

## **Appendix K: Cultural Impact Assessment**

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**Cultural Impact Assessment for the  
Kea'au-Pāhoa Road Widening Project  
Kea'au Ahupua'a to Waiakahiula Ahupua'a,  
Puna District, Hawai'i Island  
TMK: [3] 1-5 (various plats and parcels);  
1-6 (various plats and parcels)**

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SSFM International, Inc.**

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## Management Summary

<b>Reference</b>	Cultural Impact Assessment for the Kea'au-Pāhoā Road Widening Project Kea'au Ahupua'a to Waiakahiula Ahupua'a, Puna District, Hawai'i Island TMK: [3] 1-5 (various plats and parcels); 1-6 (various plats and parcels)
<b>Date</b>	September 2009
<b>Project Number</b>	Cultural Surveys Hawai'i (CSH) Job Code: KEAAU 3
<b>Project Location</b>	The project corridor is located along approximately 9.5 miles (15.29 km.) of Kea'au-Pāhoā Road (State Route 130), from the terminus of the existing 4-lane Kea'au Bypass to its intersection with Pāhoā-Kapoho Road, Kea'au Ahupua'a to Waiakahiula Ahupua'a, Puna District, Island of Hawai'i TMK [3] 1-5 (various plats and parcels); 1-6 (various plats and parcels)
<b>Land Jurisdiction</b>	State Department of Transportation and private
<b>Agencies</b>	Federal: Federal Highway Administration (FHWA); State: Hawai'i Department of Transportation (HDOT)Hawai'I; Department of Land and Natural Resources/State ; Historic Preservation Division (DLNR/SHPD)
<b>Project Description</b>	The State of Hawaii, Department of Transportation (HDOT) is proposing the Kea'au-Pāhoā Road Improvements Project, Project No. STP-0130(27) and is initiating an Environmental Assessment (EA). The project proposes to implement various improvements along a portion of Kea'au-Pāhoā Road (State Route 130), from the terminus of the existing 4-lane Kea'au Bypass to its intersection with Pāhoā-Kapoho Road. State Route 130 is the only roadway that connects lower Puna with the Hilo area and is the primary conduit for emergency services to access local properties. The project purpose is to improve road safety, increase roadway capacity, and modernize State Route 130 between Kea'au and Pāhoā. At this time, five alternatives for improvement have been proposed. The EA, of which this study will be a part, is meant to examine the feasibility of each of these five alternatives.
<b>Area of Potential Effect (APE) and Project Acreage</b>	In order to account for maximum potential areas of cut and fill, the APE covered during the archaeological inventory survey and the cultural impact assessment extends approximately 100 feet (ft) to either side of the existing centerline of Highway 130. Thus, the current project area consists of a 200 ft (61 m) wide corridor, approximately 9.5 miles (15.29 km) long, totaling approximately 104 hectares (256 acres). For the Cultural Impact Assessment, the APE widens to also include the rest of the island of Hawai'i and other Hawaiian Islands and places in Polynesia (e.g., Kahiki, or Tahiti), associated with Puna and more specifically the project area in the larger context of Hawaiian beliefs (e.g., <i>mo'olelo</i> , or legends, oral histories and <i>wahi pana</i> or

	<p>storied places), resources and practices.</p> <p>Some of the proposed Access Management Roadways fall outside of the 200 ft corridor described above. As with the initial project corridor, the APE of the proposed Access Management Roadways areas and the addendum archaeological inventory survey areas were regarded as one and the same. These areas include the following, which can be seen on Figure 1 and Figure 2:</p> <ol style="list-style-type: none"> <li>1. Improvement of Pōhaku Circle: Approximately 2,600 feet (half mile) of existing paved road, right of way approximately 40 feet wide, needs to be improved to County Standards for a minor street (50 foot right of way). Road is generally developed with houses and yards.</li> <li>2. Connector between Uala (31st Ave.) and Puakalo (30th Ave.): Approximately 750 feet of new paved roadway, 50 foot right of way to county standards for minor streets through vacant property.</li> <li>3. Cul-de-sac on Uala (31st Ave.): New cul-de-sac at end of road, approximately 90 feet in diameter. New portion of cul-de-sac appears to be open space.</li> <li>4. Extension of Kaloli Drive to Pōhaku Circle: Approximately 650 feet of new paved roadway, 60 feet in right of way width, following a somewhat curvilinear alignment, across two vacant properties.</li> <li>5. Improvement of 34th Avenue: Existing unpaved road between Auli'i Street and Ilima Street needs to be improved for a distance of about 0.8 miles to 50 feet in right of way width to serve access changes at Auli'i Street and Ilima Street (which includes a conversion to right-in-right-out access at the intersection of Auli'i Street and Kea'au-Pāhoa Road).</li> <li>6. Extension of Maku'u Drive to 34th Avenue: New paved roadway built to 60-foot right of way width for length of approximately 1,050 feet, crossing portions of three vacant parcels.</li> <li>7. Extension of Orchidland Drive to Uhaloa (32nd Ave.): New paved roadway built to 60-foot right of way width for length of approximately 350 feet through a vacant parcel.</li> </ol>
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	<p>8. Cul-de-sac on Ilima Street: New cul-de-sac just by Kea‘au-Pāhoa Road, approximately 90 feet in diameter. New portion of cul-de-sac appears to be open space.</p> <p>9. Improvement of Uhaloa (32nd Avenue): Existing gravel road between the extension of Orchidland Drive (#7 above) and Paradise Drive to be improved to County Standards (60-foot right-of-way) for distance of approximately 0.3 miles.</p>
<p><b>Document Purpose</b></p>	<p>At the request of SSFM International, Inc., CSH conducted this Cultural Impact Assessment (CIA). Through document research and cultural consultation efforts, this report provides information pertinent to the assessment of the proposed Project’s impacts to cultural practices and resources (per the <i>Office of Environmental Quality Control’s Guidelines for Assessing Cultural Impacts</i>) which may include Traditional Cultural Properties (TCPs) of ongoing cultural significance that may be eligible for inclusion on the State Register of Historic Places, in accordance with Hawai‘i State Historic Preservation Statute (Chapter 6E) guidelines for significance criteria (HAR §13-275-6) under Criterion E, which states to be significant an historic property shall:</p> <p style="padding-left: 40px;">Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.</p> <p>Further, the document is intended to support the Project’s environmental review and may also serve to support the Project’s historic preservation review under HRS Chapter 6E-8 and Hawai‘i Administrative Rules (HAR) Chapter 13-275. Additionally, the Project requires compliance with the State of Hawai‘i environmental review process [Hawai‘i Revised Statutes (HRS) Chapter 343], which requires consideration of a proposed project’s effect on cultural practices and resources.</p> <p>Finally, as a federally funded project, this project is considered a federal undertaking, requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). The investigation includes an undertaking-specific effect recommendation and treatment/mitigation recommendations for the cultural resources recommended</p>

	<p>National/Hawai'i Register eligible. This document is intended to support project-related historic preservation consultation among stakeholding federal and state agencies, interested Native Hawaiian groups and individuals, and community groups.</p>
<p><b>Consultation Effort</b></p>	<p>Hawaiian organizations, agencies, and community members were contacted in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the Project area and the vicinity. The agencies consulted include the State Historic Preservation Division (SHPD), the Office of Hawaiian Affairs (OHA), Hawai'i County Planning Department, Hawai'i Department of Transportation, Department of Hawaiian Homelands (DHHL), Hawai'i Economic Opportunity Council (HCEOC), Hawai'i County Council, Kea'au Elementary School, and the Hawai'i Island Burial Council (HIBC) in addition to community groups such as the Puna Community Regional Development Plan (PCDP), Puna Regional Circulation Plan (PRCP), Puna Traffic Safety Committee, Sierra Club, Girl Scouts of America, The Kanaka Council, The Kanakaole Foundation, Hawaiian Civic Club of Hilo, Maku'u Farmers Market Association, Mālama O Nā Kūpuna O Hawai'i Nei. This effort was made by letter, e-mail, telephone, and in person contact. In the majority of cases, letters were mailed along with a map and an aerial photograph of the Project area.</p>
<p><b>Results of Background Research</b></p>	<p>Background research conducted for this Project yields the following results:</p> <ol style="list-style-type: none"> <li>1. The current project corridor varies in elevation from approximately 320 ft above mean sea level (amsl) at the terminus of the Kea'au Bypass to approximately 675 feet amsl at the intersection with Pāhoa-Kapoho Road. The distance of the project corridor from the coastline ranges between approximately 6.4 km (3.5 miles) and 9.6 (5.2 miles). The corridor passes through both developed and undeveloped lands. The undeveloped sections of land exist primarily in two areas: between the Kea'au Bypass and the northern boundaries of Hawaiian Paradise Park and Orchidland Estates; and between the southern boundaries of Hawaiian Paradise Park and 'Āinaloa Estates and Pāhoa town (refer to Figure 1).</li> <li>2. No perennial waterways are located along the project corridor. Only one intermittent stream crosses the roadway. There is abundant water travelling through this area from Mauna Loa, but it flows underground, exiting usually at or near the ocean via springs. These underground sources of water are known to be quite pristine, having been filtered through miles of lava rock. Lava tubes are numerous throughout the Puna district.</li> </ol>

	<ol style="list-style-type: none"> <li>3. The landscape appears generally level, though it does increase in overall elevation by 300 feet over the total 9.5 miles. Occasional rises and dips through which the corridor passes are products of the lava flows that make up this part of the island.</li> <li>4. The current project corridor lies over the border of flows from both Mauna Loa and Kīlauea volcanoes. The Mauna Loa flow is found near the northern end of the project corridor, coming out of Kea‘au town, and in a couple of small pockets just north of Orchidland Estates and Hawaiian Paradise Park. This flow is classified as “k1o,” which is dated at 5,000 to 10,000 years before present (B.P.). The remainder of the project corridor runs through flows from Kīlauea Volcano. These flows are classified as “p4,” dated 200 to 750 years B.P. (Figure 8).</li> <li>5. There are several soil and land types found along the project corridor (Figure 9). The predominant land type is classified as Lava flows, pāhoehoe (rLW), a miscellaneous land type (Foote et al. 1972). <i>Pāhoehoe</i> lava has a billowy, glassy surface which can be relatively smooth or rough and broken. Hummocks and pressure domes are common. Bare <i>pāhoehoe</i> lava typically can support mosses and lichens, while in areas with more rainfall ‘<i>ōhi‘a</i> trees, ‘<i>ōhelo</i> berry, and ‘<i>a‘ali‘i</i> can grow from cracks and crevices.</li> <li>6. The currently developed lands along the project corridor are dominated by housing subdivisions, including Hawaiian Paradise Park, Orchidland Estates, ‘Āinaloa Estates, and a few smaller subdivisions. An area of Hawaiian Home Land, called “Parcel A” on TMK [3] 1-5, is located along the corridor within Maku‘u and Hālonā Ahupua‘a, below the southern boundary of Hawaiian Paradise Park. A large outdoor farmers’ market is located south of Maku‘u Drive on Department of Hawaiian Home Lands (DHHL) property. Less than one mile south of the Hawaiian Home Lands property along the corridor are Churches, a fire station, and some retail and commercial establishments particularly at Orchidland Drive and within Pāhoa town. The built environment includes the existing roadway (Highway 130), cross streets, and driveways. Utility poles and roadway barriers and signage are also present along the length of the project corridor.</li> <li>7. A bridge has been constructed where an intermittent stream (name unknown - although a bridge abutment contains the name “Waipāhoehoe” this is believed not to be Waipāhoehoe</li> </ol>
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	<p>Stream) encounters the roadway north of Shower Drive. A settlement once located <i>makai</i> (seaward) of the highway was also named Waipāhoehoe, however it was not mentioned by Hawaii Government Surveyors in 1881. The name “Waipāhoehoe” is probably more likely to have come from the name of an <i>‘ili</i> (small land division) within Kea‘au Ahupua‘a.</p> <p>8. The current project corridor falls within the Upland Agricultural Zone, or Zone II, based on its elevation, which ranges from 320 to 675 ft amsl (see Figure 11). McEldowney’s (1979) map and her description of Zone II are a bit contradictory, as she describes the zone as extending <i>up to</i> three miles inland. This anomaly seems to be due to the location of Puna on the windward side of the island, which receives much more rainfall than other parts of the island. Due to this heavy amount of rainfall, the area of the current project corridor does reflect characteristics of both Zones II and III, or the Lower Forest Zone.</p> <p>9. Based on previous archaeological and geological research in the Puna region, a number of lava tubes and caves are located in various places. These caves were used for habitation, cultural pursuits, and burial purposes. Although no lava tubes were found along the project corridor during CSHs recent survey of the project corridor, Allred and Allred (1997) and Rechtman (2004b) found a lava tube that extended <i>mauka</i> (upland) – <i>makai</i> beneath Kea‘au-Pāhoa Road, named the Kazumura tube system (Figure 27).</p> <p>10. Based on Hawaiian Government Reports, workers constructing the original Kea‘au-Pāhoa Road stated that “in fact this whole tract is so thoroughly penetrated by caverns that hollow sounds are often heard beneath ones footsteps when traversing the region,”(see Section 3.6.9).</p> <p>11. CSH Pedestrian inspection of the project area identified two historic properties. A path of Meditation associated with the Sacred Heart Catholic Church, a component of the Pāhoa Historic and Commercial District, SIHP # 50-10-55-7388 (DOT 1979:F1), appears to lie entirely within the Sacred Heart property but extends to the edge of the present and future highway right-of-way. The Sacred Heart Catholic Church and its cemetery lie outside of the project APE. SIHP # 50-10-44-26889 is an abandoned circa 1935 concrete bridge. Six</p>
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	<p>roadside memorials were also found within the project area that do not appear to be historic properties but are associated with bereavement.</p> <p>12. Native Hawaiian traditions centered on these lands in Puna suggest the area's significance and association with the people of ancient times. Mythological literature shows Puna prominently associated with legendary and historical figures including Kāne, Pele, Hi'iaka, Hōpoe, Kūka'ōhi'akalaka, Keamalu, Iwa, Chief Kumukahi, Chief Kali'ikuku, Kalohalani, Halemano, Kamalalawalu, and Kamapua'a. These associations suggest an ancient and continuous occupation of the area, and indicate that there are several <i>wahi pana</i> associated with these deities and people located within the Puna district at various locations throughout the landscape (see Sections 3 and 7).</p> <p>13. Historical accounts associated with Puna show the early history of Hawai'i and the ruling chiefs, each ruling one or several <i>ahupua'a</i> (traditional land division), entire districts, or several districts. These historical accounts date far back into the history of Hawai'i Island and relate stories of the great battles between 'Umi son of Līloa, Pō'imaiwa'a, Hua'a, Kalani'ōpū'u, Kiwala'o, 'Imakakoloa, and Kamehameha I (see Section 3.4).</p> <p>14. Among the first foreigners to see the district of Puna were members of Captains Cook's voyage in 1779. Their early documentation describes the landscape of Puna as well populated, with cultivation between the southwestern sections of Puna and the more eastern areas (see Section 3.5).</p> <p>15. According to 19<sup>th</sup>-century missionary accounts, the lands of Puna were rich in agriculture field systems and its people were kindly and orderly. The lands of Puna were well cultivated, the vegetation luxuriant, the soil light and fertile, abundant in rain. Puna was a district of beautiful groves of coconuts, breadfruit, pandanus, 'ōhi'a, and abundant rainfall (see Section 3.5).</p> <p>16. Mid-19<sup>th</sup> century Land Commission Award documentation shows the lands of Kea'au Ahupua'a were granted to Chief William C. Lunalilo. In 1860 the estate of Lunalilo was mortgaged to Mr. Charles R. Bishop, and then leased to Rufus A. Lyman. Kea'au was eventually sold to Samuel Damon, William H. Shipman, and J. Elderts in 1882. Shipman later purchased the interest of his other partners to become the sole owner (see Section 3.5).</p>
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	<p>17. Based upon previous research, young lava flows have destroyed pre-contact archaeological features, and have altered the landscape, particularly in the southern portion of the project area (see Section 3.5).</p> <p>18. According to historical records and interview testimony, by the 1890s the lands of Puna were used as pasture for grazing cattle. In some areas such as Kea'au to Ahalanui cattle grazed up to at least 1979. Also in the late 19<sup>th</sup> century, lands were leased by 'Ōla'a Sugar Company to be cleared for the cultivation of sugar cane. The development of the sugar industry in Puna, with cane cultivation stretching from South Hilo to Cape Kumukahi, began a massive landscape alteration, which would obliterate most of the archaeological sites on these lands and any related cultural uses for these properties (see Section 3.5).</p> <p>19. Immigrants from Japan, Puerto Rico, China, and Portugal, and Hawaiians came to work the cane fields living in segregated camps along the old Plantation Road (see Section 3.5 and Figure 13 to Figure 22).</p> <p>20. The Hilo Railway Company was established and in 1900 extended tracks along the coast to the sugar fields in Kapoho passing through Kea'au, Kahuwai, Pu'ala'a, Kauaea, and Kaueleau Ahupua'a (see Figure 23 and Figure 24).</p> <p>21. In Puna, as it is elsewhere in Hawai'i, agricultural practices are environmentally and ecologically adaptive. Historic accounts support the presence of several cultural modifications and adaptive measures in the Puna district through the use of various environmental zones ideally suited to the cultivation of specific types of agriculture (see Section 3.5).</p> <p>22. A review of past archaeological and historical research, and legendary sources demonstrates that the people of Puna settled primarily in the coastal region, with temporary habitation in the uplands related to agricultural pursuits with the exception of the inland settlement of 'Ōla'a. These settlements were located primarily along the <i>Ala Loa</i> (the ancient trail system that circuits the island of Hawai'i) (see Section 3.5).</p> <p>23. The <i>Ala Loa</i> was eventually improved and renamed in the 1800s and began to be called the "Old Government Road." While this trail (eventually a road) was essentially the main</p>
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	<p>thoroughfare through the Puna district before the late 1800s, as communities on the coastline began to die out, focus began to shift to the center of the Puna District and the developing sugar and related industries near 'Ōla'a, Hilo, and the Volcano region.</p> <p>24. As a result of developing industries in the upland regions of Puna, and the presence of remaining communities along the coast, the original <i>mauka-makai</i> trail that led from the coast to the Maku'u region was improved and extended to the recently constructed Volcano Road, effectively linking the Hilo, Volcano, and lower communities of Puna, first by foot, then by horse, cart and buggy, and finally by automobile (see early Hawaiian government documents, Section 3.5).</p> <p>25. Trails in Puna and elsewhere served political, economic, social, and cultural needs. Remaining trails after the "New Puna Road" was built are still located in the upland region of Puna (and extending to the coast), however their use declined over time with the installation of the new road, and were adapted later for use by cowboys of the region, who planted mango trees at key points along the path both to mark their crossing with the Kea'au-Pāhoa corridor, and to provide food and shade as they traveled (see Mr. Thomas English interview, Section 6.8).</p> <p>26. According to interview testimony there are ancient trails that still remain alongside the roadway, many that abut the present day road. Entries to these trails are marked by mango trees that have dotted the landscape since before the 1950s (see Mr. Oliver English interview, Section 6.8)</p> <p>27. According to Hawaiian Boundary Commission Reports, these trails were vital links between communities and between agricultural areas <i>mauka</i> and habitation sites in the <i>maka</i> region of Puna as a whole. They remain a part of the cultural legacy of Puna (see early Hawaiian government documents Section 3.5).</p> <p>28. There are two areas of ongoing cultural activity. One is located within the project area (Maku'u Market Association), immediately adjacent to the roadway. The other location (Aha Punana Leo and Ke Kula 'O Nawahiokalani'opu) is outside of this projects APE, but participates in activities within the APE at the previously mentioned site. One of the access areas to the second location (Opukaihaia Street) intersects this project</p>
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	<p>area's APE. Aside from the activities at these two locations, this study has not located any persons participating in ongoing traditional cultural practices in areas that will be affected by this project's APE.</p> <p>29. The Opukaihaia intersection will undergo some minor changes, but is expected to remain unsignalized and full access maintained if the road is widened.</p> <p>30. While the roadway has evolved over time, as first a trail, then a carriage and cart road, and overtime an increasingly wider and wider, more developed roadway, it remains a major thoroughfare for communities living along the coast as it once did in the past.</p>
<p><b>Results of Community Consultation</b></p>	<ol style="list-style-type: none"> <li>1. CSH attempted to contact 91 community members (government agency or community organization representatives, or individuals such as cultural and lineal descendants, and cultural practitioners) for the purposes of this CIA. Thirty three people responded, 9 people provided telephone comments and 11 <i>kūpuna</i> (elders) and/or <i>kama'āina</i> (native born) were interviewed for more in-depth contributions.</li> <li>2. The results of cultural consultations indicate that there are concerns regarding potential adverse impacts on social and customary practices within the community that the new expanded road will bring to Puna. It is a general concern that the safety issue will not be addressed properly with the newly expanded road, and it is a major concern of many respondents that the newly expanded road will bring urban change to Puna's country landscape. In terms of impacts to cultural and natural resources and associated beliefs and practices as result of the proposed development, most people were not concerned about such impacts, with the exception of the ongoing cultural programs and activities at the Maku'u Farmers Market Association site. Much of the corridor is not used for cultural purposes; however there is a concern that the removal of trees and shrubs along the roadway will expose cultural sites just outside of the project area to adverse effects in the future.</li> <li>3. All of the community consultants interviewed for this study indicated that the roadside areas are not used for cultural purposes with the exception of the Maku'u Farmers Market area.</li> </ol>

	<ol style="list-style-type: none"> <li>4. Many of the respondents were concerned about the loss of more land to more road improvements now and in the future.</li> <li>5. None of the respondents indicated, with the exception of those who refused to comment, that they are not in support of the roadway expansion.</li> <li>6. One group advocated the replanting of native trees along the new roadway to hide sites and trails that may be located just outside of the project area.</li> </ol>
<p><b>Recommendations</b></p>	<ol style="list-style-type: none"> <li>1. Based on our research of the project area and its importance as a thoroughfare in the past, and into the future, it is recommended that archaeological monitoring of construction activities along this route during all phases be implemented. Archeological monitoring will potentially prevent accidental damage to the Kazumura Cave system and its associated features and burials. Monitoring of construction activities will also prevent access or damage to the ancient trails system that abuts the corridor. Further, on-site monitors will be able to point out archaeological features and trails alongside the roadway in areas of low visibility during CSHs present archaeological survey, or in areas of increased visibility due to vegetation clearance during the construction phase.</li> <li>2. Once trails and sites are located that potentially will be impacted by their visibility to the public and passersby within the corridor, mitigation measures can be implemented to mask and buffer the sites with native vegetation, thereby restoring some of the traditional fauna to the region once more.</li> <li>3. Extra safety measures should be in place to prevent damage to equipment and persons working on the new Road, especially in the region that the Kazumura cave was previously located.</li> <li>4. W.H. Shipman, the largest landowner in the project area has requested that access points to their agricultural areas remain open. Keeping these access points open will ensure safe and continued access to farming areas along the route.</li> <li>5. Full access to the lands of Aha Punana Leo should be maintained via the Opukaihaia intersection if the road is widened. Ongoing traditional Hawaiian cultural activities on this property, while located outside of the APE for this project, would be affected if access to these lands is restricted in anyway due to the activities associated with this project. The Opukaihaia intersection provides access not only to the lands of</li> </ol>

	<p>Aha Punana Leo, but also maintains ongoing cultural interactions between these lands and the lands of Maku'u Market Association, located within the project area.</p> <p>6. Ongoing activities at the Maku'u Market should be preserved as a bastion of Hawaiian culture along the project corridor route. This area should be avoided to avoid damage to existing cultural plantings and ongoing areas of use on the Maku'u market Association lands. These lands and the activities ongoing on them meet the requirements listed in accordance with Hawai'i State Historic Preservation Statute (Chapter 6E) guidelines for Traditional Cultural Properties (TCPs) of ongoing cultural significance and may be eligible for inclusion on the State Register of Historic Places, under significance criteria (HAR §13-275-6), Criterion E which states to be significant an historic property shall:</p> <ul style="list-style-type: none"> <li>a) Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.</li> <li>b) Native Hawaiian traditional practices that are ongoing at this location have been ongoing in some cases for 80 years. Additionally, it is the last remaining site on this corridor where traditional Hawaiian cultural practices are still promoted, taught, observed and transmitted to the next generation, thereby preserving and perpetuating their importance to the history and cultural identity of the Hawaiian people residing in the Puna area and beyond, and therefore this site may be eligible under Chapter 6E guidelines for Traditional Cultural Properties (see Naeole and Kekahuna interviews in Sections 6.3 and 6.9, respectively).</li> </ul>
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## Section 1 Introduction

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### 1.1 Project Background

At the request of SSFM International, Inc., Cultural Surveys Hawai'i, Inc. (CSH) has completed this Cultural Impact Assessment for the Kea'au-Pāhoa Road Widening Project, located within Kea'au Ahupua'a to Waiakahiula Ahupua'a, Puna District, Island of Hawai'i TMK [3] 1-5 (various plats and parcels); 1-6 (various plats and parcels). The project area consists of a 200 ft (61 m) wide corridor, approximately 9.5 miles (15 km) long, beginning at the terminus of the existing 4-lane Kea'au Bypass to its intersection with Pāhoa-Kapoho Road (Figure 1 through Figure 3).

The State of Hawaii, Department of Transportation (HDOT) is proposing a Kea'au-Pāhoa Road improvements project, Project Number STP-0130(27) and is initiating an Environmental Assessment (EA). The project proposes to implement various improvements along a portion of Kea'au-Pāhoa Road (State Route 130). State Route 130 is the only roadway that connects the study area with the Hilo area and is the primary conduit for emergency services to access local properties. The project purpose is to improve Road safety, increase roadway capacity, and modernize State Route 130 between Kea'au and Pāhoa. At this time, five alternatives for improvement have been proposed. The EA, of which this study will be a part, is meant to examine the feasibility of each of these five alternatives. The five alternatives for improvement as described briefly below.

A "No-build" alternative which includes committed projects will be used as a "base case" for analysis. Project No. STP-0130 (28) included in this alternative would include the shoulder lane conversion which heads north from Shower Drive to the Kea'au Bypass.

A Transportation Systems Management (TSM) alternative includes a number of potential intersection improvements, alterations/improvements to access roads in affected subdivisions, and transit service improvements. This alternative will provide another measure for comparison as it considers low-cost and low-impact improvements that could be implemented easily with minimal levels of construction. This alternative includes expanding infrastructure related to public transportation, such as the Hele-On bus system, and alternative transportation, such as bicycling.

Three "Build" alternatives would widen to a four-lane divided highway between the Kea'au Bypass and Ainaloa Blvd., with safety improvements between Ainaloa Blvd. and Pāhoa-Kapoho Road. This alternative would improve the roadway with a combination of different cross-sections in various segments of the corridor. The "Build" alternatives will consider bike lanes, bus pull-outs, shoulders, and median treatments, incorporating designs that contain "Context Sensitive Solutions," in an effort to make the future roadway as compatible as possible with the surrounding communities.

The EA will study measures to improve safety by managing traffic in these build alternatives, such as signalization, roundabouts, consolidating access points, etc. Alternative #3 would comprise a four-lane divided highway between the Kea'au Bypass and Ainaloa Blvd. from which a two-lane road would continue to the Pāhoa-Kapoho Road intersection (Figure 4). Alternative

#4 would comprise a four-lane divided highway between the Kea'au Bypass and Pāhoa-Kapoho Road the entire length of the project area to the Pāhoa-Kapoho Road intersection (Figure 5). Alternative #5 would comprise a six-lane divided highway between Kea'au Bypass and Paradise Drive, and a four-lane divided highway between Paradise Drive and Kahakai Blvd. to the Pāhoa-Kapoho Road intersection (Figure 6).

The access management roadways to be assessed for Environmental Impacts under all Build alternatives include the following areas, seen on Figure 7:

1. Pōhaku Circle is approximately 2,600 feet or half a mile of existing paved road with a right of way approximately 40 feet wide and needs to be improved to County Standards for a minor street a 50 foot right of way. The Road is generally developed with houses and yards.
2. A connector between Uala (31st Ave.) and Puakalo (30th Ave.) will consist of approximately 750 feet of new paved roadway and a 50 foot right of way to County Standards for minor Street through vacant property.
3. A new cul-de-sac on Uala (31<sup>st</sup> Ave.) at Kaloli Drive will consist of approximately 90 feet in diameter. The new portion of cul-de-sac appears to be open space (Figure 7).
4. An extension of Kaloli Drive to Pōhaku Circle will consist of approximately 650 feet of new paved roadway, 60 feet in right of way width following a somewhat curvilinear alignment, across two vacant properties.
5. The existing unpaved portion of 34th Avenue between Auli'i Street and Ilima Street (a distance of about 0.8 miles) needs to be improved to 50 feet in right of way width to serve access changes at Auli'i Street and Ilima Street (which includes a conversion to right-in-right-out access at the intersection of Auli'i Street and Kea'au-Pāhoa Road).
6. An extension of Maku'u Drive to 34<sup>th</sup> Avenue will consist of a new paved roadway built to a 60 foot right of way width for approximately 1,050 feet, crossing portions of three vacant parcel.
7. An extension of Orchidland Drive to Uhaloa (32<sup>nd</sup> Ave.) will consist of a new paved roadway built to 60 foot right of way width for length of approximately 350 feet through a vacant parcel.
8. A cul-de-sac on 'Ilima a new cul-de-sac just by Kea`au-Pāhoa Road, approximately 90 feet in diameter. The new portion of cul-de-sac appears to be open spaces.
9. Uhaloa (32<sup>nd</sup> Ave.) is existing gravel road between the extension of Orchidland Drive (#7 above) and Paradise Drive to be improved to County Standards a 60 foot right of way for a distance of approximately 0.3 miles.

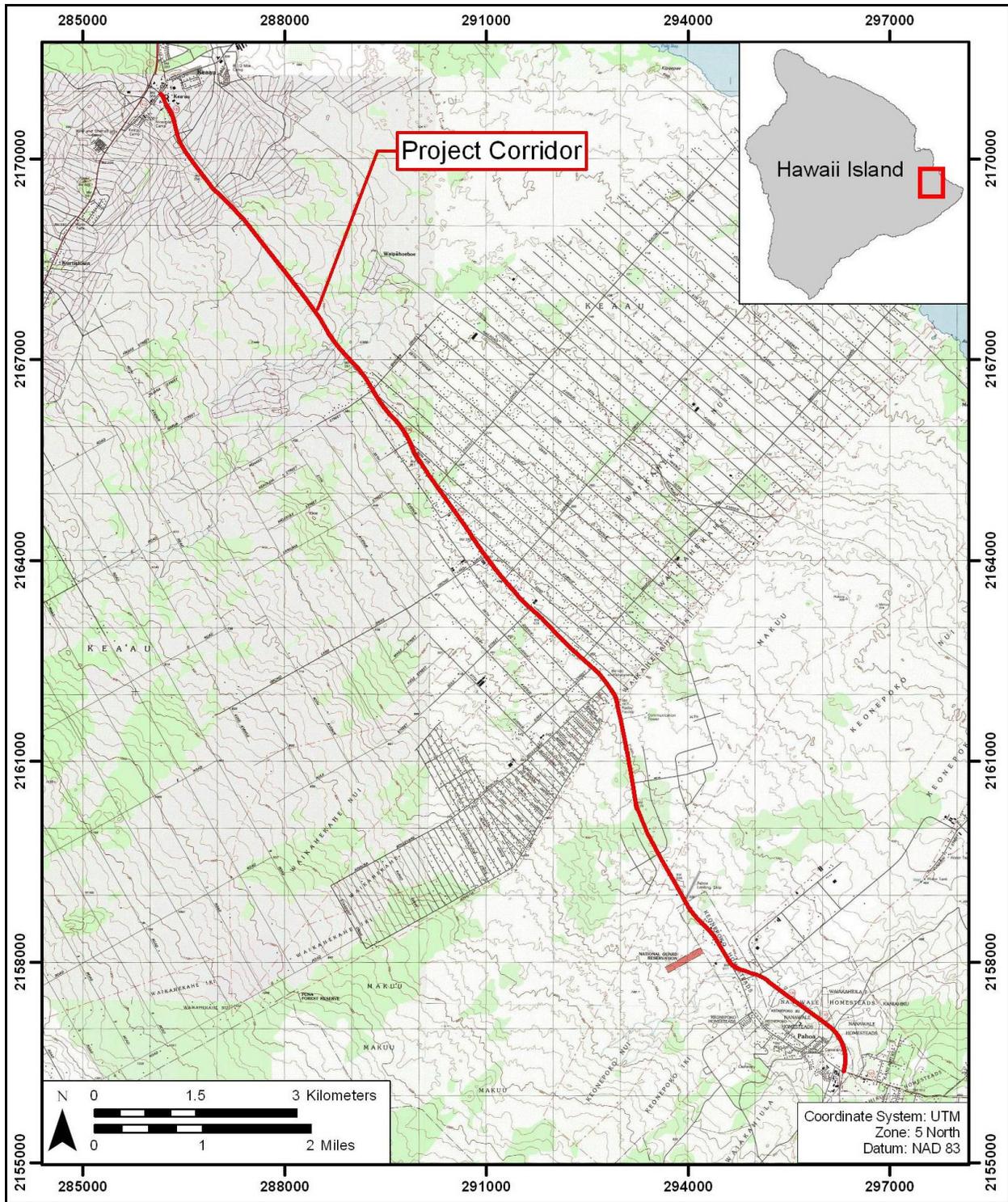


Figure 1. Portions of the Hilo (1995), Kea'au Ranch (1994), Mountain View (1994), Pāhoā North (1997), Pāhoā South (1994) and Kalalua (1995) USGS 7.5 minute topographic quadrangle maps showing the project corridor





Figure 3. Aerial photograph showing location of the project corridor (source: Google Earth 2009)

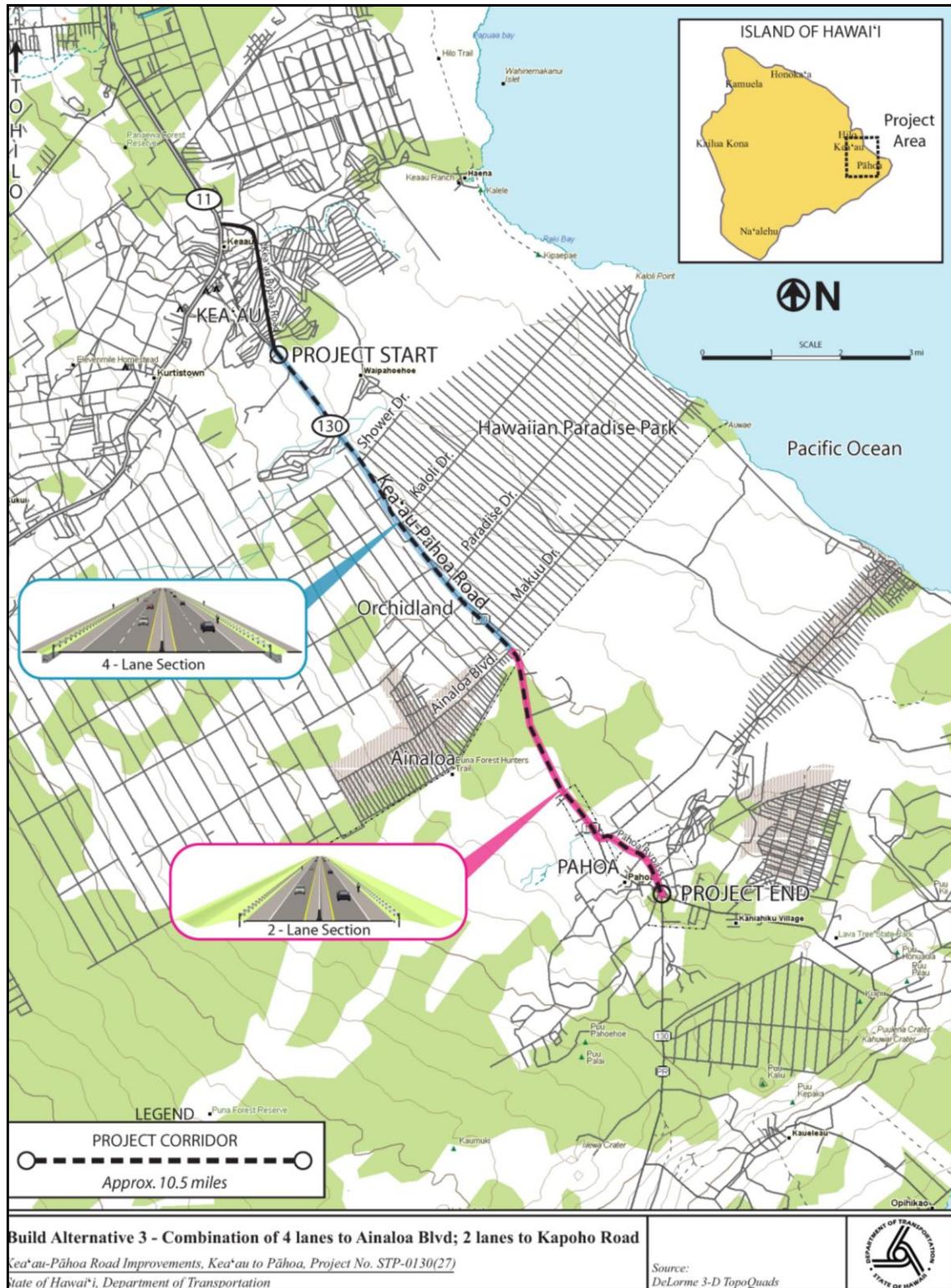


Figure 4. “Build” Alternative #3 (map produced by the Department of Transportation [DOT])

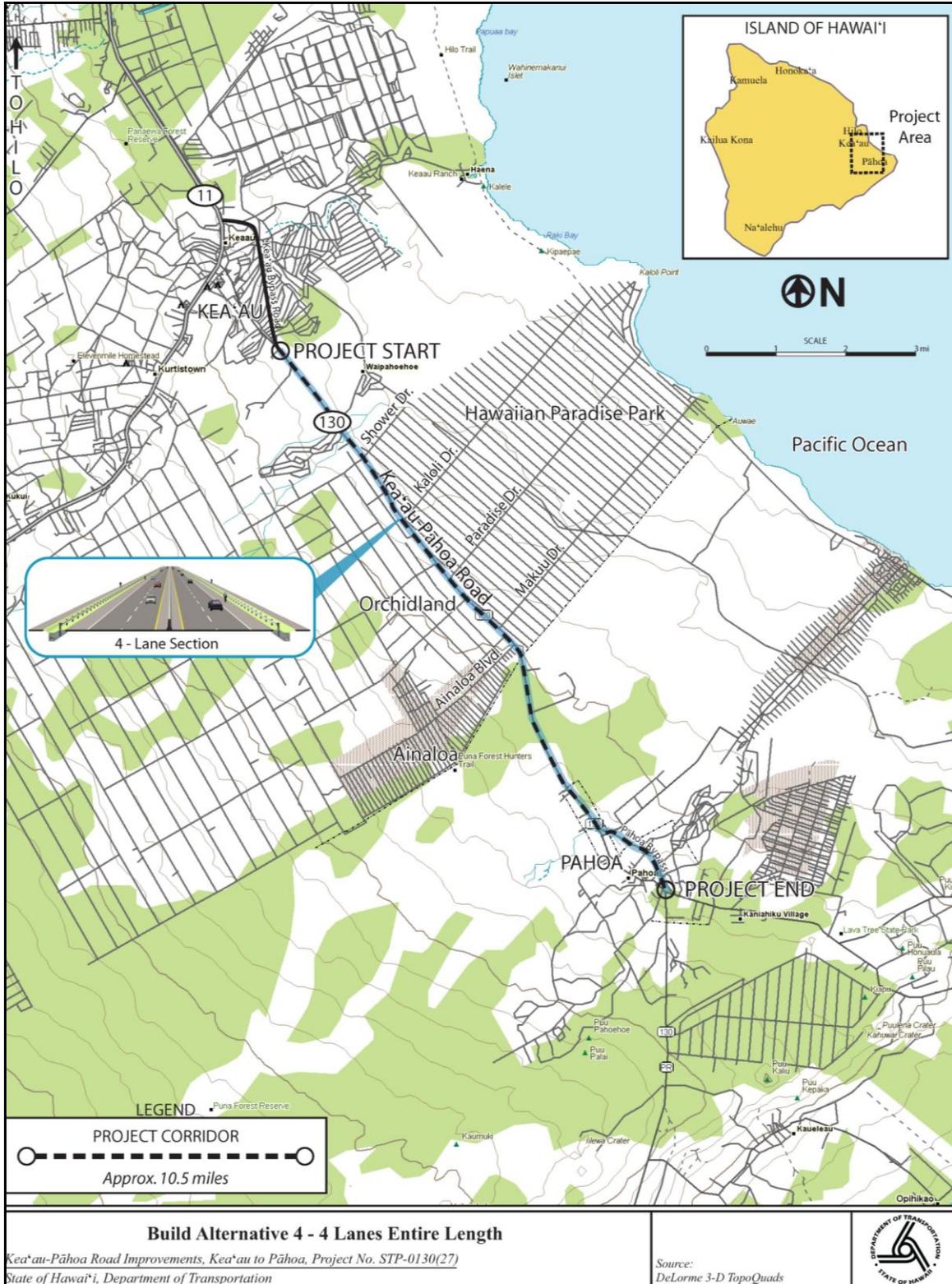


Figure 5. “Build” Alternative #4 (map produced by the Department of Transportation [DOT])

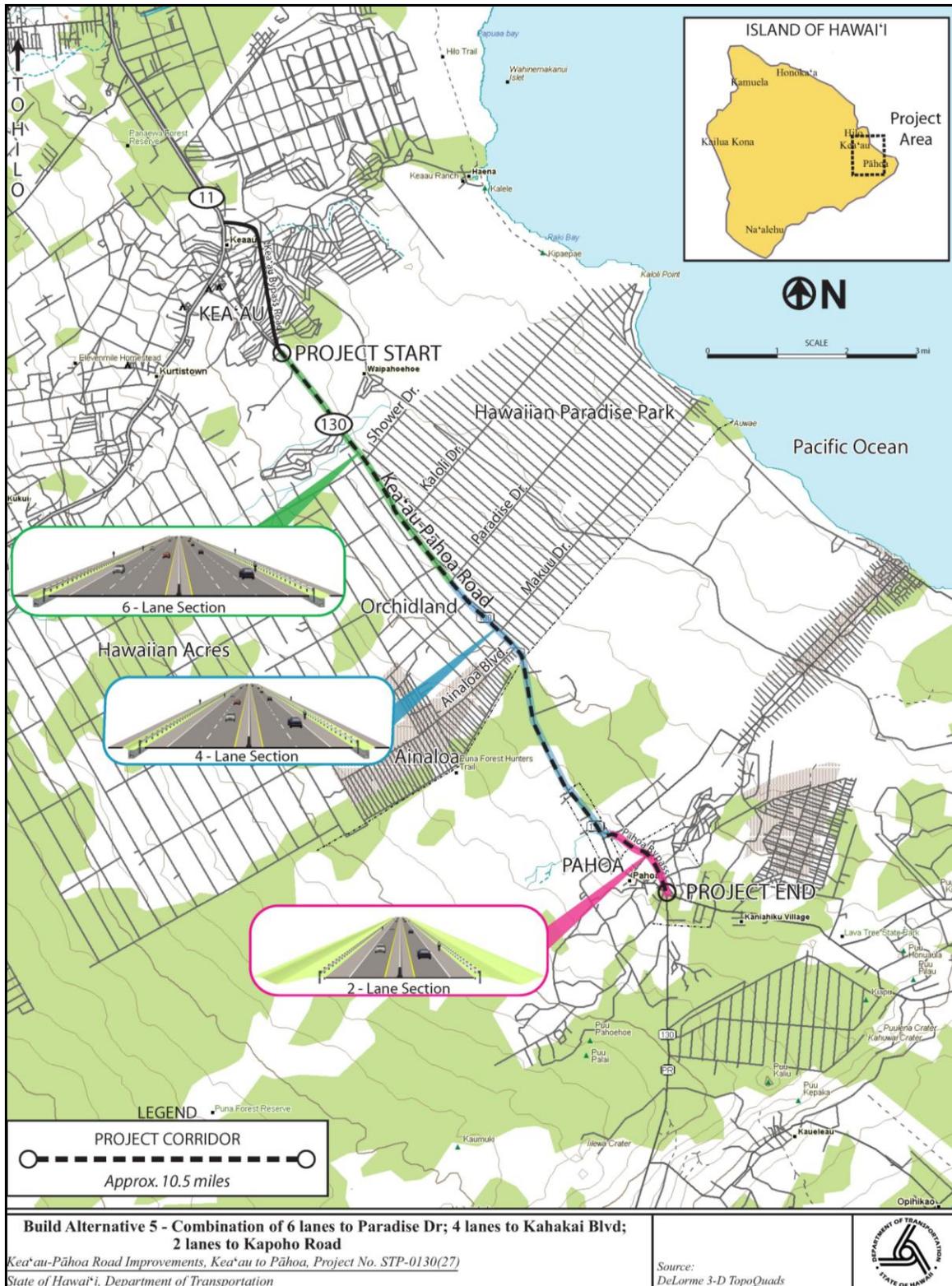


Figure 6. “Build” Alternative #5 (map produced by the Department of Transportation [DOT])

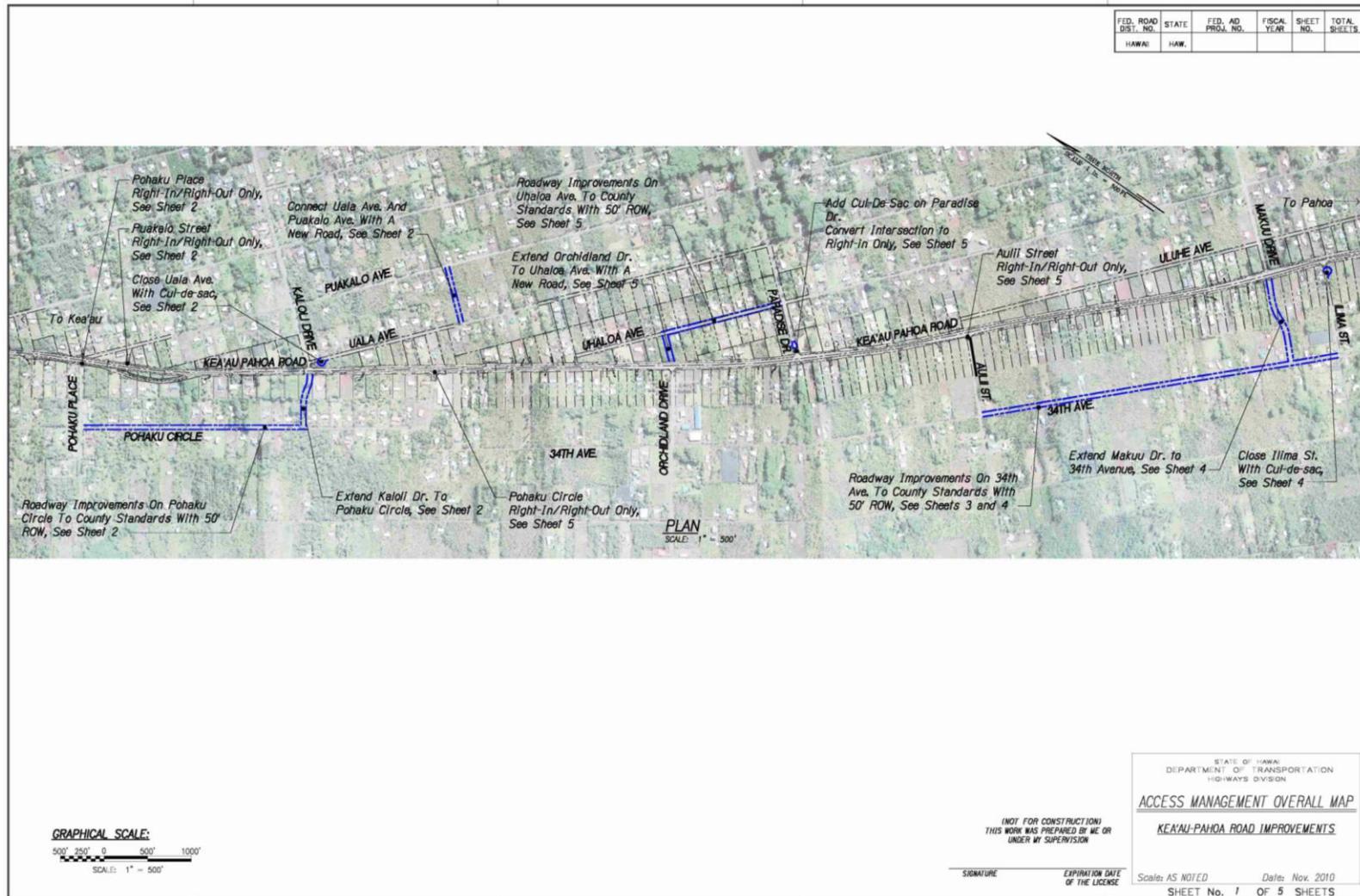


Figure 7. Access Management Overall Map Provided by SSFM International

## 1.2 Document Purpose

At the request of SSFM International, Inc., CSH conducted this Cultural Impact Assessment (CIA). Through document research and cultural consultation efforts, this report provides information pertinent to the assessment of the proposed Project's impacts to cultural practices and resources (per the *Office of Environmental Quality Control's Guidelines for Assessing Cultural Impacts*) which may include Traditional Cultural Properties (TCPs) of ongoing cultural significance that may be eligible for inclusion on the State Register of Historic Places, in accordance with Hawai'i State Historic Preservation Statute (Chapter 6E) guidelines for significance criteria (HAR §13-275-6) under Criterion E, which states to be significant an historic property shall:

Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

Further, the document is intended to support the Project's environmental review and may also serve to support the Project's historic preservation review under HRS Chapter 6E-8 and Hawai'i Administrative Rules (HAR) Chapter 13-275. Additionally, the Project requires compliance with the State of Hawai'i environmental review process [Hawai'i Revised Statutes (HRS) Chapter 343], which requires consideration of a proposed project's effect on cultural practices and resources.

Finally, as a federally funded project, this project is considered a federal undertaking, requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). The investigation includes an undertakingspecific effect recommendation and treatment/mitigation recommendations for the cultural resources recommended National/Hawai'i Register eligible. This document is intended to support project-related historic preservation consultation among stake-holding federal and state agencies, interested Native Hawaiian groups and individuals, and community groups.

## 1.3 Scope of Work

The scope for the cultural impact assessment includes:

1. Examination of historical documents, Land Commission Awards, and historic maps with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal and other resources or agricultural pursuits as may be indicated in the historic record.
2. A review of the existing archaeological information pertaining to the sites on the property as they may allow us to reconstruct traditional land use activities and identify and describe the cultural resources, practices and beliefs associated with the parcel and identify present uses, if appropriate.

3. Conduct oral interviews with persons knowledgeable about the historic and traditional practices in the project area and region.
4. Preparation of a report on items 1-3 summarizing the information gathered related to traditional practices and land use. The report will assess the impact of the proposed action on the cultural practices and features identified.

## 1.4 Environmental Setting

### 1.4.1 Environment

The current project corridor varies in elevation from approximately 320 ft above mean sea level (amsl) at the terminus of the Kea'au Bypass to approximately 675 feet amsl at the intersection with Pāhoa-Kapoho Road. The distance of the project corridor from the coastline ranges between approximately 6.4 km (3.5 miles) and 9.6 (5.2 miles). The corridor passes through both developed and undeveloped lands. The undeveloped sections of land exist primarily in two areas: between the Kea'au Bypass and the northern boundaries of Hawaiian Paradise Park and Orchidland Estates; and between the southern boundaries of Hawaiian Paradise Park and 'Āinaloa Estates and Pāhoa town (refer to Figure 3).

No perennial waterways are located along the project corridor. Only one intermittent stream crosses the roadway. There is abundant water travelling through this area from Mauna Loa, but it flows underground, exiting usually at or near the ocean via springs. These underground sources of water are known to be quite pristine, having been filtered through miles of lava rock. Lava tubes are numerous throughout the Puna district.

The landscape appears generally level, though it does increase in overall elevation by 300 feet over the total 9.5 miles. Occasional rises and dips through which the corridor passes are products of the lava flows that make up this part of the island.

In 1996, the U.S. Geological Survey produced a geologic map of Hawai'i Island with corresponding literature. This set details the types and ages of lava flows covering the island. The current project corridor lays over the border of flows from both Mauna Loa and Kīlauea volcanoes (Figure 8). The Mauna Loa flow is found near the northern end of the project corridor, coming out of Kea'au town, and in a couple of small pockets just north of Orchidland Estates and Hawaiian Paradise Park. This flow is classified as "k1o," which is dated at 5,000 to 10,000 years before present (B.P.). The remainder of the project corridor runs through flows from Kīlauea Volcano. These flows are classified as "p4," dated 200 to 750 years B.P. Within this flow, along the corridor, are pockets of "p4o," a more specific type of "p4" flow, which dates from 400 to 750 years B.P. The southern end of the project corridor, at and around Pāhoa town, consists entirely of "p4o" flow (Wolfe and Morris 1996: sheet 2).

The average annual rainfall in the general vicinity of the project area falls between approximately 120 and 160 inches (Juvik and Juvik 1998:57). Temperatures in this area of the Puna District usually fall between the sixties and eighties. As expected, the cooler temperatures and heavier rainfall occur in the winter months (October through April) and warmer temperatures and lighter rainfall occur during the summer months (May-September).

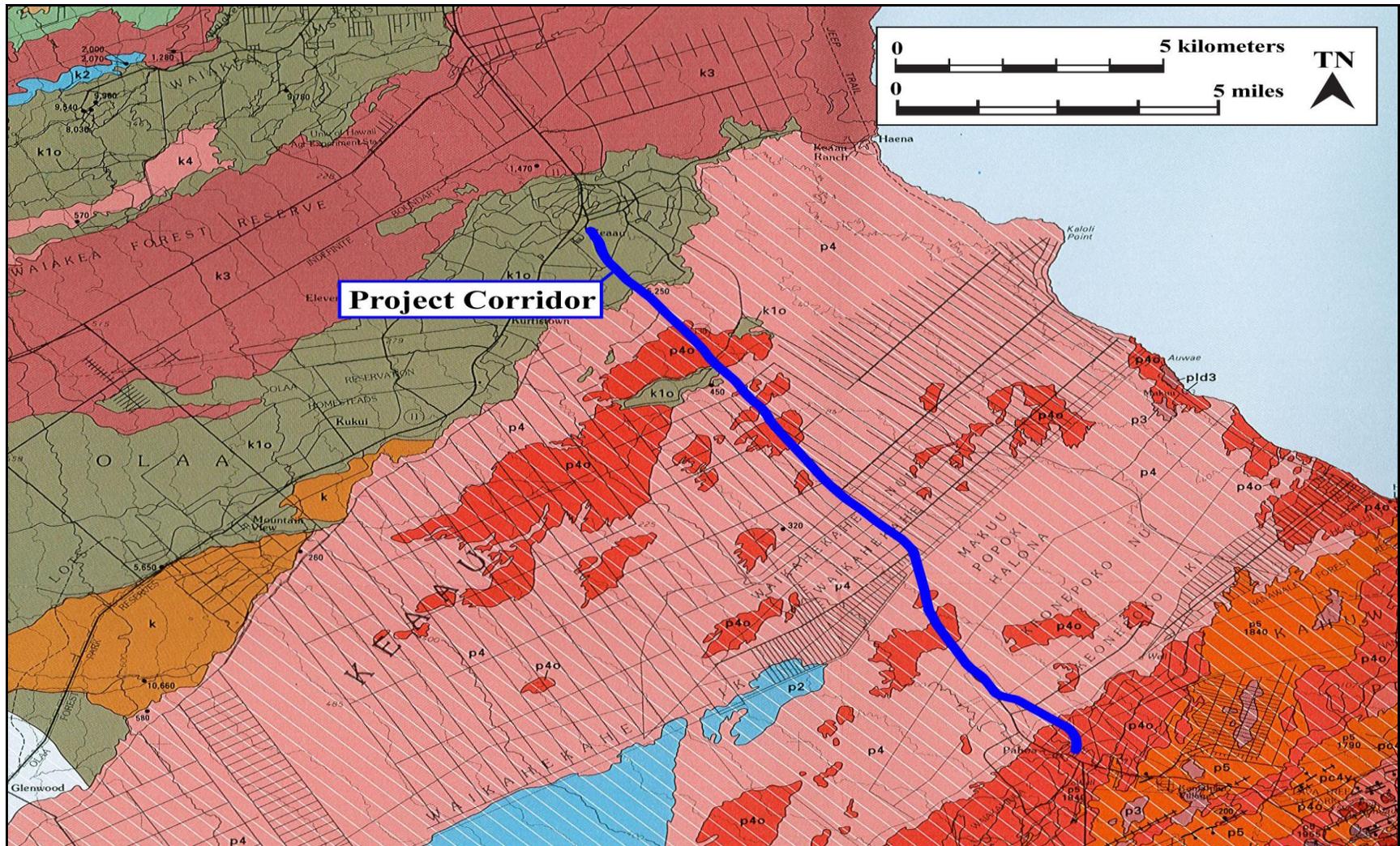


Figure 8. Portion of the 1996 U. S. Geological Survey Hawai'i Geological Map, showing the lava flows surrounding the project corridor (Wolfe and Morris 1996: sheet 2)

There are several soil and land types found along the project corridor (Figure 9). The predominant land type is classified as Lava flows, pāhoehoe (rLW), a miscellaneous land type (Foote et al. 1972). *Pāhoehoe* lava has a billowy, glassy surface which can be relatively smooth or rough and broken. Hummocks and pressure domes are common.

Bare *pāhoehoe* lava typically can support mosses and lichens, while in areas with more rainfall *‘ōhi‘a* trees, *‘ōhelo* berry, and *‘a‘ali‘i* can grow from cracks and crevices. “This miscellaneous land type occurs at elevations ranging from sea level to 13,000 feet. The annual rainfall ranges from 10 inches to more than 140 inches. Some flat slabs of pahoehoe lava are used as facings on buildings and fireplaces. In areas of higher rainfall, this lava contributes to the ground-water supply,” (Foote et al. 1972).

Soils from the Hilo series are found along the northern end of the project area (Foote et al. 1972) (see Figure 9). The Hilo series consists of well-drained silty clay loams formed in a series of volcanic ash layers, and are found in the same general area as Kaiwiki, ‘Ōla‘a, and Ookala soils. According to Foote et al., “Hilo series soils gently sloping to steep soils on uplands at an elevation ranging from near sea level to 800 feet. They receive from 120 to 180 inches of rainfall annually, and their mean annual soil temperature is between 72° and 74° F,” (1972). Soils in this series support Hilo grass, California grass, guava, *‘ōhi‘a*, and tree fern, and are suitable for sugarcane, truck crops, orchards, or pasture. Hilo silty clay loam, 0 to 10 percent slopes (HoC) is found low on the windward side of Mauna Kea and is dissected by deep, narrow gulches. Permeability of water is rapid, runoff is slow, and the erosion hazard is slight. Roots can penetrate to a depth of 5 feet or more. Hilo silty clay loam, 10 to 20 percent slopes (HoD) is similar to HoC, but with steeper slopes. Runoff is medium, and the erosion hazard is slight to moderate. Both HoC and HoD soil types are used primarily for sugarcane (Foote et al. 1972).

‘Ōla‘a series soils are also found along the northern end of the project corridor (Foote et al. 1972) (see Figure 9). The ‘Ōla‘a series consists of well-drained silty clay loams that formed in volcanic ash, occurring in the same areas as Hilea, Hilo, Keaukaha, ‘Ōhi‘a, Panaewa, and Papa‘i soils. These soils range from level to moderately steep, found at elevations from 200 to 1,000 feet. ‘Ōla‘a soils “...receive from 100 to 175 inches of rainfall annually. Their mean annual soil temperature is between 71° and 73° F. The natural vegetation consists of *‘ōhi‘a*, tree fern, guava, and Hilo grass,” and are used for sugarcane cultivation (Foote et al. 1972). ‘Ōla‘a extremely stony silty clay loam, 0 to 20 percent slopes (OID) is found atop fragmental *‘a‘ā* (rough) lava and generally has a slope of about 12 percent. Root penetration is good, and water permeability is rapid, with slow runoff and slight erosion hazard. ‘Ōla‘a silty clay loam, 0 to 10 percent slopes (OaC) is similar to OID, but is less stony and steep (Foote et al. 1972).

Small pockets of Panaewa very rocky silty clay loam, 0 to 10 percent slopes (PeC) are found adjacent to the project corridor along its entire length (Foote et al. 1972) (see Figure 9). “The Panaewa series consists of shallow, moderately well drained silty clay loams that formed in volcanic ash. These soils are nearly level to gently sloping. They are on uplands at an elevation ranging from 300 to 1,000 feet and receive from 100 to 175 inches of rainfall annually. Their mean annual soil temperature is between 72° and 74° F,” (Foote et al. 1972). Soils in this series support the growth of *‘ōhi‘a*, tree fern, Hilo grass, California grass, and guava, and tend to be used for sugarcane, pasture, and woodland. The PeC soil type is specifically found near Kea‘au. According to Foote et al., “Rock outcrops occupy 10 to 25 percent of the surface. Permeability is

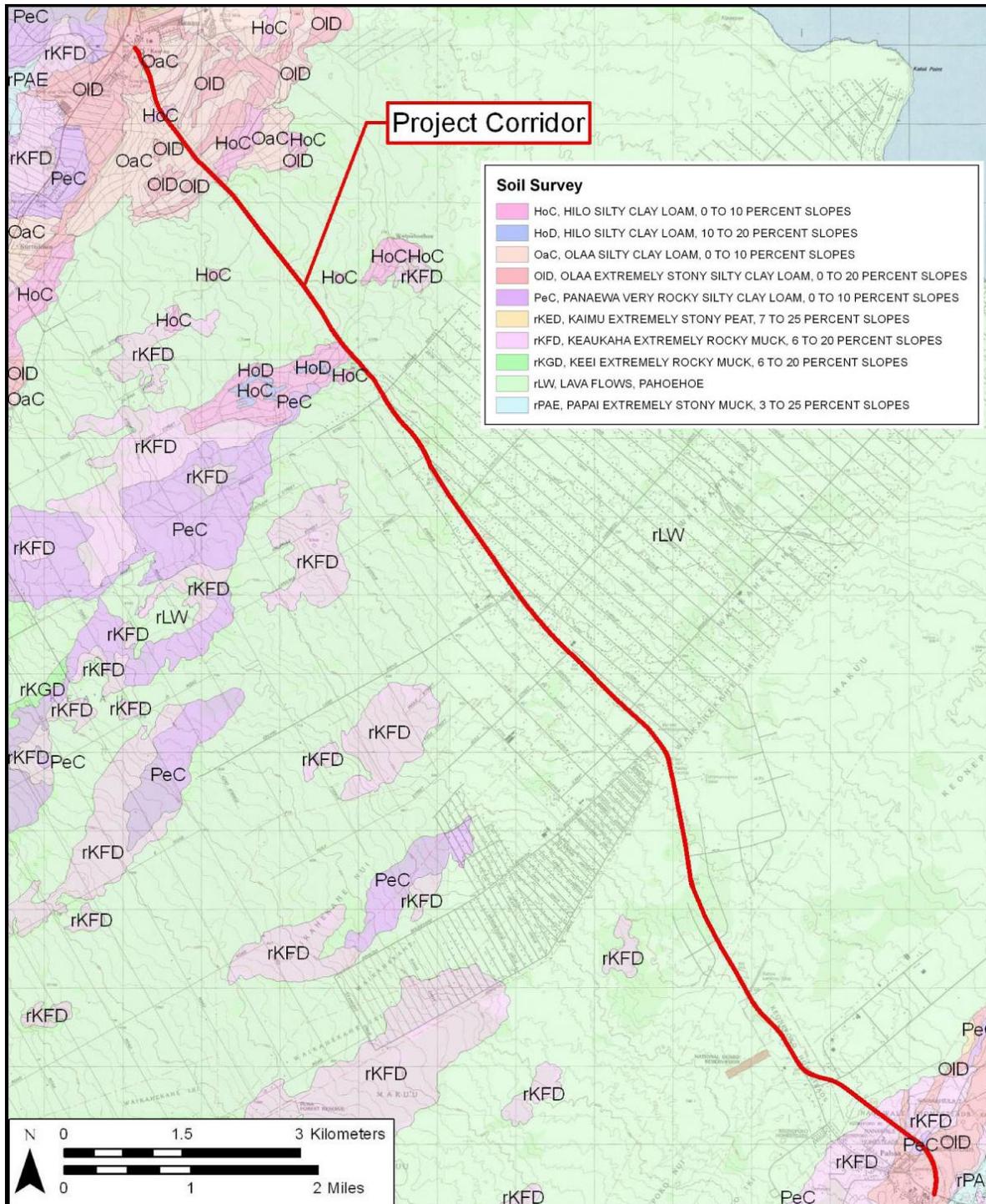


Figure 9. Portions of the Hilo (1995), Kea‘au Ranch (1994), Mountain View (1994), Pāhoa North (1997), Pāhoa South (1994) and Kalalua (1995) USGS 7.5-minute topographic quadrangle maps, with Soil Survey overlay, showing the project area soils (Sato et al. 1973)

rapid, runoff is slow, and the erosion hazard is slight. Roots can penetrate to the [*pāhoehoe*] bedrock,” (1972).

Pockets of Keaukaha extremely rocky muck, 6 to 20 percent slopes (rKFD) are also located along the length of the project corridor, consisting of well-drained, thin organic soils overlying *pāhoehoe* lava bedrock (Foote et al. 1972) (see Figure 9) Keaukaha soils are found from near sea level to 1,000 feet in elevation along the low areas of Mauna Loa, receiving between 90 and 150 inches of rainfall annually. “Their mean annual soil temperature is between 72° and 74° F. The natural vegetation consists of ‘ōhi‘a, tree fern, ‘uluhe (*Dicranopteris linearis*) fern, and guava,” and they are used for woodland, pasture, and home sites (Foote et al. 1972). The rKFD soil type is undulating to rolling, following the topography of the underlying *pāhoehoe* lava, with outcrops occupying about 25 percent of the area. “The soil above the lava is rapidly permeable. The pahoehoe lava is very slowly permeable, but water moves rapidly through the cracks. Runoff is medium, and the erosion hazard is slight. In places roots are matted over the pahoehoe lava or extend a few feet into the cracks,” (Foote et al. 1972). This soil type generally supports native forest, though it can be cleared for pasture.

A small area of Papai extremely stony muck, 3 to 25 percent slopes (rPAE) is located just south of the project corridor (Foote et al. 1972) (see Figure 9). The Papai series consists of well-drained, thin, extremely stony organic soils found over fragmental ‘a‘ā lava. “These soils are gently sloping to moderately steep. They are on uplands at an elevation ranging from near sea level to 1,000 feet and receive from 90 inches to more than 150 inches of rainfall annually. Their soil temperature is between 72° and 74° F,” (Foote et al. 1972). Papai soils support ‘ōhi‘a, tree fern, ‘uluhe (*Dicranopteris linearis*) fern, and guava and are used mostly for woodland, though small areas may be used for pasture, orchards, and truck crops. The rPAE soil type specifically occurs low on the windward side of Mauna Kea, exhibiting rapid permeability, slow runoff, and slight erosion hazard (Foote et al. 1972).

A small section of Kaimu extremely stony peat, 6 to 20 percent slopes (rKED) is located makai of the southern end of the project corridor (see Figure 9; marked in yellow). The Kaimu series consists of “well-drained, thin organic soils over Aa lava. These are gently sloping to moderately steep soils on uplands at an elevation ranging from near sea level to 1,000 feet. They receive from 40 to 60 inches of rainfall annually, and their mean annual soil temperature is between 72° and 74° F,” (Foote et al. 1972). Christmas berry, guava, guinea grass, and lantana grow naturally in this soil type. Though the Kaimu series soils can be used for pasture, macadamia nuts, papaya, and citrus fruits, the rKED soil type generally remains native woodland, as it is not ideal for cultivation. The rKED soil type is specifically found “at low elevations on Mauna Loa. Permeability is rapid, runoff is slow, and the erosion hazard is slight,” (Foote et al. 1972).

A section of Keei extremely rocky muck, 6 to 20 percent slopes (rKGD) is found *mauka* (upslope) of the project corridor in the Orchidland Estates subdivision (Foote et al. 1972) (see Figure 9). The Keei series consists of well-drained, thin organic soils found on the gently sloping to moderately steep uplands, generally ranging from 1,000 to 3,500 feet. The Keei series soils receive between 90 and 150 inches of rainfall annually, with a mean annual soil temperature between 62° and 65° F (Foote et al. 1972). These soils naturally support ‘ōhi‘a, tree fern, ‘uluhe (*Dicranopteris linearis*) fern, and *waiwī* plant life. Though they can be cleared and used for pasture, Keei soils generally remain woodland and watershed. The rKGD soil type is specifically

found at intermediate elevations on both Mauna Loa and Mauna Kea. It exhibits rock outcrops across 25 to 50 percent of the surface, and tends to be used for pasture. The soil above the *pāhoehoe* lava bedrock is rapidly permeable. “The lava is very slowly permeable, but water moves rapidly through the cracks. Runoff is medium and the erosion hazard is slight. In places roots are matted over the pahoehoe bedrock or extend a few feet into the cracks,” (Foote et al. 1972).

The lands surrounding the project corridor have been largely transformed by human activity (Juvik and Juvik 1998:123). These lands were classified as wet forest and woodland before human settlement disrupted them (Juvik and Juvik 1998:122). The biota in this type of ecosystem consisted of:

Vegetation: closed canopy forest of *‘ōhi‘a*, sometimes with *koa* or *‘ōlapa* co-dominant; dense tree fern (*Cibotium* species) understory...also, open-canopy forests or woodlands of *‘ōhi‘a* and *‘uluhe* (*Dicranopteris linearis*). Forests of *hala* (*Pandanus tectorius*) in coastal lowlands...Shrublands of *‘ōhi‘a* and ferns; also, *‘ākala* (*Rubus hawaiiensis*) shrublands. Rare bogs and mosses (*Racomitrium* species), sedges, grasses, and native shrubs. Fauna: primary habitat of most extant Hawaiian honeycreepers and other forest birds...great diversity of native invertebrates. Endangered species: more than 50 plants species...birds include *‘ō‘ū* (*Psittirostra psittacea*), Maui parrotbill (*Pseudonestor xanthophrys*), and *‘ākohekohe* (*Palmeria dolei*) (Juvik and Juvik 1998:126-127).

Threats to this type of ecosystem include:

Feral pig, mongoose, feral cat; black and Polynesian rats; alien slugs; introduced plants such as melastomes (*Clidemia hirta*, *Miconia clavescens*), banana poka (*Passiflora mollissima*), Hilo grass (*Paspalum conjugatum*), yellow raspberry (*Rubus ellipticus*), and strawberry guava (*Psidium cattleianum*). Clearing for agriculture and grazing, suburbanization (Juvik and Juvik 1998:127).

## 1.5 Built Environment

The currently developed lands along the project corridor are dominated by housing subdivisions, including Hawaiian Paradise Park, Orchidland Estates, ‘Āinaloa Estates, and a few smaller subdivisions. An area of Hawaiian Home Land, called “Parcel A” on TMK [3] 1-5, is located along the corridor within Maku‘u and Hālonā Ahupua‘a, below the southern boundary of Hawaiian Paradise Park. A large outdoor farmers’ market is located south of Maku‘u Drive. Less than one mile south of the Hawaiian Home Lands along the corridor are churches, a fire station, and some retail and commercial establishments are also located along the project corridor, particularly at Orchidland Drive and within Pāhoa town. The built environment includes the existing roadway (Highway 130), cross streets, and driveways. Utility poles and roadway barriers and signage are also present along the length of the project corridor. A bridge has been constructed where an intermittent stream (name unknown - although a bridge abutment contains the name “Waipāhoehoe” this is believed not to be Waipāhoehoe Stream) encounters the roadway north of Shower Drive. A settlement once located *makai* of the highway was also named Waipāhoehoe; however it was not mentioned by Hawaii Government Surveyors in 1891.

The name “Waipāhoehoe” is probably more likely to have come from the name of an *'ili* (small land division) within Kea'au Ahupua'a.

Additionally, the lands of Waipāhoehoe [In Kea'au Ahupua'a] to Maku'u, along the present day corridor, were covered with lava and thin forests of 'ōhi'a in 1891 (Hawaiian Government Surveyors 1891). There is no mention of habitation areas or other potential archaeological features within Waipahoehoe at that time. However, according to Mr. Thomas English (see Section 6.8.1), by the time the plantation was in full production, the area was used for sugar cane, and there was an old camp located there during more modern times:

A few areas, like the *kipuka*[clear place within a lava bed], the Waipahoehoe on the mauka side of the road, and on the makai side there was a small kipuka were in sugar cane, when Kea'au had a sugar mill. ...One trail from the *kipuka* leads up to the old camp by the bridge. I think that was part of an old access trail too [Mr. Tom English, interview 2009, 6.8.1].

The general area within and adjacent to the current project corridor has been subjected to over a century of intensive sugar cane cultivation. Remnant plant life and landscape features related to this time period can be found in the currently undeveloped sections along the project corridor.

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## Section 2 Methods

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### 2.1 Archival Research

Historical documents, maps, photographs, and existing archaeological survey and excavation reports pertaining to the sites in the vicinity of the eight subject *ahupua'a* were researched at the University of Hawai'i at Mānoa's Hamilton Library, Cultural Surveys Hawai'i Library, the University of Hawai'i's Hilo Library, Hilo Public Library, Lyman Museum Archives, Lāupahoehoe Train Museum Archives, Kamehameha Schools Library Kea'au Campus, the State Historic Preservation Division (SHPD) library, the Hawai'i State Archives, the State Land Survey Division, the Pāhoa and Kea'au Libraries special collections, and the archives of the Bishop Museum. Previous archaeological reports for the area were reviewed, as were historic maps and photographs and primary and secondary historical sources. The collections of the Bishop Museum and the Hawai'i State Survey Division in Honolulu were searched for historic maps. Information on Land Commission Awards was accessed through Waihona 'Aina Corporation's Māhele Data Base ([www.waihona.com](http://www.waihona.com)) as well as a selection of CSH library resources.

For cultural studies, research for the Traditional Background section centers on Hawaiian activities including: religious and ceremonial knowledge and practices; traditional subsistence land use and settlement patterns; gathering practices and agricultural pursuits; as well as Hawaiian place names and *mo'olelo, mele, 'ōlelo no'eau* and more. The Historical Background section focuses on land transformation, development and population changes beginning in the early post-European Contact era to the present day (see Scope of Work above).

### 2.2 Community Consultation

#### 2.2.1 Sampling and Recruitment

A combination of qualitative methods, including purposive, snowball, and expert (or judgment) sampling, are used to identify and invite potential participants to the study. These methods are used for intensive case studies, such as CIAs, and they are used to recruit people that are hard to identify, or are members of elite groups (Bernard 2006:190). Our purpose is not to establish a representative or random sample. It is to “identify specific groups of people who either possess characteristics or live in circumstances relevant to the social phenomenon being studied...This approach to sampling allows the researcher deliberately to include a wide range of types of informants and also to select key informants with access to important sources of knowledge” (Mays and Pope 1995:110).

We begin with purposive sampling informed by referrals from known specialists and relevant agencies. For example, we contact the SHPD, Office of Hawaiian Affairs (OHA), Hawai'i Island Burial Council (HIBC), and other community and cultural organizations for their brief response/review of the project and to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the project area and vicinity; and to identify cultural and lineal descendants and other appropriate community representatives and members. Based on their in-depth knowledge and experiences, these key respondents then refer CSH to additional

potential participants who are added to the pool of invited participants. This is called “snowball sampling,” which entails asking a few key individuals (including agency and organization representatives) to provide their comments and referrals to other locally recognized experts or stakeholders who would be likely candidates for the study (Bernard 2006).

CSH also employs expert or judgment sampling which involves assembling a group of people with recognized experience and expertise in a specific area (<http://www.socialresearchmethods.net/kb/samprnon.php>; Bernard 2006). CSH maintains a database that draws on over two decades of established relationships with community consultants: cultural practitioners and specialists, community representatives and cultural and lineal descendants. The names of new potential contacts are also provided by colleagues at CSH and from the researchers' familiarity with people who live in or around the study area. Researchers often attend public forums (e.g., Neighborhood Board, Burial Council and Civic Club meetings) in (or near) the study area to scope for participants. A discussion of the consultation process can be found in Section 5 on Community Consultations. Please refer to Section 5.3 for a complete list of individuals and organizations contacted.

CSH focuses on obtaining in-depth information with a high level of validity from a focused group of relevant stakeholders and local experts. Our qualitative methods do not aim to survey an entire population or subgroup. A depth of understanding about complex issues cannot be gained through comprehensive surveying. Our qualitative methodologies do not include quantitative (statistical) analyses, yet they are recognized as rigorous and thorough. Bernard (2006:25) describes the qualitative methods as “a kind of measurement, an integral part of the complex whole that comprises scientific research.” Depending on the size and complexity of the project, CSH reports include in-depth contributions from about one-third of all participating respondents. Typically this means three to twelve interviews.

### **2.2.2 Informed Consent Protocol**

An informed consent process is conducted as follows: (1) before beginning the interview the CSH researcher explains to the participant how the consent process works, the project purpose, the intent of the study and how his/her information will be used; (2) the researcher gives him/her a copy of the Authorization and Release Form to read and sign (Appendix A); (3) if the person chooses to participate by way of signing the consent form *or* providing oral consent, the researcher begins the interview; (4) the interviewee receives a copy of the Authorization and Release Form for his/her records, while the original is stored at CSH; (5) after the interview is summarized at CSH (and possibly transcribed in full), the study participant is afforded an opportunity to review the interview notes (or transcription) and summary and to make any corrections, deletions or additions to the substance of his/her testimony/oral history interview; this is accomplished primarily via phone, post or email follow-up and secondarily by in-person visits; (6) participants receive the final approved interview, photographs and the audio-recording and/or transcripts of their interview if it was recorded. They are also given information on how to view the draft report on the OEQC website and offered a hardcopy of the report once the report is a public document.

Should an interviewee agree to participate on the condition that his/her name is withheld, procedures are followed to protect his/her confidentiality (see Protection of Sensitive Information below).

### 2.2.3 Interview Techniques

To assist in discussion of natural and cultural resources and cultural practices specific to the study area, CSH initiates “talk story” sessions (i.e., unstructured and semi-structured interviews as described by Bernard 2006) by asking questions from the following broad categories: gathering practices and *mauka* (upland, mountain) and *makai* (lowland, ocean) resources, burials, trails, historic properties and *wahi pana* (storied or legendary places). The interview protocol is tailored to the specific natural and cultural features of the landscape in the study area identified through archival research and community consultation. For example, Hawaiian voyaging, navigation and astronomy were emphasized for this CIA. These interviews and oral histories supplement and provide depth to consultations from government agencies, community organizations, and other individuals that may provide brief responses, reviews and/or referrals gathered via phone, email, and occasionally face-to-face commentary.

### 2.2.4 Field Visit

Initially, CSH researchers visit the project area to become familiar with the land and recognized (or potential) cultural places and historic properties in preparation for interviews. All field activities are performed in a manner that minimizes impact to the natural and cultural environment in the project area. Where appropriate, Hawaiian protocol is used before going on to the study area and may include the offering of *ho'okupu* (offering, gift), *pule* (prayer) and *oli* (chant). Sometimes CSH researchers participate in community activities, or participant observation, as a part of the interview process. Taking part in normal community or traditional cultural practices while observing these practices in use is a way of making interviewees comfortable with the formal process of interviewing. It further provides a unique opportunity to gather data as ongoing traditional practices are occurring.

### 2.2.5 In-depth Interviews and Oral Histories

Interviews are conducted at a place of the study participant's choosing (usually at the participant's home or at a public meeting place). Following the consent protocol outlined above, interviews may be recorded on tape and in handwritten notes, and the participant photographed. The interview typically lasts one to four hours, and records the “who, what, where and when” of the interview. In addition to questions outlined above, the interviewee is asked to provide biographical information (e.g., connection to the study area, genealogy, professional and volunteer affiliations, etc.).

### 2.2.6 Phone, Email and Letter Interviews/Statements

The majority of interviews are conducted face to face, however there are times that interviewees, for a variety of reasons decline to be interviewed in person, or prefer to provide a brief statement over the telephone or via email or letter. In these cases, written documentation of the statement via telephone, or a copy of the email or letter (as an attachment) is provided and referenced appropriately within this report (See Section 5.1.2 and table 10).

### 2.2.7 Protection of Sensitive Information

On occasion, participants in cultural studies agree to contribute their comments, or be interviewed with the condition that their names are withheld from the report. Reasons for doing

so vary from concern about protecting the identity of resource collectors and/or revealing the precise location of certain natural and cultural resources to opposition to the proposed project. For the interviewee who agrees to participate on the condition that his/her name is withheld from public disclosure, CSH takes all precautions to make sure his/her contribution remains confidential. The confidentiality of subjects is maintained via protected files. For this reason, CIA reports sometimes include a subsection of Summaries of Kama'āina "Talk Story" Interviews entitled, Additional Statements.

## 2.3 Compensation and Contributions to Community

Many individuals and communities have generously worked with CSH over the years to identify and document the rich natural and cultural resources of these islands for cultural impact, ethno-historical and, more recently, traditional cultural places (TCP) studies. CSH makes every effort to provide some form of compensation to individuals and communities who contribute to cultural studies. This is done in a variety of ways: individual interview participants are compensated for their time in the form of a small honorarium and/or other *makana* (gift); community organization representatives (who may not be allowed to receive a gift) are asked if they would like a donation to a Hawaiian charter school or nonprofit of their choice to be made anonymously or in the name of the individual or organization participating in the study; contributors are provided their transcripts, interview summaries, photographs and—when possible—a copy of the CIA report; CSH is working to identify a public repository for all cultural studies that will allow easy access to current and past reports; CSH staff do volunteer work for community initiatives that serve to preserve and protect historic and cultural resources (for example, in Lāna'i and Kaho'olawe). Generally our goals are to provide educational opportunities to students through internships, to share our knowledge of historic preservation and cultural resources and the State and Federal laws that guide the historic preservation process, and, through involvement in an ongoing working group of public and private stakeholders, to improve and strengthen the Chapter 343 (environmental review) process.

## Section 3 Traditional and Historical Background

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This section contains a selection of mythological accounts and a summary of the historical background associated with the district of Puna. The Puna District is comprised of 50 *ahupua'a* (Maly 1999). The *ahupua'a* included in this project are: Kea'au, 'Ōla'a, Waikahekahe Nui, Waikahekahe Iki, Maku'u, Pōpōkī, Hālonā, Keonepoko Nui, Keonepoko Iki, and Waiakahiula 1 and 2, respectively from north to south. Place name meanings presented in the following sections are based, unless otherwise noted, on research by Kepā Maly (1999) for Kea'au, and Pukui and Elbert (1970) for all *ahupua'a*. Boundary commission and Hawaiian Government testimonies and affidavits are excerpted from Kepā Maly (1999), unless otherwise noted. The names of Ahupua'a located within the subject project area have been highlighted throughout the testimony provided. Any references to trails or roads have been underlined. Bracketed areas are provided for clarification or translation using Pukui and Ebert 1971 for definitions. No changes were made to quoted text to include okina or kahako if the original source spelled the word without diacritical marks.

### 3.1 Place Names

The way the Hawaiians viewed their land can be gathered from the meanings of place names. These names can be found in traditional *mo'olelo*, collected from ethnographic surveys, found on historic maps, and gleaned from early historic documents, such as Land Commission Award (LCA) claims, *māhele* records (See Appendix F), later grant claims, and boundary commission testimonies. Place names, some with known meanings, for individual *ahupua'a* within the project area are located at the end of each *ahupua'a* section (Table 1 through Table 6). Unless otherwise indicated, place name translations, meanings, lexicology, and locations (Hawaiian Plane Coordinate System, NAD 27) were obtained from the ulukau electronic library (ulukau.org), Hawaiian place name database, Soehren (2002-2004), with references cited in text.

In legend, place names can also be the name of people mentioned in the *mo'olelo*. The practice of naming places after people, and vice versa may allude to larger spiritual, cultural, or genealogical connections between people and places within the text. It is also a mnemonic device, used to remember important places and people and their relationship to each other through time, in the absence of written text. In this way, the story is retold through the generations and, even if it goes through minor changes through time, the place names, the people, and their connections to each other, together with their actions, are retained through time and remembered as important in some way.

Of note, within the Puna district legends, several place names are mirrored in the names of people. These names, and the people and places they represent may point to a larger cosmology and connections to the districts nearby the Puna district, as supported by some of the *olelo no'eau* about the people of Puna and their relationship to people living in the nearby district of Ka'ū (see Section 3.2.5). This relationship between the people of both districts, and larger cosmology is reflected in the sharing of lands in the Volcano area, especially Halema'uma'u crater, the home of the goddess Pele, an important figure in both districts and elsewhere. This naming convention within Puna's legends also interestingly points to people and place names

outside of Hawai'i Island, and elsewhere, leading the reader to interpret some of the hidden connections that existed in the past between Puna and lands beyond.

In 1862, a Boundary Commission was formed in the Kingdom of Hawai'i in order to establish the boundaries of all *ahupua'a*, as a part of the legal documentation that followed the awarding of lands under the Māhele in 1840 (W.D. Alexander in Thrum 1891:117-118). Testimony was taken from residents who had resided in the specific area for most of their lives, or from those who had been born there and who knew where the boundaries of the *ahupua'a* were established within the landscape (see Appendix F).

The value of these testimonies to this report is four-fold. First, it establishes the boundaries and general landscape in specific areas (especially as it relates to our project area), within a specific time period. Second, it informs us about previous and potential areas of habitation, agriculture, trails, and other areas where non-portable and portable artifacts may be located. Third, it can demonstrate the ways that traditional people used the landscape and conducted their cultural practices within specific environment in the past. And lastly (but not least), it demonstrates the use of place names within the environment, and how naming conventions were used as a way to remember places of importance.

Boundary Commission witness testimony was usually given in Hawaiian and translated into English as the information was provided during the proceedings (Maly 1999).

### 3.1.1 Kea'au Ahupua'a

According to Maly (1999):

**Kea'au** is the northern most of some 50 ahupua'a (ancient land divisions) found in the district of Puna. **Kea'au** extends from the ocean fishery some 26 miles inland, and reaches an elevation of about 3,900 feet. In the uplands, **Kea'au** is cut off by Keauhou, eastern-most of the ahupua'a of the district of Ka'u.

Within the boundaries of **Kea'au**, are some 60,000 acres of land. In the context of Hawaiian settlement and expansion, **Kea'au** was one of the favored lands of Puna. Much of **Kea'au** and its neighbor **'Ōla'a**, with which the residents shared a close relationship, has rich soil. Also, the large pond-modified into a loko i'a or fishpond-and numerous marshy areas and small ponds between **Māwae** in the north and **Waikahekahe** to the east, made **Kea'au** ideal for coastal settlement.

The watered lowlands provided inhabitants with resources-such as fresh water, marine protein resources, and the ability to cultivate vegetable foods year round. The fertile uplands provided residents with access to important agricultural complexes and other natural resources important to sustaining the local and regional community.

Historical documentation recorded by nineteenth century residents, early visitors and surveyors document the occurrence of extensive agricultural field systems in the region generally extending from the 400 foot elevation to about the 2,500 foot elevation (cf. Boundary Commission testimonies, Ellis 1963, Handy, Handy and

Pekoe 1972, and various communications from the 1890s, written by A.B. Loebenstein in this study).

In 1873, according to Boundary Commission testimony, Kea'au was a place with *'ōhi'a*, *koa* and *'iliahi* (sandalwood) forest areas, banana and coconuts growing along the shoreline near fresh water springs and a pond, numerous caves (including defensive and habitation caves), and several areas utilized by specialists and others for capturing birds, harvesting *olonā* bark for cordage, and other traditional cultural practices. Appendix G also includes excerpts from Maly's (1999) oral history interviews regarding the vicinity of Kea'au. The full text of the Kea'au Ahupua'a Boundary Commission testimony is presented below, with place names within subject project area indicated in bold. These place names, some with known meanings, are also presented in Table 1.

June 4, 1873: Uma K., Sworn

I was born at Keauhou at **Keaau Puna**, at the time of the return of Kamehameha 1st from Kaunakakai, Molokai [ca. 1791]; I have always lived there and know the boundaries between **Keaau** and **Waikahekahe**

My parents pointed them out to me when we went after birds and sandal wood. **Waikahekahe Nui** joins **Keaau** at sea shore at Keahuokaliloa, a rock that looks like a human body, which is between two points, the point on the **Waikahekahe** is called Kaluapaa [sic] and the one on **Keaau**, Keahuokaliloa.

Thence the boundary runs mauka to place called Koolauo. The pahoehoe on the north side is **Keaau** and the good ground where cocoanut trees grow is on **Waikahekahe**. In past days there was a native village at this place.

Thence mauka to Haalaaniani (He kupua) when the old road from Kalapana used to run to **Keaau**, thence the boundary runs to Wahikolau, two large caves, the boundary runs between them.

Thence mauka to another cave called [page 191] Oliolimanienie, where people used to hide in time of war. At this cave **Waikahekahe Nui** ends and **Waikahekahe Iki** joins **Keaau**.

Thence the boundary runs along Waikahekahe Iki, mauka to Laeopuula, an old kauhale, he ahua pahoehoe. **Keaau** on the Hilo side of the road running mauka, thence to Kikinui, an old Kauhale for bird catchers, thence to Hoolapehu, another old village, thence to Alaalakeiki, which is the end of **Waikahekahe Iki** and Kahaualea joins **Keaau**. This place is at an old kauhale manu [bird catchers compound] (opposite a rise of ground, above the seventeen mile post, on the Volcano Road, about two miles above Kanekoa), thence mauka to Palauhulu, an ahua [rise] on the road to Kilauea, at the place where the road to Panau branches off. The boundary between **Keaau** and Kahaualea is on the South east side of Palauhulu about as far away from Hilo Court House to seashore.

Thence the boundary runs mauka to Omaolaulau (he oioina [a resting place] on pahoe) near the woods at Reeds bullock pen, the boundary of **Keaau** is about as far from the Government road as from the Hilo Court House to the Government School house, thence mauka to Keekee, Kauhale kahi olona [house for stripping olonā bark for cordage] in 'Ōla'a. The boundary is a short distance from the Government road on the South East side.

Thence to Kauwaanahunalii (he oioina) this place is on **Keaau** and the boundary runs to the South East side of it. This is at the high ground where you can look down in the woods where the bullock pen is, thence to Kawaiaieae a large water pond (South East side of the road). The boundary of **Keaau** and Kahaualea is close to the pond, on the south east side, thence mauka to Kalaninauli, the land on the south east side being only about six chains wide thence to Puuenaena (large 'ōhi'a trees on the road makai of the koa woods) a short distance South East of the Government road.

Thence the boundary runs mauka to a place called Pohakuloa, a small cave south east of the Government road, and a very short distance above the koa woods, on the Government road to Kilauea. Thence **Keaau** is cut off by Keauhou. 'Ōla'a bounds **Keaau** on the north west side. Keauhou cuts **Keaau** off to Government road to Kilauea, then runs makai along the old [page 192] Government road, through the koa woods. 'Ōla'a being on the North side of the road and **Keaau** on the South east side.

Thence down the road passing these points Palauhulu and to Kapueuhi, thence makai to Kahooku thence to Kanekoa, the houses on the South East side of the road are on **Keaau**; those on the other side are on 'Ōla'a, thence to Kamahiki (14 mile post).

Thence to Kalehinapuo (where there is a mauka road which goes to Hawelu's) thence to Kaahakanaka, on the outer road passed Hawelu's thence to Kaluakaiole (Kaakeakaiole) mauka of where Haanio road to Kukulu leaves the present traveled road, thence to Mahinaakaaka on the outer road, out side of Kahuku, thence down to where Kahopuaku's houses used to be (Makaulele) along the old road, this is as far as I know the boundaries between 'Ōla'a and **Keaau**. Kahopuaku's houses were on 'Ōla'a.

Have heard that Mawae is the boundary between Waiakea and **Keaau**, on the Government road to Puna, and also to 'Ōla'a.

Have heard that Kawiokawaa is the boundary at sea shore between these two lands. I have not seen this place, the sea bounds **Keaau** on the makai side. Ancient fishing rights, including the uhu which was Konohiki fish extending out to sea. CXd [1873 Boundary Commission for Kea'au Ahupua'a].

June 4, 1873: Puaa K. Sworn

I live on Ponahawai, was born in Kau at time of Keouamua (one of Kamehameha I's battles).

I came to **Keaau** and lived there two years when I was a boy. Have lived on Waiakea a great many years, in 1860 I returned to **Keaau** and had charge of the land for five years. While in charge [page 193], I heard what some of the boundaries were, and went and saw them.

Uma, the last witness and Kalimakahili now at **Keaau**, and Kaoo, *Kamaaina* of **Waikahekahe** (who is now sort of *opulepule*), went with me. I never heard any dispute about boundaries between **Keaau** and **Waikahekahe 1st**. At the boundary between **Keaau** and **Waikahekahe** is the land of a place Keahuokaliloa, thence *mauka* along **Waikahekahe** to *pahoehoe*, on Hilo side of a place called Kukuikea where the natives cultivated food, and where breadfruit trees grow.

Thence to Hilo side of Waianohu a large place that fills with water in the rainy season. Thence to Koolauo, the *pahoehoe* on the Hilo side of it is **Keaau**; the soil is on **Waikahekahe Nui**. Thence *mauka* along the road to Halaaniani, **Keaau** on the Hilo side of road. Halaaniani is a *puu pahoehoe* [*pāhoehoe* hill] in a grove of ohia trees, called Keakui, about as far as from Hilo Court House to Wailuku bridge, on Hilo side of Halaaniani, on **Keaau**, thence two holes or caves where people used to live.

The boundary running between these caves, *mauka* to Oliolimanienie, *he oioina* [trail side resting place] on Puna side of a cave called Olioliana, where people used to hide in time of war. Thence **Waikahekahe Nui** ends and **Waikahekahe Iki** joins **Keaau**, and bounds it.

I have been to a place on the boundary between **Waikahekahe Iki** and **Keaau**, but I do not remember the name of the place, do not know where **Waikahekahe Iki** ends. **Keaau** ends a little above the cave at Pohakuloa, and is cut off by Keauhau.

Uma told me this. Nailima of 'Ōla'a told me **Keaau** ended at Halaaniani, he told me this when I was Konohiki of **Keaau**. Some of the 'Ōla'a people told me **Keaau** ended at Palauhulu. Kaoo K. told me that Kahaualea cut both **Waikahekahe**'s off. I think at a point outside of Kanekoa, he did not tell me where. Have heard that **Waikahekahe Iki** runs clear to Kilauea.

Kaoo is a *kamaaina* of **Waikahekahe**, have always been told that the road from Hilo is between **Keaau** and 'Ōla'a, until you get to Makaulele, below Kahopuaku's houses to a place called Kilohana where oranges are growing. Thence the boundary of **Keaau** and 'Ōla'a leaves the Volcano road and runs *mauka* above these orange trees, thence to an *ohia* grove called Puaaehu, thence to Waiaele& [page 194]& a place in the woods on the old road to 'Ōla'a. I have only been there once, 'Ōla'a is on the *mauka* side of this place, and **Keaau** is on

the *makai* side and Waiakea on the Hilo side at Mawae. Waiaele, a water spring with banana trees growing near it used to be an old *kauhale*. Mawae is on the Hilo side of Waiaele, about as far from here to Kalepolepo. It is a large crack that runs from the upper edge of the woods to shore and is the boundary between **Keaau** and Waiakea. **Keaau** is *makai* of the road from Waiaele to Mawae, and '**Ōla'a** is *mauka*.

Mawae is the boundary between **Keaau** and Waiakea from this point to the sea shore. Mawae is a large crack running across the Government road (*makai road*) to Puna, and thence to Kawiakawa, a sort of *awaawa* [gulch or depression] at shore, point of Kalipala at Papai, and point of Paukupahu. The *mawai* runs between these two. Kawiakawa is some distance on the Puna side of the cocoanut trees on Paukupahu, Alae and others whose names I do not remember, told me these things boundaries when we used to travel over the old road to 'Ōla'a. I went through there once, the road used to go from Pooholua to 'Ōla'a. The persons I went with are all dead. CXd. [Volume A No. 1:193-195]

June 4, 1873: Kanoi K. Sworn

I was born at Kapapala in Kau, at the time of the building of Kiholo [ca. 1811] lived there until a few years since know the land of **Keaau** and the boundaries on the mountain adjoining Kahaualea. The upper end of **Keaau** is bounded on the South East-side by Kahaualea, and on the *mauka* side by Keauhou and on the Northwest side by '**Ōla'a**; Kaheana, Kaihe Kaheana<sup>2</sup>, and Makanui my Kupuna showed me some of the boundaries of these lands.

Kaheana was from Panau Puna, and Kaihe was from Kau. These two men, with others from Kapapala showed me boundaries between Keauhou and Kahaualea where we went after the oo on Keauhou. Went after sandalwood on Kahaualea.

Keauhou cuts **Keaau** off at Pohakuloa, the *huina alanui* [road intersection], where the marks or sign board is at the junctions of the **Hilo and Puna** [196] roads this side of the Kilauea House, the name of this place is Halemaumau.

The boundary of **Keaau** runs *makai* along the **Puna road** to Kaluaiki, a small crater, at a place where the road runs between two craters. On to the *mauka* side of crater Kaluaiki, said crater is on Kahaualea and Keauhou is on the South side of the road. **Keaau** and Kahaualea lay side and side, from Kaluaiki to Nawailoloa, a place on the road from Palauhulu to Panau. Kaluaiki is about as far Pohakuloa as from Hilo Court House to Kaina's house at Alenaio.

Nawailoloa and Kilohana, two ponds of water, on the road to Panau from Palauhulu, from Nawailoloa the boundary between these two lands runs *mauka* to a grove of *Ohia* trees called Namauuokalahili, thence *mauka* to Puukea a hill in the woods where we used to go after sandal wood, thence *mauka* to Namamokalei where we used to catch *uwao* ['ua'u - petrels].

This place is opposite to Kauanahunahu, *mauka* of Keekee about a mile. Thence to Kaluaiki. I have often been to these points from Waiuli to Pohakuloa. I have always heard that the old Government road to Kilauea is the boundary between **Keaau** and 'Ōla'a, I do not know the *makai* boundaries. CXd. [Volume A No. 1:195-196]

June 4, 1873: Naipo K. Sworn

Was born at Waiakea at time of the Peleleu [ca. 1795]. Have always lived on Waiakea and **Keaau**. Keliinohopuu, my father, Ku his brother, and Kapulii (all dead) showed me boundaries, They told me Kapohakuau, a large rock on the point at shore is the boundary between Waiakea and **Keaau**, thence mauka [page 197], along Waiakea to Kawiakawaa, a small cave where natives worshipped Idols.

The boundary runs up mauka in awaawa **Keaau** on the Puna side and Waiakea on Hilo side to Mawae on the lower Government road to Puna, boundary at the bottom of the pali. Thence up along Mawae to mauka Government road to 'Ōla'a. I have not been along this Mawae but have always heard that it runs from lower to upper road. My parents told me **Keaau** ended at Waiaele. Naauē [Naue] is between Mawae and Waiaele, it is a place where people used to flee and live in time of war.

I have been told Waiakea joins 'Ōla'a at Waiaele. The sea bounds **Keaau** on the makai side and the land has ancient fishing rights extending out to the sea. Do not know the boundaries on the other side of the land. CXd. [Volume A No. 1:197-198]

About 18 years later, according to the Hawaiian Government Surveyors in 1891, the old road that the current road sits on was constructed on lands within the Kea'au Ahupua'a described as arable, with a portion of it consisting of *pāhoehoe* lava, which extended to the border of the *ahupua'a* of Waipahoehoe.

The arable land of **Keaau** flanks the road on either side and the Pahoehoe is reached at a distance of 7,000 feet from the starting point. The line here debauches from the old Volcano Road, running over smooth lava until **Waipahoehoe** is reached (Maly 1999).

In 1930, W.H. Shipman initiated Land Court Application 1053a with the Hawaiian Government Land court to survey and acknowledges title to the lands and boundaries of the *ahupua'a* of Kea'au. Mr. Charles L. Murray, Assistant Government Surveyor, notified R.D. King, Surveyor, Territory of Hawaii, that he was doing the survey of the Kea'au vicinity. Murray references the old Puna Government Road along the coast, the Māwae (the place where the *Kānāwai Māmalaha-hoe* (*Māmalahoa*), or Law of the splintered Paddle was born), and the location of a *heiau* named *Kawikawa*. The following are excerpts from the government survey (Land Court Application 1053) conducted by Murray (Maly 1999):

I. THE AHUPUAA OF KEAAU: R. P. 7223, L.C.A. 8559-B, Apana 16 to W.C. Lunalilo. &

After W.H. Shipman acquired title in the early '80s [1882] he made no transfer of any portion of the Ahupuaa for more than ten years. Then came the coffee boom between 1894 and 1900 he sold nearly 4000 acres, chiefly in the vicinity of what is now called "9 miles 'Ōla'a." Twelve deeds were executed&

In 1899 Shipman leased nearly 4000 acres of Keaau to 'Ōla'a Sugar Company, Limited, for a term of 40 years&

IV. L.C.A. 8081. R.P. 4360 to HEWAHEWA:

This is a kuleana within the boundaries of Keaau and petitioner has good title by unbroken chain of conveyances from the original awardee - a rather unusual condition, seldom met with in discussions of Hawaiian kuleanas.

V. ROYAL PATENT GRANTS 3 AND 4, LOTS 8 and 18 to the BOARD OF EDUCATION:

These were small lots on the beach of Keaau set aside in early days for school purposes. The native population in this vicinity was scant at best and with the advent of 'Ōla'a plantation the schools on the beach were closed for lack of pupils, and a large school lot was acquired near the junction of the Pahoa and Volcano Roads in 'Ōla'a village. This was obtained by exchanges hereinabove discussed with W.H. Shipman, and the two grants above were given to Shipman. The title to these grants is good [Land Court Application 1053, File Pages 61-69].

Table 1. Kea'au Ahupua'a Place Names

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Ā'alāmanu	Lex: Ā'alā-manu. Lit. Dense pebbles [gathered by the] birds	Situated on shore to the south of Kaiko'o.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Alaalkeiki	Lex.: 'ala'ala-keiki	Boundary point between Kea'au, Waikahekahe Iki and Kahaualea Ahupua'a. This place is at an old kauhale manu [bird catcher's compound] between Hoolapehu and Kanekoa (opposite a rise of ground, above the seventeen mile post, on the Volcano Road, about two miles above Kanekoa). Source: Boundary Commission Testimony 1:192. Quad: 10-54. North 223,700, East 630,000 Elev. 2280 ft.
Anapuka	Lit. Cave entry or underground passage, cave with holes	An area in the 'ili of Pōka'i (in Waiākea), also a heiau and associated features;
Auwae		An area in the 'ili of Pōka'i (in Waiākea), also a heiau and associated features; a cave. Source: USGS 1963. Quad: 10-36 North: 324,300 East: 673,500
Eight and Half Mile Camp		Plantation camp
Eleven Mile Homestead		Homestead, village. Source: USGS 1963. Quadrangle: 10-44 North: 281,000 East: 646,500.
Government Road (Old)		Coastal Road. Main access Road through Puna in the past. Formerly a part of the Ala Loa (The ancient road/trail that circuits the island)
Haanio Road	Lex: Ha'anio, or Hauanio.	Boundary point, place
Hā'ena	Lit. Red hot; raging wrathful (descriptive of the raging sea - pers comm. M.K. Pukui, 1976)	Point and flats fronting C. Fisher's residence; beach between Makua Reef to the east and Hauwa Reef to the west . . . across the road from Maniniholo Cave (Clark 1985:85)

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Halaaniani	Lex: Hala-aniani.	The Kea'au/Waikahekahe Nui boundary runs "mauka to Haalaaniani [sic] (he kupua [shapeshifter]) where the old road from Kalapana used to run to Koolauo" (p.191) "Halaaniani is a puu pahoe in a grove of ohia trees called Keakui" [with two habitation caves] (p.194) Between Koolauo and Laeopuula. Source: Boundary Commission Testimony 1:191,194. Quadrangle: 10-44.
Halauloa	Lex: hālau-loa. Lit: Long canoe house.	'Ili 'āina (or 'ili, land area) in Kea'au; LCAs 3996 and 8081; described as a garden. LCA 8081:2 to Hewahewa, 13.64 acres, is at Halauloa. Source: Indices of Awards, Land Commission 152,500; Land Commission, Awards Book 5:389; Land Commission, Native Testimony 4:471. Quadrangle: 10-?. See also Hapaiolaa below.
Hāpaiolaa	Lex: Hāpai-'ōla'a. Lit: Elevate, or lift up 'Ōla'a.	Kīhāpai (or Kīhāpai 'āina one of the smallest type of land division about the size of a grove, garden); LCA 8081 by Hewahewa describes it as a coffee tree grove. Land Commission Award 8081 is in Halauloa. Source: Land Commission, Native Register 8:704. Quadrangle: 10-? ( <a href="http://ulukau.org/">http://ulukau.org/</a> ) (see also Halauloa above)
Hawelu, Hawelu's Place, Hawelu's Road, Road to Hawelu's		Hawelu's Hotel was in 'Ōla'a. Mr. Hawelu was Mr. Shipman's foreman.
Hinamakanui or Wahinemakanui	Lex: Hina-maka-nui or Wahine-maka-nui. Lit.: Big-eyed Hina, or big-eyed woman	A stone in the ocean north of Kahului. Hina is an earth and fishermen's deity.
Honolulu Landing	Lit: Protected bay	Landing, probably in Nānāwale. Source: USGS 1965. Quadrangle: 10-45 North: 263,700 East: 712,300
Hoolapehu (Holapehu)	Lex: ho'ōla-pehu. Ho'ōla: to save. Pehu: swollen.	The Kea'au/Waikahekahe Iki boundary runs mauka "to Hoolapehu, another old village" between Kikinui and Alaalakeiki. Source: Boundary Commission Testimony 1:192. Quadrangle: 10-54.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Hoolapehu		boundary point, kauhale
Hoolauo		Old inland village on boundary between Kea'au and Waikahekahe
Hōpoe	Lex: Hōpoe. Lit. Fully developed.	Lava flats and forest, extending between the points of Ka'ilio and Kaloli. "Stone formerly in the sea at Kea'au...believed to be Hi'iaka's companion (deity of the lehua forest and dancers) turned to stone by Pele; it was moved by the tidal wave of 1946." Source: Pukui et al. 1974. Quadrangle: 10-36
Iwasaki Camp		Plantation camp. Village. Formerly plantation residential area. Elev. about 650 ft. Source: USGS 1963. Quadrangle: 10-44. North: 280,750. East: 650,500.
	Lit. The dog.	Point to south of Keauhou
Kaahakanaka	Lex: ka-'aha-kanaka. Lit: The assembly [of] men.	Boundary point. The Kea'au/'Ōla'a boundary runs mauka "to Kaahakanaka on the outer road passed Hawelu's", between Kaluakaiole and Kalehuapuaa
Kahooku	Lex: ka-ho'okū. Lit: To stand, in the state of standing.	Boundary point, place. The Kea'au boundary runs along 'Ōla'a to a point "in the road at place called Kahooku where some neneleau [nele-au. Rhus sandwicensis, a native Hawaiian sumach shrub/tree] Also neneleau. Trees are growing, and from where the houses at Kanekoa can first be seen in coming down from the volcano." Elev. 1849 ft. Source: Boundary Certificate No. C 61 (Vol. 3: pp114). Quadrangle: 10-44. North: 245,500. East: 630,300.
Kahului	Lex: Ka-hului. Lit. The fishnet bag. Interpretive: The winning.	Place. Old village site north of Kea'au Bay. Point in northern section of Kea'au. Possibly an 'ili 'āina at the shore. Source: USGS 1963; Tax Map 1601. Quadrangle: 10-36. North: 303,000. East: 677,000.
Ka'ilio	Lex: Ka-'ilio. Lit. The dog.	Point to south of Keauhou
Kaiko'o	Lex: Kai-ko'o. Lit. High or rough seas	Area between Pākī and Keauhou.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kalahina	Lex: Kalai-hina. Lit: Kalai: To carve. Hina: The name of a Hawaiian earth and fishermen Deity.	'Ili 'aina. Named in LCA 2327 to Barenaba, 11.32 acres. Source: Indicies of Awards, Land Commission 152,500. Land Commission, Awards Book 5:390. Quadrangle: 10-?.
Kalaninauli	Lex: Kalani-na-uli. Lit: the dark heavens.	A place, less than six chains wide.
Kalehina	Lex: Kalei-hina. Lit: The lei (flower wreath) of Hina.	'Ili 'aina in Kea'au; LCA 4658
Kalehuapuaa	Lex: Ka-lehua-pua'a. Lit: The lehua (flower) pig.	Boundary point, place. The Kea'au/'Ōlaa boundary runs mauka "to Kalehuapuaa (where there is a mauka road which goes to Hawelu's)", between Kaahakanaka and Kamakihi. Source: Boundary Commission Testimony 1:193. Quadrangle: 10-44.
Kaleinamalule	Lex: Ka-leina-malule. Interpretive: The leaping place of the weak one. A leina is a place of "leaping" or "throwing." A place where the spirits leaped into the nether world. Can also be a place to throw things, like as a trash heap (Pukui et al. 1986).	On south side of Kaloli
Kalele	Lex: Ka-lele. Lit. The leap, the flight or the altar.	Point south of Hā'ena. Perhaps an 'ili 'āina at the shore. Source: USGS 1963. Quadrangle: 10-36. North: 294,000. East: 679,500.
Kalipalu (Kalipala)	Lex: ka-līpalu. Lit: A seaweed much like hulu 'īlio 3, and perhaps the same.	Point at Papa'i Bay where māwae begins. "Point of Kalipalu at Papai." Source: Boundary Commission Testimony 1:195. Quadrangle: 10-36.
Kaloaokaoma	Lex: Ka-loa-o-ka-'oma. Lit: the length of the oven.	"Ancient surfing area, Ke-au [sic]..." Source: Pukui et. al. 1976. Quadrangle: 10-36.
Kaloli (Kaloli Point)	Lex: Kaloli. Interpretive: The changed one	Now referenced as the point on which Hōpoe is situated. Source: USGS 1965. Quadrangle: 10-45. North: 287,000. East: 690,000.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kaluaiiki	Lex: ka-lua-iki. Lit: the small pit.	In Keauhou Ahupua'a. Small crater at a place where the road runs between two craters. On mauka side: Kahaualea and Kea'au Ahupua'a, Puna.. On the South side, Keauhou Ahupua'a, Ka'u: "...a crater on the east side of the road on Kahaualea..." (p.445) "The boundary of Keaau runs makai along the Puna road to Kaluauiki, a small crater, at a place where the road runs between two craters." (p.196) Called "Twin Craters" on USGS 10-53. Elev. about 3920 ft. Source: Boundary Certificate No.62 (3:117); Boundary Certificate No. 171 (4:91); Boundary Commission Testimony 1:196,445, 2:303. Quadrangle: 10-53. North: 212,300. East: 589,050.
Kaluakaiole (Ka'akeaka'iole)	Lex: ka-lua-ka-'iole.Lit: the pit [of] the rat.	The Kea'au/'Ola'a boundary runs mauka "to Kaluakaiole (Kaakeakaiole) mauka of where Haanaia road to Kukulua leaves the present traveled road", between Mahinaakaka and Kaahakanaka. Source: Boundary Commission Testimony 1:193. Quadrangle: 10-44
Kaluapa'a (Kaluapuaa)	Lex: Ka-lua-pua'a. Lit: the pit [of] the pig.	Point on south side marking boundary between Kea'au and Waikahekahe Nui
Kamakahi	Lex: ka-makahi. Lit: Cressa cretica [a small prostrate perennial herb...].	The Kea'au/'Ola'a boundary runs mauka "to Kamakahi (14 mile post)", between Kalehuapuaa and Kanekoa. Source: Boundary Commission Testimony 1:193. Quadrangle: 10-44
Kamokuna	Lit. The cut off section	Ocean side boundary between Waiakea and Kea'au.
Kanekoa	Lex: kane-koa. Lit: The koa of the God Kane; Kane's koa.	The Kea'au/'Ola'a boundary runs mauka to Kanekoa "the houses on the southeast side of the road are on Keaau, those on the other side are on Olaa". Between Kamakahi and Kahooku. Source: Boundary Commission Testimony 1:193. Quadrangle: 10-44.
Kapohakuau	Lex: Ka-pohaku-au. Interpretive: The anchor.	Large rock situated onshore, marking the boundary between Waiakea and Kea'au
Kaulekou	Lex: Ka'u-leko'u . Lit. The potent penis	Coastal place; on shore between Anapuka and Pakaiea

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kauwaanahunalii (Kauwoanahunali'i)		( <i>he oioina</i> ) [a resting place] at the high ground where you can look down in the woods where the bullock pen was located.
Kawaiaeae	Lex: Ka-wai-a'ea'e. The mixed (as in different colors) water.	A large water pond (southeast side of the road). The boundary of Kea'au and Kahaualea is close to the pond
Kāwī-kāwā or Kāwī-o-kāwā	Lex: Kāwī-kāwā or Kāwī-o-kāwā, or .Kāwī-a-kāwā. Interpretive: Squeezed through a channel or opening.	Boundary point, place. The Kea'au boundary runs along Waiakea "to an old heiau named Kawiakawa" at the shore. (Boundary Certificate) "Kawiakawa, a sort of awaawa [gulch or depression] at shore..." (p.195) "Kawaiakawaa [sic] is at the sea shore" (p. 197) "Kawiakaawa [sic], a small cave where natives worshipped idols." (p.198) Source: Boundary Certificate No. 61 (Vol.3:pp. 114); Boundary Commission Testimony 1:193,195,197,198. Quadrangle: 10-36 North: 322,000 East: 674,200.
Kea'au	Lex: Kea'au. Lit. White current; lit. the rippling of the sea (Clark 1985:175)	<i>Ahupua'a</i> in the Puna district and a beach. Retained by Lunalilo (LCA 8559-B:16) at the Māhele. "...the land has ancient fishing rights extending out to sea." (Boundary Commission Testimony) Source: Mahele Book 25; Indices of Awards, Land Commission 77; Boundary Commission Testimony 1:198; USGS 1965. Quadrangle: 10-36. North: 300,000 East: 674,000
Keaau (now called Shipman's Beach)	Lex: Kea'au. Lit. White current; lit. the rippling of the sea (Clark 1985:175)	Town. Formerly headquarters of 'Ōla'a (later Puna) Sugar Company. Elev. about 300 ft. Source: USGS 1963. uadrangle: 10-35 North: 288,000 East: 658,000
Keaau Camp	Lex: Kea'au. Lit. White current; lit. the rippling of the sea (Clark 1985:175)	Village. Formerly plantation residential area. Elev. about 410 ft. Source: USGS 1963. Quadrangle: 10-44 North: 286,500 East: 656,500
Keaau Ranch	Lex: Kea'au. No translation.	Place. Source: USGS 1963. Quadrangle: 10-36 North: 294,700 East: 675,500.
Ke-ahi-lele	Lex: Ke-ahi-lele. Lit. The flying fire (fire ball)	An area near the intersection of the Puna Trail and the boundary wall

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Keahakanaka (Kaahakanaka)	Lex: Ke-‘aha-kanaka. Interpretive: A meeting place for people.	Boundary point, place
Keahuakaliloa (Keahuokaliloa)	Uncertain - if pronounced as Ke-ahu-a-ka-lilo-‘ā, it can be translated as ‘The mound of the one turned to stone.’ See site description given to the Boundary Commission in 1873 (see text in this study).	Boundary on ocean, between Kea‘au and Waikahekahe Nui Described in Boundary Commission testimony as appearing to look like a human body (see Uma K. testimony, this section)
Keanahe	Uncertain: If pronounced Ke-ana-hē, it may be translated as meaning "The-burial-cave."	South of Punalu‘u.
Keakui (Keaukui)		Grove. “Halaaniani is a puu pahoehoe in a grove of ohia trees called Keakui” between Koolauo and Laeopuula. Cf. Keaukui. Source: Boundary Commission Testimony 1:194. Quadrangle: 10-44 .
Keauhou	Lex: Ke-au-hou. Lit. The new era or the new current.	Place. Possibly an ‘ili ‘āina at the shore. Shoreline bay and village site between Waiakahekahe and Kea‘au. Source: USGS 1963. Quadrangle: 10-36. North: 288,000. East: 685,000.
Kikinui		Kauhale boundary point between Kea‘au and Waikahekahe Iki (house for bird catchers)
Kilohana	Lex: Kilohana. Lit: lookout point.	Boundary Point. “...a place called Kilohana, where orange trees are growing, there the boundary of Keaau and Olaa leaves the Volcano road and runs mauka above these orange trees...to an ohia grove called Puaaehu”, between Makaulele and Puaaehu. Source: Boundary Commission Testimony 1:194. Quadrangle: 10-44.
Kings Landing	Formerly Pāpa‘i.	Place. “New name for Pāpa‘i...in honor of Kamehameha’s accident there (Law of the Splintered Paddle).” See Papai. Source: Pukui et al. 1976:112. Quadrangle: 10-36

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kīpaepae	Lex: Kīpaepae. Stone pavement or steps for entering a house.	Area inland and between Pākī and Keauhou. And, an <i>'ili 'āina</i> at the shore." Source: USGS 1963. Quadrangle: 10-26 North: 289,000 East: 682,000.
Kīpū	Lit. Hold back	Point north of Cape Kumukahi
Koolauo		The boundary between Kea'au and Waikahekahe Nui "...runs mauka to place called Koolauo. The pahoehoe on the north side is Keaau and the good ground where cocoanut trees grow is on Waikahekahe. In past days there was a native village at this place." Between Waiamahu and Halaaniani. Source: Boundary Commission Testimony 1:191. Quadrangle: 10-45.
Kuhalau	Lex: Kū-hālau.. Possible meaning: Kū's (the deity) meeting house.	Boundary point, place. The Kea'au boundary runs from 'Ōla'a to Kuhalau. Elev. 2215 ft. Source: BC 61 (3:113). Quadrangle: 10-53. North: 235,600. East: 622,300.
Kukuikea	Lex: Kukui-kea. Lit: White candlenut.	Boundary point, <i>mahina 'ai</i> (truck farm), agricultural plots, breadfruit trees. According to Boundary Commission Testimony (1:194): "mauka along Waikahekahe [nui] to pahoehoe on Hilo side of a place called Kukuikea where the natives cultivate food and where breadfruit trees grow" between Keahuokaliloa and Waiamahu. Quadrangle: 10-45.
Kuolo	Lex: Kuolo. Lit: To rub, scrub. To tremble.	Place. "Area near Kea'au...where the Puna chief, Hua'ā, was defeated, thus giving control of Puna to 'Umi." Source: PEM 125. Quadrangle: 10-45.
Kurtistown		Town. According to Pukui et. al. (1974:125): "...named for A. G. Curtis, a pioneer at 'Ōla'a in 1902 when the 'Ōla'a Sugar Company began operations." Source: USGS 1963. Quadrangle: 10-44. North: 278,000 East: 652,000.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Laeopuula	Lex: Lae-o-pū-'ula. Lit: Point of the red conch shell.	Boundary point. The Keaau/Waikahekahe Iki boundary runs "mauka to Laeopuula, an old kauhale (on pahoe-hoe rise) he ahua pahoe-hoe, Keaau on the Hilo side of the road" between Oliolimanienie and Kikinui. Kauhale boundary point Source: Boundary Commission Testimony 1:192. Quadrangle: 10-54.
Mahinaakaka	Lex: Mahina-akaka. Lit: Clear moon.	Boundary point, grove located outside of Kahuku. The Kea'au/Ola'a boundary runs mauka "to Mahinaakaka on the outer road, outside of Kahuku" between Makaulele and Kaluakaiole." Source: Boundary Commission Testimony 1:193. Quadrangle: 10-44
Makaulele	Lex: Perhaps makau-lele. Lit: flying fishhook.	Boundary point. The Kea'au boundary runs along 'Ola'a to Makaulele. [Boundary Certificate 61 (3:114)] "...where Kahopuaku's houses used to be (Makaulele) along the old road". (Boundary Commission Testimony 1:193) Elev. 550 ft. Quadrangle: 10-44. North: 278,000. East: 655,000.
Mānowai-po'ō	Lex: Mānowai-po'ō. Lit.: Source of Water	A pond on the shore at Paukūpahu.
Mawae	Lex: Māwae. Lit: Fissure, cleft, crevice, fracture, crack	A long fissure in the lava, rising from Pāpa'i Bay, crossing the old government road, and proceeding to the vicinity of the Kea'au-Waiākea boundary at the upper edge of the woods. The place where the law of the splintered paddle was born (Kanawai Māmalahoa). "Mawai [sic]...is a large crack that runs from the upper edge of the woods to shore and is the boundary between Keaau and Waiakea". (Boundary Commission Testimony) Source: Boundary Certificate No. C 61 (3:114); Boundary Commission Testimony 1:195. Quadrangle: 10-35.
Nānāhuki	Lex: Nānāhuki. Lit. To pull away from	Sea fronting region between Hā'ena and Hōpoe.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Namamookalei	Lex: Nā-mamo-o-Ka-Lei. Lit.: Descendant, posterity. Nā mamo o 'Ikerā'ela (Puk. 1.13), the children of Israel. (Pukui et. al. 1974)	A place opposite Kauanohunohu where 'owao ('ua 'u, 'uwao) petrels were caught.
Namauuokalahili	Uncertain. Meaning changes with lexicology. Nā-mau'u-o-kala-hili: The rough, twisted grasses. Nā-mau'u-o-Kalahili: The grasses of Kalahili. Nā-ma'ūma'ū-o-Kalahili: Kala-hili: The loosening of bark used for dying. Ma'ūma'ū: To moisten. Interpretive: The action of loosening and moistening bark used for dying.	A grove of 'ōhi'a trees
Naue (Naauē)	Lit. Shaking, moving	An area between Māwae and Waiaele - formerly a place of refuge
Nawailoloa	Lex: Nā-wai-loloa. Lit: Very, very long/many waters.	A place. A pond of water.
Nine and One Half Mile Camp		Village. Plantation camp at about 480 feet elevation. Source: USGS 1963. Quadrangle: 10-44. North: 287,250. East: 654,750.
Ninemile Camp		Village. Plantation camp at about 380 feet elevation. Source: USGS 1963. Quadrangle: 10-44. North: 286,500. East: 657,000.
'Ōla'a Dispensary		Village. Plantation camp at about 560 feet elevation. Source: USGS 1963. Quadrangle: 10-44. North: 283,000. East: 655,000.
Olioliana	Lex: 'Oli'oil-ana. Lit. Chanting/singing cave.	Boundary point, refuge cave.
Oliolimanienie	Lex: 'Oli'oil-mānienie: Empty chanting/singing (cave echo?)	Boundary point, <i>mahina 'ai</i> . A trailside resting place marking boundary point between Kea'au and Waikahekahe Nui and Iki on Puna side of a cave called Olioliana (see above) where people used to hide in time of war.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Omao	Lex: 'Ōma'o. Lit: (1) Green as in plants. (2) Hawaiian thrush name. (3) A ti leaf bundle of food.	Boundary point, grove. The Kea'au boundary runs along 'Ōla'a to a point "in the Omao woods." At or near BM 2791. Cf. Omaolaulau, Olaa Forest Park Reserve. (see next entry) Source: Boundary Certificate No. 61 (3:113). Quadrangle: 10-53.
'Ōma'o-laulaia	Lex: 'Ōma'o. Lit: Green wrapped package/bundle (laulau).	<i>He oioina</i> (resting place) on pāhoehoe and <i>mauka</i> boundary point for Kea'au. (See previous entry)
Pakaiea	A type of seaweed ( <i>limu</i> ) [the green sea lettuce called <i>līpahapaha</i> ]; a variety of sugar cane ( <i>halāli'i</i> , named after the seaweed); a variety of taro; name of a type of wave at Kai-mū, Hawai'i (in Puna District).	Shoreline fronting Pōka'i Heiau.
Pākī	Lex: Pākī (Pākī Bay). Lit. Smashed, broken to pieces.	Shoreline bay and village site; south of Hā'ena in Kea'au Ahupua'a. Source: USGS 1963. Quadrangle: 10-36. North: 290,400. East: 682,000.
Palauhulu	Lex: Pālau-hulu. Meaning: To take all of a fish catch for a chief instead of dividing it.	Boundary Point. An <i>ahua</i> (rise) on road to Kīlauea where the road to Panau branches off. Boundary point of Kea'au and Kahaualea, between Alaalakeiki and Omaolaulau. Source: Boundary Commission Testimony 1:192. Quadrangle: 10-53.
Panau	Lex: Pānau. To move up and down as a seesaw. Restless, uneasy, to flip along, a gad about. A vulgar gesture.	An <i>ahupua'a</i> in Puna. Panau Nui, Iki.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Pāpa'i (now called Kings Landing)	Lex: Pāpa'i. Lit. Crab fishermen's shed	Land section, Old village site on shore and coastal point of Kea'au, near Paukūpahu. "This quarrel was named Ka-lele-iki, and from the striking of Kamehameha's head with a paddle came the law of Mamala-hoe (Broken paddle) for Kamehameha." Name changed to Kings Landing in honor of the accident. Source: Pukui et al. 1976:112, Kamakau 1961:125. Quadrangle: 10-36
Pā-pua'a	Lit. Pig pen.	Old village site and coastal point north of Kahului. An 'ili 'āina at the shore. USGS 1963. Quadrangle: 10-36. North: 306,000. East: 676,700.
Paukūpahu	Lex: Paukū-pahu. Lit. Section of land cut off (cf. Pukui et al. 1974); section cut off short	Point and 'ili of Kea'au where coconut trees grow and the māwae ends. The māwae runs between here and Kalipala at Papa'i Bay. Source: USGS 1963, Boundary Commission Testimony 1:195. Quadrangle 10-36. North: 321,300. East: 674,500.
Pōhākau	Lex.: Pōhākau. Lit. A stone that travelers rest on	Point and flat lands in vicinity of Kāwīakāwā; Puna Trail passes inland section. See Kawikawa, this table.
Pōhaku-'alaea	Lex: Pōhaku-'alaea. Lit. Red stone	Point between Pākī and Keauhou.
Pohakuloa	Lex.: Pōhaku-loa. Lit.: Large stone.	Place that sits on border with Keauhou. Small cave located here.
Pōka'i	Lex: Pōka'i. Interpretive: Night of the supreme one	An 'ili of Waiākea (the Hilo ahupua'a that borders Kea'au), and name of heiau on shore
Po'oholua	Lex.: Po'ohōlua. Lit: The beginning of a sled course.	Place, boundary point.
Puaaehu	Lex: Pua'a-'ehu. Lit: the red-haired pig.	Boundary point. "... the boundary of Keaau and Olaa leaves the Volcano road and runs mauka above these orange trees [at Kilohana]...to an ohia grove called Puaaehu", between Kilohana and Waiaele. Source: Boundary Commission Testimony 1:194. Quadrangle: 10-44
Punalu'u	Lex: Punalu'u. Lit. Diving spring (fresh water gotten by diving into salt water	Village and heiau south of Kalele. A cannibalistic mo'ō, Kaikapu (hag), lived here. She was killed by Laka and his helpers.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Puuenaena	Lex: Pu'u-ena'ena. Lit: Raging/hot (as in angry) hill.	Boundary point. A large 'ōhi'a trees grove on the road <i>makai</i> of the koa woods along the boundary.
Puukea	Lex: Pu'u-kea. Lit: White hill.	A hill/cinder cone covered in sandalwood.
Uhu-nui	Lex.: Uhu-nui. Lit. Large parrot fish.	Point between Pāpa'i and Kāwīakāwā.
Wahine 'Ami or Wahine 'Ami o Hōpoe	Lex: Wahine 'Ami or Wahine 'Ami o Hōpoe. Lit. Dancing woman; Hōpoe the dancing woman	Lava flats on south side of Kea'au Bay.
Wahinemakanui	Lex: Wahine-maka-nui. Lit.: Big-eyed woman.	Islet off Kea'au. "An islet (about 0.18 acre, 40 feet elevation)..." (Pukui et. al. 1974:218) About 0.4 mile offshore Kahului. Source: USGS 1963. Quadrangle: 10-36. North: 302,350. East: 679,300.
Wai-a-'eli or Waiaele)	Lex: Wai-a-'eli, Wai-a-'ele. Interpretive: Water made (gotten) by digging. The water looks 'eli (dark) from the dirt.	<i>Kauhale</i> (Traditional Hawaiian house consisting of a group or houses; a village). A place with a spring near Māwae and Kea'au-Waiākea boundary on the road to 'Ōla'a. Banana trees growing nearby. Used to be an old here. Source: Boundary Commission Testimony 1:194,195. Quadrangle: 10-44.
Waianohu	Uncertain. Lex: Wai-'ano-hū: The swelling water. Other meanings seem less likely, but at not ruled out based on other lexicology.	Name of a large place that fills with water during rainy season. Source: Boundary Commission Testimony, Uma K., Section 3.1.1.
Waiamahu	Interpretive: The water that prattles and talks when it swells/spurts.	The Keaau/Waikahekahenui boundary runs mauka "to Hilo side of Waiamahu, a large place that fills with water in the rainy season" between Kukuikea and Koolauo. Source: Boundary Commission Testimony 1:194. Quadrangle: 10-45.
Waihikolau	Uncertain.	Two caves marking inland boundary point between Kea'au and Waikahekahe Nui.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Waipahoe	Wai-pāhoe. Lit: pāhoe (smooth lava) water.	Place. "...The line here debauches from the old Volcano Road, running over smooth lava until Waipahoe is reached. This is a broad flat of a mile in width of open land surrounded with Pāhoe and covered with considerable soil, evidently accumulated from the denudation of several cones, which still exists on the upper end..."(See W.D. Alexander, New Puna Road 1889, Section 3.6.9) (See Also Waipahoe Bridge, Kalawe, Section 5.3, Table 10)Elev. 176 ft. at road junction. Source: USGS 1963. Quadrangle: 10-44. North: 280,000. East: 669,000.
Waiuli	Lex.: Wai-uli. Lit. dark water	Boundary point, place. The Keaau boundary runs along Oloo "to a pile of stones by the side (east side) of the road a little below Waiuli." Elev. about 1130 ft. at the boundary point. Source: Boundary Certificate No. C 61 (3:114). Quadrangle: 10-44. North: 265,200. East: 649,500.

### 3.1.2 'Ōla'a Ahupua'a

Boundary Commission testimony demonstrates the boundaries of the *ahupua'a* of 'Ōla'a in 1873, however in the present, 'Ōla'a is now a part of Kea'au Ahupua'a. According to Thrum's Hawaiian Annual for 1896, the *ahupua'a* of 'Ōla'a was well suited for growing agriculture such as: "...coffee, sugar, avocado, pear, Highland cacao, Vanilla, Tongan beans, Japanese plum (kaki), Chinese lichee, pine apples, mangosteen, loon fiber, mangoes, certain variety of grapes." (Thrum 1896) The *ahupua'a* was heavily forested with 'ōhi'a (*Metrosideros Polymorpha*), *māmaki* (a form of paper mulberry, *Pipturus spp.*), *Hala* (*Pandanus tectorius orodatissimus*), *loulou* (*Pritchardia hillebrandii*), and a number of different native ferns, vines and fern trees (Thrum 1896). The place names of 'Ōla'a Ahupua'a are presented in Table 2 below.

Maly says of 'Ōla'a, in his report for Pu'u Maka'ala Natural Area Reserve System program (2004):

...we find that Kū-ka-'ōhi'a-Laka, is a defied guardian of the 'ōhi'a growth of 'Ōla'a; Ua-kuahine, is the body form of a goddess of the rains in 'Ōla'a; and Kū-lili-ka-ua is the god of the thick mists that envelop the forests of the upper Puna, Waiākea, and Keauhou lands. In the early 1900s, the Hilo and 'Ōla'a forest lands were determined to be of significance, and worthy of protection. In between

1905 to 1928, the lands of the ‘**Ōla‘a** and Waiākea Forest Reserves, and the neighboring Kīlauea Forest Reserve were dedicated to the public interest as unique natural resources. Indeed, tradition also tells us that the gods and goddesses of these forest lands were very protective of them. In olden times, travel through them was accompanied by prayer, and care [Maly 2004:ii].

Maly further states that both the *ahupua‘a* of ‘**Ōla‘a** in Puna, and Waiakea in Hilo were given to King Kamehameha III during the māhele by Kaunuohua, (Buke Māhele pp. 91-92). These lands were retained by the King as crown lands (Maly 2004:40).

The forest lands of ‘**Ōla‘a** are noted for their growth of *hāpu‘u* (*Cibotium*) tree ferns. The collection of pulu was one of the activities undertaken in the ‘**Ōla‘a** section, as mentioned in the following letter from 1866. At the time, the applicant, T. Spencer, also applied for the right to run a few head of animals in the forest lands:

Honolulu, Oahu

23, April, 1866

Thomas Spencer. To J.O. Dominis:

...I would respectfully ask of you as a favor, to grant, or procure for me, a Pulu privilege on the land called **Olaa**— I do not ask you for “The privilege,” but a Pulu privilege, and to run what few animals I have connected with the business. I cannot afford to pay but a small sum, as the business will not warrant it—I am barely making both ends meet, I assure you, out of it. I called this morning on Mr. Rufus Lyman for information, in regard to this business who referred me to you, and has kindly promised me to write you for instructions. Be so good as to grant me this favor... [HSA Interior Department Lands, in Maly 2004:41-42].

Later in 1866, we find that native applicants were seeking “pulu privileges” in ‘**Ōla‘a** as well, and that they had knowledge of the native birds and other resources in the uplands:

Hilo, Sept. 18th, 1866

R.A. Lyman; to J.O. Dominis:

...Kaaikai & Kaaua are the ones who wish to lease **Olaa** for five years from the first of next January. Provided that they are allowed to have the pulu, and only the pulu. Birds, & awa, to be reserved. They would like to have two or three weeks more to consider about it, and wish to know whether you will allow them to pay on the 1st of July of each year, or whether they will have to pay the first of every year. Please let me know about this, and I will let you know as soon as I can if they will take it... [HSA Interior Department Lands, in Maly 2004:41-42].

Boundary Commission testimony outlines the boundaries, prominent land features, proper settlement areas, and locations of forested areas within the *ahupua‘a* of ‘**Ōla‘a** in 1873:

Nailima K. Sworn

I was born at 'Ōla'a, and know the boundaries between 'Ōla'a and Keaau. My kupuna, now dead, showed them to me.

**Keaau** ends at Halemaomao at the junction of the Hilo and Puna road. 'Ōla'a on the Hilo side of the road and **Keaau** on the Puna side. Thence makai to Pohakuloa, thence makai to Puuenaena (big 'ōhi'a trees) thence to Kalaninauli, so called by Nahienaena. Thence to Waiaiai, thence to Kauailehulehu, thence to Keanapapa at the 24 mile post thence to Kauwanahunalii, thence to Keekee, thence to Omaolaulau (at 'ōhi'a woods, and the bullock pen) thence to Pohakuloa, thence to Palauhulu, thence to Kawaikahoohia.

Thence to Kawaa, thence to Kaialuawai, thence to Kaluamanuahi, to Kaleinakeakua, which is at the 18 mile post, thence to Pahookui, thence to Pohakuloihi, to Punahaha, 17 mile post, thence to Kapuamau [page 196]. Thence to Kawaiaiai, thence to Kapae, 16 mile post, thence to Kanekoa, thence to Mokuhaaheo, thence to Mahiki, to Kahau, to Puualae, to Kaleiki, to Kanukea, thence to Umihali at the fifteen mile post, thence the boundary runs to Kalehuapua, mauka of the road to Hawelu's house (thence to Kaahakanaka, outer road to Hawelu's house).

Thence follow the outer road to Popoiwi, where Haanio's road branched off to go to Kukulu. Thence follow the outer road to Mahinaakaaka, opposite Kahuku, thence to Kapuhu, and 'ōhi'a grove, where the road turns towards Hilo on the makai side, thence to Ahuapuu, a puuhala tree by the road, thence to Makaulele, a little makai of this place, **Keaau** road joins at this point the boundary leaves the Hilo road, and turns mauka along 'Ōla'a, to Kilohana, an ahua or mound with orange trees.

Thence the boundary runs up mauka along awaawa on Ka'ū side of Kilohana, up a hill covered with puuhala, thence to pali Puuaehu, the boundary on the brow of pali, this side of Keaani, which is the name of an 'ōhi'a grove on the side of the pali, some distance mauka of Haanio's road, thence to Kaanamanu a place inside the woods. I have never been there and only heard of this place. Thence to Kaaipuaa, an old village, where people used to live. Thence to Waiaeli [also written Waiaele in text], a pond of water with aweoweo growing in it. Said pond is on the old road from 'Ōla'a to Pooholua. Have heard Waiakea joins 'Ōla'a and **Keaau** at Waiaele, Mawae is near there and have always heard that it is the boundary between **Keaau** and Waiakea. From the Government road to 'Ōla'a, seashore Kawiakawaa is at sea shore. CXd [Volume A No. 1:196-197].

In May of 1899 'Ōla'a Sugar Company leased 3,182 acres of land in 'Ōla'a (Pahoa up to Mountain View) from W. H. Shipman for a term of forty years. Several more land exchanges were made the same year. The lands were allowed to be cleared (by horse and mule) for the cane fields, preserving only certain fruit trees on the property (Hurst 1994: 14-15). Construction of the

‘Ōla‘a Sugar Mill was completed in 1902, requiring 51 men working a three-shift operation (Togashi 1992:4). This industrial expansion in Kea‘au marks the beginning of massive landscape alterations and clearing operations, which would have obliterated most, if not all above ground archaeological features present on leased lands.

Table 2. ‘Ōla‘a Ahupua‘a Place Names

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Glenwood	Lex: Ā‘alā-manu. Lit. Dense pebbles [gathered by the] birds	Village, Train Stop. "...built in 1901 as a terminal of the Hilo Railroad." Formerly named Ka-pu‘e-uhi (the yam mound) (Pukui et. al. 1974:32). Source: USGS 1963. Quadrangle: 10-53. North: 239,000. East: 619,000. See Kapueuhi (below).
Kapueuhi	Lex: Ka-pu‘e-uhi. Old name for Glenwood (Pukui et. al. 1974:89). Lit: The yam mound.	Village. The ‘Ōla‘a boundary runs mauka along Kea‘au to Kapu‘euhi, between Kahooku and Palaupulu [sic, Palauhulu]." (Boundary Commission Testimony 1:193) Probably an ‘ili; Glenwood is nearly a mile from the boundary. Quadrangle: 10-53. North 239,000. East 619,000. (ulukau.org)
Keekee	Lex: ke‘eke‘e. Lit: zigzag.	<i>Kauhale kahi olonā</i> [house for stripping <i>olonā</i> bark for cordage] along border with Kea‘au. Also the name of an <i>ahupua‘a</i> in Puna.
Kukui	Lex: Kukui. Lit: Candlesnut lamp, light of any kind. (Pukui et. al. 1974)	Village in Olaa Reservation Homesteads, along Kukui Camp Road. Elev. about 1150 ft. (USGS 1963) Quadrangle: 10-44. North 270,500. East 640,500.
Kulani	Lex: Kū-lani. Interpretive: Like heaven. (Pukui et. al. 1974)	Boundary point. Prominent cinder cone in the Kahuku Volcanic Series. Corner of Kau, Puna, and South Hilo districts. Elev. 5518 ft. Quadrangle: 10-42. North: 250,700. East: 568,300. (USGS 1956; Stearns and Macdonald 1946)
Laa	Lex.: La‘a. Lit.: Dedicated. (Pukui et. al. 1974:126).	<i>Ahupua‘a</i> . "Old name for ‘Ōla‘a, Hawaii, a legendary area for collecting bird feathers." Retained by the Crown at the Māhele, perhaps because of its traditional value as a source of feathers. Quadrangle: 10-44. North: 265,000. East: 630,000.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Maunahuihui (Mauna huihui)	Lex: Mauna hu'ihu'i. Lit.: Chilly mountain.	Place. "Old name for Mountain View, Hawaii." (Pukui et. al. 1974:148) Quadrangle: 10-44. North: 262,500. East: 635,000. See also Mountain View (below) ancient road/trail that circuits the island).
Mountain View	Lex: Ha'anio, or Hauanio.	Town. "...named for the Mountain View House, built in 1891 as a half-way house stop on the way to the volcano from Hilo." (Pukui et. al. 1974:158) Formerly known as Mauna Hu'ihu'i. (USGS 1963) See also Maunahuihui (above).
Olaa	Lex: 'Ōla'a. Translation not provided. However, interpretively, some scholars believe that 'Ōla'a is misspelled, and should be spelled as: 'O-La'a, because they believe that the okina is a substitute for the letter "k," as it is in some other Polynesian languages, which would, in turn, change the meaning to the name of the hula deity Laka. Or a place "dedicated" (la'a) to the god. This view is supported by the presence of the beautiful 'Ōla'a forest, since Laka is invoked by hula dancers and others when entering the forest its guardian.	<i>Ahupua'a</i> . Returned by Kaunuohua, retained by Crown at the Māhele. A very large land, but cut off from the sea by Keaau. Formerly called La'a, "a legendary area for collecting bird feathers." (Pukui et. al. 1974:126) Source: Mahele Book 96,192; Indices of Awards, Land Commission 25; Tax Map 1700, 1800, 1900; USGS 1963. Quadrangle: 10-44. North: 265,000. East: 630,000. (See La'a above)
'Ōla'a Forest Park Reserve		Place. This area includes part of the Omaolaulau [q.v.] forest which extends south across Keaau to Kahaualea, through what is now Fern Forest Estates. (USGS 1963) Quadrangle: 10-53 North: 230,000 East: 615,000.

Place Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
‘Ōla‘a Reservation Homesteads		Homestead. (USGS 1963) Quadrangle: 10-44. North: 270,000. East: 640,000.
Puu Makaala	Lex: Mak‘ala. Lit: Alert Hill (Pukui et. al. 1974)	A cinder cone in the Kahuku Volcanic Series. Elev. 3707 ft. Quadrangle: 10-43. North: 260,600. East: 594,750. (USGS 1963; Stearns and Macdonald 1946).
Volcano		Residential area and post office. Elev. about 4000 ft. Quadrangle: 10-53. North: 218,000. East: 591,000. (USGS 1963).

### 3.1.3 Waiakeahiula Nui and Iki (1 and 2) Ahupua‘a

Information regarding these two *ahupua‘a* is scant. This may be due to the lands being set aside for an *ali‘i* (chief/chieftess). According to the Māhele Land Commission Awards records (LCAw 11216:40, Māhele Book 33, Indices of Awards, Land Commission 69), the *ahupua‘a* was retained by Kekauonohi (see Appendix F for other lands awarded). According to the table below there was at least one tenant farmer working a Kō‘ele (small land unit farmed by a tenant for the chief) at Pili‘aikū in the past. According to Wikipedia.com, Kekauonohi was:

Anna Keahikuni-i-Kekau‘ōnohi, sometimes called Miriam Kekau‘ōnohi, (1805–1851) was a Hawaiian queen consort, member of the House of Kamehameha and granddaughter King Kamehameha I.

She was born circa 1805 at Lahaina, Maui. Her father was Prince Kahoanoku Kina‘u of Hawaii. Her mother was Princess Kahakuha‘akoi Wahini-pio of Maui, sister of Boki and Kalanimoku and granddaughter of King Kekaulike of Maui. Her father was son of King Kamehameha I and Queen Peleuli-i-Kekela-o-kalani, daughter of Kamanawa one of the royal twins. She married her uncle Liholiho who ruled as King Kamehameha II. She was one of his five wives. Others were Queen Victoria Kamāmalu, Queen Kalani Pauahi, Queen Elizabeth Kīna‘u, and Queen Miriam Auhea Kekauluohi. She was the youngest, but Kamāmalu was Liholiho's favorite [Stewart, C. S. 1839:147]. She was at the famous meal when the kapu system was overturned in 1819 known as the ‘Ai Noa.

Kekau‘ōnohi served as a governor of the island of Kauai some time around 1840 - 1845 [Acc. to Hawaii State Archives Digital Collections (HSADC)] and was a staunch [sic] Protestant. [Joesting 1988:146] Kamehameha III created the House of Nobles in the Hawaiian Constitution of 1840. [Acc. to HSADC] She was among the first members along with the King, Hoapiliwahine, Paki, Kōnia, Keohokalole, Kuakini, Kahekili, Leleiōhoku I, Kekuanaoa, Kealiiāhonua, Kanaina, Keoni Ii, Keoni Ana, and Haalio [Hill, 1856:413].

After the death of Queen Ka'ahumanu in 1832, she remarried Kealiihonui, former prince of Kaua'i and the son of King Kaumuali'i of Kaua'i. They had no children. After his death in 1849 she remarried Levi Ha'alelea, a relative of Queen Kalama (consort of Kamehameha III) and had a son named William Pitt Kīna'u who died young [Pratt, 1920:40]. She inherited most of the land of her uncle William Pitt Kalanimoku. She died in Honolulu June 2, 1851 age 46. Stephen Reynolds in his Journal noted at her death that she was "the last of the old stock of chiefs – one of the best of them – good natured, benevolent, liberal and generous." She left her land to her husband. She was foster mother of her nieces Abigail Maheha and Anna Kai'ulani [http://en.wikipedia.org/wiki/Kekauonohi].

Modern day Pāhoa town is located here (but outside of the current project area), and its historical archaeological features related to the historic railroad, plantation era sites, and other historic features (see Section 6.5 for interview testimony regarding Pāhoa town). Place names associated with these *ahupua'a* are presented in Table 3 below.

Table 3. Waiakeahiula Nui and Iki (1 and 2) Ahupua'a Place Names

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Auwai	Lex: 'Auwai. Lit.: Ditch, canal.	Boundary point, place. The Waiakahiula Iki boundary runs "along Kauaea to Auwai." Elev. 980 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp.49). Quadrangle: 10-55. North: 231,100. East: 687,500.
Hooaho Mawae	Lexicology (and Translation): Ho'o-aho, Hō'aho (Thatch, to thatch). Māwae (cleft, fissure, crevice, crack)	Boundary point, place. The Waiakahiula Iki boundary runs "along Kaniahiku to Hooahomawae." Elev. 905 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp.49). Quadrangle: 10-55. North: 233,250. East: 687,350.
Hookakee	Lex: Ho'o-kakee. Interpretive: To make crooked.	Boundary point, place. The Waiakahiula Iki boundary runs "along Kaohe to Hookakee". Elev. 970 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp. 50). Quadrangle: 10-55. North: 232,800. East: 683,150.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kahuaopiki	Lex: Kahua-o- 'āpiki. Lit: The house platform of 'Āpiki. ( 'Āpiki: crafty, cunning).	Boundary point, place. The Waiakahiula Iki boundary runs "along Nanawale to ohia tree marked X at place called Kahuaopiki, in woods". Elev. 650 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp. 49). Quadrangle: 10-55. North: 241,250. East: 689,500.
Kaloi	Lex: Ka-lo'i. Meaning: Loi: to look as if searching for flaws. Lo'i: Irrigated agricultural area. Interpretive: The irrigated taro patch, or "the searching".	Boundary point, ridge. The boundary of Waiakahiula Iki begins at a "pile of stones on the ridge called Kaloi." Elev. about 685 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp. 50). Quadrangle: 10-45. North: 242,500. East: 687,400.
Kaukapehu	Lex: Ka-'uka-pehu. Lit: The wrinkled sweet potato (a certain variety).	Boundary point, <i>o'io'ina</i> (resting place). The Waiakahiula Nui/ Nanawale boundary runs "mauka along old trail to oioina Kaukapehu" between Kawahinemaikai and Kawi. Source: Boundary Commission Testimony 2:397. Quadrangle: 10-45.
Kaupewai Mawae	Lex.: Kaupē-wai māwae. Lit: Kaupē- wai: the nose mucus. Māwae: crack.	Boundary point, place. The Waiakahiula Iki boundary runs "along [Kaohe] to ohia tree marked V at Kaupewai Mawae, a volcanic crack". Elev. 1015 ft. Source: Boundary Certificate No.158 (Vol. 4: pp. 49). Quadrangle: 10-55. North: 231,500. East: 683,700.
Kawahinemaikai	Lex: Ka- wahinemaika'i. Lit: The good woman.	Boundary point, <i>o'io'ina</i> [resting place]. The Waiakahiula Nui/Nanawale boundary runs "mauka along old trail to place called Kawahinemaikai an oioina" between Punalaupakukui and Kaukapehu. Source: Boundary Commission Testimony 2:397. Quadrangle: 10-45.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kawi	Lex: Kāwī. Lit: To press, wring out, squeeze out (as fruit juice).	Boundary point, place. The Waiakahiula Nui/Nanawale boundary runs mauka “to makai of where Kaina used to get pulu at place called Kawi, where this land turns toward Puna and cuts land of Nanawale off.” Coordinates are for the corner of Nanawale, at about 358 ft. elevation; the angle in the boundary is 2500 feet makai. Source: Boundary Commission Testimony 2:397. Quadrangle: 10-45. North: 252,200. East: 698,250.
Keukihale	Boundary point, place. The Waiakahiula Iki boundary runs “along Kaniahiku to ohia X at Keukihale.” Elev. 845 ft. Source: BC 158 (4:49). Quadrangle: 10-55. North: 235,100. East: 688,100.	Boundary point, place. The Waiakahiula Iki boundary runs “along Kaniahiku to ohia X at Keukihale.” Elev. 845 ft. Source: BC 158 (4:49). Quadrangle: 10-55. North: 235,100. East: 688,100.
Malamakuhoa	Lex: Mālama-kūhoa. Interpretive: A place to meet/take care of a friend.	Boundary point, place. The Waiakahiula Nui /Keonepokoiki “boundary runs along old road...to place called Malamakuhoa. At this point the land bends toward Puna and goes into woods.” Elev. about 250 ft. Source: Boundary Commission Testimony 2:396. Quadrangle: 10-45. North: 257,400. East: 700,800.
Pahoa	Lex: Pāhoa. Lit: The dagger	<i>O'io'ina</i> , town. Currently the principal town of lower Puna. It straddles the boundary between Waiakahiula Nui and Nanawale. “The [Waiakahiula] boundary runs up old road to oioina called Pahoa”. (Boundary Commission Testimony 2:396) Elev. About 650 ft. Source: USGS 1966. Quadrangle: 10-55. North: 241,500. East: 690,000

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Papala	Lex: Pāpala: Meaning: All species of native genus of shrub and small tree belonging to the amaranth family (Charpentiera). Parts of plant used for trapping birds. Wood also used for fireworks.	Boundary point, rock. “There is a rock in the sea called Papala on the boundary” between Waiakahiula and Honolulu. Source: Boundary Commission Testimony 2:396. Quadrangle: 10-45. North: 264,500. East: 711,250.
Piliaiku	Lex.: Pili‘aikū. Lit: Cramped, stiff, numb.	Boundary point, Kō‘ele (small land unit farmed by a tenant for the chief). The Honolulu/Waiakahiula Nui boundary runs “up kualapa to place called Piliaiku, an old koele belonging to Waiakahiula,” between Govt. road and Puu Holoaa. Source: Boundary Commission Testimony 2:397. Quadrangle: 10-45.
Punalaupakukui	Lex: Puna-lau-pā- Kukui. Meaning: Puna’s many candlenut groves.	Boundary point, grove. The Waiakahiula Nui/Nanawale boundary runs mauka “to some groves of woods called Punalaupakukui where the boundary turns toward Hilo,” between Puu Holoaa and Kawahinemaikai. Elev. 280 ft. Source: Boundary Commission Testimony 2:397. Quadrangle: 10-45. North: 256,850. East: 704,250.
Puu ‘Ōlelo	Lex: Pu‘u ‘Ōlelo. Lit: Speaking Hill.	Boundary point, place. The Waiakahiula Iki boundary runs “along Nanawale to ohia X [a tree marked with an “X”] at Puuolelo.” Elev. 665 ft. Source: Boundary Certificate No. 158 (Vol. 4 pp.:49). Quadrangle: 10- 55. North: 241,250. East: 692,000.
Puu Pahoehoe	Lex: Pu‘u- Pāhoehoe. Lit: Hill of smooth lava stones.	Boundary point, <i>pu‘u</i> (hill). the Waiakahiula Iki boundary runs “along Keonepoko to Puupahoehoe”. Elev. 855 ft. Source: Boundary Certificate No. 158 (4:50). Quadrangle: 10-55. North: 237,900. East: 683,000

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Waaomaui	Lex: Wa'a-o-maui. Lit: Maui's canoe. The canoe of Maui.	Boundary point, place. The Waiakahiula Iki boundary runs "along Kaohe to Waaomaui, a canoe shaped crack in the pahoehoe, about 2 chains outside of the ohia woods." Elev. 880 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp. 50). Quadrangle: 10-55. North: 237,150. East: 681,900.
Waiakahiula (Waiakeahiula)	Lex.: Possibly Wai-akahi-'ula: Interpretive: The first red water.	<i>Ahupua'a</i> . Retained by Kekauonohi (LCAw 11216:40) at the Māhele. Source: Māhele Book 33; Indices of Awards, Land Commission 69; SGS 1965. Quadrangle: 10-45. North: 257,000. East: 702,000.
Waihonapu	Lexicology and meaning uncertain. Wai: water.	Boundary point, place. The Waiakahiula boundary runs along Keonepokoiki "along road to Waihonapu". Elev. about 315 ft. Source: Boundary Certificate No. 158 (Vol. 4: pp. 48). Quadrangle: 10-45. North: 255,950. East: 98,050.

### 3.1.4 Waikahehake Iki, Nui Ahupua'a

Boundary Commission testimony demonstrates the boundaries of the *ahupua'a* of Waikahehake Iki and Nui in 1873, however in the present, a portion of Waikahehake Iki is now a part of Kea'au Ahupua'a. These two *ahupua'a* appear to have been in a region of *pili* (*Heteropogon*) grass, breadfruit (*ulu*) trees, and cultivated fields, coconut trees, interdispersed with areas of *pāhoehoe*. In addition to the boundary testimony excerpted below, appendix G also includes excerpts from Maly's (1999) oral history interviews regarding the vicinity of Waikahehake.

Trail locations and other trail related features, habitation areas, the old government road along the coast, and cultivation grounds are also mentioned here, and shown in Table 4 below. Of special note is the practice of naming stones, agricultural plots, individual trees and other land features within the environment, demonstrating the intimate relationship that Hawaiians had with their environment in the past:

Testimony - Palau K.

Palau K. sworn says (The witness appears to be over 60 years) I was born at **Waikahehake iki** Puna, Hawaii, at time of Niaukani o Kamalii (ca. 1811), and was grown up when missionaries first came to Hilo.

I now live at **Makuu** the adjoining land. Have always lived on these two lands. I am a kamaaina of **Waikahekahe iki**. My mother Mau was a kamaaina of the land, and showed me the boundaries.

The boundary at the shore between this land and land of **Makuu**, is at a kualapa [a ridgeline or point] called Kuwelo [Ku'uwelo], there is also a mawae [fissure] there: Thence the boundary runs mauka along Kualapa to the end of it, and on across the Govt. road to an ahu Pahoehoe [pāhoehoe rock cairn] near the road;

Thence mauka to old road to an ahu pohaku [stone cairn] at place called Kaumumanu, thence mauka across old pahoehoe to the pili [heteropogon grass] on the Hilo side of a grove of breadfruit trees on **Makuu**, at place called Kulanapahu. Thence to pili on Hilo side of grove of breadfruit trees at place called Kahoolua.

Thence mauka to pili on Hilo side of place called Puunanaio, a breadfruit tree and old mahina ai [cultivated field]. Thence boundary runs mauka across pahoehoe to place called Papamaihi an oioina [trail side resting place] on the old road from Kaimu. Thence mauka to the Puna side (or Kau side) of where houses used to be at old cultivating ground at place called Wahileolae.

The point of woods called Makaohē are on **Makuu**, and part of pahoehoe. Thence the boundary runs mauka to old road from Kaunamano to Kalae, where I was told **Waikahekahe iki** ends.

This land is bounded makai by the sea. The ancient fishing rights extended way out to sea. The boundary at shore between this land and **Waikahekahe nui** is at a point called Lahale [Laahale]. thence the boundary runs mauka to grove of cocconut trees makai of Govt. Road.

Only one cocconut tree is on this land at that place [page 400] the rest of the grove are on Waikahekahe Nui. Thence mauka to old road at place called Malumaluulu, where a breadfruit tree formerly stood on the boundary.

Thence mauka to a breadfruit tree at place Papamahina. Thence mauka to a cocconut tree at Piliui towards Puna of place called Koolauo: Thence mauka facing on the Hilo side of breadfruit tree to Haamea. Thence mauka across pahoehoe to place called Holoholokolea at the old road from Makahanaloa in Puna to place called Naakiolaola. Thence mauka to the edge of the pahoehoe on the Puna side of the old cultivating ground at place called Naepuhi.

Thence mauka to edge of pahoehoe on the Puna side of the old kauhale [house site] at place called Wailoa. This place is on Hilo side of place called Wahikolae. Thence the boundary runs mauka to place called Oliolimanienie the mauka end of this land and Waikahekahe Nui and junction of Keaau and Makuu. I have always been told this is the end of these lands. C.X.d. [Volume B:399-400].

Table 4. Waikahekahe Nui and Waikahekahe Iki Ahupua'a Place Names

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Haamea	Ha'amea: Humble person, thing.	Boundary point, kauhale (traditional Hawaiian home consisting of multiple structures). The Waikahekahe Nui boundary runs "along Waikahekaheiki to...Haamea, the west angle of the kauhale o Haamea bearing S 53-00 W 205 ft." Elev. about 195 ft. Source: Boundary Certificate No. 180 (Vol. 4: pp. 126). Quadrangle: 10-45. North: 268,450. East: 683,100.
Holoholokolea	Lex.: Holoholokōlea. Meaning: The strolling Kolea (Pacific Golden Plover)	Boundary point, place. The Waikahekahe Nui boundary runs "along Waikahekaheiki to [a point] 232 ft below the old Pahoa trail at Holoholokolea". Elev. 440 ft. Source: Boundary Certificate No.180 (Vol. 4: pp. 125). Quadrangle: 10-44. North: 261,300. East: 676,900.
Kahikinakala	Lex.: Ka-hikina-aka-lā. Meaning: The rising of the sun.	Boundary point, place. The Waikahekahe Nui boundary runs "along Waikahekaheiki to...Kahikinakala". Elev. 235 ft. Source: BC 180 (4:125. Quadrangle: 10-45. North: 267,600. East: 682,500.
Kahoolua	Lex: Ka-ho'o-lua. Lit.: The second time, to do twice. Name of wind elsewhere. Fig. to talk loudly with no purpose.	Boundary point, place. The Waikahekahe Iki/Maku'u boundary runs mauka 'to the pili on Hilo side of a grove of breadfruit trees at place called Kahoolua", between Kulanapahu and Puu Nanaio. Source: Boundary Commission Testimony 2:399. Quadrangle: 10-45.
Kalae	Lex: Ka-lae. Lit: The cape/brow/point.	Boundary point, place. The Waikahekahe Nui boundary runs "along Keaau to + marked on lava 605 ft. south of the easterly of two caves at Kalae". [Boundary Certificate No. 180 (Vol. 4: pp. 125)] "Two holes or caves where people used to live, the boundary running between these caves". (Boundary Commission Testimony 1:194) Elev. 1000 ft. Quadrangle: 10-44. North: 249,650. East: 661,600.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kaleolomea	Lex.: Ka-lae-olomea. Lit: The spotted cape/point	Boundary point, place. Kauhale, mahina 'ai. The Waikahekahe Iki boundary runs along the Puna Forest Reserve "to Kalaeolomea, the mauka corner of this land." Cf. Keekee. Elev. 2280 ft. Lexicology: ka-laeolomea. Source: Boundary Certificate No. 192 (Vol. 4: pp. 169). Quadrangle: 10-54. North: 223,700.
Kaluapaa (Kaluapua'a)	Lex: Ka-lua-pa'a. Meaning: (Ka-luapa'a) The permanent/steadfast pit; (Ka-lua-pua'a) The pig pit.	Boundary point between Kea'au and Waikahekahe Nui. One of two points. The other point marks Kea'au ahupua'a at the ocean and is named Keahuokaliloa (see Boundary Commission Testimony, Uma K., Section 1.1.1)
Kamaka	Lex.: Ka-maka. Lit: The face, the eye.	Boundary point, place. The Waikahekahe Nui boundary runs "along Waikahekaheiki to mound of stones between a cocconut tree and an orange tree at Kamaka..." Elev. about 175 ft. Source: Boundary Certificate No.180 (4:126). Quadrangle: 10-45. North: 269,500. East: 683,700.
Kamokuna	Lex: Ka-mokuna. Lit: The boundary, or The cut off Section.	Boundary point. Waikahekahe Nui. The boundary at the shore between Waikahekahenui and Kea'au is "at a point known as Kamokuna..." Source: Boundary Certificate No. 180 (4:124). Quadrangle: 10-45. North: 279,800. East: 691,300.
Kauanahunahu	Lex: Ka-uanahunahu. Lit: the pelting rain.	Boundary point. Kaualea/Waikahekahe Iki (Kea'au today) ahupua'a. "A high place you can look down onto the woods and at Reid's bullock pen". Between Keanapapa and Keekee. Source: Boundary Commission Testimony 1:210. Quadrangle: 10-53.
Kaumumanu	Lex.: Ka-umumanu. Lit: The bird oven.	Boundary point, place with an <i>ahu pohaku</i> (stone cairn) located there. The Waikahekahe Iki boundary runs along Maku'u to Kaumumanu. Elev. 21 ft. Source: Boundary Certificate No.192 (Vol. 4: pp. 169); Boundary Commission Testimony 2:399. Quadrangle: 10-45. North: 275,800. East: 695,250.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Keahuakaliloa	Lex.: Ke-ahu-a-kaliloa. Interpretive: The altar of long waiting.	Boundary point. The “point known as Kamokuna...[is] 30 ft. from the edge of the sea bluff, above a rock in the sea called Keahukaliloa [sic], and another rock called Kalau[o]pae [?]” (Boundary Certificate No. 180 (Vol. 4: pp. 124). Written “Keahuakaliloa” in Boundary Certificate No. 61 (Vol. 3: pp.112) "Keahuokaliloa" in Boundary Commission Testimony 1:191,194. Quadrangle: 10-45. North: 279,800. East: 691,300.
Keanapapa	Lex: Ke-ana-papa. Lit: The flat cave.	Boundary point. Kahualea Ahupua‘ā. Between Kohelehulehu and Kauanahunahu on the Kahaualea/Waikahekahe Iki (Kea‘au today) boundary. Source: Boundary Commission Testimony 1:210. Quadrangle: 10-53.
Keaukuilua	Lex.: Keaukui Lua. Meaning unknown.	Boundary point, pit. Waikahekahe Nui ahupua‘a: The Waikahekahe Nui boundary runs “along Keaau...to an ohia tree...in the middle of mouth of the Keaukui Lua...” Elev. 618 ft. Source: Boundary Certificate No. 180 (4:124). Quadrangle: 10-44. North: 257,150. East: 669,600.
Kikinui	Lex: Perhaps kīkīnui. Lit: large kīkī (a bird resembling a plover).	boundary point. The Kea‘au/Waikahekahe Iki boundary runs mauka “to Kikinui, an old kauhale for bird catchers” between Laeopuula and Hoolapehu. Source: Boundary Commission Testimony 1:192. Quadrangle: 10-54.
Koolauo	Lex: Ko‘o-lauo. Meaning unknown.	Boundary point. Old village. Kea‘au Ahupua‘a. The Kea‘au/Waikahekahe Nui “boundary runs mauka to place called Koolauo. The pahoehoe on the north side is Keaau and the good ground where cocoanut trees grow is on Waikahekahe. In past days there was a native village at this place.” Between Waiamahu and Halaaniani. Source: Boundary Commission Testimony 1:191. Quadrangle: 10-45.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Kulanapahu	Kulana: Lit. Position, place. Pahu: The name of a region below the <i>'ilima</i> and above the <i>kula</i> . Also means drum, cask; and explosion ( <i>pahū</i> )	Boundary point. A grove of breadfruit trees. The Waikahekahe Iki/Maku'u boundary runs mauka "to the pili on the Hilo side of a grove of breadfruit trees on Makuu at place called Kulanapahu", between Kaumumanu and Kahoolua. Source: Boundary Commission Testimony 2:399. Quadrangle: 10-45.
Kuwelo (Ku'uwelo, Ku'uwelu, Kuelo)	Lex: Kuwelo: Var.spelling of kuelo, which means "hard cooked taro." Ku'uwelu/Ku'uwelo: to hang loose, dangle, float in wind.	Boundary point. The boundary at the shore between Waikahekahe Iki and "Makuu is at a kualapa called Kuwelo [sic], there is also a mawae there". Written "Kuuwelu" on Tax Map1601 and Boundary Certificate No.192 (Vol. 4: pp. 169). Source: Boundary Commission Testimony 2:399. Quadrangle: 10-45. North: 276,550. East: 696,400.
Lahale (Laahale) "A" and "B"	Lex: Lā-hale. Lit: House of the sun, Sun house. La'ahale. Lit: Dedicated house.	Boundary Point. The Waikahekahe Iki boundary runs "to a point...near the edge of the sea pali at sea shore at place called Laahala [sic]..." Cf. Lahale "B." The two points are about 200 feet apart. Source: Boundary Certificate No. 192 (Vol. 4: pp. 169).
Mokuaalaa	Lex/Translation unknown.	Boundary point, place. The Waikahekahe Iki boundary runs makai along Keaau to Mokuaalaa. Elev. about 1350 ft. Source: Boundary Certificate No.192 (Vol. 4: pp.169). Quadrangle: 10-54. North: 241,900. East: 651,300.
Ohiakuapuu	Lex: 'Ōhi'akuapu'u. Lit: Hunchedback 'Ōhia.	Boundary point, place. The Waikahekahe Iki boundary runs "along Makuu to Ohiakuapuu." Elev. about 496 ft. Source: Boundary Certificate No.192 (Vol. 4: pp.169). Quadrangle: 10-45. North: 258,200. East: 680,300.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Ohipupu	Lex.: 'Ohi-pūpū. Lit: Gather shells.	<i>Mahina 'ai.</i> The Waikahekahe Nui boundary runs “along Waikahekaheiki to...Kamaka, distant...275 ft. south of the south edge of the Ohipupu cultivating grounds.” Elev. 170 ft. Source: Boundary Certificate No. 180 (Vol. 4: pp. 126). Quadrangle: 10-45. North: 269,850. East: 683,700.
Olalalapa	Lex: 'Ōlālapā. Lit: Full of ravines, ridges.	Boundary point. Kahaualea 'ahupua'a. Between Kilaueaiki and Pohakuloa on the Kahaualea/Waikahekahe Iki [Keaau today] boundary. Source: Boundary Commission Testimony 1:210. Quadrangle: 10-53.
Olioliana	Lex: 'Oli'oli-ana. Lit. Chatter cave.	Boundary point, refuge cave. The Waikahekahe Nui boundary runs ‘along Keaau...to...the brink of the Oleoleana [sic] cave.’ [Boundary Certificate No. 180 (Vol. 4: pp. 125)] “...where people used to hide in time of war.” (Boundary Commission Testimony 1:194) Elev. about 855 ft. Quadrangle: 10-44. North: 255,550. East: 663,350.
Oliolimanienie	Lex: 'oli'oli-manienie. Lit. Barren/empty chatter	Boundary point, mahina 'ai. The Waikahekahe Nui boundary runs “along Keaau to...north edge of the ancient cultivating grounds of Oliolimanienie...this point being the extreme west or mauka angle of Waikahekahenui, as also of Waikahekaheiki, the common angle of these two lands with Makuu”. [Boundary Certificate No. 180 (Vol. 4: pp. 125)] “...he oioina [resting place], on Puna side of a cave called Olioliana [q.v.] and where people used to hide in time of war”. (Boundary Commission Testimony 1:194). Elev. about 1190 ft. Quadrangle: 10-44. North: 242,650. East: 661,800.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Papamaihi	Lex: Perhaps papama‘ihi. Meaning: A dwarf kava variety.	Boundary point, <i>o‘io‘ina</i> . The Waikahekahe Iki/Maku‘u boundary runs <i>mauka</i> to “Papamaihi an oioina on old road from Kaimu”, between Puu Nanaio and Wahikolae. Source: Boundary Commission Testimony 2:399. Quadrangle: 10-45.
Pilinui	Lex.: Pili-nui. Lit: Big Pili grass. ( <i>Heteropogon contortus</i> ; used for thatching houses)	Boundary point, place. The Waikahekahe Nui boundary runs “along Waikahekaheiki to + marked on lava by a lone cocoanut tree...at Pilinui.” Elev. about 155 ft. Source: Boundary Certificate No. 180 (Vol. 4: pp. 126). Quadrangle: 10-45. North: 270,300. East: 684,550.
Pohakuloa	Lex: Pōhaku-loa. Lit: long stone.	Boundary point. Kahaualea ‘Ahupua‘a. “a pool or swamp” between Olapalapa and Puu Enaena on the Kahaualea/Waikahekahe Iki [Keaau today] boundary. Source: Boundary Commission Testimony 1:210. Quadrangle: 10-53.
Pulehuakaula		Boundary point, place. The Waikahekaheiki boundary runs “along Makuu to Pulehuakaula” Elev. 720 ft. Source: Boundary Certificate No. 192 (Vol. 4: pp.169). Quadrangle: 10-45. North: 250,100. East: 675,500.
Puunanaio	Lex.: Pu‘u nā-naio. Lit: Hill of false Sandalwood ( <i>Myoprum sandwicense</i> ).	Boundary point. The Waikahekahe Iki/Maku‘u boundary runs <i>mauka</i> “to pili on Hilo side of place called Puunanaio, a breadfruit tree and old mahinaai (agricultural field)”, between Kahoolua and Papamaihi. Source: Boundary Commission Testimony 2:399. Quadrangle: 10-45.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Wahikolae	Unknown.	<i>Kauhale, mahina 'ai.</i> The Waikahekahe Iki/Maku'u boundary runs mauka to Wahikolae "where houses used to be at old cultivating ground" between Papamaihi and Kalaeolomea. (Boundary Commission Testimony 2:399). The Waikahekahe Nui boundary runs "along Waikahekaheiki...at the edge of the west or mauka bight of the ancient cultivating grounds of Wahikolae" (Boundary Certificate No. 180 (Vol. 4: pp.125). Elev. 840 ft. Quadrangle: 10-44. North: 250,000. East: 667,350.
Waikahekahe Iki	Lex: Wai-kahekahe- iki. Small Waikahekahe. Kahekahe: Fishing method. Bird catching method.	<i>Ahupua 'a.</i> Retained by Kale (LCA 8522-B:3) at the Māhele. Waikahekahe Iki is said to have reached "to the brink of" Kilauea Iki (Boundary Commission Testimony 1:210) but is now cut off by Keaau well below the crater. Source: Māhele Book 173; Indices of Awards, Land Commission 60; Boundary Certificate No.192 (Vol. 4: pp.168-169); Boundary Commission Testimony 2:399-400; USGS 1965. Quadrangle: 10-45. North: 260,000. East: 681,500.
Waikahekahe Nui	Lex: Wai-kahekahe-iki. Large Waikahekahe. Kahekahe: Fishing method. Bird catching method.	<i>Ahupua 'a.</i> Retained by Lahilahi (LCA 8520-B:4) at the Māhele. Source: Māhele Book 169; Indices of Awards, Land Commission 73; Boundary Certificate No.180 (Vol. 4: pp. 124-127); Boundary Commission Testimony, USGS 1965. Quadrangle: 10-45. North: 263,000. East: 676,000.

### 3.1.5 Maku'u, Halona and Popokī Ahupua'a

The place names associated with these *ahupua'a* are presented in Table 5 below. According to the Hawaiian Government Surveyors in 1891, the lands of Maku'u and Halona that the present day corridor sits within was covered with forest, and agriculture:

The extensive forests of **Makuu** and **Halona**, Gov't. lands, distant one and one-half miles above the road line, filled with an exuberant mass of shrubbery, in which the presence of bananas, Ki [ti plants], Yam, and Awa [Piper methysticum] can be easily distinguished, and the growths of young Sandal wood.

During more recent times, Maku'u was the subject of three short stories written by Richard Ha. Richard Ha writes about his childhood in Puna, specifically Maku'u *ahupua'a* on his website at: <http://hahaha.hamakuasprings.com/makuu-stories>. His account of the Maku'u area informs us of what that area and the road once looked like prior to the Paradise Park and Hawaiian Beaches subdivisions were built:

#### Part 1: My Kamahele Family in Maku'u

Today I was thinking about my grandmother Leihulu's brother, Ulrich Kamahele. Everybody knew him as Uncle Sonny, as if there was only one "Uncle Sonny" in all of Hawai'i. He was a larger-than-life character. In a crowd, he dominated by the sheer force of his personality. Since I have been thinking about him, I thought I would write a several-part story about **Maku'u**.

My extended Kamahele family came from **Maku'u**. When we were small kids, Pop would take us in his '51 Chevy to visit. He would turn left just past the heart of Paho town, where the barbershop is today. We drove down that road until he hit the railroad tracks, and then turned left on the old railroad grade back toward Hilo. A few miles down the railroad grading was the old **Maku'u** station. It was an old wooden shack with bench seats, as I recall. That is where the train stopped in the old days. A road wound around the pahoehoe lava flow all the way down the beach to **Maku'u**. That was before there were the Paradise Park or Hawaiian Beaches subdivisions.

We did not know there was a district called **Maku'u**; we thought the family compound was named **Maku'u**. Of the 20-acre property, maybe 10 acres consisted of a kipuka where the soil was ten feet deep. The 10 acres on the Hilo side were typical pahoehoe lava. The property had a long oceanfront with a coconut grove running the length of the oceanfront. It was maybe 30 trees deep and 50 feet tall.

The old-style, two-story house sat on the edge of a slope just behind the coconut grove. If I recall correctly, it had a red roof and green walls. Instead of concrete blocks as supports for the posts, they used big rocks from down the beach. There was no telephone, no electricity, and no running water. So when we arrived it was a special occasion.

We kids never, ever got as welcome a reception as we got whenever we went to **Maku'u**. And the person happiest to see us small kids was tutu lady Meleana. She was my grandma Leihulu's mom. She was a tiny, gentle woman, maybe 100 pounds, but very much the matriarch of the family. She spoke very little English but it was never an issue. We communicated just fine.

We could not wait to go down the beach. Once she took us kids to catch 'ohua—baby manini. She used a net with coconut leaves as handles that she used to herd the fish into the net. I don't recall how she dried it, but I remember how we used

to stick our hands in a jar to eat one at a time. They were good. She would get a few 'opihi and a few haukeuke and we spent a lot of time poking around looking at this sea creature and that.

Between the ocean in the front and the taro patch, ulu trees, bananas and pig pen in the back, there was no problem about food. I know how Hawaiians could be self-sufficient because I saw it in action.

The house was full of rolls of stripped lauhala leaves. There were several lauhala trees and one was a variegated type. I don't recall if it was used for lauhala mats but it dominated the road to the house. There were lauhala mats all over the place, four, and five thick. There was a redwood water tank, and the kitchen water pipe had a Bull Durham bag on the spout as a water filter.

Years later when I showed interest in playing slack key, I was given Tutu's old Martin guitar. She had played it so often that the bottom frets had indentations in it where her fingers went. (<http://hahaha.hamakuasprings.com/makuu-stories/>)

#### **Maku'u** Stories, Part 2: Cousin Frank Kamahale

It was because he stayed at **Maku'u** when he was a small kid that my Pop's cousin Frank Kamahale became a jet pilot and also the manager of the Hilo and Kona airports.

About a mile down the coast from Tutu's house in **Maku'u**, toward Hawaiian Beaches, was an island called Moku 'Opihi. During World War II, Hell Fire and other planes flew from Hilo and used that island for target practice.

The pilots knew there was a small kid at the house who jumped up and down waving at the planes. Some would fly low and turn sideways, then smile and wave at the small kid. Others would wiggle their wings and buzz the house. The small kid knew that he would become a pilot one day. He did not know how; just that he would.

Later, when that kid Frank Kamahale was at Pahoa High School, a new teacher came from Texas and became the basketball coach. Frank loved basketball, and the new coach helped him to go to the University of Hawai'i on a scholarship to play basketball. It so happened that the University of Hawai'i had an Air Force ROTC program, which Frank joined. Upon graduating, Frank applied to go to flight school. He was told to go home and wait for an opening, and one came a few months later. Next thing he knew, he was in Arizona at flight school.

Frank told me recently that he feels like the luckiest person in the world. He came from a very poor family, and no one in the family had gone to college. If it hadn't been for the planes flying overhead and a kind, dedicated teacher from Texas, he might have had a career as a "cut cane man." He was pretty good at that and

earned \$200 a month for contract cane cutting. At that time, it was a lot of money. (<http://hahaha.hamakuasprings.com/makuu-stories/>)

### **Maku'u** Stories, Part 3: Uncle Sonny

My Uncle Sonny farmed at **Maku'u** after some years in the Merchant Marines. His real name was Ulrich Kamahela (I have no idea where that name came from). He had a big personality.

One day, when I was walking with a couple of my buddies on Waiianuenue Avenue near where Cronies is now, I heard someone call me. It was Uncle Sonny, and he was almost all the way up the block toward Kaikodo. It's hard to be rugged -- even when you are in the 9th grade and smoking cigarettes -- when your Uncle Sonny yells "Hey, Dicky Boy." I cringed and looked around to see if any girls had heard him. He must have been in his 30s then.

I caught up with him again after I graduated from the University of Hawai'i and returned home to run Pop's chicken farm. When we decided to start growing bananas, we got lots of our banana keiki from Uncle Sonny. The Paradise Park subdivision had been built and so one could drive all the way down to **Maku'u**. So we saw him quite frequently.

Uncle Sonny did not have electricity, running water or a telephone, but he had a transistor radio and a 1-foot stack of U.S. News and World Reports. He always got the current copy from the Pahoehoe post office. Though he lived a very simple life, he'd traveled all over the world with the Merchant Marines and he knew a lot more than one would think. He could talk about a myriad of subjects. I found his stories fascinating.

I visited him often and learned a lot about farming from him. A visit to **Maku'u** would take hours, with most of that time spent listening to Uncle Sonny. I learned to be a good listener. He always talked in a loud voice and he waved his arms a lot. My wife June and my sister Lei told me that they would stay arms' length from Uncle Sonny, walking backwards or in a big circle around the yard. They were careful to stay out of range of his swinging arms, or else they would be all bruised at the end of the visit.

Uncle Sonny was known for growing the sweetest watermelons. People would come from miles around to get his watermelons. He did not have to go out to sell them; they would all sell by word-of-mouth. We spent a lot of time talking about farming watermelons. He used a backpack poison pump. Once he showed me how he knew that the amount of sticker/spreader in the mixture was effective. Although the rate was supposed to be something like ½-teaspoon per gallon, he always double-checked the mixture by sticking a piece of California Grass into it. Due to the fine hair on the grass, water normally runs off California grass, taking

the herbicide with it. If the water spread on the leaf instead of running off it, the mixture was right.

The message I learned was: Use the book for the first approximation, and then confirm things on the ground. The word “grounded” does come to mind. He told me that melon flies, an enemy of watermelon, rest under a leaf at the height of the midday sun. That was why he planted a few corn plants on the outside border of his watermelon patch. Sure enough, they were there. He was in tune with the behavior of the fruit fly. He would pull out his can of Raid and give them a short burst. The standard solution would have been to spray the whole field. Uncle Sonny’s way was much more effective and very much cheaper.

Here’s how Uncle Sonny knew his watermelons were ready: When they were the size of golf balls, he would put a wooden stake with the date on it. Then he harvested the melons after a certain number of days went by. It was so simple and so effective. It’s what led us to place a different colored ribbon on every banana bunch we bagged in a particular week. We harvested the bananas based on elapsed time—pretty much like Uncle Sonny did. I learned from Uncle Sonny to use the “book” for general instructions. But not to rely on it exclusively. Uncle Sonny broke things down to their essential components. He made his life simple, and yet he was very effective. I admired him very much. (<http://hahaha.hamakuasprings.com/makuu-stories>)

Ms. Naeole (see section 5.3 for interview), tells us of **Maku‘u**, and the Hawaiian Homestead area located within the project area during modern times.

Well, you know for me right now where I am at the **Maku‘u** Hawaiian Homestead. I know that portion of land was used by the military for bombing. There are some shells they found. I am not too sure what they call it...yes Artillery casings things that the military used in the olden days. It was not a total clean up.

I just wanted to say, with the **Maku‘u** Hawaiian Homestead at the time we created it I think in July 1985 we were awarded our lands. That is when I was awarded our land. I moved over there in December in a 16 X 24 shack, I was 29 years old. I remember I had no green machine I only had a sickle. I created and started cleaning my land with a sickle. I remember when I set up one blue tarp and tied it to the trees so my kids go underneath and have a shade and then I started to clean my land with a sickle. So, since 1985 until today, 2009 my personal experience over there at the Maku‘u Hawaiian Homestead was a great struggle. We really struggled. We never had infrastructure.

When it came to the building of the Maku‘u Farmer’s Market. I had been part of the gang for long time. I feel so proud of what it is today, because my daughter Heidi is actually the Secretary-Treasurer of that Farmers Market, Paula Kekahuna’s son, Ioane, is actually the site manager. So we have given the realm

to our children. Now we have moved on and stepped aside so that the next generation can come forward. And so, I feel so proud to be part of the Maku'u Market Association. Right now we are working to get the money to build a community culture center over there. It is all about hard work, setting your visions, and plowing through to make it real. Even before 1985 my parents and other Hawaiians from this district actually put this land in a land bank pushing it forward to become Department of Hawaiian Home Lands for the people. So there was a movement even before I was awarded my land in 1985.

I'm really blessed because I actually put in my paperwork in 1979 for Hawaiian Homestead to get me a land. So it was my parents who hustled to get to be part of the Department of Hawaiian Homelands.

Currently, the Maku'u Farmers Market Association continues the long standing use of Maku'u Ahupua'a as an area for farming, fishing and hard work. Many areas up until the late 70s did not have electricity, running water or other services, therefore families residing there lived simple lives, just like their ancestors before them. Additionally, they continue to pass on traditional skills to the younger generation through hands on use of resources, and educational classes as people in Maku'u have done for generations. Finally, with the advent of infrastructure and other modern conveniences, the Maku'u community has evolved through time, to include community outreach, economic self sufficiency, and traditional cultural education through the Maku'u Farmers Market Association site located within the project corridor area (see Kekahuna and Naeole interviews, Section 6.9 and 6.3, respectively).

Table 5. Maku'u and Popokī Ahupua'a Place Names

<b>Feature Name</b>	<b>Ahupua'a</b>	<b>Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning</b>	<b>Description and Location</b>
Auwae	Maku'u	Lex.: 'Auwae. Lit: The place below a person's mouth and above chin.	Place. In Nānāwale; north of Maku'u. Source: USGS 1965. Quadrangle: 10-45. North: 276,400. East: 696,700.
Halona	Hālonā	Lex: Hālonā. Meaning: peering place (Pukui et. al. 1974).	Returned by A. Kaeo, retained by <i>aupuni</i> (Hawaiian Kingdom) at the Māhele. (Māhele Book 46,193; Indices of Awards, Land Commission 29; USGS 1965)

Feature Name	Ahupua'a	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Makuu	Maku'u	Lex: Maku'u. Translation: Knob or end piece of a canoe, used for hauling the hull perform to the shore - also the knob of a wooden club swung over the head and thrown to strike or trip someone; prob. Lit. canoe endpieces	<i>Ahupua'a</i> in Puna. Returned by Leleiohoku (Could possibly refer to Ke Ali'i William Pitt Leleiohoku I (1821-1848), who was married to Princess Ruth Ke'elikōlani), retained by <i>aupuni</i> (Hawaiian Kingdom) at the Māhele. Source: Māhele Book 28,191; Indicies of Awards, Land Commission 34; USGS 1965. Quadrangle: 10-45. North: 258,000. East: 682,000.
Makuu	Pōpōkī	See Maku'u, previous entry.	Place. "Site" Elev. 44 ft. A dozen beach lots on state land next to the land of Maku'u. Source: USGS 1965; Tax Map 1500, 151. Quadrangle: 10-45. North: 273,000. East: 698,000.
Makaohe	Maku'u	Lex.: Maka-'ohe. Lit: Bamboo eye(s).	Boundary point. <i>Lae</i> (cape, headland, point, or promontory). "The point of woods called Makaohe are [sic] on Makuu" along the Waikahekahe Iki boundary, between Wahikolae and Ohiakuapuu. Source: Boundary Commission Testimony 2:399. Quadrangle: 10-45
Popoki	Pōpōkī	Lex: Pōpōkī Lit: Ti ( <i>Cordyline terminalis</i> ) leaf bundle.	<i>Ahupua'a</i> in Puna. Returned by Kamamalu, retained by <i>aupuni</i> at the Māhele. Source: Māhele Book 10,191; Indicies of Awards, Land Commission 36; USGS 1965. Quadrangle: 10-45. North: 257,000. East: 684,000.

### 3.1.6 Keonepoko Nui and Iki (1 and 2) Ahupua'a

These *ahupua'a* are mentioned in other boundary commission reports mentioned earlier in this CIA. According to Māhele records (see Table 6 below), the *ahupua'a* of Keonepoko was returned by Lunalilo and retained by *aupuni* (the kingdom) in the Māhele. It was also listed as land that does not pay tribute to any *konohiki* (*hemo* lands, see table below). According to King the William Charles Lunalilo Trust website (<http://www.lunalilo.org>), Lunalilo was:

Prince Lunalilo was born on January 31st 1835 to High Chiefess Miriam 'Auhea Kakauluohi (Kuhina Nui, or Premier of the Hawaiian Kingdom and niece of Kamehameha I) and High Chief Charles Kanaiana. Lunalilo's grand parents were Kala'imamahu (half brother of Kamehameha I) and Kalakua (sister to Ka'ahumanu). His great grandfather was Keouakupupailaninui (father of Kamehameha I)... The coronation of Lunalilo [being elected to reign as King after the death of Kamehameha V] took place at Kawaiaha'o Church in a simple ceremony on January 9th 1873. He was to reign for one year and twenty-five days, succumbing to pulmonary tuberculosis on February 3rd 1874 [at the age of 39].

Information regarding these *ahupua'a* are scant, and as in the case of Waikahekahe, may be due to the lands being held in the hands of high *ali'i*. It is not known why King Lunalilo returned these lands during the māhele, and set them aside as government lands, excluded from tribute. The table below does not list any lands or place names associated with habitation, nor does it indicate that anyone was residing on these lands at the time of the māhele.

Table 6. Keonepoko Nui and Iki (1 and 2) Ahupua'a Place Names

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Keonepoko	Lex.: Ke-one-poko. Lit.: The short sand.	<i>Ahupua'a</i> . Returned by Lunalilo, retained by <i>aupuni</i> at the Mahele (Keonepoko-nui or 1 but not specified). Keonepoko-iki or 2 were omitted from the Māhele. (Alexander) Listed among "hemo lands (which do not pay tribute to any konohiki)." (IDLM, see below) Source: Māhele Book 24,191; Indices of Awards, Land Commission 32; Boundary Commission Testimony 2:401,402; Alexander 1888; Interior Department, Land Matters, Archives of Hawaii (IDLM) Doc. No. 393. Quadrangle: 10-45. North: 260,000. East: 698,000.
Keonopoko Homesteads	(see Keonepoko above)	Homestead. USGS 1965. Quadrangle: 10-45. North: 246,500. East: 685,000.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Keonepoko Iki	Small Keonepoko (see above)	<i>Ahupua</i> 'a. Not specifically named in the Māhele Book but distinguished in Boundary Commission records. "Keonepoko" was returned by Lunalilo, retained by <i>aupuni</i> at the Māhele. Keonepoko Iki is listed by Alexander among the lands omitted at the Māhele. Source: USGS 1965; Tax Map 1500; Alexander 1888. Quadrangle: 10-45. North: 250,000. East: 693,000.
Keonepoko Nui	Large Keonepoko (see above)	<i>Ahupua</i> 'a. Not specifically named in the Māhele Book but distinguished in Boundary Commission records. "Keonepoko" was returned by Lunalilo, retained by <i>aupuni</i> at the Māhele. Keonepokonui "has ancient fishing rights extending out to sea." (Boundary Commission Testimony 2:401) Source: USGS 1965; Tax Map 1500. Quadrangle: 10-45. North: 251,000. East: 687,000.
Mokuopihi	Lex: Moku 'Opihi. Lit.: Limpet Island.	Rock. Old name for Opihi Rock. The Keonepokonui/Halona boundary begins "at a rock in the sea that is called Mokuopihi." (Boundary Commission Testimony 2:401) Source: Boundary Certificate No. 127 (Vol. 3: pp. 313); Pukui et. al. 1974:156,171. Quadrangle: 10-45. North: 272,350. East: 701,600.
Opihi Rock	Lex: 'Opihi. Lit. Limpet Rock.	Rock. See Mokuopihi. Source: USGS 1965. Quadrangle: 10-45. North: 272,350. East: 701,600.
Anakuakala	Lex: Ana-kuakala. Meaning: Cave [of] medicine made of pua kala plant.	Boundary point, cave. The Keonepokonui boundary runs "along Keonepokoiki to Anakuakala". Elev. 640 ft. Source: Boundary Certificate No. 127 (Vol. 3: pp. 314). Quadrangle: 10-45. North: 245,200. East: 685,000.
Ekuokapuaa	Lex: 'Eku-o-kapua'a. Lit: Rooting of the pig.	Boundary point, place. The Keonepoko Nui/Hālonā boundary runs "mauka to Hilo side of moku laau called Ekuokapuaa" between Moku Opihi and Mokuoumi. Cf. Mokuakapuaa. Source: Boundary Commission Testimony 2:401. Quadrangle: 10-45.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Halewaa	Lex: Hale-wa'a. Lit. Canoe house	Boundary point, <i>lae</i> . The Keonepoko Nui boundary runs "along Keonepokoiki to Halewaa." (BC) "Point of woods called Halewaa, most of this point (or grove) of woods is on Keonepokoiki". Elev. 135 ft. Source: Boundary Certificate No. 127 (Vol. 3: pp. 314); Boundary Commission Testimony 2:401. Quadrangle: 10-45. North: 266,250. East: 701,600.
Kahiamoe	Lex: Ka-hiamoe. Lit: The sleep.	Boundary point, place. The Keonepoko Nui boundary runs "along Halona to Kahiamoe." Elev. 362 ft. Source: Boundary Certificate No. 127 (Vol. 3: pp. 313). Quadrangle: 10-45. North: 260,400. East: 689,500.
Kaiko	Lex.: Kai-kō. Meaning: Sea with a strong current.	Boundary point, place. The Keonepoko Nui boundary runs "along Keonepokoiki to Kaiko" at the shore. (Boundary Certificate No. 127 (Vol. 3: pp. 314) "...an awawa running to shore called Kaeko [sic]". (Boundary Commission Testimony 2:401) Quadrangle: 10-45. North: 268,850. East: 703,900.
Mokuakapuaa	Lex.: Moku-a-kapua'a. Meaning: Grove of the pig.	Boundary point, place. The Keonepoko Nui boundary runs "along Halona to Mokuakapuaa." Elev. 540 ft. Cf. Ekuokapuaa. Source: Boundary Certificate No. 127 (Vol. 3: pp. 313). Quadrangle: 10-45. North: 252,050. East: 684,000.
Mokuoumi	Lex.: Moku-o-'Umi. Meaning: Grove of 'Umi.	Boundary point, grove. The Keonepoko Nui boundary runs "along Halona to Mokuoumi woods", the southwest corner of the land. [Boundary Certificate No. 127 (Vol. 3: pp. 313)] "Mokuoumi is a large grove of ohia trees." (Boundary Commission Testimony 2:402) Elev. 935 ft. Quadrangle: 10-55. North: 237,950. East: 677,050.
Puaakokoki	Lex.: Pua'a-kokoki. Meaning: Snubnosed pig.	Boundary point, place. The Keonepoko Nui boundary runs "along Keonepokoiki to Puaakokoku". Elev. 882 ft. Source: Boundary Certificate No. 127 (Vol. 3: pp. 313). Quadrangle: 10-55. North: 239,000. East: 681,100.

Feature Name	Lexicology (Lex.), Literal Translation (Lit.), Interpretive Meaning	Description and Location
Pupuakoko	Unknown.	Boundary point, grove. The Keonepoko Nui boundary runs “along Keonepokoiki to Pupuakoko”. Elev. 335 ft. Source: Boundary Certificate No. 127 (Vol. 3: pp. 314). Quadrangle: 10-45. North: 255,200. East: 695,300.

### 3.2 *Nā ‘Ōlelo No‘eau* (Hawaiian Proverbs and Sayings)

According to Mary Kawena Pukui (1983), Hawaiian proverbs and poetical sayings offer a unique opportunity to savor the wisdom, poetic beauty, and earthy humor of these finely crafted expressions. The sayings may be appreciated individually and collectively for their aesthetic, historic and educational values. They reveal with each new reading ever deeper layers of meaning, giving understanding not only of Hawai'i and its people but of all humanity. These saying bring us closer to the everyday thoughts and lives of the cultural expression in old Hawai'i. Together, the sayings offer a basis for understanding the essence and origins of traditional Hawaiian values. All of the following *‘ōlelo no‘eau* and translations come from Pukui's book, *‘Ōlelo No‘eau, Hawaiian Proverbs and Poetical Sayings*.

#### 3.2.1 Regarding the beauty of Puna

*‘Āina i ka houpo o Kāne. Land on the bosom of Kāne.*

The saying commemorates Puna, of which it is said that before Pele migrated to Hawai'i from Kahiki, there was “no place in the islands was more beautiful than Puna” (Pukui 1983:11, No.79).

#### 3.2.2 Regarding the fragrance of Puna

*Puna paia ‘ala i ka hala. Puna, with walls fragrant with pandanus blossoms.*

Puna, Hawai'i, is a place of hala and lehua forests. In olden days the people would stick the bracts of hala into the thatching of their houses to bring some of the fragrance indoors (Pukui 1983:301, No.2749).

*Ka makani hali‘ala o Puna. The fragrance-bearing wind of Puna.*

Puna, Hawai'i, was famed for the fragrance of maile, lehua, and hala. It was said that when the wind blew from the land, fishermen at sea could smell the fragrance of these leaves and flowers (Pukui 1983:158, No.1458).

***Ka ua moaniani lehua o Puna.** The rain that brings the fragrance of the lehua of Puna.*

**Puna** is known as the land of fragrance (Pukui 1983:172, No.1587).

***Nani Puna pō i ke 'ala.** Beautiful **Puna**, heavy with fragrance.*

Praise for **Puna**, Hawai'i, where the breath of maile, lehua, and hala blossoms are ever present. (Pukui 1983:248, No.2278)

***Niniu Puna, pō i ke 'ala.** Puna is dizzy with fragrance.*

Puna is a land heavily scented with the blossoms of hala and lehua (Pukui 1983:252, No.2316).

### 3.2.3 Regarding the flora and fauna of Puna

***Ma'ema'e Puna i ka hala me ka lehua.** Lovely is Puna with the hala and lehua.*

Refers to Puna, Hawai'i (Pukui 1983:221, No.2036).

***E nihi ka helena i ka uka o Puna; mai pūlale i ka 'ike a ka maka.** Go quietly in the upland of Puna; do not let anything you see excite you.*

Watch your step and don't let the things you see lead you into trouble. There is an abundance of flowers and berries in the uplands of Puna and it is thought that picking any on the trip up to the volcano will result in being caught in heavy rains; the picking is left until the return trip (Pukui 1983:44, No.360).

***Puna, 'āina 'awa lau o ka manu.** Puna, land of the leafed 'awa planted by the birds. (Pukui 1983:300, No.2744).*

### 3.2.4 Regarding Puna's connection to Pele

***Lohi'au Puna i ke akua wahine.** Puna is retarded by the goddess.*

Refers to Pele, ruler of volcanoes. The lava flows she pours into the district retard the work and progress of the people (Pukui 1983:217, No.2019).

***Maka'u ka hana hewa i ka uka o Puna.** Wrongdoing is feared in the upland of Puna.*

Wrongdoing in the upland of Puna brings the wrath of Pele (Pukui 1983:228, No.2100).

***Lauahi Pele i kai o Puna, one 'aa kai o Malama.** Pele spreads her fire down in Puna and leaves cinder down in Malama*

There are two places in Puna called Malama, one inland and one on the shore where black sand is found (Pukui 1983:210, No.1950).

***Weliweli Puna i ke akua wahine. Puna dreads the goddess.***

Puna dreads Pele. Said of any dreaded person (Pukui 1983:321, No.2934).

***Pau Puna ua ko'ele ka papa. Puna is ravaged; the foundation crackles.***

Said of anything that is entirely consumed. From a chant by Lohi'au when Pele sent her sisters to overwhelm him with lava (Pukui 1983:288, No.2619).

***Pō'ele ka 'āina o Puna. The land of Puna is blackened [by lava flows] (Pukui 1983:292, No.2665).***

***'Ā'ohe 'alawa wale iho ia Mali'o. Not even a glance at Mali'o.***

Said of a haughty person. Pele was once so annoyed with Mali'o and her brother, Halaaniani, that she turned them both into stone and let them lie in the sea of Puna. It was at the bay Halaaniani that clusters of pandanus were tossed into the sea with token to loved ones. These were borne by the current to Kamilo and Ka'ū (Pukui 1983:16, No.127).

### 3.2.5 Regarding the people of Puna

***He iki hala au no Kea'au, 'aloha pōhaku 'alā e nahā ai. I am a small hala fruit of Kea'au, but there is no rock hard enough to smash me.***

The boast of a Puna man - I am small, perhaps, but mighty (Pukui 1983:71, No.624).

***'Apiki Puna i Lele'apiki, ke nānā la i Nānāwale. Puna is concerned at Lele'apiki and looks about Nānāwale.***

The people are but followers and obedient to their rulers. The people of Puna were not anxious to go to war when a battle was declared between Kiwala'o and Kamehameha; it was the will of their chief. Lele'apiki (trickly leap) and Nānāwale (just looking) are places in Puna (Pukui 1983:27, No.233).

***E ala e Ka'ū, Kahiko o Mākaha; e ala e Puna, Puna Kumākaha; e ala Hilo na'au kele! Arise, O Ka'ū of ancient descent; arise, O Puna of the Kumākaha group; arise, O Hilo of the water-soaked foundation.***

A rallying call. These names are found in Ka'ū and Puna chants of the chiefs. The Mākaha and Kumākaha were originally one. Some moved to Puna and took the name Kumākaha (Pukui 1983:254, No.260).

***He moku 'āleuleu. District of ragamuffins.***

Said by Kamehameha's followers of Ka'ū and Puna because the people there, being hard-working farmers, lived most of the time in old clothes (Pukui 1983:90, No.826).

***Hilina'i Puna kālele ia Ka'ū, hilina'i Ka'ū kālele ia Puna. Puna trusts and leans on Ka'ū, Ka'ū trusts and leans on Puna.***

The people of Puna and Ka'ū are related (Pukui 1983:107, No.994).

***Ha'alele i Puna na hoaloha e. Left in Puna are the friends.***

Said of one who has deserted his friends. Originally said of Hi'iaka when she left Puna (Pukui 1983:49, No.397).

***Lilo i Puna i ke au a ka hewahewa, ho'i mai ua piha ka hale i ke akua. Gone to Puna on a vagrant current and returning, finds the house full of imps.***

From a chant by Hi'iaka when she faced the lizard god Pana'ewa and his forest full of imps in a battle. It was later used to refer to one who goes on his way and comes home to find things not to his liking (Pukui 1983:216, No.2006).

**3.2.6 Regarding Puna, the land of the sunrise*****Mai ke kai kuwā e nū ana i ka ulu hala o Kea'au a ka 'āina ka'ili lā o lalo o ka Waikū'auhoe. From the noisy sea that moans to the hala groves of Kea'au, to the land that snatches away the sun, below Waikū'auhoe.***

From Puna, Hawai'i, where the sun was said to rise, to Lehua, beyond Waikū'auhoe, where it vanishes out of sight (Pukui 1983:225, No.2070).

***Mai ka hikina a ka lā i Kumukahi a ka welona a ka lā i Lehua. From the sunrise at Kumukahi to the fading sunlight at Lehua.***

From sunrise to sunset. Kumukahi, in Puna, Hawai'i, was called the land of the sunrise and Lehua, the land of the sunset. This saying also refers to a life span—from birth to death (Pukui 1983:223, No.2058).

***Mai ka lā 'ō'ili i Ha'eha'e a hāli'i i ka mole o Lehua. From the appearance of the sun at Ha'eha'e till it spreads its light to the foundation of Lehua.***

Ha'eha'e is a place at Kumukahi, Puna, Hawai'i, often referred to as the gateway of the sun (Pukui 1983:224, No.2063).

**3.2.7 Puna's association with the God Kāne*****Puna, ka 'āina i ka houpo o Kāne. Puna, the land [held] in the breast of Kāne***

(Kihe, Wise, and Desha - In *Ka Hōkū o Hawai'i*; Sept. 16, 1915).

More than a god of the verdant forests of Puna, Kāne is also the Hawaiian god of sun light. And the relationship between Kāne, the sun and Puna is significant throughout the Hawaiian Islands. In his role as giver of light, Kāne, also known as Kāne-i-ka-'ōnohi-o-ka-lā (Kāne-in-the-eyeball-of the sun) (Maly 1999).

### 3.3 *Oli* (Chants), *Pule* (Prayers) and *Mele* (Songs)

On April 20, 1995 on the anniversary of Kawena Pukui's 100<sup>th</sup> birthday, *Nā Mele Welo* or the Songs of Our Heritage was published. In this publication are found numerous chants of the lands of Puna. The following chants go far back into the history of Hawai'i and relate tales of love, travels, and inevitably the beauty, charm and wonders of the Puna area.

#### 3.3.1 *Noho nō i Puna ka Nani me ka Maika'i* (In Puna dwells beauty and goodness)

There was a certain man living in Puna who had a wife and then afterwards his friend took away his wife. There upon the husband went to Honolulu and lived in Mānoa alone. There was living at that time in Mānoa a great chanter by the name of Kū. It was his custom to chant when he had 'awa, fish, and poi, and every time he chanted, the boy would cry. One day Kū asked him the trouble, so he related the story of how he lost his wife. Kū took all this down and composed this *mele hula ho 'āeae* or love chant and told him to go back to Puna and that if he would chant it, his wife would surely come back to him. It so happened that he returned to Puna and chanted the *mele*, and the result was that his wife returned to him and they lived happily ever after (Pukui 1995: 82-83).

Noho nō i Puna ka nani me ka maika'i,  
 He hale kipa ia no ke `ala me ke onaona,  
 Onaona ka maile me ka hala o Kea'au.  
 Aloha `ino ke kupa Kaniahiku,  
 Kū mai ka ua nahunahu ki`eki`e i luna,  
 Ho`okakano lua i ka la`i o Wahinekapu,  
 Puapua`i maila nā leo `awahia a ka anu,  
 Nā kauna `ōlelo o ka Pu`ulena i ka uka,  
 Ka `ī mai nō ua lilo o Ma`olala iā Pana`ewa.  
 He aha nō lā ka hewa ke `ai `ia ka`u hakina,  
 He koena ia na ka manu i `ai a ha`alele,

Ke pane maila e Hō`ā`ā ke kono Waianuhea,  
 Peulaka ū ka hau anu a Kawaiapo,  
 `O ka`u hana `ike `ia, `o ke kōnane,  
 Helu `ekahi au ma ka pūlapu.  
 I lono `oe `o `oe nō ka `ole he mā`uka`uka,  
 He kela `oe no mua he huki kaula kau hana,  
 He pūlumi `oe no ka `oneki o ka papahale.  
 `O wau mai nō ka ona, ka haku o ko`u waiwai,  
 He wahi aloha no puā i ke onaona,  
 Ke `ala ka paia o Puna

Translation:

In Puna dwells beauty and goodness,  
 A house in which fragrance and sweetness dwell,  
 Fragrant are the maile and hala of Kea`au.  
 Woe betide the native son of Kaniahiku,  
 When the stormy rains gather high overhead,  
 Threatening the peace of Wahinekapu.  
 Gradually louder grew the harsh voices of the birds,  
 And the many unkind words of the Pu`ulena breeze of the upland,  
 Telling me that Ma`olala was taken away by Pana`ewa.  
 What matters if my leftover food is being eaten,  
 It is just a remnant eaten by the bird and left,  
 The answer left the Waianuhea wind in concentration,  
 Penetrated to the core with the cold dew of Kawaiapo,  
 I am skilled in the game of kōnane,

And also excel in the art of fooling my opponent.  
 Now listen you, you are but a worthless person,  
 A sailor near the prow who merely pulls on ropes,  
 One who sweeps the deck.  
 I am the owner, the lord of my possessions,  
 With love for the gently wafted fragrance,  
 The fragrance of the groves of Puna.

### 3.3.2 Puka mai ana ka Lā ma Puna (The sun appears in Puna)

[*He pule no ka po 'e puka mai* or a prayer chant used as an entrance dance (Pukui 1995:104-105)]:

Puka mai ana ka lā ma Puna.  
 Ea mai ana ma Ha`eha`e,  
 Ma luna mai o Kūki`i.  
 Ua hiki ka lā, aia i Hawai`i,  
 He `awamea ua na Pele, na Hi`iaka.  
 Ke kakali lā i loko o ke kai ka `alā ku`i o Kaueleau.  
 Ho`olono ka luahine i uka o ka ua,  
 Kia`i wai Pu`ulena, `ūlili, kōlea,  
 He kanaka la`ila`i ia ka lā.  
 He `kua, `o Hi`iaka paha ia e hele a`ela lā ē,  
 `O Hi`iaka, `o Hi`iaka, `o ka wahine hele mauna,  
 Nāna i hehi ke po`o o Hue`hu`e,  
 `O Hu`ehu`e-a-e.

#### Translation:

The sun appears in Puna,

It rises at Ha`eha`e,  
 Above Kūki`i.  
 The sun has come to Hawai`i,  
 Brightening the home of Pele, of Hi`iaka.  
 Waiting for it in the sea are the sea-pounded rocks of Kaueleau.  
 The old woman listens, up in the Pit,  
 To the guardians of the water, the sandpiper and plover,  
 Who warn of the approach of men.  
 Perhaps that is the goddess Hi`iaka passing by,  
 Hi`iaka, the woman who travels the mountains,  
 She it is, who steps on the summit of Hu`ehu`e,  
 Of Hu`ehu`e.

### 3.3.3 A Luna Au o Pu`uonioni (I stand up at Pu`uonioni)

(Pukui 1995:106, 107)

A luna au o Pu`uonioni  
 Noho ke aniani a ka wahine,  
 Kilohi a ku`u maka i lalo o Wahinekapu,  
 He kaulu `o Wahinekapu,  
 He o`io`ina `o Kīlauea,  
 He hale noho `o Papalauahi.  
 Ke lauahi maila `o Pele iā Puna,  
 Ua one `ā kai o Malama.  
 E mālama i ke kanaka  
 Okipa hewa ke aloha i ka `īlio,

He `ilio ia, he kanaka wau.

Translation:

I stand up at Pu`uonioni

And look down on the concourse of women,

I glance down on Wahinekapu,

A beautiful spot, Wahinekapu,

A resting place to Kīlauea,

A dwelling place is Papalauahi.

Pele spreads her lava down to Puna,

Leaving black cinders by the sea of Malama.

Take care of the people (O Pele),

Lest your love be wasted on a dog.

The other is a dog, I am a person.

**3.3.4 No Luna ka Hale Kai nō e Kama`alewa (From the root-matted mountain retreat)**

In one version, it is the lehua that fear men and go below, but according to some hula masters, it is the reverse. According to the latter, the lehua was kapu for the gods and caused rain when plucked. Hence men left them alone (Pukui 1995:112, 113).

No luna ka hale kai nō e kama`alewa,

Nānā nā maka iā Moananuikalehua,

A noi au i ke kai lā e mali`o.

Kū a`e ana he lehua i laila

Hōpoe lehua a ki`eki`e.

E maka`u ke kanaka i ka lehua,

Lilo i lalo e hele ai.

A i lalo.

`O Kea`au `ili`ili nehe i ke kai,

Ho`olono ke kai o Puna i ka ulu hala,

Kai ko`o Puna,

Puna a kai ko`o ia.

Nene`e mai ana kāua e ke hoa,

Ia pili ke waiho `ē mailia `oe.

Eia ka mea `ino lā he anu.

`A`ohe anu!

Mehe mea lā ōlua i waho lā e ke hoa,

Mehe wai i lā kō kāua `ili.

Translation:

From the root-matted mountain retreat,

My eyes look out at Moananuikalehua,

And I beg the sea to be calm.

The lehua trees tall grow there by the sea

The tall lehua trees of Hōpoe.

Men fear the lehua blossoms and go below,

They walk the ground below.

The pebbles at Kea`au grind in the surf.

The sea at Puna seems to shout to the hala groves,

“Rough is the sea of Puna,”

That is Puna of the rough sea.

Move close to me, O companion,

You keep away so.

Here is the evil thing, the cold.

There is no cold!

Yes, there is—when you remain away, O companion;

Our skins become clammy and cold.

### 3.3.5 Hea 'Oe Kahaiolama (Where are you, O Kalama)

This chant is from the time before the death of Kamehameha I. Ka'ahumanu was his wife, but he loved Kalama, a beautiful queen. In this song Kamehameha asks Kalama if he may come to see her, but she replies that it is not possible, for if Ka'ahumanu heard of it, there would be trouble (Pukui 1995:194, 195).

Kamehameha:	Hea `oe Kahaiolama?
Kalama:	`A`ole au e puka aku ana iō waho. He maka`u mai au lā iā Ka`ahumanu.
Kamehameha:	Mai maka`u mai `o `oe, E hele kāua i kahi a kāua i Hauonu`uwai e hauolani ai.
Kalama:	He maka`u mai au iā Ka`ahumanu.
Kamehameha:	Mai maka`u mai `oe. No`u o luna, no`u o lalo, No`u o Kohala, No`u o Hāmākua, No`u o Hilo, No`u o Puna, No`u o Ka`ū, No`u o Kona, No`u nā wahi āpau-o-loa, No`u nā maka`āinana.

#### Translation:

Kamehameha:	Where are you, O Kalama?
Kalama:	I shall not come outside. I am afraid of Ka`ahumanu.
Kamehameha:	Do not be afraid, Let us go to Hauonu`uwai, to make love.
Kalama:	I am afraid of Ka`ahumanu.
Kamehameha:	Do not be afraid. All above is mine, all below is mine, Kohala is mine, Hāmākua is mine, Hilo is mine, Puna is mine, Ka`ū is mine, Kona is mine,

Everywhere is mine,  
The commoners are mine.

### 3.4 *Mo'olelo* (Legendary Accounts)

According to Handy and Handy (1972), myths and legends provide an understanding of an early time when the district of Puna was famous for its long stretch of sand, fertile plains, and its *hala* (pandanus trees). Many legends describe Pele's devouring of land by causing lava to cover either large areas of the region or more limited sections of it. Traditions imply that Puna was one of Hawai'i's wealthiest agricultural regions. It is only in recent times that volcanic eruptions have destroyed much of Puna's best land.

Very few myths speak about the *ahupua'a* of Waikahekahe Nui and Iki, Maku'u, Hālonā, Keonepoko Nui and Iki, and Waiakahiula Ahupua'a. It may be due to the concentration of population at the coastline, and the area's familial, genealogical and political connections to the neighboring districts of Ka'ū and Hilo. This connection is emphasized in some of the legendary accounts listed below, and is demonstrated by the mention of certain key place names both as places, and as people, further strengthening the idea of family as places, and places as connected genealogically to individuals as places of importance. Many of the names mentioned in the following legendary accounts are those associated with those areas that either sit on the borders of Puna, or are otherwise significant because it is the name of a sacred landscape connected to larger cosmology (e.g. Kumukahi is the easternmost point of the island, where the sun is born each day). However, Barrere (1971:11) speculated that the reason for this dearth of traditional literature was the "remarkably successful" conversion of the natives to Christianity that began with the visit to the district by the Reverend William Ellis' missionary party in 1823, and was continued and strengthened during Rev. Titus Coan's management of the mission district, beginning in 1835. In 1841, Wilkes noted:

Almost all the hills or craters of any note [in Puna] have some tradition connected with them; but I found that the natives were now generally unwilling to narrate these tales, calling them 'foolishness' [Wilkes 1845:Vol. 4:186].

The following myths and legends were gathered from a variety of sources. They shed light on the rich and mystical history of Puna and give a grand picture of Hawaiians association with the supernatural.

#### 3.4.1 Kūka'ōhi'aakalaka

Kūka'ōhi'aakalaka or Kū of the 'Ōhi'a forest and his sister Kauakuahine left their homelands of Kahiki to come to the island of Hawai'i and live at Kea'au and 'Ōla'a in the district of Puna. Kūka'ōhi'aakalaka is one of the gods worshiped by those who go up into the forest to hew out canoes or timber for building (Malo 1903: 113 and 169). The following legend is taken from *Folktales of Hawai'i, He Mau Ka'ao Hawai'i*, collected and translated by Mary Pukui (2003):

ʻO Kūka'ōhi'aakalaka ke kaikunāne a ʻo Kauakuahine ke kaikuahine. Mai Kahiki mai lāua a noho i Hawai'i, ʻo Kauakuahine i ʻŌla'a me kāna kāne, a ʻo Kūka'ōhi'aakalaka i Kea'au me kāna wahine. ʻA'ohē keiki a Kūka'ōhi'aakalaka,

a `o ke kaikuahine ho`i, he mau keiki nō. He mahi `ai ka hana a ke kaikuahine i `Ōla`a a he lawai`a kā ke kaikunāne i Kea`au.

I kēlā a me kēia manawa, ua iho `o Kauakuahine me ka `ai i kahakai na ke kaikunāne a `o ka i`a kāna e ho`iho`i mai ai na kona `ohana. Ua kauoha `o Kūka`ōhi`aakalaka i kāna wahine e hā`awi a nui i ka i`a malo`o i kona kaikuahine i nā wā a pau āna e iho mai ai me ka `ai. Ua nānā ihola ka wahine i ka i`a malo`o a minamina, a ho`iho`i aku nei ma lalo o nā moena a hūnā ai.

I ka iho `ana mai o Kauakuahine me ka `ai, ua hala ke kaikunāne i ka lawai`a. `Ōlelo aku nei ke kaiko`eke, “A`ohe i`a a maua lā. E nānā a`e nō `oe i kauhale nei, ua nele. `O ka pa`akai wale nō kahi mea i loa`a. “Hele nō `o Kauakuahine a loa`a ka līpahapaha, `o ko iala ho`i nō ia. I ka iho hou `ana mai o Kauakuahine, `o ia ana nō, `o ka ho`i nō me ka nele. I ahona nō i kahi līpahapaha.

No ka pī mau o ke kaiko`eke, ua lilo ia i mea ho`okaumaha iā Kauakuahine. I kekahi ho`i `ana āna me ka līpahapaha, ua mana`o ia he mea makehewa ka ho`oluhī `ana iā ia iho e lawe mau aku i ka `ai i Kea`au a `o ka līpahapaha wale nō ka i`a e ho`iho`i aku ai na kāna kāne ho`omanawanui a me nā keiki a lāua.

I ke kokoke `ana aku ona i ka hale o lākou ua holo maila ke kāne a me nā keiki e `ike iā ia. Ua pa`ipa`i pākahi akula `o ia iā lākou a lilo lākou i mau `iole. `O ka `iole māhuahua, ka makua kāne ia; `o nā `iole makali`i, `o nā keiki nō ia. No Kauakuahine, ua lilo `o ia i pūnāwai me ka ua kilihune e helele`i ana ma laila.

I ke kaikunāne e lawai`a ana, ua hiki akula ka hō`ike a nā akua iā ia i ke pī o ka wahine i ka i`a a i ka lilo o ke kaikuahine i wai a `o ka `ohana i pua `ole. Ua lilo kēia i mea kaumaha i kona no`ono`o a ho`i aku nei i kauhale nīnau aku i ka wahine, “Ua hā`awi anaei `oe i i`a na nā pōki`i o kāua?” “Ae, ke hā`awi mau nei nō au i ka i`a.”

`O ko Kūka`ōhi`aakalaka lālau akula nō ia in nā moena o ka hale o lāua a hāpai a`ela i luna. `Ike a`ela `o ia i nā i`a malo`o, ua ho`onoho papa `ia ma lalo a`e o ka moena, a e hoholo a`e ana nā pu`u. Ua piha loa `o ia i ka inaina, a `i aku nei i ka wahine, “He keu `oe a ka wahine loko `ino. Pō`ino ku`u pōki`i iā `oe.” A me kēia mau hua `ōlelo ua pepehi `ia kēlā wahine a make loa.

Ua pi`i akula `o ia i `Ōla`a i kahi a ke kaikuahine a `ike aku nei `o ia i ka hoholo mai o nā `iole i kauhale a kulu io nei kona waimaka aloha no ke kaiko`eke a me nā keiki. Hele pololei aku nei `o ia a ka pūnāwai a ihoiho nei ke po`o i lalo i loko o ka wai, a `o ke kino, ua lilo a`ela i kumu `ōhi`a.

He `elua wale nō pu ao kēia kumu `ōhi`a i nā wā a pau, a ke haki ka lālā, kahe mai ke koko mai kona kino mai [Pukui 2003: 111 and 112].

#### Translation:

Kūka`ōhi`aakalaka, Kū the `Ōhi`a of the Forest, was the brother, and Kauakuahine, the Sister Rain, was the sister. They came from Kahiki and lived in Hawai`i, the sister in `Ōla`a with her husband, and the brother at Kea`au with his wife. The brother had no children, the sister had a flock of them. Her husband was a farmer in `Ōla`a, the brother a fisherman in Kea`au.

The sister often brought vegetables to the shore for her brother and returned with fish for her family. The brother told his wife to give his sister an abundance of dried fish when she came with the vegetables. The wife hated to give up the fish and laid it under the sleeping mats. While the husband was out fishing, the sister came with vegetables and the wife said, "We have no fish, as you can see for yourself; all we have is salt." The sister went and gathered coarse seaweed to take the place of fish. Again she came with vegetables and went back without anything. She was lucky to get the seaweed. This constant stinginess of her sister-in-law vexed the sister. It seemed to her useless to burden herself with carrying vegetables and to return with only seaweed for her patient husband and children. One day when she came close to the house and her husband and children ran out to meet her, she gave them each a slap and changed them into rats, the husband into a large rat and the children into young rats. She herself became a spring of water where fine rain fell.

While the brother was out fishing, the gods showed him how stingy his wife had been and how his sister had become a spring and her family had changed into rats. He was much distressed and returned home and asked his wife, "Did you give fish to our dear sister?"

"Yes, I always give her fish."

He saw the dried fish laid flat beneath the sleeping mats and what a heap of them there were. He was very angry with this wife. "What a cruel woman you are! You have brought misfortune upon our little sister!" And with many words of reproach, he beat his wife to death.

He ascended to his sister's place in `Ōla`a and saw the rats scampering about where the house had stood, and he shed tears of love for his brother-in-law and the children. He went straight to the spring, plunged in headlong, and was changed into an `ōhi`a tree.

### 3.4.2 Ka U`i Keamalu (The Beauty Keamalu)

In the beautiful uplands of `Ōla`a, Puna lived a chiefess named Keamalu. This story refers to a beautiful spring located in `Ōla`a named Pūnāwai o Keamalu. The following story is taken from *Folktales of Hawai`i, He Mau Ka`ao Hawai`i*, collected and translated by Mary Pukui (2003):

No Paliuli `o Keamalu, no kēlā `āina kamaha`o i noho `ia e Lā`iekawai. E like nō me ka hānai punahele `ia `ana o Lā`iekawai, pēlā nōko Keamalu hānai punahele `ia `ana. Na nā manu i kia`i iā ia, a i hānai iā ia i nā hua lama, pi`oi, māmaki a me ka wai o ka lehua,. `A`ohe ona `ai i nā mea `ē a`e, `o nā maea wale nō a nā manu i hānai mai ai iā ia.

He pūnāwai ko ke kuahiwi o `Ōla`a i kappa `ia ka “pūnāwai o Keamalu,” a i laila i hele ai `o Keamalu e `au`au. Iā ia e noho ana ma kapu o ka pūnāwai i kekahi lā, ua `ō`ili maila kekahi kanaka `ōpio a i kona `ike `ana iā Keamalu, ` kona koi akula nō ia i wahine nāna. Ua hō`ole mai `o Keamalu, `a`ohe ona makemake i kāne `o ia nāna, a no ka pa`akikī loa o kēia kanaka `ōpio, ua iho main ā manu a `o ka lilo nō ia o ua kaikamahine nei i luna o ko lākou mau `ēheu.

Ua ho`i akula ke kanaka `ōpio i Puna me kāna ipo aloha, me Kalehua`ula. `Oiai kona kino i Puna me kēlā wahine u`i, aia nō na`e kona no`ono`o i ka uka o `Ōla`a. A no ka loa`a `ole iā ia o ka maha ma ka na`au, ua `imi hele `ia e ia ka nahele o `Ōla`a i nā manawa a pau. A ka loa`a `ole `ana o Keamalu iā ia, ua ho`i akula `oia me Kalehua`ula. Ua noho mālie nō `o Keamalu i ka hale no kekahi manawa lō`ihi no kona maka`u o `ike hou `ia mai `o ia e ke kanaka `ōpio.

Ua lohe nā mākuā o Kalehua`ula i ka `imi o kēia `ōpio iā Keamalu a nīnau mai nei me ke `ano ho`onāukiuki. “He u`i anei kēlā wahine āu e `imi nei?” “Ae, he u`i maoli,” I pane mai ai ka `ōpio. “O kā māua nō ka u`i. No hea ia pālau`eka o kuahiwi i loa`a mai ai kā māua?” He mea `oia`i`o nō, he u`i `o Kalehua`ula, koe na`e ke kūkōna o nā maka.

Ua noho `o Keamalu a mana`o no ka lō`ihi loa o kona pe`e `ana ua pōina kēlā kanaka `ōpio iā ia, a no laila, ua hele hou main ō ia i ka pūnāwai `au`au ona. Iā ia nō a hiki iho, `o ka pa`a nō ia i ka pūliki `ia, a i hemo wale nō `o ia i ke kiko `ia `ana o ka helehelena a me nā lima o ke kanaka `ōpio e ka `io a lilo hou `o Keamalu i nā manu.

Ua lohe nā kahu hānai kupua o Keamalu i ka `ōlelo kīkoi a nā mākuā o Kalehua`ula a no laila, u ho`oholo lākou e ho`okūkū i ka u`i o kā lākou me ka u`i o Puna. Ua ho`ouna `ia ke kanaka e hō`ike i ko lākou nei mana`o i nā mākuā o Kalehua`ula. I ko lāua lohe`ana, ua `ae mai lāua me ke kānalua `ole, no ka mean, ua kaulana ka u`i o kā lāua kaikamahine a puni `o Puna.

`A`ohe lāua i `ike he hānai `o Keamalu na nā kupua o Paliuli. Aea ka mea mua i ho`oholo `ia, e `ako `o Keamalu i kāna pua a ho`okomo i loko o kekahi `umeke nui, a `o Kalehua`ula i kāna pua a ho`okomo i loko o kāna `umeke, a `o ka `umeke e pōhai `ia ana e nā manu lā, `o kā ka u`i ia.

I ka hiki `ana mai o ka lā ho`o kūkū, ua piha kā Kalehua`ula `umeke i ka hīnana a me ka lehua `ula, a `o kā Keamalu i ka maile a me ka lehua kea. Ua pōhai `ia ka `umeke a Keamalu e ka `i`iwi a `o kā Kalehua`ula ho`i, ho`okahi nō wahi nalo

keleawe i lele mai a kau i luna o kāna mau pua. Ua nui a ho'ohalahala o nā mākua o Kalehua`ula i kēia a koi aku nei e ho'okūkū a'e i nā kaikamāhine. `O ka makemake nō ia o nā kupua a ua `ae lākou.

I kahi lā mai, ua kno `ia nā po'e a pau e hele mai nei e nānā i kēia ho'okūkū nui. I ka hō`ea `ana mai o Kalehua`ula, ua nui ka mahalo `ia o kona u`i e nā kānaka, akā, i ka lawe `ia `ana mai o Keamalu e kona mau kahu hānai, ua `ike `ia a `ela ua `oi kona u`i ma mua o nā u`i `ē a'e a lākou i `ike ai.

Ua ho`ōho a `ela lākou i ka u`i o kēia kaikamahine a ua `ā`ume`ume nā kānaka no kahi a lākou e `ike pono aku ai i kēia nani kamaha`o. Ua hoka loa nā mākua o Kalehua`ula a ho`i me ka hilahila i kā lāua noho `ana i ka uka o Paliuli.

`O ka pūnāwai o Keamalu, ua nalowale, a he kāka`ikahi loa ka po'e i hō`ike `ia kēlā pūnāwai [Pukui 2003: 120 and 121].

### Translation:

Keamalu, or Clear Shade, lived in Paliuli, that wonderful land where Lā`iekawai dwelt. She was brought up as carefully as Lā`iekawai. Birds guarded her and fed her with lama, pi`oi, and māmaki berries, and with the honey of lehua blossoms. She did not eat ordinary food; she was brought up on the food of birds.

A spring in the mountains of `Ōla`a is called Pūnāwai o Keamalu, Spring of Clear Shade, and there Keamalu went to bathe. One day as she sat by the spring, a young man appeared to her and asked her to become his wife. She refused, for she did not want to marry, and when he insisted, the birds came and took the girl away on their wings. The young man returned to Puna, to his sweetheart Kalehua`ula, the Red Lehua Blossom. While his body remained in Puna with that handsome woman, his thoughts were in the uplands of `Ōla`a. Again and again he visited the uplands, finding no rest for his passion. Not finding Keamalu, he went back to Kalehua`ula. Keamalu remained hidden in the house for fear of meeting the young man.

The parents of Kalehua`ula heard how he was running after Keamalu, and they asked him teasingly, "Is the girl really so beautiful?"

"Yes, she is really beautiful," replied the young man.

"Our daughter is indeed beautifully formed. How can that common girl of the forest be compared to our daughter?" Now it was true that Kalehua`ula was beautiful, but her eyes were sullen.

Keamalu remained hidden until she thought that the young man had forgotten her; then she returned to the spring. But she was seized by the youth and released only when the hawk had scratched his face and arms. Then the birds carried her away

once more. Keamalu's guardian kupua heard of the slighting remarks made by the parents of Kalehua`ula, and they determined to have a test of beauty between their child and the beauty of Puna. They sent a messenger to her parents, who accepted without hesitation, for their daughter was famous for her beauty all over Puna. They did not know that her opponent was the foster child of the kupua of Paliuli. Thus it was decided; Keamalu was to pick her flowers and place them inside a certain big gourd, and Kalehua`ula was to place her flowers inside a gourd, and the gourd over which the birds hovered would be the winner.

When the day came for the contest, the Puna girl put pandanus blossoms and red lehua into her gourd; Keamalu filled hers with maile vine and white lehua. `Tiwi hung over Keamalu's flowers, while only a fly flew over those of Kalehua`ula. The parents were angry and insisted that the girls themselves should be compared. This was just what the foster parents wanted. Everyone was invited to come on that day and witness the great contest. When Kalehua`ula appeared, all praised her beauty, but when Keamalu was brought forward by her foster parents, the people saw that she was more lovely than anyone they had ever seen. They struggled for places to see this incomparable beauty. The parents of Kalehua`ula turned away in shame. The young man's proposal for Keamalu was accepted, and the two were married and lived happily in the uplands of Paliuli.

As for the spring of Keamalu, it was hidden and is shown to very few people. [Pukui and Green 2003: 120 and 121]

### 3.4.3 Pele and Hi'iaka in Kea'au, Puna

The excerpts below are from the story of *Pele and Hi'iaka, A Myth from Hawai'i* by Nathaniel B. Emerson (2005). Hi'iakaikapoliopole is named among the patron deities of the hula. Her older sister, Pele, did not dance but the movement of the lava flows was often compared to the hula. The following scene is laid in lower Puna when Hi'iaka is given the art of hula:

Once, when Pele was living in the pit of Kilauea, she roused up from her couch on the rough hearth-plate and said to her sisters, "Let us make an excursion to the ocean and enjoy ourselves, open the opih shells and sea-urchins, hunt for small squid and gather sea-moss."

To this all joyfully assented saying, "Yes, let us go."

The sisters formed quite a procession as they tramped the narrow downhill path until they came to the hill Pu`u-Pahoehoe – a place in the lower lands of Puna. Pele herself did not visibly accompany them on this journey; that was not according to her custom: she had other ways and means of travel than to plod along a dusty road. When, however, the party arrived at the rendezvous, there, sure enough, they found Pele awaiting them, ready for the business at hand.

In the midst of their pleasuring Pele caught sight of Hopoe and Haena as they were indulging in an al fresco dance and having a good time by the Puna Sea. She was greatly pleased and, turning to her sisters, said, "Come, haven't you also got some dance that you can show off in return for this entertainment by Hopoe and her companion?"

They all hung their heads and said, "We have no hula."

Hiiaka, the youngest, had stayed behind to gather lehua flowers, and when she came along laden with wreaths, Pele said to her jestingly, "I've just been proposing to your sisters here to dance a hula in response to that of Hopoe and her fellow, but they decline, saying they have not the art. I suppose it's of no use to ask you, you are so small; but, perhaps, you've got a bit of a song."

"Yes, I have a song," Hiiaka answered, to the surprise of all. "Let us have it, then; go on!" said Pele.

Then the little girl, having first decorated all of her sisters with the wreaths, beginning with Pele, sang as follows:

Ke ha'a la Puna i ka makani,	Puna`s a-dance in the breeze,
Ha'a ka ulu hala i Kea'au.	The hala groves of Keaau shaken.
Ha'a Ha'ena me Hopoe,	Ha'ena and Hopoe are swaying'
Ha'a ka wahine,	The thighs of the dancing nymph,
'Ami i kai o Nana-huki, la-	Quiver and sway, down at Nana-huki,
Hula le'a wale,	A dance most sighly and pleasing,
I kai o Nana-huki, e-e!	Down by the sea Nana-huki.

Pele was delighted. "Is that all you have?" she asked. "I have something more," said the girl. "Let us hear it then." Hi'iaka put even more spirit into the song as she complied:

O Puna kai kuwa i ka hala	The voice of Puna's sea resounds
Pae ka leo o ke kai,	Through the echoing hala groves,
Ke lu, la i na pua lehua.	The lehua trees cast their bloom.
Nana i kai o Hōpoe,	Look at the dancing girl Hōpoe;
Ka wahine 'ami i kai	Her graceful hips swing to and fro,

O Nana-huki la.	A dance on the beach Nana-huki.
Hula le'a wale,	A dance that is full of delight,
I kai o Nana-huki e!	Down by the sea Nana-huki.

At the conclusion of this innocent performance – the earliest mention of the hula that has reached us – Hiiaka went to stay with her friend Hopoe, a person whose charm of character had fascinated the imagination of the susceptible girl and who had already become her dearest intimate, her inspiring mentor in those sister arts, song, poesy and the dance [Emerson 2005: 1 and 2].

After Hiiaka's song Pele went to lie down in a cave of pāhoehoe. Before she slept she commanded her sisters not to wake her, if they must awaken her to summon her little sister Hi'iaka. It was in her sleep that Pele heard the far off beating of hula drums, and her spirit body pursued the sound. This sound led her clear across the channel of the Hawaiian islands to the little village of Ha'ena the northernmost point of the island of Kaua'i. It was here that Pele first lays eyes on the Prince Lohiau. The following paragraphs pertain to the waking of Pele by her sister Hi'iaka:

Though it was many days since Pele had lain down to sleep, and though they feared the consequences if she continued thus, they dared not disturb her. When that was proposed, the sister in charge objected. "If it must be done, we shall have to send for Hiiaka the beloved."

The girl Hiiaka saw the messenger that had been dispatched to fetch her, while as yet she was in the dim distance, - it was her nurse, Pa'u-o-pala'e – and there came to her a premonition of what it all meant, a vision, a picture, of the trouble that was to come; yet, overmastering her, was a feeling of affection and loyalty for her elder sister.

Arrived at Lau-pahoehoe (This Laupahoehoe is to be distinguished from that in Hilo), Hiiaka found her sister in great consternation, fearing for the life of Pele if she were allowed to continue her long sleep. Her spirit, it is true, had come back to her body; but it was merely hovering about and had not entered and taken possession, so that there were no signs of animation or life. It seemed to be waiting for the voice of Hiiaka, the beloved, to summon it back and to make it resume consciousness [Emerson 2005: 9-12].

Emerson continues in the lands of Puna as Pele is awakened by Hi'iaka's song. Pele and her sister return to Kīlauea. The day after Pele's awakening she makes a proposition to her sisters:

That same day Pele and the other sisters returned to Kilauea while Hiiaka went back to resume her visit with Hopoe, each party reaching its destination at about the same time. Early the next morning Pele called to her sister Hiiaka-i-ka-ale-i (Hiiaka-of-the-choppy sea) and said, "I want you to go on an errand for me." "No

doubt I shall agree to do when you have told me what it is,” was the answer of the young woman.

“You are to journey to Kaua`i and escort hither our lover- yours and mine. While on the way you are not to lie with him; you are not to touch noses with him; you are not to fondle him or snuggle close to him. If you do any such thing I will kill both of you. After your return, for five days and five nights, I will have him to myself, and after that he shall be your lover.”

On hearing this, the young woman hung her head and wept. Pele then made the same proposal to each of the other sisters in turn. Not one of them would consent to undertake the mission. They knew full well the perils of the undertaking; the way was beset with swarms of demons and dragons, with beings possessed with powers of enchantment; and Pele did not offer to endow them with the power that would safeguard them on their journey.

Pele called to Pa`u-o-pala`e and bade her go straightway to Haena and fetch Hiiaka.”

Now the girl, whose full name was Hiiaka-i-ka-poli-o-Pele, was the youngest of the sisters, and, by reason of her loveliness and accommodating disposition, she was Pele’s favorite. She was, moreover, gifted with a quick intuition and a clairvoyant perception of distant happenings and coming events [Emerson 2005:12 and 13].

It is here that Hi`iaka while surfing in the company of Hopoe that the matter of the proposed journey to fetch Pele’s lover comes to here in vision. Hi`iaka and Hopoe and travel through the lands of Puna back to the pit of Kilauea to join Pele and her sisters:

Hiiaka arrived at the Pit in good time to partake with the others of the frugal fest ordered by Pele. At its conclusion, Pele turned to the girl Hiiaka and put the question in her blunt way, “Will you be my messenger to fetch our lover – yours and mine – from Kauai? Your sisters here” – she glanced severely about the group – “have refused to go. Will you do this for me?”

The little maid, true to her sense of loyalty to the woman who was her older sister, the head of the family, and her alii, to the surprise and dismay of her other sisters, answered, “Yes, I will go and bring the man.”

Hiiaka, though a novice in diplomacy, as shown by her instant and unconditional acceptance of Pele’s proposition, having once got her second breath, now exacted of Pele a condition that proved her to be, under the discipline of experience, and apt pupil in the delicate art of diplomacy. “I am gong to bring our lover, while you remain at home. If during my absence you go forth on one of your raids, you are welcome to ravage and consume the lands that are common to us both; but, see to it that you do not consume my forests of lehuas. And, again, if the fit does come

upon you and you must ravage and destroy, look to it that you harm not my friend Hopoe,” [Emerson 2005:15-18].

Pele readily agreed to Hi'iaka's condition. Pele designates Pā'ū-o-pala'ē (or Pā'ū-o-pala'ā) as Hi'iaka's attendant. Hi'iaka makes ready for the journey, traveling with her companions:

Pele designated a good-natured waiting woman as her attendant, who had the poetical name of Pa`u-o-pala`e (or Pa`u-o-pala`a). This faithful creature heartily accepted the trust, that of kahu – a servant with the pseudo responsibility of a guardian –and, having expressed her fealty to her new mistress, she at once took her station. Thus everything seemed arranged for a start on the eventful journey.

Night shut down upon them at Kuolo, a place just on the border of Pana-ewa. Pa`u-o-pala`e proposed that they should seek a resting place for the night with the people of the hamlet.

In the morning while it was still dark, they roused and started afresh. Their way led through lehua groves of the most luxuriant growth, the bloom of which crimsons and landscape to this day, exuding a honey that is most attractive to the birds of heaven.

At the sight of Hiiaka's party, the lively flower-girls made a rush, as if to capture and appropriate their friendly acquaintance for individual possession. The most vivacious and forward of the whole party was Pa-pulehu, their leader, a buxom young woman, of good family, who at once took possession of Hiiaka for herself, crowned and bedecked her with wreaths and garlands, with many expressions of enthusiastic admiration: “This is my friend! – What a beauty! – How the scarlet lehua becomes her! – Just look, girls! – And now you are to come and be my guest. – The feast is set for this very day. – But you are all welcomed. [Emerson 2005:19-27]

During the feast Hi'iaka called upon her allies, the Sun, the Moon, the Stars, the elements and all the gods to come to the feast and eat. The tables were cleared of food and Hi'iaka bade farewell to the people and resumed her journey through Puna, taking with her Pa-pulehu:

Their journey still lay through Puna. They were at Kalalau, not far from Haena (at the place where, centuries afterwards, Kamehameha was struck with the well-nigh fatal blow by an outraged fisherman). Some fishermen were hauling in their nets full of fish. The sight was too much for Pa-pulehu. “I hunger for fish,” she exclaimed. “These fish belong to my father. Oh, if I only were at home! How I would eat until I was satisfied!”

Hiiaka thought it best to indulge the appetite of this novice in her service. From a little knoll overlooking the ocean, she descried the canoe of a fisherman named Pahulu floating in the offing, but already well stocked with fish. Hiiaka used her power and drove away the school of fish that would have come to his net. The man was so intent on his work that he had no eyes for what was passing on shore;

but his assistant exclaimed, “Look at the beautiful woman standing on the shore and watching us!”

This brought the two fishermen ashore who thereupon willingly parted with some of their fish to Hiiaka, coupling the gift, however, with a proposition insulting to the honor of the two women. The fishermen, imagining they had the two women under their power, were soon after seen lying in the open embracing two figures of stone which they, in their insane infatuation, fancied were the two women, thus exposing themselves to the jeers and derision of their fellows.

Pa-pulehu cooked and ate the fish, but her manner of eating was lacking in due punctilio, in that she did not dispose properly of the unconsumed parts – the tails, fins, bones and scales – of the fish. This neglect was highly offensive to Pele and caused her to withdraw from Pa-pulehu the protection she otherwise would have given her.

Two routes offered themselves for Hiiaka's choice, a makai road, circuitous but safe, the one ordinarily pursued by travelers; the other direct but bristling with danger, because it traversed the territory of the redoubtable witch-mo`o, Pana-ewa [Emerson 2005:28-31]

In additional tales, Hi'iaka's battles with Pana'ewa in Kea'au. Pana'ewa turns himself into a *kukui* tree. The fate of Pana'ewa was most tragic. In the disguise of a *kukui* tree he found himself entangled with meshes of parasitic growth; he could neither fight nor fly. The spot on which he stood sank and became a swamp. Pana'ewa, swallowed up in the gulf, was swept out to sea and perished in the waves. A reef is pointed out in the ocean opposite of Pāpa'i in Kea'au which is the remains of the body of the *mo`o* Pana'ewa (Emerson 2005:45).

### 3.4.4 The Legend of Iwa

Fornander (1918) places this legend in Kea'au, Puna. There once lived a man by the name of Kea'au, who owned two *leho* shells (cowries) called Kalokuna. This story takes place in the time when 'Umi-a-Liloa unified the districts of the island of Hawai'i under his rule in the mid-16<sup>th</sup> century:

.....I ka wa e holo ai i ka luu hee, wehe ae la i ka leho a hoike iho, na ka hee no e pii a komo ka waa. Pele mau ka **Keaau** hana i na la a pau. Kukui aku la ka lohe ia Umi a hiki i Kona. Ia wa hoouna mai la o Umi i na elele i o **Keaau** la, a lawe ia aku la na leho. A lilo na leho ia Umi, hoaa ia o **Keaau** i ke aloha i na leho. Hoomakaukau iho la ia i ka waa, ka puaa, ka awa, ke kapa ouholowai Ola`a a me ka eleuli, a loko o ka hoeko. Ia wa holo ia e kaapuni ana ia Hawaii. O keia holo ana e imi ana i aihue nana e kii na leho ia Umi.

A hiki i **Puna** aohe aihue akamai, hiki i Kau, aole no, hiki i Kona, aole no, hiki i Kohala, Hamakua, Hilo, aole o he aihue akamai. Haalele o **Keaau** ia Hawaii, holo i Maui e kaapuni ai, a puni o Maui, oia ana no, he aihue no aole nae e loaana leho. Holo i Lanai e huli ai, oia ana no, holo i Molokai, kaapuni ia a hiki i Ka-lae-

o-Kalaau, i laila, loa he kamaaina e lawaia ana, ninau mai: “E holo ana kou waa i hea?” I aku o **Keaau**: “E imi an au i kanaka aihue e loa ai a`u leho ia Umi, a oia keia waiwai o luna o ka waa, he makana i ka aihue e loa ai o a`u leho.”

Olelo mai ke kamaaina: “Ua loa, e holo oe a hiki i Makapuu, a hala ia mahope ou, kau pono aku ko waa i na moku manu a me Mokapu, a ku pono i laila nana aku i ka pali e halehale mai ana, he luna ia, he lalo ka pohai kukui, aia i laila o Iwa, keiki aihue a Kukui.”

(No Iwa, he wahi keiki uuku o Iwa, i loko no o ka opu, hele e aihue, a he oi o Iwa mai ka akamai ia hana.)

“A hiki oe, nana aku i kahi keiki uuku e lewalewa ana kahi mai, e holo ana i ka lae kahakai, o Iwa ia. Uhau aku oe i ka puua, a haawi aku i na waiwai a pau loa, mai hoopoina oe, o pau ka waiwai i ka aihue ia e Iwa.”

Aohe o **Keaau** i na olelo a ke kamaaina, holo aku la ia a hala hope na wahi i olelo ia maluna, hiki aku la ia i kahi o Iwa. I nana aku ka hana e holoholo mai ana neia wahi keiki i ka lae kahakai e lewalewa ana kahi mai. Ninau aku la keia: “O Iwa oe?” Hoole mai la kela: “Aole, ei aku no o Iwa i ka hale,” a hiki keia i ka hale e noho ana o Kukui, ka makuakane o Iwa. Ninau aku la keia: “Auhea O Iwa?” I mai la o Kukui: “Aohe wahi keiki uuku i loa mai la ia i ka lae kahakai e lewalewa ana kahi mai?” “He wahi keiki no.” “O hoi a uhau aku i ko puua ia ia.” A lohe keia, hoi aku la a hiki, olelo aku o **Keaau** ia Iwa: “O Iwa no ka hoi oe la, kuhikuhi lalau oe ia`u.” Uhau aku la ia i ka puua ma keia lo o Iwa: “A make na Iwa na ke keiki aihue a Kukui, o ka waiwai o kuu waa nau ia a pau loa a me ka waa.”

Olelo mai o Iwa: “Hoi aku kua i ka hale.” A hiki laua, kalua ka puua, mama ka awa, ai a pau, ninau mai o Iwa: “Heaha kau huakai o ka hele ana mai?” Wahi a **Keaau**. “He mau leho na`u, ua kina mai e ko makou alii e Umi, a lilo ia ia. Aa ia au i ke aloha, oia ko`u kuleana i hiki mai nei i ou la.” “Pela iho,” wahi a Iwa, “a kakahiaka maopopo.”

Moe laua a ao, kau maluna o ka waa a holo i ka moana. O Iwa mahope o ka waa me kana hoe o Kapahi. O **Keaau** mamua. Kahea iho o Iwa. “Kapahi ka moana i kai e Iwa.” (O kea no o ia hookahi mapuna hoe.) Hele ana laua nei ma ke kowa o Niihau me Kauai. Ninau aku o Iwa: “Hiki kua?” “Aole keia o Hawaii, o Kauai keia me Niihau.” Uli hou o Iwa i ka hope o ka waa. Kahea hou i ua hoe nei ana ia Kapahi. “Kapahi ka moana i kai e Iwa.” A kai ka hoe a Iwa, hele ana laua nei ma waho o Kawaihoa. Ninau aku ia **Keaau**: “Hiki kua i Hawaii?” “Aole;” pela mai o **Keaau**. Lalau hou o Iwa i ka hoe ana o Kapahi, hoe hou, holo laua nei a hala hope o Molokai me Lanai, hele ana laua nei ma ke kowa o Molokini me Pohakueaea, he lae ia e nana ala ia Hawaii. I aku o Iwa: “Hiki kua?” “Ae,” pela mai o **Keaau**, “aia nae i kela puuli la, e kau la kea o i ke kuahiwi, aia ma ke komohana, aia i laila o Umi.” Lalau hou o Iwa i kana hoe o Kapahi a hoe, hele

ana laua ma waho o Kalaeakeahole, he lae ia e nana ana ia Kailua, kahi a Umi e noho ana. I nana aku ka hana, e lana mai ana no o Umi makai o Laua nei i aku o Iwa a **Keaau**: “Aia o Umi me ka waa a me na leho, e hoemi ka waa o kaua i hope a nalowale o Umi.” A kaawale laua nei mai ia Umi mai, olelo aku o Iwa: “E **Keaau**, maanei oe e lana ai a loa mai ia`u.” Lana o **Keaau**, luu o Iwa, a hiki i ka honua o lalo, hele a hiki malalo o kahi a Umi e lana nei, pii keia mai lalo ae a kokoke ia Umi. E iho ana na leho mawaho o ka waa o Umi. E apo ae ana o Iwa, lilo ia ia nei i lalo, a ke koa hawele o Iwa i kea ho a paa. Luu aku la a loa o **Keaau** e lana ana ea ae la me na leho. Ia wa, hoi laua a pae ma Leleiwi i Hilo, noho o **Keaau** me Iwa ma laila. O ka **Keaau** hana ka holo e luu hee ma ua mau leho nei, me Kalokuna. Ka ka hee hana ka pii a e komo ka waa, hoi i uka.

(Ma keia wahi e waiho ka olelo ana, a e hoi hou mahope ia Umi.)

A lilo mai na leho ia Iwa, noho o Umi me ka minamina, e manao ana he mau maoli ko na leho i lalo i ke koa. Nolaila, ku moe o Umi i ke kai me na waa, a me na kanaka, noho ai, a ia, hookahi hana he luu i na leho. Kii ia aku la na kanaka aho loa i ka luu. I ka luu ana ekou kaau anana e pau, aole e hiki aku i lalo i ke koa i paa ai ke kaula, pela ka hana ana a hala he hepekoma okoa. Hoouna o Umi i na kukini, e kaapuni ia Hawaii i loa ke kanaka aho loa, e pau ai ke koa i ka luu a loa na leho. Ia kaapuni ana, loa o Iwa ma Leleiwi e pili la me **Kumukahi**, i waena o **Puna** a me Hilo. A lohe o Iwa i ka olelo a ka elele kukini, hai mai o Iwa, aohe leho, he aho wale no ia e paa laa i ke koa. Ua lilo mai na leho ia **Keaau**. Ma keia olelo a Iwa i ka elele, lawe ia aku la a mua o Umi. Ninau mai o Umi ia Iwa, no na leho. Hai aku o Iwa e like me na olelo i ka elele, a pau ia olelo mai o Umi. Loa no ia o eke kii, ae aku o Iwa. “Ae.” Hele aku la o Iwa a hiki i o **Keaau** la, ma Leleiwi.

He mea mau ia **Keaau**, ka huna i na leho ai, oia o Kalokuna ma. Ma ka loha o ka hale o waho, e pili ana i ka hio kala, a o na leho ai ole, i loko pono lakou o ka hale e kau ai.

A poeleele, hoopuka loa aku la o Iwa i ka hale, lalau aku la i na leho a loa, hoi aku la i o Umi la i Kona. Haawi aku la o Iwa i na leho ia Umi, a ike o Umi, olioli ia, a olelo mai ia Iwa: “Akamai oe i ka aihue,” Alia nae au e mahalo i aoe, a loa kuu wahi koi, aia i lalo i Waipio, i ka heiau o Pakaalana, o Waipu ka inoa. Olelo aku o Iwa: “Loa paha ia`u, aole paha? Aka, e hoao wau.”

(Maanei kakou e luaana iki iho ai no na olelo e pili ana i ke koi, a me na hana a na kiai.)

O ua wahi koi nei o Waipu, he mau luahine elua na kiai, ua hana ia he kaula, paa he poo i ka ai o kekahi luahine, a o kekahi poo hoi i kekahi luahine, ma waena ke koi e lewalewa ai.

He kapu hoi, aohe kanaka maalo, aohe puaa holo, aohe ilio aoa, aohe moa kani, mai Waipio ke kapu a Puuepa, ma waena o Waimea a me Kawaihae, alaila pau. Aia a noenoe poeleele o ke ahiahi, holo ka luna kala, mai Puuepa a ka pali o Puaahuku i Waipio, he oloa ma ka lima akua, ma waena o ka iwi kano a me ka peahi, o ia ka Lepa. Penei e kala ai: "E moe e! E moe i ke koi o Umi e! Kapu ke kanaka a o e hele, kapu ka ilio a o e aoa, kapu ka moa a o e kani, kapu kapuaa aole e holo, emoe e!" Elima hele ana a keia luna ao ka po.

A pau ka olelo ana a Umi me Iwa, aui ka la. Hele mai la o Iwa, a ahiahi poeleele, hiki i Puuepa, holo o Iwa me ke kahea ana e like me ka luna holo mau mamua aku, me ka oloa i ka lima. A hiki i Puaahuku, he pali ia e kiei ana ia Waipio. Ma keia kahea ana a Iwa, moe na kanaka a me ka luna mua, ala no make, hele o make. Nolaila, oia nei wale no ke kanaka hele. O na kanaka a pau, ke manao nei no o ka luna mua. No ka mea, aohe wahi lilo, oia okoa no, na kino, na oloa, na leo, na mama.

Holo aku la O Iwa mai luna o ka pali a ka heiau o Pakaalana, kahea aku loa: "Ke moe nei no olua?" "O," pela mai na luahine, "aole maua i moe, kala aku nei no." Olelo malie aku o Iwa: "Auhea haki koi e haha aku wau?" "Eia no," wahi a na luahine. "E neenee mai olua a kokoke i launa aku kuu lima, o ka haha wale aku ka!" Ia nee ana mai a na luahine a kokoke loa pono aku la ke koi i ko ianei mau lima, e huki mai ana keia lilo. Kahea na lunahine: "He aihue ka keia e! Ua lilo ke koi a ke `lii e! Make maua e! Kai no he kanaka pono keia e!" Lohe na mea a pau, ala mai la alualu. Kahea na luahine, kau o Iwa iluna o Puaahuku me ke koi. Hiki ka hahai i laila, hele ana o Iwa i Mahiki, pela no ka holo ana a hiki o Iwa i Puuepa. Hiki ka hahai i laila, hele ana o Iwa i Puako. Alaila, pau ka hahai, pau mai la ke kapu, hoi aku la o Iwa a hiki ia Kona, moe a ao, a hiki i ka wa ai o Umi, noho ana o Iwa, a ike o Umi ia Iwa. Hoomaoe mai la: "Aole no paha e loa ia oe kuu wahi koi?" I aku o Iwa: "Pela, aka, e nana mai oe, oia paha nei, aole paha?" A ike o Umi, olelo mai la: "Ka! Kupanaha, e kuhi ana au aole e loa ia oe, eia ka loa ana, akamai oe," Olelo hou mai o Umi ia Iwa: "Eia ko`u manao ia oe, e aho e hoao oe me ka`u poe aihue eono. Elua hale, aia ka piha i ka po hookahi; hookahi ou, hookahi o lakou. Ina i piha ole kou hale, make oe, a pela hoi lakou." "Ae," aku o Iwa, "heaha la hoi, o ko lakou hale no ke piha, he hui lakou, a o e piha ko`u, he hookahi."

Eono moku o Hawaii, eono aihue akamai. I ka la okoa hele lakou, a ahiahi poeleele hiki. Lawe mai la i ka waiwai a ko lakou hale waiho, pela ka lakou hana ana a hiki i ka moa mua o ke kani ana. Koe iki ka hale. Ia wa ala o Iwa, e aihue ahu kela i ka waiwai a kela poe aihue, ko Umi, na kanaka, na wahine, na keiki, na waa, na holoholona aole i pau na mea piha ko ianei hale. Ao ae la, aole i piha ka hale o ka Umi poe aihue, ia wa pau lakou i ka make, koe o Iwa [Fornander Vol. V, 1918: 284-294].

#### Translation:

.....Whenever the possessor of these shells went out squid fishing all that was necessary to do was to take and expose them and the squids would come up and enter the canoe. This was **Keaau's** regular occupation every day. The existence of these extraordinary shells was in time carried to Umi, who was then living in Kona. Whereupon he ordered his messengers to go to the home of **Keaau** and obtain possession of them, and at their demand the shells were given up and the messengers returned with them to the king.

After the shells were secured by Umi, a deep yearning sprang up in the breast of **Keaau** for them. After studying for a time for means of recovering the shells, he one day prepared his canoe for sea, procured a pig, some awa and ouholowai and eleuli, kapa of 'Öla'a. The kapa he put into calabash and then the pig the awa and the calabash were placed into the canoe, which he then boarded and set out on a journey around Hawaii in search of some one who could steal back his shells from Umi.

All through the district of **Puna** he found no smart thief. He next traveled through the district of Kau, without success; then through Kona, still unable to find his man. He next touched at Kohala, and on through that district and the district of Hamakua and Hilo, meeting with the same failure; he found no one smart enough. **Keaau** then left Hawai'i for Maui and traveled around that island; still he met the same disappointment. He found men good in the art of stealing, but none smart enough to recover his shells. He next set out for Lanai and traveled around that island, but he met the same fate. He then set out for Molokai and journeyed around it till, off the point of Kaleokalaau, he met a man of that island who was fishing. The man upon seeing him called out, saying: "Where is your canoe sailing for?" **Keaau** replied: "I am in search of a person who can steal back my leho shells from Umi. I have here with me in my canoe several valuable things which I shall give as presents to the thief who could return my shells to me." The man replied: "You have found him. You sail on until you come to Makapuu and after you have passed the place steer your canoe for a point between the bird islands and Mokapu. When you reach that point look for the cliff which resembles the roof of a house, above, and directly below the cliff you will see a grove of kukui trees; there you will find Iwa, the thieving son of Kukui."

(Iwa was a small boy at this time, but while he was yet in his mother's womb he used to go out stealing. He was the greatest thief in his day.)

"When you come to land, look for a small boy who goes about along the beach without a loin cloth; that is Iwa. Take out your pig and the other articles of value and lay them before him. Don't forget this; else all your things will be stolen from you by Iwa."

After receiving these instructions, **Keaau** set out, and after he had sailed past the different points he came to the landing below the home of Iwa. Upon touching land he looked about him and saw a small boy without his loin cloth running

along the beach. **Keaau** then called out to him: “Is your name Iwa?” The boy replied: “No, Iwa is at the house.” When **Keaau** arrived at the house he found Kukui, the father of Iwa. **Keaau** then asked him: “Where is Iwa?” Kukui replied: “Did you not meet a small boy on the beach running about without his loincloth?” “Yes, there was such a small boy.” “Go back and present him your pig.” When **Keaau** heard this, he returned and said to Iwa: “There, you are Iwa after all; you misdirected me.” **Keaau** then took the pig and presented it to Iwa saying: “Here, I present this to Iwa, the thieving son of Kukui, together with the articles of value in my canoe and the canoe itself.” Iwa then said to **Keaau**: “Let us return to the house.” When they arrived at the house, the pig was killed and put into the oven, and the awa was prepared. After the meal was over, Iwa turned and asked of **Keaau**: “What is the object of your journey that has brought you here?” **Keaau** replied: “I had two shells which were taken away from me by orders from the king, Umi, and he has them in his possession now. I value these shells so much that I am distracted, and that is the reason of my being present here.” “We must wait until tomorrow morning,” said Iwa.

They retired for the night and on daylight the next day they boarded the canoe and set out to sea. Iwa took the stern of the canoe with his paddle called **Kapahi**, while **Keaau** took the seat at the bow. After they were seated in the canoe, Iwa called out: “**Kapahi**, take Iwa out to sea,” at the same time he dipped his paddle into the sea. (This is meant that one stroke of the paddle was all that was needed.) With this one stroke, they passed between Niihau and Kauai. Iwa then asked; “Have we arrived?” “This is not Hawaii, these islands are Kauai and Niihau.”

Iwa then turned the stern of the canoe around and again called out to his paddle, **Kapahi**: “**Kapahi**, take Iwa out to sea.” When Iwa drew his paddle out of the sea they were passing outside of Kawaihoa. He then asked of **Keaau**: “Have we arrived at Hawaii?” “No,” said **Keaau**. Again Iwa took up his paddle and gave one stroke and they left Molokai and Lanai to their rear and they went floating between the island of Molokini and Pohakueaea, a point of land looking toward Hawaii. Iwa then asked: “Have we arrived?” “Yes,” replied **Keaau**, “but it is at that point of land where the cloud hangs over the mountain that we want to go; it is to the west of the point that Umi is now living.”

Iwa then took up his paddle, **Kapahi**, and gave one stroke and they arrived outside of Kalaeakeahole, a point of land looking toward Kailua, where Umi had his residence. When they looked about they saw Umi just below them, in his canoe. Iwa then said to **Keaau**: “There is Umi in his canoe with the shells. Let us get our canoe to the rear and out of sight of Umi.” When they were some distance from Umi, Iwa said: “Say, **Keaau**, you must float right at this spot until I return with your shells.” **Keaau** therefore kept his canoe floating on the same spot while

Iwa dove down and swam until he had reached the bottom of the ocean, then walked under water to the place where the canoe of Umi was floating, then swam up until he was almost up to the surface; and as the shells were being let down on

the side of the canoe, Iwa grabbed them and took them down with him to a large coral, there he fastened the fish-line, then he took the shells and swam under water until he reached their canoe and got into it.

The two then returned and landed at Leleiwi, in Hilo, where they made their home. Upon the recovery of his shells **Keaau** again took up his favorite occupation, that of squid fishing, taking along his shells, Kalokuna. The squids at sight of the shells climbed and entered the canoe until it was loaded down when they returned to the shore.

(We will here leave **Keaau** and let us return to Umi.)

After the shells were taken by Iwa and the line fastened to a coral, Umi after a time pulled up on his line, but to his surprise it would not yield and thinking that the line was entangled to the coral he did not wish to pull very strong, thinking the line would break and he would lose the shells. Fearing he would lose them he remained in his canoe all day, and that night he slept out at sea with his men, and for some days he lived there, while his men dove down to untangle the fish-line and thus recover the much valued shells.

Men noted for being able to stay under water a long time were sent for, and these men were told to go down, but the best they could do was to go down three times forty fathoms, seven hundred and twenty feet, not deep enough to reach the bottom where the line was tangled. This kept up for a week.

Umi then sent out his runners to make a circuit of Hawaii to look for a man who could stay under water long enough to recover the shells. In this trip around the island of Hawaii, Iwa was found at Leleiwi, the point of land adjoining **Kumukahi**, between **Puna** and Hilo. When Iwa heard the king's wish through his runner, Iwa said to him: "There are no shells at the end of the line. The line only is fastened to some coral in the bottom of the ocean. The shells have been recovered by **Keaau**."

When the runners heard this he returned to Umi taking Iwa with him and told Umi of what he had heard from Iwa. Umi then asked Iwa regarding the shells and Iwa told Umi just what the runner had told him. At the close of the report Umi asked Iwa: "Can you get these shells for me if you should go for them?" Iwa replied: "Yes," Iwa then journeyed back to the home of **Keaau** in Leleiwi.

It was **Keaau's** custom to hide these shells on the end of the house, up next to the curve of the rafters; and the other shells, the ones that he did not care so much for, he kept them in the house hung up on a cord.

About dusk Iwa made his appearance near the house and knowing where the shells were secreted he went up and removed them from the place they were hidden and he then returned to Kona, and handed them over to Umi. When Umi

saw the shells he was made very happy and he then said to Iwa: "You are a smart thief, but I am not going to praise you just yet, not until you can produce my axe, which is being kept in Waipio in the temple of Pakaalana. The name of the axe is Waipu." Iwa then made reply: "I don't know whether I will be able to steal it or not, but I shall try."

(We will here speak a few words relating to the axe and how it was kept by its guards.)

This axe, Waipu, was kept by two old women. It was fastened to the middle of a piece of rope and the ends of the rope were fastened around the necks of the two old women allowing the axe to dangle between the two."

There was a very strict kapu placed on this axe; no person was allowed to pass near the place, and during the period of time when the kapu was in force, the pigs were not allowed to run about, the dogs were not allowed to bark, and even the roosters were kept from crowing. The kapu was extended from Waipio to Puuepa, a hill between Waimea and Kawaihae. At dusk, just before it gets real dark in the evening the crier, would run from Puuepa to the cliff of Puaahuku overlooking Waipio, carrying olonā kapa in his right hand, held between the palm of the hand and the wrist as a flag and would cry out: "Sleep ye, sleepy because of the axe of Umi. Persons are kapu from walking about, the dogs are kapu from barking, the roosters are kapu from crowing the pigs are kapu from running about. Sleep ye." The crier was required to make five trips back and forth before daylight.

After Umi had told Iwa what he wanted, the sun was past the meridian. Iwa did not, however, wait for further directions but started out on his way to Waipio. Just before dusk he arrived at Puuepa and immediately started running and crying out like the king's crier with a flag in his hand. He continued running until he reached the cliff of Puaahuku, looking down into Waipio. In calling out the way he did, the crier, whose duty it was to make the cry, was forced to go to sleep like the rest of the people, for to get up and go about meant death. Because of this Iwa was the only one about, all the people believed it was the usual crier and the crier himself believed that the king had appointed some one else to take his place. Furthermore the people could not recognize any difference; the build was the same, the flag looked the same, the voice sounded the same and the speed in running was the same.

Iwa continued running from the top of the cliff down to the temple of Pakaalana and then he called out: "Are you two still asleep?" The old women replied: "No, we are not asleep, we are still awake." Iwa then asked quietly: "Where is the axe? Let me feel of it." "Here it is," answered the old women. "You must come nearer so that I can touch it with my hand. I just want to feel of it." When the old women drew nearer to Iwa, he reached out and pulled at the axe, getting it away from them. The old women then called out: "Here is a thief! The king's axe is

gone! We are killed! We had thought this was a good man!” When the people heard this, they all got up and gave chase.

When the old women made the first outcry, Iwa had reached the top of Puaahuku with the axe in hand. When the pursuers reached there he had reached Mahiki. This chase was kept up until Iwa reached Puuepa. When those in pursuit reached this place, he was at Puako. They therefore gave up the chase as the country beyond that place was outside of the kapu area, while Iwa continued on until he arrived in Kona. He then slept until daylight the next day. When it was about time for Umi to have his morning meal, Iwa went up to him. When Umi saw Iwa he asked jokingly: “I don’t think you have been able to get my axe.” Iwa then replied: “Perhaps not, but I want you to look at this axe and see if it is not yours.” When Umi saw it, he said: “How strange! I thought you never would be able to get it; but here you have gotten it. You are smart.” After this Umi said to Iwa: “Here is my thought regarding you. I want you try with my six best thieves. There are two houses to be filled in one night, one for you and one for them. If you will not be able to fill yours first, you will be killed; so shall it be with the others.” Iwa then replied: “Yes, not doubt the others will fill theirs first for there are six of them. Mine will not be filled because I am alone.”

There are six districts in the island of Hawaii and Umi had six expert thieves.” While it was still daylight the six thieves went out to see what things they could steal; and when it became dark they began to steal and to carry everything they could lay their hands on into their houses. At about this same time Iwa woke up and as soon as the six men went to sleep he proceeded to steal the things stolen by them of Umi’s men, men, women, children, canoes, animals and various other things. Before he could remove all the things into his house there was no space left, so he had to leave some of them. When it was daylight the next day they found that the house belonging to the six men was almost empty, while Iwa’s house was filled with the different things. The six men were therefore declared beaten and were killed in place of Iwa [Fornander Vol. V, 1918: 284-294].

Frequently mentioned in Hawaiian tradition is certain *kapa* of ‘**Ōla’a, Puna**. These *kapa* were treasurable products of high value. The *ouholowai kapa* was made from the bark of the *mamaki* (*Pipturus albidus*), dyed differently on its two sides. The *eleuli* is described as a perfumed *kapa*, rarely found (Fornander Vol. V, 1918: 284-294).

### 3.4.5 The Legend of Halemano

The legend of Halemano is told in the collections of Abraham Fornander’s *Collections of Hawaiian Antiquities and Folk-lore* (1916-1919). In this legend Halemano is stricken with love through a dream infatuation and dies. He is later restored to life by his sister Laenihi. Laenihi visits the lands of Puna in search of Halemanao’s *wahine o ka pō* or dream woman. This legend is filled with place names associated with the lands of Puna. Each place name has taken on a character role in this legend:

O Wahiawa ka makuakane, o Kukaniloko ka makuahine, O Kaukaalii ka makuahine o Kukaniloko, o Halemano e pili la me Lihue ka aina, i Waianae. Ma ka noho ana o Wahiawa me kana wahine o Kukaniloko, ua hanau ka laua mau keiki eono, eha, kane, elua whaine. Eia na inoa o na keiki a laua: maeaea ka mua, he hane ia; Kaiaka kona muli iho; Anahulu ka hope iho; Halemano ka pokii o lakou; Pulee he wahine ia; Laenihi he wahine akua ia.

O Laenihi ka mua, a o Halemano ka hope, oia ka mea nona keia kaa. I Kaaukahi i hanai ia ai o Halemano a nui, he kanaka maikai o Halemano ma kona kino, aohe puu, aohe kee, pali ke kua, mahina ke alo.

Ia Halemano e noho ana me kona kupunawahine me Kaukaalii, ma Kaau i Waianae, ua loa ia Halemano ka moe uhane ma ia noho ana no Kamalalawalu. Oia ke kaikamahine a Hanakaulua me Haehae, no Kapoho i Puna, Hawaii. He mau alii na makua, no ia aina, a na laua o Kamalalawalu. He wahine maikai loa ia ke nana aku, a he wahine i oi mamua o ko Puna a me ko Hilo, he puupaa, a he kapu loa, aohe kanaka ike ia ia, aohe hoa noho, he kaikunane wale no kona hoa noho, o Kumukahi ka inoa; he mau ilio elua lau, ko lau amau hoa noho.

Ia wa e noho ana o Huua he `lii no Puna, a o Kulukulua no Hilo, o laua e elua, e hookuli ana ia Kamalalawalu, i ka waiwai o Puna a me Hilo, me ko laua manao, na laua e wahi ke kapu o Kamalalawalu.

Ma ke moe mua a Halemano ma ka po akahi ua halawai uhane laua me Kamalalawalu ma Kaau, pela ko laua launa pinepine ana, a aloha o Halemano ia Kamalalawalu. No ke aloha o Halemano, ua waiho oia i ka ai a me ka ia, a ua pau kona manao i na mea e ae, o Kamalalawalu wale no kona manao nui i na la a pau loa; no keia manao pono ole ia ia, ua nawaliwali kona kino a make iho la.

No Laenihi, oia ko Halemano mua pono, ua hele oia ma na wahi a pau o keia mau kaapuni a pau, e imi i wahi na Halemano, kona kaikunane. Ua hele no hoi oia a kokoke i Puna, lohe e oia i ka make o Halemano, hoi e ia i kaau, ma Waianae, i Oahu nei; nolaila, loa ole o Kamalalawalu ia ia. A hiki o Laenihi i Kaau, ma Waianae ma Oahu nei, he mana ko Laenihi e hooloa i na mea make, nolaila, ola hou o Halemano.

A ola o Halemano, ninau aku Laenihi: "Heaha ke kumu o kou make ana?" I mai o Halemano: "He wahine. Eia kea no ke hiki mai, he wahine maikai loa o na maka a me ke kino, he lauoho kalole eleele, he wahine kiekie hanohano, kohu alii, ke nana e like me ke pele o Kauai a me ka mahina, a he pa-u nahenahe ulaula ma hope, he lei hala, me ka lehua ko ke poo, a me ko ka ai." I aku o Laenihi: "No Puna a me Hilo ka lehua, no Puna ka ouholowai o Laa, nolaila no ka pukohukohu, no Puna ko wahine, aole no ke komohana a ka la. Ina o ka wahine i lohe wale ai i Puna, o Kamalalawalu, he wahine maikai io no," pela aku o Laenihi ia Halemano.

Ninau aku o Laenihi i Halemano: “Ahea hiki ko wahine?” I mai o Halemano: “Aia a moe iho wau, o ka manawa ia e hui ai maua; e hoolohe no auanei oukou i ke kamailio a maua, ke moe ae au.” “Ae,” wahi a Laenihi. “I moe olua auanei me ko wahine, e ninau aku oe i ko wahine, i kona aina a me kona inoa.”

A lohe o Halemano i na olelo a kona kaikuahine a Laenihi, mahope o laila, moe iho la laua me Kamalalawalu. Ma keia moe ana, ninau aku o Halemano ia Kamalalawalu.” Mahope o laila, ala ae la o Halemano a olelo aku ia Laenihi, a lohe o Laenihi, olelo aku la iaia Halemano: “E ai oe i ka ai, e kii au i ko wahine i Hawaii.” Ae mai o Halemano.

Mamua ae o ka holo ana o Laenihi i Hawaii, e kii ia Kamalalawalu, olelo aku ia na ouli o kona hele ana, a hope e hooiaio aku ai kona kii ana. Malaila ka loa a me ka ole o Kamalalawalu. Eia na ouli a Laenihi olelo aku ai: “I ua ka ua, aia au i Molokai; olapa ka uwila, aia au i Maui; kui ka hekili, aia au i Kohala: nei ke olai, aia au i Hamakua; kahe ka wai ula, aia au i Puna. Alaila, loa ko wahine ia`u, nolaila e noonoo oukou i keia mau mea a`u e olelo nei, o poina auanei.” A pau ka olelo ana a Laenihi, hele mai la ia ma ke kino ia, o ia kela ia o Laenihi a hiki i keia la.

Holo mai la o Laenihi i ke ahiahi, a hiki i Haleolono ma Palaau i Molokai, ua ka ua. Kahaha o hope no ka hikiwawae loa. Malaila aku a Hanakaieie, ma Kahikinui i Honuaula, ma Maui, olapa ka uwila. Kahaha hou o hope no ka emo ole loa. Mai Maui aku a Umiwai, ma Kohala i Hawaii, kui ka hekili; malaila aku a Pololikamanu, ma waho o Mahiki i Hamakua, nei keolai. Malaila aku a hala o Hilo, a komo i loko o Panaewa, a hiki i Kukululu ma waho o Puna, kahe ka wai ula. Alaila, moomoo o hope nei, ua loa o Kamalalawalu.

Ma keia hiki ana o Laenihi i Kapoho ma Puna i Hawaii, noonoo iho la ia i ka mea e ike ai ia Kamalalawalu, i loko o konakapu e paa ana, a loa iho la. Eia kea no: Hoala mai la oia i ka makani, makai o Puna, he unuloa ka inoa o ia makani, a ala mai la ke kai mai kona lana malie ana, a hai a nalu iho la ma waho o Kaimu. Oia kahi hee nalu mau in a wa a pau loa. I ke kakahiaka nui, hai mai la ka nalu mua, ala ae la na kanaka, a nana aku la me ka uwa nui loa, ma keia uwa ana, lohe aku la o Kumukahi, ke kaikunane o Kamalalawalu, hele mai la ia e nana i ka hai o ka nalu, a ike hoi aku la olelo ia Kamalalawalu. A lohe o Kamalalawalu, ala ae la ia a hele.

Olelo hoakaka no Kumukahi; ke kaikunane o Kamalalawalu. He punahele o Kumukahi i kona kaikuahine, aohe ana olelo hookahi e hole ia, e hiki i ka na kaikuahine kea e i na mea a pau a kona kaikunane e olelo ai, aole e hole, mai ka mea nui a ka mea lili.

Hele aku la o Kamalalawalu eheenalua ma Kaimu; ia ia i hiki aku ai ma ka ae one, nana aku la ia i ka nalu i ka hai mai. Ku ka nalu mua, he kakala ka nalu mua, a ai ia, he pakaiea ka nalu alua, a hala ia, he opuu ka nalu akolu, a hala na nalu ekolu,

au aku la o Kamalalawalu, e heenalua. A hiki i kahi o ka nalu e hai ana, hee mai la ia, ekolu nalu i hala ma kana hee ana, pio loa iho la ka nalu, aohe nalu o ia wa; kakali iho la ia, me ka manao e ku hou mai ua nalu hou, pela kona lana ana a opili ia, manao iho la e hoi i uka.

Ia wa hoala hou o Laenihi i ka nalu, a ike o Kamalalawalu, hee hou iho la ia, a kokoke e pae i uka, ililo iho la ka nalu ana i hee ai i ia, pau ae la ka nalu. O keia ia, o Laenihi no ia, ua lilo iho la ia, i ia, ia wa. A ike o Kumukahi ke kaikunane aloha a Kamalalawalu i ka ia, kahea aku la ia, penei: "E Kamalalawalu e! Kuu puni o ka ia." Aole e hiki ia Kamalalawalu ke hole, no ka mea, he leo no kona kaikunane. Lalau iho la i ka ia a hoi aku la i ka hale, hoo iho la i loko o ka ipu wai a lilo ae la ia i milimili na kona kaikunane.

I ka po, ka moe ana o loko o ka hale, lilo ae la o Laenihi mai ke kino ia, a ke kino moa, ia wa lele ae la a ma ka haka moa o waho kani, pela kona kani ana, a pau na moa elima. Wehe mai la ka alaula o ke kakahiaka nui, iho aku la ia me ke kino moa a hiki i kahakai, lilo ae la i kino wahine. Pii mai la o Laenihi me ke kino wahine a hiki i ka hale o Kamalalawalu ma e noho ana. Ninau aku o Kamalalawalu: "Mahea mai oe?" "Maanei mai nei." "Aohe o onei wahine e like me oe, a ina no hoi no anei aku nei, aole no e hele mai ianei, he kapu o anei, he make." Wahi a Laenihi: "Makai mai nei." "Ae, ina pela kau olelo, he oiaio, e ae aku wau." Ninau hoohuahualau aku o Laenihi: "Aole au kane i moe i ka uhane?" "Aole," wahi a Kamalalawalu. I hou aku o Laenihi: "Aole ou lei i lei ai a maloo?" He lei no, aole nae e loa aku ia oe, mamuli au make ia oe." I mai o Laenihi: "Heaha la hoi e haawi mai oe ia`u, a i mai oe, kii ae no ia`u e hele mai e lapaau ia oe, aia ko`u wahi i Kaimu, o Nawahinemakaakai ko`u inoa." Lilo ka lei ia Laenihi, nonoi hou o Laenihi i ka pa-u, haawi no o Kamalalawalu, alua mea e lilo ia Laenihi.

A loa keia mau mea ia Laenihi, hoi mai la ia mai Hawaii mai a hiki i Waialua, a kahi o Halemano e noho ana, hoike aku la o Laenihi i ka lei, a me ka pau, ia wa, wikiwiki iho la o Halemano e holo i Hawaii, hoole mai o Laenihi: "Aole e loa pela. Eia ka mea e loa ai, e hana i milimili na ke kaikunane punahele o Kamalalawalu, o Kumukahi ka inoa, no ka mea, ua ike aku nei au, o kana mea e olelo ai, oia ka kona kaikuahine e hana ai, aole ia e hoole i na leo a pau a kona kaikunane e pane ai."

Nolaila, olelo o Laenihi, e kalai kii, mai Waialua a Waianae, e paele i ka alaea a me ke nanahu, a e hana i moa laau, hooholoholo i luna o ka nalu, a i koieie i luna o ka wai, a i lupe hoolele i luna. I waa ula, i kanaka ula, i la ula, he hoe ula, he haulaula, a he waa nui, a he waa iki. A makaukau keia mau mea a pau loa, holo aku la lakou a hiki i Puna ma Hawaii, he mau aina liilii e pili ana i Puna, o Makuu, o Popoki; i laila hoolele ka lupe, uwa o uka i keia mea lele.

Ia lakou e uwa ana, lohe aku la o Kumukahi, ke kaikunane o Kamalalawalu, hele mai la ia e nana, a like ia, holo mai la a kae one e pili ana me ke kai, kahea mai la

i na kanaka o luna o ka waa: “Na`u ka mea lele.” I aku o Laenihi ia Halemano: “Haawi ia aku na ke keiki.” A lilo ka lupe ia Kumukahi. Hookuu ka waa liilii i luna o ka nalu, uwa hou o uka; alaila, kii hou o Kumukahi, a nonoi aku penei: “E kela waa, keia waa, e na mea i luna o ka pola, na`u ka waa liilii.” Ae aku o Laenihi. Pela wale no ka hana ana a hiki i ke kii, hoolale ae ana o Laenihi i na waa a pau, e kukulu kii o kela waa kei waa, ma keia ku ana o na kii a pau loa, huli hou o Kumukahi a nonoi hou i na waa, nana na kii.

Olelo aku o Halemano a me Laenihi: “He punahele no oe i ko kaikuahine?” “Ae,” pela mai o Kumukahi; “ma ka`u e olelo ai, malaila ia.” “Kahea ia hoi ha.” Kahea o Kumukahi: “E Kamalalawalu e! Hele mai, aia ka a hele mai oe, alaila, loa kuu milimili.” A hiki o Kamalalawalu, olelo hou lakou la: “He punahele no auanei oe i ko kaikuahine, ke olelo aku oe e huli aku kea lo mahope, a o ke kua mamua nei?” “Ae,” A huli kua aku la o Kamalalawalu, nana aku lakou ma ke kua, ahoe puu, ahoe kee. A pau ko lakou nana ana, olelo hou lakou i ke kaikunane. “He punahele no oe i ko kaikuahine ke olelo aku e huli mai kea lo i mua nei?” “Ae,” a huli mai la kea lo o Kamalalawalu.

Ia wa, pii o Kamalalawalu i luna o na waa; a hiki ia i luna, kahea o Halemano i ka poe hoewaa e hoe, ia wa lilo laua elua i Oahu nei. Hahai mai la o Puna a me Hilo, aohe launa mai, hao mai la ka mana o na waa o Halemano a me Laenihi.

Ma keia holo ana, pae ae la kekahi waa me Kumukahi i Hauula ma koolauloa. Ilaila kekahi kii e ku ana, o Malaekahana ka inoa, hoohihi iho la o Kumukahi i ke kii, noho iho la i laila. O Halemano, holo loa aku la lakou a pae ma Waialua i Ukoa, me Kamalalawalu. Ma keia pae ana, ua holo koke ka luna kala a puni o Waialua a me Waianae, e hele mai laua e hookupu ia Kamalalawalu.

A pau ka hookupu ana, ekolu la i hala, haohao o Kamalalawalu ia Kumukahi i ka ike ole ia aku. Ninau aku la ia ia Halemano a me Laenihi: “Auhea O Kumukahi?” “Aia i Hauula, ua noho ia puni ana o ke kii.” I aku o Kamalalawalu: “E kii aku a hoi mai.” A hoi mai la o Kumukahi, olelo aku la o Kamalalawalu: “E hoi oe me ka waiwai i Hawaii, i na makua o kaua a me na makaainana, o poino mai kekahi o lakou.” Ia wa, hoi aku la o Kumukahi i Hawaii.

Ia wa ma kēia mo`olelo, no ka lohe `ana o `Ainkanaka, ka mō`ī o O`ahu, i ko Kamalalawalu u`i, ki`i ia `oia. No kona ko`oko `ole `ana i ke Kauoha, ho`ouna o `Ainkanaka i ka pū`ali koa e kaua iā Halemano. Me ka wahine a me ka kupunawahine, he`e lākou i Moloka`i, alaila, i Kaupō, Kohala a me Hilo. Lawe `ia `O Kamalalawalu e Hua`a. Ho`i `O Halemano i Kohala. Hahai kana wahine. Puni hei `ia `O Kamalalawalu. Ko Halemano make `ana. Ho`ōla hou `ia e Laenihi, kona kaikuahine kupua. No ko Halemano ho`ōla hou `ia `ana. `Imi `O Halemano i wahi e ho`i mai ai kana wahine. Komo `oia ike kilu `ana eo iāia. Kā`ili `ia e Kikeka`ala mai a Kamalalawalu:

A pau ka olelo ana no ka pili alaila, hoolei mai la o Kikekaala i ke kilu, aole i pa i ka pahu, lalau iho la o Halemano, a paa i ka lima, nana aku la a o ka noho mai a ka wahine, o Kamalalawalu me kona nani mae ole, hu mai la ke aloha ia Halemano no ka noho ana ia Puna me ka wahine. Nolaila, kau aku la o Halemano i keia kau olioli, no Kamalalawalu, penei:

Alahula Puna i ke ahi a Laka,

E halaoa mai ana i kuu maka.

Ka ulu hala i kai o Kookoolau,

He ane lalau ko`u ia oe;

O keia mea o ka hilahila, hoi no ai.

Auwe kuu wahine – a!

Kuu wahine mai ke kai nui o Puna

Ke kapi ae la i na pali kahakai.

Kaha ke aloha hoolalau i Kaimu,

Mu ka waha heahea ole mai.

Kuu wahine o ka hale makamaka ole,

O ia hale kuleana ole a`u i alo ai,

I pukui aku ai au me ka la i Maliu – e!

E maliu i kuu leo uwalo!

Kuu wahine hoi – e – a.

A pau ke oli ana a Halemano, pehi aku la ia i ke kilu, a pa i ka pahu, alaila helu mai la ka helu ai, penei: “Auwe! Auwe! Akahi kua i lalo la.” Lalau hou o Halemano i ke kilu a paa i ka lima, nana aku la no i ka wahine a o ka noho mai, aohe like o ka maikai me ko na wahine e ae, he oioi wale no kela o ka nani a me ke kelekela, nolaila, nana aku la a kulu haloiloi iho ka waimaka. Hu mai la ke aloha o ka wahine, i ka hele i ka hala o Puna, a me ka heenalu i Kaimu, alaila, oli aku la:

Ke kua ia mai la e ke kai ka hala o **Puna**,

E halaoa ana me he kanaka la,

Lulumi iho la i ke kai o Hilo – e,

Hanuu ke kai i luna o Mokuola.

Ua ola ae nei loko i ko aloha –e,

He kokua ka inaina o ke kanaka;

Hele kuewa au i ke alanui e,

Pela, peia, pehea au e ke aloha?

Auwe kuu wahine –a!

Kuu hoa o ka ulu hapapa o **Kalapana**,

O ka la hiki anuanu ma **Kumukahi**.

Akahi ka mea aloha o ka wahine,

Ke hele nei a wela kuu manawa,

A huihui kuu piko i ke aloha,

He aie kuu kino na ia la –e.

Hoi mai kua, he a`u koolau keia.

Kuu wahine hoi e, hoi mai.

Hoi mai kua e hoopumehana,

Kamakamaka o ia aina makua ole.

A waiho o Kamalalawalu i ke oli ana, huli ae la ia a nana aku i ke kane ia Halemano, i nana aku ka hana, e nanahu mai ana o Kikekaala i ka aoaao o Halemano, kau hou aku la o Kamalalawalu i keia oli:

Hoolawehala ka nanahu a ke kupa,

Akaaka ka malihini he mea hewa ia,

Puni hoi i kua awa a ka wahine,

I wahine au i kane oe,

Kuu kane o ka ua kanikani lehua o Makaulele

Ke haki manua mai la i ka lae o Kumukahi;

Akahi la a ke aloha i hiki ai.

Ke olewa nei ka nuku wai o Ohele,

Ke kaoo ae la ia uka o Piihonua,

Kuu kane hoi o ka hale wai anu o Hilo e!

A pau keia oli ana a Kamalalawalu, lawe aku la na ilamuku o Kikekaala a ma kahi e hoonoho, alaila, oli hou Kamalalawalu, penei:

A pa ka makani he Koolauwahine,

E ike aku auanei oe ia Haili,

Haili kula lehua i wilia e ka manu;

Ke lawe la ke awa kau laau o **Puna**,

Ka oo kani leo lea i ka nahele,

E ano wale mai ana no i ke ahiahi.

Kuu hoa o ka hale wai anu o Hilo,

O ia hale koekoe a kaua i alo ai,

Auwe kuu kane aloha e!

A pau ke oli ana a Kamalalawalu, olelo aku o Kikekaala: “Aole au kane, no ka mea, he wahine haalele kane oe, a eia ka e kii hou mai ana; aole e hoi aku ke kane me oe.”

Ma`ane`i kakou e ike ai ma ka mokuna a`e ka ho`i o Halemano i O`ahu, alaila, i Kaua`i. Hahai `O Kamalalawalu iāia, alaila, noho a ho`okahuahale `oia ma O`ahu. Ho`ouna o Hua`a a me ke ali`i o Hilo i kekahi pū`ali e ki`i iāia. Mahope o ka luku `ia `ana o ko O`ahu mau kanaka, ho`iho`i `ia `oia i Hawai`i:

I aku o Huaa ke `lii o Puna ia Kulukulua: “E, o na kahuna a me ke kilo, ke kuhikuhi puuone, ke hai mai i ka pono o keia hele ana aku.” A hiki lakou i mua o na `lii, olelo mai na `lii: “O ka oukou ike ke olelo mai.” Olelo aku ke kilo o Kalapana: “E moe hou kakou i anei, i keia la a me ka po, apopo kakou holo.” Ae mai na `lii; moe lakou a ao ae, hai aku ke kilo, i kana olelo ike, penei: “I holo kakou i ka moana, a i uhi ka noe ma ka hikina, na kakou ka make, a ina i pamaloo

a pae kakou i uka, na O`ahu ka make. Eia ka lua: i halii ka ua koko i ka moana a hiki i ka aina, hee o Oahu ia kakou.”

A pau ka olelo ana a ke kilo, holo aku la lakou, a pae ma Makapuu, hoonoho ke kaula. Ma keia holo ana i ka moana, ua uhi ia e ka noe, a me ka ua koko, e like me ka maka ke kaula, ma ia kaula ana, ua hee honua o Oahu nei, a ua luku ia o Waiahole, a o Kamalalawalu hoi kai loa aku e ola ana, a hoi ae la ia me na `lii o Hawaii, o ia o Huua a me Kulukulua, a hoi aku la lakou i Hawaii [Fornander 1918 Vo. V:228-262].

Translation:

Wahiawa and Kukaniloko were the father and mother of Halemano. Kaukaalii was the mother of Kukaniloko, and the land of Halemano, which is next to Lihue in Waianae, is the place where Halemano was born. Through the married life of Wahiawa and Kukaniloko, his wife, six children were born to them, four males and two females. The names of the children were as follows: Maeaea, the first, was a male; Kaiaka, the second, was also a male; Anahulu, the third, was another male; Halemano, the youngest of the children, was another male; Pulee was a female; Laenihi was a female with supernatural powers.

Laenihi was the eldest, and Halemano, the youngest [of the family], and the hero of this story. He was nurtured in Kaau until he grew up, and became a very handsome man, perfect in form, without pimples or deformity, with straight back, and open countenance. While Halemano was living with his grandmother, Kaukaalii, at Kaau, in Waianae, he was subject to dreams.

Concerning Kamalalawalu: she was the daughter of Hanakaulua and **Haehae** of **Kapoho**. She was a very beautiful woman to behold, far superior to all the women of **Puna** and Hilo, a virgin, brought up under very strict kapu; no person was allowed to see her and she had no companion other than her own brother, **Kumukahi**. These two had eight hundred dogs for their companions.

At this time Huua was the king of **Puna**, and Kulukulua was the king of Hilo. Both of these kings were courting Kamalalawalu, giving her large quantities of properties from **Puna** and Hilo, with the idea that in time one of them would win her hand and take her to wife.

In Halemano's first dream, he dreamed that he met Kamalalawalu in Kaau. After that he met her in his dreams frequently, and this happened so often that he fell deeply in love with the object of his dreams. Because of this great love, Halemano refused to take food and meat, and he denied himself everything; his whole mind was centered on Kamalalawalu, both night and day. And because of this he became very ill and finally died.

Laenihi, who was the elder of Halemano, in the meantime was traveling from place to place in search of a site for Halemano her brother. In her search she went until near **Puna**, when she was recalled upon hearing of the death of Halemano which forced her to return to Kaau in Waianae, Oahu. Because of this she failed to meet Kamalalawalu. When Laenihi arrive at Kaau, through her power to restore the dead to life, Halemano was again brought back to life.

Shortly after Halemano was restored to life, Laenihi asked him: "What was the cause of your death?" Halemano replied: "It is because of a woman. This is the manner of her appearance [in my dreams]: she is very beautiful; her eyes and body are perfect; she has long, straight, black hair; is tall, dignified, and seems to be of very high rank like a chieftess." Laenihi again asked him: "What is the nature of her outward dress?" "Her dress seems to be scented with pele and mahuna of Kauai, and her pa-u is made of some very light material dyed red. She wears a hala wreath and a lehua wreath on her head and around her neck." Laenihi then said: "It is in **Puna** and Hilo that the lehua blossoms are found. It is in **Puna** that the ouholowai of **Laa** and the pukohukohu are found; therefore, your lover must be a woman of **Puna**; she is not of the west. If it is Kamalalawalu, the woman I heard so much of while in **Puna**, then she must be very beautiful indeed." Laenihi then again asked: "How do you meet her?" Halemano replied: "When I fall asleep we meet very soon after, and you could hear us talk if you should listen; even now you could hear us if I fall asleep." Laenihi then said: "Yes, you may go to sleep now. If you should meet your lover, ask her to give you her name and the name of the land in which she lives."

After Halemano had received these instructions he fell asleep and again met Kamalalawalu. In this dream Halemano asked Kamalalawalu: "What is the name of the land of your birth and what is your name?" "**Kapoho** in **Puna**, Hawaii, is the land of my birth; it is where the sun rises, and not in the west. My name is Kamalalawalu." Shortly after this Halemano awoke from his sleep, and he told Laenihi of his dream. When Laenihi heard this she said: "You must partake of some food and I will go and bring you your lover from Hawaii." Halemano then consented and took some food.

Before Laenihi set out for Hawaii to bring Kamalalawalu, she told of the signs of her going so as to make known to those behind of her arrival and coming home, whereby they could tell whether her mission was a success or not. The signs were as follows: "If it rains then I am at Molokai. If the lightning flashes, then I am at Maui. If it thunders, I am at Kohala. If you feel an earthquake, I am at Hamakua. If the red water flows, I am at **Puna**. If the signs show that I am at **Puna**, then you can be sure that I will be able to get your lover. You must consider these things I am telling you, else you will forget." Soon after this Laenihi went off in the form of a fish; and the fish is called Laenihi is named after her. This is the name of the fish to this day.

It was in the evening that Laenihi set out and when she was off the coast of Haleolono in Palaau, Molokai, it began to rain [in Oahu]. Those with whom she had left the instructions were surprised at the speed she was traveling. From this place she next passed off Hanakaieie at Kahikinui in Honuaula, Maui, and the lightning flashed. The people were again greatly amazed at her great speed. From Maui she next passed off Umiwai in Kohala, Hawaii, when the people heard the roar of the thunder; then when she was off the coast of Pololikamanu outside of Mahiki, Hamakua, the people felt an earthquake. Next she passed Hilo and then off the coast of Panaewa, then off Kukulu, directly outside of **Puna**, when the red water flowed. At sight of this the last sign the people knew that Laenihi had reached Kamalalawalu.

When Laenihi arrived at **Kapoho** in **Puna**, Hawaii, she began to devise a way by which she would be able to meet Kamalalawalu, as she was then within the confines of her kapu place. At last Laenihi hit upon a plan. She, through her power, first cause the wind from the sea to blow, called the unuloa, which caused the sea to be aroused from its calm repose and the surf off **Kaimu** began to roll in. It is here that the people at all times go in surf riding. Early that morning the surf began to roll in. When the people rose from their sleep and saw the surf, they all began to shout and yell. While the people were shouting, **Kumukahi**, the brother of Kamalalawalu heard it and he came out to see the cause, and saw that it was the surf; so he returned and told Kamalalawalu of the matter. On hearing this she rose and prepared to go out [surfing riding].

A few words in relation to **Kumukahi** the brother of Kamalalawalu. **Kumukahi** was a great favorite with his sister, not a single request would be refused by his sister that she could comply with, from the greatest to the smallest.

When Kamalalawalu saw the surf rolling in at **Kaimu** she started out for the beach. Upon arriving at the place she stood on the sand and watched for a chance to swim out. She allowed the first roller, known as the kakala, to come in until it reached the shore; then the second, known as the pakaiea; the third, the opuu; as soon as this roller reached the shore, she plunged in and swam out to the place where the rollers began to curve up. When she arrived at this place she took the first roller that came along and rode in on it. This she repeated three times, when the surf began to grow smaller till after a short while there was none to be seen. She then waited with the hope of again seeing the surf grow larger; but after waiting until she was almost stiff with the cold not a single surf could be seen; so she concluded to return to the shore.

At about this time, Laenihi caused the surf to rise again and it began to roll in. When Kamalalawalu saw this she again returned and took the first surf and rode in, but before she reached the shore it ceased and the surf again disappeared. Just as she reached the shallow water she saw a fish and **Kumukahi** at the same time called out to her: "Kamalalawalu, take up my favorite, the fish." This fish was Laenihi herself. Kamalalawalu could not refuse the request of her brother; so she

took up the fish and returned home. After arriving at the house the fish was put into a calabash of salt water and it became a plaything for **Kumukahi**.

That night after everybody had fallen asleep, Laenihi transformed herself from a fish to a rooster; it then flew onto the roosting place outside and began to crow. The crowing was kept up until the dawn began to break. The rooster then proceeded down to the seashore where it transformed itself into a woman. Laenihi then returned to the house where Kamalalawalu was living. When she arrived at the house Kamalalawalu was living. When she arrived at the house Kamalalawalu asked her: "Where are you from?" "I am from near here." "There is no woman like you near here, and even if you belonged to any place near, you would not come, because they all know that people are forbidden from coming here on pain of death." Laenihi then proceeded to speak of her errand: "Have you ever met a man in your dream?" "No," said Kamalalawalu. Laenihi again asked: "Have you no wreath that you have worn until withered?" "I have a wreath, but I am not going to give it to you, for you may cause my death with it." Laenihi replied: "All right, you give it to me and in case you should become ill, come for me and I will come and cure you. I am living at **Kaimu**; my name is Nawahinemakaakai." Laenihi took the wreath and then asked for the pa-u of Kamalalawalu which was also given up.

After Laenihi had received these things she returned from Hawaii to Waialua and from there on to where Halemano was living. Laenihi then showed him the wreath and pa-u. Upon seeing these things Halemano hastily prepared himself to go to Hawaii; but Laenihi rebuked him, saying: "You will not be able to get her in that way. Here is the way to get her: You must first make some playthings for the favorite brother of Kamalalawalu, **Kumukahi** by name; because I have seen that whatever things he desires his sister would always do; she will deny nothing that her brother requests of her."

Laenihi then instructed the people of Waialua to Waianae that wooden idols be hewed out and that they be painted red and black. Orders were also issued that wooden chickens be made to ride on the surf, also koieie floaters, and kites to fly above; also that a red canoe be prepared and red men be had to paddle the canoe. The men should be provided with red paddles and the canoe must be rigged with red cords, and they set out for **Puna**, Hawaii. Upon their arrival off of **Makuu** and **Popoki**, two small pieces of land next to **Puna**, the kite was put up. When the people on the shore saw this flying object they all shouted with joy.

While the people were shouting **Kumukahi**, the brother of Kamalalawalu, heard it and he came out to see the cause of the shouting. When he saw the kite he ran to the beach and called out to the men in the canoe: "Let me have the thing that flies." Laenihi said to Halemano: "Let the boy have the kite," and it was then given to **Kumukahi**. The small canoe was then let down and as it floated through the surf the people ashore again shouted with joy. **Kumukahi** turned back and called out to those in the canoe, saying: "Let me have that small canoe." Laenihi

gave her consent. He then requested all the things exhibited by the people until the idols were the only things left. Laenihi then ordered that the idols be made to stand up in all the canoes. When Kumukahi saw the idols he asked that they all be given to him.

At this Laenihi and Halemano said: "Are you a favorite with your sister?" "Yes," answered **Kumukahi**, "She will do anything I ask of her." "Call for her then." **Kumukahi** then called out: "Kamalalawalu, come here. I cannot get these playthings unless you come." Upon the arrival of Kamalalawalu another request was made of **Kumukahi**: "Are you a favorite with your sister, and would she mind if you asked her to turn her back this way?" "Yes." Kamalalawalu then turned her back toward the canoes. The people then looked at her and saw that she was neither humped back nor deformed in any way. After inspecting her they said to the brother: "Are you a favorite with your sister, and would she obey you if you request of her to turn her face this way?" "Yes," Kamalalawalu then faced toward the canoes.

Soon after this Kamalalawalu went aboard one of the canoes; whereupon Halemano gave orders to the paddlers that they start on their return, and the two were thus carried off to Oahu. The people of Puna and Hilo pursued them but could not come near them, as by the power of Halemano and Laenihi they were soon left far to the rear.

In this flight to Oahu on canoe, the one in which was **Kumukahi**, landed at Hauula, Koolauloa. There was at this place an image standing, Malaekahana by name: upon seeing this image, **Kumukahi** took such a fancy to it that he remained there. Halemano and the others, together with Kamalalawalu, continued on their way and landed at Ukoa at Waialua. As soon as the canoe in which Kamalalawalu was a passenger landed, a crier was sent out to make a circuit of Waialua and Waianae with orders to the people to come and give presents to Kamalalawalu.

About three days after the hookupu, Kamalalawalu for the first time missed **Kumukahi**, so she asked of Halemano and Laenihi: "Where is **Kumukahi**?" "He is at Hauula where he is enraptured by an image that is there." Kamalalawalu then said: "Go and bring him here." When **Kumukahi** arrived, Kamalalawalu said to him: "You had better return to Hawaii with the presents to our parents and to our people, else some of them will feel troubled over us." **Kumukahi** in obedience to his sister returned to Hawaii.

At about this time in this legend Aikanaka, King of O`ahu, hearing of Kamalalawalu's beauty, sends for her. Refusing to comply with the mandate, Aikanaka sends an army against Halemano. With his wife and grandmother, they flee to Moloka`i, thence to Kaupō, Kohala, and Hilo. Kamalalawalu is taken by Huaa. Halemano returns to Kohala. His wife follows. Later Kamalalawalu is enticed away. Halemano dies. He is brought to live again by Laenihi, his

supernatural sister. Halemano seeks to win his wife back. Engaging in a kilu contest and is victorious Kamalalawalu is supplanted by Kikekaala:

As soon as his wager was settled Kikekaala began by throwing the kilu at the mark; but it missed and Halemano picked it up. As he looked and saw Kamalalawalu sitting there in all her grace, his mind went back to the days when he and his wife lived in **Puna**; so he chanted a few lines to Kamalalawalu as follows:

A kapu is placed over the road of **Puna** by the fire of Laka,

For I see its reflection in my eyes.

It is like the breadfruit in the lowlands of Kookoolau;

I am almost tempted to pick it;

Being repelled by shame, I touch it not.

Alas, my love!

My love from the big sea of **Puna**

Whose waves beat on the sea cliffs.

You forget your lover while went astray in **Kaimu**,

Your mouth was closed, refusing to call.

My love of the home where we were friendless,

That home to which we had no claim, though I made no complaint,

Where I drew warmth from the sun at Maliu.

Take heed to my supplications

My own, my love!

At the close of the chant of Halemano, he threw the kilu and it hit the mark, where at the game keeper said: "Alas, alas, we count one down!" Halemano again picked up the kilu and held it in his hand; then looked at his wife, whom he saw was not like the other women, being far superior in looks, therefore his eyes were filled with tears, and a great love for his wife came over him as he remembered their walks amidst the hala trees of Puna, and their surf riding at Kaimu; he therefore chanted the following lines:

The sea is cutting down the hala trees of Puna,  
They stand up like people,  
Like a multitude in the lowlands of Hilo.  
The sea is rising by steps to flood Mokuola.  
Life is once more alive within me for love of you,  
For anger is a helper to man.  
As I roamed over the highways friendless,  
That way and this way, what of me my love?  
Alas, my own dear love!  
My companion of the low hanging breadfruit of Kalapana,  
Of the cold sun that rises at Kumukahi.  
The love of a wife is indeed above all else,  
For my temples are burning,  
And my middle is cold because of your love,  
And my body is under bonds to her.  
Come back to me, for this is a Koolau sphere,  
My love, come back.

When Kamalalawalu cease chanting, she turned and looked at Halemano. When she did, she saw Kikekaala biting Halemano on the side, so she chanted the following lines:

The bite of a native is a sign of treachery;  
The stranger laughs, for it is a sign of evil;  
For you are then surrounded by fine rain from the goddess.  
I must be your wife and you my husband,  
My husband of the Kanikani rain of the lehua trees of Makaulele.

It is being broken in large pieces at Kumukahi Point,  
 For love has come for the first time this day.  
 Like the mouth of the Ohele stream, it is changeable,  
 For the clouds are gathering in the uplands of Piihonua,  
 O my love of the cold, watery home of Hilo!

At the close of the chant, Kamalalawalu was removed by force by the officers of Kikekaala to some other place. As she was being led away she chanted these lines:

The wind is blowing, it is the Koolauwahine.  
 You will surely see Haili,  
 Haili the plain of lehua entwined by the birds;  
 They are carrying away the awa of Puna that grows on trees,  
 The sweet notes of the oo of the forest,  
 Whose sweet notes can be heard at eventide.  
 My companion of the cold, water home of Hilo,  
 That cold wet home where you and I lived,  
 O my own beloved husband!

At the end of this chant Kamalalawalu, Kikekaala said to her: “You have no husband because you are a woman who has deserted her husband. I see that you have come back to him, but he will not go back to you.”

Here we shall see in the next chapter Halemano returns to O`ahu, thence to Hawai`i. Kamalalawalu follows him, thence she leaves and settles on O`ahu. Hua`a and the King of Hilo send an army to secure her. After a slaughter of O`ahu forces she is taken to Hawai`i:

On the next day Huaa, the king of **Puna**, said to Kulukulua: “Let us consult the priests, the astrologers and diviners as to our proper course and also as to the outcome of this expedition.” When the priest, astrologers and diviners came in the presence of the two kings, they were asked: “Let us hear what you have to say as to our future course?” The astrologer from **Kalapana** then spoke out: “Let us again spend this day and night in this place and tomorrow we may continue on

our journey.” The two kings consented to this and another night was spent at the place. On the next day the astrologer said: “If after we set out a thick fog comes from the east, we will win the day; but if hot, warm weather is encountered all the way until we land, Oahu will be victorious. The second sign is this: if we encounter a heavy rain and the rainbow is seen and these things keep up until we reach land, we will route Oahu.”

At the end of the astrologer's predictions, the canoes once more set sail and landed at Makapuu, where the armies were placed in line of battle. In coming across the channel they encountered a thick fog and rain, the signs of victory predicted by the astrologer. After the armies were placed in line they advanced overland, going by way of Kaneohe. At Kaneohe proper they met the enemy and the fighting began. Early in the battle Oahu was routed and a great slaughter took place at Waiahole. After the battle Kamalalawalu was found, still alive, and she was taken by the kings of Hawaii, Huala and Kulukulua, to Hawaii [Fornander 1918 Vol. V: 228-262].

### 3.4.6 Pele and Kamapua'a

This Pele and Kamapua'a legend was written in serial form in the Hawaiian newspaper *Ka Leo O Ka Lāhui* from June 22, 1891 to July 23, 1891, and portions were recently compiled and translated by Lilikalā K. Kame'eiehiwa (1996).

Kamapua'a traveled to the Puna District in Hawai'i to seduce the Hawaiian goddess Pele, but she spurned him and tried to chase him away with her lava flows.

Then Kamapua'a began to run in this pig form. He sprang forward through the great lehua forest, from the mountains to the sea. . . . Pele began to eat. All of these trees were destroyed in the mystical eating by Pele. The upper heavens became very dark with smoke. No one could be seen. Kamapua'a could only cling to a clump of 'ama'uma'u fern. The fires burned until they found the bristles that are the curly pig bristles. The stench of burning pig bristles went out and surrounded the island.

Kamapua'a escaped to another area of Puna, where the people were enjoying riding down a *hōlua* slide, but Pele soon followed:

Pele saw her opponent run into the distant forest, so she sent her fire on before her with great force. It chased after this little pig until he was very close to the water's edge. There was no hope for his life.

This one [Kamapua'a] leaped into the sea, changing his body into the humuhumuāpua'a (a variety of triggerfish). Pele's people, the Hi'iaka sisters, stood upon the plain. Pele's people had indeed been thwarted [Kame'eiehiwa 1996: 95, 103].

### 3.4.7 Law of Māmalahoe

During Kamehameha's conquest to gain control over Hawai'i he battled against many *ali'i* on Hawai'i Island. During one of his battles with Keawema'uhili and Keoua the infamous event of the "Law of Māmalahoe" took place in Puna. In "The Ruling Chiefs," Samuel M. Kamakau recalls how this law came about:

Since Keawe-ma`u-hili and Keoua had joined forces against Kamehameha there was no place for him in Hilo; he camped his men at Laupahoehoe in Hilo Paliku (Hilo by the cliff). Afterwards Kamehameha and Ka-haku`i paddled to **Papa`i** and on to **Kea`au** in **Puna** where some men and women were fishing, and a little child sat on the back of one of the men. Seeing them about to go away, Kamehameha leaped from his canoe intending to catch and kill the men, but they all escaped with the women except two men who stayed to protect the man with the child. During the struggle Kamehameha caught his foot in a crevice of the rock and was stuck fast; and the fishermen beat him over the head with a paddle. Had it not been that one of the men was hampered with the child and their ignorance that this was Kamehameha with whom they were struggling; Kamehameha would have been killed that day. This quarrel was named Ka-lele-iki, and from the striking of Kamehameha's head with a paddle came the law of Mamala-hoe (Broken paddle) for Kamehameha [Kamakau 1961:125-126].

At the time when he became ruling chief over all Hawaii, there were brought to him those men who had struck him with a paddle, together with their wives and children. All the chiefs said, "Let them be stoned to death!" Kamehameha replied, "The law of the broken paddle is declared: no chief or officer of execution is to take their lives. It is I who should by right be stoned." What a wonderful thing for a chief thus to meet out justice toward those who had injured him! [Kamakau 1992:181]

### 3.4.8 Ka 'alā pa'a o Kaueleau

There are no legends that mention Kauaea or Kaueleau, but there is one saying that refers to Kaueleau. Mary Pukui recorded this poetical saying:

Ka 'alā pa'a o **Kaueleua**. *The Hard rock of Kaueleau*.

A dollar, or a hard, unyielding person. There is a rock at **Kaueleau, Puna, Hawaii**, called the 'alā pa'a [Pukui 1983:140].

The word *pa'a* has many meanings, but in this instance, it probably means solid, hard or stubborn (Pukui and Elbert 1986:296). 'Alā is the Hawaiian term for a dense water worn volcanic stone used to make adzes, poi pounders, and sling stones (Pukui and Elbert 1986:16). It is probably this last use, for sling stones, that led to the reference to "the hot stones of **Kaueleau**" in the recounting of one of the many battles conducted by Kamehameha during his conquest of Hawai'i. During a visit by Kamehameha to the *ali'i* of Hāmākua and Kohala at Hakalau, a Maui chief named Kahāhāwai learned of his whereabouts and decided to try to ambush his forces, but Kamehameha was forewarned of the coming attack. He prepared for this attack:

...and the army called Hunalele was readied. These were people very accomplished with sling stones, led by Kalawa the famous warrior of Hālawā at North Kohala. They were quickly sent to the stream, where it emerged at the sea, to gather hard stones to let fly when they met the enemy. At this time also the Huelokū were readied. They were very skillful at hurling spears and at seizing them and they were led by Puniawa, a famous warrior of Makahanaloa, close to Hakalau. He was a daring man accomplished in warfare. Kamehameha ordered the warriors of this division to follow quickly after the Hunalele after they had thrown their hard basaltic stones which made a cracking sound when they struck.

When Kamehameha's Hunalele warriors had prepared their sling stones they proceeded to the place where they would meet the Maui warriors led by that pā'ele kū [black, referring to tattooing] warrior of the Bays of Pi'ilani. The Maui warriors were sure that Kamehameha was not aware of their secret attack and they came down thinking that Kamehameha was taking his ease. However they met with something undreamed of: **the hot stones of Kaueleau** (unyielding forces).

Compare this saying with that discussed by Pukui (1983:141, #1278): "There is a rock at **Kaueleau, Puna**, Hawai'i, called the 'alapa'a." This saying can refer to an unyielding person (Desha 2000:68).

### 3.4.9 Kumukahi from Kahiki

The characters in this legend are named after famous place names in the district of Puna. Kumukahi, the eastern most cape of Hawai'i Island, is named for a migratory hero from Kahiki who stopped here and who is represented by a red stone. Two of his wives, also in the form of stones, manipulate the seasons (Pukui et al. 1974: 124):

**Kumukahi** and his brother Palamoa came from Kahiki to Hawai'i long ago in the time when the gods still walked on earth. Some say he was a relative of Pele (Beckwith 1979:119). Other say he came with his older brother, the great chief Moikeha (Fornander 1918 4:114). With their sister Kahikinaakala "the sunrise", they took the form of mortals and settled in Puna at the most easterly point of land in the Hawaiian Islands, Cape Kumukahi (Komori 1987:17).

**Kumukahi** had four wives: Kanono, Pa'upo'ulu, **Ha'eha'e**, and Kanaka'ulua. (Some say **Ha'eha'e** was **Kumukahi's** youngest brother[Fornander 1918 4:114]) The wives manipulated the seasons by pushing the sun back and forth. They were later seen as four large stones spaced evenly apart at Cape **Kumukahi**, and were used to calculate the solstices of the sun. The literal translation of "**Kumukahi**" is "first beginning" (Pukui et al. 1974:124).

Sun worshipers brought their sick to be healed at Cape **Kumukahi**. Along with the lake at **Kapoho** Crater, **Kawaiapele**. It was one of the stops on the "journey of health" frequently made by those who had recovered from illness (Westervelt 1916:28-29).

At some point Pele destroyed **Kumukahi** and his family as mortal beings. However, they were powerful 'aumakua. **Kumukahi** could take the form of a man or a kolea bird (the migrant plover). Palamoa could take the form of a rooster (Komori 1987:17).

#### 3.4.10 Legend of Kumukahi, a Chief of Puna

A chief of Puna who delights Pele and later ridicules her is covered by lava and formed into Cape Kumukahi:

Kumukahi, the chief of Puna was a handsome man who loved the ancient games. Pele found great delight in this man and his love for the ancient games. When Pele came before him as an old woman expecting to join the games he began to ridicule her. Pele's anger raged and covered him with lava turning him into the cape called Kumukahi (Westervelt 1916:27-28).

#### 3.4.11 The Legend of Kahawali

This legends takes place in the lands of Kapoho, Puna on a hill famed for the racing of the hōlua or sleds:

The chief of Puna and his favorite companion, Ahua race their holua down the side of a hill in Kapoho. At the bottom of the race course, Kahawali sticks his broad spear into the ground, and then climbs the hill called Kahelokamahina.

Back at the top of the slide, Pele, in the form of a woman, challenges Kahawali to a race and loses. She then asked him for his sled. Not realizing the deity in Pele, Kahawali abruptly refuses and sleds off down the hill. Enraged, Pele stamps her foot, causing an earthquake and chases Kahawali with streams of lava

At the bottom of the hill, Kahawali looks back and sees Pele. He grabs his spear and with Ahua flees for his life. The spectators and entertainers at the race are overwhelmed by Pele's lava as she pursues Kahawali. In his flight, he pauses at Pu'ukea, where he throws off his ki leaf cloak. He then bids farewell to his favorite pig Alo'ipua'a, to his mother at Kūki'i, to his wife Kanakawahine, to his children Poupoulu and Kaohe, and finally, after crossing a deep chasm, to his sister Koai in Kula. Kumukahi and Ahua escape in a canoe, despite the large rocks Pele throws at them from the shore [Westervelt 1916:40-43].

#### 3.4.12 The Legend of Papalauahi

Pele rages again upon another chief of Puna, Papalauahi. Defeated in a sled race by the chief, Pele transforms him, neighboring chiefs, and spectators into pillars of stone:

The chief of Puna, Papalauahi, was also challenged to a holua race by Pele, appearing this time in the form of a beautiful woman. He won and Pele stamped on the ground, letting loose floods of lava. Paplauahi and many of the neighboring

chiefs attending the games were destroyed as they fled, and the spectators on the plains below were turned into pillars of lava [Westervelt in Komori 1987: 18].

### 3.4.13 The Legend of Kaliikuku

This legend gives a glimpse into the abundance of natural beauty that once covered Puna – a land once laden with beautiful *‘ōhi‘a* and *hala* trees, a land where everything grew. Chief Kaliikuku, so fond of his homelands, boasts to a prophet of Pele on the beauty of his lands. Later he is ridiculed by the prophet that Pele has devoured his lands and all on it:

This legend tells of a chief of Puna, Keliikuku, who is very proud of his homeland. While on O`ahu he boasts to a prophet of Pele, Kaneakalau, “My country is charming. Abundance is found there. Rich, sandy plains are there, where everything grows wonderfully” (Westervelt 1916:31). The prophet ridicules him, saying that Pele has desolated Puna. “The trees have descended from the mountains to the sea. The *ohi`a* and *puhala* are on the shore. The houses of your people are burned. Your land is unproductive. You have no more people.” (Westervelt 1916:31-32). Keliikuku heads home. He comes around the eastern side of Hawai`i, lands his canoe, and climbs the highest point for a view of Puna. He sees his fertile plains covered with black lava still pouring out clouds of smoke. The remnant of forests is still burning. Pele had heard Keliikuku boasting and had demonstrated that the land around her pit of fire is not secure against her will. Keliikuku hangs himself [Westervelt in Komori 1987:19].

### 3.4.14 The Legend of Kealohalani and Honolulu

Pele’s anger is shown again in this legend of a Puna chief, Kealohalani. Kealohalani courts one of Pele’s sisters. In chase from Pele, Kealohalani dives into the ocean losing his helmet to a sand hill. After which Pele turns him and his helmet into stone:

A Puna chief named Kealohalani angers Pele by courting one of her sisters. Pele chases him and, as he dives into the ocean, his helmet falls off onto a sand hill. Pele changes man and helmet into stone. Kealohalani can be seen below the sand hill as the red stone formation of a man lying in the water.

The sand hill became known as Honolulu, because the chief Honolulu, one of Kealohalani’s retainers, composed the chant of this story. Later he settled in O`ahu.

The helmet stone, also called the **Honolulu** stone or the bell stone for its shape, was moved first to **Kalapana** and then to **Olaa** [Mrs. Anne Hall in Emory, also cited in Komori 1987:19].

## 3.5 Traditional and Historical Accounts

### 3.5.1 Pre-Contact History

In the early history of Hawai'i there were many chiefs, each ruling one or several *ahupua'a*, entire districts, or several districts. Emory provides an explanation as to why there is a comparative lack of traditional political history surrounding Puna:

We find that Puna, as a political unit, played an insignificant part in shaping the course of the history of Hawai'i island. Unlike the other districts of Hawai'i, no great family arose upon whose support one or another of the chiefs seeking power had to depend for his success. Puna lands were desirable, and were eagerly sought, but their control did not rest upon the conquering of Puna itself, but rather upon control of the adjacent districts, Ka'u and Hilo. An attempt to follow in detail the course of Puna's history is bound up with the fortunes of the ruling families on either side of her [Emory et al. 1959:15].

According to Barrère (1959), Puna remained under the control of chiefs from adjacent districts for a large part of the pre-historic period. According to Fornander (1996), Legendary accounts tell of how Puna came under the control of a Ka'u chief by the name of "Imaikalani who was blind. The battles between 'Umi and Imaikalani are legendary and lengthy, however in the end it was 'Umi who won control of both Ka'u and Puna [Fornander 1996:34].

In the late 1500s, the government was united under the rule of Līloa, who became the *ali'i nui* (high chief) over the entire island. He was a descendant of Pili, probably a high chief in the A.D. 1200-1300s period (Cordy 2000:160), who was said to be a voyager from the ancestral land of Kahiki. Līloa proclaimed an elder son, Hākau to be his heir, but gave unto a younger son, 'Umi (Umi-a-Līloa), the care of the god Kūkā'ilimoku and his *heiau*. After Līloa's death, his younger son, 'Umi rebelled against the rightful heir, his older brother Hākau. The district chiefs refused to acknowledge his island-wide rights, and each chief went back to rule their respective district (or districts). 'Umi fought endless battles and finally triumphed over all of these chiefs, including a chief of Puna named Hua'a. He then united the island once again under one *ali'i nui*.

Hua-a was the chief of Puna, but Puna was seized by 'Umi and his warrior adopted sons, Pō'i-mai-wa'a, 'Oma'o-kamau, and Ko'i. . . . Hua-a was killed by Pō'i-mai-wa'a on the battlefield of Kuolo in Kea'au, and Puna became 'Umi-a-Līloa's [Kamakau 1961:18].

After his death (circa A.D. 1620), the chiefs reestablished their authority over the separate districts of Hawai'i. Puna does not seem to have had a district chief of its own; instead, it was at various times under the domination of the Hilo (district to the north) chiefs, descendants of 'Umi and his wife Pi'ikea and the Kona (district to the south) chiefs, descendants of 'Umi and his wife Kapukini.

In 1760, the chief Kalani'ōpu'u defeated the last of his enemies, and became the *ali'i nui* of Hawai'i. After these victories, Kalani'ōpu'u sent for his son, Kiwala'o, and his favored nephew,

Kamehameha. In an act reminiscent of Līloa and his two sons (Hakau and 'Umi), Kalani'ōpu'u made the son his heir, with the right to perform the ritual to dedicate a *heiau*, but gave his god, Kūkā'ilimoku, into the care of Kamehameha.

One warrior who had originally fought on Kalani'ōpu'u's side was a chief of Puna: . . . 'o 'Īmakakoloa ka pū 'awa hiwa hīnalo o Puna; . . . [Kamakau 1996:22].

'Īmakakoloa, the dark 'awa among the hala blossoms of Puna; . . . [translation in Kamakau 1961:86].

This warrior rebelled against the rule of Kalani'ōpu'u.

'O 'Īmakakoloa ke ali'i o Puna, ua kipi a'ela 'o ia; a 'o nā waiwai o ke aupuni, 'o ka pua'a, 'o ka 'eleuli, 'o ka mamaki, 'o ka 'ahu hīnalo me ka 'ahu 'ao, 'o ka hulu 'ō'ō me ka mamō o Puna, ua hao a'ela 'o 'Īmakakolao, ka pū 'awa hiwa hīnalo o Puna [Kamakau 1996:58].

It was I-maka-koloa, a chief of Puna, who rebelled, I-maka-koloa the choice young 'awa [favorite son] of Puna. He seized the valuable products of this district, which consisted of hogs, gray tapa cloth ('*eleuli*), tapas made of *mamaki* bark, fine mats made of young pandanus blossoms ('*ahu hinalo*), mats made of young pandanus leaves ('*ahuao*), and feathers of the '*o'o* and *mamo* birds of Puna [translation in Kamakau 1961:106].

Kalani'ōpu'u moved with his court to Hilo and sent a war party into Puna to find 'Īmakakoloa, but he escaped and hid with his people for almost a year. The court then moved to Ka'ū and under the direction of a *kahu* (guardian or advisor), men began to burn the villages of Puna, until they found 'Īmakakoloa, hidden on an islet off the Puna coast. 'Īmakakoloa was taken to Ka'ū, where his body was to be presented as a sacrifice at the dedication of Hālauwilua Heiau near South Point by Kiwala'o, son of Kalani'ōpu'u.

It was here that Kamehameha, like 'Umi before him, made his bid for ascendancy over his cousin, the rightful heir, by seizing the body of 'Īmakakoloa during the dedication ceremony and offering it to the gods himself, thus completing the dedication of the *heiau*, a duty that Kalani'ōpu'u had reserved for his son. Kiwala'o was later killed during a battle with Kamehameha's forces, who went on to conquer all of Hawai'i by 1791, and unified all of the Hawaiian Islands under his rule by 1810 (Malo 1951:258; Fornander 1996:72-78; Cordy 2000:191-208 Barrere 1971:7).

## 3.6 Early Historic Period

### 3.6.1 Captain Cook's Expedition, 1779

The first foreigners to see the Puna coast were crewmembers of Captain Cook's third voyage to the Pacific in 1779. They were the first to note the differences in population and cultivation between the southwestern section of Puna and the more easterly area.

The East part of Opoona [Puna] is flat, covered with Coco nut trees, and the land far back is of a Moderate height. As well as we could judge this is a very fine part of the Island, perhaps the best.

On the SW extremity of Opoona the hills rise abruptly from the Sea side, leaving but a narrow border, and although the sides of the hills have a fine verdure, yet they do not seem Cultivated and when we sailed pretty near and along this end of Opoona, we did not observe that it was equally populous with the eastern parts [Beaglehole 1967:606].

### 3.6.2 Ellis Missionary Tour, 1823

In 1823, British missionary William Ellis and members of the American Board of Commissioners for Foreign Missions (ABCFM) -- Asa Thurston and Artemas Bishop -- toured the island of Hawai'i. After touring Ka'ū District, they made a side trip inland to the Kilauea crater, then returned back to shore near the Ka'ū/Puna border. Mr. Ellis kept a detailed journal of his travels, and was the second foreigner to note the differences in population and cultivation of the various areas of Puna.

T. Stell Newman (1971) reviewed the Journal of William Ellis for his 1823 tour of Hawai'i Island to reconstruct the environmental characteristics of aboriginal agricultural lands on different parts of the island. Based on Ellis' observations of these early observers, there were two main types of dry land farming in Hawai'i, either in field systems or in scattered fields. As seen on Newman's map (Figure 10), Ellis recorded only scattered fields on the northern coast of Puna, as opposed to the more organized field systems of the southern Puna coast.

Within the western beginning of this field system, around Kaimū, Ellis approved of the "extent of cultivation in the neighborhood [sic], together with the decent and orderly appearance of the people," and contemplated making Kaimū the location of a new mission. The next day, the party traveled on to Keouohana to preach, then to the villages of Kehena and Kama'ili, where they rested. They next traveled to 'Opihikao, not making any mention of the *ahupua'a* of Kaueleau, suggesting that there was not a large enough population in that area to stop for a sermon. They gave a sermon at Opihikao, which Ellis describes as a "populous village, situated within a short distance of the sea" (Ellis 1963:200). They continued east along the coastal trail:

We then proceeded about two miles, principally through cultivated grounds, to Kauaea. About 300 people, excited by curiosity, soon collected around us, to whom Mr. Thurston preached [Ellis 1963:201].

Their stay in the *ahupua'a* of Kauaea was brief, so there is little description of the area. The group next traveled to the *ahupua'a* of Malama and then to Keahialaka, the residence of Kinao, the governor of the Puna District. The party split up at Keahialaka, with Ellis remaining with the sick chief of Puna, Kinao, and the rest of the party continuing north to the village of Pu'ala'a.

When they reached Pualaa, the above-mentioned village, they were kindly welcomed by the head man, who soon had the people of the place collected at their request, and to them Mr. Thurston proclaimed the news of salvation through

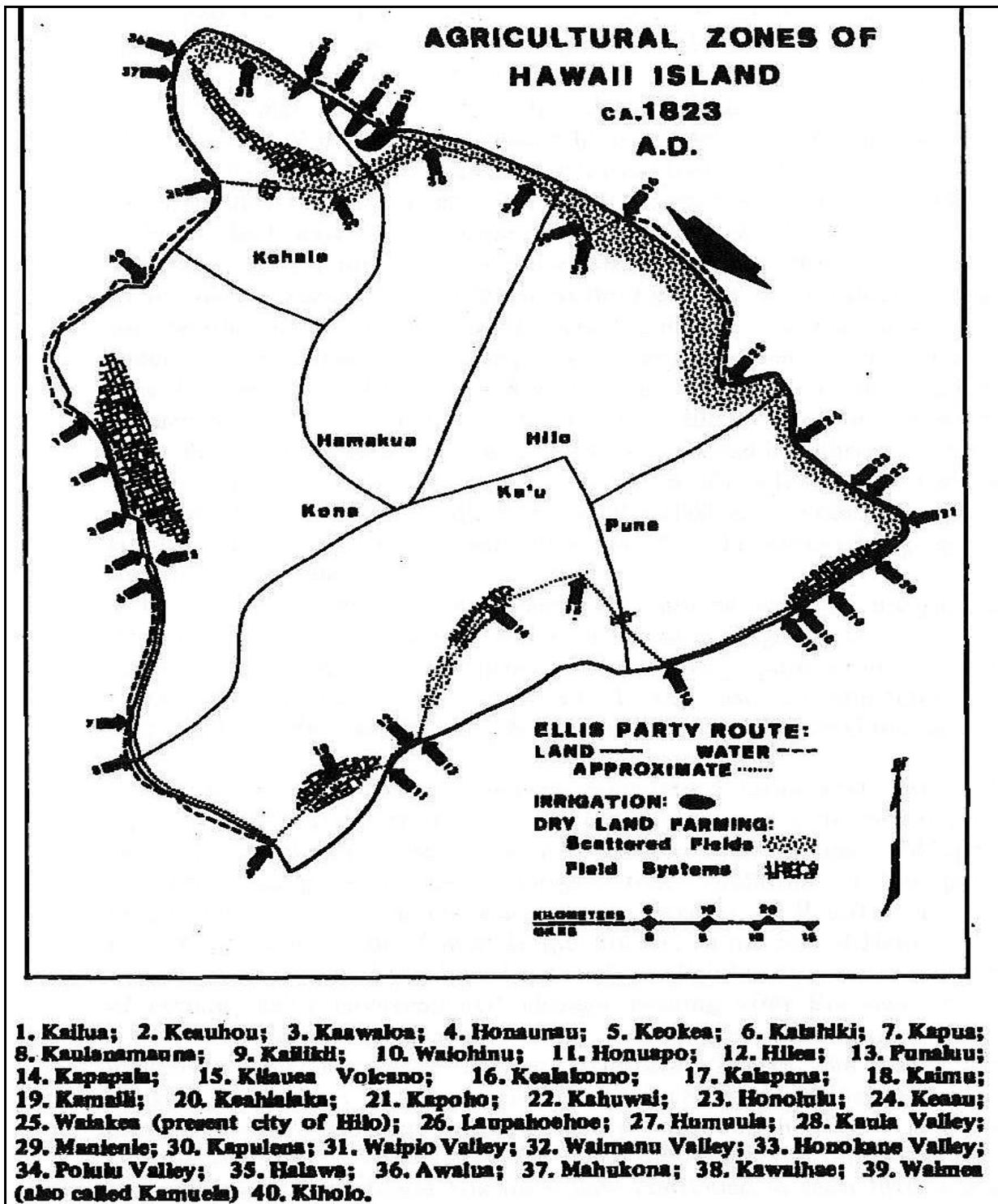


Figure 10. Portion of map of Hawai'i showing Newman's (1971:337) reconstruction of the agricultural zones of the island in 1823, based on observations in the journals of William Ellis

Jesus Christ. The chief furnished the travelers with a hospitable supper and comfortable lodgings...

About half-past eleven we took leave of them, and directed our way across the eastern point. A most beautiful and romantic landscape presented itself on our left, as we traveled out of Pualaa. The lava covered with a tolerably thick layer of soil, and the verdant plain, extending several miles toward the foot of the mountains, was agreeable diversified by groups of picturesque hills, originally craters, but now clothed with grass, and ornamented with clumps of trees [Ellis 1963:205].

Barrere (1971:10) believes there may have been less than 100 people in the crowd that came to hear the missionaries at Pu'ala'a, since Ellis always gave an estimate of the audience when it was greater than 100 people. The chief of Puna, Kinao, visited by Ellis, may be Kinau, a son of Kamehameha, who was at one time considered his principal heir. Kamehameha instead selected a younger son, Liholiho, to be next *ali'i nui* of the islands ('I'i 1959:33, 37).

The missionary groups traveled to Kapoho and then past Kula, sometimes traveling "on the top of a wall four feet high and about three feet wide, formed of fragments of lava that had been collected from the surface of the enclosures which these walls surrounded" (Ellis 1963:211). They reached Kahuwai in the afternoon where they met with an assembled group of about 150 people, then traveling up the coast to Honolulu Landing to spend the night and continuing to Waiakahiula in the morning. Bishop left the group to continue the tour traveling along the coast to Kea'au, and Ellis and Thurston followed the next day:

Being somewhat recovered by noon, I was able to proceed with Mr. Thurston. The country was populous, but the houses stood singly, or in small clusters, generally on the plantations, which were scattered over the whole country. Grass and herbage were abundant, vegetation in many places luxuriant, and the soil, though shallow, was light and fertile.

Soon after five p.m. we reached Kaau [Kea'au], the last village in the division of Puna. It was extensive and populous, abounding with well-cultivated plantations of taro. Sweet potatoes, and sugar-cane; and probably owes its fertility to a fine rapid stream of water, which, descending from the mountains, runs through it into the sea. . . . [Ellis 1963:212].

### 3.6.3 Titus Coan and the Hilo Mission Station

Later in 1823, a mission station opened in Hilo, which was responsible for the districts of Hilo, Puna, and part of Ka'u. In 1833, two churches were dedicated, one in Hilo, and one in Kuoloa, on the eastern boundary in Puna [Hilo Station Report, June 1833]. The missionary Titus Coan became head of the Hilo Station in 1835, and took his first tours through Hilo and Puna with his fellow preacher Mr. Lyman in the same year. Mr. Coan reported:

Soon after, I made a tour with him into Puna, one wing of our field, and then through the district of Hilo, in an opposite direction. These tours introduced me to

the people for whom I was to labor, and with whom I had a burning desire to communicate freely, and helped me greatly in acquiring the language. . . .

For many years after our arrival there were no roads, no bridges, and no horses in Hilo, and all my tours were made on foot. These were three or four annually through Hilo, and as many in Puna; the time occupied in making them was usually ten to twenty days for each trip [Coan 1882:20].

In describing the district of Puna, Coan emphasized the abundant rainfall, the many evidences of volcanic activity, and the fields of vegetables and fruits grown in those regions with both deep soils and access to water.

Its [Puna's] shore line, including its bends and flexures, is more than seventy miles in extent. For three miles inland from the sea it is almost a dead level, with a surface of pahoehoe or field lava, and a-a or scoriaceous lava, interspersed with more or less rich volcanic soil and tropical verdure, and sprinkled with sand-dunes and a few cone and pit-craters. . . . The rains are abundant, and subterranean fountains and streams are numerous, carrying the waters down to the sea level, and filling caverns, and bursting up along the shore in springs and rills, even far out under the sea...

Puna has many beautiful groves of the cocoa-palm, also breadfruit, pandanus, and 'ōhi'a, and where there is soil it produces under cultivation, besides common vegetables, arrowroot, sugar-cane, coffee, cotton, oranges, citrons, limes, grapes, and other fruits. On the highlands, grow wild strawberries, cape gooseberries, and the ohelo, a delicious berry resembling our whortleberry [Coan 1882:26].

### **3.6.4 The Wilkes Expedition, 1826**

The Wilkes Expedition made a trip to the summit of the Kīlauea Crater in 1826, then returned along the Puna coast, descending from the crater to Kapoho.

This excursion to Kīlauea Crater was followed by others in the same manner. Nordhoff (1874:41), in his guide to the Hawaiian Islands, suggests that “your pleasantest plan is to ride from Hilo by the direct road to the crater, and return by way of Puna” over the seventy miles back along the coastal path to Hilo.

Almost the whole of it [Puna] is a land of desolation. A narrow trail across unceasing beds of lava, a trail which in spots was actually hammered down to make it smooth enough for horses' feet, and outside of whose limits in most places your horse will refuse to go, because he knows it is too rough for beast or man; this is your road.

Most of these early visitors followed an ancient coastal foot trail, which in the late nineteenth century was made into a horse trail, called the “Old Government Road” (Lass 1997:15). To improve these paths for horses, the variously spaced paving stones that marked the foot trail were removed, and curb stones, to mark the edges of the trail and guide the horses, were added. It is

uncertain exactly when the foot trail was altered into an “improved road.” Alfred Hudson thought it was constructed right before the Wilkes expedition of 1840-41, since Wilkes states “In some places they have taken great pains to secure a good road or walking path; thus, there is a part of the road from Nanaivalie [Nānāwale] to Hilo which is built of pieces of lava. . . .” However, Lass does not believe this was a horse trail, since Wilkes also states that “the road is exceedingly fatiguing to the stranger, as the lumps are so arranged that he is obliged to take a long and a short step alternatively, but this the natives do not seem to mind, and they pass over the road with great facility . . .” (Wilkes 1845:191). This suggests that the trail was made of variously spaced paving stones. During a tour of Puna in 1848 by the missionaries Henry Lyman and Titus Coan, no mention of an improved road is made. Lass believes that the present form of the Old Government Road was constructed around the early 1870s (1997:17).

### 3.6.5 Land Use

The U.S. Army Engineer Division contracted for an archaeological and historical literature search as part of the Lava Flow Control Study for Hilo, Hawai'i (McEldowney 1979). The search included Kea'au and surrounding *ahupua'a* in the Hilo and Puna districts. Significant to the present project are the geographic and ecological zone classifications for early historic-period land use, which are presented in the report. These five zone classifications (McEldowney 1979:64) are listed below, and are pictured in Figure 11:

- I: Coastal Settlement
- II: Upland Agricultural
- III: Lower Forest
- IV: Rainforest
- V: Subalpine or Montane

The coastal settlement land extends from the shore to about a half-mile inland (at 20-50 feet in elevation). The upland agricultural zone was once an open grassland band extending up to three miles inland and 1,500 feet in elevation; this zone contained scattered agricultural features and some temporary residence. The lower forest, beginning at elevations of 1,500 feet to 2,500 feet in elevation, was used to gather resources such as wood, bird feathers, fiber, and some food crops. The upland rainforest, at elevations from 2,500 feet to 5,500 feet, was used mainly by bird catchers to collect feathers and to gather other resources not available at the lower elevations. In the post-contact era, the forest areas were also used for the collection of resources that could be sold as trade items to foreigners, such as sandalwood and *pulu* (McEldowney 1979). *Pulu* is the soft substance at the base of *hāpu'u* ferns, which was shipped to California to be used for furniture and mattress stuffing (Baxley 1865:596). The sub-alpine zone was located at elevations above 5,500 feet. Trails from one district to another are the major features found in this subzone.

The current project corridor falls within the Upland Agricultural Zone, or Zone II, based on its elevation, which ranges from 320 to 675 ft amsl (see Figure 11). McEldowney's map and her description of Zone II are a bit contradictory, as she describes the zone as extending *up to* three miles inland. This anomaly seems to be due to the location of Puna on the windward side of the

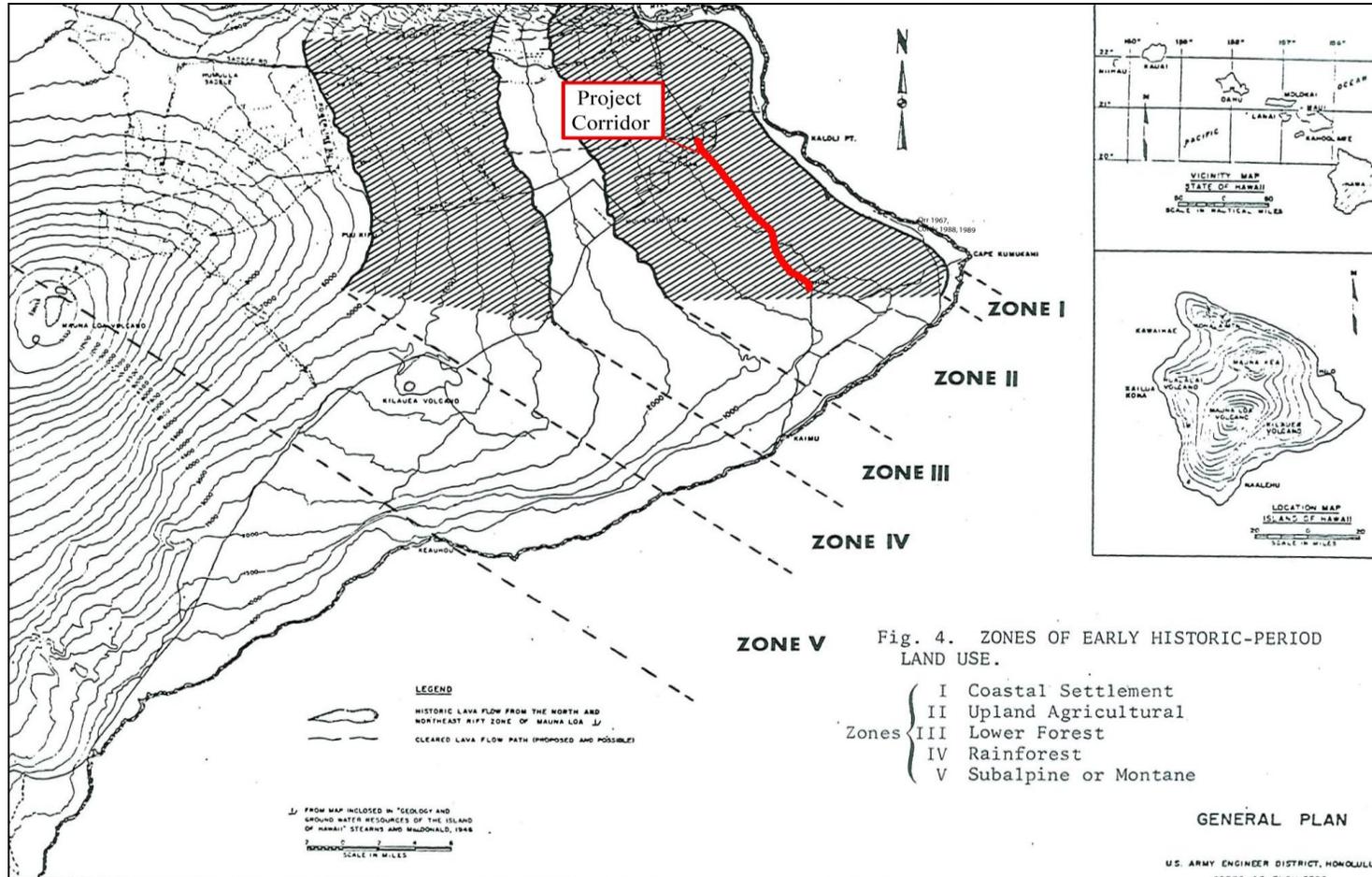


Fig. 4. ZONES OF EARLY HISTORIC-PERIOD LAND USE.

- I Coastal Settlement
- II Upland Agricultural
- III Lower Forest
- IV Rainforest
- V Subalpine or Montane

GENERAL PLAN

U.S. ARMY ENGINEER DISTRICT, HONOLULU  
CORPS OF ENGINEERS

Figure 11. Land-Use Zones for the South Hilo-Puna area, showing the location of the current project corridor within Zone II (Upland Agricultural Zone) (from McEldowney 1979)

island, which receives much more rainfall than other parts of the island. Due to this heavy amount of rainfall, the area of the current project corridor does reflect characteristics of both Zones II and III, or the Lower Forest Zone (refer to Section 1.3.1).

The missionary Titus Coan described the forested lowlands of Puna, which at the time were still lightly inhabited and used for agriculture:

The inhabited belt is one to three miles wide and in a few places there were hamlets and scattered villages five to ten miles inland. Beyond this narrow shore belt there is a zone of forest trees with a tropical jungle from ten to twenty-five miles wide, almost impenetrable by man or beast [Coan 1882:29]

In Puna, historic accounts relate the cultivation of taro in cleared forest areas, dryland taro and sweet potatoes from the lower forest edge, and breadfruit and coconut trees near the coast. E.S. Craighill Handy related several methods of cultivation common and unique to Puna:

In the wet, lowland forests of Puna, taro used to be planted under the pandanus trees, which were felled and cleared to let in the sun after the taro had rooted and put forth the first grown of leaves. It is said that here the cutting was planted wrapped in a roll of dry pandanus leaf to keep it moist and give it nourishment in the stony ground of the lava-covered lowlands [Handy 1940:53].

Despite the fact that sweet potatoes were planted almost universally and many patches are still maintained [1931-1932], the Puna natives seem to regard this vegetable with little interest, probably because Puna people prided themselves upon and relished their breadfruit, and also because potato was nowhere and at no time the staple for this rainswept district [Handy 1940:165].

This remark is contradicted by Charles Wilkes and others, who speak of the myriad methods of sweet potato cultivation.

[Potatoes] . . . are seen to be growing literally among heaps of stones and pieces of lava, with scarcely soil enough to cover them; yet they are, I am informed the finest on the island [Wilkes 1845:4:188].

[Potatoes are planted] . . . by digging holes in the lava where it was a little decayed, carrying a handful of earth to each of these holes, and planting there in a wet season, he got a very satisfactory crop [Nordhoff 1874:94].

The natives pick out the stones to the depth often of from 2 to 4 feet, and in the bottom plant the potato—how it can expand in such a place is a wonder [Lyman 1846, July 7].

[Potatoes are planted in] . . . the holes dug among the stones to receive the potatoes where some of them 6 feet in depth—thus securing a degree of moisture and shelter from the sun though no more soil than at the surface [Lyman 1846, July 13].

Titus Coan says arrowroot, and other vegetables, cotton, coffee, oranges, citrons, limes grapes, and other fruits were grown in Puna (1882:40). Handy and Handy also mention the unusual cultivation of breadfruit in Puna:

Except in Puna, Hawaii, breadfruit was wholly secondary to taro and sweet potato as a staple. We are told that in Puna in a good year, breadfruit may be eaten for eight months of the year, beginning with May [Handy and Handy 1972:152].

### 3.6.6 Population at Contact and Subsequent Decline

Cordy (2000:49-50) estimates that there may have been 12-15,000 people in Puna (29,000 for Puna and Hilo combined) at the time of first Western contact (A.D. 1778). Population for each *ahupua'a* may have ranged from 50 to 100 residents, based on the size of the *ahupua'a* and the availability of food resources. By the time of the first missionary census, the combined population of the districts of Hilo and Puna was 12,500, a decline of over 50 percent for Puna. Soon after contact, people began to move to port cities or other trading areas. Since Puna has no good harbor, it lost a large portion of its population.

The missionary Rev. Titus Coan estimated that the population of Puna was 4,371 in the year 1841, which stayed constant until at least 1846, when Chester Lyman visited the area. However, in a second journey to the area in 1871, Lyman (1924:103) noted a rapid depopulation: "There are but few people in this region . . . miserably poor and for some time past have been almost in a state of famine." Decreasing population was also the result of the introduction of many foreign diseases, for which the native Hawaiians had no natural immunization. Four epidemics occurred in 1848 and 1849, killing at least 1,000 people in the Hilo and Puna districts (Crozier and Barrere 1971:7; Coan 1882:260; Lyman 1906:168-169). By 1860, the population of Puna was only 2,200 people, and by 1890, it decreased to only 800 people (Schmitt 1968:71). Titus Coan wrote in 1882, "Our people are now greatly diminished by death, and by being drawn away to the numerous plantations of the islands, upon ranches, in various industries with foreigners, and by hundreds into Honolulu, and on board vessels . . ." (Coan 1882:121). Another visitor in the 1880s, Captain Dutton, noted, "The native population is somewhat scanty and has undergone a great decrease within the present century, as in all other parts of the island (Dutton 1884:147).

### 3.6.7 Mid-1800s (Land Commission Awards)

In the mid-1800s, Kamehameha III decreed a division of lands called the *Māhele*. Lands were divided into three portions: crown lands, government lands, and lands set aside for the chiefs. Individual plots, called *kuleana* awards, were granted within these divided lands to native inhabitants who lived on and farmed these plots. Researching the claims and testimonies that were given in the mid-1800s can sometimes assist in forming a settlement pattern for the region at that time and possibly earlier. The Land Commission Awards located near the current project corridor are listed in Table 7.

Kea'au Ahupua'a was granted as chief lands to William C. Lunalilo, as a portion of LCA 8559-B designated 'Āpana (lot) 16. Only one *kuleana* award, comprising 13.64 acres, was granted in Kea'au, to Hewahewa: LCA 8081, RP (Royal Patent) 4360. The claim indicated that the land was unfenced with no house, and that coffee was being grown (Hurst 1994:12-13, 17). This parcel was sold to the Roman Catholic Church in 1865.

Few other *kuleana* awards were granted in all of Puna: “one for 13+ acres in Kahaualea, was to Baranaba an early convert to Christianity, and Rev. Titus Coan...the other, for 7+ acres in Kehena was to one Haka,” (Lyman 1924, 7/10/1846). Kahaualea and Kehena are lands located outside of the current project area. One Royal Patent, Number 8095, was issued to Mikahela Kekauonohi in Waiakahiula Ahupua‘a, as part of LCA 11216:40. This LCA is divided into two sections, one *mauka* and one *makai* of Pāhoa town, at the southern end of the project area (Figure 12). LCA 7713:12 was granted to Victoria Kamamalu, and LCA 8452:15 was granted to A. Keohohalole (wahine) (see Figure 12). Both of these awards are also found near Pāhoa town. The documentation for awards 11216:40, 7713:12, and 8452:15 do not include any information as to land use [www.waihona.com].

The absence of *kuleana* awards throughout the Puna district may indicate the paucity of habitation in the region during the mid-1800s. The lack of *kuleana* awards along the coast, wherein numerous villages were documented by travelers in the early part of the century, may be due to a tsunami devastating the coast of East Hawai'i sometime before 1846. However, the lack of *kuleana* awards may be more related to political and/or other social factors than a total absence of inhabitants. Unfortunately, *kuleana* data cannot be utilized to reconstruct mid-1800s settlement patterns for Puna.

Table 7. Land Commission Awards (LCAs) Adjacent to the Project Corridor

Land Commission Award Number	Claimant
LCA 8559 B ( <i>Apana</i> 16)	Lunalilo, William C.
LCA 8081 (RP 4360)	Hewahewa
LCA 11216:40 (RP 8095)	Kekauonohi, Mikahela
LCA 7713:12	Kamāmalu, Victoria
LCA 8452:15	Keohokālole, A. (wahine)

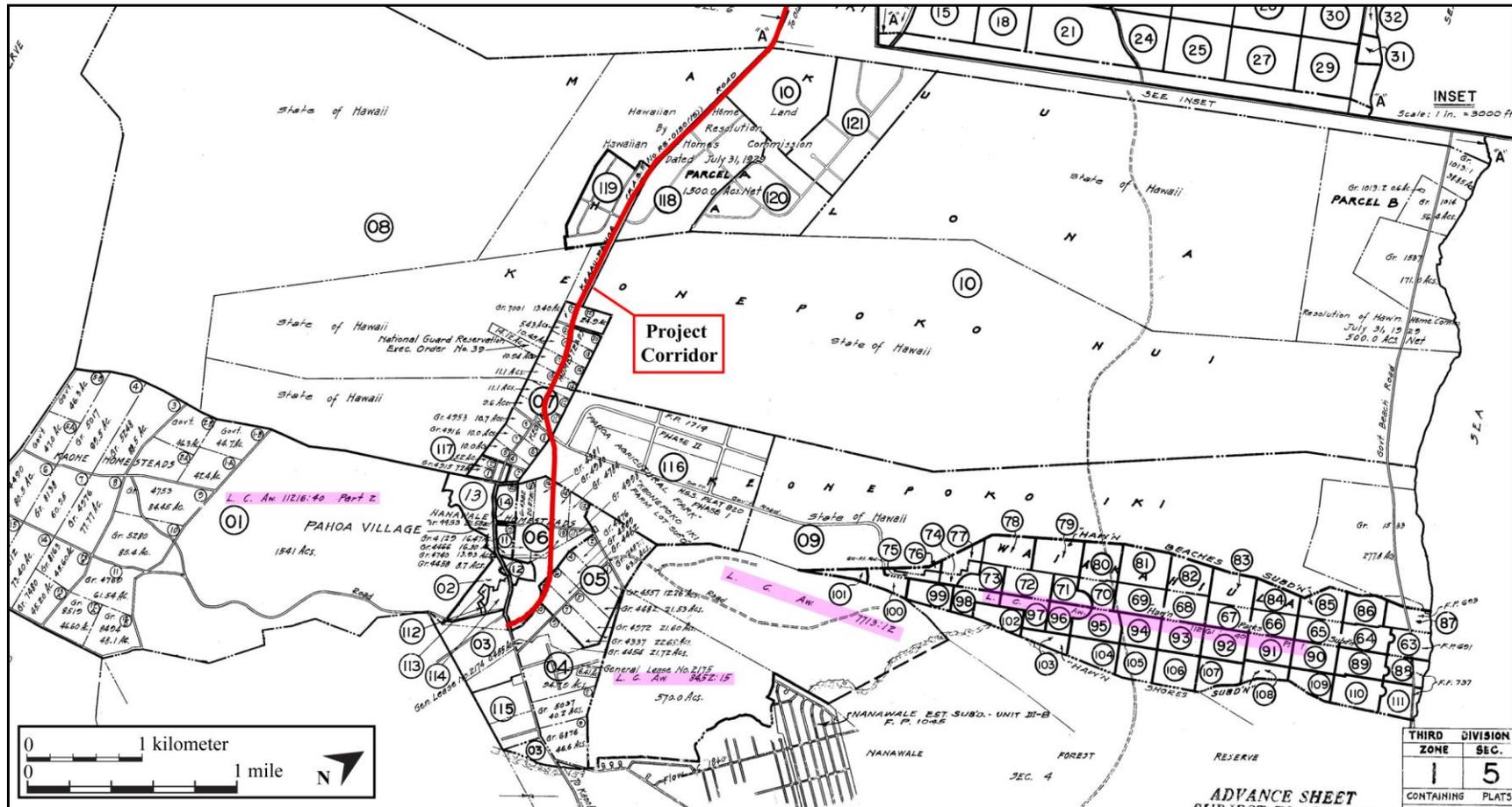


Figure 12. Tax Map Key (TMK) [3] 1-5 map (portion), showing the location of the current project corridor in relation to the Land Commission Awards (highlighted in pink) near Pāhoā

### 3.6.8 Late 1800s

Shipman and Eldarts leased lands in north and south Puna, with rough pastures stretching from Kea'au to Pu'ala'a. They continued to lease land in Pu'ala'a until at least 1882, but in 1889 the landowner is listed as the Bishop Estate Trust; thus W.H. Shipman must have stopped leasing land in Pu'ala'a sometime between these two dates.

The Puna lands were used as pasture for grazing cattle, stock for the Hilo Meat Market, and the Wai'akea Stock Ranch, also owned by Shipman. In 1889, a 50-foot right-of-way was granted by Shipman for the construction of Volcano Road. The road was completed sometime after 1893. By 1900, the Kea'au Ranch consisted of 50,000 acres, extending from the coast to elevations of 1800 ft AMSL, from 'Ola'a in the north to Pāhoa in the south. It was never a very lucrative business since the soil was too poor for good pasturage, but a few head of cattle ranged on the property up to at least 1979 (United States Army Corps of Engineers 1979:88). The roaming cattle destroyed many native Hawaiian gardens. In 1874, Charles Nordhoff (1874:49) noted that people in Puna planted sweet potatoes, coffee and fruit trees "fencing in their small holdings, even, with lava blocks," doubtless to save them from the depredations of the cattle:

It will surprise you to find people living among the lava, making potato-patches in it, planting coffee and some fruit-trees in it, fencing in their small holdings, even, with lava blocks. Very little soil is needed to give vegetation a chance in a rainy season, and the decomposed lava makes a rich earth. But except the cocoa-nut which grows on the beach, and seems to draw its sustenance from the waves, and the sweet-potato, which does very well among the lava, nothing seems really to thrive [Nordhoff 1874:49].

The outlook for large-scale agriculture seemed poor, as noted by Loebenstein in his 1891 survey:

Only a few of these Puna lands however, are other than small and worthless, and what little decent land there is, is taken up by grants scattered here and there. In view of the fact therefore that the whole amount of arable land contained in these latter and all of the rest of the District put together along the sea coast road between Hilo and Kaimu [which includes all five subject ahupua'a], a distance of 37 ½ miles would hardly exceed 2,000 acres by the most liberal estimate, it is to be hoped that the statement as compiled will convey all the needed information [Loebenstein, surveyor 1891, cited in Holmes 1985:3].

Coffee cultivation was first attempted in Puna by at least the 1890s, when a man named Rycroft grew coffee on about 35 acres and operated a mill in Pohoiki. The fledgling coffee industry of Puna could not compete with similar growers in the Kona region, and coffee operations in Puna declined after 1905 and disappeared completely by 1937 (University of Hawai'i Study of Coffee 1927, as cited in Cordy 1977:4). Coffee trees continued to grow in scattered clumps in the area, but local informants who lived in the area in the mid-twentieth century said that the beans were not harvested (Kennedy et al. 1991:20).

The government began to sell land to homesteaders in the 1880s, and coffee was grown on many of these homesteads. These independent homesteaders would soon be swallowed by larger companies, who uprooted the coffee trees to plant the new king crop, sugar.

### 3.6.9 The Kea'au-Pāhoa Road in 1891

This section includes excerpts from a Hawaiian Government Survey conducted on the new Puna Road. (The thoroughfares now know as the Kea'au-Pahoa Road). These excerpts are from Kepā Maly's report he prepared on Puna Trails for the State of Hawai'i's Trails and Access Program (Nā Ala Hele) (Maly 1999). They document what the current proposed project area looked like in 1889. Emphasis added in bold to highlight important points.

The New Puna Road. (Attachment 1)

Prof. W.D. Alexander, Surveyor General Hawaiian Government Survey.

Sir:

Having been commissioned to undertake a survey for a Road line through the Interior District of Puna Hawaii, the object being to ascertain –

1st. If any lands existed there that were capable of development, but which are now locked up by reason of there inaccessibility, and

2nd. To lay out a road, which would bring such lands into cultivation and a market. I now beg leave to submit the following report;

The survey for the road was **begun in the middle of May and finished in August A.D. 1891, the distance traversed over being 25 miles.** The **initial point** is on the present **Volcano Road**, within a few hundred feet of the 9th mile from Hilo town. The distance, at this point, from the sea coast being about 6 miles, and the elevation above mean tide 312 feet. **For over 1,000 feet or so the line follows a short bit of newly constructed road, which was originally intended to continue to the sea coast at Makuu, and leaves the same on its junction with the old Volcano Road.** The arable land of Keaau flanks the road on either side and the **Pahoehoe is reached at a distance of 7,000 feet from the starting point.** The line here debauches from the old Volcano Road, running over smooth lava **until Waipahoehoe is reached.** This is a **broad flat of a mile in width of open land surrounded with Pahoehoe and covered with considerable soil**, evidently accumulated from the denudation of several cones, which still exists on the upper end.

For the **next 7 miles** the line of the road is carried **over Pahoehoe**, the general elevation being 475 feet, distance from the sea coast being 6 miles. This stretch of 7 miles, lying **over large tracts of smooth solid lava, of the kind marked with rope like lines and concentric folds, and covered with thin 'ōhi'a woods**, is remarkably easy to travel over, and for the progress of a bullock cart would afford

no difficulty even now. **The extensive forests of Makuu and Halona, Gov't. lands, distant one and one-half miles above the road line, filled with an exuberant mass of shrubbery, in which the presence of bananas, Ki [ti plants], Yam, and Awa [Piper methysticum] can be easily distinguished, and the growths of young Sandal wood,** which seem to thrive and find support in the fissures which intersect the surface are features which would make the nearer approach desirable.

The attempt to do so was made but the undulating nature of the lava the many rounded hillocks, and the constant concession of slight ascents and descents, and the numerous fissures intercepting the plain, all characteristics, which singularly exists both above and below the surveyed road line through this section, as if Nature had intended no other line, would have rendered any other location unsuitable from a point of cost. **While on the other hand there is nothing to enjoin, from constructing feeders to the main road, at available points, making use, where possible of the numerous trails built and used in ancient time, by the natives, for access to these localities, their old planting grounds.**

An interesting feature of this locality is the **large number of lava caverns and long subterranean passages abounding upon it, especially between the 9th and 11th miles, in fact this whole tract is so thoroughly penetrated by caverns that hollow sounds are often heard beneath ones footsteps when traversing the region.**

These **subterranean passages are generally entered through some opening made by the falling in of the roof and prove to be regular arched ways, ranging as much as 25 feet in width and 15 feet high and extending for long distances.** The floors have that corrugated ropy appearance such as are seen on any viscid mass if drawn out as it hardens. The roofs and sides are covered with stalactites, the whole producing a wonderful effect when lit up.

These caverns evidently served as burial places in ancient and comparatively modern times in view of the fact that the benches here and there were covered in human remains&

By the sea coast, from Hilo to Kaimu, it is 37 ½ miles and by the upper road as now laid out it is not quite 34, and there is no doubt but that this distance can be further reduced by improvements in location at different points.

The total receipts in road taxes from the whole District for 1891 was no more than \$408 and of this whole amount only 104 dollars was collected with in the first 23 miles ending at Kapoho, while from there to Kaimu a further distance of 14 ½ miles the receipts amounted to \$118.

Of this total of \$222 nearly one half was from tax payers either **residing in the interior, or else having their Kalo, Awa or Coffee patches there, and who**

**migrate back and forward between the sea coast and the interior. The first settlement met with after leaving Hilo by the sea coast road, is at Keaau, a distant 10 miles where there are less than a dozen inhabitants; the next is at Makuu, distant 14 miles where there are a few more, after which there is occasionally a stray hut or two, until Halepuua and Koae are reached, 21 miles from Hilo, at which place there is quite a village; thence to Kaimu there are only a few scattered settlements here and there. A good many of those living along the lower road have their cultivating patches in the interior, along or within easy accessibility to the new road.**

With rare exceptions this whole stretch of country passed over by the **lower road** is only an alternation between rugged fields of cool lava and the most desolate areas of scoriae and clinkers. It is true that over the barest fields there is found a stunted growth of trees and a sprinkling of verdure, struggling for recognition and growing in the many crevices and cavities in the lava, while it is true that **effort at cultivation are made here and there these seem to succeed only in the holes made among the stones or diminutive patches of earth scattered here and there. Though even then the best spots afford but scanty returns.**

Nearly all the food consumed by the residents of this District is raised in the interior belt to which access is had by the ancient paths or trails leading from the sea coast & the finest sweet potatoes are raised in places that look more like banks of cobble stones or piles of macadam freshly dumped varying from the size of a walnut to those as large as ones fist. In these holes there is not a particle of soil to be seen&

**The old sea coast road** cannot be kept in repair with the means now at its disposal and its condition each year is becoming more unsafe and ruinous, there is but **little travel over it**; it has been shown that there is little land capable of cultivation or development either side of it and whatever travel there is now over it would soon be entirely diverted to the upper road&

Supplementary Report On the amount of Arable Land along the Proposed Road: (Attachment 2)

The statement appended hereto endeavors to give an idea approximately of the **acreage fit for cultivation along the proposed road**. A large portion of the lands in Puna remain as yet unsurveyed and the uncertainty in area is shown by the mark "(?)" in the column headed "total area".

It was originally intended to incorporate with the list, **those lands which beginning at the sea coast extend but a short distance inland, but are more or less out of reach except by ancient trails which can be followed from the new road.** Only a few of these lands however, are other than small and worthless, and what little decent land there is, is taken up by grants scattered here and there. In view of the fact therefore that the whole amount of arable land contained in these

latter and all of the rest of the District put together along the sea coast road between Hilo and Kaimu, a distance of 37 ½ miles would hardly exceed 2,000 acres by the most liberal estimate, it is to be hoped that that the statement as compiled will convey all the needed information&

Lands of Puna - Hawaii: Approximate acres suitable for cultivation along the upper road.

Name of Land Owner Total acres Dist. from Hilo as Surveyed Approx. Arable acres Nature of Land Approx. Elev. of Arable land Remarks

Keaau W.H. Shipman 64275 a. 7-13 mi. 7000 a. soil & aa 250 to 1000 ft. This land will grow cane, coffee, cocoa & etc., lies both sides of the road.

Olaa Crown 54260 11 mi. 12000 ditto ditto. Lots are now being applied for. Considerable Kalo & coffee now being produced.

Waikahekahe I W.H. Shipman Unsur-veyed 13 mi. Very little Pahoehoe Thin forests growing on pahoehoe, only fit for grazing.

Waikahekahe 2 Est. Queen Emma Unsur-veyed 13 ½ mi. Very little Pahoehoe Similar to preceding, though there are small patches of good land scattered here & there.

Popoki Makuu Halona Keonepokonui Keonepokoiki Haw'n Gov't. Un-surveyed 14 ½ to 20 mi. 3,000 a. Soil & aa. 400-1500 These lands are all unsurveyed with the exception of Keonepoko-nui.

Large islands of forest are scattered throughout this section, some adjoining, others from 1-1 ½ miles above the road, the old cultivating patches were in these forests and coffee, cocoa & etc will thrive in them. Large numbers of young sandal wood trees are found growing on the pahoehoe surrounding these forests.

### 3.6.10 Early-to Mid-1900s

In May of 1899 the 'Ōla'a Sugar Company leased 3,182 acres of 'Ōla'a land from W. H. Shipman for a term of forty years. (See Figure 13 and Figure 14). Several more land exchanges were made the same year. The lands were allowed to be cleared by horse and mule for cane fields, preserving only certain fruit trees on the property (Hurst 1994:14-15). According to the Plantation Archives Ola'a Sugar Company, Ltd. changed its name in 1960 to Puna Sugar Company, Ltd. "in hope that it might turn the tide of bad luck that had plagued the company since its inception," (Plantation Archives 1992).

The old mill and the old villages of Kea'au and 'Ōla'a were located outside of the project area APE (See Figure 17). Little remains of them in their old locations, with the exception of the old mill, and some old railroad remnants. (See Tom English interview, Section 6.8). In fact, the mill is still located to the east of the Kea'au Bypass Road, outside of the project area. However, lands

previously under cultivation, and other related structures were located near or within the project area at one time. Plantation camps where laborers of the company lived were located all around the mill. Laborers at that time consisted of Japanese, Puerto Ricans, Chinese, Portuguese, Caucasians, and Hawaiians. They lived in segregated areas within camps along the old Plantation Road. In the twenties, Filipinos became a prominent immigrant labor force for the sugar company.

There were several camps in the surrounding area, several named after the mile marker they were located near (8 mile camp, 8 ½ mile camp, 9 mile camp, 9 ½ mile camp) as shown in Figures Figure 15 through Figure 18). Others camps were named after the culture of the people living there (Filipino Camp, Puerto Rican Camp, Portuguese Camp) (Figure 19). Additional camps (Iwasaki, Kurtistown, 'Ōla'a mauka) were located more inland. Sugarcane and other crops were planted around the mill, and extending for about ten miles on both sides of the Mamalahoa Highway (Plantation Archives 1992).

By 1901, the 'Ōla'a Sugar Company held 4,000 acres of land under cane cultivation, employing 1,100 men (Hurst 1994:16,17). The sugar cane fields stretched from the south Hilo border to Cape Kumukahi, then west to inland areas of south Puna.. In 1905, the 'Ōla'a Sugar Co. (Figure 21) took over the Puna Sugar Company, which was based in Pāhoa and only operated for six years (Conde and Best 1973:93).

By 1919, the company had “the distinction of operating the first bagasse paper mill in the Territory and the only one of its kind in the United States at that time.” (Plantation Archives 1992). This industrial expansion in Kea'au marked the beginning of massive landscape alterations and clearing operations, which would have obliterated most if not all archaeological sites present on the leased lands.



Figure 13. Aerial photograph of 'Ōla'a mill in distance; note the Kea'au-Pāhoā Road in foreground (Kea'au Elementary School Library Special Collection)

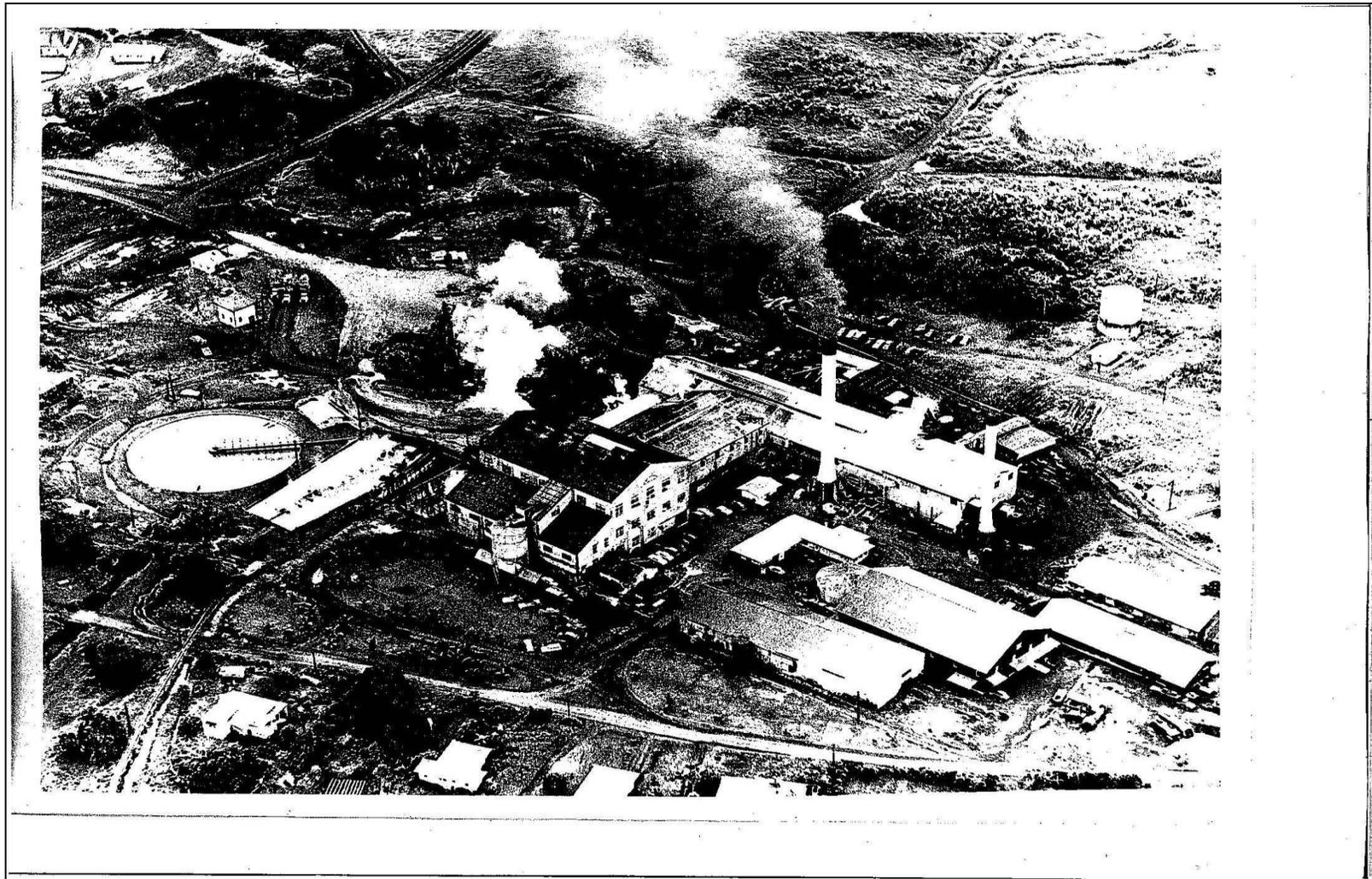


Figure 14. Aerial View of 'Ōla'a Mill, 'Ōla'a Sugar Company, Ltd. (Kea'au Elementary School Library Special Collection)

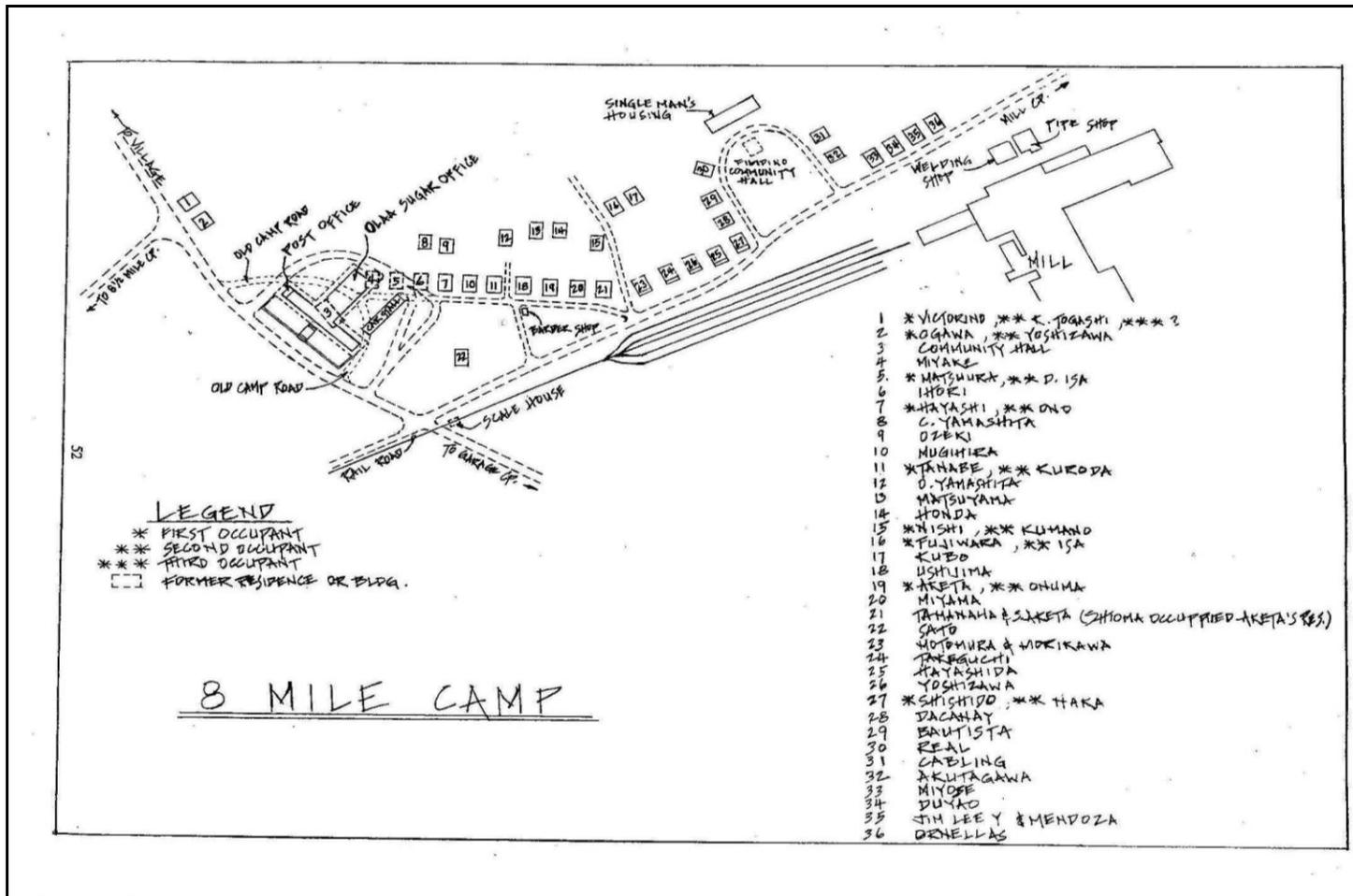


Figure 15. 8 Mile camp; 'Ōla'a Mill. (Kea'au Elementary School Library Special Collection)

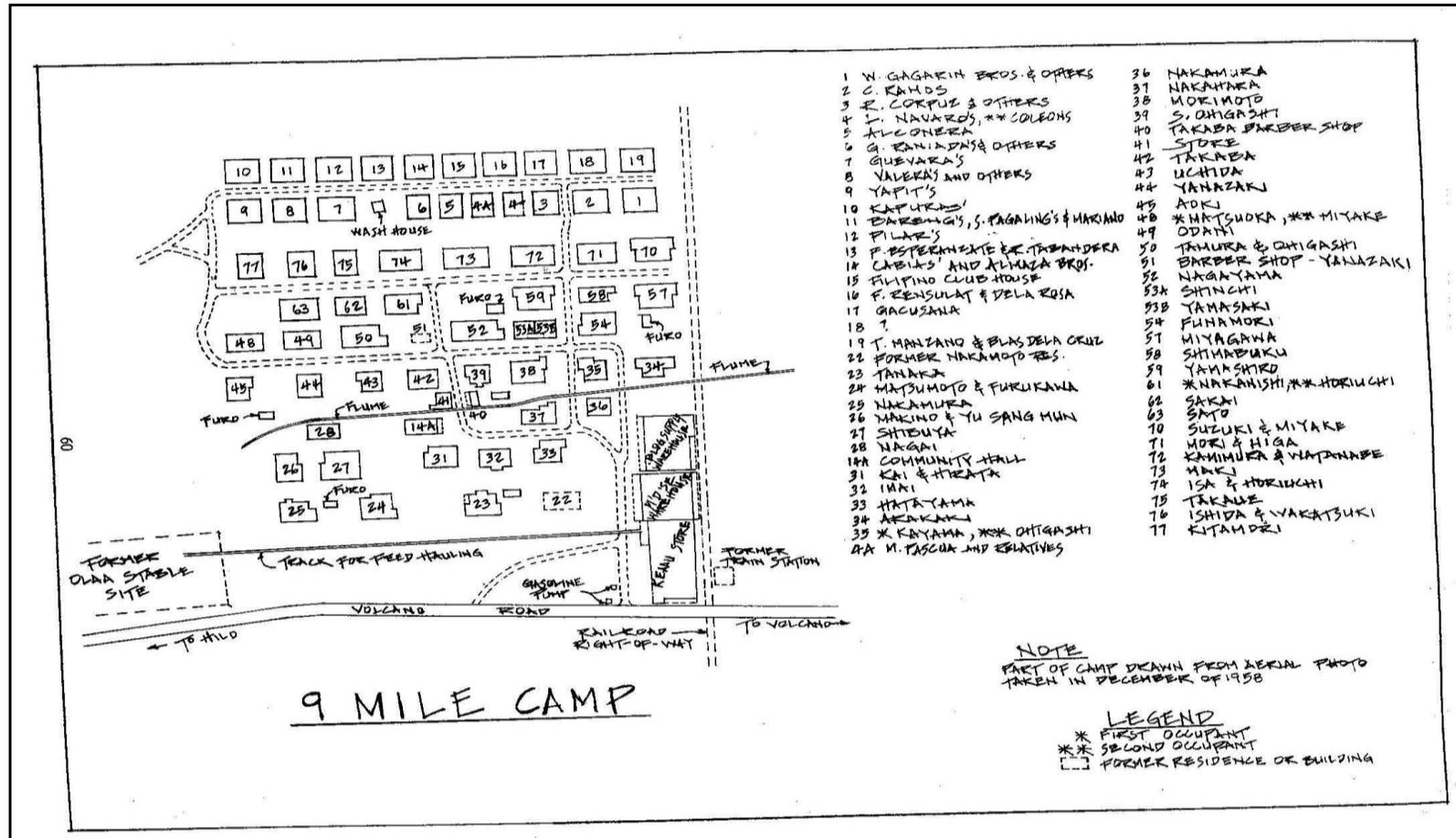


Figure 16. 9 Mile camp; 'Ōla'a Mill (Kea'au Elementary School Library Special Collection)

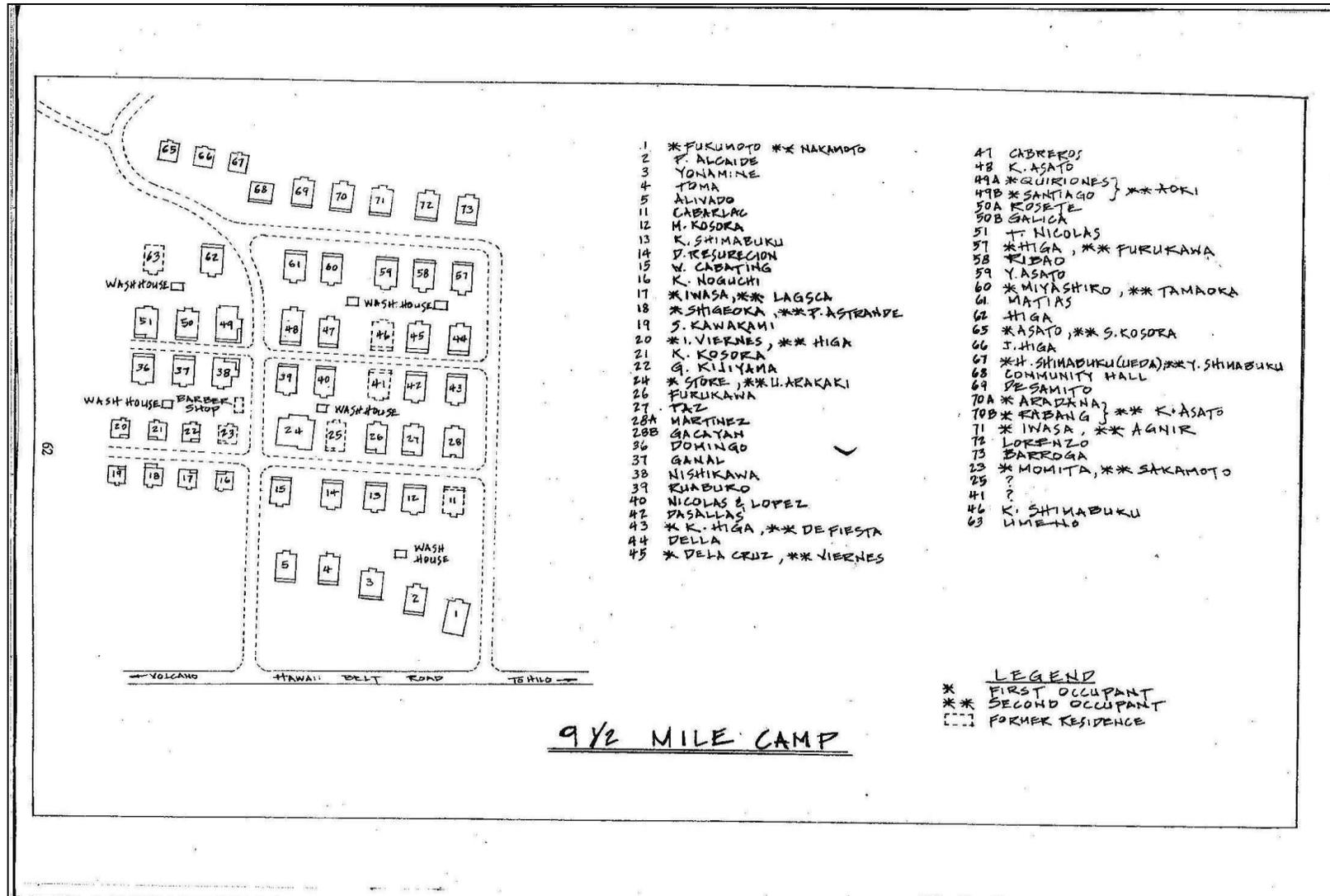


Figure 17. 9 1/2 Mile camp, 'Ōla'a Mill (Kea'au Elementary School Library Special Collection)

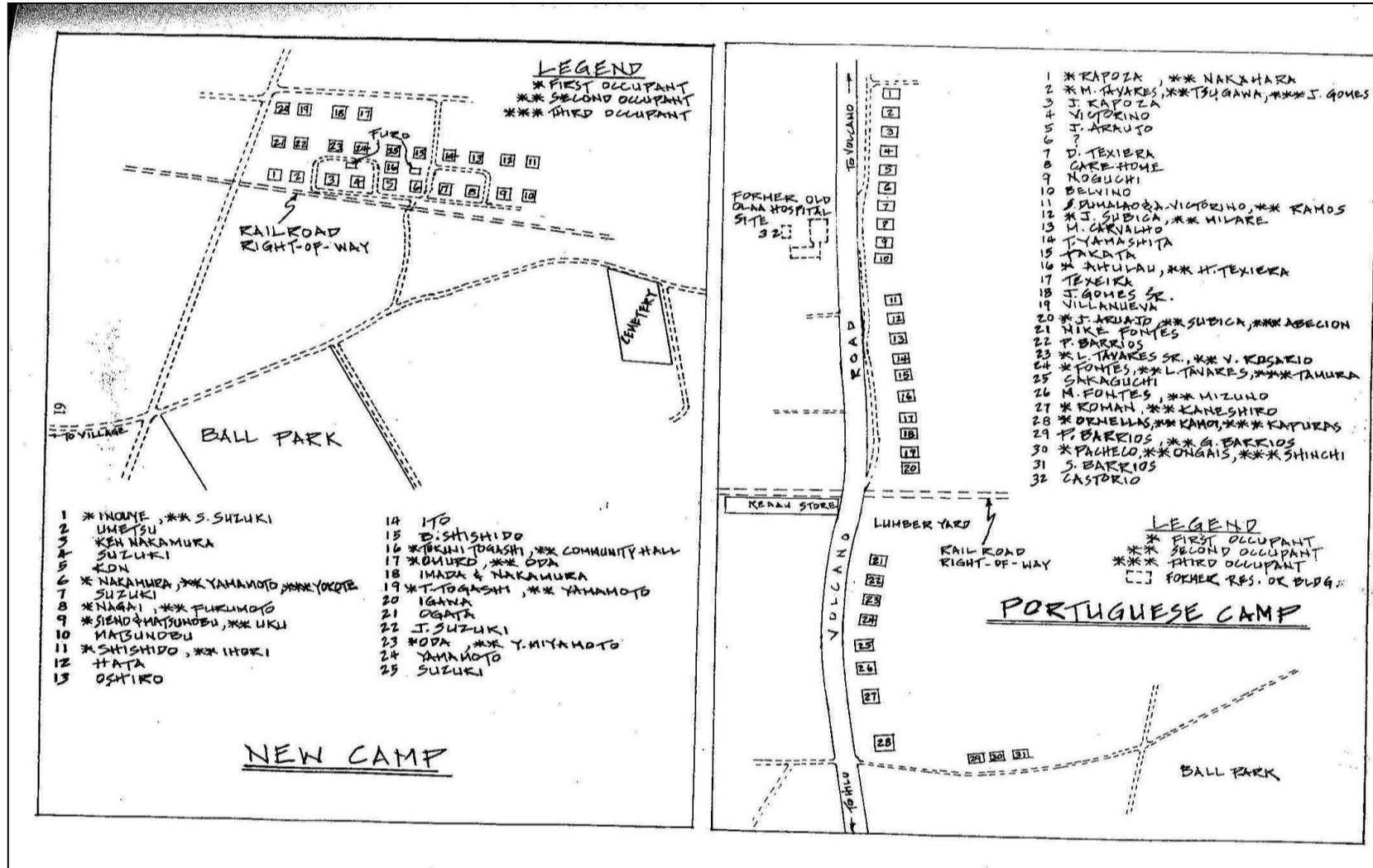


Figure 18. New Camp and Portuguese Camp; ‘Ōla‘a Mill (Kea‘au Elementary School Library Special Collection)

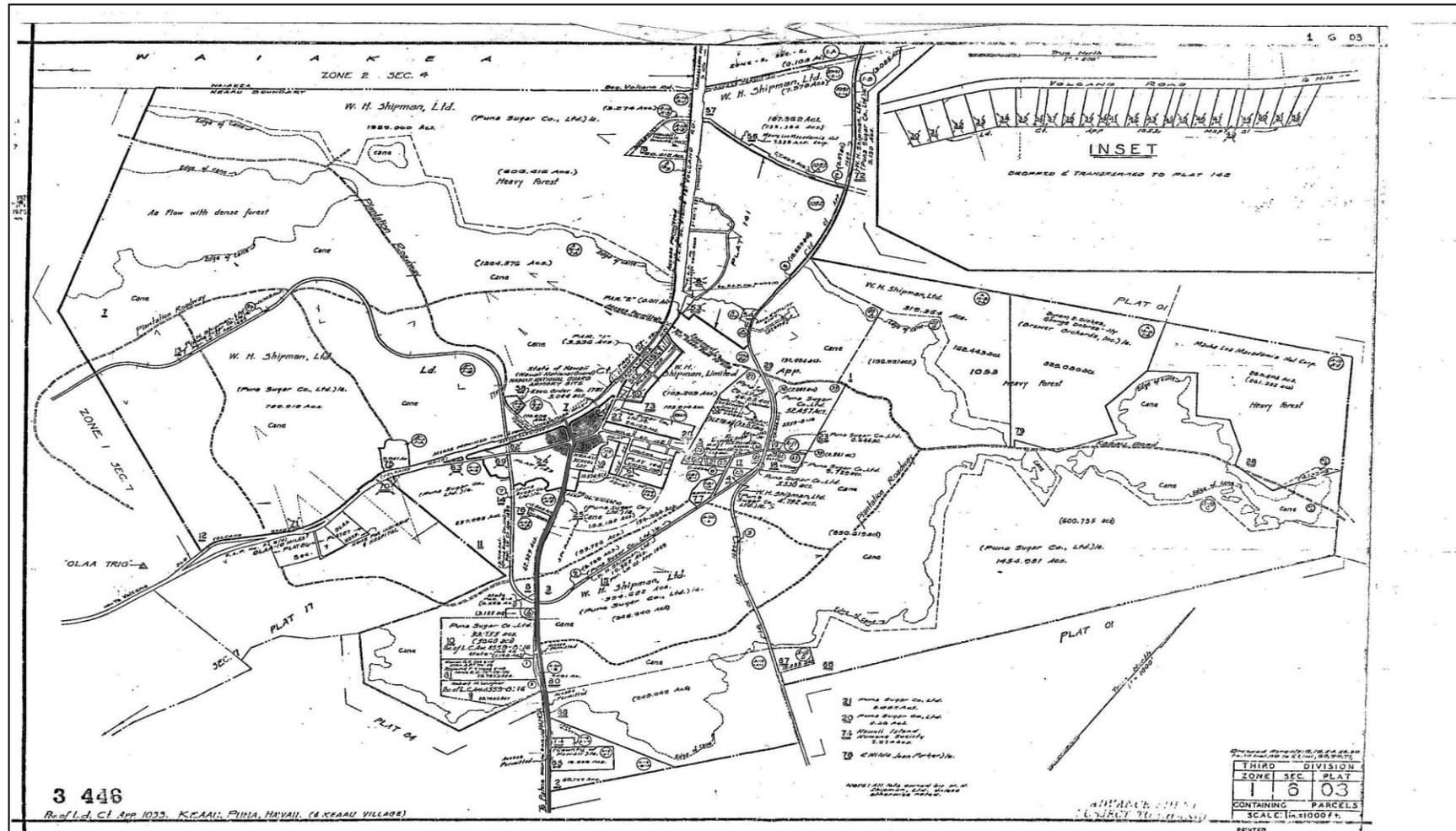


Figure 19. 1975 TMK of Ola'a, Kea'au area showing lands planted in sugar cane, other agriculture; some forested areas shown; road Corridor shown (Kea'au Elementary School Library Special Collections)



Figure 20. Sugar cane workers in field; note density of plantings, 'Ōla'a Sugar Company (Kea'au Elementary School Library Special Collection)

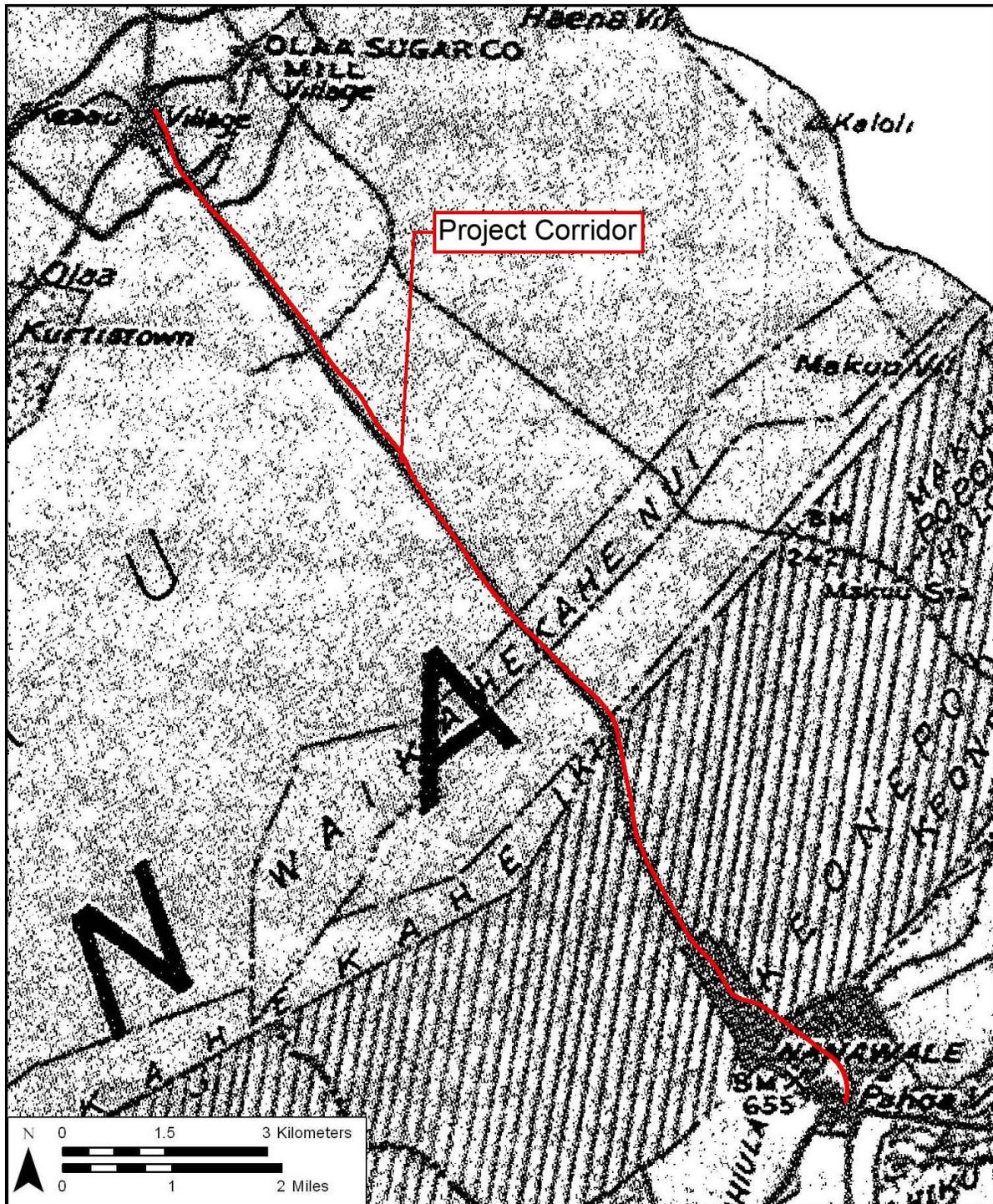


Figure 21. 1928 Hawai'i Territory Map of the Island of Hawai'i by Walter E. Wall (portion) showing the current project corridor in relation to the 'Ōla'a Sugar Co. Mill and Village

### 3.6.11 The Hilo Railway Company

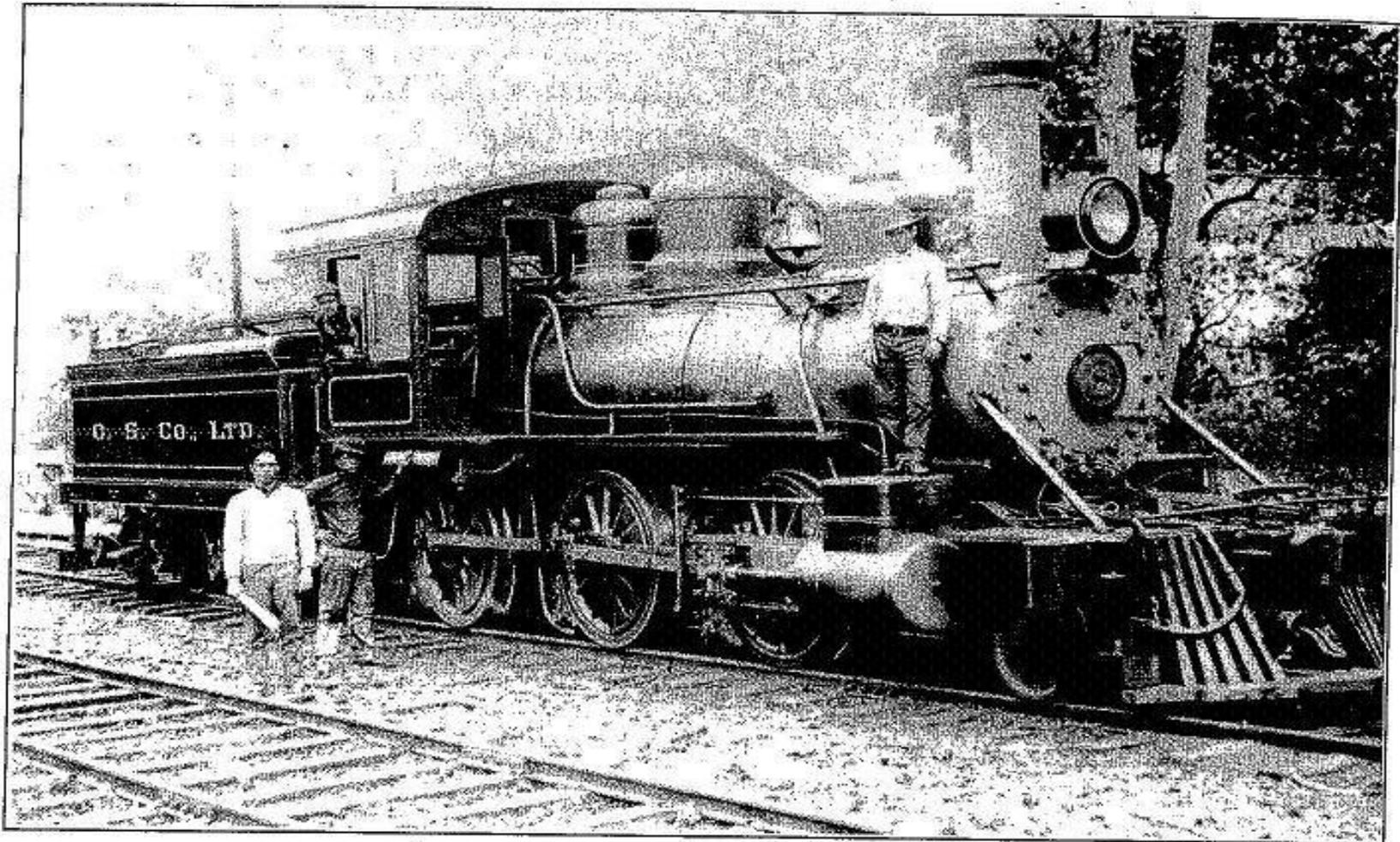
A 40-foot right-of-way from Kea'au to Hilo was granted to the Hilo Railway Company in December of 1899. The right-of-way was to revert to Shipman when the railway was no longer in use. In 1901, the railway was extended from 8 ½ mile camp south to Mountain View, at the 17 mile mark of Volcano Road (Conde and Best 1973:99, 211, 388). Wood from the cleared lands was sold to the railroad companies for ties. In 1907, the Hawaiian Mahogany Lumber Co. (later called the Pāhoa Lumber Co.) was founded, initially for the purpose of making 'ōhi'a wood rails for the railroad. Much woodland was cleared in 'Ōla'a, but the woodcutting was also conducted in other areas of Puna:

Most of the ties for this contract will be cut in the Puna District on homestead lots above Olaa on lands of the Puna plantation that are being cleared for cane, and on other lands in Puna on which rubber will be planted. The ties will be shipped from Hilo by steamers and sailing vessels, the first shipment being sometime in the spring of 1908 [Board of Commissioners of Agriculture and Forestry 4th report, quoted in Conde and Best 1973:101].

In 1900, a 170-mile coastal extension was constructed, passing through Kea'au and Kahuwai Ahupua'a to the sugar cane fields near Kapoho. Spurs were built inland to additional fields in Pāhoa and Kama'ili (Figure 22 to Figure 23). The rail transportation occurred primarily from the 'Ōla'a, Pāhoa, and Kapoho fields and was used to haul sugar to the mill in 'Ōla'a. In 1914 the Hilo Railway Co. went into receivership, and was reorganized as the Hawai'i Consolidated Railway (Figure 24). Portable tracks were used in the cane fields until 1945. Prior to using these tracks, loaded carts were pulled by mule to the main line. On April 1, 1946 a tsunami inundated the railway on the Hāmākua Coast and in Hilo, forcing the Hawai'i Consolidated Railway company out of business (Conde and Best 1973:99, 211, 388). However, portions of the Puna Division continued to be operated by the 'Ōla'a Sugar Co. until 1948, when trucks took over the transportation of the sugar cane (Treiber 2005:59).

According to Mr. Thomas English, Vice President of W. H. Shipman, Ltd., the railroads in Puna served a vital function, not only to the sugar mill, but to travelers going from Hilo and elsewhere to the Puna area:

Back in the day there was a railroad that ran through your property. The railroad was a part of the Hawaii Consolidated Railway system. Actually, there was more than just one railroad, in addition to the Hawaii Consolidated Railway system; the plantation had temporary internal railroads. They were only used for hauling cane from the fields into the factory. The Hawaii Consolidated Railway system traveled from Hilo to Kapoho, with a split at Kea'au, which went to Glenwood. Passengers and freight traveled on the Hawaii Consolidated Railway system. The 130 corridor crosses the old railroad system in one place; the old railroad right of way is now part of the Kea'au Elementary School.



*Olaa Sugar Co. – train engine and railroad workers*

Figure 22. 'Ōla'a Sugar company train engine and railroad workers

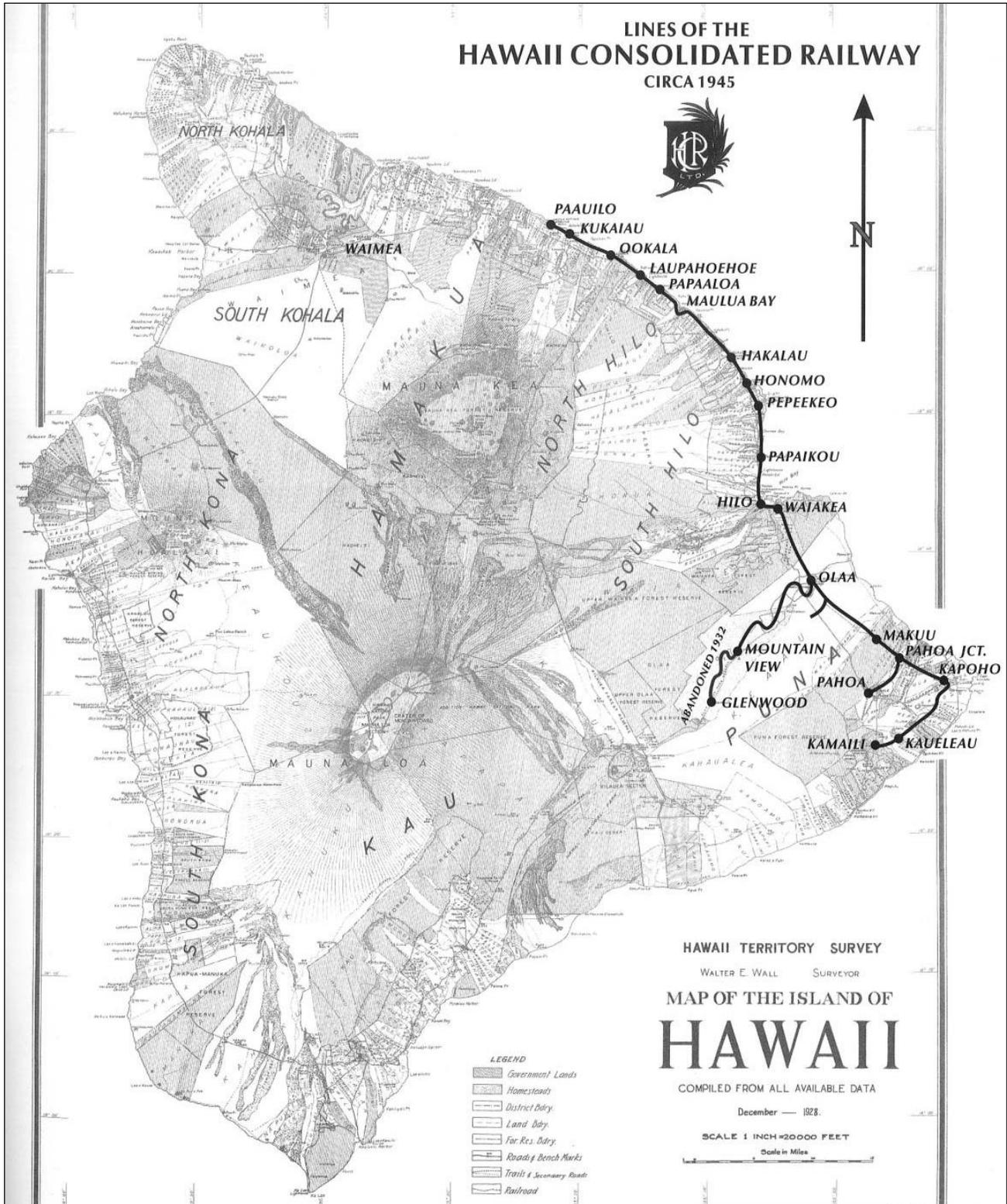


Figure 23. 1928 Territory Survey Map of Hawai'i Island by Walter E. Wall, overlain with the route of the Hawai'i Consolidated Railway circa 1945 (figure from Treiber 2005)

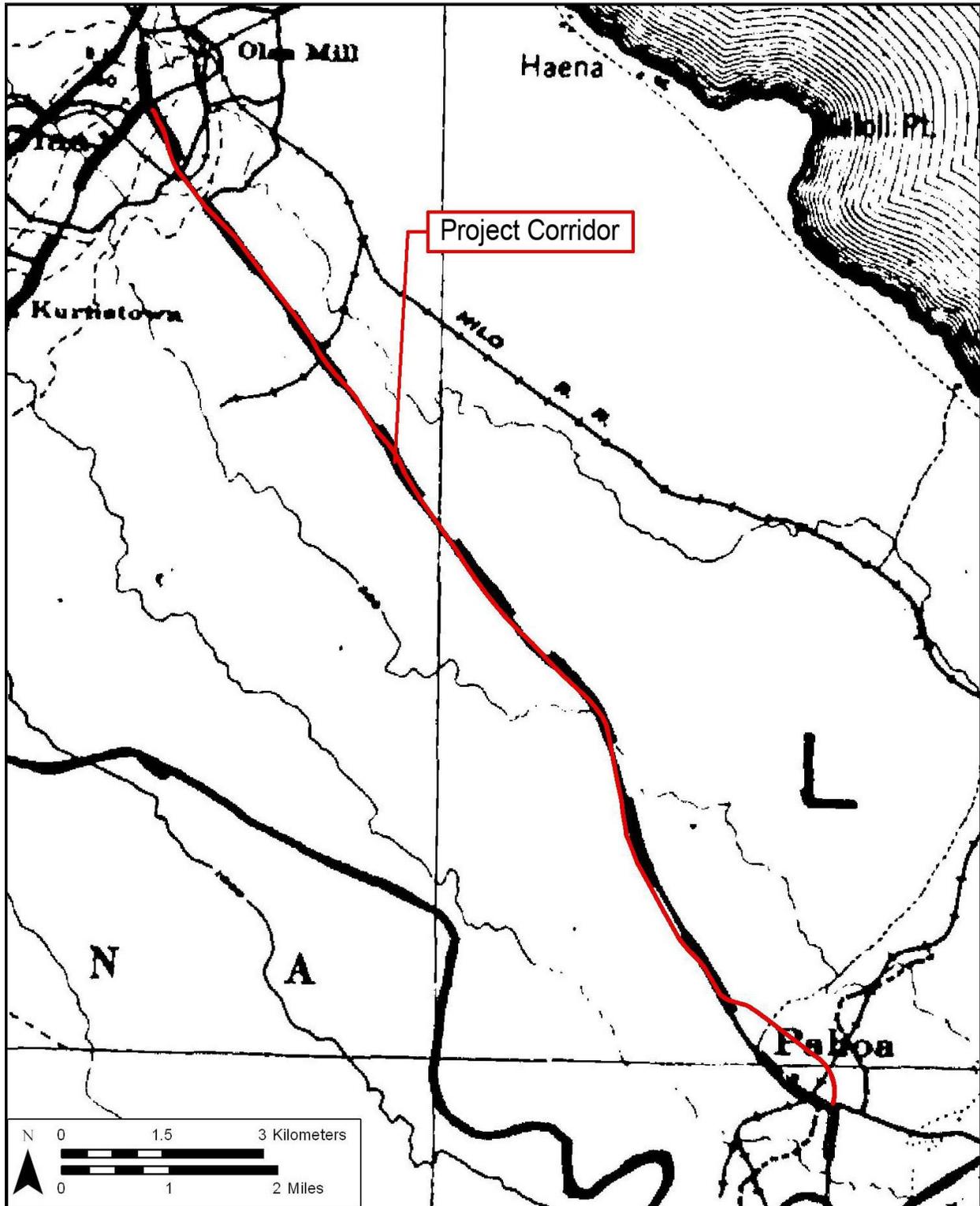


Figure 24. 1944 Hawai'i Island Map by H.T. Stearns (portion), showing the location of the current project corridor in relation to the Hilo Railway line system

The railroad had acquired their rights of way in Kea'au from W. H. Shipman way back in the early 1900s with the provision that if they ever stop using it for a railroad, the land reverted back to W. H. Shipman. So, when the railroad went out of business in the 1940s the land reverted to Shipman once more.

One thing people do not realize is that the railroad was in fact, a private company. The Hawaiian Consolidated Railroad was a privately owned and operated company. They in turn, owned the right of way that the railroad passed over. The public use of that right of way was by contract when they purchased a ticket to ride on the railroad. So, there was no public right to use that right of way. They had to purchase a ticket and enter into a contract with the railroad to ride on that train over that property.

When the railroad stopped carrying passengers on that property, then with that the public's right to get on that property, there was no way that they could, without trespassing, go on that property anymore cause the railroad was no longer there to contract with them to sell them a ticket to go on it.

That is a popular misconception. People think, because it was a railroad, therefore, for some reason or another they can use as they would public property, but that is not the case. In any case, it only crosses, as I mentioned, the Highway 130 corridor in one place. Out where the current High School is located, in fact the Kea'au Elementary School is built on part of the old railroad right of way (T. English, Interview 7/31/2009).

In Ka'ohē Homesteads, where lumber mill operations were ongoing in the past, Ms. Rene Siracusa recalls how the area she now lives in was not only covered in sugar, but was used for lumber mill operations. According to Ms. Siracusa, remnants of the old railroad can still be found within the Puna district:

Going up to Ka'ohē Homesteads where I live, it was full of sugar, and, that is why they put in the whole railroad line. Well, partly for the sugar, but also partly because they were doing the logging. Up in Ka'ohē Homesteads where I live, they logged first for the sandalwood. During Kamehameha the third's time. First, they logged up the sandalwood, and when once that was gone, then they logged up the 'ohi'a, which was the Santa Fe railroads. And that didn't work. That was a loss. But then they went back and started doing more logging, and when the Japanese who were working on the sugar plantations figured out that if they could grow some of their own sugar, they could get a lot more bang for their labor. And so they started getting parcels up there and that's when the royal patent grants started. As matter fact, on my property I still have parts of the old rail line. The old loggers used single, narrow gage rail lines, tucked and tacked.

As far as I know, the old sugar cane areas are all taken over by Albezia now in my neighborhood. And, there used to be sugar cane growing on the Catholic Church lands, but there is not anything cultivating any longer.

In Pāhoa town there was a Sumo ring, but it is gone now. The Japanese immigrants when they came they started it for a sports thing, for Sumo wrestling. It was just a, like a circle with sand. It was right behind the Akebono Theatre. The Akebono Theater goes back to like 1930 or 1934 or something like that. It is the oldest operating theater on the National Register.

And then there was the railroad turn-around. Rails went right through the back of that parking lot and up through the parking lot of the Pāhoa Community Center, and went straight through towards Kea'au to where the pool is now, and I remember when they were constructing the pool, Norman Olsen was the project coordinator, and he went out there, you know, to look, and there were the rails. And I said, you really ought to leave these here and just put some informational, interpretive signage. You know? And he said they would, but they did not, as it turns out.

Then when we were doing some planting at the Community Center parking lot, and we dug a hole, came up with one of the small horse shoes, too small for a horse. The donkeys were used to turn the engines around. It was one of the donkey's shoes. They would house the donkeys in the pasture up above, behind where the Community Center is now. Above that is the playing field now, but behind that field is the old donkey pasture. And since they used to walk the donkeys up there, one of them must have lost a shoe. And there we found it (Ms. Siracusa, interview 7/31/2009).

### 3.6.12 The Kea'au-Pāhoa Road in 1932

In 1932, the following affidavits were obtained by the Hawaiian government as a part of the testimony related to roads in Puna. These affidavits not only tell us about the roadways and trails of Puna in general, but also about the locations of business, and the relationships between tenants and land owners in Kea'au, and beyond, and how these new relationships affected the use of trails between Kea'au and other areas. These affidavits also inform us about the current project area and what it looked like in the 1930s. The "trail" or "road" (the present corridor) mentioned in this affidavit extended from Ola'a to Maku'u:

#### AFFIDAVIT OF MAI KEOKI [George Mai]

MAI KEOKI, of Keaau, Puna, Hawaii, being first duly sworn and upon his oath, deposes and says as follows: I am 64 years old. I was born May, 1868, at Paki, **Keaau**, Puna, Hawaii. I have lived in **Keaau**, Puna all my life time. Only one **Keaau**.

When **Keaau** came in to Mr. Shipman's possession, the people that were living in **Keaau** became tenants at will (*Komo Kino*). The people of **Olaa** lived in **Olaa** and the people of **Keaau** lived in **Keaau**. I went to school in Keaau. Mr. Kamakahiki was the teacher. The people that were living at **Keaau** were tenants at will (*Komo Kino*).

Hawelu's Hotel was on **Olaa**. Mr. Hawelu was Mr. Shipman's foreman. The trail or road from **Olaa** to **Makuu** is the main road upon which the *kamaaina* and strangers travelled from **Makuu** to the old Volcano Road, and from **Olaa** to **Makuu**. This main trail is the road which David Malo had described.

Another small trail starts at 12 miles **Olaa** and goes down to Keakuamakakii, where it passes Hilo of the Stone Crusher *makai* of the Pahoa Highway, thence it goes on to Lopaiki, and on to two cocoanut trees, thence it goes on to Kaikoo where it branches off. One branch goes down to Keauhou and another branch goes down to my place. On this trail the people of **Olaa** came down to my place. During Obed Spencer's time there were no tenants at will. Since the fence was put up along the Pahoa Road, this trail has not been used by anybody. Nobody has used this trail since 1910 or 1911. When the people were made tenants at will, the people have not used this trail since.

Pahoa Public Highway was put through before 1900, long before the plantation was started in 1899. Capt. Willfong planted Rami at Kuolo. At that time a road was cut by us from the school house at 9 miles **Olaa**, down to Keauhou. This road was made to haul Rami on ox car down to Keauhou.

The trail that goes to **Makuu** I had gone over that road till I reached **Waikahekahe**, at the Ahua where the gate is now on the King Highway. Another road or trail starts from the school house at 9 miles, **Olaa**, and goes down to the school house at **Makuu**.

There are piles of stone along this road. This road was made at the direction of Mr. Shipman. The road which David Malo has described, running from 12 miles **Olaa**, down to **Makuu** and meets the King Highway, is the main road or trail that was used by everybody. Subscribed and sworn before me this 17th day of December, A.D. 1932. (Maly 1999)

In this affidavit in 1932, David Malo testifies that there were three main routes at that time: The King Highway along the coast, the Volcano Highway through the interior between Hilo and Volcano, and the interior “main trail” or “main public highway” through Puna that extended from Ola’a in the interior to the King’s Highway along the coastline: While Malo mentions other *mauka* to *makai* trails in Puna, he clarifies that the only trail of that type that was in use by 1932 was the “main trail” or “main public highway:”

#### AFFIDAVIT OF DAVID MALO

DAVID MALO, of Keaukaha, S. Hilo, Hawaii, being first duly sworn and upon his oath, deposes and says as follows:

I was born in the year 1852, at Makuu, Puna, Hawaii. I am 80 years old. I was brought up in Makuu, Puna, and lived there for many years, up to the time when my father died. I was then about 18 years old.

The King Highway or Main Public Highway starts from Puumaile, Waiakea, and goes through Waiakea, Keaau, Kapoho, Kalapana along the seacoast and on Panau to the Volcano. It lies from Puumaile to Kapuepue, thence it turns down to Haena where it crosses a Fish Pond (*Loko Ia*), thence it goes on till it passes *mauka* of a flat where Keaau school house was located, thence it continues on till it passes *mauka* of a (school and church house) which was located there, at Paki, thence it goes on to Keauhou and on to Hopoe, and through Waikahekahe-nui and Waikahekahe-iki.

At Keaau school house which was located on a flat, an old fish trail turns off *makai* of the King Highway at a point Hilo of the school house and passes *makai* of said school house, and it goes on till it passes *makai* of school and church house, at Paki, between the seashore and the King Highway, and it goes on along the seashore to Keahualiloa where it meets again with the King Highway.

The old Volcano Highway starts from Hilo and goes through Puuainako, Waiakea, and goes on to the present 4 mile bridge, thence it turns off to the right or *mauka* side of the 4 mile bridge and goes on till it crosses the present main public highway about 7 miles, thence it goes on till it meets again the present main public highway at 8 miles, thence it goes on to 9 miles Olaa, thence it goes on to Kuolo, and on the *pahoehoe* to Mahinaakaka, and on to Waiuli where Hawelu's Hotel was located, thence it goes on to Kalehuapua, Kapae, Kapueuhi, and on to Kekee where Shipman's cow pen is, where it meets with the present highway, thence it goes on to the Volcano. The old Volcano Highway separates Keaau from Olaa.

The people that were living in Olaa were tenants at will (*Komo Kino*) while under Queen Emma. My father was the Queen's Konohiki. The people that were living in Keaau paid money for living on the land. Only tenants were allowed to go on the land.

The people of Waiakea were not allowed to go on Keaau without permission. The boundary mark of Waiakea and Keaau is at Wiokawa on the beach, thence the boundary line runs from there on to the King Highway, and on the present Volcano Highway.

There were people living at Paukupahu, Papai and Papua [Papuaa]. There was a big village *mauka* of Keaau in Olaa. The only main trail or main Public Highway that was used by everybody at that time is the trail that starts from about 12 miles Olaa, and goes down to Waipahoehoe, and on to Makuu till it meets the King Highway. There were many other trails running down to the King Highway and

the beach, some of them were made by cowboys for driving cattle, and some of them were made by cows.

Close to where the school house was located on a flat at Keaau, there is a checker board made on *pahoehoe* with many holes into the *pahoehoe*. On this the children at that time played checkers. At Waikahekahe there was a village. The children of that village went to school at Makuu & Subscribed and sworn to before me this 15th day of December, A.D. 1932.

### 3.7 Modern Land Usage

The lands along the current project area are dominated by three large housing subdivisions: Hawaiian Paradise Park, Orchidland Estates, and Ainaloa Estates (refer to Section 1.3.2, Figures 1-6). Hawaiian Paradise Park is the second largest private subdivision in the United States, “with over 8800 building lots, most of which are one acre in size,” [<http://www.hawaiianparadisepark.org/index.html>]. According to Mr. Thomas English, Vice-President of W. H. Shipman, Ltd.:

Near Maku‘u, in the 1960s, much of the land which makes up the present day Hawaiian Paradise Park subdivision, on the *makai* side of the highway, and the ‘Ainaloa and Orchidland subdivisions on the *mauka* side, was sold by W.H. Shipman. They were then further divided by others in creating those subdivisions. Once the subdivisions were created, there was an influx of people buying lots, building houses and setting up housekeeping in those areas. In between those subdivisions, and Kea‘au village, the land has remained in some type of agriculture. After the plantation shut down, W. H. Shipman diversified their agricultural areas. Currently, we have cattle, macadamia nuts, papaya, banana, nursery crops, biofuels, and a number of vegetables and fruit crops growing on our lands. We have over 80 individual licensees who license land from us and are conducting their farming operations on our land. ...a lot of this activity occurs along the Highway 130 corridor.

I remember what it was like back in the fifties. It was a two lane, narrow, basically in the old style, where they put some gravel on the pahoehoe. It went up and down and around. It was a windy road. By the fifties there were automobiles and trucks and stuff. Prior to that, most of the traffic was down around the coastline. There was some *mauka makai* travel, but as far as I know, there were the *mauka makai* trails to Kea‘au, and then there was the main route to Kapoho from Hilo and back again along the old government road.

From Kea‘au to almost Pāhoa town it was all ranch lands. A few areas, like the *kipuka*, the Waipahoehoe on the *mauka* side of the road, and on the *makai* side there was a small *kipuka* were in sugar cane, when Kea‘au had a sugar mill. Most of the sugar in Pāhoa was on the other side of Pāhoa, going towards Kalapana, and of course going down towards Kapoho on the other side of Pāhoa. There were not a lot of houses before the ranch lands were there. The lands of Kea‘au were all

a part of Shipman. And then you got into the Maku'u area, and towards Pāhoa town there were scattered houses here and there [T. Shipman, Interview July 31, 2009].

### 3.7.1 Hawaiian Paradise Park

The website for Hawaiian Paradise Park includes a history of the subdivision, written by its first permanent inhabitant, Rick Edwards. This history first appeared in an article entitled "Paradise Park-Past and Present" in the August 1978 issue of "The Hawaiian Conch", the newsletter for the subdivision. Edwards notes that the lands of Paradise Park changed ownership from the Shipman family to the Watumull family before Hawaii's statehood:

I do know that it was in anticipation of statehood that these lots started to be marketed...Oddly enough, some of the local people who turned up their noses, today are buying now that the prices are greatly increased over what it was at the end of the 1950's and beginning of the 1960's. There was a promotion at the very beginning, (I was not here at this time but several people told me about it). During this promotion lots were made available only to people on the island, next to people within the state, and then it was thrown open to the people on the mainland... I bought my first lot in a snow storm in New York City, back in 1959 and it was a sight unseen kind of thing...I was the only resident, so I guess I am the first permanent resident, of the sub-division. I was here a couple of years before the next families came...Originally there was only one entry into the sub-division and that was Paradise Drive. It was kept closed, with a chain to protect the fishing area. But the main reason, people would come in to picnic, and became careless like they do any place, I suppose, and it got to be a major problem with people throwing out their rubbish along the road...Another reason for the chain was that people used this as an access to get into the Shipman estate from Block 10 roads near the ocean. Some people did a little bit of cattle rustling from the Shipman estate and brought out some free hamburgers...

I also think it is significant to note in 1960 there was only one house in the sub-division. It took five years from 1960 to 1965 to go from one to ten houses, a thousand percentage increase, it's not very much numerically but it's quite a percentage increase. Oddly enough between 1965 and 1970 it increased another thousand percent. It went from ten houses to one hundred houses...

Earlier I mentioned that this land had been used for cattle grazing. Mr. Shipman told me at one time that his brother was responsible for frequently setting fires in this area to prevent trees from growing. The old grass would be burned out so new green grass could grow up for the cattle. It also made it easier for the cowhands to see the surface of the ground-you know how irregular and full of cracks it is. It was easier for them to ride and see without vegetation...

...[I]t should be pointed out, that the road that everyone knows as Old Railroad is called that because at one time a railroad went over this road alignment. In the

very beginning, the only means of communication was either by canoe along the coast or along the Mamalahoa. I do know, from some of the old time Kalapana Hawaiians, that they used to have pig roundups, and they would drive the pigs to market in Hilo. They would follow along the Mamalahoa, spending the night several times along the way, because they couldn't make all that much time with so many pigs to be concerned with. Then the TRAIN was put in from Hilo to Puna. One spur went up into Pahoa; it was like a dagger into the forest. I'm told this is how Pahoa got its name. (Pahoa means dagger). The other spur went all the way around to Opihikao and almost to Kalapana, and one branch of it went down to Kapoho to the rock quarry. The bulk of the rocks for the Hilo breakwater came from there and were shipped over that railroad to Hilo.

I am told that one of the first businesses in Pahoa was a lumber mill where they did logging of 'ōhi'a trees. These were cut into square railroad ties that were shipped to California, and a lot of the ties that exist to this day in the Union Pacific and Southern Pacific Railroads are 'ōhi'a logs which came from the Pahoa area.

Later on sugar began to expand so that a lot of the sugar cane made its way on the train. About that time World War II came along, there was more and more effort to go by truck, and from the 1946 tidal wave, which destroyed part of the track, the train started to be phased out, and more and more trucking came into the picture as the main means of transportation. Highway 13 [now "Highway 130"] or the Pahoa government road as we know it today was one of the main routes. Things have been swinging inland from originally being along the coast to the railroad which is midway between the coast and Highway 13, and now Highway 13 [now "Highway 130"]. Now I see signs that perhaps the future may swing back to having the bulk of the activity close to the ocean. I don't know-time will tell on that. The reason I am mentioning this about the railroad is when I first came here there was a concrete platform on Lot 130 in Blk 6 with bamboo and orange amaryllis plants. This was the remains of a railroad station called Makuu Station. Can you imagine, a train station there which served this area, I know that some of the old-timers who lived in Pahoa and Kalapana areas used to go to school in Hilo. They rode the train back and forth along with anything else that had to be shipped, including sugar cane. Oddly enough you can see sugar cane growing here and there where some of it spilled off along the right-of-way of the old railroad.

In the old days the Puna land was pretty much divided between two families--The Shipman's and the Lyman's. The Shipman "domain" extended from the Hilo boundary all the way to the Hawaiian Beaches and Parks area, which is where the Lyman family's interests began. Fortunately Mr. Shipman's father was very wise in legal matters. He went to the trouble of having the bulk of the land, which fell within his area of interest, registered with the land court which was the Torrance Land system. This is the best kind of land system there is. It means you can't even

lose it to squatters rights, or adverse possession, without due cause, and that's why to this day we are fortunate enough to have all our lots recorded with the Hawaii State Land Court, as well as the Bureau of Conveyances. All the lots in this sub-division fall into that category, thanks to the foresight of Mr. Shipman in the old days.

...[O]ff Road 22 on the mauka side between Paradise Dr. and Kaloli, there is an entrance to a lava tube. The lava tube goes on for quite some distance in the mauka direction before it runs into collapsed rock near Road 29. This lava tube apparently served two different purposes since there are one or two branches off this tube. One of them was sealed with lava rock and is not too high at all, and contains the remains of quite a few burials. It was very important to the Hawaiians to bury their loved ones in a place that couldn't be found by anyone else, so that the grave couldn't be desecrated. This cave was used for, number one, that purpose, and number two, defense purposes, because in the early sixties within this cave were found the rotted remains of spears and sling stones and some of the largest opihi shells that I have ever seen which were used to collect water. Upon coming in and out of the sunlight into this cave and looking into the dark you are blinded. You are on loose rock to begin with, therefore, it is an area that can be defended easily (only a few can come in at a time; it only takes a few whose eyes are already adjusted to the light to defend it)...

...PARADISE DRIVE, I feel positive was named because the corporation, Hawaiian Paradise Corp. started this sub-division. SHOWER DRIVE was named because there were several attempts to plant shower trees along it, but when they were not attended, they would not grow.

The words POHAKU CIRCLE, I think, are kind of significant. The story behind that is Lot 8323 originally belonged to Louis Stone. I'll never forget that name because Louis Stone was the name of the man that played the father in Andy Hardy movies when I was a kid growing up. Some of you may remember that. Louis Stone and his mother owned that lot, before there were any houses on that street. He came here and made a big issue of going to build a house. But (if) they built a house, they expected the street to be named after them. I phoned David Watumull and told him the story. We both recalled the word for stone, or rock, in Hawaiian was POHAKU, so we said, "O.K., we will name the street after you, go ahead and build your house". The street was named for him, and like quite a few false starters in the beginning, it turned out to be just talk. Subsequently Louis Stone sold the lot and moved someplace else. I think it is rather interesting that it was a trivia type reason how POHAKU CIRCLE got its name. For anyone who is curious, that is the story behind it

[<http://www.hawaiianparadisepark.org/history.html>].



Figure 25. Developed portion of project area south of Pōhaku Drive, view to south,

### 3.7.2 Orchidland Estates

Orchidland Estates is located across from Hawaiian Paradise Park. A history of the lands of Orchidland Estates is found on the website [[www.orchidland.org](http://www.orchidland.org)]:

In the early 1900's the Puna lands were used primarily for raising cattle. The land was marginal at best for farming and ranching, so in the late 1950's the property owners decided to subdivide and sell off most of this land. The developer's permits were issued for Orchidland Estates, Hawaiian Paradise Park, Hawaiian Acres, and several other subdivisions all at the same time. It should be noted that this "time" was before Hawaii became a state. By getting the permits under the rules of the Territory of Hawaii, the developers were able to avoid the more strict requirements of the U.S. Federal Government. We ended up with some huge subdivisions of ¼ to 3 acre parcels, agriculturally zoned, with private roads, and no utilities or services provided.

Priced at under 500 dollars, the parcels sold rather quickly, however, very few people became residents. Only those with a strong pioneering spirit were able to overcome the absence of phones, electricity, County water, road maintenance, and other services. We had catchment systems for water, generator, and solar systems for electricity, and phones, well, back then it didn't seem like such a big deal to not have a phone. It should be noted that Hawaiian Tel was first to provide a

utility service to the people of Orchidland. Road maintenance became the biggest issue. The developers had made beautiful red cinder roads, which, in the Puna rains, lasted just about long enough to take the picture. If you lived in Orchidland in the 60's or 70's, you were on your own and you knew it. The roads that weren't used became overgrown, the roads that were used became washed out.

The biggest appeal of this area back then, and to a certain extent now, was the price. This land has always been the cheapest in Hawaii, and the only option for many folks who wanted to own a piece of the rock. Commonly, people would live in tents or shacks until the land was paid off, building their house a stick at a time or in a series of additions. The rustic nature was endearing. People were very proud to say, "It's humble, but it's mine".

In 1979, some of the residents formed the Orchidland Community Association. In the first half of the current decade we have experienced a rapid influx of newcomers, real estate sales, and inflated property values, much like the boom of the early '90's. And now, in the latter half, we are seeing the same downward trend that followed. With the growth in population come certain problems, such as increased traffic, noise, flooding issues, and crime. The special assessments for paving that have been approved by the membership have nearly completed paving of the entry roads. Also funded by voluntary donations in 2001 was the purchase of the Orchidland Community Lot, which will someday house a community center, office, playground, and road maintenance building [[http://www.orchidland.org/about\\_us/index.php](http://www.orchidland.org/about_us/index.php)] (See Figure 24).

The majority of the lands along the project corridor are privately owned lots under 5 acres each. The Shipman family still retains a large parcel of land north of Paradise Park, stretching from the project corridor to the coast. Sections of State lands and Hawaiian homelands are found *makai* of Pāhoa (Juvik and Juvik 1998:226). In areas outside of the subdivisions, many of these privately owned lands are used for agriculture, including macadamia, papaya, orchids, and other cut flowers. The bottled-water industry has grown immensely in and around Kea'au in recent years, tapping in to the pristine underground waters flowing through the area.

### **3.7.3 Aha Punana Leo (Language Nest) and Ke Kula 'O Nawahiokalani'opu'u (The School of Nawahiokalani'opu'u)**

According to their website ([www.ahapunanaleo.org](http://www.ahapunanaleo.org)), Aha Punana Leo, a landowner, whose property is located at 16-120 'Opukaha'ia Street, in Kea'au (near, but outside the project APE), is:

...best known for our Language Nest Preschools, is the leading entity in Hawai'i and the United States for indigenous language revitalization. In the past twenty years, the 'Aha Punana Leo has moved the Hawaiian language from a population with less than forty children speakers to one with over 2,000 children speakers.

‘Aha Punana Leo is committed to use of the Hawaiian language at all times—in ‘Aha Punana Leo programs, from preschools to graduate school, and from canoe sailing lessons to contemporary computerized offices. The ‘Aha Punana Leo is an active partner in the community—both the Native Hawaiian community and the broader multiracial community of Hawai‘i, fostering academic, social and economic progress. The organization’s reach expands beyond the Hawaiian Islands to other indigenous communities, especially other Native American communities, where the ‘Aha Punana Leo model is assisting other peoples in their efforts to save their languages from extinction. We remain committed and focused on our vision, E ola ka ‘ōlelo Hawai‘i, the Hawaiian language shall live [<http://www.ahapunanaleo.org>].

Punana Leo o Hilo is the second Hawaiian Language Nest Preschool to be established. The school serviced its first *keiki* (children) on April 15, 1985. The school was moved from Hilo to its present location in Kea‘au and adjoins the Nawahiokalani‘opu‘u School Campus. This campus is the “First Punana Leo on Hawai‘i Island.” The school has serviced 517 families since its inception. Enrollment currently includes 35 children (<http://www.ahapunanaleo.org>).

On the same property since the 1997-98 school year, is the Hawaiian language Immersion School of Nawahiokalani‘opu‘u. The school was named after “Joseph Nawahi (1842–1896) also known as Joseph Kaho‘oluhi Nawahi and as Joseph Kaho‘oluhi Nawahiokalani‘opu‘u...Joseph Nawahi was a native Hawaiian legislator, lawyer, newspaper publisher, and painter,” ([http://en.wikipedia.org/wiki/Joseph\\_Nawahi](http://en.wikipedia.org/wiki/Joseph_Nawahi)).

According to the school’s website ([www.nawahi.com](http://www.nawahi.com)):

The ‘Aha Punana Leo provides, the physical facilities (21 acre site), and structures, utilities, Facilities Coordinator, Facilities Assistant and groundkeepers. Ke Kula ‘O Nawahiokalani‘opu‘u is designed for families, teachers and staff who have chosen to speak Hawaiian as the first and main language of the home, and also those who are in the process of establishing Hawaiian as the dominant language of the home. The goal is to develop, enhance and maintain the Hawaiian language through education in the home and school. The purpose of academics and global learning i.e., foreign languages such as English and Japanese, is to develop skills to be applied in the revitalization of the Hawaiian speaking community through economic interaction with the outside world. Educational Mission: Students of Nawahiokalani‘opu‘u are educated upon a culturally Hawaiian foundation. This foundation is the basis upon which students are impelled to: Bring honor to ancestors; Seek and attain knowledge to sustain family; Contribute to the well-being and flourishing of the Hawaiian Language and culture; Contribute to the quality of life in Hawai‘i. School Standard of Operation: The Hawaiian language is the living language of the school community and must be perpetuated through its daily use. The program is family-based, enrolling families rather than individual students for an overall program of language and cultural development...

### 3.7.4 Department of Hawaiian Home Lands (DHHL)

The DHHL, was created in 1920 as the result of an act of Congress who passed the Hawaiian Homes Commission Act or 1920, which was signed into law in 1921. Chapter 42, 42 Stat. 108 of the act:

...provides for the rehabilitation of the native Hawaiian people through a government-sponsored homesteading program. Native Hawaiians are defined as individuals having at least 50 percent Hawaiian blood. Pursuant to provisions of the HHCA, the Department provides direct benefits to native Hawaiians in the form of 99-year homestead leases at an annual rental of \$1. In 1990, the Legislature authorized the Department to extend leases for an aggregate term not to exceed 199 years (Act 305, Session Laws of Hawaii 1990; section 208, HHCA). Homestead leases are for residential, agricultural, or pastoral purposes. Aquacultural leases are also authorized, but none have been awarded to date. The intent of the homesteading program is to provide for economic self-sufficiency of native Hawaiians through the provision of land. Other benefits provided by the HHCA include financial assistance through direct loans or loan guarantees for home construction, replacement, or repair, and for the development of farms and ranches; technical assistance to farmers and ranchers; and the operation of water systems.

According to the 2008 DHHL circular entitled “Maku‘u Regional Plan” located on their website (<http://hawaii.gov/dhhl/publications/regional-plans/hawai-i-regional-plans/Makuu>), there are several areas of DHHL properties in Puna, portions of which are within the current project area. Maku‘u Farm Lots and Maku‘u Residential Lots are both located alongside the *mauka* and *makai* areas of Kea‘au-Pāhoa Road. All of the DHHL lands located in Puna rely on the Kea‘au-Pāhoa Road for access. According to the circular, the Maku‘u Farmers’ market, which began as a “grassroots initiative” with 2 acres, is now operating on 9 acres of DHHL land. Future plans for the market includes expanding to 38 acres and building a community center, housing for kūpuna and homeless, a visitors center with overnight housing, “a festival park,” a child care center, playing fields, commercial and retail spaces, a health center and a social agency center. Some of these new plans include opening some of the facilities for community use.

Currently the Maku‘u Farmers Market Association Lot (located alongside Highway 130 adjacent to Maku‘u Homesteads lots) is not only being used as a farmers market, for economic benefit, but also as a bastion of culture for native Hawaiians living in the region, and the local population. Within the Maku‘u Farmers Market Association grounds there are many cultural practices still ongoing as a way to perpetuate the culture and pass knowledge of traditional Hawaiian ways to the next generation (see Section 7). Mrs. Kekahuna is President of the organization and their son Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna is the project manager for the association (see Section 6.9).

## Section 4 Previous Archaeological Research

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Archaeological research throughout Puna has focused primarily on the coast and areas of proposed construction relating to roadways and industrial development. Recent archaeology within the coastal zone reveals that the coast was the primary zone for habitation in both prehistoric and historic times. Major areas of this zone have been heavily impacted by historic agricultural endeavors (sugar cane, macadamia nuts, etc.). Inland sites that remain are primarily related to plantation camps from the same period (late 1800s to early 1900s) and possibly from earlier (late-1800s) ranching and (mid-1800) agricultural endeavors.

Early archaeological studies in the area are related to island-wide surveys by Thrum (1909), and Hudson (1931), both of which were limited to the old trails between towns and sometimes along the coast, and focusing mainly on *heiau* sites. Later, Stokes (1991) retraced these earlier surveys. Emory's work (1945) in the Puna district provided the first evidence of traditional lava tube use for habitation and burial placement in the Puna district. Many archaeological investigations have occurred over the last few decades in areas adjacent to the current project corridor. These studies are outlined in Table 8 and shown on Figure 26 below.

### 4.1 Archaeological Research Within the Immediate Vicinity of the Current Project Area

Several previous archaeological studies have been conducted within and adjacent to the current project.

#### 4.1.1 Komori (1987)

Bernice P. Bishop Museum (BPBM) conducted a cultural and biological resources survey of the proposed Pohoiki to Puna-substation 69kv Transmission Corridor in 1987 (Komori 1987). The project area consisted of two areas that overlap with the current undertaking: Area A, southeast of Kea'au town, extending from the old Puna Sugar Mill *makai* to Shower Drive below Waipāhoehoe town, and Area B, from the boundary of Waikahekahe Iki south to the Keonepoko Homesteads. Eleven archaeological and three historic sites were recorded, all over one mile southeast of Kea'au town (Komori 1987:13). Site types included mostly agricultural features with associated habitation areas: irrigation ditches, terraces, platforms, modified outcrops, refuge and burial caves, petroglyphs, and a historic cement and stone foundation. It is suggested that this area was settled after A.D. 1450 during the Expansion Period (as proposed by Kirch 1985), when a burgeoning population forced habitation areas to expand beyond the coastal settlement zone to possibly less desirable upland agricultural areas (Komori 1987:29-31).

Area A contained three transects running more or less east/west and adjacent to Hwy. 130. Transects 4 and 5 were *mauka* of the road and transect 3 was *makai*. Two pre-contact terrace sites were found within transect 5 and designated A1-48 and A1-49. Based on Komori's Figure 2a, site A1-49 appears to be just beyond the limits of the current project area, approximately 45 m *mauka* of Hwy. 130 just south of BM 297 on the bank of an intermittent stream. Site A1-49 is described as:

Table 8. Previous Archaeological Investigations in the Vicinity of the Project Corridor

Source	Nature of Study	Location	Findings
Hudson (1931)	Archaeological Survey/ Investigation	Eastern Hawai'i	Sites along the coast including some in the vicinity of Pāpa'i where Kamehameha declared the "Law of the Splintered Paddle"
Emory (1945)	Survey/ Exploration	Shipman Cave, Kea'au TMK [3] 1-6	SIHP site 50-10-36-20678, a lava tube used for habitation and burial
Ewart and Luscomb (1974)	Reconnaissance Survey	Proposed Kapoho-Keaukaha Highway, Kea'au, Waikahekahe, Maku'u, Keonepoko and other Ahupua'a TMK [3] 1-5 and 1-6	118 historic properties in all, with 30 listed along the Kea'au coastal region alone, including site complexes, walls, terraces, enclosures, platforms, temporary shelters, and lava tube with burials
Bordner (1977)	Archaeological Reconnaissance	Proposed F.A.A. Air Traffic Control Radar Beacon System (ATCRBS) Facility at Pāhoa, Puna TMK [3] 1-5-010:017	SIHP site 50-10-46-21217, a small <i>ahu</i> , or marker, constructed of <i>pāhoehoe</i> , which may or may not be prehistoric
Hammatt (1978)	Reconnaissance Survey	King's Landing, Kea'au Ahupua'a, Puna TMK [3] 1-6-001	27 historic properties, concentrated at the coast, included both historic and prehistoric stone structures, subsurface cultural deposits, and traditional cultural places
McEldowney (1979)	Archaeological and Historical Literature Search and Research Design: Lava Flow Control Study: Inventory of Archaeological and Historical Resources	Kea'au, 'Ōla'a, Waikahekahe, Maku'u, Keonepoko, Waiakahiula and other Ahupua'a TMK [3] 1-5 and 1-6 among others	94 historic properties island-wide, some listed in the SHPD database as "needing new site numbers"

Source	Nature of Study	Location	Findings
Kam (1982)	Memorandum of Examination	Pāhoa Cave TMK [3] 1-5-009:009	Memo briefly describes two large lava tubes containing at least 20 burials, presumably from the early to late contact period; no mention of state site numbers associated with this project in the SHPD database
Rosendahl (1982)	Archaeological Reconnaissance Survey	Proposed Shipman Industrial Park TMK [3] 1-6-03:Portion 012	No historic properties identified
Yent (1983)	Survey	Lava Tube in Pāhoa, Waiakahiula 2 Ahupua'a TMK [3] 1-5-008:001	SIHP site 50-10-45-14900, the Pāhoa lava tube system.
Olson (1984)	Reconnaissance	Kapokohelele and the Puna Cave TMK [3] 1-6-009:376	SIHP site 50-10-46-10001, the "Puna Cave Complex," which correlates to traditional accounts
Komori (1987)	Cultural and Biological Resources Survey	Pohoiki to Puna-Substation 69KV Transmission Corridor, Kapoho to Kea'au, Puna TMK [3] 1-4, 1-5 and 1-6	Eleven archaeological and three historic sites were recorded, including mostly agricultural features with associated habitation areas such as irrigation ditches, terraces, platforms, modified outcrops, refuge and burial caves, petroglyphs, and a historic cement and stone foundation
Rosendahl (1988)	Archaeological Reconnaissance Survey	Pāhoa Elementary School Sites, Keonepoko Nui and Iki Ahupua'a TMK [3] 1-5-008:001,006; 1-5-009:009; 1-5-010:003	No historic properties identified
Rosendahl (1989)	Field Inspection	Paradise Park Development Parcel #2, Lands of Maku'u, Pōpōkī, and Hālonā, Puna District TMK [3] 1-5-010:028	No historic properties identified

Source	Nature of Study	Location	Findings
Stone and Tashima (1989)	Survey and Description	Pāhoa Cave beneath Pāhoa Phase II Agricultural Lots, Keonepoko Nui and Iki Ahupua'a TMK [3] 1-5-010:003; 1-5-116:030, 031, 049, 050, 051, 052, 053, 054, 055, 056, 057	Eight historic properties identified, though report describes these as confidential and does not include description; no mention of state site numbers associated with this project in the SHPD database
Barrera and Lerer (1990)	Archaeological Inventory Survey	Maku'u, Puna TMK [3] 1-5-010:033	State Inventory of Historic Places (SIHP) sites 50-10-45-14674, 50-10-45-14681 through -14685, consisting of over 70 features, primarily agricultural. A few possible habitation and burial features were identified as well.
Stokes (1991)	Historic Survey	Native Hawaiian Temple Sites, Island of Hawai'i	Reviewed <i>heiau</i> sites identified by Thrum (1909) and Hudson (1931)
Franklin et al. (1992)	Archaeological Inventory Survey	Ainaloa Project: Lands of Waikahekahe Nui and Waikahekahe, Puna District TMK [3] 1-6-004:021, 057	SIHP sites 50-10-44-17848 (modified excavated blister) and -17849 (terrace); both are traditional agricultural features
Major (1992)	Archaeological Inventory Survey	Pohoiki No. 2 Transmission Line Corridor, Puna District, Kahawai Ahupua'a TMK [3] 1-5-009	SIHP sites 50-10-45-17962, -17963 (lava tube with human remains) and -17967 (historic, double-faced, core-filled wall)
Major and Stone (1992)	Burial Report	Pohoiki No. 2 Transmission Line Corridor, Puna District, Kahawai Ahupua'a TMK [3] 1-5-009	Examination of SIHP sites 50-10-45-17962 and -17963 (Major 1992)
Chaffee and Spear (1993)	Archaeological Investigations	Site 50-10-45-14675 and Site 50-10-45-14985, Maku'u Aquafarms, Maku'u, Puna TMK [3] 1-5-010:033	Re-examined SIHP sites 50-10-45-14675, 50-10-45-14985 (from Barrera and Lerer, 1990), confirming human remains at two features

Source	Nature of Study	Location	Findings
Charvet-Pond and Rosendahl (1993)	Archaeological Inventory Survey	Vaughan Residential Parcel; Lands of Maku'u, Pōpōkī, and Hālonā, Puna District TMK [3] 1-5-010:029	SIHP sites 50-10-45-18418 through -18422, which include a prehistoric coastal trail, two historic cattle walls, a coastline terrace complex, two bait cups on a basalt bench, and a horticultural complex consisting of 26 features
Hunt (1993)	Archaeological Assessment	Shipman Lands, Kea'au Ahupua'a TMK [3] 1-6-003:003, 007, 008, 011, 012, 027, 029, 058, 073, 075, 084, 086, 090	Historic properties identified consisted of primarily historic agricultural features and associated plantation camps
Chaffee et al. (1994)	Data Recovery	Site 50-10-45-14675 and Site 50-10-45-14985, Maku'u Aquafarms, Maku'u, Puna TMK [3] 1-5-010:033	Re-examined SIHP sites 50-10-45-14675, 50-10-45-14985, confirming earlier finds (Chaffee and Spear 1993)
Conte et al. (1994)	Archaeological Inventory Survey	Portion of Maku'u, Pōpōkī and Hālonā Ahupua'a TMK [3] 1-5-008:003; 1-5-010:004	No historic properties identified; this lack of features is ascribed to lack of arable soil in project area
Hurst and Schilz (1994)	Archaeological Survey	Kea'au Pāhoa Road, Kea'au Town Section, Kea'au Ahupua'a TMK [3] 1-6-003	No historic properties identified
Allred et al. (1997)	Identification	Herbert C. Shipman Cave, Kea'au TMK [3] 1-6-001:001	No historic properties identified; describes errors in previous survey/ historical investigations of the cave
Lass (1997)	Archaeological Reconnaissance Survey	Old Government Road, Kea'au, Puna	14 historic properties along the coast, including both prehistoric and historic agricultural features, habitation features and complexes, a <i>heiau</i> , and human burials. The historic sites are related to Shipman Ranch and WWII construction activities

Source	Nature of Study	Location	Findings
Walker et al. (1997)	Historical and Archaeological Research	Proposed Kea'au High School Site, Kea'au Ahupua'a TMK [3] 1-6-003:003, 015, 084	SIHP site 50-10-44-21191, which is the Hilo Railroad Company right-of-way
Masterson and Hammatt (1998)	Archaeological Inventory Survey	Proposed Kea'au Elderly Housing Project, Kea'au Ahupua'a TMK [3] 1-6-143:Portion 018, 039	No historic properties identified; modern camp identified
Maly (1999)	Archival-Historical Documentary Research, Oral History and Consultation Study, and Limited Site Preservation Plan	Puna Trail-Old Government Road, Kea'au Ahupua'a, Puna District TMK [3] 1-6-001	No historic properties identified
McGerty and Spear (1999)	Archaeological Inventory Survey	Proposed K.S.B.A. East Hawai'i campus, Kea'au Ahupua'a, Puna District TMK [3] 1-6-03:portion 012	SIHP site 50-10-44-21823, consisting of seven features related to clearing of the land for the sugar cane industry
Clark et al. (2001)	Archaeological Inventory Survey	Waiakahiula Ahupua'a, Puna District TMK [3] 1-5-002:024	SIHP sites 50-10-55-22966 and -22967, which are related to historic railroad activities in Pāhoa town
Rechtman (2003)	Archaeological and Limited Cultural Assessment	Proposed Maku'u Water System, Maku'u and Hālonā Ahupua'a TMK [3] 1-5-008:001	No historic properties identified
Desilets and Rechtman (2004)	Archaeological Inventory Survey	Maku'u residential subdivision TMK [3] 1-5-08:03	SIHP sites 50-10-45-24231, an enclosure complex, and 50-10-45-24232, a stone-retained terrace
Kasberg and Rechtman (2004)	Monitoring Report	DHHL Maku'u Water System, Maku'u and Hālonā Ahupua'a TMK [3] 1-5-008:001	No historic properties identified

<b>Source</b>	<b>Nature of Study</b>	<b>Location</b>	<b>Findings</b>
Rechtman (2004a)	Monitoring Plan	DHHL Maku'u Water System, Maku'u and Hālonā Ahupua'a TMK [3] 1-5-008:001	No historic properties identified
Rechtman (2004b)	Request for SHPO Concurrence - No Historic Properties Affect	New Pāhoa Fire Station, Keonepolo Nui and Keonepoko Iki ahupua'a TMK: 3-1-5-07:17	Lava tube in project area but no historic properties identified



Figure 26. Portions of U. S. Geological Survey 7.5-minute topographic quadrangle maps, showing previous archaeological studies and the project corridor

...a segment of terracing 25 meters long. Constructed of 4-5 courses (75-100 centimeters high) of stacked angular stone, the structure is oriented approximately 355 degrees east of magnetic north. The site has been disturbed by bulldozing of the deep soils of the adjacent sugar cane field and is covered with guava. No artifacts or midden were observed (Komori 1987:17).

Site A1-48 is approximately 150 m southwest of A1-49, and is described as:

...a five meter long terrace situated at the top of the steep southeast bank of an intermittent stream. The terrace is located in a dense, narrow stand of hau (*Hibiscus tileaceus*) that follows the stream and between two sugar cane fields. The terrace is constructed of stacked angular stones, two to three stones high (60 centimeters) and oriented approximately 10 degrees east of magnetic north. No artifacts or midden were observed. Disturbed remnants of additional terracing were found nearby and the soil in the area is deep (Komori 1987:15-17).

Two transects within Komori's (1987) Area B overlap with the current project. Transect 10 extended across Hwy. 130 and Transect 12 was adjacent and *mauka* of the road. No cultural resources were found within either of the transects.

#### 4.1.2 Desilets and Rechtman (2004)

Rechtman Consulting LLC (Desilets and Rechtman 2004) conducted an archaeological inventory survey for a proposed Department of Hawaiian Home lands (DHHL) residential development in Maku'u residential subdivision (TMK [3] 1-5-08:03). The project was *mauka* of Highway 130 near the southern portion of the current undertaking. Two sites were found in the northern most portion of the project area in a grove of pandanus and guava.

SIHP site 50-10-45-24231 is an enclosure complex consisting of three features. Feature 1 is a large more or less round enclosure with a mound within its center. Feature 2 is a basalt cobble platform, and Feature 3 is a 4.5 m long and 1 m wide wall that is "connected to the eastern side of the enclosure (Feature 1) and adjoining the northern side of the platform (Feature 2)" (Desilets and Rechtman 2004:21). Five test units were excavated to aid in determining the site's function, the design and construction of which "clearly indicate a traditional Hawaiian cultural affiliation" (Desilets and Rechtman 2004:24). No evidence of habitation was present and the possibility that the site type was ceremonial is supported by a subsurface feature found during excavation of the mound in the enclosure's center. The feature is described as

several upright, tabular cobbles...and some adjoining cobbles arranged parallel to one another. Between these large cobbles was a line of small water-worn cobbles...presumably...from the coast. An alignment of four cobbles runs at a 150° bearing, all at the same depth and sandwiched between large cobbles....The linear orientation of the cobbles and their careful placement suggest that there is a larger pattern extending beyond the limits of the test unit [Desilets and Rechtman 2004:12].

SIHP 50-10-45-24232 is a stone-retained terrace whose function is ambiguous. A rusted metal ring was the only "artifact" found during a test excavation indicating the possibility that the site

is actually modern. Desilets and Rechtman (2004:25) also suggested that the site may be a “natural collection of cobbles perched on the outcrop slope.”

#### 4.1.3 Rechtman (2004b)

Rechtman Consulting LLC (Rechtman 2004b) conducted an archaeological inventory survey and consultation for the proposed new Pāhoā Fire Station (TMK: 3-1-5-07:17). The project was *makai* of Highway 130 near the southern portion of the current undertaking. The property has been under cultivation as an anthurium farm by the Kuwahara family. Alan Kuwahara, the property lessee's son, reported that a lava tube was found during initial grading along “the northeastern parcel boundary in the southeastern portion of the property” (Rechtman 2004b:4).

Lava tube entrances were found *makai* of the property area and thoroughly surveyed “*mauka* and *makai*” of the project area. No historic properties were identified during pedestrian survey or within the lava tubes. However, “a significant quantity of modern debris (i.e., rusted metal, plastic, broken glass, building materials)” was observed, and believed to have been “deposited as the result of water flowing through the tube” possibly from another entrance (Rechtman 2004b:6). This lava tube extends *mauka/makai* beneath Kea‘au-Pāhoā Road.

#### 4.1.4 The Kazumura Cave and the Current Project Area

At more than 60 km long and 1,101 m deep the Kazumura Cave (State Inventory of Historic Places [SIHP] 50-10-46-10001) has been called the longest and deepest lava tube in the world and the deepest cave in the USA ([www.showcaves.com/english/usa/caves/Kazumura.html](http://www.showcaves.com/english/usa/caves/Kazumura.html)). The information available to us indicates that the Kazumura Cave crosses (underlies) the current project area just northwest of the intersection with Paradise Drive (Figure 27 and Figure 28). It is asserted that: “Prehistoric use of the cave by humans was heavy in the downstream nine kilometers nearest the ocean” (Allred and Allred 1997:67) – which would appear to include the vicinity of the portion of the lava tube underlying the present project area. CSH’s archaeological survey did not find any entrance to any cave within the project area. Furthermore, a current survey conducted by Imata and Associates, Inc. did not identify any openings to the Kazumura Cave within the proposed Orchidland Drive Extension APE, and established that the ceiling of the cave lies between 16.5 and 30 feet from the Kea‘au-Pāhoā Road surface (Figure 29). Therefore, it is highly unlikely that the current project will have any effect on this particular lava tube. CSH did interview at least one respondent who mentioned that there is a family with an entrance to a cave in their yard along the corridor, and that in at least one instance a tube was breached in the Orchidland area with a bulldozer. It is not known whether this is the Kazumura Cave (see Naeole Interview Section 5).

According to Allred and Allred (1997):

Kazumura Cave is located about 20 km south of the city of Hilo in Puna District on the Big Island of Hawaii. In 1966, one of its many entrances was designated as a fallout shelter (Hawaii Grotto News, 1995) [See also Stapelton interview, Section 6.4]. It came to the caving community's attention in the early 1970s when Francis Howarth discovered several new troglobitic invertebrate species in this and other nearby caves (Howarth, 1973). An 11.7 km portion was surveyed by a British expedition (Wood, 1981) and then was recognized as one of the longest

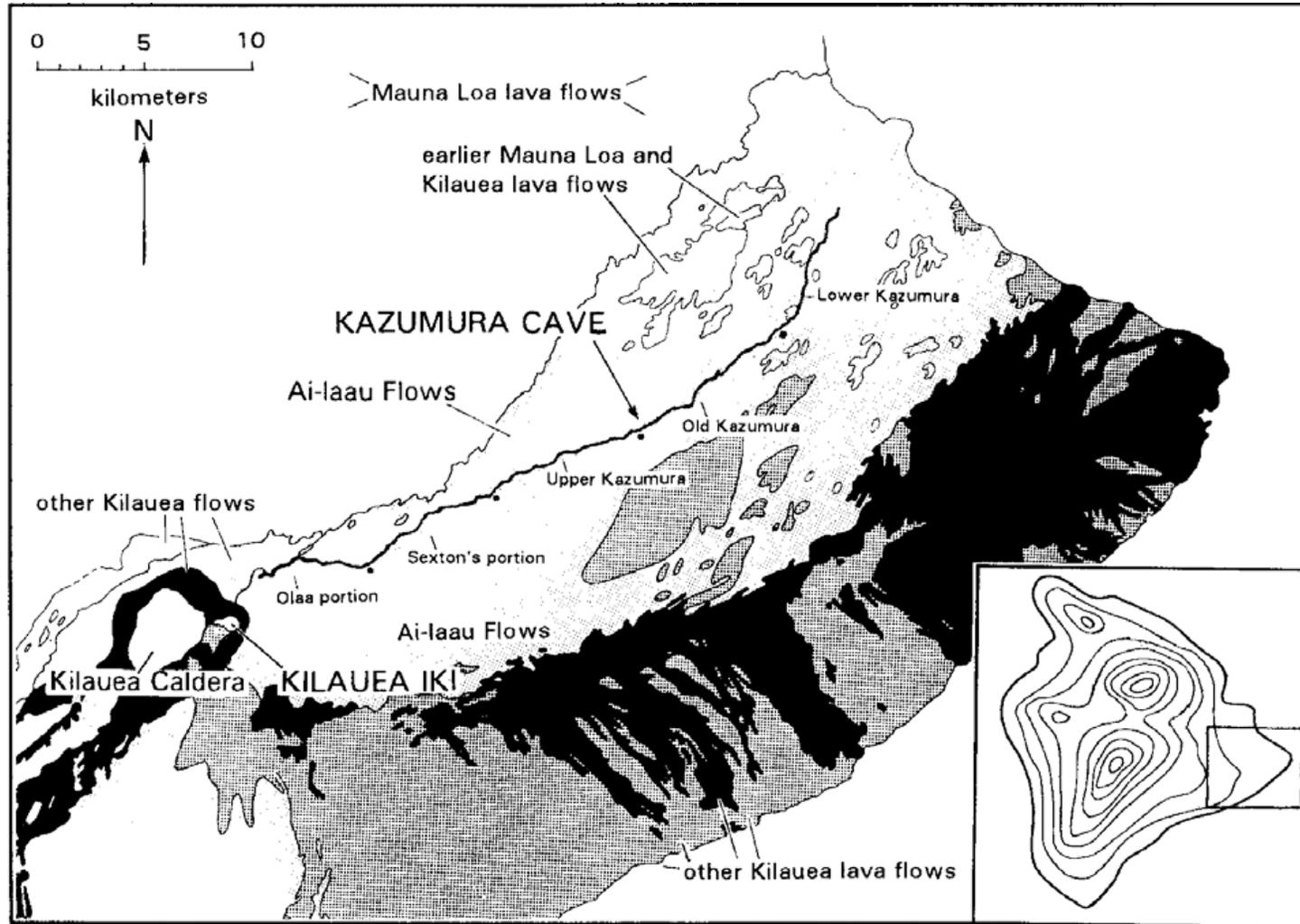


Figure 27. Lava flow boundaries according to Holcomb (1987) showing Kazumura Cave and its five portions (Holcomb 1987 as published in Allred and Allred 1997). The current project area appears to travel NNW to SSE between Allred's "old Kazumura and lower Kazumura portions.

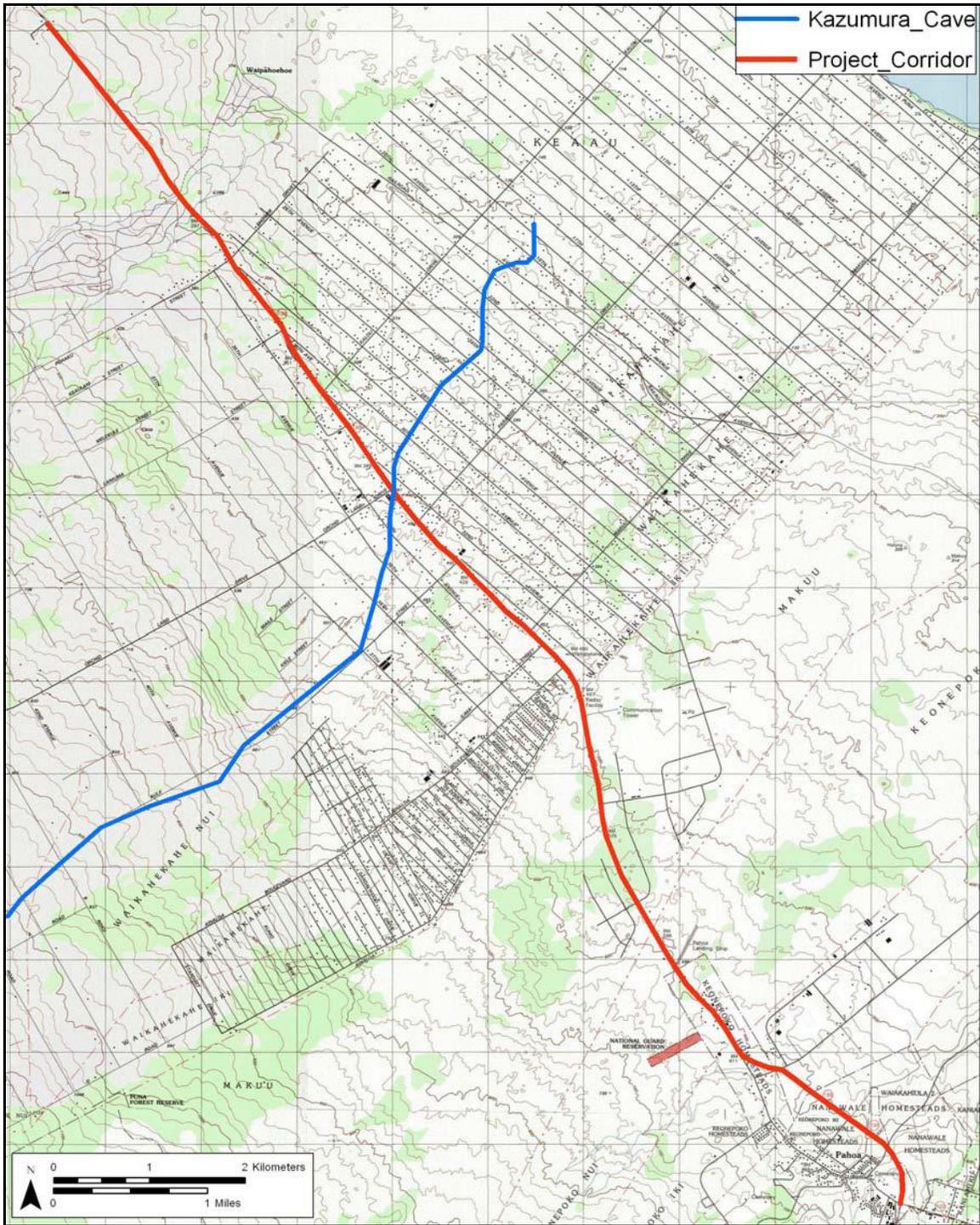


Figure 28. USGS topographic map Map showing the relationship of the Kazumura Cave to the current project area; the lava tube appears to cross the project corridor at the intersection with Orchidland Drive ([www.showcaves.com/english/usa/caves/Kazumura.html](http://www.showcaves.com/english/usa/caves/Kazumura.html))

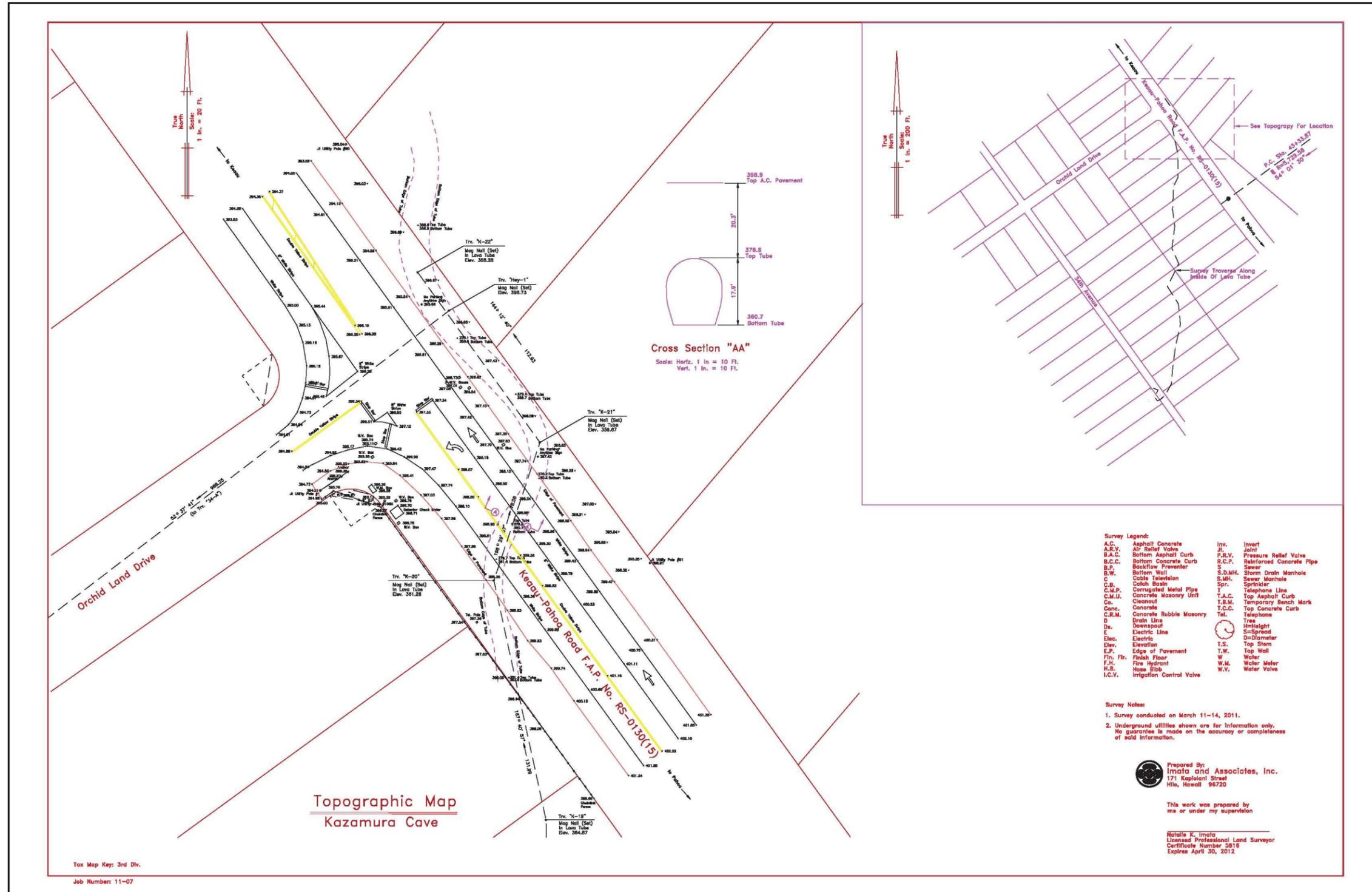


Figure 29. Map prepared by Imata and Associates, Inc., showing the depth of the Kazamura Cave in relation to the Kea’au-Pāhoa Road; note that Cross Section “AA” shows the tube at a depth of 20 feet below the center of the road

lava tubes in the world. In 1994 and 1995, teams of the Hawaii Speleological Survey of the National Speleological Society conducted explorations and studies.

...To date, the length of the cave is 59.3 km with a vertical extent of 1098 m. Average slope of the cave is 1.9° over the linear length of 32 km. Approximately 17 km of the surveyed passages consist of side branches and passages overlying the main (lowest) level. Also surveyed were additional caves originally part of Kazumura Cave but segmented from it according to criteria described by Crawford (1982). These additional caves total less than one kilometer.

Kazumura Cave carried tholeiitic pahoehoe lava for one of the Ai-laau shield flows originating from Kilauea Volcano approximately 350 to 500 years BP (Holcomb, 1987). The Ailaau flows spread from 1.5 km long Kilauea Iki Crater, situated just east of Kilauea Caldera at nearly 1200 m elevation (Holcomb, 1987).

...The Kazumura Cave flow once drained 39 km toward coastal Kaloli Point, and may have extended the shoreline there, adding an unknown mass below sea level. Analysis of the Ai-laau basalt indicates only a 4° C temperature loss across the 39 km flow (Clague, personal communication, 1995) due to the insulative efficiency of lava tubes.

The character of the cave varies dramatically from a road fill blockage high on the volcano at 1128 m, to the nearly sealed bottom located only 29 m msl. Passage dimensions can be as much as 21 m wide and 18 m high.

...the volume of accessible cave is nearly 1.2 million cubic meters. Sinuous, smooth, dark gray metallic-looking walls are often gently grooved with horizontal flow ridges. Floors are usually clean pahoehoe, and seldom grade into a clinker aa surface. In dead-air spots such as side passages, the ceilings and floors can have a very rough, popcorn or frothy appearance, possibly from degassing. The narrow, stacked passages common in the portion closer to the crater gradually change into a single, low, broad-shaped passage further downstream.

...Because of thin soils and the relative new age of Kazumura Cave, we found only two significant silt deposits underground, but entrances have accumulated organic debris of decomposing vegetation. Cave temperature consistently increases from 15° C near Kilauea, to 22° C under the coastal plain. Prehistoric use of the cave by humans was heavy in the downstream nine kilometers nearest the ocean. Over the years, subsequent vandalism and destructive impacts are extreme on these cultural sites because of overlying subdivisions, roads, and many entrances.

Allred and Allred (1997) divided the Kazumura cave into five portions for their research and documentation of the system. Figure 30 shows the inside of the cave system within Allred and Allred's (1997) "Old Kazumura portion." According to Figure 27 and Figure 28, it appears that the current project area overlies the Kazumura cave system somewhere within the Old and

Lower Kazumura portions, as outlined by Allred and Allred (1997). Further, according to Allred and Allred, the Kazumura cave tube system has about 82 entrances, is multileveled, with some areas demonstrating tube within tube construction, overlying passages, balconies and waterfall



Figure 30. Photo showing the inside of the Kazumura cave, possibly near project area; “A lava tube fall in the Old Kazumura portion”; photo by Kay Allred (1997).

like features. Evidence of structural breakdown and separation of levels within the system is apparent due to geological conditions. (Allred and Allred 1997:72-73) Finally, while prehistoric use of the cave is evident, modern use of the cave, road construction and increased populations within existing subdivisions has impacted the cave system:

Prehistoric use of the cave by humans was heavy in the downstream nine kilometers nearest the ocean. Over the years, subsequent vandalism and destructive impacts are extreme on these cultural sites because of overlying subdivisions, roads, and many entrances. We discovered three sewer pipes in the cave, at least three sites of graywater pollution, two significant garbage dumps, and several fills from road construction. Some entrance portions had signs of recreational caving (i.e., trash and shoe fragments) usually ending at drops, or crawlways [Allred and Allred 1997:67].

#### **4.1.5 Archaeological Background Summary**

The District of Puna is located between the Hilo and Ka‘ū Districts, which were traditionally strongholds of chiefs and ruling families. While “Puna lands were desirable, and were eagerly sought...their control did not rest upon the conquering of Puna itself, but rather upon control of the adjacent districts, Kau and Hilo. An attempt to follow in detail the course of Puna’s history is bound up with the fortunes of the ruling families on either side of her” (Emory et al. 1959:15).

Additionally, with the arrival of missionaries such as Ellis and Wilkes in the early 1800s, massive conversion to Christianity seemed to bring with it a sense of unwillingness to relay traditional mythologies and histories of the land (Barrere 1971:11).

The lands along the current project corridor fall between approximately 320 and 675 feet amsl. The corridor is located between approximately 3.5 and 5.2 miles from the Puna coastline, which is located on the windward side of Hawai'i Island. This area seems to reflect aspects of McEldowney's (1979) Upland Agricultural and Lower Forest Zones, in that, while scattered agriculture was practiced throughout the area, the expansive 'ōhi'a forests found in this region were also a major resource.

The end of the Contact Period saw a rapid decline in the population of the Puna District (Lyman 1924:103), a result of foreign disease and industrialization (Coan 1882:121). This contraction of population in Puna may help to account for the lack of *kuleana* awards throughout the region under the Māhele.

During the late 1800s men such as Lyman and Shipman turned large chunks of land throughout Puna into cattle ranches (Hurst and Shilz 1994; Cahill 1996). This industry took a toll on small-scale agriculture throughout the district, as cattle were prone to destroy unprotected plots. Remnants of the cattle industry are found across Puna today, in the form of historic features such as ranch walls.

Near the turn of the 20<sup>th</sup> century, large-scale coffee cultivation was attempted, particularly in the more coastal regions of Puna. This fledgling industry couldn't compete with more successful ventures located in other districts, and after a few decades the coffee industry in Puna was abandoned (Cordy 1977:4).

During the first half of the 20<sup>th</sup> century, Puna was dominated by the sugar industry. Thousands of acres of land were turned into sugar plantations, stretching from the south Hilo border to Cape Kumukahi, then west to inland areas of south Puna. The rapid success of the sugar industry brought with it the Hilo Railway Company expansion across Puna, as well as an influx of foreign workers. When the 1946 tsunami shut down the rail line, the transportation of sugar continued with trucks (Treiber 2005).

Beginning in the 1950s and 60s, residential development began in Puna, with Hawaiian Paradise Park in particular. Though agriculture is still an important industry in Puna, it has decreased over the years as settlement throughout the district has almost exponentially increased.

Recent studies (Allred and Allred 1997; Rechtman 2004b) have emphasized the possibility of extensive lava tube systems underlying the present study corridor.

#### **4.1.6 CSH Archaeological Survey Results**

A complete pedestrian survey identified two historic properties within the current project area. A portion of a cemetery associated with the Sacred Heart Catholic Church in Pāhoa, was determined to be located within the current project area at the intersection of the Kea'au-Pāhoa Road and Old Pāhoa Road. The Sacred Heart Catholic Church and its cemetery are components of the Pāhoa Historic and Commercial District, SIHP # 50-10-55-7388 (Department of Transportation 1979:F1). The second historic property, SIHP# 50-10-44-26889 consists of an abandoned concrete bridge and associated asphalt-paved roadway located adjacent and parallel

to the southwestern edge of the existing Kea'au-Pāhoa Road. The SIHP# 50-10-44-26889 bridge is located approximately 630 m northwest of the intersection of Pōhaku Drive and the Kea'au-Pāhoa Road (Figure 31).



Figure 31. SIHP # 50-10-44-26889 extending across the dry streambed of Waipāhoehoe Stream, view to northeast

A path of Meditation associated with the Sacred Heart Catholic Church, a component of the Pāhoa Historic and Commercial District, SIHP # 50-10-55-7388 (DOT 1979:F1), appears to lie entirely within the Sacred Heart property but extends to the edge of the present and future highway right-of-way. The Sacred Heart Catholic Church and its cemetery lie outside of the project APE.

The results of the pedestrian inspection indicate that the majority of land within the current project area has been significantly altered during the construction of the existing Kea'au-Pāhoa Road and adjacent roadways, subdivisions, and private residences. The majority of development has occurred at the northern end of the project area in Kea'au, near the center of the project area between Shower Drive and Maku'u Drive, and at the southern end of the project area near Pāhoa (see Figure 1). Developed areas generally consisted of the existing Kea'au-Pāhoa Road surface, a wide mowed-grass easement, and features related to individual house lots including fences, stone walls, shrubbery, and driveways. Ground visibility within developed portions of the current project area was generally high.

Two sections along the sides of the current Kea'au-Pāhoa Road were determined to be generally undeveloped. These areas extended from Opukahaia Street southeast to Pōhaku Drive and Shower Drive and from the Maku'u Farmer's Market southeast to Pāhoa (see Figure 1).

These two undeveloped areas generally consisted of the existing Kea'au-Pāhoa Road surface, a narrow mowed berm, and dense vegetation comprised of 'uluhe fern (*Dicranopteris linearis*), guava, strawberry guava, and other exotic grasses and shrub. Ground visibility within undeveloped portions of the current project area was generally low due to thick, nearly impassable vegetation (Figure 32).

The agricultural terraces found during a previous archaeological inventory survey (Komori 1987) near the current project area were not visible from the survey area due to the dense vegetation. Since the terraces are more than 15 m (50 ft.) west of the survey area no attempt was made to find them.

While no lava tubes were found within the project area during the archaeological inventory survey, their presence may have been obscured by dense vegetation, particularly in the southern portion of the project area in the vicinity of Pāhoa.

Six roadside memorials were also found within the project areas that do not appear to be historic properties (Figure 33).



Figure 32. Representative photo of undeveloped portions of project area; taken north of Old Pāhoa Road, view to south

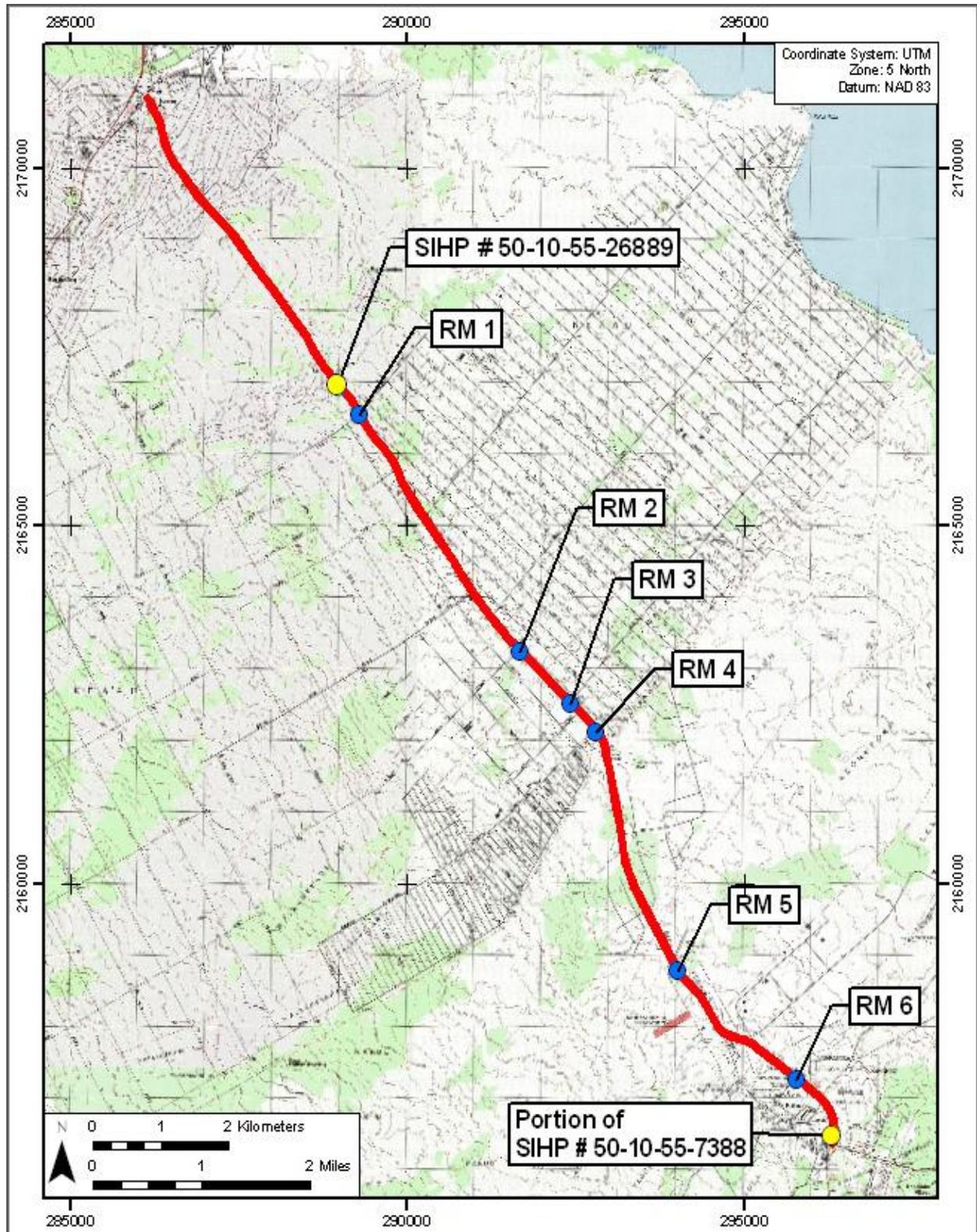


Figure 33. Portion of U. S. Geological Survey map showing locations of sites and features within the project area

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## Section 5 Community Consultations

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### 5.1 Community Consultation Effort

An effort was made to contact and consult with Hawaiian cultural organizations, government agencies, and individuals who might have knowledge of and/or concerns about Hawaiian cultural practices, resources and beliefs related to the Kea'au-Pāhoa Road Project corridor within the *ahupua'a* of Kea'au, Waikahekahe Nui, Waikahekahe Iki, Maku'u, Pōpōkī, Hālonā, Keonepoko Nui, Keonepoko Iki, and Waiakahiula 1 and 2, and Pōpōkī. This effort was made by letter, e-mail, telephone, and in person. In most cases, letters with a detailed description of the proposed action and conceptual plan provided by The State of Hawaii, Department of Transportation, along with a TMK map of Puna showing the project area and a USGS map of the Project Area were mailed to community consultants.

#### 5.1.1 Community Respondents: A Note on Non-Participation

It is important to understand that community response to the proposed Kea'au- Pāhoa Road Improvement Project is represented not only by those who agreed to participate in this consultation, but also—and perhaps as importantly—by those who chose not to participate. A number of likely contributors to this cultural impact study by way of their cultural use, knowledge, attachment and generational ties to Puna, as well as those *kupuna* (elders) who are knowledgeable of legends, stories and cultural practices taking place in the project area, declined to provide comment for this CIA. Their reasons for non-participation vary, but generally underscore decades of discontent with how developments in Hawai'i have been undertaken. Many are frustrated by the continued expansion of the road over time, and the loss of their lands to yet another road project. Others feel as though their native Hawaiian stories and legends will not be taken seriously in a modern system of empirical studies. And, some feel as though they have nothing to contribute to the study because of their non-Hawaiian cultural background. Finally, some of the participants and non-participants in this study generally expressed that the corridor itself is a place that is generally not in use personally for ongoing native Hawaiian cultural activity. However, is in use for other activities that may not be necessarily defined as a cultural activity for the purpose of this study. Most agree however, that the road, as a thoroughfare, has existed through time, has served as a vital transportation route first as a trail for native Hawaiians in pre-history, a carriage, cart, and then a narrow winding road for people during historic times, and finally, a paved, wider and straightened road for the people of Puna in the present. The results of the community consultation for this CIA, while elucidating many of the key cultural issues surrounding the Puna District, may not reflect the wealth of concerns possessed by many other members of the community who chose not to be interviewed for this study.

#### 5.1.2 Community Outreach and Consultation Table

As described in Section 1.1., when the Kea'au-Pāhoa Road Widening Project's CIA consultation was initiated in July 2009, communication with Project proponents indicated that the proposed project area consists of a 200 ft (61 m) wide corridor, approximately 9.5 miles (15 km) long, beginning at the terminus of the existing 4-lane Kea'au Bypass to its intersection with

Pāhoia-Kapoho Road (Figure 1 through Figure 3) within the *ahupua'a* of Kea'au, Waikahekahe Nui, Waikahekahe Iki, Maku'u, Pōpōkī, Hālonā, Keonepoko Nui, Keonepoko Iki, and Waiakahiula 1 and 2, and Pōpōkī, in the Puna District, island of Hawaii.

The entire corridor was canvassed door to door, address and phone numbers of residents were obtained from written and electronic sources, maps and TMK information was consulted. Initial community outreach letters were sent to residents along the corridor, community leaders, organizations, agencies and other community contacts in July 2009 along with a TMK map outlining the project area, and a USGS map were sent via regular mail or electronic mail (as an attachment) with the following text:

At the request of SSFM International, Inc., Cultural Surveys Hawai'i Inc. (CSH) is conducting a Cultural Impact Assessment (CIA) for the proposed Approximately 9.5 Mile Kea'au-Pāhoia Road Improvement Project, Kea'au-Pāhoia Ahupua'a, District of Puna, Island of Hawai'i (see enclosed maps).

The State of Hawaii, Department of Transportation (HDOT) is proposing to the Keaau-Pahoia Road Improvements Project, Project No. STP-0130(27) and is initiating an Environmental Assessment (EA). The project proposes to implement various improvements along approximately 9.5 miles of Kea'au-Pāhoia Road (State Route 130), from the terminus of the existing 4-lane Keaau Bypass to its intersection with Pāhoia -Kapoho Road. State Route 130 is the only roadway that connects the study area with the Hilo area and is the primary conduit for emergency services to access local properties.

The project purpose is to improve Road safety, increase roadway capacity, and modernize State Route 130 between Kea'au and Pāhoia. Currently, the Kea'au-Pāhoia Road is heavily congested during its peak hours of operation. The study area is only a quarter built-out, but it is expected that over the next 20-30 years, population will double, exacerbating an already-congested situation if improvements are not made. Safety for both motorists and non-motorists is a paramount concern, as the roadway serves motor vehicles, the county's Hele-On bus routes, bicyclists, and pedestrians. Vehicle conflict points, at the intersections and numerous driveways, contribute to an accident rate much higher than the statewide average.

A Public Informational Meeting was held on April 17, 2008 in Kea'au, Hawai'i. Since then, a local advisory group was formed and has met to advise HDOT on the area's context sensitivity.

The EA for this project will consider a range of alternatives:

Three "Build" alternatives would improve the roadway with a combination of different cross-sections (six lanes, four lanes, and two lanes) in various segments of the corridor. "Build" alternatives will consider bike lanes, buss pull-outs, shoulders, and median treatments. The "Build" alternatives will incorporate designs that contain Context Sensitive Solutions, in an effort to make the future

roadway as compatible as possible with the surrounding communities. The EA will study measures to improve safety by managing traffic in these build alternatives, such as signalization, roundabouts, consolidating access points, etc.

A “No-build” alternative which includes committed project will be used as a “base case” for analysis.

A transportation Systems Management (TSM) alternative will provide another measure for comparison as it considers low-cost and low-impact improvements that could be implemented easily with minimal levels of construction.

The purpose of this cultural study is to assess potential impacts to cultural practices as a result of proposed development in the Kea'au-Pāhoa Ahupua'a. We are seeking your kōkua and guidance regarding the following aspects of our study:

- **General history and present and past land use of the project area.**
- **Knowledge of cultural sites which may be impacted by future development of the project area - for example, historic sites, archaeological sites, and burials.**
- **Knowledge of traditional gathering practices in the project area, both past and ongoing.**
- **Cultural associations of the project area, such as legends and traditional uses.**
- **Referrals of *kūpuna* or elders and *kama'āina* who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua'a* lands.**
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area.**

In some cases, where electronic mail was used, the following text was sent to individuals, organizations or agencies:

My name is Malia Luika Farias. I am assisting Auli'i Mitchell of Cultural Surveys Hawaii (CSH) with the Cultural Impact Assessment (CIA) for the Kea'au-Pāhoa Road Improvement Project. I am sending you this email, with the attached correspondence and maps for your review as a part of the community contact process.

As our letter states, we are focusing on your knowledge of potential impacts to Native Hawaiian traditional cultural practices that may be ongoing within the project area (see maps attached). As a result, we are interested in setting up a “talk

story” interview with you sometime in the next two weeks (in order to meet our deadline) if you have information, or input to contribute to our study. Please feel free to call 965-6478 (or respond to this email) and ask for Mr. Mitchell or myself to set up your appointment. WE will be glad to meet you at a time and place that is convenient for you within the next two weeks.

Mahalo for your time and consideration of this matter.

Several (3-9) attempts were made to contact individuals, organizations, and agencies via telephone, regular mail or electronic mail for the subject project. Some individuals and organizations were hand delivered letters and maps pertaining to the proposed project. The results of all consultations are presented in Table 9 below. Excerpts from more extensive interviews and statements related to the proposed project and its environs are presented in Section 6 below.

Table 9. Community Contacts and Consultation Effort

<b>Name</b>	<b>Background/ Affiliation</b>	<b>Comments</b>
Alvarado, Severino	Resident/Owner	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 11, 2009 stating, “Not deliverable as addressed, unable to forward.” A follow up telephone call was made on July 22, 2009 to verify post office box address. A second letter was mailed on July 23, 2009 to Mr. Alvarado’s post office box address. On 7/27/2009 and July 28, 2009, CSH telephoned Mr. Alvarado to follow up on the community contact letter. There was no answer. CSH left a message on the answering machine on both occasions.
Alvarez, Keoni	Resident/Film Producer, Waikahekahe Ahupua‘a	On August 5, 2009, Mr. Alvarez’s name was referred to CSH via formal letter, by Ms. Cayan, History, and Culture Branch Chief, of the Department of Land and Natural Resources, State Historic Preservation Division. On August 6, 2009, CSH sent Mr. Alvarez a community contact letter and a notice of referral via email. An email read receipt confirmation was received on August 27, 2009.
Ayau, Edward Halealoha	Executive Director, Hui Mālama O Nā Kūpuna O Hawai‘i Nei	An email containing the community contact letter and map attachments were mailed on July 1, 2009. An email read receipt confirmation was received on 7/27/09.

Name	Background/ Affiliation	Comments
Ayau, Edward Halealoha	Executive Director, Hui Mālama O Nā Kūpuna O Hawai'i Nei	An email containing the community contact letter and map attachments were emailed on July 1, 2009. An email read receipt confirmation was received on July 27, 2009.
Babilona, Bradley	Resident	A Community contact letter was mailed on July 1, 2009. On July 31, 2009, Mr. Babilona contacted CSH via telephone. <b>Mr. Babilona stated: "I received the letter you sent me about the Kea'au-Pāhoa Road Expansion. I just wanted to call to let you know that I don't know anything about any Native Hawaiian cultural practices taking place along that corridor."</b>
Baliante, Mr. And Mrs.	Resident/Owner	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 11, 2009 stating, "not deliverable as addressed, unable to forward." On July 22, 2009, CSH telephoned the Baliante residence in order to follow up on the community contact letter. CSH spoke to Mr. And Mrs. Baliante's daughter, who provided an alternate mailing address. A second letter was mailed on July 23, 2009. <b>On July 27, 2009, Mr. Baliante telephoned CSH and stated: "I received the community contact letter and have nothing to offer in the way of information. We are moving to Hilo this month and will no longer be in the area."</b>
Bath, Stephanie	Resident	A Community contact letter was mailed on July 1, 2009. On July 29, 2009, CSH telephoned Ms. Beth Bath who provided us with a home telephone number for Ms. Stephanie Bath. On July 29, 2009, CSH telephoned Ms. Stephanie Bath's residence in order to follow up on the community contact letter. A call back telephone message was left on her answering machine. On July 29, 2009, Ms. Bath telephoned CSH, and scheduled an interview at her office in Hilo. Meeting cancelled on August 2, 2009. CSH was told to call back to reschedule. On August 6, 2009, CSH telephoned the Bath residence. A call-back message was left on her answering machine. On August 7, 2009, Ms. Bath returned CSH's telephone call and rescheduled her interview appointment. <b>See interview in Section 6.7.</b>

Name	Background/ Affiliation	Comments
Billings, Paul	Resident/Owner	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 7, 2009 stating, "no mail receptacle, unable to forward." A second letter was mailed on July 23, 2009 to an alternate mailing address. On July 27, 2009, CSH telephoned the Billings residence in order to follow up on the community contact letter. There was no answer. An additional follow-up telephone call was made by CSH on July 28, 2009. There was no answer.
Brown, Larry	County of Hawai'i Project Manager for Puna Regional Circulation Plant (PRCP) and Puna Community Plan (PCDP). Member of Kea'au – Pāhoa Advisory Group	A Community contact letter was mailed on July 1, 2009. On July 22, 2009, CSH telephoned the Brown residence in order to follow up on the community contact letter. CSH spoke to Mr. Brown, who scheduled an oral interview with CSH at his office in the Planning Department, at the Hawai'i County building in Hilo on July 30, 2009, at 11:00 am. On July 30, 2009, CSH met with Mr. Larry Brown at County of Hawai'i Planning Offices in Hilo, Hawai'i. <b>See interview in Section 6.6.</b>
Cacpal, Dino L.	Resident/Owner	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 11, 2009 stating, "not deliverable as addressed, unable to forward." On July 23, 2009, CSH telephoned the Cacpal residence in order to follow up on the community contact letter. CSH spoke to Mrs. Cacpal, who provided an alternate mailing address. Mrs. Cacpal stated: <b>"Please call me back in a few days to possibly set up an interview, after I have read the letter."</b> In response, a second letter was mailed on July 23, 2009. On July 27, 2009, CSH telephoned the Cacpal residence in order to follow up on the second letter. At that time, a call back message was left on the answering machine. No return telephone call was ever received.
Campbell, Mrs.	Vice Principal, Kea'au Elementary School. Ms. Campbell's name was referred to CSH by Ms. Reveira of the University of Hawai'i at Hilo.	On August 6, 2009, CSH telephoned Mrs. Campbell in her office. CSH requested a copy, or access to read a copy of their anniversary edition book produced on the anniversary of the school about the region around the school and down the Kea'au-Pahoa Road. Mrs. Campbell stated: <b>"I am fairly new here and I am not sure if we have that. I will look for a copy, and call you back."</b> On September 9, 2009, CSH went to the library at the school and was able to access their special collections.

Name	Background/ Affiliation	Comments
Canario, Maile	Resident of 'Ainaloa Housing Subdivision	On July 30, 2009, Mr. Canario's name was referred to CSH in an interview with Ms. Emily Naeole. CSH attempted to get contact information from Ms. Naeole via email. CSH unsuccessfully attempted to locate contact information for Ms. Canario via local and internet resources. There was other telephone number on record for this person.
Carriaga, Shon Allen	Resident/Owner	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 11, 2009 stating, "not deliverable as addressed, unable to forward." A second letter was mailed on July 23, 2009 to the alternate address listed. On July 29, 2009, CSH telephoned the Carriaga residence in order to follow up on the community contact letter. The person who answered the telephone was not a resident of the area. CSH was informed that the Carriaga family is no longer at this telephone number. CSH unsuccessfully attempted to locate this family via local and internet resources. There was other telephone number on record for this family.
Darston, Mr.	Resident/Owner	Community contact letter sent July 1, 2009. On July 23, 2009, CSH telephoned the Darston residence in order to follow up on the community contact letter. CSH spoke to Mr. Darston, who promptly hung up after responding: <b>"Not interested."</b>
Davis, Bill	Department of Hawaiian Homelands	A Community contact letter was mailed on July 1, 2009. On July 23, 2009, CSH telephoned Mr. Davis' office in order to follow up on the community contact letter. CSH was told that Mr. Davis was out of the office. A call back message was left on his machine. <b>On July 23, 2009, CSH received a telephone response from Mr. Davis in which he stated, "I have no knowledge of any Native Hawaiian cultural practices ongoing within the project area; however I forwarded your letter to the "Maku'u organization" to further comment on the subject, and to allow them an opportunity to respond to you themselves."</b>
Dedman, Palikapu	Referral from Mr. Josephides for the SHPD Office. Member of the Kanaka Council.	The telephone number provided by SHPD was telephoned and a message was left on Mr. Dedman's message machine. An email with a community contact letter and maps were sent to the Kanaka Council's email on their website. Email was returned as undeliverable. No return telephone call was ever received.

Name	Background/ Affiliation	Comments
Delsey, Kay Clift	Resident/Owner	A Community contact letter was mailed on July 1, 2009. On July 23, 2009, July 24, 2009, July 27, 2009 and July 28, 2009 CSH telephoned the Delsey residence in order to follow up on the community contact letter. There was no answer during any attempt.
Deven, Family	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, "Not deliverable as addressed, unable to forward." Follow up telephone call made on July 23, 2009. CSH spoke to Mr. Deven's mother, who provided an alternate mailing address. CSH was told that they have not lived at this address very long. A second letter was mailed on July 24, 2009. On July 27, 2009, CSH telephoned the Deven residence in order to follow up on the community contact letter. <b>CSH spoke to Mr. Deven who stated: "I have received the community contact letter, but have nothing to offer in the way of information."</b>

Name	Background/ Affiliation	Comments
Domizio, Dan, Dr.	Puna Community Medical Center. Member of Kea'au – Pāhoa Advisory Group.	<p>A Community contact letter was mailed on July 1, 2009. On July 23, 2009, CSH telephoned the Domizio residence in order to follow up on the community contact letter. CSH left a call back message for Dr. Domizio on his answering machine. On July 23, 2009, CSH telephoned Dr. Domizio's office in order to follow up on the community contact letter, and a call back message was left for Dr. Domizio with his secretary. On July 24, 2009, CSH telephoned the Puna Community Medical Center and left a message for Dr. Domizio to return our call. Dr. Domizio telephoned CSH on July 25, 2009 <b>Dr. Domizio told CSH: "I wish I could show you this video about how roads affect the growth of areas. It's about two hours long. I'm from New York and I remember how the freeways were built into the city, and right afterwards the entire area changed and the city grew up around the roads and highways. Road expansion always does that, not to mention the separation that occurs between neighbors on opposite sides of the new freeway. New roads are needed, but they always bring separation and growth." When CSH asked Dr. Domizio if he was aware of any ongoing traditional cultural practices within the project corridor, he responded with "No."</b> An interview was scheduled for July 30, 2009. Dr. Domizio sent CSH an email on July 29, 2009, cancelling the interview due to out of town guests. Two more attempts were made on July 30 and July 31, 2009 to reschedule Dr. Domizio's interview. On August 1, 2009, Dr. Domizio telephoned CSH in order to schedule an interview for August 4, 2009 at 11:00 AM at our CSH Office in Puna. Confusion regarding the appointment time resulted in the rescheduling of the second interview on August 1, 2009. The third attempt at trying to reschedule the interview was made via telephone on August 2, 2009. A message was left at his work. On August 6, 2009, CSH telephoned Dr. Domizio's office and left a call-back message with his secretary. On August 6, 2009, Mr. Domizio telephoned CSH and rescheduled an interview for August 11, 2009 at 3:00 PM. This interview was cancelled due to scheduling problems. Follow up telephone calls and emails were made on August 12, 2009. CSH was unable to reschedule an interview with Dr. Domizio.</p>

Name	Background/ Affiliation	Comments
Donham, Teresa	Hawaii Archeologist, State Historic Preservation Division	A Community contact letter was mailed on July 1, 2009. On July 9, 2009, CSH received an email, in which Ms. Donham stated: <b>“Auli‘i, please be advised that Analu Josephides does the CIA reviews and comments for Hawai‘i island. Please send future inquiries to him. I Cc’d you when I forwarded this to him so that you will have his email address.”</b> See Mr. Josephides’s entry below for CSH follow-up contact information.
Duloulao, Morren	Resident/Owner	A Community contact letter was mailed on July 1, 2009. On July 27, 2009, CSH telephoned the Duloulao residence in order to follow up on the community contact letter. CSH spoke to Ms. Duloulao, who stated: “I never received a letter from CSH. Can you please send another one to my post office box in Kea‘au?” A second letter was mailed on July 27, 2009.

Name	Background/ Affiliation	Comments
English, Oliver	Resident/Owner, Resource Manager W. H. Shipman	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH telephoned Mr. English's office in order to follow up on the community contact letter. CSH spoke to his secretary, who provided CSH with Mr. Oliver English's personal cell telephone number. On July 24, 2009, CSH telephoned Mr. Oliver English and left a call back message on his personal cell telephone. On July 27, 2009, CSH telephoned Mr. English at his office. CSH spoke to Mr. English, who stated: "There are a few items on our property, and I would be glad to meet with you to discuss them. My uncle, Tom English is really the historian for the company, and we have been discussing the possibility of meeting with you to talk about some of these items. I need to call you back with an appointment time for an interview, after I speak to him so we can gel our schedules and meet with you together." On July 28, 2009, CSH telephoned Mr. Oliver English on his personal cell telephone number in order to follow-up on our last conversation. CSH spoke to Mr. Oliver English who stated: "Please call my office and speak to Dee Joaquin. Tell her to schedule an appointment with both Uncle Tom and I for an interview." On July 28, 2009, CSH telephoned Mr. English's office and spoke to Ms. Joaquin. An appointment for an interview was scheduled for Friday, July 31, 2009 between 1:30pm and 3:00 pm at the Shipman Ltd. Offices. On July 31, 2009, CSH met with Mr. Tom English, Mr. Oliver English, and Mr. Bill Walter at the Shipman Ltd. Offices in Kea'au. See Shipman interviews in Section 6.8.
English, Tom	Resident/Owner, Vice President W. H. Shipman	See Mr. Oliver English entries above. See Shipman interviews in Section 6.8.

Name	Background/ Affiliation	Comments
Erickson, Neil	Architect, Planner, Kea'au- Pāhoa Advisory Board Member, Resident	A Community contact letter was mailed on July 1, 2009. On July 23, 2009, CSH contacted Mr. Erickson, who stated: "I didn't receive a community contact letter. Please resend a letter to my business office in Hilo, HI, or to my email address." <b>Mr. Erickson provided new addresses to CSH, and stated: "I really have no knowledge of any Native Hawaiian cultural practices ongoing within the project area, however I bicycle that route at least two or three times per week. I suggest you try and contact someone at the Hawaiian school in Kea'au. They are very knowledgeable of many Native Hawaiian practices, and may know something of any that are ongoing along that stretch of road. You might also contact the two "English" brothers, who may or may not be willing to comment on the issue. With specific reference to what activities I observe when biking along the road in the project area, there are few cars parked alongside the highway except when abandoned. I do notice when people stop to gather maile or blossoms when on the saddle road but rarely, if ever, on the k-p stretch. I am very interested in receiving a copy of your letter, especially since I sat on the community Kea'au-Pāhoa advisory board during the environmental assessment for this project."</b> A second letter was mailed on July 24, 2009. Additionally, CSH mailed a letter via email to Mr. Erickson on July 24, 2009. An email read receipt was received at CSH on July 24, 2009.
Fuchijmi, Keiko	Resident/Owner	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH telephoned the Fuchijmi residence in order to follow up on the community contact letter. <b>CSH spoke to Mrs. Fuchijmi who stated: "I have no knowledge of any Native Hawaiian cultural activities ongoing within the project area."</b>
Fukumoto, Yoshi	Resident/Owner	A Community contact letter was mailed on July 1, 2009. CSH telephoned Mrs. Fukumoto on July 24, 2009, as a follow up to our letter. <b>Mrs. Fukumoto stated: "I don't know of any Native Hawaiian activity in the area."</b>
Gardner, Timothy Lynn Family Trust	Resident/Owner	Community contact letter sent July 1, 2009. No phone number on record.

Name	Background/ Affiliation	Comments
Garmon, Ulu Kanaka'ole Foundation	Ms. Garmon's name was referred to CSH from Mr. Josephides of SHPD	A Community contact letter and maps were sent to the main office of the Kanaka'ole Foundation, addressed to Ms. Garmon on September 10, 2009. No response was ever received.
Godoy, Lorraine	Program Manager for Hawai'i County Economic Opportunity Council	Community contact letter sent July 1, 2009. CSH telephoned Ms. Godoy at her office on July 24, 2009. A brief summary message was left on her answering machine asking her to return our call. CSH telephoned Ms. Godoy at her office on July 27, 2009. A brief summary message was left on her answering machine asking her to return our call. No return telephone call was ever received.
Grammer, Edward, Sr.	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, "Not deliverable as addressed, unable to forward." Follow up telephone call made on July 23, 2009. CSH spoke to Mr. Grammer, who provided an alternate mailing address. Second letter sent July 23, 2009. On July 27, 2009 CSH telephoned Mr. Grammer as a follow up to the letter. He informed us that he had not yet received his letter and information; however he had not yet gone to check his post office box mail. CSH informed him that we would call back in a few days to see if he received it and if he had any input to offer. <b>On August 3, 2009, CSH telephoned Mr. Grammer to follow up on his letter. He had no comments to offer.</b>
Gumpac, Kali (Kale)	Referral from Ms. Naeole's interview. Member of the Kanaka Council.	CSH telephoned the phone number that Ms. Naeole provided for Mr. Gumpac. It was the number to Ms. Naeole's office. No other contact information was found for Mr. Gumpac either from Ms. Naeole, or in public information sources. An email with a community contact letter and maps were sent to the Kanaka Council's email on their website. Email was returned as undeliverable.

Name	Background/ Affiliation	Comments
Hanohano, Faye	4 <sup>th</sup> District Representative	Community contact letter sent July 1, 2009. A follow-up telephone call was made on July 22, 2009 to the office of Mrs. Faye Hanohano, in which a message was left by CSH. CSH sent Ms. Hanohano an email with the letter attached on July 24, 2009. CSH telephoned Mrs. Hanohano's Office in Honolulu. Her secretary informed us that Mrs. Hanohano is only in Honolulu one day a week, and this week she is ill. She confirmed that CSH's letter was received, and printed out for Mrs. Hanohano to read. When we informed her that we were located in Puna as well as Honolulu, and that we would like to meet with Mrs. Hanohano here in Puna, her secretary informed me that she would contact Mrs. Hanohano and notify her of our intent, and once she was feeling better, possibly next week, we could meet with her. CSH was unable to schedule an appointment for an interview with Ms. Hanohano.
Hasawat, Glen & Close, Page	Resident/Owner	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH telephoned the Hasawat residence in order to follow up on the community contact letter. <b>CSH spoke to Mr. Hasawat, who stated: "I have only lived on this side of the island for about nine months and have not observed any kind of activity along the project route that could be considered Native Hawaiian, which is unlike the Kona area where there often is flower gathering for lei making and other activities along the roadside."</b>
Hauanio, Elaine	Ms. Hauanio's name was referred to CSH by Ms. Naeole and Ms. Siracusa.	CSH located Ms. Hauanio's telephone number via public record sources and telephoned her on September 10, 2009. She provided CSH with an accurate mailing address, and <b>stated the following: "I don't know about that area, I know about Kaimu, Kalapana, 'Opihikao, down here, but I dunno about over there. Send me the letter I will read it and call you if I know anything, but that is not my area over there, I am from down here."</b> CSH mailed Ms. Hauanio a letter and maps to that address on September 10, 2009. CSH never received a follow-up telephone call from Ms. Hauanio.

Name	Background/ Affiliation	Comments
Janto, Joe (Puna Boy)	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, "Return to sender no such number." Follow up telephone call made on July 23, 2009. CSH spoke to Mr. Janto, who provided an alternate mailing address. CSH was told to call him back in a few days to set up an interview, after he is provided time to read the letter. Second letter sent July 23, 2009. A follow up telephone call was made to Mr. Janto on July 30, 2009. A telephone message was left on Mr. Janto's machine. CSH never received a follow-up telephone call from Mr. Janto.
Josephides, Analu	Cultural Historian, State Historic Preservation Division	A Community contact letter was mailed on July 1, 2009. On July 23, 2009, CSH telephoned Mr. Josephides's office in order to follow up on the community contact letter. A callback message was left on Mr. Josephides's answering machine. On July 24, 2009, a follow-up letter and project maps were emailed to Mr. Josephides. On July 23, 2009, CSH telephoned Mr. Josephides's office in order to followup on previous contact attempts. A call-back message was left on Mr. Josephides's answering machine. On August 5, 2009, CSH received an official letter from Mr. Josephides's office. See Response letter, Appendix A, and Ms. Donham's entry above.
Jensen, Rocky	Mr. Jensen's name was referred to CSH by SHPD. He is the Founder of Hale Naua III.	CSH obtained Mr. Jensen's address and telephone number via his organization's website. A letter and maps were sent to Mr. Jensen on September 10, 2009. The letter was returned to CSH, stamped "no such person, address unknown." The telephone number was disconnected.

Name	Background/ Affiliation	Comments
Julian, William & Cathy	Resident/Owner	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 3, 2009 stamped: "no mail receptacle, unable to forward." On July 23, 2009, CSH telephoned the Julian residence in order to follow up on the community contact letter. CSH spoke to Mr. Julian, who provided an alternate mailing address. Mr. Julian stated: <b>"My lands lie between Kaloli and Shower drive, off the highway. None of my lands would fall in the project area, although I support the entire project. An alternate route is needed. It would be better to have them make a bottom road because when accidents happen no one can go anywhere. You can call me at any time to talk story."</b> A second letter was mailed on July 23, 2009. CSH was unable to schedule an interview with Mr. Julian.
Ka'awaloa, Minnie	Ms. Kaawaloa's name was referred to CSH by Ms. Naeole	Ms. Ka'awaloa's telephone number was located via public records and she was telephoned on September 10, 2009. <b>CSH spoke to Mrs. Ka'awaloa who stated: "I got nothing to say really, no, I never see anyone gather over there, but I keep telling people that area is funny kind, especially over there by the bridge. Get plenty trails over there all over the place along that road, but that place is nothing to fool around with you know. I am too busy right now for interviews, I gotta weave my lauhala, that's all I do these days, is weave my lauhala. I will look at the letter you send, and yes I will call you if I have time for interview, but I don't think so, you know. Ok then."</b> Letter and maps were sent to Ms. Ka'awaloa's post office box number that she provided on August 11, 2009.
Kaiewe, John	Mr. Kaiewe's name was referred to CSH by Mr. Thomas English. Resident of Kea'au.	CSH found Mr. Kaiewe's telephone number via public records. On August 7, 2009 CSH telephoned Mr. Kaiewe's residence. The number was disconnected. CSH was unable to get contact information for Mr. Kaiewe from Mr. English's office. However, CSH was able to locate a statement from Mr. Kaiewe's father in the old Hawaiian archives regarding the old road (see Appendix G).

Name	Background/ Affiliation	Comments
Kalawe, Joanne M.	Resident/Owner	<p>Community contact letter sent July 1, 2009. CSH telephoned the three telephone numbers we found for Kalawe in the directory. The first number was disconnected. CSH left a call back message at the second number, and spoke to a Mrs. M. Kalawe at the third number. She was not aware of any way to contact Mrs. Joanne Kalawe via telephone, other than to state that Joanne and her husband Jon owned other properties and they may be staying elsewhere. She suggested we check the phone directory for Joanne Kalawe's number. On July 24, 2009, Mrs. Joanne Kalawe (of J &amp; J Tax Service) telephoned our office. Mrs. Kalaewe stated: <b>"I am against the expansion of the road into my property. My husband and I have lived and worked in Puna all our lives. My husband is a retired police officer and I am retired from the Bank of Hawaii in Pāhoa town. We run a tax business from our home now. I think the road was paved between 1961 and 1965 when I was going to grade school in Hilo. Prior to that the road was a small, winding, country road. The Waipahoehoe bridge has some legends attached to it because cars get stuck there all the time. I don't know what I would say in an interview since I cannot back up what I say with documentation or anything like that, but if you want to interview me, I will be home on July 30, 2009 at 2:30pm."</b> On July 27, 2009 Mrs. Kalawe contacted CSH and left a message to reschedule her interview appointment. CSH returned her call three times on July 27, 2009, and left a message each time for her to call our office. On August 6, 2009, CSH telephoned the Kalawe residence. Mr. Kalawe's answered the telephone. <b>He stated: "She has been busy lately with the grand kids and all. It's just bad timing. I will tell her you called and have her call you back."</b> CSH was unable to schedule an interview with Mrs. Kalawe.</p>
Kanahele, Pualani Kanaka'ole Foundation.	Ms. Kanahele's name was referred to CSH from Mr. Josephides of SHPD	A Community contact letter and maps were sent to the main office of the Kanakaole Foundation, addressed to Ms. Kanahele on September 10, 2009. An email with a community contact letter and maps were sent to Ms. Kanahele personally on September 10, 2009.

Name	Background/ Affiliation	Comments
The Kanaka Council	On August 5, 2009, "The Kanaka Council," a local Hawaiian group, was referred to CSH via formal letter, by Ms. Cayan, History and Culture Branch Chief, of the Department of Land and Natural Resources, State Historic Preservation Division	On July 31, 2009, an email with a letter and maps attached was sent to the Kanaka Council website. On August 6, 2009, CSH received an error message from the email delivery system that read: "No such user." No other number or contact information was found for this council.
Kapu-Saffery, Dutchie Hawai'i Island Burial Council	Ms. Kapu-Saffery's name was referred to CSH from Mr. Josephides of SHPD	A Community contact letter and maps were sent to Ms. Saffery's email on 8/6/2009. Read receipt was received on 8/7/2009. A hand delivered letter and maps were presented to Ms. Kapu-Saffery on August 20, 2009 at the Hawai'i Island Burial Council Meeting in Kona.
Kela, Diane M.	Resident/Owner	Community contact letter sent July 1, 2009. CSH attempted to telephone Mrs. Kela on July 24, 2009. The phone number we were given is disconnected. There is no other phone number on record.
Kekahuna, I'oane	Maku'u Farmer's Market Association.	See Ms. Paula Kekahuna's entry below. See Section 6.9 for interview.
Kekahuna, John Sr.	Maku'u Farmer's Market Association.	See Ms. Paula Kekahuna's entry below. See Section 6.9 for interview.

Name	Background/ Affiliation	Comments
Kekahuna, Paula	Maku'u Farmer's Market Association	Community contact letter sent July 1, 2009. Letter returned July 3, 2009 stating, "No mail receptacle, unable to forward." CSH sent Ms. Kekahuna an email with the letter attached on July 24, 2009. On July 27, 2009, CSH telephoned Mrs. Kekahuna and there was no answer. On July 27, 2009, CSH telephoned Mrs. Kekahuna's office again. There was no answer. On August 5, 2009, CSH telephoned Mrs. Kekahuna's personal cell telephone number. CSH spoke to Mrs. Kekahuna, who scheduled an on site visit with herself and several other local people on Friday August 7, 2009 at 10:00 AM, at the Maku'u Farmers Market Association lot on Kea'au-Pāhoa Road. On August 7, 2009, CSH personnel went to the Maku'u lot for an onsite visit and participated in cultural activities, while talking story with some of the <i>kūpuna</i> (grandparent generation), <i>mākua</i> (parents) and <i>keiki</i> (children) (who declined to be taped or interviewed formally) about the cultural activities that occur on the lot and in the homesteads area of Maku'u. On August 28, 2009, CSH interviewed Mrs. Paula Kekahuna, Mr. John Kekahuna Sr., and their son I'oane Kekahuna at the Maku'u lot. See Section 6.9.
Kelson, Albert	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 17, 2009 "unable to forward". A follow-up phone call was made on Wednesday, July 22, 2009. CSH was informed by his wife to resend the letter to an alternate address. Second letter sent on July 23, 2009.
Koch, David Bryan	Resident/Owner	Community contact letter sent July 1, 2009. CSH telephoned Mr. Koch on July 24 and 27, 2009. A call back message was left on his answering machine each time.
Kuwahara, Alan A. Jr.	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 17, 2009 "unable to forward". A follow-up phone call was made on Wednesday July 22, 2009. CSH was informed by his daughter, to resend the letter to alternate address. Second letter sent on July 23, 2009.
Kuwahara, Collin E.	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, "Not deliverable as addressed, unable to forward." Second letter sent on July 23, 2009 to post office address. No phone number on record.

Name	Background/ Affiliation	Comments
Lau, Dina	Manager for Kea'au-Pāhoa Road Improvement Project Hawaii Department of Transportation	On July 24, 2009, CSH emailed the Community contact letter to Mr. Nelson Sagum (see his entry, this table below) of the Hawaii Department of Transportation. On July 24, 2009, Mr. Sagum informed CSH that he forwarded CSH's email to Ms. Dina Lau, Manager For Kea'au Pāhoa Road Improvement Project, Hawai'i Department of Transportation. On July 24, 2009, CSH sent a community contact letter via email to Ms. Lau. <b>On July 24, 2009, Ms. Lau responded via email and stated: "Thank you for helping Aulii to conduct the CIA and the information you provided. We suggest also making reference in your letter to the two public informational meetings for the subject project that was held on April 29, 2009 in Pāhoa and April 30, 2009 in Keaau. As indicated by Nelson, we are very interested to uncover and learn about the traditional cultural practices in the project area."</b>
Leslie, Bucky Hawai'i Island Burial Council	Mr. Bucky Leslie's name was referred to CSH from Mr. Josephides of SHPD	A Community contact letter and maps were sent to Mr. Leslie's email on 8/6/2009. Read receipt was received on 8/7/2009. A hand delivered letter and maps were presented to Mr. Leslie on August 20, 2009 at the Hawai'i Island Burial Council Meeting in Kona.
Lui, Nicole	Ms. Lui's name was referred to CSH from Mr. Josephides of SHPD as a descendant of Maku'u.	A hand delivered letter and maps were presented to Ms. Lui on August 20, 2009 at the Hawai'i Island Burial Council Meeting in Kona.
Macomber, Edwin D., & Hughes	Resident/Owner	Community contact letter sent July 1, 2009. CSH telephoned the Macomber-Hughes residence on July 24, 2009, July 27, 2009, and July 28, 2009. A call back message was left on their answering machine on three occasions.
Makino, Hiroshi Gerald	Resident/Owner	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH telephoned the Makino residence in order to follow up on the community contact letter. <b>CSH spoke to Mr. Makino, who stated: "I have nothing to contribute, and don't know of anyone who might have something to contribute."</b> 6

Name	Background/ Affiliation	Comments
Maly, Kepā	Mr. Maly's name was referred to CSH by Mr. Thomas English. Mr. Maly is a cultural historian with knowledge of the Puna district.	An email was sent to Mr. Maly on August 7, 2009. Read receipt was received on August 8, 2009. CSH was unable to schedule an interview with Mr. Maly due to Mr. Maly's presence on Lana'i Island. However, CSH was able to obtain copies of some of Mr. Maly's writings about Puna, many of which are incorporated into this report.
Manuel, Orland P.	Resident/Owner	Community contact letter sent July 1, 2009. CSH telephoned Mr. Manuel on July 24, 2009. There was no answer. On July 27, 2009 CSH spoke to Mr. Manuel. He never received a community contact letter from CSH, and requested we send one to him, to an alternate address. Letter was re-sent to alternate address on July 28, 2009.
Marzo, Evalani SL	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009, CSH telephoned Mr. or Mrs. Marzo. There was no answer.
Mattos, Manny	Resident & Retired Police Officer	Community contact letter sent July 1, 2009. No phone number on record.
McGee, Lynn (Girl Scout)	Resident/Owner. Representative of Girl Scouts of America	Community contact letter sent July 1, 2009. On July 27, 2009, CSH telephoned Lynn McGee of the Girl Scouts of America. A call back message was left on the Girl Scouts of America's answering machine. On July 27, 2009, <b>Ms. McGee telephoned CSH and stated: "I received your letter, and having read the letter, I have nothing to offer in the way of knowledge or information of any cultural significance."</b>
Medeiros, Clarence Jr.	Referral from Mr. Josephides for the SHPD Office. Member of the Kanaka Council.	The telephone number provided by SHPD was telephoned and a message was left on Mr. Medeiros' message machine. An email with a community contact letter and maps were sent to the Kanaka Council's email on their website. Email was returned as undeliverable. No return telephone call was ever received.
Medeiros, Jimmy	Referral from Mr. Josephides for the SHPD Office. Member of the Kanaka Council.	The telephone number provided by SHPD was telephoned and a message was left on Mr. Medeiros' message machine. An email with a community contact letter and maps were sent to the Kanaka Council's email on their website. Email was returned as undeliverable. No return telephone call was ever received.

Name	Background/ Affiliation	Comments
Meints, Roger William (Chris?)	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009, CSH telephoned Mr. Meints. There was no answer. On July 31, 2009, the community contact letter was returned on July 11, 2009 stamped “ returned to sender, attempted, not known, unable to forward, not at this address.” On July 31, 2009, CSH telephoned Mr. Meintz to follow up on the community contact letter. CSH spoke to Mr. Meintz, who stated “My first name is Chris, not Roger. The letter was addressed to Roger, and so I sent it back. Please resend the letter to Chris Meints.” A second letter was mailed on August 7, 2009.
Naeole, Emily	Council Member, District 5. Member of Kea‘au – Pāhoa Advisory Group	A Community contact letter was mailed on July 1, 2009. The letter was returned on July 11, 2009 stamped “returned to sender.” On July 22, 2009, CSH telephoned Mrs. Naeole’s Pāhoa office in order to follow up on the community contact letter. CSH spoke to Mrs. Naeole’s secretary, who stated: “Please call-back tomorrow when Mrs. Naeole returns to the office.” On July 24, 2009, CSH mailed the community contact letter to Mrs. Naeole via email. Email read receipt notification was received on July 26, 2009. On July 27, 2009, Mrs. Naeole telephoned CSH to schedule an interview for July 30, 2009 at 2:00 PM. On July 30, 2009, CSH met with Mrs. Naeole in her office in Puna. See Section 6.3 for interview.
Nahale’a, William K. (‘Alapaki)	DHHL East Hawaii Commissioner	Community contact letter sent July 1, 2009. On July 28, 2009, CSH sent Mr. Nahale’a a Community contact letter via regular mail and email.
Nahooikaika Family	Resident/Owner.	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, “Not deliverable as addressed, unable to forward.” A follow up telephone call was placed on July 22, 2009 with a message to return a call to CSH and that a second letter would be sent to their post office address. A second letter was sent on July 23, 2009.
Nāmu‘o, Clyde	Office of Hawaiian Affairs/Adminis- trator	Community contact letter sent July 1, 2009. On July 28, 2009, CSH sent Mr. Nāmu‘o a community contact letter via regular mail and email. On July 28, 2009, a “read receipt” email confirmation was received.
Nases, Larry Elwin	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, “Not deliverable as addressed, unable to forward.” A second letter was sent to his post office address on July 23 2009. No phone number on record.

Name	Background/ Affiliation	Comments
Olson, Jon and Meishon	Puna Traffic Safety Committee & PCDP Chairman & Sierra Club Big Island Chapter, Moku Loa Group. Member of Kea'au – Pāhoa Advisory Group	Community contact letter sent July 1, 2009. On July 27, 2009, CSH telephoned Mr. and Mrs. Olson and left a message on their answering machine to return our call. Mrs. Olson returned our call on July 27, 2009 and stated that she never received a letter and would like us to re-send her one. On July 28, 2009, CSH re-sent a letter.
Okimoto, Neal T & Mei Ling	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009, CSH spoke to Mrs. Okimoto. She stated that she never received a letter and could we resend her another one. Letter was re-sent on July 28, 2009.
Owens, Wesley	Vice President Orchidland Association and Cyclist	Community contact letter sent July 1, 2009. No phone number on record.
Pabliona, Bradley Wade	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, "Not deliverable as addressed, unable to forward." CSH telephoned Mr. Pabliona on July 23, 2009. Mr. Pabliona provided an alternate address, to which a second letter was sent to on July 24, 2009.
Passamonte, Mario	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009, CSH telephoned Mr. Passamonte. There was no answer.
Pau, Rebecca	Mr. Maly's name was referred to CSH by Ms. Emily Naeole. Mr. Alvarez (see list) wrote a book about Ms. Pau's life in Puna.	Ms. Pau's telephone number was located via public records. CSH telephoned Ms. Pau and left a message on her answering machine on 8/7, 8/10, and 1/15/2009.
Pearlita	Resident/Owner	Community contact letter sent July 1, 2009. Letter was returned as undeliverable to CSH on July 11, 2009. On July 23 and CSH telephoned Ms. Pearlita. There was no answer. On July 27, 2009, CSH telephoned Ms. Pearlita and left a message on her answering machine.

Name	Background/ Affiliation	Comments
Peleiholani, Robert	Resident	On July 30, 2009, Mr. Peleiholani's name was referred to CSH in an interview with Mr. Larry Brown. No listing for Mr. Pleiholani on the internet or in the phonebook.
Poulin, Guy S.	Resident/Owner	Community contact letter sent July 1, 2009. No phone number on record.
Roddie, Christopher Hyong	Resident/Owner	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH telephoned the Roddie residence in order to follow up on the community contact letter. <b>CSH spoke to Mr. Roddie, who stated "I received your letter, however I have no input, and no knowledge of any ongoing native Hawaiian cultural practices within the project area."</b>
Sagum, Nelson	HDOT. Member of Kea'au – Pāhoa Advisory Group	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH emailed and mailed the Community contact letter to Mr.Sagum. On July 24, 2009, <b>Mr. Sagum responded to CSH via email and wrote: "Sorry, I am not aware of any cultural practices in the area; however, there is a uniqueness and spirituality of Puna, which I hope that you'll be able to uncover. I'll be forwarding your email to Ms. Dina Lau, our manager for this project."</b> (See Dina Lau, this table, above.)
Salfen, Elizabeth	PMAR Working Committee & PCDR Community Liaison and Weed and Seed. Member of Kea'au – Pāhoa Advisory Group	Community contact letter sent July 1, 2009. CSH sent Ms. Salfen an email with the letter attached on July 24, 2009.
Salone, Janelle	Resident/Owner	On June 25, 2009, CSH telephoned the resident and was informed that she is moving out. She referred me to Janelle Salone as the owner. Community contact letter sent July 1, 2009. No phone number on record.
Sato, Thomas	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009, CSH telephoned Mr. Sato at the number listed. The responding answering machine stated "Niketown Honolulu." CSH left a message on the answering machine. On July 27, 2009, someone from Niketown Honolulu returned our call and stated that there is no Mr. Sato at that number. No other phone number on record.

Name	Background/ Affiliation	Comments
Serrano, Jen	Resident/Owner	Community contact letter sent July 1, 2009. On July 29, 2009 CSH called the Serrano residence. A message was left on the answering machine.
Seungsiri, Benjamin Ii, LLC	Resident/Owner	Community contact letter sent July 1, 2009. No phone number on record.
Sherlock, Ululani Hawaii Island Burial Council Chair, Hawaiian Civic Club of Hilo and Puna	The Hawaiian Civic Club of Hilo or Puna was referred to CSH from Mr. Josephides of SHPD	A Community contact letter and maps were hand delivered to Ms. Sherlock on August 20, 2009 at the Hawai'i Island Burial Council Meeting in Kona.
Siracusa, Rene	Founder, President Malama O Puna	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH mailed Ms. Siracusa a copy of the community contact letter via email. On July 28, 2009, CSH telephoned Ms. Siracusa in order to follow up on the community contact letter. <b>CSH spoke to Mrs. Siracusa who stated: "I am not aware of any cultural impacts within the project region, however without a proper survey of the region for plant species there may be more impacts to native plants in the area, but I am not sure. So far, my observation as I am driving by is there is 'ohi'a and 'uluhe growing on the sides of the road, but the 'ohi'a is too tall for gathering purposes. I forwarded your information and letter to other concerned parties that might have more information to provide to you."</b> An interview was scheduled for July 31, 2009 at 10:00 am at the CSH office in Puna. On July 31, 2009, CSH met with Ms. Siracusa. See Section 6.5 for interview.

Name	Background/ Affiliation	Comments
Stapleton, Frankie	Resident	A Community contact letter was mailed on July 1, 2009. On July 24, 2009, CSH mailed the community contact letter to Ms. Stapleton via email. On July 28, 2009, <b>CSH telephoned Ms. Stapleton who stated: "I have lived and worked here in Puna and Hilo for 30 years, part of that time as a journalist. I have no knowledge of any cultural practices in the region. My knowledge pertains to regions closer to the ocean in Puna, or about issues related to community issues within Puna. If you want to call me back to interview her about any of these issues you may do so, as I am retired now and have free time to discuss the issue further."</b> On July 29, 2009, CSH contacted Mrs. Stapleton via email to schedule an interview with her for August 3, 2009 at 2:00 PM. Meeting cancelled on August 3, 2009. On August 3, 2009, <b>CSH spoke to Ms. Stapleton, who stated: "Please call back or email me to reschedule my interview in a few days."</b> On August 6, 2009, CSH emailed Ms. Stapleton. On August 7, 2009, Ms. Stapleton scheduled an interview with CSH for August 14, 2009 at CSH offices in Puna. See Section 6.4 for interview.
Vallente, Armondo	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009 CSH telephoned Mr. Vallente. His daughter stated that Mr. Vallente was not home, and took a call back message. On July 27, 2009, Mr. Vallente's daughter telephoned CSH to give us Mr. Vallente's work number. CSH telephoned Mr. Vallente's residence on July 28, 2009. <b>He declined to provide comment.</b>
Walker, Bernice	Ms. Walker's name was referred to CSH by Ms. Emily Naeole as knowledgeable of a cave nearby her home within the project area.	CSH telephoned Ms. Walker's home on August 6 and 8, 2009 and left messages on both occasions with her daughter. <b>On August 10, 2009 CSH telephoned the Walker residence and was told that they had no knowledge of a Bernice Walker, however the Walker family did reside at that address. They had no knowledge of any cave nearby the house.</b> A mailing address was obtained, and a letter and maps were sent to the Walker family on August 11, 2009.
Walker, Dwight E. Jr.	Resident/Owner	Community contact letter sent July 1, 2009. On July 27, 2009 CSH telephoned Mr. Walker. The telephone number on record was disconnected.
Walters, Bill	Resident/Owner, President of W. H. Shipman	See Mr. Oliver English entries above. See Shipman interviews in Section 6.8.

Name	Background/ Affiliation	Comments
Weatherford, Elizabeth	Resident	<p>A Community contact letter was mailed on July 1, 2009. The letter was returned on July 11, 2009 stamped: “not deliverable as addressed, unable to forward.” On July 22, 2009, CSH telephoned the Weatherford residence in order to follow up on the community contact letter. A call-back message was left on the answering machine. On July 28, 2009 Mrs. Weatherford telephoned CSH and stated: <b>“My property is located outside of the project area. However, my husband and I have both served or attended the Puna Regional Circulation Plan and the Puna Regional Development Plan committee meetings. I am frustrated with the disruption of traffic during construction because there is only one route into the Puna district for emergency vehicles and other traffic. For example, when there is an accident, all traffic stops. I am in favor of implementing “roundabouts,” similar to New Zealand and Australia, where the accident rates are less as a result. I feel as though me and many other community members are in favor of this option, and we are not being heard. Further, I believe that there is nothing traditional about the Hawaiian people as a separate entity from the rest of the population, who also need clean air and fresh rain to grow crops and live, as well as a safe route for transportation to and from their destinations. Everyone uses the land. Everyone has been dispossessed at some point or another as a people. I believe the trees must be cared for because of the “hydro cycle,” and clean and healthy living. We need to care for our culture now, that is, all the people here in Puna and elsewhere, and forget about what is underground. I did participate in stopping bull dozing on a property nearby her home when bones were discovered, but I do feel like all people as a whole are part of one culture here that need to take care of nature here.”</b> Mrs. Weatherford provided an alternate mailing address to CSH. A second letter was mailed to Ms. Weatherford on July 28, 2009.</p>

<b>Name</b>	<b>Background/ Affiliation</b>	<b>Comments</b>
Zuniga, Pablo A.	Resident/Owner	Community contact letter sent July 1, 2009. Letter returned July 11, 2009 stating, "Not deliverable as addressed, unable to forward." CSH telephoned Mr. Zuniga on July 23, 2009 and July 27, 2009. He was not at home at either time. CSH left a message to return our call. On July 28, 2009, Mr. Zuniga telephoned CSH, and provided an alternate address. Another letter was sent to his alternate address on July 28, 2009.

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## Section 6 Summaries of Kama'āina "Talk Story" Interviews

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### 6.1 Talk Story Interviews

*Kama'āina* and *kūpuna* with knowledge of the proposed Projects and study area participated in "talk story" sessions for this CIA. The approach of CSH to cultural impact studies affords community contacts an opportunity to review transcriptions and/or interview notes and to make any corrections, deletions or additions to the substance of their testimony. CSH employs snowball sampling, an informed consent process and semi-structured interviews (cf. Bernard 2006). CSH attempted to contact 77 individuals for this CIA (see Table 9 above); 51 responded, and of the respondents, 11 participated in talk story, face to face interviews, with 8 additional interviews being conducted via telephone. To assist in discussion of natural and cultural resources and any cultural beliefs and practices associated with the Project areas, CSH initiated talk story sessions with questions from the following broad categories: Gathering and Hunting, Ritual and Ceremonial Practices, Freshwater and Marine Resources, Burials, Trails and Cultural and Historic Properties. Presented below are brief backgrounds of participants' "talk story" sessions and their comments and concerns about the proposed Project area.

### 6.2 Acknowledgements

The authors and researchers of this CIA extend our deep appreciation to everyone who took time to speak and share their *mana'o* (thoughts) with CSH in talk story interviews and in brief phone, post or email consultations noted in Table 9 above; including contacts who opted not to contribute to the current CIA, but nevertheless spent time explaining their position on the proposed Projects. We request that if these interviews are used in future documents, the words of contributors are reproduced accurately and not in any way altered, and that report preparers obtain the express written consent of the interviewees.

### 6.3 Mrs. Emily Iwalani Naeole



Figure 34. Aunty Emily Iwalani Naeole

Aunty Emily (as she is fondly called) Iwalani Naeole (Figure 34) was born in Pāhoa on September 23, 1956 to Mr. Gabriel Kealoha of Kalapana, Kaimu and Ms. Mary Makuakane of 'Opihikao. Mrs. Naeole grew up in 'Opihikao but today resides in Maku'u Hawaiian Homestead. Mrs. Naeole is presently the County Councilwoman, District 5, Puna, *makai*. Mrs. Naeole sat down with CSH for a "talk-story" interview on July 30, 2009:

When asked is there anything you would like to say about the general history about the project area, or past and present land use, Mrs. Naeole mentioned:

Well, you know for me right now where I am at the Maku'u Hawaiian Homestead. I know that portion of land was used by the military for bombing. There are some shells they found. I am not too sure what they call it...yes Artillery casings things that the military used in the olden days. It was not a total clean up.

The Pāhoa Road in the olden days was not that wide. When I was growing up it took long time to get to Hilo because I think it might have been just one road.

Yes, one single road. You really could not go that fast. When they had the floods coming through between Shower Drive and Kea'au there is the bridge. It used to really get totally smashed over there and the roads were really bad. My mother could not make it to the hospital because of that road, so three out of eight children were born at home and I was one of the three. We could not get to the hospital fast enough so we had to be born at home.

The sugar cane was very intense here in the early days, because Puna Sugar grew sugarcane all over on both sides of the road. They also grew up the mountain and down to the kahakai or beaches. There was a lot of sugarcane and the big truck with all the sugarcane inside would be rolling down the road back and forth. Sugarcane was one of the things plentiful in the olden days. I remember there were helicopters that flew and sprayed the fertilizer. They would fly and drop the fertilizer, flying up and down the streets through the whole highway on both sides wherever the cane was they fertilized not by hand, but by helicopter. They would just drop a whole load of fertilizer on the fields. The sugarcane companies were hard at work. They had machines and the big trucks would haul them up and down the road. The road came all the way up to Pāhoa. Even that road going up towards, Pāhoa School to Kalapana then to Leilani Estates on both sides of the road was all sugarcane. Coming over here by the Post Office and where Hawai'i Academy of Arts School (HAAS) is today it was sugar cane on both sides of the road. The road never had the bypass at that time. It came in later. Pāhoa town was the only road there was no bypass, and so the big sugarcane trucks were going back and forth, up and down to Pāhoa town.

There used to be plantation camps I remember. A Filipino camp that had a lot of Filipinos who worked in the fields, which is why we called it a Filipino camp, but they were plantation camps. I think there was one across Pāhoa Elementary School, on the side of the Catholic Church. They had the camps all in the different areas around Pāhoa. I remember there was one behind by the where the Pāhoa swimming pool is today.

There might have been some houses until Mālama Market area and towards Hawaiian Beaches, but the ones between Hawaiian Beaches and Pāhoa School never have. Now from Mālama Market going all the way into Kea'au had houses for a long time, but they just keep making them bigger and bigger.

When asked about sharing some of her personal or family history in the area, Mrs. Naole commented:

I just wanted to say, with the Maku'u Hawaiian Homestead at the time we created it I think in July 1985 we were awarded our lands. That is when I was awarded our land. I moved over there in December in a 16 X 24 shack, I was 29 years old. I remember I had no green machine I only had a sickle. I created and started cleaning my land with a sickle. I remember when I set up one blue tarp and tied it to the trees so my kids go underneath and have a shade and then I started to clean

my land with a sickle. So, since 1985 until today, 2009 my personal experience over there at the Maku'u Hawaiian Homestead was a great struggle. We really struggled.

We never had infrastructure. We had to go out and fight for infrastructure. I remember in 1991 when I gave birth to my son, he was about two and a half maybe in 1993 or 1994 we protested against Department of Hawaiian Homes Lands so we could get our infrastructure. I have as you can see that picture right here in my office on the wall (see Figure 35 below). There is my son on top of my neck the sign says, "Screwed by DHHL". We were protesting at the State Building.



Figure 35. Ms. Emily Iwalani Naeole and her son protesting for infrastructure for Maku'u Homesteaders (Hilo, Hawai'i 1995); sign says "Screwed by DHHL"

I remember we started the protest outside of Maku'u Hawaiian Homes and we were like, "beep, beep, beep, and beep" as the cars went by. So we really went out and had to push and kick for them to actually give us our infrastructure.

I have some pictures when the infrastructure. My husband and I had this bulldozer we worked it, my husband, me, and all my children. We were standing

on the side of the bulldozer, and we have those pictures that show the first starting of the infrastructure of Maku'u Hawaiian Homestead.

When it came to the building of the Maku'u Farmer's Market. I had been part of the gang for long time. I feel so proud of what it is today, because my daughter Heidi is actually the Secretary-Treasurer of that Farmers Market, Paula Kekahuna's son, Ioane, is actually the site manager. So we have given the realm to our children. Now we have moved on and stepped aside so that the next generation can come forward. And so, I feel so proud to be part of the Maku'u Market Association. Right now we are working to get the money to build a community culture center over there. It is all about hard work, setting your visions, and plowing through to make it real. Even before 1985 my parents and other Hawaiians from this district actually put this land in a land bank pushing it forward to become Department of Hawaiian Home Lands for the people. So there was a movement even before I was awarded my land in 1985.

I'm really blessed because I actually put in my paperwork in 1979 for Hawaiian Homestead to get me a land. So it was my parents who hustled to get to be part of the Department of Hawaiian Homelands.

When asked about her knowledge of any cultural, archaeological, historic sites, including burials with in the vicinity of the project area, Mrs. Naeole commented:

I know that there is one over there by Orchidland. Yes, Orchidland. I am not sure exactly where it is, but people know where it is. You must go underground and it goes for a long ways it is a burial cave. There is another one somebody just told me about a month and a half ago. They found one down in Paradise Park. I do not know how close it is to the road. They said that they found one site and Kali Gumapac of the Kanaka Council who lives in Paradise Park and he knows more about that place. There is a cave over here across the street (pointing towards the other side of Kea'au-Pāhoa Road across from the new Fire Station). It's next to the Walker family. They're building the police station next door. And then, just, you get that house right on the corner across the street. That is Bernice Walker's House. Just a little bit on this side of them (pointing towards road and indicating) there is a line of trees. That is where the cave is. The house with the palm trees in the front. If I remember correctly there is a cave over there next to their property. I think the cave is on the county land.



Figure 36. Ms. Naeole when her last name was Kealoha, with her parents and siblings in Opihikao

When asked about the traditional cultural practices of the past, present, and ongoing, Mrs. Naole shared:

Mauka of the Homestead there are trails people have been using for hunting for many many years. It is a trail of long time past. Not just a recent trail. The trail has been over there for a long time.

Our Maku'u people and our native people have been doing many cultural practices for a long time at the Maku'u Farmer's Market. So our people have been practicing their culture here for at least 80 years.

As a native Hawaiian Homestead and Maku'u Farmer's Association we are working to keep alive what is of our culture. We now have the Maku'u Sunday Market and we hire only the *kamali'i* or children. All adults volunteer. The *kamali'i* is the only ones getting paid right now on the homestead. The traditional cultural practices that are still on-going at the Maku'u Market are drum making, Uncle Keoni has taught carving and canoe making with our people, 'ukulele lessons, and different kumu hula or teachers of native Hawaiian dance come to teach. We also have Tahitian drum making there, the toere. We also have 'ōlelo

Hawai'i or Hawaiian Language classes for the community there at the market. For some five years the Kamehameha School Kids programs has come over and conducted different cultural workshops and classes. Sometimes classes are offered during the week and sometimes on Sunday. The community also practices traditional planting of sweet potato and kalo or taro. So we have been conducting all kinds of different traditional cultural practices at this site.

Mrs. Naeole shares the cultural practices of the past practiced by her parents and grandparents:

One of their everyday practices I knew that my 'ōhana or family practiced was *lā'au lapa'au*. We practiced the Hawaiian medicine and you know because we never had the regular medicine from the *haole* or foreigner we had to do our own medicine. So we knew things like the *kukui* nut or candle nut and many different lapa'au or medical practices that we could use to heal ourselves. I know there's this blue flower and you steam it that helps you inside so you can breathe.

My father and my grandma used to collect *lauhala* or pandanus leaf and take them to Keaukaha to the Waipā family who were the weavers. We were the gatherers here in Puna.

My parents were really into pounding *'opihi*. That is one of the practices which were part of our survival. My father was a fisherman and diver in which he would take his sons out and they learned all that stuff. You know for eating and survival on our own. Another one of our practices was *hāpai wa'a* or carry the canoe. My Papa, before the boat system came out, they used to go out in the canoes. So they practiced *hāpai wa'a* and it stayed in the family for years and years, like until the 90s. People would come help carry out the *wa'a* or canoe and they would give each person fish to take home to their families. In the olden days they went with the canoes and then had the logs and they would roll them up on shore and everybody would join in to *hāpai wa'a*. When the boat system came in they still did *hāpai wa'a*. You know at times the ocean was so rough the people had to hold the *wa'a* still so you could get out of the water. So that is what I could share with you about our Hawaiian cultural practices of my 'ōhana.

## 6.4 Ms. Francis Cathleen Stapleton



Figure 37. Ms. Stapleton

Ms. Francis Cathleen Stapleton (Figure 37), fondly known as Frankie Stapleton, was born in Wilshire County England, to Ms. Cathleen Florence Sawyer, a native of London England and Mr. Lyman Thurkel Shepard, from Hertford, North Carolina. Ms. Stapleton's father was in the United States Air Force during World War II when she was born. She grew up all over the Southern United States, and for the past thirty years she has resided in the Nānāwale Estates in Lower Puna District, Hawai'i Island. Ms. Stapleton is presently retired and enjoys doing public volunteer work. She wrote the Mass Transit report for the Puna Community Development Plan (PCDP), and served on the transportation working group as a part of the larger community group that authored that plan. Ms. Stapleton participated in a "talk-story" interview with CSH on August 14, 2009.

Ms. Stapleton shared some of her personal or family history in the state of Hawaii and the Big Island:

I have lived in Hawai'i since November 1, 1970. It was my first full day here. When I first came here, I was on O'ahu for seven years completing my journalism

degree at the University of Hawai'i at Mānoa. By 1973, I was working for KITV on a part time basis. Eventually, I was hired full time as a KITV Assignment Editor for news for two years.

After KITV, I worked for six months for the Department of Education, where I produced Hawaiian television shows for the Department of Education. During that time I worked with people from the Bishop Museum. I totally adored it because it gave me a great foundation and understanding about Hawaiian language and things like that.

Then in 1977 I was hired by the Hilo Tribune Herald newspaper, so I moved here for work after the company hired me in Honolulu. As a result, I worked for them for the next twenty years. During part of the time that I was working for the Tribune Herald, I was also attending the University of Hawaii at Hilo. I earned education and teaching credits there, and so forth. However, my publisher wouldn't approve a leave of absence from work to complete my degree and do my student teaching, so that just fell off the deep end. When I left the Tribune Herald I had some free time, so I did a bit of travelling, and some part time teaching here in Pāhoa. And, that is when I did the Archaeology.

I worked on the Hōkūli'a project with S and S. And, then I went back to school and earned my teaching certificate through Chaminade. Afterwards, I was hired as a teacher at Waimea Elementary and Middle school through the Department of Education from 2000 until 2006.

Since then I have been retired and doing public volunteer work. I worked for a year and a half or two years on The Puna Community Development plan. I wrote the Mass Transit report, and I was on the transportation working group.

When asked about her personal connection to the district of Puna, and if there was anything she would like to say about the general history about the project area, Ms. Stapleton answered:

Well, I am a student of Hawaiian history. My partner of thirty years is Native Hawaiian, and his family was from the Kalapana-Kaimū area. His name is Fallou, the family name is Mehau. He talks about Keolanui in that area as being a family to him. Not in the project area. We go riding around and he tells me stories and things. His focus is always on the coasts. He is a canoe carver and a designer. Beautiful stuff.

Since I have lived here, I have watched Puna evolve from a very substandard bedroom community to Hilo's workforce. I know it is the home to some of the last Native Hawaiian communities. And, I wrote a book about Kalapana, in Puna entitled "Aloha o Kalapana" because that was my beat in the newspaper.

I first got to know Puna by covering the September 1977 eruption above Kalapana. After that, I spent 20 years covering the volcano. I worked with the

geologists and the local people. I wrote human interest type stories. So, I became very much involved with that area, and the people residing there. Which led me to eventually move here, and why I felt comfortable moving here. I also had friends that had moved from O'ahu into Hawaiian Acres.

I am of the Vietnam era generation, and some of these friends were Vietnam veterans. They parlayed what resources they could into buying three acre lots, and building their homes over time as they could. So now, they have mature homesteads all over Puna and they are still my good friends.

Meanwhile, I'm working full time and I'm out there in the community hands on, talking to people day in and day out. I knew there were, particularly with Paradise Park and Hawaiian Beaches, a lot of retired military coming over here. They were the ones with the free time to serve on little Transportation Committees and things like that. When they were in the military most of them had no real authority. No big titles or anything like that. But, once they retired, they were the experts on everything.

I watched over the years as everything that was planned to help alleviate the traffic problems in Puna, Puna Makai and Lower Puna, would get derailed by the various newcomers in the Community Associations around here. The people serving on these Associations were not the people that had lived here a long time, nor were they the native community, so nothing got done. That coupled with the patriarchal domination by Shipman Estate. I was here when they had the cane trucks and the mud and the boulders and everything falling off the trucks. Our roads are so much safer and wonderful now that the plantation is gone.

I saw and learned from my connections with people about what was going on. For example, when Shipman, in the early 1900's, I guess around 1920 or 1930, went around and bought up all the *mauka-makai* thoroughfare paths. That is unconscionable. It was a smart business move, but it was totally against the interests of the population. The plantation mentality prevailed during those times.

So now were in the 21<sup>st</sup> century, and I think it is time to start paying attention to the needs of an ever growing population. It blew my mind back in the early years when the county charter originally stated that there could be no development except between the two rivers in Hilo. It was a ten year public initiative battle that enabled the building of a shopping center in Hilo outside of that restriction of the two rivers. This was accomplished by Doc Hill and Richard Henderson, all of them. That's why there is what is Prince Kūhiō Plaza now.

At the time they were trying to push all development up Kaūmana side. Compared to the Puna plane, it's insane to push everybody up to Kaūmana, or up the mountain. Puna is a huge broad area. Much more amenable to a growing population. So I really feel strongly that 19<sup>th</sup> century interests need to be laid to rest, and we need to take care of things

Ms. Stapleton shared her knowledge of past and present land use within the project area:

When I first came here, the old AJA (Americans of Japanese Ancestry) guys had developed these different substandard subdivisions in Puna. My old National Guard friends in Hilo warned me not to buy them. But, Puna is the place where young local families can get their first start. Not everybody is going to inherit a home in Hilo.

Anybody with any real investment in the land, not in it as a financial investment, but as an investment of love for their homestead and the land, is not going to live on the highway. Because they just clear things out, knock things down in the forest. I have talked to some local people around here for years about it, and they don't understand how they could just bulldoze the beauty. For example, you don't see yellow 'ōhi'a around here any more.

When asked about her knowledge of any cultural, archaeological, historic sites, including burials with in the vicinity of the project area, Ms. Stapleton answered:

I haven't seen any. The only one I know about was not in the corridor area. It's in Leilani Estates. It's a cave. Some school kids took me into it, me and the photographer from the tribune, and there were a good two dozen tubes.

I know that Hawaiians didn't just travel the perimeter. They had a trail system that really kept them well connected. *Mauka-makai* thru the *kula* plains all the way up. There was a system of *kuapo*, of trading back and forth. What one did not have, the others would have. And they had family systems.

Regarding her knowledge of any traditional cultural practices of the past, present, and ongoing, such as when people pick flowers for leis and so forth, or when someone erects a monument to memorialize an accidental death, Ms. Stapleton stated:

No. I have never seen people gathering. The one thing that I was aware of was that there were several Hawai'i County Civil Defense shelters along the highway, in the caves. Especially over by the new fire station. You could drive along the road there and you would see yellow signs with the black civil defense shelter symbol displayed on it that marked where the shelter was located.

When I was assigned that story as a reporter for the Tribune, Harry Kim was the Civil Defense Director for Hawai'i Island at that time. He told me about our Hawai'i County Civil Defense shelters in Puna. He said that they were all old caves. He also told me that we would not even necessarily be the ones to be allowed access to them as shelters, because they would be bringing in something like a 125,000 people from O'ahu if there was a nuclear threat. These people would be the leadership from Honolulu. They would be using the shelters. I did stories on it back then. He's a quite a source of information, that man.

Afterwards I began to notice the signs as I traveled down the road. All of a sudden you see this yellow civil defense sign marking a shelter. I thought, well it is good to know where they are just in case. I also wondered where the shelter caves were that had the fresh water in them. Although Hawaiians did collect water from roof drip too.

I always thought of this area as the place where the new Garden of Eden could begin. Because, when I first came here there was the nuclear threat of O'ahu to worry about. O'ahu with its big storage of nuclear weaponry on the one side, that anything on that island would be vulnerable. However, we in Puna are on the opposite side of this island, furthest away. With access to pure water that wouldn't be contaminated, Puna would be the new Eden.

When I would read the Reverend William Ellis' journal, he would talk about the Green Lake area and the coastal villages and everything; it sounded like the Garden of Eden. Even when you look around Puna, there are so many beautiful gardens here.

When asked about her knowledge of any legends or stories about the area, Ms. Stapleton replied:

I do not know of any along the project corridor. All of my collecting of stories was down Kalapana side. That is why I was able to produce my book "Aloha 'o Kalapana." When they called me to write it, I was angry at Bishop Museum. Because they had all the time in the world to do research down there in that area and had done nothing, essentially, since the 1950's when Kenneth Emory did some stuff down there. So, here they are with the lava threatening and they called out for archaeological people to help all over the country and brought them in to try to do research on what have been there all that time and then, got immediately covered up. So, I was kind of frustrated with them because I felt that, they as the keeper's of the Hawaiian cultural flame had let the Hawaiian people down. But, then I thought about it, and decided to go, because the guy who called me to it had shot the pictures and was looking for someone to the writing part. And, because I had written about that area for the Tribune for all those years. The geologist told him to contact me. I did it. Ultimately, the reason why I did it, was so that all these little stories I had come across did not get lost in the end. I wanted them to be preserved somewhere or in something.

When asked if she knew of any concerns the community might have related to Hawaiian or other cultural practices within the vicinity of the project area, she responded:

The construction of roundabouts on the road is a major concern of mine and the community in general. It's a major concern of everybody down here. And everybody almost unequivocally has been pushing, pushing, pushing for them. They say that Hawaiian Acres, Kahakai Road entrance to the Hilo end of Pāhoa needs to be a roundabout. It's so poorly designed now. There are so many accidents. Going to the meetings, they've never addressed it. We have brought it

up over and over in public hearings. They've had shouting matches at Brian Morioka himself, right at Maku'u Market. This has been going on for no less than 3 years.

They don't need to do a round-about at every intersection. Do what they can do. We've told them this in the working group transportation report. They can do the same thing at here, wait, here, here and here (pointing at map). If they had a police officer at the morning rush hour and the evening rush hour directing traffic towards Hilo in the morning from these areas (pointing at map). Then in the afternoon, they could direct traffic coming home to Puna from these areas (pointing at map). So, it's a safety issue, especially between Shower Drive and Maku'u Drive; or 'Āinaloa Boulevard to Shower Drive.

We've told them from three (3) years ago. Because in Hilo they use police officer's to direct traffic around Hilo High School, and around St. Joseph School. So, excuse me, but what's the problem with doing the same thing out here? This is an immediate thing, and its not requiring construction equipment or traffic lights. Besides, traffic lights are going to actually be counter productive most of the time. It's only the mornings and afternoon rush hours. So, if you just had a human here directing it, which would take the safety issue off the table. It would take it right off the table. It's not about money. It's about allocating people that we've already got. We need to take care of this issue now, not wait. Reallocate the police to do this until the road is built.

## 6.5 Ms. Rene Siracusa



Figure 38. Ms. Siracusa

Ms. René Siracusa (Figure 38) was born in New York City on May 3, 1938, to Mr. Antonino Siracusa and Ms. Celia Aronovna Merson Siracusa. Ms. Siracusa grew up in the New York City area, and resides in Ka'ohē Homesteads, Puna District, Hawai'i Island today. Ms. Siracusa is presently the President of Mālama O Puna, and serves on the board of the Puna Community Medical Center, and is the Fundraising Chair for the Pāhoa Weed and Seed Program. Ms. Siracusa participated in a "talk-story" interview with CSH on July 31, 2009:

When asked is there anything you would like to say about the general history about the project area, or past and present land use, Ms. Siracusa mentioned:

I remember when I first came here, and that Kea'au-Pāhoa Road was so beautiful there were beautiful trees all along it. I remember reading in Isabella Bird's book "Six months in the Sandwich Islands" that it was one of the most beautiful roads on the island. I can't remember exactly what part it was in the book. And then of course they chopped down all the trees and put up utility poles and strung wire all over the place. And now it's ugly. Ugly, ugly. She talked about when Kea'au was

'Ōla'a then. The Kea'au-Pāhoa Road's name was probably 'Ōla'a road then. I am not sure.

That's all I really know about the corridor itself, but I do know about Puna in general, and the area I live in specifically. In Puna I know, there were a lot of people living down on the coast for a long time and then the missionary came through and got them all moving into Hilo in the early 1800s. Titus Coan was the missionary's name. He gathered them up and moved them into Hilo.

Of course, there was agriculture in Puna, because there are a lot of places where we have found either the Hawaiian signature plants, you know, like right there at the entrance to Black Sands subdivision. There is an area that's looks like native forest, until you get in there, and you see all of those signature plants with burials and rock features nearby.

Going up to Ka'ohē Homesteads where I live, it was Royal Patent Grants. They put in the narrow gauge railroad line. Because of the logging. Up in Ka'ohē Homesteads where I live, they logged first for the sandalwood. During Kamehameha the third's time. First, they logged up the sandalwood, and when once that was gone, then they logged up the 'ohi'a, which was for the Santa Fe railroads. And that didn't work. That was a loss. Then the Japanese who were working on the sugar plantations figured out that if they could grow some of their own sugar, they could get a lot more bang for their labor. And so they started getting parcels up there. As a matter of fact, on my property I still have parts of the old rail line and I have found a lot of old bottles, like Pāhoa Soda Works.

The Ka'ohē Homesteads Community & Farm Watch did some research on the patent grants, because they were looking at the access roads into the homesteads. We are a landlocked cul-de-sac community, and if the Catholic Diocese were to sell their old cane land we could be locked out of our property. We were concerned about the metes and bounds so we could try to get the church to dedicate it to the county. And so, we went back in the old records, and we found old deeds, written in longhand Hawaiian. And found that they were no good anymore because the reference points are gone. You know like, so many paces to the big rock, and then so many paces to the tree or whatever. Those are not there anymore.

As far as I know, the old sugar cane areas are all taken over by Albezia now in my neighborhood. And, there used to be sugar cane growing on the Catholic Church lands which were leased to now-defunct Puna Sugar, but there is not anything cultivated any longer.

In Pāhoa town there was a Sumo ring, but it is gone now. The Japanese immigrants when they came they started it for Sumo wrestling. It was just a, like a circle with sand. It was right behind the Akebono Theatre. The Akebono Theater

goes back to like 1930 or 1934 or something like that. It is the oldest continually-operating theater in the State.

And then there was the railroad turn-around. Rails went right through the back of that parking lot and up through the parking lot of the Pāhoa Community Center, and went straight through towards Kea'au to where the pool is now, and I remember when they were constructing the pool, Norman Olesen was the project coordinator, and he went out there, you know, to look, and there were the rails. And I said, you really ought to leave these here and just put some informational, interpretive signage. You know? And he said they would, but they did not, as it turns out. So the old rails are no longer there.

Then when we were doing some planting at the Community Center parking lot, and we dug a hole, came up with one of the small horse shoes, too small for a horse. The donkeys were used to turn the engines around. It was one of the donkey's shoes. They would house the donkeys in the pasture up above, behind where the Community Center is now. Above that is the playing field now, but behind that field is the old donkey pasture. And since they used to walk the donkeys up there, one of them must have lost a shoe. And there we found it.

Ms. Siracusa shared some of her personal or family history in the area:

I have lived in Hawai'i since 1979. I have no one here that I am related to by blood or genealogy, but I have people here that might be called extended family. Those that consider me a part of their family and visa versa. I'm the Godmother of Emily Nae'ole's son Kopa Makua Wao Kele O Puna Nae'ole.

Ms. Siracusa commented on her knowledge of any cultural, archaeological, historic sites, including burials with in the vicinity of the project area:

At the entrance to Black Sands Subdivision, we found what looked like Hawaiian signature plants and left them alone to grow, until one day someone decided they wanted to bulldoze that area. We called the State Historical Preservation Division to try and stop it, and Mark Smith went in there and found caves and burials. Boom! That was the end of that. It was Steve Hirakami who clued me to that, and I contacted Historic Preservation Division.

I also know that in Paradise Park subdivision, on the opposite side of 17<sup>th</sup> street from where the Community Center is located, there is a large parcel that the community owns. They were considering developing it for a park and a committee was selected to study the site. I was brought in as a consultant on the botany. We found archaeological features, like rock walls, pig enclosures, house foundations, and other things. There was not much in the way of native plants, but lots of 'canoe plants'. These are not located in the corridor, itself.

Inside the corridor there used to be a trail that went up to that cave called the "vagina cave." I have never been to it. I'm claustrophobic (laugh). When you are

driving along the highway, you see a little sign, a hand written sign that says "cave" with an arrow. That is where the cave is. I forget what street it's on, but it is in Orchidland. I have never followed up on it. I know that Ole Fulks, who lives all the way in the back of Orchidland, by Tiki Gardens, he's a spelunker. He knows a lot about the cave systems there, and so does Fred Stone.

Regarding her knowledge of any traditional cultural practices of the past, present, and ongoing, such as when people pick flowers for leis and so forth, or when someone erects a monument to memorialize an accidental death, Ms. Siracusa stated:

I do not know of any actually taking place in the corridor. However, in Wao Kele O Puna, there is a lot going on there. There has been gathering of plant material (*liko lehua*) for leis. Also *hapu'u*. In Ka'oho Homesteads, where I live, there are people who are pig hunting. It's a residential area now, but, (laughs) that's not stopping a lot of people. Mostly the hunters are not Hawaiians. They are local Portuguese and do not live in the area..

When asked if she knew of any concerns the community might have related to Hawaiian or other cultural practices within the vicinity of the project area, she responded:

Not to my knowledge, except for the fact that, widening roads always changes everything. It changes the whole feel, the whole ambiance, the whole economically, and every other way, socially and what not, of the community. And, there are people who will not want to see that happen. There are a lot of people right now and certainly the Puna Community Development Plan we worked on, focuses on job creation within the district. We should not have to keep going out of the district and commuting to Hilo for jobs. We shouldn't need the widening, which will only encourage more growth. What we need is some traffic calming (roundabout at Kahakai Blvd., traffic light at Paradise Drive, etc.) so that people can safely access the highway from the subdivisions. We need to open connectivity between abutting subdivisions so people don't have to get on the highway for short trips. We need to fix the entrance/exit to Pāhoa Marketplace.

## 6.6 Mr. Lawrence M. Brown



Figure 39. Mr. Lawrence Brown

Mr. Lawrence M. Brown (Figure 39) was born in Seattle, Washington in 1947 to Mr. William L. Brown and Ms. Virginia M. Rubens. Mr. Brown grew up in the Seattle, Washington area, and resides in Hawaiian Paradise Park area of the Puna District, Hawai'i Island today. Mr. Brown is presently a Planner at Hawaii County Planning Department in Hilo, Hawai'i. Mr. Brown participated in a "talk-story" interview with CSH on July 30, 2009:

When asked is there anything you would like to say about the general history about the project area, or past and present land use, Mr. Brown mentioned:

Well, we're currently paying for and will continue to pay, for generations to come, some very bad land use decisions that were made in the fifties, sixties, and very early seventies that created the large, substandard subdivisions in Puna and Ka'u. Basically they are the root of the problem in trying to create viable communities in Puna, particularly the *makai* area of Puna due to its high rate of population growth. And when you compound that with the extent of exposure to natural hazards including lava flow, earthquake, tsunami, hurricane, etc., it is a

real challenge (laughs). I am talking about creating more viable self-reliant communities in those large subdivisions.

The more recent subdivisions have been relatively small, but they have not helped to address the problems created by the previously approved larger subdivisions. However, they are adding to the problems, especially the ones that get approved with variances from the minimum requirements for infrastructure, whether it be water or proper roadways or whatever. But they are not the main problem like the big subdivisions such as Hawaiian Paradise Park, Hawaiian Acres, Orchidland, and similar subdivisions.

I am not aware of anyone within the project corridor conducting agriculture according to traditional Hawaiian ways anymore. To my knowledge, the ongoing agricultural activities are more modern in nature.

Mr. Brown shared some of his personal or family history in the area:

I have lived in Hawai'i for almost 12 years now. I have no one here that I am related to by blood or genealogy.

Mr. Brown commented on his knowledge of any cultural, archaeological, historic sites, including burials and trails within the vicinity of the project area:

I can't say for sure. I'm not aware of any comprehensive studies that have actually been done to identify cultural, archeological or historical sites, especially burial sites. Some localized surveys have been done for developments being proposed for specific building sites. I know that some mapping of lava tubes that are likely to contain ancient burials has been done. And some of those are in proximity to the highway 130 project, but exactly where, I really could not tell you.

I've never noticed any old settlement sites or *heiau* within the proposed or existing Highway 130 corridor. However, I know there are MANY throughout the *makai* area of Puna. These are primarily located much further down towards the coastal areas, to my knowledge. The only historic trail that I know of would not be in the project area, but would be in the vicinity of the project. This would be the old volcano trail from Hawai'i Volcanoes National Park to Kea'au. It crosses the corridor down by Kea'au. The other ones I know about are down by the coastline, like the old Puna trail. In between there are likely to have been *mauka-makai* trails. Puna is one area where the Planning Department's knowledge base on trails is really poor. Because one of my jobs is management of our public access and trails inventory we're trying to develop a knowledge base about trails, and Puna is just void of information (laughs). So, I have a lot of work to do down there.

Regarding his knowledge of any traditional cultural practices of the past, present, and ongoing, such as when people pick flowers for leis and so forth, or when someone erects a monument to memorialize an accidental death, Mr. Brown stated:

I'm sure that there's some gathering going on, but I really could not direct you to who might be doing that for sure. I bet there are some Puna *hula hālau* that might be gathering plants in lower Puna. Maybe some from Hilo too. I do not know whether they might be doing it within proximity to the corridor. I think they might be further *mauka*, or *makai*, up the mountain or much closer to the shoreline. The Maku'u Association might be doing some cultural things over there near the open market. I really can not offer more in the way of information about that, and so I'm sorry because I am a relative newcomer here. I've only been here about twelve years.

I have seen people gathered along the roadside in groups of ones or twos, probably immediate family members or something, at those roadside memorials. They are probably putting out fresh flowers or something. And, I have a really, troubled feeling about that. I can understand the feelings, of the people that lost loved ones and so forth, but, I think they add to the problem to a certain extent, because they do stop and put fresh flowers out, and they are right there where it's probably a dangerous place already. So, they are parking right on the side of the road where the accident occurred. And, they get out, and sometimes they have their little kids with them and they're not paying attention to the little kids and cars are whizzing by so fast. I have seen it on several occasions. However, I know there will be some people who will be upset by the disturbance of their roadside memorials once the new highway goes in. .

Mr. Brown commented on traditional Hawaiian practices, protocol and related activity ongoing in the project area:

Well, traditional Hawaiian practices, are to my knowledge, are fairly limited within the corridor project area. It seems to be pretty much focused around, to my knowledge, the Maku'u homestead area. With the, uh, how much of that area is actively, um, being used for traditional practices versus more modern practices, um I wouldn't want to venture to guess on, because I don't know what everybody is doing on their lease lots within the farm lots subdivision and then DHHL has the proposed residential subdivision, on the *mauka* side of the highway that's supposed to be going in, giving us another, I think nearly 700 home sites.

When asked if he knew of any concerns the community might have related to Hawaiian or other cultural practices within the vicinity of the project area, he responded:

The one thing I know, or the potential I see for, impacts on our community as a whole, whether it's the more modern, current culture, or the traditional culture, is when you put a big concrete ribbon down the middle of the landscape, you have the tendency to create a physical barrier within that community, and if you don't do the roadway improvements right, if you don't do a roadway project properly,

that can really have an adverse impact on, the whole sense of community within that area. And, the ability of people to even, remain in contact with each other.

Just physically to be able to say hi to your neighbor, because you've got a hundred and twenty feet of concrete separating you, it's an intimidating thing, especially when you've got cars whipping up and down it at fifty or sixty miles an hour.

We have got to have proper transportation and infrastructure, that's a given, you know, that's the day and age that we live in. But how do you do that? Do you do it the way they do it on the mainland? The way they did it in Honolulu? The way, the path the Maui is starting to follow?

What I've sensed is, by what I've perceived or understand to be most of the people in Puna, is that they don't want to go down that same path, they want something different, they want a roadway that does more to enhance the sense of community, than to destroy it. And still retain the beauty of Puna.

## 6.7 Ms. Stephanie Bath



Figure 40. Ms. Stephanie Bath

Ms. Stephanie Bath (Figure 40) was born in Brooklyn, New York, to Ms. Francis Nacaroff and Mr. LawrenceDimitri Slutzky. She grew up in a lot of places, but mostly grew up in Hawai'i, after arriving here in 1981. She currently resides in Hawaiian Acres subdivision, 'Ōla'a Ahupua'a, Puna District, Island of Hawai'i. Ms. Bath is presently employed as a Message Therapist, enjoys gardening, and is a mother and a wife. Ms. Bath participated in a "talk-story" interview with CSH at the Otto Building in Hilo on August 14, 2009.

Ms. Bath shared her knowledge of past and present land use within the project area:

Yes. There was cultivation; I believe that there were cattle possibly. I am not certain. There are a few areas in there that something came down, just by my feelings. I do not know. I believe that 'Umi went along and around the forest reserve. This is only my feelings about who lived in there. There was some action going up and down this way, definitely, definitely (pointing at map). I am pretty sure that it probably was, I think it likely went along here (pointing at the map), Orchid Land Drive, between Maku`u and Paradise. Something definitely came

down; I am telling you between Kaloli and in this area here. It might not have necessarily been good either.

Ms. Bath shared some of her personal or family history in the state of Hawaii and the Big Island:

Well, I'm still actually studying where we living, our place. Because we're building a home and we're not doing it traditionally. We placed our stones. And it's taken us two years to find the 'ōhi'a poles. We didn't want to just take trees and so we had to seek them out. We gathered trees that were previously bulldozed, and trees that had died, and needed to come out for our house posts. We also gathered a few trees that were endangering residences that were going to have to come out, and we did take one from our place and use it. That was the hard part, when it had spoken to us for many years. When you're looking at a 400 year old tree, that is sacred, and I've seen two young men, I think they use to gather feathers at that place. Because I wasn't born here, I don't share things because not everybody can process.

When we bought the land, we made two driveway/parcels. The first one we put in by hand, it took us five years to put our driveway in. Because we listened to the land, and we didn't want to bring in a dozer because we knew we would disturb some of the trees. So we picked up the rocks, from the side of the road, back then you could do that, and there were still rocks to pick.

We scraped the soil off the 'ā'a and the pāhoehoe before we placed them, my husband basically for five years placed them, and we used that soil to create our first garden in grow bags. We placed them by hand because the soil is so sacred, and we live in an old kapuka (*kipuka*). It was almost like a mouth. People thought that we, my husband and I were crazy as they drove by because when the bulldozer came in to create 9 road, it bulldozed through. So our, where the land told us where we were supposed to put the driveway is higher. So we had to build it. Thank you for letting me share this with you.

While he was doing this, I went off exploring and listening. I got to a place probably about 871 feet deep of the lot, probably 500 feet back, and I thought there's supposed to be a meditation shack or like something is supposed to be here. And it was interesting because the forest the old grove, older forest came around like this and then the tree's got smaller and then there was the area in the back where the grasses were, 'uluhe (*Dicranopteris linearis*) and the, I call it Lasiandra, the blue flowered. That was where the garden was supposed to be because that was where the light was. But anyway, I told my husband, "This is where it's supposed to be." And it ended up being a house site. That was where the house was supposed to be. It's taken us this long to create the house. I have many issues about the way things are done. Its all money based.

I always had these feelings. I have, I was given a gift. The curse gift or anyway you look at it. It's a gift. And I don't talk about that either. I would always go back there to see if something was there. We'd find old grow bags because people would grow back there. But that wasn't it.

As the garden was being created, while our children were being home schooled, and they would play and hide in the garden, there were times when I felt like I was being watched. Sometimes no matter where I was, it didn't matter. It was a regular occurrence for some years. I'd be engaged in weeding or planting or whatever and peripherally I'd see somebody run. Chicken skin. I haven't talked about this to anybody except to very few. One day I saw him.

He didn't have a shirt on. He must have been in his early 20's at the latest. I don't know who the feather gatherers were? I know nothing about this. He's maybe 16 or 17, young. Because I didn't see him like this, he was buff but he wasn't, he was just a lean, healthy, almost like. Yes, he was that way because he used his muscles the way our bodies were used. And he, what he was wearing, he was clothed on the bottom but not on the top and his legs were exposed.

He was quick, quick, fast. I don't know whether or not he had anything on his feet but I don't think he probably did. And if he did, I don't know. But I think, he was just quick, he was sharp, and he knew how to make himself invisible. And I can do that sometimes so I can relate to this man. There was another one. He was the one, he was the master. I didn't figure it out to later 'cause I was praying and asking him. There was another one that was clumsier. I shouldn't say clumsy, he was younger, I figured he was apprenticing. That's what I figured with him.

.I don't know Hawaiian, I'm Russian. My language is Russian so I don't know what the correct Hawaiian words are for these things. So, one day, when we were doing the house, I felt something was there, and there was a trail created, re-created. It was there.

So, since then I got my confirmation because, I did some research on the way they got the feathers, and they put something on the branch and the bird got stuck and then they took what they needed and released the bird which is something else that I saw. I don't like to talk about things before they manifest, but there's got to be on our front door that we're going to make, a carving of hands with this bird flying away on it. I have got to learn to carve.

I have to go and look up the birds, because I am not sure which bird it was, the name of it. I heard a bird one time at 'Āinapō when I was hiking up there. I think that might have been what kind of bird it was that I saw in my vision, but I have to look at the birds, I don't know. I don't want to read into this thing just to make it happen for my carving thing. Anyways, one day when I was in the garden, he was there. We had planted some *hāpu'u*'s because we're trying to plant natives and remove the invasive plants because we didn't know what to plant at first. I

sensed that the bird was there one time and he stopped and was watching me. I said to him, "It is okay; you don't have to stay here anymore because we're watching over the place." I said, "Is there anything I could do to help you?", "Is it okay?" I haven't seen him since. So, I don't know

When asked about her knowledge of any cultural, archaeological, historic sites, including burials within the vicinity of the project area, Ms. Bath answered:

There is a burial. I do not know. There is a cave that is in this area and I walked. Somebody shared it with me, because it was private property. Before I got there they were kind of like sharing this special place that very few knew about and the owner knew about. As I was arriving I said, before I even knew I was going there, I saw a cave or something. I did not know why she was bringing me there and I said where is the cave? Where is the tube? Her eyes got bug eyed, she got freaked out.

When I got there first I sat for a while and then I walked down and because it was a *puka*, I would not go in. I did not want to go in. I felt like it was not my place. And then, as I sat there, I felt something about two twins. There were two twins and then something very negative, I did not feel comfortable I got queasy. It was not what happened in the past, it was like desecrating, something and it was above and in the front and I did not want to go by there.

The cave is located somewhere between Kaloli and Paradise. Closer to the highway, but I did see a vision, and I asked her to ask the owner who is Hawaiian, what is with the water, because I had this feeling. The cave is the one with a house in front of it; there are rings that go under the cave. I saw in the vision that it was filled with salt water, about this high salt water it is a women's cave. Then, I went into the paternity cave.

I kind of do not seek them out. I think they are something that our ancestors had and it is their business. If I happen to come upon one and have the opportunity, the privilege to experience that part of history, then I do and that is as far as it goes. One of the reasons we did bring up a dozer into our place was because we needed to create a corridor. Where the house site was, we were going to rip, but we had feelings like we should not rip. We just had a feeling that there might be something there. Because of the whole, everything that came down, we decided to make the little corridor so the cement truck could come in.

In the Maku'u quadrant there are many caves with different names. There is the rubbish cave and the trail, the Cazimero [Kazumura?] Cave thing, and then there is the John Martin Cave that comes down here (pointing at the map).

Regarding her knowledge of any traditional cultural practices of the past, present, and ongoing, such as when people pick flowers for leis and so forth, or when someone erects a monument to memorialize an accidental death, Ms. Bath stated:

That is the first one I thought about gathering plants. Well, people are starting to go elsewhere because there is less to gather for one thing. Would you gather flowers from a highway?

Plus a lot of this is private property. I mean, I have stopped along there and picked, but just for quickies and it was more in this area (pointing at map). I did not even know if it was legal because on the Hawaiian that is a reserve.

Another thing is the birds are part of our culture and when you allow for the resting places to be taken out that is something. I would say that, anymore, there are less and less people gathering along the highway, the way I did it, because there are other places that are safer. When I gather I go up to the saddle because it is a spiritual experience for me.

I have mixed feelings about the crosses and the Mylar balloons. That is part of there culture and they live here. I honor and respect it. I have seen people that were gathering at accident sites. I think I will defer on that one, I know that there is one on Ainaloa Boulevard area now. I have mixed feelings about it because sometimes for me they almost end up looking like a rubbish pile.

I have mixed feelings especially when it, I think a memorial a remembrance. I had a client friend that ate it on a motorcycle. At first there was all this stuff and now it is not there anymore, but it is still there for me and I do not need to have flowers. My dad passed on yesterday and I am here having an interview with you. I am going on with life and we will have our time when I make my passage to the mainland to do what I need to do. So my personal religion is a cultural thing and for me birth and death are very similar. In my experience helping people come in and going out it is a very sensitive issue not to be taken lightly. My gut feeling is that the balloons and that whole thing is something that one person created as a memory and people took on as appropriate and a way to extend aloha and remembrance and so if that is what they are doing I accept that as something they are doing. To leave rubbish does not show respect.

When asked about her knowledge of any legends or stories about the area, Ms. Bath replied:

I am embarrassed to say that as long as I have been here no. The forest reserve I have some. I do not ask as people want to share there stories they do. It is just a thing that I have a respect.

When asked if she knew of any concerns the community might have related to Hawaiian or other cultural practices within the vicinity of the project area, she responded:

I am not *malahine* (a newcomer) but I have been here for a while and I see what is happening and it is concerning me because I grew up here, I really did grow up here. I had my children, I started my business, I got married, building my first home-I am building it the old way. You know, I talk to people like some of these kids that get into the Hawaiian *noni* and all this. You know I had my garden

before you were a sperm and an egg. The thing that concerns me is how do we, it is not this way anymore and it is not going to be this way anymore, it is this way now and there is not very much we can do about that at this point other than to perhaps build some corridors that go *mauka –makai* but they need to be mindful. They need to be foot trails, they need to be bike paths, they need to be for local people to get to point a to point b, with the technologies and the things that we have now. We use cars, we use trucks, we use motorcycles, we use bicycles. We need to create something that is going to provide a transportation car to serve the people that live here. Were they can walk; they can use this to get from point A, to point B. This thing here (the road) when I am looking at this the very pictures that I see are stripping us, not just the Hawaiians, but all the people that live here of our culture of our home. By creating some western way of thinking has impacted so globally that it is the norm. China has it, Russia has it, and everyone has it, and look what is happening

So, in creating this the way it is, it infringes on people who have been there for years. Some of the people that live along this corridor have been there before it was expanded the first time. Did expanding the highway as it did now help the situation? No. People keep coming as long as you widen it is going to keep widening and infringing.

During the CDP what I heard, and I subscribe to the same thought so it was kind of nice to here, was what people are willing to live with if they were given the opportunity. There is going to need to be expansion, just because of safety issues. That is a given. Rather than build four (4) lanes or even two (2) lanes, slow down this corridor. Bring it down, even if you have to go 35 miles an hour.

Dillingham Boulevard is 35 miles an hour if you are lucky and people get from point A to point B. Create an island, a buffer zone within the center of it. Plant native trees in it. Plant it down the center and create roundabouts in Orchidland, in Paradise, in Ainaloa. A roundabout at Shower Drive it is not going to work. Use Roundabouts we do not need street lights. Street lights take power, they take energy, they do not solve the problem, and they are not part of the culture.

I am not easily offended, but I am offended by this, I am offended by this big time, because HDOT said that they were going to come and work with us and they did not. I called them on it at a meeting because I do not want to be angry, I want to do aloha on the whole thing but the bottom line is do not come here, do not come from there to here and tell me what my community wants .

The other thing is the people that are involved in this that give feed back, everybody's opinions are valid, but a lot of the people are not educated there are not given the alternatives. The mom with the four kids with the car that can not run is trying to get to Kea'au school and her husband is unemployed and they are foreclosing on the house and she is pregnant and they are asking her do they want

a quicker road. They do not say how would you feel about, or this is what we are going to do. People will accept slowing down for the safety.

It has to do with lifestyle; it has to do with stripping a community of a way of being. It has to do with when we have highways, these wide highways that slice the 'āina, psychically separate. The culture a system of living. We do not let them take that away. I do not let them take that away. It was not the system I put in place, but I am not going to let them take or get that one.

All because it was stripped, it does not mean we cannot have a sense of healing. All because there is a wound that has been made you do not pick at the scab. I am being straight. To do this is so inappropriate, the word would be inappropriate, because what is happening is the *malahine's*. The people that have not been taught, because they have not been shown, because they do not have to, they have been empowered to not honor the culture, to not know you are here now and this is how it was and this is what we are preserving . That little 'ōhi 'a tree is eighty years old. It is not like a birch that is two or three years old on the mainland. It is a grandma, it is older than you.

So doing this is so inappropriate. I arrived here because I felt that it was home, it is home for me. My kids want to come back they do not want to move to the mainland this is where they want to live, and part of it is the culture. This violates, I can only speak as a Caucasian of Russian ancestry. I can not speak for Hawaiians or Filipinos, or Japanese, or Micronesians. I am speaking for myself and this is my home. That is what I am saying and to me to do anything to the Hawaiian culture or the practices here is I strongly, I strongly oppose.

At the same time we are all people living together with our own cultures and it is finding that balance of respect for one another, but the one thing, the bottom line is to protect the land, because that is what was here before any of us. Now whether or not you believe in Pele or not is of no consequence to me. The other thing is let us talk economics. We can preserve we can use that money to preserve what we have and to make it right. We can *ho'oponopono*, with some of these funds instead of destroying.

## 6.8 W. H. Shipman, Ltd.



Figure 41. Mr. Thomas English, Mr. Oliver English, and Mr. Bill Walter of W. H. Shipman, Ltd. participated in a “talk-story” interview with CSH on July 31, 2009.

### 6.8.1 Mr. Thomas T. English

Thomas T. English (Figure 41) was born in ‘Ōla’a, Puna District, Hawai’i Island in 1948 to Mr. Eldon Shipman English Sr. and Ms. Martha Taylor. Mr. English grew up in the volcano area, and resides there today. Mr. English is presently the Vice President of W. H. Shipman, Ltd.

When asked is there anything you would like to say about the general history about the project area, or past and present land use, Mr. English mentioned:

I wanted to talk a little bit about the historical land use patterns in the area. Of course, you know, a long time ago the main route to get from one place to another on the island was the trail. It was down along the coastline, which is now on the maps as the old government road. I think the present corridor that goes from the Volcano Highway, up towards Pāhoā was something that came along later, and was certainly over the years, you know, started out as something pretty small and

then was improved and expanded over the years as traffic in and out of the area increased. One of the activities, besides general population growth in the region, that was the driving force for expansion, of course, was sugar production activities that began in Puna in 1899.

Near Maku'u, in the 1960s, much of the land which makes up the present day Hawaiian Paradise Park subdivision, on the *makai* side of the highway, and the 'Ainaloa and Orchidland subdivisions on the *mauka* side, was sold by W.H. Shipman. They were then further divided by others in creating those subdivisions. Once the subdivisions were created, there was an influx of people buying lots, building houses and setting up housekeeping in those areas. In between those subdivisions, and Kea'au village, the land has remained in some type of agriculture. After the plantation shut down, W. H. Shipman diversified their agricultural areas. Currently, we have cattle, macadamia nuts, papaya, banana, nursery crops, biofuels, and a number of vegetables and fruit crops growing on our lands. We have over 80 individual licensees who license land from us and are conducting their farming operations on our land. And as Bill had mentioned, a lot of this activity occurs along the Highway 130 corridor.

I remember what it was like back in the fifties. It was a two lane, narrow, basically in the old style, where they put some gravel on the pahoehoe. It went up and down and around. It was a windy road. By the fifties there were automobiles and trucks and stuff. Prior to that, most of the traffic was down around the coastline. There was some *mauka makai* travel, but as far as I know, there were the *mauka makai* trails to Kea'au, and then there was the main route to Kapoho from Hilo and back again along the old government road.

From Kea'au to almost Pāhoa town it was all ranch lands. A few areas, like the *kīpuka*, the Waipahoehoe on the *mauka* side of the road, and on the *makai* side there was a small kipuka were in sugar cane, when Kea'au had a sugar mill. Most of the sugar in Pāhoa was on the other side of Pāhoa, going towards Kalapana, and of course going down towards Kapoho on the other side of Pāhoa. There were not a lot of houses before the ranch lands were there. The lands of Kea'au were all a part of Shipman. And then you got into the Maku'u area, and towards Pāhoa town there were scattered houses here and there.

Back in the day there was a railroad that ran through your property. The railroad was a part of the Hawaii Consolidated Railway system. Actually, there was more than just one railroad, in addition to the Hawaii Consolidated Railway system; the plantation had temporary internal railroads. They were only used for hauling cane from the fields into the factory. The Hawaii Consolidated Railway system traveled from Hilo to Kapoho, with a split at Kea'au, which went to Glenwood. Passengers and freight traveled on the Hawaii Consolidated Railway system. The 130 corridor crosses the old railroad system in one place; the old railroad right of way is now part of the Kea'au Elementary School.

The railroad had acquired their rights of way in Kea'au from W. H. Shipman way back in the early 1900s with the provision that if they ever stop using it for a railroad, the land reverted back to W. H. Shipman. So, when the railroad went out of business in the 1940s the land reverted to Shipman once more.

One thing people do not realize is that the railroad was in fact, a private company. The Hawaiian Consolidated Railroad was a privately owned and operated company. They in turn, owned the right of way that the railroad passed over. The public use of that right of way was by contract when they purchased a ticket to ride on the railroad. So, there was no public right to use that right of way. They had to purchase a ticket and enter into a contract with the railroad to ride on that train over that property.

When the railroad stopped carrying passengers on that property, then with that the public's right to get on that property, there was no way that they could, without trespassing, go on that property anymore cause the railroad was no longer there to contract with them to sell them a ticket to go on it.

That is a popular misconception. People think, because it was a railroad, therefore, for some reason or another they can use as they would public property, but that is not the case. In any case, it only crosses, as I mentioned, the Highway 130 corridor in one place. Out where the current High School is located, in fact the Kea'au Elementary School is built on part of the old railroad right of way.

Mr. English shared some of his personal or family history in the area:

I have lived in Hawai'i my entire life. My great grandparents, WH and Mary Shipman acquired the *ahupua'a* of Kea'au in 1882. When Grandpa Shipman acquired the lands of Kea'au in 1882, his primary use for the land was ranching. He was running cattle back in those days, the result was that the land was essentially open all the way from the northern side of the Volcano Highway area, all the way down to the boundary of the Kea'au Ahupua'a.

Mr. English commented on his knowledge of any cultural, archaeological, historic sites, including burials within the vicinity of the project area:

I am aware some old pens. I could not go out and show you where they are, however I know there were some old cattle pens, in or very near the corridor. The ones that I was aware of are mostly now within the subdivision.

Uncle John was telling us about a settlement down at Pakī. Where they built stone enclosures to protect their gardens from introduced goats and cattle and so forth. I am sure it happened elsewhere as well. I do not know how many they are going to find out there. Along the Highway 130 corridor, within the Shipman lands, I do not think you are going to find too much of that kind of stuff. As I mentioned before, some of the cattle enclosures and so forth are out by the subdivision.

Certainly there are going to be places where old trails went across though. It is something that certainly they are going to find, when they survey. There are trail entrances currently abutting the road. These old trails are not on the modern map. In some cases, we do not really know where they are, or where they were. They are marked with mango trees on the Kea'au side. It was a very common thing. On the Old Government Road there were a lot of mango trees. They provided shade, they provided food. One trail from the *kīpuka* leads up to the old camp by the bridge. I think that was part of an old access trail too.

I think probably they predate the cowboys. We know there were settlements along the coastline, and settlements in the Kurtistown area. I think they were the old trails that travel *mauka-makai* linking various places along the coastline. These trails do not go straight to the coast; they travel downwards towards the coast in a radial fashion and terminate at various different places along the coastline.

The best thing for these trails is that they would not be marked. To the extent you call attention to them, and then people get *niele*. The old trails are still there, but no one uses them because they are hard to find.

Regarding his knowledge of any traditional cultural practices of the past, present, and ongoing in the project area, including the gathering of flowers for lei or the erecting of roadside monuments, Mr. English stated:

On this particular corridor, we do not see much roadside monuments currently ongoing. Certainly, it is a concern, and of course any monuments over there, are within the right of way. That is the *Kahuna's kuleana*. We certainly do not encourage people putting monuments up on private property. The access points to our lands along the corridor have a limited amount of traffic coming out of them, so we do not see many accidents associated with those areas. Most of the roadside monuments that we see are located farther down the road, *makai* of our properties.

And then in terms of the other question about gathering for flowers and so forth, again within the state right of way, no problem, but to the extent that they then start wandering off into the adjoining private lands, it is a concern. People might not be aware of any hazards that might exist, and it is private property. It is sort of like, if they are wandering in there to pick flowers, it is no different than wandering in there to hunt pig.

Particular things of picking flowers or monuments we really do not have that much of an issue really at this time on our lands. However, there is a lot more of that on volcano side, than along highway 130. Highway 130 does not pass through a pristine native Hawaiian forest. There are some '*ōhi'a*' trees there, and some '*uluhe (Dicranopteris linearis)*', and so forth, however, there is also a lot of invasive species along there as well. There is strawberry guava, various grasses and other invasive plants, and so there is not much to be gathered along there. So

in terms of any sanctioned gathering that goes on in that area now. There is none. There is nobody who has come in and secured permission from us to gather on any of our property. And, while the law does allow for gathering rights, it is to be done with the permission of the land owner.

Mr. English voices his concerns about the highway expansion, and how it will affect the company lands. He envisions the present forest being gone, and what the area might look like after expansion:

We are not so concerned about what widening the 130 corridor would do because it is certainly something that is needed, and immediately adjacent to the highway we do not have that much stuff, however, once you get away from that corridor, you start getting into places where we own half the farms.

I think that it is possible that some areas that are hidden now by forest would be exposed after expansion. I guess what it depends on, is how much forest is behind the forest that is there now immediately adjacent to the highway. There are places along that existing corridor where there are mango trees, which have been along that highway for a long time, ever since I was a kid. It is one of the things I remember as a small kid. Once you left Kea'au, and drive to Pāhoa, there was nothing between Kea'au and Pāhoa, except old pasture land, but there were these old mango trees all along the roadway. So, the extent to which you widen the roadway, and those are gone, there are not a lot of them, it is not like there is a deep forest of mango trees along the highway.

It would be too bad to draw attention to certain things, for example, you do not want to draw attention to the old trails because that is only going to encourage people to go *niele*. And, on the other hand you do not want to destroy them.

It ties into what I mentioned about the issue of protecting, to the extent possible, protecting our land from the ultimate corridor, and whether they might consider replanting mango trees or whatever was traditionally there along the old highway, along the edge of the new right of way as a mitigating measure, so we may lose that stuff for a time, but eventually it will regrow.

When asked if he had any other concerns, or if he had anything else to add, he added:

I think certainly we want to be sure that any archaeological sites are identified and properly dealt with. I will not say preserved, because I do not believe that we necessarily have to preserve every single archaeological site we come across. But they do need to, at a minimum, be identified and documented and dealt with in an appropriate manner. And, it would be very nice if the road was built in a manner that does not encourage the public to stray from the corridor into adjoining private property.

I am not sure exactly how you would implement that, but we do have a problem, a constant problem with controlling illegal access to our property. We would like to

be sure that the state, in designing these highway improvements, takes those issues into consideration.

Just as a general remark, I think that we, as a family and as a company, recognize the need for good transportation infrastructure to serve the people of Kea'au and Puna. In general, we are very supportive of this project, and we want the right thing to happen for the community at large, and we look forward to having the state and all of the contractors work with us for successful completion of this.

### 6.8.2 Oliver English

Oliver English (Figure 41) was born in Hilo, Hawai'i Island in 1972 to Mr. and Mrs. Gus and Kate English. Mr. English grew up in the Volcano and Puna areas, and resides in the Volcano area today. Mr. English is presently the nephew of Mr. Tom English, and the Resource Manager of W. H. Shipman, Ltd.

When asked is there anything you would like to say about the general history about the project area, or past and present land use, Mr. English mentioned:

Prior to the way it is now, it was all ranch lands, except for the *kīpuka*. They were planted in sugar.

Mr. English shared some of his personal or family history in the area:

I have lived in Hawai'i my entire life. My great-great grandparents, WH and Mary Shipman acquired the *ahupua'a* of Kea'au in 1882.

Mr. English commented on his knowledge of any cultural, archaeological, historic sites, including burials within the vicinity of the project area:

The roads of the *kīpuka* are the access trails. There is one that leads up to the old camp by the bridge. By the guava patch there is a trail that comes around and down into the kipuka. Most of the trails over there either lead to the kipuka or leads off of it and travels *mauka*. *Mauka* to *makai*. The entries to trails are marked by mango trees. You will also find rock piles, and walls and all kinds of stuff there as well. I do not know if they were cattle pens from cowboy times, or if they were fence walls, or whatever. There is wire out there too, between parts of rock walls. You will see part of a rock wall, then wire fence, then rock wall.

Regarding his knowledge of any traditional cultural practices of the past, present, and ongoing in the project area, including the gathering of flowers for lei or the erecting of roadside monuments, Mr. English stated:

The only thing I have ever seen over there is evidence of grafting or air layering of *'ōhi'a* trees along the side of the road.

I have not seen any monuments erected in memorial of an accident. I am a member of the Kea'au-Pāhoa Highway Group, and I was having a discussion at

one of the meetings, and they were saying that the corridor should be lined with trees. It is lined. There are mango trees all the way down both the sides of the highway, if you look, because the weed trees are kind of crowding them out, they are hard for most people to see.

The mango trees in that section designate where the pathways and trails were, it marks the highway going across, but inside our lands going *mauka -makai* you can identify trails going down by the mango trees, you can follow them. When you do, you are on an old trail usually. Whether it was made in the old days, or not, the cowboys used the trails and the mango trees. They would pass by a tree, grab a mango, and keep going, and grab another one later, when they were out checking cows or whatever. That is how the trails were demarcated. A lot of the mango trees can be found along the trails or marking the trails. They extend all the way to Pohohiki, and then all the way to *mauka*. I don't see anyone stopping alongside the roadway and picking mangos nowadays.

### 6.8.3 Bill Walter

Bill Walter (Figure 41) was born in Seattle, Washington in 1948 to Mr. and Mrs. William and Beryl Walter. Mr. Walter grew up in Hilo, Hawai'i, and resides in the Kea'au area today. Mr. Walter is presently the President of W. H. Shipman, Ltd.

When asked is there anything you would like to say about the general history about the project area, or past and present land use, Mr. Walter mentioned:

Not many cars traveled on the old two lane, narrow road in the fifties. And, the one thing that I would say is, over a period of time, that particular corridor became the main transportation, really the singular transportation route between Volcano highway, Pahoehoe and below. The result is that we concentrate on that corridor, as you are here. However, on either side of the corridor, non-transportation related activities are taking place. For example, up to about Shower Drive, there are farming areas on either side. Elsewhere there are residences, and so on. It is important to recognize that.

Mr. Walter shared some of his personal or family history in the area:

I have not lived in Hawaii my entire life. For several decades I resided on the mainland, but maintained ties with my family here. My great grandparents, WH and Mary Shipman acquired the *ahupua'a* of Kea'au in 1882. When Grandpa Shipman acquired the lands of Kea'au in 1882, his primary use for the land was ranching.

Mr. Walter commented on his knowledge of any cultural, archaeological, historic sites, including burials within the vicinity of the project area:

There are trails that abut the road, but they are usually hard to find, and located in the corridor, but towards the coastline more.

The old railroad system is on our property. And that is why I was saying, see you have a roadbed, and you have people who envision using this roadbed as an alternative route, some envision it as a walking trail, biking trail, and so forth. However, what happened when the right of way expired, it became an internal roadway on our property. There are farms along the sides of it, a rock quarry, and a little ranch at one point, and so forth. We have a large problem with theft, and ATVs trespassing, and so forth already. So, when people start talking about, oh, what a wonderful bike path that would make, they do not take into account the impact of that on surrounding areas.

Regarding his knowledge of any traditional cultural practices of the past, present, and ongoing in the project area, particularly the practice of hunting, Mr. Walter stated:

Well, we have a feral pig problem throughout the islands. It is one thing if you have feral pigs on your property, and you arrange for people to come in and hunt. On small lots there may not be so much of a feral pig problem. However, W. H. Shipman Ltd. has, in the area about 16,000 acres. As a result, we probably have a few less than 16,000 feral pigs (laughs). We have a lot of them. As a result, people trespass on our property to hunt them, some with ATVs, some with rifles, some with bows and arrows, and some with knives, most of them with dogs. Even though we have "no hunting" signs posted. They are posted until such a time as they come and rip them off or deface them, or whatever. The point is, the feral pigs draw people in, and you then have this hunting going on, and a lot occurs out there that is not safe.

Regarding his knowledge of any traditional cultural practices of the past, present, and ongoing in the project area, particularly the practices of roadside monuments, Mr. Walter stated:

In the areas where our property abuts the corridor, we do not see monuments, but, *makai* of that, towards Pāhoa town, yes, because many of those intersections at these traffic levels are not safe, so you have had a number of accidents and so on, on our property the only access points are to some of our farm lands, and we really have not particularly had accidents that I am aware of coming out of those, in part because there is just not that much traffic coming out of them. Also, people just don't stop to do things along that corridor because there is no shoulder, it is not safe.

Mr. Walter voices his concerns about the Road expansion, and how it will affect the company lands. He envisions the present forest being gone, and what the area might look like after expansion:

We have now certain established, recognized, and authorized connections to Highway 130 along that route, and in many cases that is the only ingress and egress points to parts of our property. For instance, we have farmlands and other lands along that area. These access points need to remain open, and made safe, given whatever happens to the highway. For instance, we have a very fertile farming area, *mauka* of highway 130, right about where the bridge is. That area is

farmed by people who have old farm vehicles in disrepair that they use to travel to and from that area. If suddenly, that area was cut off, with no provision made for those vehicles to get on and off the road, then a very fertile farming agricultural area will become un-usable and lost. As a part of this, the engineers need to spend time with us to examine those access points, and what they are used for, so that they can determine how these vehicles going to get on and off the highway as they do now. If that is not done, then we have some major losses. I mention this because access one way or the other has been cut off in the past elsewhere. If access is cut off, that would be a real problem. It is not as easy as saying that they are going to take an extra thirty feet of the road, but leave the road there, because now the cars are traveling sixty. How do you get on and off?

When asked if he had any other concerns, or if he had anything else to add, he added:

A part of this study has looked at whether we should create another road below highway 130 to reroute some of the activity on the main road. If that were to occur, the problems of theft, dumping, and unlawful hunting, as well as, people driving around in Alternate Terrain Vehicles (ATVs) would then, at a greater intensity, be transferred to those new routes as well. Not that they do not already occur there to some extent, but the new route would make it that much easier for these activities to occur.

What the new route would create for W.H. Shipman Ltd., very specifically, is for example, if you created a four or five mile route, from Shower Drive to Milo Road, the result is, we would be faced with an additional ten miles worth of security problems in our existing farming and industrial areas along the new route because of easier access to these areas.

Currently, people stop along the road, unload their ATVs, or bicycles or whatever, and then trespass onto adjoining properties, resulting in a variety of subsequent issues that occur. Also, in establishing another corridor like highway 130, the crossways that lead to it are redefined.

If you were to design another road next to it, what happens to the existing internal roads that already connects to it? You then come into the problem of, do you really want to have that connection, or does the new road break that connection, or make it much less effective, because you have to wait for traffic or you build underpasses, or what do you do?

You then come into the problem of, do you really want to have that connection, or does the new road break that connection, or make it much less effective, because you have to wait for traffic or you build underpasses, or what do you do?

The reason I bring that up is because, there are a number of alternatives, but the alternatives all revolve around not looking at the unintended consequences that occur when you build a road and what happens to the properties along the side of

that road. And given that, is it better to widen the road? You do not necessarily have an increase in those types of occurrences, because the borders stay the same, but it is further out, because the road is wider. However, if you design a new road, you now exacerbate whatever problems you might have had along the old corridor, and transfer it to the new corridor, resulting in increased security problems, and everything that goes along with that.

I am not saying that we do not have some of that already. But, you make some areas so much easier to access, and more visible to those people passing by. People who may not think of it now, suddenly realize that new access has been created, and new opportunities for ingress have opened up.

And, in they go! Also, there are existing internal roads, which are often privately used for agricultural or industrial activities, and so forth. The new road suddenly breaks these connections between roads, resulting in other problems. Widening what you already have, does not cause all of these other consequences.

For instance, in the last couple of months, people have trespassed onto our Ranch, and cut the water line, vandalizing, you know. They break through the fences. Also, there are some cultural sites in that area, they are not yet improved, but they have not been destroyed either. And again, people intrude with ATVs and so forth, and run roughshod like the place is a playground and things get damaged or vandalized. What you do to these people, what happens? Well, start by understanding that ATVs are not road legal, so if you look at the number of ATVs there are out there, you have to say, if they are not road legal, where are they operating them?

Then you look at a piece of land like ours, and discover that they like to race these vehicles all over the property. We try to stop that from happening, and have ejected them a number of times, for safety, trespassing, or for cultural site preservation reasons, to protect our farmers and, or to protect ourselves, and it is a very significant ongoing problem for us. That is one of the reasons why we are very, very concerned when people look at Railroad Avenue, so called Railroad Avenue. People say, "We already own it, let us just pave this and go about our business", or "let us make a bike path, a walking path." To begin with, it is not a community right of way, it is fully owned by W. H. Shipman. We recognize that, if it were opened up, the set of problems we already have, would be magnified. Were we to then decide that we needed to be very strongly secured, and they ran through five miles of our property, or six or ten, you would have to double that for security purposes. You know, we would have to secure twice that distance, because we would have to secure both the *mauka* and *makai* sides of the area.

So, if we use the old roads as an example of a public right of way that people could drive vehicles on; there is a problem with the legality of making use of it. You could maybe legally drive one way on it, but you could not turn around, because, in order to turn around you would have to trespass on our property.

However, people have gone down there and just trashed it with old mattresses, car hulls, and other rubbish. We hauled five truck loads of car chassis out of there. The aspect of all those issues are such, that there are concerns that the state needs to take into account when they determine where they are going to put roads, and where they wind their road and built another road.

There is also a need to have a study conducted to determine the size and composition of expected immigration to this area. This study should tell us the amount of space needed for employment and services (among others) for Puna to be largely self sufficient - and where such would best be located (best includes costs and probability of zoning, infrastructure, etc.). Based on such a study we could do a much better job of planning infrastructure for the future including minimizing the need for highways to take us out of Puna for virtually everything that we need.

## 6.9 The Kekahuna Family

Mr. and Mrs. Kekahuna are founding members of the Maku'u Farmer's Market Association (see also Section 3.7.4) (in the district of Puna. Mrs. Kekahuna is President and their son Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna is the project manager for the association. Today the family resides on the Maku'u Hawaiian Homesteads in Puna. They have lived there for more than twenty years. On August 28, 2009, CSH conducted an interview with Mr. and Mrs. Kekahuna, and their son Ioane Kekahuna at the Maku'u Farmers Market Association Lot alongside Highway 130.

### 6.9.1 Mrs. Paula Kanoelani Kekahuna

Mrs. Paula Kanoelani Kekahuna was born in Honolulu to Albert and Cecelia Ki'ilehua. She later married Mr. John Ioane Kekahuna Sr. Mrs. Kekahuna is the current President of the Maku'u Farmer's Market Association and mother of Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna.

Mrs. Kekahuna shared the history of the Maku'u Farmers Market Association, its location along Highway 130, and how her family feels about the *ahupua'a* of Maku'u in general:

We feel a personal, family connection to the *ahupua'a* of Maku'u, as a feeling, within ourselves.

The homestead was awarded in 1985. The first increment was in 1986, when Uncle John (her husband) received it, and we started our *'ōhana* (family) planning (as in gathering the families together to plan) in 1996, when we became nonprofit. This market site location was determined by our lessees (of Maku'u Homesteads), based on what our people needed. A farmer's market to sell our vegetables. A small business to help our economy, and to educate through our traditional cultural practices and ways. That was, and still is, the mission, the goal. We started back in 2001 with five people for one year and kept applying for more land and making the DHHL (Department of Hawaiian Homelands) realize that our people needed the land. Our future goals include a community center; *kūpuna*

(older, grandparent generation) housing; and a place that is comprehensive (all inclusive?) for over night stays for visiting *hālau* (various traditional schools, such as hula), canoe clubs, baseball teams, and other cultural practitioners; and a big open *mala* (*mala 'ai*, dryland planting) area.

We inherited the Pāhoa's Farmer Market. We became involved in running it ourselves, which took a lot of our people. We then continued working by hand to develop a cultural area, which we call the *Mala-ho 'o-na 'auao* or what we call the "Garden of Knowledge," [literal translation]. Through the years it was hard sweat from our *kūpuna*, our *kamali 'i* [progeny], *keiki* [children] and *'ōpio* [youth]. We had a lot of help from our community. The prisoners of HCCC [Hawaii Community Correctional Center], Kua O Ka Lā, [a K-12 charter school located at an intact ancient Hawaiian village in Puna teaching hands on learning] Uncle Robert's (Robert Kelihoomalū from Kalapana) group, Kamehameha Schools, Queen Lili'uokalani Trust, who supported us with foods. So pretty much that is how we came to what we are today.

So in the future we are aiming for our community center which we have to find more partnerships to create a home base for our people so they can work more freely with computer labs giving them a way to technology. The certified kitchen is so that we can run the market with our own foods. A certified *imu* [traditional Hawaiian below ground oven] so it would be legal. Right now we still use our regular cultural *imu* which we provide to the public and use it to teach this practice to the schools.

When asked about the role of the *nā 'ōpio* (the next generation) working at the market, Ms. Kekahuna shared:

Right now they are the second generation of the homestead which we pray we can create jobs for, through the teaching of our cultural practices. They will survive because we are a five-acre agricultural farm. The marketing that we created also branched out to our kids so they can still keep their culture, yet work into the future with technology. We have Ioane Kekahuna [her son], Heidi Botello [County Councilwoman Emily Naeole's daughter] that has been working with the homesteaders and they are running this project as far as the market and cultural practices go. They handle the workshops, facilitating the different projects with the schools, different non-profit groups, and mostly our community. There are a lot of Hawaiians outside of the Hawaiian Homestead which we would like to reach.

Ms. Kekahuna shared her knowledge about general history of the area, past and present land use:

From the stories from the *kūpuna* of Puna this was Shipman and McCandless land. Uncle Eric Kama, which my husband just was talking about. Eric Hanalei Kama, he was born and raised down Waiākea, the old golf course. They have the

Kama Estates in Puna right on the nine mile marker, but Uncle Eric taught us a lot about the Puna area.

Previously there were cattle ranchers, but the DLNR [Department of Land and Natural Resources] traded and acquired this land which they gave to the Hawaiian people. Years ago the Army had it, and there was bombing going on down here. They are still cleaning it up. We have a meeting with them in the near future about cleaning the rest of our homesteads. On the *mauka* side of the Maku'u Farmer's Association lot there are still wells. That's how the hunters know where the pig lives. Uncle Eric [Kama] told us there are caves still. They did some environmental assessment on the mauka side and said they found nothing, but there are pictures in that document that look like there was a village in that area. Where? We are not sure of. I have the book at home [the EA report].

Today, we have our project that we want to build because there is not much facilities in the Puna area for our community, the Hawaiian people and our *kamali'i* to reside on. This area here is pretty much like a *kūkākūkā* (consultation, discussion, deliberation) place. Someplace that they can call home. They classify some of our land as non-growable (non-agricultural) and the rest of the land is growable (agricultural). So the "permit thing" kind of throws me off. Some is non-agriculture and then right next door some is agriculture. I'm finding that is the problem with the state and county. This land is good to grow and that land is not good to grow. They are limiting the people.

Regarding burials, trails, burials, roadside memorials and historic or prehistoric sites in the area, Mrs. Kekahuna had the following to offer:

The only historic site I know of is the Kama residence. Uncle Kama's grave is the only grave I know of. The cave I know of is Pele's vagina cave [location unknown] which PKO [Project Kaho'olawe 'Ōhana?] are the ones that *mālama* [take care of, tend to]. As far as trails there are many that cross the road, many.

There are memorials and personally they should stay there. They should have a limit on flowers and keep it clean. It also attracts people to slow down or think before you drink and drive. They are just like a private graveyard. Today still our family goes to these different sites and takes the flowers say prayer.

When asked about the traditional cultural practices ongoing at the Maku'u Farmer's Association, Mrs. Kekahuna shared:

Aunty Pua Fernandez teaches *'ōlelo* [*'ōlelo Hawai'i*, Hawaiian language] from Joseph Nawahi School. The Kelihoomalua Family [from Kalapana] teaches genealogy. Kamehameha Schools teaches classes here, for the past three years. They hold all day sessions and plant *kalo* [taro], ti-leaf and other agriculture. The parents come and use our site to teach the children how to make coconut milk. They also teach how to make *haupia* [Pudding made in past of coconut cream and arrowroot (*pia*), now cornstarch] and then they open the *imu* and have a big

*pā'ina* [meal, dinner, party with food] of what they have harvested and cooked. Dave Silva comes and teaches *lomilomi* [Hawaiian massage]. The Alu Like Program also comes down. We also have cooking classes, *lau lau* (traditional Hawaiian way of wrapping food in ti leaves and cooking it), *'inamona* [relish made of cooked candlenut (*kukui*) kernels mashed with salt]. Whatever we get from our land that is what we teach.

We teach lei making and hula that is taught by our *'ōpi'o*. We also host Tahitians to help them fundraise. Maku'u 'Ōhana is pretty strong in the supporting of their community. Different hula *hālau* come, present, and teach the practices of the dance. We educate tourists and our children on our native plants. Right now, that is, we are striving to work with DLNR so we can have the rights to bring the native plants back. We cannot obtain *kauila* wood, *koa* wood. We cannot bring them out of the forest anymore because they watch us. You cannot get some Hawaiian plants from the nurseries because they are not the real native kind. If you get the *kauila* from the nursery it is not the same kind as in the forest. We cannot remove any plant from the forest without a permit. It is kind of hard. Just like the *kou* tree, you don't find the *kou* like you used to find before. We really want to get the native trees and plants from the forest. Even the people at the market are being asked where they got their native plants from.

Regarding myths, stories and legends of the region, Mrs. Kekahuna had the following to contribute:

The name Maku'u, yes, it came from the tail end of the canoe. It also means the reins of the horse. The *ahupua'a* today is not like the old maps. The *kūpuna* said that Maku'u was strictly down by the ocean part. This area is Keonepoko, Hālonā, and Maku'u [Ahupua'a]. And then we have Keonepoko [there is Keonepoko 1, and Keonepoko 2 Ahupua'a] by the nine mile marker. It is how they are dividing our areas today is very puzzling because the name was sacred to that area purposely. Puna we know is all spring water. By digging up to make residential, we have the biggest aquifer which they don't want to admit. Hawaiian homes are going to be doing 900 something houses on the *mauka* side which we as Maku'u lessees are concerned with, because that is our water. They need to think about the future before they damage what is there now. The *kūpuna* are worried but they are not going to come out and say it. They are not going to tell you where it is at, they are just going to tell you it is there, because they are changing the name of all our districts. The state, the county, or the environmental people will not recognize the original names of the areas. 'Ōla'a changed to Kea'au, and now they are changing all the different land divisions. In the *kūpuna*'s eyes it is not right, because they can tell you the real name. Even when they tell the real name they don't recognize it. That is what happens because I was in the Puna Development Plan. They have no cultural in there. We want this place to be utilized for all Hawai'i's culture and our resources. All the names of the streets came from the Kanahēle Family.

When asked about any concerns that the community has regarding the proposed project, she stated:

With CDP [County Development Plan] plans they don't want us to succeed because we are taking away all the environment natural resources and we feel we have to because we don't have a home base place to continue teaching our traditional cultural practices. Hawaiian Homes are supposed to hold their own permits. But, we have conflict between county and DHHL because of the memorandum of understanding. That is what is prolonging and preventing us from moving forward, the do's and the don'ts, (for example) you can make *imu*, but you cannot sell.

### 6.9.2 Mr. John Ioane Kekahuna Sr.

John Ioane Kekahuna Sr. was born on the island of Lāna'i. to Mr. Peter Noah Kekahuna of Paia, Maui Island and Adeline Leialoha Kaehuaea of Honolulu, O'ahu Island. Mr. Kekahuna grew on the island of Lāna'i and moved to O'ahu in 1964. He is the husband of Mrs. Paula Kekahuna, and the father of Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna

When asked about his work at the Maku'u Farmers Market Association, Mr. Kekahuna shared:

I do mostly everything. I am not on the board. I have no title. I just help to make the whole project work.

When asked about the general history of the area, past land use, present land use, what was here before time, Mr. Kekahuna responded:

We came a long way. Not to long ago, Uncle Eric Kama (a local *kūpuna* who taught the people there about the region) passed away. I am glad we came this far before he passed. We dedicated the bathroom building to him, and we had the funeral here. Working with the kids here is really important to us because many are having a hard time at home with families, so it is working out great. (Even though they say this land cannot grow certain things,) if you *mālama* the land, you can grow.

Mr. Kekahuna told CSH about some of the problems with traditional cultural practices ongoing at the market, and how it relates to ongoing gathering practices elsewhere:

That's what is so upsetting because, when we went up to Saddle Road we saw one guy taking the *hapu'u* and coming down to sell it at the market, but if we do it we get questioned or fined. My wife and I have been making lei for many years and it got to the point that we had to get permit to pick. Because we are open to the public [the market] we get a lot of questions. *Leipo'o* [a traditional Hawaiian flower head wreath] was our business, but now have to get a permit. Scary for us *kūpuna* today because we don't want to go jail. They [the *kūpuna*] don't like to fight so they stay on the side and hope that *'ōpio* [the children of the next

generation] kind of take over and help take care of their resources. The *hale* was built by the inmates at OCCC in Hilo.

### **6.9.3 Mr. Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna**

Ioane Kalikookapalaiwiliamekeala Kekahuna was born in Hilo, Hawai'i Island to Ms. Paula Kanoelani Kekahuna of Honolulu, O'ahu Island, and Mr. John Ioane Kekahuna Sr. of Lana'i Island. Mr. Kekahuna grew up in Maku'u Ahupua'a, Puna District, Island of Hawai'i, and resides there today. Mr. Kekahuna is presently the project manager for the Maku'u Farmers Market Association.

When asked about his work at the Maku'u Farmers Market Association, particularly as it pertains to passing on traditional Hawaiian cultural vales to the next generation (*nā 'ōpio*), Mr. Kekahuna shared:

I coordinate all the kids that work in the parking lot, attendants. We have 14 kids that work for us. I just make sure they *mālama* [take care of and respect] the area, clean rubbish, and direct cars. Then we do some projects like building this *hale*, yard cleaning, etc.

When asked about the traditional cultural practices ongoing at the market, Mr. Kekahuna responded:

We do *kalua* pig, *imu*, clean fish, gather all the things we need on this land. A Samoan guy his name Alofa he teaches Tahitian drums, Keoni Taraldo teaches canoe carving, other's come and give classes on throw net, *'ōlelo Hawai'i*, and *kūpuna* come and teach their culture.

## Section 7 Traditional Cultural Practices

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Traditional cultural practices are based on a profound awareness concerning harmony between man and our natural resources. The Hawaiians of old depended on these cultural practices for survival. Based on their familiarity with specific places and through much trial and error, Hawaiian communities were able to devise systems that fostered sustainable use of natural resources. Many of these cultural practices have been passed down from generation to generation and are still practiced in some of Hawai'i's communities today.

Discussions of specific aspects of traditional Hawaiian culture as they may relate to the project area in the broader context of the encompassing Kea'au Ahupua'a to Waiakahiula Ahupua'a, landscape, District of Puna, Hawai'i Island. This section examines cultural resources and practices identified within or in proximity to the subject project area.

As defined by Maly, "Cultural attachment is demonstrated in the intimate relationship (developed over generations of experiences) that people of a particular culture share with their landscape – for example, the geographic features, natural phenomena and resources, and traditional sites etc., that make up their surroundings. This attachment to environment bears direct relationship to beliefs, practices, cultural evolution, and identity of a people" (Maly 1999:27). Excerpts from "talk story" sessions from past cultural studies and the subject CIA are incorporated throughout this section where applicable.

Our research into the traditional cultural practices ongoing within the project area has found two areas of ongoing cultural activity. One is located within the project area (Maku'u Market Association, Section 6.9), immediately adjacent to the roadway. The other location (Aha Punana Leo and Ke Kula 'O Nawahiokalani'opu, Section 3.7.3) is outside of this project's APE, but participates in activities within the APE at the previously mentioned site. One of the access areas to the second location (Opukaihaia Street) intersects this project area's APE. Aside from the activities at these two locations, this study has not located any persons participating in ongoing traditional cultural practices in areas that will be affected by this project's APE.

In addition to, and in cooperation with the ongoing Hawaiian cultural activities at the Maku'u Market Association site, just outside of the corridor, on Opukaihaia Street, which intersects with Kea'au-Pāhoa Road near the end of the bypass, and the beginning of the APE, lies the property of Aha Punana Leo (language nest) and Ke Kula 'O Nawahiokalani'opu'u (The School of Nawahiokalaniopuu). Both programs provide programs dedicated to the preservation of the Hawaiian language, and the customs and culture of the Hawaiian people. All of the activities listed separately in this section are occurring at both the Maku'u Market and the Aha Punana Leo locations as part of imbedded cultural norms within the larger context of existing programs (e.g. Hawaiian language taught via the activities and practices of the hula, or the Hawaiian cultural tradition of kaikua'ana-kaikaina relationships [to act as a older sibling to younger sibling] embedded within traditional practices [the older helping to teach the younger]). CSH was unable to obtain interviews with persons connected to Aha Punana Leo or Ke Kula'O Nawahiokalani'opu'u prior to the finalization of this report.

These cultural practices and traditional cultural norms are too numerous to list here due to their embedded nature. However, some effort to document some of these practices are listed in

this section, with separate sections for practices of special note, with accompanying excerpts from our research.

While there will be no direct impacts to Aha Punana Leo and Ke Kula 'O Nawahiokalani'opu'u, the Opukaihaia intersection, one of the access points to the school's property, is located within this project's APE. Please see Section 3.7.3 for information regarding the ongoing activities at this location.

## 7.1 Plant Resources and Gathering Practices

Puna, according to Mary Kawena Puku'i, is translated as "bowers fragrant with pandanus" and "the land in the heart of Kāne" (Puku'i et. al. 1974). Prior to recent lava flows, Puna was verdant and luxurious and one of the most fertile areas on the island of Hawai'i (Handy and Handy 1972). This is further supported not only by the translation of the district name, but also in the abundance of *'ōlelo noe'au* (poetical sayings), *mo'olelo* (stories), *'oli* (chants), and *mele* (songs) that praise the district for its beauty, fragrance, and abundance of *hala* (*pandanus tectorius odoratissimus*) and *'ōhi'a lehua* (*Metrosideros polymorpha*) trees (see Sections 3.2 and 3.3). Further, historical accounts of the region (see Section 3) inform us about the landscape of Puna in the 1800s, and how the people of Puna used their environment and existing trails and roads to travel into and out of the project area. In Section 3 of this report, we also see in legends, that trails were used as a way to access areas in order to gather plants for cultural uses, such as lei making, and gift exchanges. This practice is still maintained in Puna as it is elsewhere (see Naeole and Siracusa interviews, Section 6).

According to Maly (1999):

In the context of landscape, Puna is synonymous with the groves of pūhala (pandanus trees) with their fragrant clusters of huahala (pandanus fruit born on the female trees) and the hīnano (blossoms of the male pandanus). The fragrance of the hala permeated the kula (plains) and kahakai coastal region of most of Puna...

However, within the corridor of the highway the practice of gathering is largely non-existent (see Section 6). It is unknown at this time why the area is not used for gathering, as is other places on the island where people still use the highway right of way to access plant resources (see Erickson, Table 9). The reason may be that the right of way on the Kea'au-Pāhoa Road is an unsafe area to stop, or that there are plenty of resources elsewhere that are easier to access. However, according to Oliver English (see Section 6), there is evidence of "grafting or air layering of *ohi'a* trees along the side of the road."

The only exception is in the Maku'u Farmers Market Association lot area, where according to Mr. Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna, the Maku'u people "gather all the things we need on this land." An indication that there is ongoing gathering occurring within the project area, but only on the Maku'u lot. Elsewhere, according to Mrs. Kekahuna (Section 6.9.1), there may be some problem with reestablishing native plants in the region, and gathering plants that are already there in the vicinity of the corridor, or anywhere that native plants could be located due to permitting rules in Hawai'i, especially if they are using the materials to create native artifacts for sale:

We educate tourists and our children on our native plants. Right now, that is, we are striving to work with DLNR so we can have the rights to bring the native plants back. We cannot obtain *kauila* wood, *koa* wood. We cannot bring them out of the forest anymore because they watch us. You cannot get some Hawaiian plants from the nurseries because they are not the real native kind. If you get the *kauila* from the nursery it is not the same kind as in the forest. We cannot remove any plant from the forest without a permit. It is kind of hard. Just like the *kou* tree, you don't find the *kou* like you used to find before. We really want to get the native trees and plants from the forest. Even the people at the market are being asked where they got their native plants from.

Mr. John Kekahuna Sr. (Section 6.9.2) shares the same sentiment as his wife, Paula Kekahuna when he discusses their choice of gathering areas for native Hawaiian plants for lei making, and the inequality that exists for native Hawaiian gatherers and practitioners who are making items for resale:

That's what is so upsetting because, when we went up to Saddle Road we saw one guy taking the *hapu'u* and coming down to sell it at the market, but if we do it we get questioned or fined. My wife and I have been making lei for many years and it got to the point that we had to get permit to pick. Because we are open to the public (the market) we get a lot of questions. *Leipo'o* (a traditional Hawaiian flower head wreath) was our business, but now have to get a permit. Scary for us *kūpuna* today because we don't want to go jail. They (the *kūpuna*) don't like to fight so they stay on the side and hope that *'ōpio* (the children of the next generation) kind of take over and help take care of their resources.

## 7.2 Carving and Canoe Making

Within the Maku'u Farmers Market Association grounds there are many cultural practices still ongoing as a way to perpetuate the culture and pass knowledge of traditional Hawaiian ways to the next generation. According to Ms. Naeole the practice is ongoing through the cultural classes held weekly at the Maku'u site (see Section 6.3):

The traditional cultural practices that are still on-going at the Maku'u Market are drum making, Uncle Keoni has taught carving and canoe making with our people... We also have Tahitian drum making there, the *toere*...

This information is supported by Ioane Ka-liko-o-kapalai-wili-a-me-ke-ala Kekahuna (Section 6.9.3) of the Maku'u Farmers Market Association, who shared the following with CSH:

...A Samoan guy his name Alofa he teaches Tahitian drums, Keoni Taraldo teaches canoe carving...

## 7.3 'Ōlelo Hawai'i or Hawaiian Language

As a way to continue to preserve the language of Hawai'i, Hawaiians at Maku'u Market Association conduct Hawaiian language classes for the community at Maku'u:

... We also have *'ōlelo Hawai'i* or Hawaiian Language classes for the community there at the market (see Naeole, Section 6.3)...

... others come and give classes... *'ōlelo Hawai'i* (see Ioane Ka-liko-okapalai-wili-a-me-ke-ala Kekahuna, Section 6.9.3) ...

Outside of the project area APE, landowner Aha Punana Leo (translated “language nest”) whose property is located at 16-120 'Opukaha'ia Street in Kea'au, operates a language immersion preschool dedicated to Hawaiian language revitalization there. Immediately adjacent to the preschool, on the same property, is the Nawahiokalani'opu'u School Campus, which is “designed for families, teachers and staff who have chosen to speak Hawaiian as the first and main language of the home, and also those who are in the process of establishing Hawaiian as the dominant language of the home. The goal is to develop, enhance, and maintain the Hawaiian language through education in the home and school,” (www.nawahi.com, see also Section 3.7.3).

The Maku'u Market site and the Aha Punana Leo/Nawahiokalani'opu'u Immersion schools participate in programs of language and culture together. Teachers and students from the schools volunteer their time to not only teach language at Maku'u Market, but also bring their students to Maku'u to participate in ongoing activities and educational opportunities:

Aunty Pua Fernandez teaches *'ōlelo* from Joseph Nawahi School (see Mrs. Paula Kekahuna, Section 6.9.1) ...

## 7.4 Agriculture

In Puna, as it is elsewhere in Hawai'i, agricultural practices are environmentally and ecologically adaptive. Historic accounts support the presence of several cultural modifications and adaptive measures in the Puna district through the use of various environmental zones ideally suited to the cultivation of specific types of agriculture. For example, in the wet lowland forest areas of Puna:

...taro used to be planted under the pandanus trees, which were felled and cleared to let in the sun after the taro had rooted and put forth the first grown of leaves. It is said that here the cutting was planted wrapped in a roll of dry pandanus leaf to keep it moist and give it nourishment in the stony ground of the lava-covered lowlands [Handy 1940:53].

In general, the district of Puna is underlain with evidence of previous lava flows, as a result, in other areas of the district, successful sweet potato cultivation was dependent on other adaptive measures, as observed by visitors to the region during the historic period:

[Potatoes] . . . are seen to be growing literally among heaps of stones and pieces of lava, with scarcely soil enough to cover them; yet they are, I am informed the finest on the island [Wilkes 1845:4:188].

[Potatoes are planted] . . . by digging holes in the lava where it was a little decayed, carrying a handful of earth to each of these holes, and planting there in a wet season, he got a very satisfactory crop [Nordhoff 1874:94].

The natives pick out the stones to the depth often of from 2 to 4 feet, and in the bottom plant the potato—how it can expand in such a place is a wonder [Lyman 1846, July 7].

[Potatoes are planted in] . . . the holes dug among the stones to receive the potatoes where some of them 6 feet in depth—thus securing a degree of moisture and shelter from the sun though no more soil than at the surface [Lyman 1846, July 13].

In addition to sweet potato grown adaptively within stones, lava, and other environmental conditions, according to Titus Coan, arrowroot, cotton, coffee, oranges, citrons, limes grapes, and other fruits were also grown in Puna during the historic period (1882:40).

While taro is widely known as the main staple crop of the Hawaiian people, with sweet potato as a secondary crop in drier areas, in Puna, according to Handy and Handy, breadfruit cultivation held a primary place in the diet of the people of Puna. This may be due to the nature of the environment, which may have contributed to the predominance of arboriculture in certain regions:

Except in Puna, Hawaii, breadfruit was wholly secondary to taro and sweet potato as a staple. We are told that in Puna in a good year, breadfruit may be eaten for eight months of the year, beginning with May [Handy and Handy 1972:152].

According to Gordon McDonald, Puna is underlain with geologically recent lava flows which may not have provided the people of Puna with deeper soils for more extensive agricultural production of root crops:

There is ample evidence that in geologically recent times Puna has often been the site of eruption of cinder cones and extensive lava flows. It is probable that all of the surface lavas throughout this region should be considered geologically recent, but many of them are of such late date that it is surprising not to find more mention of them in native tradition [MacDonald 1941:1].

This may explain the widely-held belief among Hawaiians that in pre-contact times Puna was once “Hawaii’s richest agricultural region and that it is only in relatively recent times that volcanic eruption has destroyed much of its best land” (Handy 1972:542). The location of recent lava flows where soil development was poor, the availability of rainfall, streams, and springs, and the presence of good fishing grounds were all important factors in the location of early Hawaiian settlements in Puna, as discussed by the archaeologist Ross Cordy:

Puna’s settlement pattern was a patchy one, affected by the lava flows in the area. Most houses and major heiau appear to have been near the shore, often clustered about small coves, but some inland settlements were found from Kea’au to ‘Ōla’a

(towards the volcano) and towards Pāhoa. Agriculture was dryland cultivation of kalo and sweet potatoes. In areas where rainfall was high and soil was present, farms were in the form of walled fields. Where rainfall was lower or soil was minimal due to relatively recent lava flows, cultivated areas were informal clearings, mounds, pits and terraces. These fields were located around the houses and extended a bit farther inland, often clustered in kīpuka, remnants of old flows with soil. Forests were exploited as in the other windward lands. Fishery rights extended out to sea, with some fisheries cutting off others [Cordy 2000:45].

Mr. Tom English, in his interview discussed the kinds of agriculture and animal husbandry that has been ongoing through time at W. H. Shipman:

From Kea'au to almost Pāhoa town it was all ranch lands. A few areas, like the *kipuka*, the Waipahoehoe on the *mauka* side of the road, and on the *makai* side there was a small *kīpuka* were in sugar cane, when Kea'au had a sugar mill. Most of the sugar in Pāhoa was on the other side of Pāhoa, going towards Kalapana, and of course going down towards Kapoho on the other side of Pāhoa. There were not a lot of houses before the ranch lands were there. The lands of Kea'au were all a part of Shipman. And then you got into the Maku'u area, and towards Pāhoa town there were scattered houses here and there.

(Tom English) Near Maku'u, in the 1960s, much of the land which makes up the present day Hawaiian Paradise Park subdivision, on the *makai* side of the highway, and the 'Ainaloa and Orchidland subdivisions on the *mauka* side, was sold by W.H. Shipman. They were then further divided by others in creating those subdivisions. Once the subdivisions were created, there was an influx of people buying lots, building houses and setting up housekeeping in those areas. In between those subdivisions, and Kea'au village, the land has remained in some type of agriculture. After the plantation shut down, W. H. Shipman diversified their agricultural areas. Currently, we have cattle, macadamia nuts, papaya, banana, nursery crops, biofuels, and a number of vegetables and fruit crops growing on our lands. We have over 80 individual licensees who license land from us and are conducting their farming operations on our land. And as Bill had mentioned, a lot of this activity occurs along the Highway 130 corridor.

According to Ms. Naeole (See Section 6.3), the Maku'u Farmers Market Association offers classes on agriculture at their sites and promotes the native Hawaiian value of passing on knowledge to the next generation:

For some five years the Kamehameha School Kids programs has come over and conducted different cultural workshops and classes. Sometimes classes are offered during the week and sometimes on Sunday. The community also practices traditional planting of sweet potato and kalo or taro.

Ms. Kekahuna (Section 6.9.1) explains that not only is culture taught at the Maku'u Farmers Market Association lot, but knowledge is put into practice in various programs that teach Hawaiians how to not only grow agriculture, but how to prepare agricultural byproducts in

traditional ways, using traditional Hawaiian recipes and methodologies. These traditional cultural ways are promoted to the next generation in order to preserve cultural ways and ensure sustainability within modern lifestyles and economic conditions:

We then continued working by hand to develop a cultural area, which we call the Mala-ho'ona'auao or what we call the "Garden of Knowledge," [literal translation]. Through the years it was hard sweat from our *kūpuna*, our *kamali'i* [progeny], *keiki* [children] and *ōpio* [youth]. We had a lot of help from our community.

...Kamehameha Schools teaches classes here, for the past three years. They hold all day sessions and plant *kalo* [taro], ti-leaf and other agriculture. The parents come and use our site to teach the children how to make coconut milk. They also teach how to make *haupia* [Pudding made in past of coconut cream and arrowroot (*pia*), now cornstarch] and then they open the *imu* and have a big *pā'ina* (Meal, dinner, party with food) of what they have harvested and cooked [see Mrs. Kekahuna, Section 6.9.1].

## 7.5 Transmission of Generational Knowledge

Hard work and the transmission of knowledge inter-generationally through education is a foundational and traditional Hawaiian cultural practice. Ms. Naeole (Section 6.3) shares with CSH the passing on of the torch to the next generation of children, now parents at the Maku'u Market Association Lot:

When it came to the building of the Maku'u Farmer's Market, I had been part of the gang for long time. I feel so proud of what it is today, because my daughter Heidi is actually the Secretary-Treasurer of that Farmers Market, Paula Kekahuna's son, Ioane, is actually the site manager. So we have given the realm to our children. Now we have moved on and stepped aside so that the next generation can come forward. And so, I feel so proud to be part of the Maku'u Market Association. Right now we are working to get the money to build a community culture center over there. It is all about hard work, setting your visions, and plowing through to make it real.

Our Maku'u people and our native people have been doing many cultural practices for a long time at the Maku'u Farmer's Market. So our people have been practicing their culture here for at least 80 years. As a native Hawaiian Homestead and Maku'u Farmer's Association we are working to keep alive what is of our culture. We now have the Maku'u Sunday Market and we hire only the *kamali'i* or children. All adults volunteer. The *kamali'i* is the only ones getting paid right now on the homestead.

Mrs. Kekahuna (Section 6.9.1) also talked about this passing on of knowledge to the children, and how through education and training, the culture is perpetuated through time and space:

...Right now they (the next generation) are the second generation of the homestead which we pray we can create jobs for, through the teaching of our cultural practices. They will survive because we are a five-acre agricultural farm. The marketing that we created also branched out to our kids so they can still keep their culture, yet work into the future with technology. We have Ioane Kekahuna (her son), Heidi Botello (County Councilwoman Emily Naeole's daughter) that has been working with the homesteaders and they are running this project as far as the market and cultural practices go. They handle the workshops, facilitating the different projects with the schools, different non-profit groups, and mostly our community. There are a lot of Hawaiians outside of the Hawaiian Homestead which we would like to reach.

Mr. John Ioane Kekahuna Sr. (Section 6.9.2), and his son, Mr. Ioane Ka-liko-o-kapalai-wili-ame-ke-ala Kekahuna discusses with CSH about how the Hawaiian children in Maku'u are struggling. Through the efforts conducted at the Maku'u site to restore and perpetuate the culture, and provide good role models to them, knowledge can be used in important ways socially:

Working with the kids here is really important to us because many are having a hard time at home with families, so it is working out great. (Even though they say this land cannot grow certain things) if you *mālama* the land, you can grow [John Kekahuna Sr., Section 6.9.2].

I coordinate all the kids that work in the parking lot, attendants. We have 14 kids that work for us. I just make sure they *mālama* (take care of and respect) the area, clean rubbish, and direct cars. Then we do some projects like building this *hale*, yard cleaning, etc. ... We do *kalua* pig, *imu*, clean fish [Figure 42] [Ioane Kekahuna, Section 6.9.3].

## 7.6 Music, Dance and Lei Making

In addition to the wealth of knowledge being transmitted at the Maku'u Market location, there are ongoing: "ukulele lessons, and different kumu hula or teachers of native Hawaiian dance come to teach," (Naeole, Section 6.3).

According to Mrs. Kekahuna (Section 6.9.1), the people connected to the Maku'u Market also supports the community in return:

We teach lei making and hula that is taught by our *'ōpi'o*. We also host Tahitians to help them fundraise. Maku'u 'Ōhana is pretty strong in the supporting of their community. Different hula hālau come, present, and teach the practices of the dance (Mrs. Kekahuna, Section 6.9.1).



Figure 42. Photo of workers uncovering the *imu* at the Maku'u Farmers Market Association lot; Photo Courtesy of Mrs. Kekahuna

## 7.7 Weaving

According to Maly (1999):

The people who dwelt in Puna were known as master weavers. The most famous mat of Puna was one which was called puahala (G.S. Kahanai IN Fornander 1919 Vol. V-Part III:626). This mat was woven from the leaf sheaths of the puahīnano (male pandanus tree blossoms), and it was particularly favored because of its silky texture and pleasant fragrance. To this day, Puna is known for its growth of hala, and the floors and furniture of some of the old households are still covered with fine woven mats and cushions. Weaving remains an important occupation of many native families of Puna as well.

According to Ms. Naeole, the art of weaving that Puna is so famous for continued through her parents generation, with the Puna line of her family gathering *lauhala* (the leaves of the

Pandanus tree) (see section 6.1), and the Keaukaha (an area by Hilo) side of the family doing the weaving:

My father and my grandma used to collect lauhala or pandanus leaf and take them to Keaukaha to the Waipā family who were the weavers. We were the gatherers here in Puna [see Naeole interview 2009, Section 6.3].

## 7.8 Hunting

In general, the Puna area is well stocked with pigs for hunting purposes, according to Mr. Walter of W.H. Shipman, they have a severe feral pig problem:

Well, we have a feral pig problem throughout the islands. It is one thing if you have feral pigs on your property, and you arrange for people to come in and hunt. On small lots there may not be so much of a feral pig problem. However, W. H. Shipman Ltd. has, in the area about 16,000 acres. As a result, we probably have a few less than 16,000 feral pigs. (Laugh) We have a lot of them. As a result, people trespass on our property to hunt them, some with ATVs, some with rifles, some with bows and arrows, and some with knives, most of them with dogs. Even though we have “no hunting” signs posted. They are posted until such a time as they come and rip them off or deface them, or whatever. The point is, the feral pigs draw people in, and you then have this hunting going on, and a lot occurs out there that is not safe [Walter 2009, see Section 6.8].

According to Ms. Naeole, local people are still using the trails in the area for subsistence:

Mauka of the Homestead there are trails people have been using for hunting for many many years. It is a trail of long time past. Not just a recent trail. The trail has been over there for a long time [Naeole 2009, Section 6.3].

While most of the hunters in Maku'u come from the Hawaiian Homelands subdivision there, and are native Hawaiian, according to Ms. Siracusa:

In Ka'ohē Homesteads, where I live, there are people who are pig hunting. It's a residential area now, but, (laughs) that's not stopping a lot of people. Mostly the hunters are not Hawaiians. They are local Portuguese and do not live in the area [Siracusa 2009, Section 6.5].

## 7.9 Marine Practices

Cultural Surveys Hawaii (CSH) had an opportunity to participate in cleaning fish at the Maku'u Farmers Market Association's site alongside of the proposed corridor as a part of a participant observation interview with several residents of Maku'u who declined to be recorded (Figure 43). CSH was able to observe the cleaning of fish, and other traditional *lu'au* preparation activities on the market property. There were people of different ages present, from elderly to age four or five who participated in all of the activities, no matter what their abilities. In general, we learned about the ongoing activities at the site, and were able to observe various activities

ongoing while we were there, as well as discuss other activities that occur in the vicinity. The entire area has been landscaped to closely mirror a traditional Hawaiian *kauhale*, or village/homestead. There are planting areas, rock walls, several openended *lānai*-type *hale* for various kinds of uses (e.g. storage, food preparation, *imu*, etc.). It is evident that much hard work has gone into the designing and landscaping of the site. On one end, there is an open area where the market is located on the weekends; the other end is a cultural area, described above. Many portions are near the roadway, but outside of the right of way of Highway 130. While the site is not located near the ocean or a body of water where fishing could occur, ongoing classes at the site perpetuate Hawaiian fishing culture (e.g. net throwing, and the sharing of the fish catch).



Figure 43. CSH employees at Maku‘u Market Association lot cleaning fish; photo courtesy of Ms. Paula Kekahuna

## 7.10 Wahi Pana (Sacred Places)

According to Mr. Ed Kanahale in his article “An Introduction to Wahi Pana: A Native Point of View” (Kanahale in James 1995:6):

The concept of *wahi pana* involves many levels of meaning. If we translate this term literally as a sacred place, then it does no justice to the Hawaiian culture. A *wahi pana* meant much more than just a sacred geographical spot. In order to understand the deeper meaning of the idea of place, let us examine cultural roots. A place tells me who I am, and who my extended family is. A place gives me my history. The history of our clan, and the history of my people. I am able to look at a place and tie in human events which affect me and my loved ones. A place gives me the feeling of stability and belonging to my family both living and dead. A place gives me a sense of well-being, and knowledge that I am accepted by all who have experienced my place.

Places of course, can connote economic significance, emotional significance, historical significance or spiritual significance. It is, however, spiritual significance of a place that is a major portion of the concept of *wahi pana*. The Hawaiian culture accepts the sense of the spiritual as a dominant factor in the daily lives of native Hawaiians. The sense of the spiritual was an important part of how my ancestors reacted to people and to their environment. This value is also a part of my values; thus the sense of the spiritual gives me a link to my past and to my future. Unfortunately, this sense of the spiritual in regard to *wahi pana* has deserted some native Hawaiians. The resulting lack of spiritual sensitivity by some native Hawaiians and the ignorance of the public often contribute to the disrespectful use of *wahi pana*. The modern economically driven society in Hawai'i causes much of the pathos of insensitivity that our society now demonstrates toward *wahi pana*.

Where once the entire Native Hawaiian society paid homage to numerous *wahi pana*, now we may give *wahi pana* hardly a cursory glance. Only when a Native Hawaiian gains spiritual wisdom is the ancestral and spiritual sense of place reactivated and gain a mystic ambiance and spiritual meaning. The spiritual knowledge and the *wahi pana* are ancestrally related, thus spiritual strength connects to the ancestral guardians, or *'aumakua*. My *'aumakua* knew that the great gods created the land and generated life. The gods infused their spiritual force or *mana* into the earth. The gravity of this concept was keenly grasped by my ancestors: they knew that the earth's spiritual essence focused through the *wahi pana*.

...The inventory of sacred places in Hawai'i includes the dwelling places of the gods, the dwelling places of their legendary *kahuna*, temples, and shrines, as well as selected observation points, cliffs, mounds, mountains, weather phenomena, forests, volcanoes. My *kupuna's* religion functioned through a hierarchy of gods, practices and lore; therefore the *wahi pana* were hierarchical. A *wahi pana*

avored by a dominant god or high status disciple was seen to be inherently more remarkable than that favored by a lesser god or being. The great god Ku is associated with the *luakini heiau*, or temple, while the lesser manifestation of Ku or Ku'ula is associated with a lower order of fishing shrine. But this hierarchy is not limited to just the great gods of Ku Kāne, Lono, Kānaloa, Wākea and Papa.

If I consider Pele the creator of the islands, I see an ancestor who has migrated to and settled on Hawai'i Island. Pele's domain is limited to the districts of Hilo, Puna, Ka'ū, and Kona in this day and age. Her sacred places are located in these districts and are in abundance at Kilauea, her present dwelling place. Pele's migration saga begins in the windward islands of Lehua and Ka'ula, therefore, she has *wahi pana* on all islands. Her home at Halema'uma'u, the Kilauea caldera rim sites of *Uwe Kahuna*, *Wahine Kapu* and *Kapalikumohoali'i* are her more well-known *wahi pana*. Yet her *wahi pana* also includes Mauna Loa with its many specific places honored by Pele. For instance, she recognizes the Mauna Loa summit caldera of *Moku'aweoweo*, the slopes of *Kahauale'a*, and the *ahupua'a* of *Keahialaka* (in Puna) as being sacred. These areas are the body of Pele and the places feel her movements and animism.

The volcano is but a small part of the *wahi pana* of Pele. The steam, the heat and the forest greenery of *Keahialaka* are also parts of the Pele milieu. The Pele milieu involves the family, especially her sister Hi'iakaikapoliopole. Hi'iaka and her spiritual essence are a part of the spiritual essence that forms the Pele hierarchy. Hi'iaka operates in conjunction with Pele and not in true opposition. It is consistent that Ki'iaka as the focal point of greenery, the symbol of generative life and regeneration, also has *wahi pana*. The generative symbol of greenery in *Keahialaka* is a part of the idea of *wahi pana*, and it this symbology is connected to the function of *hula* adornment, for instance, then the idea of *wahi pana* in *Keahialaka* becomes understandable. The *hula* praises to Hi'iaka and Pele complete the balance needed to fully appreciate the Hawaiian mind and the cultural value of *wahi pana*.

The gods circumscribed many *wahi pana*, but so did individuals, events and functions. The south point of Hawai'i island, of Ka Lae is a *wahi pana* for long distance voyaging and for offshore fishing. This point served as a navigational reference for oceanic travel between Hawai'i and Tahiti; therefore priests communed with deity to use the *mana* of Ka Lae in planning. Though we may normally think of *wahi pana* as geographically connected, this may not always be so. For instance, *Paliuli*, a divine place of much spiritual presence, gives the thought of peace, reverence and tranquility. Yet, I would only come upon *Paliuli* if my mind and soul were ready to receive this discovery; thus, *wahi pana* also depended upon my state of consciousness. A water hole like Palehemo, in the district of Ka'ū, gained spiritual status through functional ancestral use over the span of many generations.

My ancestors and I believe in a life that is integrated with the world-of-the-seen and the world –of-the-unseen. Which are complementary and are parts of a whole. My ancestors and I believe that we live in a dualistic universe where a theme of *lokahi* or balance is necessary for a healthy, natural existence. Both worlds are a part of that theme as are the male and female or the night and the day. Dualism was evident throughout the life of my ancestors both physically and philosophically. *Wahi pana* were also part of my ancestors' view of involving dualism and spiritual essence. I use the *wahi pana* to do righteousness which in turn results in an increase in my *mana*.

The use of *wahi pana* is most effective when done by a native Hawaiian practitioner. Allowing for the presence of a bystander, meddler or the curious is judged as foolish by the practitioner as the flow of *mana* will be negative. The practitioner will generally do the rituals when no uninvited people are present; therefore; night or early morning ceremonies are common. The practitioner often feels that if the curious, be they academics or researchers, wish to observe and participate, then let them join the religion. The rituals contain prayers, offerings and conversations with deity. Often, the ignorant, offering a bottle of gin or a ti leaf wrapped around a stone, wish to participate in homage but offend and desecrate rather than honor Pele. No serious or respectful person would ever be so insulting to Pele or any of the gods. Yet, I have seen even foreigners, who have only read about the god Pele or have seen other media about her, bring acceptable offerings, such as food or foliage. The difference, of course, is the sensitivity, thoughtfulness and humanity that the individual has. These are the qualities needed to fully benefit from the *wahi pana*.

*Wahi pana* of Hawai'i are part of my culture and values. These places need our protection and deference not only for their historical significance but also for their human significance. We native Hawaiians offer many unique features of our culture to others, but sharing is not a one-way street. Any resource that is mined and consumed will become depleted if there is no conservation or attempt to replenish that resource. This analogy can be applied to the native Hawaiian culture and especially to our *wahi pana*. Overuse by tourism and the public will result in the physical depletion of our sacred places and over abuse will result in the spiritual desecration of our *wahi pana*.

The question arises: How will I functionalize, protect, and pay deference to my *wahi pana*? A cultural response to this question is that I will solve these problems through the cultural education of my children. It is an axiom in my culture that my cultural values and knowledge must be conveyed through my children. The value and esteem that *wahi pana* holds for me began with my ancestors who gave me the duty to carry on these values, and these same values will be passed to my children.

In summary, some examples of *wahi pana* in Puna, according to Mr. Kanahale would be related to function. Such as, those places that are *leina* (jumping off places into *Pō* – the

afterlife; those places related to deities (in name or legend) such as Pele; shrines or temples where previous rituals were performed; burial grounds; places where gods are said to dwell; places connected to the ancestors or *'aumakua* such as Ka Lae at South Point, or Waipi'o Valley in the Hāmākua District; places associated with *ali'i*; and places where deities are said to have lived (Kanahale in James 1991). Many of these places can be found in the place names, legends and famous sayings of the district. Often times, *wahi pana* are made known via *kūpuna* (elders) interviews.

According to Ms. Kaawaloa and Ms. Kalawe (see Table 9) there is a *wahi pana* associated with the Waipahoehoe bridge. There was a general feeling that there was something sacred there, according to Ms. Kaawaloa:

You know that place over there is nothing to fool around with. Get plenty trails over there, and all kinds of stuff. But people today, they don't want to listen to you when you tell the stories. I get plenty stories of that place..." [Kaawaloa 2009, see Table 9].

Ms. Kalawe also stated:

The Waipahoehoe bridge has some legends attached to it because cars would get stuck all the time at that location [see Kalawe 2009, Table 9].

Aside from this location, and the trails that cross the corridor, in general, burials and caves are also considered *wahi pana*. While CSH's current survey did not locate any caves within the project area. There are caves nearby the corridor that are considered sacred to the Native Hawaiian community.

## 7.11 Trails

According to Prof. W.D. Alexander, Surveyor General Hawaiian Government Survey, on the new Puna Road, there were many *mauka-makai* trails along the roadway in the late 1800s that were used by residents to access both their permanent residences by the ocean, and their agricultural lands in the interior:

While on the other hand there is nothing to enjoin, from constructing feeders to the main road, at available points, making use, where possible of the numerous trails built and used in ancient time, by the natives, for access to these localities, their old planting grounds.

Nearly all the food consumed by the residents of this District is raised in the interior belt to which access is had by the ancient paths or trails leading from the sea coast. The finest sweet potatoes are raised in places that look more like banks of cobble stones or piles of macadam freshly dumped varying from the size of a walnut to those as large as ones fist. In these holes there is not a particle of soil to be seen [Maly 1999].

When surveys for the Ahupua'a of Kea'au and vicinity began in 1930, they included the trails and roads in the area (Maly 1999):

On December 17, 1930, Charles L. Murray, Assistant Government Surveyor, notified R.D. King, Surveyor, Territory of Hawaii, that he was transmitting under a separate cover, working sheets of surveys for Kea'au and vicinity. The work was conducted as a part of Land Court Application 1053, included surveys of the "old volcano trail, the Pahoa Road and a tracing of the closure, coordinates, and area of Keaau," [Murray to King, Dec. 17, 1930; in the files of the State Survey Division].

Of general interest to this study, and the condition of trails in the vicinity of the boundaries between Kea'au and the Olaa Homesteads at the time of the surveys, Murray wrote:

The trails on these maps are shown where they are clearly defined. There are no signs to show that this trail is still in use. In many places a heavy moss has grown on the grooved trail in the pahoehoe and in other places the trail is covered with "uluhi" fern. Still in other places new trails have been opened away from the old trail. All this goes to show that the old trail is very seldom used if ever [Murray, Dec. 17, 1930:2; in the collection of the State Survey Division - Land Court Application Folder 1].

In traditional times, trails served to connect the various settlements throughout the ahupua'a and districts of Hawai'i Island. They served as socio-economic, cultural and political networks of exchange between districts and between areas in *mauka* and *makai* regions. Many of the community contacts discussed trails in the Puna region, and specifically within the corridor. Archaeological studies conducted by Thrum (1909), Hudson (1932) and Maly (1999) have also identified trails in this area. The three main trails in the Puna district during the last 1800s were the Volcano, the Puna, and the Old Government Roads (see boundary commission testimonies in section 3.5.12).

The extensive Puna trail which is sometimes referred to as the Old Government Road runs along the coast throughout the *ahupua'a* (Figure 44). According to Maly (1999), his informant, John Kaiewe informed him about the old government road, *mauka-makai* trails, and the planting of mango trees to mark the location of trails:

In speaking about the old government road and some of the mauka-makai trails, John noted that the mango trees were purposefully planted by his family and others who traveled the trails. The trees provided shelter, and in season, mangoes were always appreciated by those who traveled the trails. Also, Tūtū Ma'i and a few other elder members of his family continued to do repair work on sections of the old government road that they traveled until about 1942 - when World War II broke out, access was restricted for a while, and the section of the road from Kaloli to Hā'ena was opened up for military vehicles. John noted that it was the custom of the people who traveled the roads to take care of them. He remembers many trips where he and elder family members would carry 'ili'ili to fill in the road, and that they would also set the larger stones back in place [John Kaiewe interview, Maly 1999].



Figure 44. Old Puna Government Road sign located in Kea‘au

According to the Hawaiian Government Survey of The “New Puna Road” (Now the Kea‘au-Pāhoa Road) in 1891 (see Section 3.5.6), there were many trails that abutted the area where the new road was being constructed, and residents in Puna had been using these trails to travel to and from agricultural lands in the interior and their homes along the coastline.

While on the other hand there is nothing to enjoin, from constructing feeders to the main road, at available points, making use, where possible of the numerous trails built and used in ancient time, by the natives, for access to these localities, their old planting grounds.

Nearly all the food consumed by the residents of this District is raised in the interior belt to which access is had by the ancient paths or trails leading from the sea coast... The finest sweet potatoes are raised in places that look more like banks of cobble stones or piles of macadam freshly dumped varying from the size of a walnut to those as large as ones fist. In these holes there is not a particle of soil to be seen...

...those lands which beginning at the sea coast extend but a short distance inland, but are more or less out of reach except by ancient trails which can be followed from the new road.

These ancient trails, according to Mr. Thomas English and Mr. Oliver English, are still present inside of dense brush along the present day roadway, but are not listed on present day maps. Many still abut the road, and are marked by mango trees.

The roads of the *kīpuka* are the access trails. There is one that leads up to the old camp by the bridge. By the guava patch there is a trail that comes around and down into the kipuka. Most of the trails over there either lead to the kipuka or leads off of it and travels *mauka*. *Mauka* to *makai*. The entries to trails are marked

by mango trees. You will also find rock piles, and walls and all kinds of stuff there as well. I do not know if they were cattle pens from cowboy times, or if they were fence walls, or whatever. There is wire out there too, between parts of rock walls. You will see part of a rock wall, then wire fence, then rock wall [Mr. Oliver English, interview 2009 Section 6.8].

The mango trees in that section designate where the pathways and trails were, it marks the highway going across, but inside our lands going *mauka -makai* you can identify trails going down by the mango trees, you can follow them. When you do, you are on an old trail usually. Whether it was made in the old days, or not, the cowboys used the trails and the mango trees. They would pass by a tree, grab a mango, and keep going, and grab another one later, when they were out checking cows or whatever. That is how the trails were demarcated. A lot of the mango trees can be found along the trails or marking the trails. They extend all the way to Pohohiki, and then all the way to Kaumaka. I don't see anyone stopping alongside the roadway and picking mangos nowadays [Mr. Oliver English, interview 2009, Section 6.8].

There are trail entrances currently abutting the road. These old trails are not on the modern map. In some cases, we do not really know where they are, or where they were. They are marked with mango trees on the Kea'au side. It was a very common thing. On the Old Government Road there were a lot of mango trees. They provided shade, they provided food. One trail from the *kīpuka* leads up to the old camp by the bridge. I think that was part of an old access trail too [Mr. Tom English, interview 2009, Section 6.8].

I think probably they predate the cowboys. We know there were settlements along the coastline, and settlements in the Kurtistown area. I think they were the old trails that travel *mauka-makai* linking various places along the coastline. These trails do not go straight to the coast; they travel downwards towards the coast in a radial fashion and terminate at various different places along the coastline [Mr. Tom English, interview 2009 Section 6.8].

While he is aware of the trails and the mango trees that mark them alongside the present roadway, Mr. Thomas English has some concerns about what will happen once all the overgrowth and trees are gone from the sides of the road:

I think that it is possible that some areas that are hidden now by forest would be exposed after expansion. I guess what it depends on, is how much forest is behind the forest that is there now immediately adjacent to the highway. There are places along that existing corridor where there are mango trees, which have been along that highway for a long time, ever since I was a kid. It is one of the things I remember as a small kid. Once you left Kea'au, and drive to Pāhoa, there was nothing between Kea'au and Pāhoa, except old pasture land, but there were these old mango trees all along the roadway. So, the extent to which you widen the

roadway, and those are gone, there are not a lot of them, it is not like there is a deep forest of mango trees along the highway.

It would be too bad to draw attention to certain things, for example, you do not want to draw attention to the old trails because that is only going to encourage people to go *niele*. And, on the other hand you do not want to destroy them.

It ties into what I mentioned about the issue of protecting, to the extent possible, protecting our land from the ultimate corridor, and whether they might consider replanting mango trees or whatever was traditionally there along the old highway, along the edge of the new right of way as a mitigating measure, so we may lose that stuff for a time, but eventually it will regrow [Mr. Tom English 2009, Section 6.8].

Trails near Maku'u Hawaiian Homesteads are still in place as well, and continue to be utilized:

Mauka of the Homestead there are trails people have been using for hunting for many many years. It is a trail of long time past. Not just a recent trail. The trail has been over there for a long time [Naeole interview 2009 Section 6.3].

When CSH interviewed Mr. Brown, he stated:

The only historic trail that I know of would not be in the project area, but would be in the vicinity of the project. This would be the old volcano trail from Hawai'i Volcanoes National Park to Kea'au. It crosses the corridor down by Kea'au. The other ones I know about are down by the coastline, like the old Puna trail. In between there are likely to have been *mauka-makai* trails [Brown interview 2009 Section 6.6].

Ms. Stapleton (Section 6.4) offered the following information regarding how Hawaiians traveled:

I know that Hawaiians didn't just travel the perimeter. They had a trail system that really kept them well connected. *Mauka-makai* through the *kula* plains all the way up. There was a system of *kuapo*, of trading back and forth. What one did not have, the others would have. And they had family systems.

Regarding trails in the area, Mrs. Kekahuna had the following to offer: "As far as trails there are many that cross the road, many," (See Section 6.9.1).

## 7.12 Cultural and Historical Properties

According to Ms. Siracusa, a resident of Ka'ohe Homesteads, there are some sites and burials within the Black Sands and the Paradise Park Subdivisions in Puna, which is outside of our project archaeological survey area:

At the entrance to Black Sands Subdivision, we found what looked like Hawaiian signature plants and left them alone to grow, until one day someone decided they wanted to bulldoze that area and in the application to Public Works misstated (lied?) the situation. We called the State Historical Preservation Division to try and stop it, and Mark Smith went in there and found caves and burials. Boom! That was the end of that. It was Steve Hirakami who clued me to that, and I contacted Historic Preservation Division.

I also know that in Paradise Park subdivision, on the opposite side of 17<sup>th</sup> street from where the Community Center is located, there is a large parcel that the community owns. They were considering developing it for a park and a committee was selected to study the site. I was brought in as a consultant on the botany. We found archaeological features, like rock walls, pig enclosures, house foundations, and other things. There was not much in the way of native plants, but lots of canoe plants'. These are not located in the corridor, itself [Siracusa interview 2009, Section 6.5].

As a matter of fact, on my property I still have parts of the old rail line and I have found a lot of old bottles, like Pāhoa Soda Works [see Siracusa interview 2009, Section 5].

Regarding the railroad in particular, Mr. Tom English of W. H. Shipman provided information on his family right of way for the old railroad, and the part of the railroad that ran through the Shipman properties:

Back in the day there was a railroad that ran through your property. The railroad was a part of the Hawaii Consolidated Railway system. Actually, there was more than just one railroad, in addition to the Hawaii Consolidated Railway system; the plantation had temporary internal railroads. They were only used for hauling cane from the fields into the factory. The Hawaii Consolidated Railway system traveled from Hilo to Kapoho, with a split at Kea'au, which went to Glenwood. Passengers and freight traveled on the Hawaii Consolidated Railway system. The 130 corridor crosses the old railroad system in one place; the old railroad right of way is now part of the Kea'au Elementary School.

The railroad had acquired their rights of way in Kea'au from W. H. Shipman way back in the early 1900s with the provision that if they ever stop using it for a railroad, the land reverted back to W. H. Shipman. So, when the railroad went out of business in the 1940s the land reverted to Shipman once more [Mr. Tom English interview 2009, Section 6.8].

Ms. Siracusa provided information regarding areas of Pāhoa town that are connected with the railroad, and Japanese Sumo wrestling during historic times:

And then there was the railroad turn-around [in Pāhoa town]. Rails went right through the back of that parking lot and up through the parking lot of the Pāhoa

Community Center, and went straight through towards Kea'au to where the pool is now, and I remember when they were constructing the pool, Norman Olesen was the project coordinator, and he went out there, you know, to look, and there were the rails. And I said, you really ought to leave these here and just put some informational, interpretive signage. You know? And he said they would, but they did not, as it turns out. So the old rails are no longer there.

Then when we were doing some planting at the Community Center parking lot [in Pāhoa town], and we dug a hole, came up with one of the small horse shoes, too small for a horse. The donkeys were used to turn the engines around. It was one of the donkey's shoes. They would house the donkeys in the pasture up above, behind where the Community Center is now. Above that is the playing field now, but behind that field is the old donkey pasture. And since they used to walk the donkeys up there, one of them must have lost a shoe. And there we found it.

In Pāhoa town there was a Sumo ring, but it is gone now. The Japanese immigrants when they came they started it for Sumo wrestling. It was just a, like a circle with sand. It was right behind the Akebono Theatre. The Akebono Theater goes back to like 1930 or 1934 or something like that. It is the oldest continually-operating theater in the State [Siracusa interview 2009, Section 6.5].

According to Thomas English, there are some old pens, possibly historic located near there property in Kea'au:

I am aware some old pens. I could not go out and show you where they are, however I know there were some old cattle pens, in or very near the corridor. The ones that I was aware of are mostly now within the subdivision [Mr. Tom English interview 2009, Section 6.8].

Mr. Larry Brown, a Planner for the County of Hawai'i, in his interview in July of 2009, informed CSH that he has

...never noticed any old settlement sites or heiau within the proposed or existing Highway 130 corridor. However, I know there are MANY throughout the makai area of Puna. These are primarily located much further down towards the coastal areas, to my knowledge [Mr. Brown interview 2009, Section 6.6].

When asked about her knowledge of any cultural, archaeological, historic sites, including burials with in the vicinity of the project area, Ms. Stapleton answered:

I haven't seen any. The only one I know about was not in the corridor area. It's in Leilani Estates [Ms. Stapleton interview 2009, Section 6.4].

Regarding historic or prehistoric sites in the area, Mrs. Kekahuna had the following to offer: "The only historic site I know of is the Kama residence," (see Section 6.9.1).

## 7.13 Caves and Lava Tubes

According to Ms. Siracusa, there is a cave that is easily accessible to anyone that is traveling along the roadway corridor:

Inside the corridor there used to be a trail that went up to that cave called the “vagina cave.” I have never been to it. I’m claustrophobic (laugh). When you are driving along the highway, you see a little sign, a hand written sign that says “cave” with an arrow. That is where the cave is. I forget what street it’s on, but it is in Orchidland. I have never followed up on it. I know that Ole Fulks, who lives all the way in the back of Orchidland, by Tiki Gardens, he’s a spelunker. He knows a lot about the cave systems there, and so does Fred Stone [see Siracusa interview 2009, Section 6.5].

Ms. Siracusa’s statement appears to refer to the Kazumura Cave (see Section 4.1.4 above). CSH’s archaeological survey of the project area and the survey of the Kazumura Cave by Imata and Associates, Inc. indicate that there are no openings to the cave within the project area, and that the Kazumura Cave lies 16.5 to 30 feet below the surface of the Kea’au-Pāhoa Road (Figure 29).

In addition to this cave alongside of the corridor, according the Hawaiian Government Surveyors in 1891:

An interesting feature of this locality is the large number of lava caverns and long subterranean passages abounding upon it, especially between the 9th and 11th miles, in fact this whole tract is so thoroughly penetrated by caverns that hollow sounds are often heard beneath ones footsteps when traversing the region.

These subterranean passages are generally entered through some opening made by the falling in of the roof and prove to be regular arched ways, ranging as much as 25 feet in width and 15 feet high and extending for long distances. The floors have that corrugated ropy appearance such as are seen on any viscid mass if drawn out as it hardens. The roofs and sides are covered with stalactites, the whole producing a wonderful effect when lit up.

These caverns evidently served as burial places in ancient and comparatively modern times in view of the fact that the benches here and there were covered in human remains.

When asked if she had any knowledge of any caves in the vicinity, especially within our project area, and Ms. Stapleton stated:

I haven’t seen any. The only one I know about was not in the corridor area. It’s in Leilani Estates. It’s a cave. Some school kids took me into it, me and the photographer from the tribune, and there were a good two dozen tubes.

The one thing that I was aware of was that there were several Hawai’i County Civil Defense shelters along the highway, in the caves. Especially over by the

new fire station. You could drive along the road there and you would see yellow signs with the black civil defense shelter symbol displayed on it that marked where the shelter was located.

When I was assigned that story as a reporter for the Tribune, Harry Kim was the Civil Defense Director for Hawai'i Island at that time. He told me about our Hawai'i County Civil Defense shelters in Puna. He said that they were all old caves. He also told me that we would not even necessarily be the ones to be allowed access to them as shelters, because they would be bringing in something like a 125,000 people from O'ahu if there was a nuclear threat. These people would be the leadership from Honolulu. They would be using the shelters. I did stories on it back then. He's a quite a source of information, that man.

Afterwards I began to notice the signs as I traveled down the road. All of a sudden you see this yellow civil defense sign marking a shelter. I thought, well it is good to know where they are just in case. I also wondered where the shelter caves were that had the fresh water in them. Although Hawaiians did collect water from roof drip too [Ms. Stapleton interview 2009, Section 6.4].

## 7.14 Burials

Regarding burials, Ms. Naeole informed CSH that she is aware of a burial cave across the street from her office, inside of the project area:

I know that there is one over there by Orchidland. Yes, Orchidland. I am not sure exactly where it is, but people know where it is. You must go underground and it goes for a long ways it is a burial cave. There is another one somebody just told me about a month and a half ago. They found one down in Paradise Park. I do not know how close it is to the road. They said that they found one site and Kali Gumapac of the Kanaka Council who lives in Paradise Park and he knows more about that place. There is a cave over here across the street (pointing towards the other side of Kea'au-Pāhoa Road across from the new Fire Station). It's next to the Walker family. They're building the police station next door. And then, just, you get that house right on the corner across the street. That is Bernice Walker's House. Just a little bit on this side of them (pointing towards road and indicating) there is a line of trees. That is where the cave is. The house with the palm trees in the front. If I remember correctly there is a cave over there next to their property. I think the cave is on the county land [Naeole interview 2009, Section 6.3].

The only burial that Mrs. Kekahuna had knowledge of was the burial that occurred recently when Mr. Kama died and was buried (see Section 6.9.1)

## 7.15 Roadside Memorials

Six roadside memorials (see Figure 33 and Figure 45 through Figure 53) that were likely constructed by friends or relatives of persons involved in fatal vehicular or pedestrian accidents



Figure 45. Memorial/burial at corner of Sacred Heart Catholic Church property within the current project area, view to northwest



Figure 46. Placard at corner memorial/burial showing family names, view to northwest



Figure 47. Memorial/burial along eastern edge of Sacred Heart Catholic Church property within the current project area, view to south



Figure 48. Roadside memorial (RM 1) at the intersection with Pōhaku Drive, view to south



Figure 49. Roadside memorial (RM 2) at the intersection with Auli'i Street, view to south



Figure 50. Roadside memorial (RM 3) at the intersection with Maku'u Road, view to south



Figure 51. Roadside memorial (RM 4) at the intersection with 'Āina'ola Road, view to south



Figure 52. Roadside memorial (RM 5) mauka of 152527 Kea'au Pāhoa Road, view to south



Figure 53. Roadside memorial (RM 6) at the intersection with Post Office Road, view to south

were also identified within the project area during CSHs archeological survey. CSH does not believe that these memorials are associated with *iwi*, nor are they historic properties but are associated with bereavement, and likely memorialize the loss of a loved one. The memorials may or may not be associated with the Hawaiian community. It was first thought that the memorial located along eastern edge of Sacred Heart Catholic Church property within the project area was a burial due to its location and stylistic attributes. However, CSH has determined through consultation with church officials that there is no burial located there, however the area is used regularly for meditation and prayer (Figure 54).

Regarding the roadside memorials, Mrs. Kekahuna stated:

There are memorials and personally they should stay there. They should have a limit on flowers and keep it clean. It also attracts people to slow down or think before you drink and drive. They are just like a private graveyard. Today still our family goes to these different sites and takes the flowers say prayer [Ms. Kekahuna interview 2009, Section 6.9.1].

Mr. Walter of W. H. Shipman speaks of the memorials near or on his land:

In the areas where our property abuts the corridor, we do not see monuments, but, *makai* of that, towards Pahoia town, yes, because many of those intersections at these traffic levels are not safe, so you have had a number of accidents and so on, on our property the only access points are to some of our farm lands, and we really have not particularly had accidents that I am aware of coming out of those,

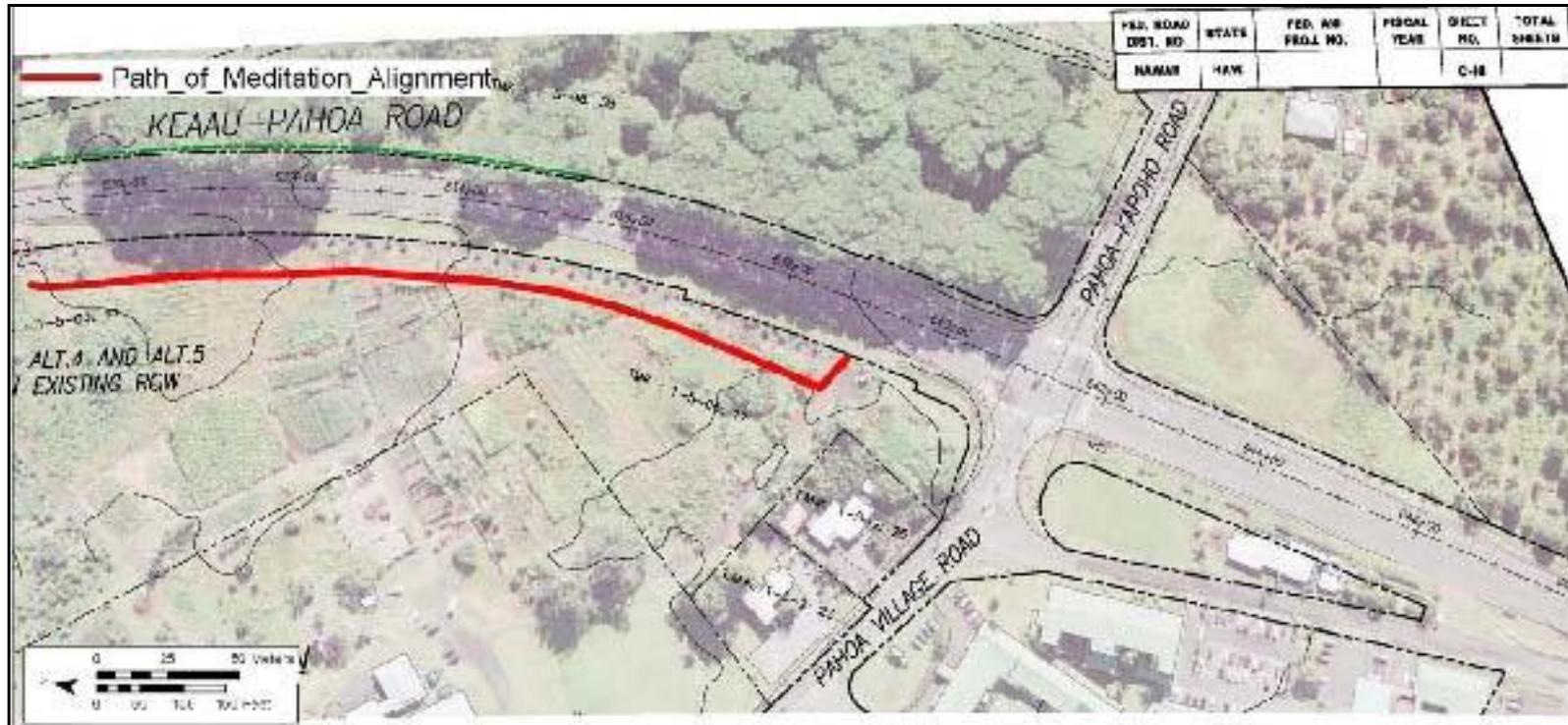


Figure 54. Map showing the relationship of Sacred Heart Catholic Church Path of Meditation to the project corridor

in part because there is just not that much traffic coming out of them. Also, people just don't stop to do things along that corridor because there is no shoulder, it is not safe [see Walter interview 2009, Section 6.8].

Mr. Larry Brown voiced his concern for the safety of the grieving families, who largely put memorials out on the roadside in areas that are already dangerous to begin with:

I have seen people gathered along the roadside in groups of ones or twos, probably immediate family members or something, at those roadside memorials. They are probably putting out fresh flowers or something. And, I have a really, troubled feeling about that. I can understand the feelings, of the people that lost loved ones and so forth, but, I think they add to the problem to a certain extent, because they do stop and put fresh flowers out, and they are right there where it's probably a dangerous place already. So, they are parking right on the side of the road where the accident occurred. And, they get out, and sometimes they have their little kids with them and they're not paying attention to the little kids and cars are whizzing by so fast. I have seen it on several occasions. However, I know there will be some people who will be upset by the disturbance of their roadside memorials once the new highway goes in [see Brown interview 2009, Section 6.6].

On the other hand, Mr. Thomas English has not seen many roadside memorials on this corridor, but has strong feelings about the practice:

On this particular corridor, we do not see much roadside monuments currently ongoing. Certainly, it is a concern, and of course any monuments over there, are within the right of way. That is the *Kahuna's kuleana*. We certainly do not encourage people putting monuments up on private property. The access points to our lands along the corridor have a limited amount of traffic coming out of them, so we do not see many accidents associated with those areas. Most of the roadside monuments that we see are located farther down the road, makai of our properties.

And then in terms of the other question about gathering for flowers and so forth, again within the state right of way, no problem, but to the extent that they then start wandering off into the adjoining private lands, it is a concern. People might not be aware of any hazards that might exist, and it is private property. It is sort of like, if they are wandering in there to pick flowers, it is no different than wandering in there to hunt pig.

Particular things of picking flowers or monuments we really do not have that much of an issue really at this time on our lands. However, there is a lot more of that on volcano side, than along highway 130. Highway 130 does not pass through a pristine native Hawaiian forest. There are some *'ohi'a* trees there, and some *'uluhe* (*Dicranopteris linearis*), and so forth, however, there is also a lot of invasive species along there as well. There is strawberry guava, various grasses and other invasive plants, and so there is not much to be gathered along there. So

in terms of any sanctioned gathering that goes on in that area now. There is none. There is nobody who has come in and secured permission from us to gather on any of that property. And, while the law does allow for gathering rights, it is to be done with the permission of the land owner [see Mr. Tom English Interview 2009, Section 6.8].

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## Section 8 Summary

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At the request of SSFM International, Inc., Cultural Surveys Hawai'i, Inc. (CSH) has completed this Cultural Impact Assessment for the Kea'au-Pāhoa Highway Widening Project, located within Kea'au Ahupua'a to Waiakahiula Ahupua'a, Puna District, Island of Hawai'i TMK [3] 1-5 (various plats and parcels); 1-6 (various plats and parcels) (See Appendix A for a complete list of potentially affected TMKs). The project area consists of a 200 ft (61 m) wide corridor, approximately 9.5 miles (15 km) long, beginning at the terminus of the existing 4-lane Kea'au Bypass to its intersection with Pāhoa-Kapoho Road (Figure 1 through 3).

The State of Hawaii, Department of Transportation (HDOT) is proposing a Kea'au-Pāhoa Road improvements project, Project No. STP-0130(27) and is initiating an Environmental Assessment (EA). The project proposes to implement various improvements along a portion of Kea'au-Pāhoa Road (State Route 130). State Route 130 is the only roadway that connects the study area with the Hilo area and is the primary conduit for emergency services to access local properties. The project purpose is to improve highway safety, increase roadway capacity, and modernize State Route 130 between Kea'au and Pāhoa. At this time, five alternatives for improvement have been proposed.

### 8.1 Results of Background Research

Background research on the Project area and the surrounding district indicates: Background research conducted for this Project yields the following results:

1. The current project corridor varies in elevation from approximately 320 ft above mean sea level (amsl) at the terminus of the Kea'au Bypass to approximately 675 feet amsl at the intersection with Pāhoa-Kapoho Road. The distance of the project corridor from the coastline ranges between approximately 6.4 km (3.5 miles) and 9.6 (5.2 miles). The corridor passes through both developed and undeveloped lands. The undeveloped sections of land exist primarily in two areas: between the Kea'au Bypass and the northern boundaries of Hawaiian Paradise Park and Orchidland Estates; and between the southern boundaries of Hawaiian Paradise Park and 'Āinaloa Estates and Pāhoa town (refer to Figure 3).
2. No perennial waterways are located along the project corridor, and there is only one intermittent stream which crosses the roadway. There is abundant water travelling through this area from Mauna Loa, but it flows underground, exiting usually at or near the ocean via springs. These underground sources of water are known to be quite pristine, having been filtered through miles of lava rock. Lava tubes are numerous throughout the Puna district.
3. The landscape appears generally level, though it does increase in overall elevation by 300 feet over the total 9.5 miles. Occasional rises and dips through which the corridor passes are products of the lava flows that make up this part of the island.
4. The current project corridor lies over the border of flows from both Mauna Loa and Kīlauea volcanoes. The Mauna Loa flow is found near the northern end of the project corridor, coming out of Kea'au town, and in a couple of small pockets just north of Orchidland Estates and Hawaiian Paradise Park. This flow is classified as "k1o," which is dated at 5,000 to 10,000 years before present (B.P.). The remainder of the project corridor runs through flows

from Kīlauea Volcano. These flows are classified as “p4,” dated 200 to 750 years B.P. (Figure 8).

5. There are several soil and land types found along the project corridor (Figure 9). The predominant land type is classified as Lava flows, pāhoehoe (rLW), a miscellaneous land type (Foote et al. 1972). *Pāhoehoe* lava has a billowy, glassy surface which can be relatively smooth or rough and broken. Hummocks and pressure domes are common. Bare *pāhoehoe* lava typically can support mosses and lichens, while in areas with more rainfall ‘ōhi‘a trees, ‘ōhelo berry, and ‘a‘ali‘i can grow from cracks and crevices.
6. The currently developed lands along the project corridor are dominated by housing subdivisions, including Hawaiian Paradise Park, Orchidland Estates, ‘Āinaloa Estates, and a few smaller subdivisions. An area of Hawaiian Home Land, called “Parcel A” on TMK [3] 1-5, is located along the corridor within Maku‘u and Hālonā Ahupua‘a, below the southern boundary of Hawaiian Paradise Park. A large outdoor farmers’ market is located south of Maku‘u Drive. Less than one mile south of the Hawaiian Home Lands along the corridor are Churches, a fire station, and some retail and commercial establishments are also located along the project corridor, particularly at Orchidland Drive and within Pāhoa town. The built environment includes the existing roadway (Highway 130), cross streets, and driveways. Utility poles and roadway barriers and signage are also present along the length of the project corridor. A bridge has been constructed where an intermittent stream (name unknown - although a bridge abutment contains the name “Waipāhoehoe” this is believed not to be Waipāhoehoe Stream) encounters the roadway north of Shower Drive. A settlement once located makai of the highway was also named Waipāhoehoe; however it was not mentioned by Hawaii Government Surveyors in 1881. The name “Waipāhoehoe” is probably more likely to have come from the name of an *‘ili* (small land division) within Kea‘au Ahupua‘a.
7. The current project corridor falls within the Upland Agricultural Zone, or Zone II, based on its elevation, which ranges from 320 to 675 ft amsl (see Figure 10). McEldowney’s map and her description of Zone II are a bit contradictory, as she describes the zone as extending up to three miles inland. This anomaly seems to be due to the location of Puna on the windward side of the island, which receives much more rainfall than other parts of the island. Due to this heavy amount of rainfall, the area of the current project corridor does reflect characteristics of both Zones II and III, or the Lower Forest Zone.
8. Based on previous archaeological and geological research in the Puna region, a number of lava tubes and caves are located in various places. These caves were used for habitation, cultural pursuits, and burial purposes. Although no lava tubes were found along the project corridor during CSHs recent survey of the project corridor, Rechtman (2004b) found a lava tube that extended *mauka/makai* beneath Kea‘au-Pāhoa Highway, named the Kazumura tube system.
9. Based on Hawaiian Government Reports, workers constructing the original Kea‘au-Pāhoa Road stated “in fact this whole tract is so thoroughly penetrated by caverns that hollow sounds are often heard beneath ones footsteps when traversing the region,” (See Section 3.6.9).

10. CSH Pedestrian inspection of the project area identified two historic properties. A path of Meditation associated with the Sacred Heart Catholic Church, a component of the Pāhoa Historic and Commercial District, SIHP # 50-10-55-7388 (DOT 1979:F1), appears to lie entirely within the Sacred Heart property but extends to the edge of the present and future highway right-of-way. The Sacred Heart Catholic Church and its cemetery lie outside of the project APE. SIHP # 50-10-44-26889 is an abandoned circa 1935 concrete bridge. Six roadside memorials were also found within the project area that do not appear to be historic properties but are associated with bereavement.
11. Native Hawaiian traditions centered on these lands in Puna suggest the area's significance and association with the people of ancient times. Mythological literature shows Puna prominently associated with legendary and historical figures including Kāne, Pele, Hi'iaka, Hōpoe, Kūka'ōhi'akalaka, Keamalu, Iwa, Chief Kumukahi, Chief Kali'ikuku, Kalohalani, Halemano, Kamalalawalu, and Kamapua`a. These associations suggest an ancient and continuous occupation of the area, and indicate that there are several *wahi pana* associated with these deities and people located within the Puna district at various locations throughout the landscape.
12. Historical accounts associated with Puna show the early history of Hawai'i and the ruling chiefs, each ruling one or several *ahupua'a*, entire districts or several districts. These historical accounts date far back into the history of Hawai'i Island and relate stories of the great battles between 'Umi son of Līloa, Pō'imaiwa'a, Hua'a, Kalani'ōpū'u, Kiwala'o, 'Imakakoloa, and Kamehameha I.
13. Among the first foreigners to see the district of Puna were members of Captains Cook's voyage in 1779. Their early documentation describes the landscape of Puna as well populated, with cultivation between the southwestern sections of Puna and the more eastern areas.
14. According to 19<sup>th</sup>-century missionary accounts, the lands of Puna were rich in agriculture field systems and its people were kindly and orderly. The lands of Puna were well cultivated, the vegetation luxuriant, the soil light and fertile, abundant in rain. Puna was a district of beautiful groves of coconuts, breadfruit, pandanus, 'ōhi'a, and abundant rainfall.
15. Mid-19<sup>th</sup> century Land Commission Award documentation shows the lands of Kea'au Ahupua'a were granted to Chief William C. Lunalilo. In 1860 the estate of Lunalilo was mortgaged to Mr. Charles R. Bishop, and then leased to Rufus A. Lyman. Kea'au was eventually sold to Samuel Damon, William H. Shipman, and J. Elderts in 1882. Shipman later purchased the interest of his other partners to become the sole owner.
16. Based upon previous research, young lava flows have destroyed pre-contact archaeological features, and have altered the landscape, particularly in the southern portion of the project area.
17. According to historical records, and interview testimony, by the 1890s the lands of Puna were used as pasture for grazing cattle. In some areas such as Kea'au to Ahalanui cattle grazed up to at least 1979. Also in the late 19<sup>th</sup> century, lands were leased by 'Ōla'a Sugar Company to be cleared for the cultivation of sugar cane. The development of the sugar industry in Puna, with cane cultivation stretching from South Hilo to Cape Kumukahi, began

- a massive landscape alteration, which would obliterate most of the archaeological sites on these lands and any related cultural uses for these properties.
18. Immigrants from Japan, Puerto Rico, China, and Portugal, and Hawaiians came to work the cane fields living in segregated camps along the old Plantation Road.
  19. The Hilo Railway Company was established and in 1900 extended tracks along the coast to the sugar fields in Kapoho passing through Kea'au, Kahuwai, Pu'ala'a, Kauaea, and Kaueleau Ahupua'a.
  20. In Puna, as it is elsewhere in Hawai'i, agricultural practices are environmentally and ecologically adaptive. Historic accounts support the presence of several cultural modifications and adaptive measures in the Puna district through the use of various environmental zones ideally suited to the cultivation of specific types of agriculture.
  21. A review of past archaeological and historical research, and legendary sources demonstrates that the people of Puna settled primarily in the coastal region, with temporary habitation in the uplands related to agricultural pursuits with the exception of the inland settlement of 'Ōla'a. These settlements were located primarily along the *Ala Loa* (the ancient trail system that circuits the island of Hawai'i).
  22. The *Ala Loa* was eventually improved and renamed in the 1800s and began to be called the "Old Government Road." While this trail (eventually a road) was essentially the main thoroughfare through the Puna district before the late 1800s, as communities on the coastline began to die out, focus began to shift to the center of the Puna District and the developing sugar and related industries near Ola'a, Hilo, and the volcano region.
  23. As a result of developing industries in the upland regions of Puna, and the presence of remaining communities along the coast, the original *mauka-makai* trail that led from the coast to the Maku'u region was improved and extended to the recently constructed Volcano Road, effectively linking the Hilo, Volcano, and lower communities of Puna, first by foot, then by horse, cart and buggy, and finally by automobile (see early Hawaiian government documents).
  24. Trails in Puna and elsewhere served political, economic, social and cultural needs. Remaining trails after the "New Puna Road" was built are still located in the upland region of Puna (and extending to the coast), however their use declined over time with the installation of the new road, and were adapted later for use by cowboys of the region, who planted mango trees at key points along the path both to mark their crossing with the Kea'au-Pāhoa corridor, and to provide food and shade as they traveled (see Mr. Thomas English interview, Section 6).
  25. According to interview testimony there are ancient trails that still remain alongside the roadway, many that abut the present day road. Entries to these trails are marked by mango trees that have dotted the landscape since before the 1950s.
  26. According to Hawaiian boundary commission reports, these trails were vital links between communities and between agricultural areas *mauka* and habitation sites in the *makai* region of Puna as a whole. They remain a part of the cultural legacy of Puna.

27. While the roadway has evolved over time, as first a trail, then a carriage and cart road, and then overtime, increasingly wider and wider, more developed roadway, it remains a major thoroughfare for communities living along the coast as it once did in the past.
28. There are two areas of ongoing cultural activity. One is located within the project area (Maku'u Market Association), immediately adjacent to the roadway. The other location (Aha Punana Leo and Ke Kula 'O Nawahiokalani'opu) is outside of this projects APE, but participates in activities within the APE at the previously mentioned site. One of the access areas to the second location (Opukaihaia Street) intersects this project area's APE. Aside from the activities at these two locations, this study has not located any persons participating in ongoing traditional cultural practices in areas that will be affected by this project's APE.
29. The Opukaihaia intersection will undergo some minor changes, but is expected to remain unsignalized and full access maintained if the road is widened.
30. Results of this CIA demonstrate that there is no impact to traditional cultural practices along the corridor, with the exception of the activities that are ongoing at the Maku'u Farmers Market Association site where ongoing cultural activities still survive into the 21<sup>st</sup> century.

## 8.2 Results of Community Consultation

For this CIA, CSH attempted to contact 91 community members (government agency or community organization representatives, or individuals such as cultural and lineal descendants, and cultural practitioners) for the purposes of this CIA. Thirty three people responded, 9 people provided telephone comments and 11 *kūpuna* (elders) and/or *kama'āina* (native born) were interviewed for more in-depth contributions.

1. The results of cultural consultations indicate that there are concerns regarding potential adverse impacts on social and customary practices within the community that the new expanded road will bring to Puna. It is a general concern that the safety issue will not be addressed properly with the newly expanded road, and it is a major concern of many respondents that the newly expanded road will bring urban change to Puna's country landscape.
2. In terms of impacts to cultural and natural resources and associated beliefs and practices as result of the proposed development, most people were not concerned about such impacts, with the exception of the ongoing cultural programs and activities at the Maku'u Farmers Market Association site. Much of the corridor is not used for cultural purposes, however there is a concern that the removal of trees and shrubbery along the roadway will expose cultural sites just outside of the project area to adverse effects in the future.
3. All of the community consultants interviewed for this study indicated that the roadside areas are not used for cultural purposes with the exception of the Maku'u Farmers Market area. Many of the respondents were concerned about the loss of more land to more road improvements now and in the future. None of the respondents indicated, with the exception of those who refused to comment, that they are not in support of the roadway expansion. Two respondents advocated for the installation of roundabouts as a traffic calming measure to alleviate safety issues. One group advocated the replanting of native trees along the new roadway to hide sites and trails that may be located just outside of the project area. Two

respondents advocated for the installation of roundabouts as a traffic calming measure to alleviate safety issues. One group advocated the replanting of native trees along the new roadway to hide sites and trails that may be located just outside of the project area.

4. Results of this CIA demonstrate that there is no impact to traditional cultural practices along the corridor, with the exception of the activities that are ongoing at the Maku'u Farmers Market Association site where ongoing cultural activities still survive into the 21<sup>st</sup> century.

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## Section 9 Recommendations

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1. Based on our research of the project area and its importance as a thoroughfare in the past, and into the future, it is recommended that archaeological monitoring of construction activities along this route during all phases be implemented. Archeological monitoring will potentially prevent accidental damage to the Kazumura Cave system and its associated features and burials. Monitoring of construction activities will also prevent access or damage to the ancient trails system that abuts the corridor. Further, on-site monitors will be able to point out archaeological features and trails alongside the roadway in areas of low visibility during CSHs present archaeological survey, or in areas of increased visibility due to vegetation clearance during the construction phase.
2. Once trails and sites are located that potentially will be impacted by their visibility to the public and passersby within the corridor, mitigation measures can be implemented to mask and buffer the sites with native vegetation, thereby restoring some of the traditional fauna to the region once more.
3. Extra safety measures should be in place to prevent damage to equipment and persons working on the new highway, especially in the region that the Kazumura cave was previously located.
4. W.H. Shipman, the largest landowner in the project area has requested that access points to their agricultural areas remain open. Keeping these access points open will ensure safe and continued access to farming areas along the route.
5. Full access to the lands of Aha Punana Leo should be maintained via the Opukaihaia intersection if the road is widened. Ongoing traditional Hawaiian cultural activities on this property, while located outside of the APE for this project, would be affected if access to these lands is restricted in anyway due to the activities associated with this project. The Opukaihaia intersection provides access not only to the lands of Aha Punana Leo, but also maintains ongoing cultural interactions between these lands and the lands of Maku'u Market Association, located within the project area.
6. Finally, ongoing activities at the Maku'u Market should be preserved as a bastion of Hawaiian culture along the project corridor route. This area should be avoided to avoid damage to existing cultural plantings and ongoing areas of use on the Maku'u market Association lands. These lands and the activities ongoing on them meet the requirements listed in accordance with Hawai'i State Historic Preservation Statute (Chapter 6E) guidelines for Traditional Cultural Properties (TCPs) of ongoing cultural significance and may be eligible for inclusion on the State Register of Historic Places , under significance criteria (HAR §13-275-6), Criterion E which states to be significant an historic property shall:
  - a) Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

- b) Native Hawaiian traditional practices that are ongoing at this location have been ongoing in some cases for 80 years. Additionally, it is the last remaining site on this corridor where traditional Hawaiian cultural practices are still promoted, taught, observed and transmitted to the next generation, thereby preserving and perpetuating their importance to the history and cultural identity of the Hawaiian people residing in the Puna area and beyond, and therefore this site may be eligible under Chapter 6E guidelines for Traditional Cultural Properties (see Naeole and Kekahuna interviews in Section 6.3 and 6.9, respectively).

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**Hawai'i State Department of Transportation, Aliiimoku Building, 869 Punchbowl Street, Honolulu, HI 96813**

Kea'au-Pāhoa Road Improvements, Kea'au to Pāhoa, Project No. STP-0130(27), Build Alternative #3

**Hawai'i State Department of Transportation, Aliiimoku Building, 869 Punchbowl Street, Honolulu, HI 96813**

Kea'au-Pāhoa Road Improvements, Kea'au to Pāhoa, Project No. STP-0130(27), Build Alternative #4

Kea'au-Pāhoa Road Improvements, Kea'au to Pāhoa, Project No. STP-0130(27), Build Alternative #5

**Hawai'i TMK Service, 222 Vineyard St Ste 401, Honolulu, Hawai'i**

Tax Map Key (TMK) [3] Zone 1

**Hawai'i TMK Service, 222 Vineyard St Ste 401, Honolulu, Hawai'i**

Tax Map Key (TMK) [3] 1-5

Tax Map Key (TMK) [3] 1-6-04

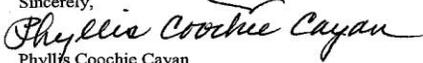
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# Appendix A Hawai'i State Historic Preservation Division Letter

 <p>LINDA LINGLE GOVERNOR OF HAWAII</p>		<p>Laura H. Thiele Chairperson Board of Land and Natural Resources Commission on Water Resource Management</p> <p>Russell Y. Tsuji First Deputy</p> <p>Ken C. Kawahara Deputy Director - Water</p> <p>Aquatic Resources Boating and Ocean Recreation Bureau of Conveyances Commission on Water Resource Management Conservation and Coastal Lands Conservation and Resources Enforcement Engineering Forestry and Wildlife Historic Preservation Kaiohale Islands Reserve Commission Land State Parks</p>
<p>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES STATE HISTORIC PRESERVATION DIVISION 601 KAMOKILA BOULEVARD, ROOM 555 KAPOLEI, HAWAII 96707</p>		
<p>July 29, 2009 Mr. Aulii Mitchell, Director Cultural Surveys Hawai'i Inc. P.O. Box 393 Pahoa, Hawaii 96778</p>	<p>LOG NO: 2009.2474 DOC NO: 0907AJ03</p>	
<p>Dear Aulii Mitchell:</p>		
<p>Subject: <b>KEAAU 3: Preparation for a Cultural Impact Assessment (CIA) for 9.5 Mile Keaau to Pahoa Road (State Route 130). Various Ahupua'a, Puna District, Island of Hawai'i. TMK (3) 1 Var.</b></p>		
<p>Thank you for the opportunity to consult on the preparation of a CIA for the Keaau-Pahoa Road improvement. The following are recommendations as it relates to your cultural study and research that will assess the potential impacts to cultural practices at the proposed project area in the Keaau-Pahoa Ahupua'a.</p>		
<ol style="list-style-type: none"> <li>1. The Puna area has significant Burial Caves that run mauka to makai in an underground tunnel system. Two of the many significant cave systems are the Kazumura and the Johns Martin cave system.</li> <li>2. SHPD recommends that you provide a Cultural Monitor during any ground activities (digging, grubbing, etc.) that may disturb na iwi kupuna in the project area. As you know, all inadvertent discoveries will be the jurisdiction of the SHPD under Hawai'i Administrative Rules (HAR) 13-300-40.</li> <li>3. Should this project receive federal funding, it should go through NHPA Section 106 review.</li> <li>4. The following organizations and/or persons who may be knowledgeable of the Puna District : <ul style="list-style-type: none"> <li>• The Kanakaole Foundation - Ulunui Kanakaole Garmon or Pua Kanahale. n/a</li> <li>• Rocky Jensen, a native Hawaiian artist n/a</li> <li>• Dutchie Kapu-Saffery (HIBC) duchesskapu@webtv.net</li> <li>• Keoni Alvarez (Waikahakahe Ahupua'a) n/a</li> <li>• Mr. Bucky Leslie (HIBC, descendant of Maku'u) mahubucky@aol.com</li> <li>• Ms. Nicole Lui (Descendant of Maku'u) n/a</li> <li>• The Kanaka Council with Mr. Palikapu Dedman/ Jimmy Medeiros (938-5340)</li> <li>• Clarence Medeiros, Jr. n/a</li> <li>• The Hawaiian Civic Club in Puna or of Hilo nei. n/a</li> <li>• Any Neighborhood Boards or similar groups in Puna. n/a</li> </ul> </li> </ol>		
<p>Last but not least, the many myths and legends associated with the many Hawaiian deities (especially Pele and the hula traditions) as well as the people of old who lived there are important to include in the CIA as part of the rich Hawaiian oral tradition that continue to define the Puna lands.</p>		
<p>If you have any questions, please contact Analu Kameciamoku Josephides, SHPD Cultural Historian at 808-933-7652.</p>		
<p>Sincerely,  Phyllis Coochie Cayan History and Culture Branch Chief</p>		

# Appendix B Office of Hawaiian Affairs Letters

PHONE (808) 594-1888



FAX (808) 594-1865

STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

HRD09/3620C

July 29, 2009

Auli'i Mitchell, Director  
Cultural Surveys Hawai'i- Hawai'i Island Office  
P.O. Box 393  
Pāhoa, Hawai'i 96778

**RE: Cultural Impact Assessment consultation  
Kea'au-Pāhoa Highway Improvement Project  
Kea'au and Pāhoa Ahupua'a, Puna District, Hawai'i Island**

Aloha e Auli'i Mitchell,

The Office of Hawaiian Affairs (OHA) is in receipt of your July 1, 2009 letter initiating consultation and seeking comments ahead of a cultural impact assessment (assessment) for the proposed Kea'au-Pāhoa Road Improvements Project. Based on the information contained within your letter, this project proposes to implement various improvements along approximately 9.5 miles of the Kea'au-Pāhoa Road (State Route 130). It is our understanding that the overall intent of the project is to increase roadway capacity, improve safety and modernize this road.

OHA has no comments on the assessment at this time. Thank you for initiating consultation at this early stage and we look forward to the opportunity to review the draft assessment and provide additional comments. Should you have any questions, please contact Keola Lindsey, Lead Advocate-Culture at (808) 594-1904 or [keolal@oha.org](mailto:keolal@oha.org).

'O wau iho nō me ka 'oia'i'o,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o".

Clyde W. Nāmu'o  
Administrator

C: OHA East Hawai'i CRC office

# Appendix C Hawaii Department of Transportation Email Response

Re: CIA for Kea'au-Pahoa Road Improvement Project - SmarterMail

Page 1 of 2

**Date** Fri 7/24/2009 1:28 PM  
**From** Dina.Lau@hawaii.gov  
**To** mfarias@culturalsurveys.com  
**Cc** Nelson.Sagum@hawaii.gov  
**Subject** Re: CIA for Kea'au-Pahoa Road Improvement Project  
**Attachments** map1.doc, map2.doc, Community Contact Letter.KEAAU 3.doc  
**View** [HTML](#) | [Text](#) | [Header](#) | [Raw Content](#)

Hi Malia,

Thank you for helping Aulii to conduct the CIA and the information you provided. We suggest also making reference in your letter to the two public informational meetings for the subject project that was held on April 29, 2009 in Pahoa and April 30, 2009 in Keaau. As indicated by Nelson, we are very interested to uncover and learn about the traditional cultural practices in the project area.

Please let me know if I can be of further assistance.

Thank you,  
 Dina Lau  
 Hawaii Department of Transportation  
 Highways Division, Planning Branch  
 Phone: 587-6307

"Malia Luika Farias" <mfarias@culturalsurveys.com>

To <dina.lau@hawaii.gov>

cc

Subject CIA for Kea'au-Pahoa Road Improvement Project

07/24/2009 11:55 AM

Please respond to  
[mfarias@culturalsurveys.com](mailto:mfarias@culturalsurveys.com)

Aloha maua!

My name is Malia Luika Farias. I am assisting Auli'i Mitchell of Cultural Surveys Hawaii (CSH), with the Cultural Impact Assessment (CIA) for the Kea'au-Pahoa Road Improvement Project. I am sending you this email, with the attached correspondence and maps for your review as a part of the community contact process. Mr. Nelson Sagum forwarded some information to you via email from our office this morning, and referred your name to me.

As our letter states, we are focusing on your knowledge of potential impacts to Native Hawaiian traditional cultural practices that may be ongoing with in the project area(see maps attached). As a result, we are interested in setting up a "talk story" interview with you sometime in the next two weeks (in order to meet our deadline), if you have information, or input to contribute to our study. Please feel free to call 965-6478, (or respond to this email) and ask for Mr. Mitchell or myself to set up your appointment. Mr. Mitchell will be available this coming week on Thursday or Friday, or any day the following week. We will be glad to meet you at a time and place that is convenient for you.

Mahalo for your time and consideration of this matter. And, I apologize for any duplication of information that may have been sent to you regarding this matter.

Mahalo,

Malia Luika Pualeihua Farias (Fernandes)  
 Archaeologist, Cultural Specialist  
 Cultural Surveys Hawaii  
 Work: (808)965-6478

<http://mail.culturalsurveys.com/Main/frmPreview.aspx?folder=keeau+3&messageid=7&ma...> 9/7/2009

# Appendix D Hawaii Island Burial Council Email Response

CULTURAL IMPACT ASSESSMENT FOR THE KEA'AU-PAHOA ROAD IMPROVE... Page 1 of 1

**Date** Mon 8/10/2009 10:33 AM  
**From** csaffery1@hawaii.rr.com  
**To** MFARIAS@CULTURALSURVEYS.COM  
**Subject** CULTURAL IMPACT ASSESSMENT FOR THE KEA'AU-PAHOA ROAD IMPROVEMENT PROJECT  
**View** [HTML](#) | [Text](#) | [Header](#) | [Raw Content](#)

ALOHA MALIA,  
I'VE RECEIVED YOUR E-MAIL, BUT NOT THE ATTACHEMENTS. COULD YOU PLEASE RE-EMAIL ME THE  
ATTACHMENTS.  
THANK YOU,  
CARMELITA (DUTCHIE) SAFFERY

<http://mail.culturalsurveys.com/Main/frmPreview.aspx?folder=kecau+3&messageid=22&m...> 9/7/2009

# Appendix E Kanaka Council Email Response

Undelivered Mail Returned to Sender - SmarterMail Page 1 of 1

**Date** Thu 8/6/2009 3:31 PM  
**From** MAILER-DAEMON (Mail Delivery System)  
**To** mfarías@culturalsurveys.com  
**Subject** Undelivered Mail Returned to Sender  
**Attachments** Attachment 1, Attachment 2.eml  
**View** HTML | Text | Header | Raw Content

This is the Spam Firewall at smtp30.dc2.safesecureweb.com.

I'm sorry to inform you that the message below could not be delivered. When delivery was attempted, the following error was returned.

: host mail.kanakacouncil.org[216.10.248.252] said:  
550 No such user here (in reply to RCPT TO command)

*Kanaka council  
u email undeliverable*

<http://mail.culturalsurveys.com/Main/frmPreview.aspx?folder=kccau+3&messageid=19&m...> 9/7/2009

# Appendix F Distribution Of Lands at the Māhele in 1848, Puna District

(<http://ulukau.org>, Hawaiian Place Names, Hawai'i Island, Puna District)

<u>Catalog number</u>	<u>Ka Aina</u>	<u>Returned by</u>	<u>Retained by</u>	<u>LCAw No.</u>
311.01	Apua	Keohokalole	Crown	
311.02	Kahue	?	(Gov.)	
311.03	Kealakomo	L. Kamehameha	Gov.	
311.04	Panau-nui		Kekauonohi	11216:41
	Panau-iki	Lunalilo	Gov.	
311.05	Laeapuki		Lunalilo	silc
311.06	Kamoamo		Kaoanaeha	8515-B:1
311.07	Pulama	Kekauonohi	(Gov.)	
	Pulama	Kailakanoa	(Gov.)	
311.08	Poupou1	Lunalilo	Gov.	
	Poupou2	Kekauonohi	Gov.	
311.09	Kahaualea		Lunalilo	8559-B:14
312.10	Ki A	Lunalilo	Gov.	
312.11	Kapaahu	Leleiohoku	Gov.	
312.12	Kaunaloa	?	(Gov.)	
312.13	Hulunani	?	(Gov.)	
312.14	Kupahua	Loe	Gov.	
312.14.001	Hapaiki	A. Kaeo	Gov.	
	Hapaiki	N. Namauu	Gov.	
312.14.002	Lonokaeho	A. Kaeo	Gov.	
	Lonokaeho	N. Namauu	Gov.	
312.15	Kalapana		Lunalilo	silc
312.15001	Waiakolea	N. Namauu	Crown	
312.16	Makena	Keelikolani	Gov.	
312.17	Kaimu	Kamamalu	Crown	
312.18	Kikala1,2	Lunalilo	Gov.	

312.19	Keokea	Lunalilo	Gov.	
312.20	Keauohana	Lunalilo	Gov.	
312.21	Kehena		Kalua	(none)
312.22	Keekee	?	(Gov.)	
312.23	Kukuihala	?	Kaoanaeha	8515-B:7
313.24	Kamaili	Lunalilo	Gov.	
313.25	Kaueleau		Kamamalu	7713:13
	Kaueleau	A. Kaeo	Gov.	
313.26	Opihikao	I. Kaeo	Gov.	
313.27	Iiililoa	?	(Gov.)	
313.28	Kauaea		Kamamalu	7713:14
313.29	Malama	Kalaimoku	Gov.	
	Malama	Kealohaai	Gov.	
313.30	KiB	?	(Gov.)	
313.31	Kanane	Lunalilo	(Gov.)	
313.32	Kaukulau	Lunalilo	Gov.	
313.33	Keahialaka		Lunalilo	8559-B:15
313.34	Pohoiki	Lunalilo	Gov.	
314.35	Oneloa	Lunalilo	Gov.	
	Oneloa	Laumaka	Gov.	
314.36	Laepaoo		Lunalilo	silc
314.37	Ahalanui	Kaunuohua	Gov.	
314.38	Pualaa		Leleiohoku	9971:14
314.39	Kapoho		Kanaina	8559:5
314.39.001	Kaniahiku	Kamakahonu	Gov.	
314.40	Halekamahina		Kalama	4452:2,3
314.41	Kula		Kalama	4452:1
314.42	Puua		Keohokalole	8452:15
314.43	Koae1,2		Lunalilo	silc
314.44	Kanekiki	A. Kaeo	Gov.	
314.45	Halepuuaa	P. Kanoa	Gov.	

314.46	Kahuwai		Kamamalu	7713:12
314.47	Waawaa	L. Kamehameha	Gov.	
	Waawaa	Lunalilo	Gov.	
314.48	Nanawale	Kekuanaoa	Gov.	
314.48.001	Kaikawowo	?	Gov.	
314.49	Honolulu	Kamamalu	Gov.	
315.50	Waiakahiula		Kekauonohi	11216:40
315.51	Keonepoko-iki	?	(Gov.)	
	Keonepoko-nui	Lunalilo	Gov.	
315.52	Halona	A. Kaeo	Gov.	
315.53	Popoki	Kamamalu	Gov.	
315.54	Makuu	Leleiohoku	Gov.	
315.55	Kaohe	Ulumaheihei	Gov.	
316.56	Waikahekahe		Kale	8522-B:3
	Waikahekahe		Lahilahi	8520-B:4
316.57	Keaau		Lunalilo	8559-B:16
316.58	Olaa	Kaunuohua	Crown	
Unlocated lands in Puna				
310.59	Kaualea	?	Gov.	

# Appendix G Maly's Oral Histories

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(<http://www.planetpuna.com/Puna%20Trails%20Draft%20Page/Kepa/Kepa-23-Oral%20History%20Interviews.html>) (in Maly 1999, Appendix A)

The following is an excerpt from Kepā Maly's research on the Old Government Roa in Puna. He interviewed old time *kūpuna* (elders) from the Kea'au-Waikahekahe vicinity regarding the road, cultural sites, lifestyle, trails, etc. Many of the place names in his ora history interviews are within the *ahupua'a* that fall within the region of this report's study area, however locations are generally outside of this project's physical APE. These ora histories were included as a part of this report because many of the descendants or relatives of those persons listed here were among those that CSH was referred to by others to interview, and were unable or unwilling to participate in our interview process. Place names within the *ahupua'a* covered in this project are in bold, along with any cultural practices and historic sites. References to roads or trails are underlined.

## **John Ka'iewe Jr.**

### **Oral History Interview of July 16, 1998**

#### **and Walk Along the Puna Trail- Old**

#### **Government Road (November 16, 1998)**

John Ka'iewe Jr. was born at **Kea'au**, in 1929. He has lived at **Kea'au** all his life, and his family has lived in the **Kea'au-Maku'u** vicinity for many generations. John's elders lived at **Maku'u, Keauhou, Pākī, and Kea'au- Hā'ena**, and as a child he traveled along the old Government Road and mauka-makai trails with his family to their various places of residence and on fishing journeys. He and his elders traveled the Puna Trail (and smaller mauka-makai trails in between the shore and the main trail) all the way from Kaloli-Keauhou in the south to **Pāpa'i** in the north. Also, as a youth, John's Tūtū Ma'i, still lived at the place of his birth, **Pākī Bay**, and today, John is among the last few individuals alive, to have lived at **Pākī** with his elders. This interview provides readers with important historical accounts of the relationship that native families shared with the land.

From his grandfather, Solomon Ka'iewe, John learned that his family used to live at Keauhou Bay. They had houses there, fished the ocean and cultivated taro, sweet potatoes and other crops in the area between the shore and the Government Road, and on the mauka side of the road as well. There were other relatives living between Keauhou and **Pākī** as well. When John was young, Tūtū Ma'i and some of the other old-timers were still cultivating mixed crops in walled enclosures in the pu'e (mulched, mound planting) style, behind **Pākī**. The 1946 tsunami had a significant impact on this section of the Puna shoreline. Tūtū Ma'i's house was destroyed, as were a number of stone wall features on the makai side of the

government road. John recalls that in his youth, and as he was told, in the preceding years, there was a close relationship between his family and the Shipmans (that relationship is still important to family members to this day). In those early years, John described a Konohiki type relationship between the families and the rights which they were granted for use and care of the land, ocean and various resources necessary for sustaining the well-being of the native families. One example shared by John in regards to access and collection of marine resources, was in the area of the present-day collection, "wiping out" of 'öpihi for sale. John noted that before - "they don't do that. They come in, they pick up, and then when my uncle comes down, he sees them over there, he'd tell them "What you fellas get now, you folks take. Take what you get." That's all. But because of the boundaries, he [Shipman] had from Keauhou. From Keauhou side all the way to Pāpa'i& People didn't just come into Kea'au."

He observed that before there were all kinds of fish, 'öpihi, wana and limu, but now, because so many people take so much, the place has been cleaned out. John suggested that there be some sort of rules like before days, to manage how much and when fish can be taken from along the **Kea'au-Puna Coast**.

In speaking about the old government road and some of the mauka-makai trails, John noted that the mango trees were purposefully planted by his family and others who traveled the trails. The trees provided shelter, and in season, mangoes were always appreciated by those who traveled the trails. Also, Tütü Ma'i and a few other elder members of his family continued to do repair work on sections of the old government road that they traveled until about 1942 - when World War II broke out, access was restricted for a while, and the section of the road from Kaloli to Hä'ena was opened up for military vehicles. John noted that it was the custom of the people who traveled the roads to take care of them. He remembers many trips where he and elder family members would carry 'ili'ili to fill in the road, and that they would also set the larger stones back in place.

When asked his thoughts about increased use of the old government road and the care of native Hawaiian sites, John commented that the trail was very special to him, and urged that the trail be restored in a traditional manner-that it not be paved as some people have suggested-and that the Hawaiian sites be:

"Taken care of, as much as possible. I would like to see those things left just as they are&. Within the government's rights, if they're going to make the road, we can't stop progress, you know. But, if they can kind of respect the area& If they could leave it as a historical area, that other people, like interpreters could tell people about."

John did not recall ever hearing of a specific site between **Kea'au Bay** to **Päki** that was a heiau, but he does recall that there were special places that were respected by the old people-there were places with mana (spiritual power). He also had not seen any burials exposed, but from conversations with various elders,

he feels that there are burial sites along the coast-some belonging to his kūpuna who lived at various places between **Kea'au to Maku'u** in ancient times. In this century, some members of his family have been buried at the Kea'au (Shipman) Cemetery near the shore.

Further north along the shore line, at **Pāpa'i**, John has heard of heiau and burial sites, and he recalls that there is one area along the trail (not far from the old boundary wall) that the family was always cautious about because peculiar things would happen there.

John recalled that at **Pāki**, the names etched in the stone (the petroglyphs) were written by several of the old families that lived in the area. His mother also told him that some times, people who were visiting the families living on the shore would etch their names into the stone. It was quite a custom among the people at the time, "**Pāki** was famous for the names on top of the rocks."

### **Roy Shipman Blackshear**

#### **Oral History Interview at Kea'au Beach, Puna**

#### **July 23, 1998 and Site Visit of September 24, 1998 - with Kepā Maly**

Roy Shipman Blackshear was born in 1923, at the Shipman family home in Hilo. Roy's grandparents, William H. and Mary Elizabeth Johnson- Shipman (a descendant of the Kauwē-Davis lines) first traveled along **Kea'au Beach** and the **Puna shoreline-between Hilo and Kapoho**-on the "King's Trail" in the early 1870s. In the later 1870s, W.H. Shipman and partners in the Hawaiian Agricultural Company entered into a series of lease agreements with the estate of King William Lunalilo for the ahupua'a of **Kea'au** where ranching operations agricultural interests were being developed. The Shipmans have owned most of the ahupua'a of **Kea'au** since ca. 1882.

Roy has lived along the shore of **Kea'au** for much of his life, either as a full-time or part-time resident. During his youth, he traveled along the old Government Road and coastal lands of **Kea'au** with his family and other Hawaiian and part-Hawaiian families who have lived on the land for many generations. The interview transcript includes rich descriptions of the landscape, practices of the families who called **Kea'au** home, and historical events, which he learned from elders, or personally experienced.

In his early years, Roy learned about and saw various Hawaiian sites in the coastal region of **Kea'au**. Among the important places that he discussed in the interview, and which were always respected by his family and the few other Hawaiian families that lived there were:

- The **Kea'au Fishpond** and mākähä (rights to gathering fish from the pond were based upon work done to repair the pond features and keep the pond in working order).
- Two kū'ula (fish god stones) on **Kea'au Bay**.
- The famous stone Höpoe, which was lost in the 1946 tidal wave.
- A possible burial site above the Höpoe vicinity, on the mauka (towards the mountain) side of the **Puna Trail**.
- The old sweet potato cultivating field behind **Hä'ena Point**.
- Old house sites and walls along the Old Government Road from Hä'ena to Pāki and Keauhou.
- South of a paddock-boundary wall (Site 21269) are two ancient petroglyphs in the forms of a turtle and fish near the high water line.
- The old heiau and burial sites crossed by the **Puna Trail in Waikahekahe Nui**. Roy noted that he never heard of any other heiau sites in the **Kea'au Bay-Hä'ena** vicinity, and during his youth no one from outside of the immediate Hawaiian families of **Kea'au** made offerings at any sites in the coastal region of the ahupua'a.
- The māwae (crack crevice) where Kamehameha I was attacked, and numerous other sites between the coast and Puna Trail, extending from **Kahului to Pāpa'i** in the north.

When asked what he'd heard about the early residents in the coastal region of **Kea'au**, Roy shared what he remembered of his grandfather's description of the area, and the relationship of the native tenants to the land in the 1870s-1880s:

RSB: "I asked my grandfather, "When you first bought the property, were there very many Hawaiian living around here?" And he said, "Not very many." So where the population of **Hä'ena** went, I don't know. But he said, "There weren't too many." But he was telling me this fresh water pond out here, he said that after he bought the property, "The Hawaiians that were around here, asked him if they could fish in the pond." I think that it had been restricted before."

KM: "Sure, the Konohiki (chief in charge of the 'ahupua'a) fishery rights of Lunalilo."

RSB: "Yes. And he said, "Yes, you can fish in the pond." And he said, "For everyday that you fish in the pond, you give me one day of building stone walls around the edge of the pond." So that's how the walls were built. So that worked out pretty good."

In discussing the Puna Trail-Old Government Road, protection of resources (both cultural and natural), and public access, Roy shared that his family has worked hard to keep the land intact, and in its natural state:

RSB: "Over the years, you know, we've had people come up to me and say, "You know, you have such a beautiful place down there, I' surprised you don't have hotels and condos and everything else." And I said, "That's why it is a beautiful place. Because we don't have all of that. This is one of the natural spots on the island."

The family is very concerned about growing public access and proposals to pave the trail. Roy shared that much of the concern lies in the fact that already, he and other family members are cleaning up the rubbish left behind by people who carry in what they want, but fail to pack it back out. Also, since 1918, the family has been involved in a nēnē (Hawaiian goose) breeding program, the oldest of its kind, and one that is significantly responsible for keeping the endemic Hawaiian nēnē from becoming extinct. People who approach the nēnē-or worse yet, their dogs-can impact the breeding cycle and in the worst case, loose animals can destroy birds. On the shore, it is not uncommon to see turtles and seals hauled out as well. People and loose animals also impact them. Roy also noted that not too long ago, someone had cut the head off of one of the turtles on the shore, and just left the dead turtle there. In these matters, the family has maintained a long-term resource stewardship program with the DLNRDOFAW (Department of Land and Natural Resources-Division of Forestry and Wildlife), and all cases are reported to the department. Roy feels strongly that the cultural and natural resources need to be protected, and he understands that the Old Government Road is a public right-of-way, that is ten (10) feet wide. He feels it is important that people know about and respect the sensitive cultural and natural resources, and it is hoped, that trail users will also respect the property rights of the Shipmans.

**Albert Kahiwhiwaokalani Haa Sr. (AKH)**

**and Albert K. Haa Jr. (AH)**

**November 10, 1998**

**Oral History Interview with Kepā Maly**

Albert Kahiwhiwaokalani Haa Sr., was born at Kapoho, Puna, in 1930, and raised at **Kea'au**. His father's family had worked for the Shipman family almost since the Shipman's arrival in Hawai'i in the 1850s. Living at **Kea'au Beach**, members of the Haa family worked the lands of the **Shipman Ranch**, including **Kea'au**, Keauhou, and Mauna Kea (the Pu'u 'ō'ō-Pua 'Äkala vicinity). Mr. Haa's great grandfather was the often spoken of "Ioane."

Ioane was a close friend and steady companion of Willie Shipman (see interview with Roy Shipman Blackshear), Eben Low, and many families who had ties to activities in Puna and various lands on Hawai'i. Ioane was known as a healer, and by all accounts, he was very knowledgeable of sites, practices, and customs associated with the land.

During his youth and teen years, Mr. Haa lived at **Kea'au**, and it was in those years that he heard some of his elders speaking about **Kea'au**. During the interview, the elder Mr. Haa was joined by his son Albert K. Haa Jr. The younger Haa was raised by his tütü (Edward Haa) at **Kea'au** makai (and later inland). Together, father and son shared some of their family history and thoughts about Kea'au, protection of Hawaiian cultural sites, and travel along the Puna Trail-Old Government Road.

Recalling things he'd heard as a youth, Mr. Haa Sr. shared that in the last century, a number of people lived between **Päki** and Keauhou, that there was even a school there. Tütü Ma'i was the last resident in the area, and Mr. Haa often stayed at **Päki** with the elder Ma'i. Mr. Haa also traveled the entire shore line of **Kea'au**, fishing. When asked about walking the Old Government Road, Mr. Haa said he almost never walked on the government road, instead he walked the shoreline trail from Hä'ena to the Päki vicinity. Going to the north (Hilo side of **Kea'au**), he recalled that he and his father mä (and others) traveled the entire trail from Kea'au Beach past Päpa'i, almost to Pu'umaile in Waiäkea, they ran cattle through most of the makai (oceanward) lands. His father told him about a large cave some where along the coast line, that was so big a plane could go inside (Mr. Haa was never taken to the cave).

Mr. Haa also shared his recollections of the two kù'ula (a stone god used to attract fish) in front of **Kea'au Beach**; he heard that it was his father who set them there to protect them. Ho'okupu (offerings) were still made by his father and others throughout his youth. When asked about heiau (temple) at **Kea'au**, Mr. Haa commented:

“Well, my father tells us, but he didn't tell me the location. Like I told you, the special, important things, he didn't say too much.” “...to them, it's a secret that goes with them.”

Later, Mr. Haa did say that he had been told about heiau near **Päpa'i** and **Päpua'a**. Both father and son urge that people not be maha'oi (intrusive - nosy), that they leave the Hawaiian places alone. Proposals to pave the old trail are unacceptable to them.

In response to a question about making public access to the Puna Trail more widely known, father and son both expressed concerns, referencing some of the recent activities that have received media attention. The elder Mr. Haa summed it up in a very personal Hawaiian manner, as one who's family is buried on the land:

AH: **Kea'au**, I don't like people to go over there, leave 'em alone. They don't know what they are doing. These guys that have been going down there, they make any kind heiau and praying. But they don't belong there.

AKH: [tears welling up in his eyes] We see that and that's *kāpulu*, (careless, unclean) that's not what our folks did. My family, we have been at **Kea'au** for a long time. My uncle Henry Haa is buried there in the **Shipman Cemetery**, and we are attached to the land for eternity.