatment for Site 50-10-27-18511. Mitigation plans will include a data recovery plan, a preservation plan, and archaeological monitoring plan for the project, and a burial treatment plan.

No Further Work

Sites 50-10-27-13256, 13257, 13258, 13269, 13271, 13272, 13282, 13286, 13288, 13293, 13298, 13300, 13301, 13302, 13351, 25644, 25646, 25647, 25648, 29089, 29093, 29094, 29096, 29097, 29099, 29100, 29101, 29102, 29103, 29104, 29105, 29106, 29107, 29108, 29109, 29110, 29111, 29112, 29113, 29114, 29115, 29116, 29117, 29119, 29120, 29121, 29122, 29123, 29126, 29127, 29128, 29129, 29131, 29132, 29133, 29134, 29136, 29137, 29138, 29139, 29140, 29141, 29143, 29145, 29146, 29147, 29151, 29153, 29154, 29155, 29156, 29157, 29161, 29162, 29163, 29164, 29166, 29169, 29171, 29172, 29173, 29174, and 29176.

Data Recovery

Sites 50-10-27-13258, 13262, 13272, 13274, 13280, 13351, 13386, 25649, 29088, 29095, 29099, 29104, 29118, 29124, 29125, 29130, 29135, 29144, 29146, 29148, 29149, 29150, 29152, 29158, 29165, 29168, 29170, and 29175.

Preservation

Sites 50-10-27-13260, 13261, 13272, 13274, 13275, 13280, 13281, 13287, 13294, 13299, 13353, 29090, 29091, 29092, 29098, 29142, 29144, 29159, 29160, and 29167.

The AIS report meets the requirements of HAR §13-276-5. **It is accepted.** Please send two hard copies of the document, clearly marked FINAL, and a text-searchable PDF version, to the Kapolei office, attention SHPD Library. Additionally, please include a copy of this acceptance letter with the hard copies of the report.

Pursuant to HAR §13-284-3, Steps (1) through (4) of the historic preservation review process are complete. As stipulated in HAR §13-284-7, when SHPD comments that a project will result in “Effect, with agreed upon mitigation commitments,” then detailed mitigation plans shall be developed for SHPD review and acceptance prior to project work commencing.

SHPD looks forward to receiving for review and acceptance, a data recovery plan meeting the requirements of HAR §13-278-4, an archaeological preservation plan meeting the requirements of HAR §13-277, and an archaeological monitoring plan meeting the requirements of HAR §13-279-4 for the current project and a Burial Treatment Plan (BTP) for Site 50-10-27-18511.

SHPD shall notify the County and the Lili‘uokalani Trust when the afore-mentioned mitigation plans have been reviewed and accepted and the permit issuance process may proceed.

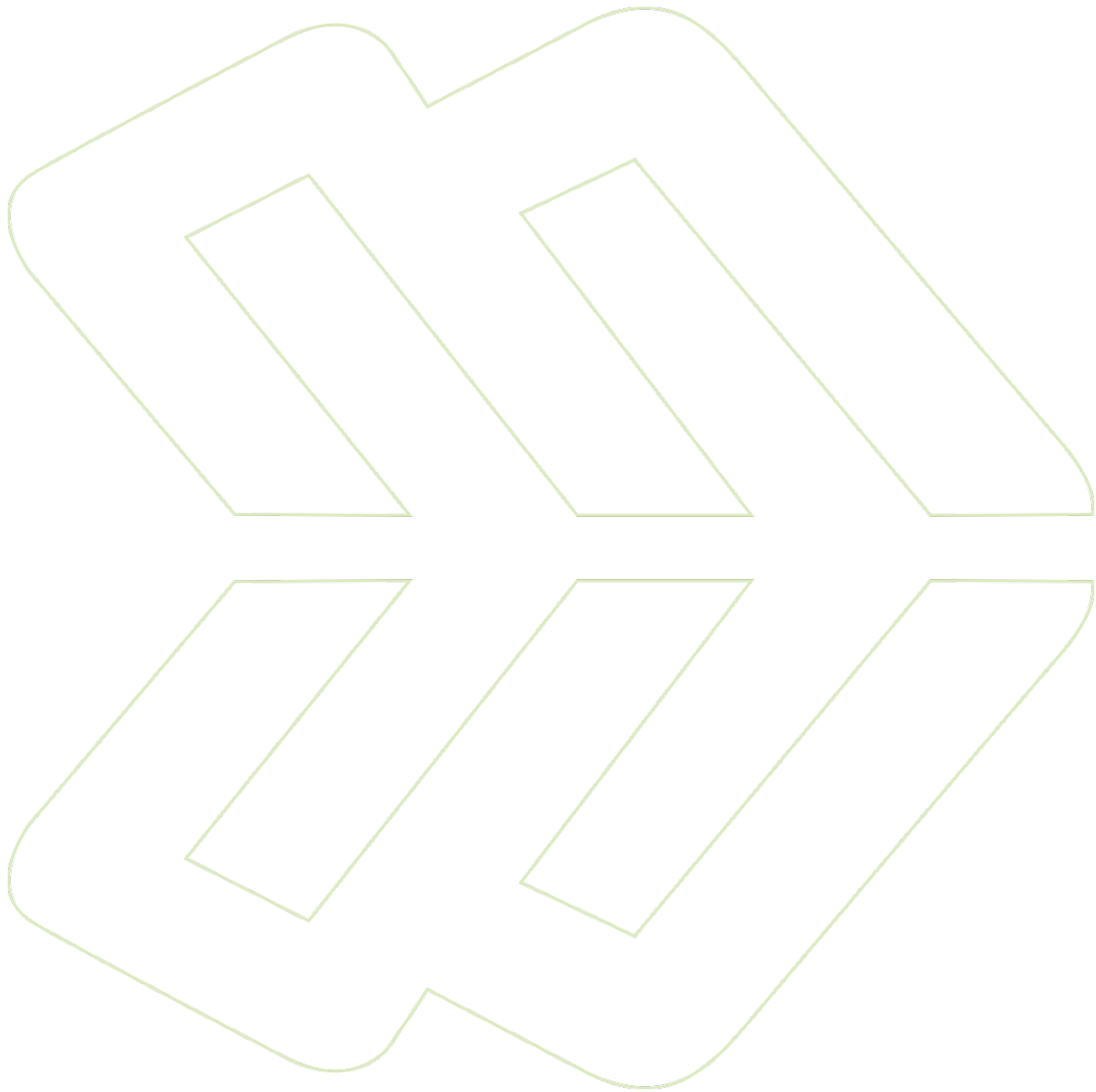
Please contact Andrew McCallister, Archaeologist III, at (808) 692-8010 or at Andrew.McCallister@hawaii.gov if you have any questions, or if we can be of assistance in any way.

Aloha,

Alan Downer

Alan S. Downer, Ph.D.
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

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