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8420-01
April 4, 2014

PLANNING DEPARTMENT
COUNTY OF HAWAII

2014 APR -9 AM 7:53

Ms. Esther Imamura
County of Hawai'i Planning Department
Aupuni Center
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720

Subject: Special Management Area Use Permit Assessment Application – Minor
Hālau Maluhia Improvements
Tax Map Key: 8-3-04:por. 001
Ke'ei, South Kona, Hawai'i

Dear Ms. Imamura:

We would like to take this opportunity to provide additional documentation in regard to the subject Special Management Area Use Permit Assessment Application – Minor for Hālau Maluhia Improvements located in Ke'ei, South Kona, Hawai'i. The subject application which pertains to proposed showers/comfort facility and electrical improvements, was submitted to the Department on March 12, 2014.

In order to provide additional substantiation regarding potential archaeological issues, attached is a copy of the Archaeological Assessment for Wastewater System Improvements done by Thomas S. Dye, Ph.D. The scope of the Dye assessment included nearby wastewater system improvements as well as land for the subject proposed showers/comfort facility. The assessment concluded that there will be no historic properties affected. Also attached is a June 26, 2013 letter from the State Historic Preservation Division concurring that no further archaeological work is necessary within the project area.

If there are questions or if additional information is needed, please feel free to call me at (808) 946-2277 or e-mail me at marakawa@wilsonokamoto.com. Thank you very much for allowing us to provide this additional documentation.

Sincerely,

Milton Arakawa, AICP
Wilson Okamoto Corporation

Enclosures

Cc: Allen Salavea
Jacob Yung

091030

T. S. Dye & Colleagues, Archaeologists, Inc.

735 Bishop St., Suite 315, Honolulu, Hawai'i 96813

Archaeological Assessment for Wastewater System Improvements

Lands of Ke'ei I and II, South Kona, Hawai'i
TMK: (3) 8-3-06:019, 030, 033 and TMK: (3) 8-3-04:Por. 001

Thomas S. Dye, PhD

December 17, 2012

Abstract

At the request of the Land Assets Division, Kamehameha Schools, T. S. Dye & Colleagues, Archaeologists has completed an archaeological assessment for a proposed Wastewater System Improvements project, located at Ke'ei I and II, South Kona District, Hawai'i Island. Pedestrian survey at four locations and consultation with residents familiar with the area yielded no potentially significant historic properties within the areas of potential effect for the wastewater system improvement projects.

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1 Introduction

At the request of the Land Assets Division of Kamehameha Schools, T. S. Dye & Colleagues, Archaeologists has completed an archaeological assessment of four locations proposed for wastewater system improvements. The four proposed wastewater system improvements are located in the lands of Ke'ei I and II, South Kona District, Hawai'i Island (fig. 1). They are identified on tax maps as TMK: (3) 8-3-06:019, 030, 033 and TMK: (3) 8-3-04:Por. 001. All of the parcels are owned by Kamehameha Schools.

The parcels proposed for wastewater system improvements are located in the village of Ke'ei and at Halau Maluhia, a facility used and maintained by Kamehameha Schools. They are on the leeward coast of the active southwest rift zone of Mauna Loa. The substrate here is *pāhoehoe* lava that was formed 1,500-3,000 years ago [6], when a Mauna Loa eruption flowed to the sea. Hawai'i Island is sinking at rates of 1.8 mm to more than 3 mm per year as the earth's crust below the island compensates for the removal of magma during eruptions and the increasing weight of the island [3]. Subsidence is particularly rapid along the South Kona coast in the vicinity of the *project* parcels. The coast at Hōnaunau is sinking at a rate of 3 mm per year [1] and at Kealahou 3.4 mm per year [4]. These rates translate to a local rise in sea level of about a foot a century.

The climate is dry, with an annual rainfall of about 100 cm [2]. There are no streams near the project parcels. Soil is poorly developed in the project parcels, which are classified by soil scientists as rough, broken land, "suitable for pasture, woodland, wildlife habitat, and recreation areas" [5:51]. Calcareous *sand* deposits are present along the coast on both sides of Palemanō point, but are present as a thin, recent deposit in Parcel 30.

Vegetation consists of various landscape plants, typical of residential yards.

2 Methods

The principal investigator for this project was Thomas S. Dye, PhD, who is a fully qualified archaeologist (§13-281-3). Dye was shown the parcels by KS Land Assets Division personnel Allen Salavea and Dale Fergerstrom. He conducted the field inspections without assistance. The field inspections were carried out primarily on 18 September 2012, with

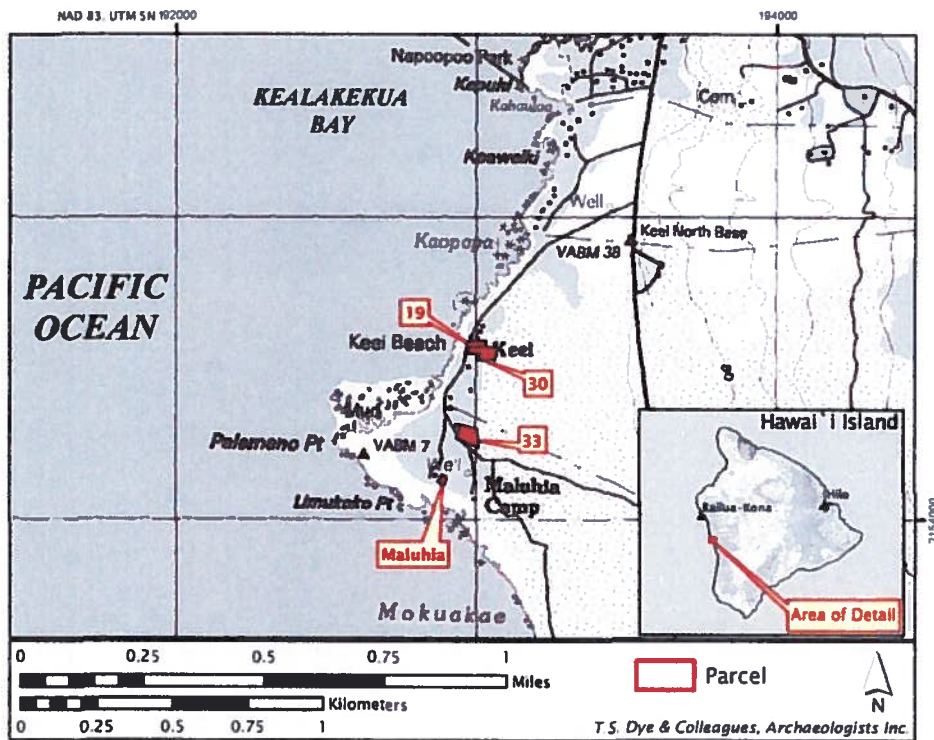


Figure 1: Locations of the proposed wastewater system improvements in the lands of Ke'e I and II.

a second visit to parcel 33 on 9 October 2012 for discussions with the lessee. The field inspection of each proposed wastewater improvement project took less than an hour because conditions were ideal for survey. Vegetation is actively maintained at each location and visibility of the ground surface was everywhere unimpeded. One hundred percent survey coverage was achieved at each of the four locations by the principal investigator who visually inspected the ground surface for evidence of cultural deposits, architectural remains, and other evidence of potentially significant historic properties. In addition, consultation with individuals knowledgeable about parcels 19 and 33 produced information on the history of land use and the interpretation of extant surface architecture.

3 Results

This section describes the results of the field observations and interviews with people knowledgeable about the area and its history.

3.1 Parcel 19

Parcel 19 is an improved house lot of approximately 0.28 ac. A dry-laid rock wall borders the lot almost completely, with openings in the northeast corner and at the west end where the lot is fronted by the road. There is an existing dwelling, a carport, and several sheds (fig. 2). The entire lot is maintained as a yard with grass and ornamental plants. Bare *pāhoehoe* lava outcrops in several locations around the yard.

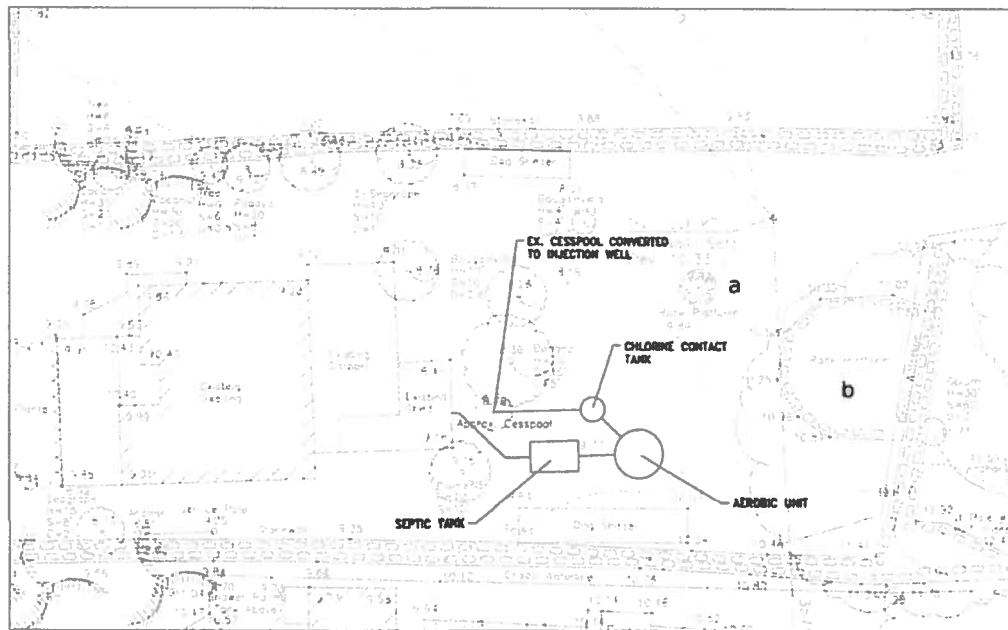


Figure 2: Engineering map showing the location of proposed wastewater facilities on parcel 19 and rock platforms: *a*, small platform; *b*, large platform.

William Panui and his family have lived in the dwelling here for the last seven years.

Wastewater system improvements are proposed for the backyard, *mauka* of the existing dwelling. The area of potential effect for the wastewater system improvements is confined to the excavations that will be carried out, as shown on figure 2, and the driveway, which will be used for construction staging and laying down materials.

The area of potential effect is an open yard location between the carport and two rock platforms at the east end of the parcel. The smaller of the two rock platforms (fig. 3, *a*) is

freestanding, but the larger rock platform (fig. 3, *b*) abuts, and is younger than, the wall surrounding the parcel. In plan view, the larger of the two rock platforms has distinctly rounded corners.



Figure 3: Photograph of the backyard in the vicinity of the proposed facility location at parcel 19, looking east. Note the small platform in the left foreground and the large platform in the background with the photo scale. The scale is marked in 10 cm increments.

Inspection of parcel 19 failed to yield any evidence of potentially significant cultural deposits. When queried, William Panui reported that the sediment deposit over most of the parcel is less than 3 in. thick and that he had never found traditional Hawaiian artifacts at the parcel. Inspection also failed to reveal any petroglyphs on exposed *pāhoehoe* outcrops within the area of potential effect (APE). William Panui also reported that he hadn't discovered any petroglyphs on the parcel.

The unusual shape of the large rock platform, with its rounded corners, and the fact that it was built after the parcel's enclosing wall are two indications that it is a fairly recent construction. Dale Fergerstrom noted that a previous occupant was an amateur radio operator who built the large rock platform as a foundation for an antenna. According to Fergerstrom, the small rock platform marked the location of a guy wire anchor for the antenna. This information is consistent with field observations.

3.2 Parcel 30

Parcel 30 is an improved house lot of approximately 0.35 ac. A dry-laid rock wall borders the lot almost completely, with an opening at the west end where the lot is fronted by the road. There is an existing dwelling with large *lānai*, and a separate shower and sauna (fig. 4). The entire lot is maintained as a yard with grass and ornamental plants. Bare *pāhoehoe* lava outcrops in several locations around the yard.

Wastewater system improvements are proposed for the front yard, *makai* of the existing dwelling. The area of potential effect for the wastewater system improvements is confined to the areas that will be excavated, as shown on figure 4, and to the driveway, which will be used to stage construction and lay down materials. The APE is an open yard with a shallow cover of calcareous sand that supports mature and young coconut trees and some grass (fig. 5). No evidence of a potentially significant cultural deposit was seen in eroding

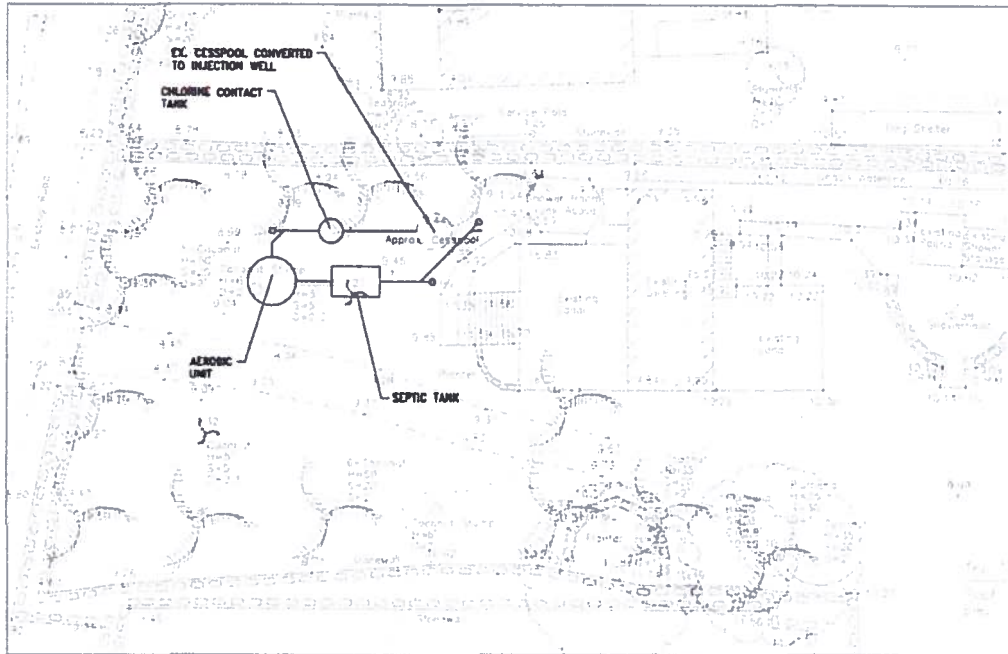


Figure 4: Engineering map showing the location of proposed wastewater facilities on parcel 30.

sections of this sand deposit alongside the driveway. Rings of coral cobbles around some plants in the front yard are obviously recent constructions.



Figure 5: Photograph of proposed facility location at parcel 30, looking northeast.

No petroglyphs were found on exposed patches of *pāhoehoe* lava within the APE at parcel 30.

3.3 Parcel 33

Parcel 33 is an improved house lot of approximately 0.89 ac. A dry-laid rock wall borders the lot almost completely, with an opening at the south end where the lot is fronted by the road. There is an existing dwelling, a carport that is serviced by a crushed rock driveway, and an outhouse (fig. 4). The wastewater system improvements are proposed for a location south and *mauka* of the existing dwelling. The area of potential effect for the wastewater system improvements is confined to the excavations that will be carried out, as shown on figure 6, and the crushed rock driveway, where construction will be staged and materials laid down.

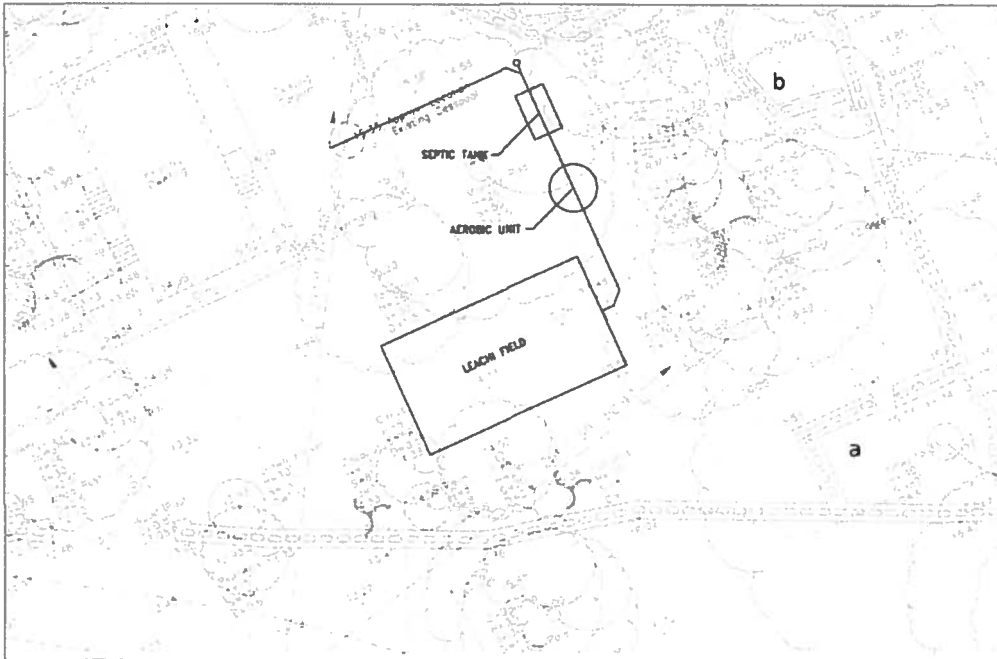


Figure 6: Engineering map showing the location of proposed wastewater facilities on parcel 33 and dry-laid stone masonry structures: *a*, platform; *b*, enclosure.

The entire lot is maintained as a yard with ornamental plants. It is surrounded with a dry masonry *stone* wall that roughly follows the lot boundaries. Bare *pāhoehoe* lava outcrops over most of the parcel. In addition, there are dry-laid stone masonry surface architectural features located near the APE. An enclosure (fig. 6, *b*) and a platform (fig. 6, *a*) both show on the engineering map. There is also a small semicircular enclosure (fig. 7), which does not show on the engineering map. No petroglyphs were observed on *pāhoehoe* outcrops at or near the APE.

Field observations indicate that the enclosure wall abuts the lot boundary wall and thus postdates it. It was not possible to determine the stratigraphic relation of the platform

with the lot boundary wall without excavation. Field observation of the small semicircular enclosure did not yield any information about its age or function.

A meeting with Lavainia Puou, the parcel lessee, took place on 9 October 2012. Ms. Puou's family has lived at the parcel for several generations. At one time, the family owned the parcel. After ownership was transferred to Kamehameha Schools, the Puou family leased the parcel. Ms. Puou explained that the current dwelling is relatively new and that it replaced an older dwelling that was removed completely except for portions of its foundation. Ms. Puou identified the various surface architectural features in the vicinity of the proposed wastewater improvements as having been built and used within her lifetime. The platform at the southeast corner of the parcel (fig. 6, *a*) and the semicircular enclosure between the existing outhouse and the enclosing wall (fig. 6, *b*) were both constructed and used as pig pens. The small semicircular enclosure was built as a landscape feature by Ms. Puou's relative, Lawrence Grace, now deceased. Ms. Puou did not know of any petroglyphs at or near the APE.



Figure 7: Photograph of proposed facility location at parcel 33, looking west. The small semicircular enclosure near the photo scale was built by Lawrence Grace. The scale is marked in 10 cm increments.

When asked about the possible presence of human burials on the parcel, Ms. Puou replied that she knew of none. She noted that family members are traditionally buried at Kahikolu Church.

3.4 Halau Maluhia

Halau Maluhia is a facility owned and operated by Kamehameha Schools. It consists of a large, open building serviced by several outbuildings that include outhouses and showers. The wastewater system improvements are proposed for a location northeast of the large open building (fig. 8). The APE for the wastewater system improvements is confined to areas that will be excavated and to the driveway and parking areas, which will be used to stage construction and lay down materials. The APE is in an open area of undulating *pāhoehoe* lava that was modified during construction and maintenance of Halau Maluhia. Today, it is partially covered with secondarily deposited material (fig. 8).

Field observation of the APE yielded no evidence for potentially significant historic properties. The various stone walls that show on the engineering map (fig. 8) are all

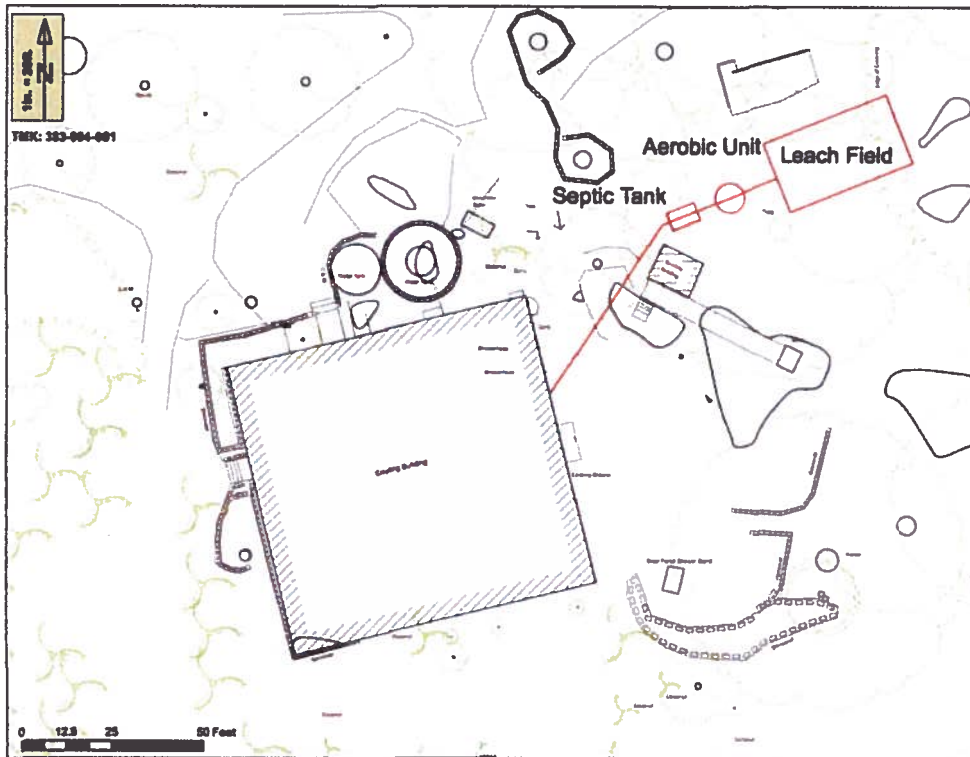


Figure 8: Engineering map showing the location of proposed wastewater facilities at Halau Maluhia.



Figure 9: Photograph of proposed facility location at Halau Maluhia, looking east.

modern structures associated with construction and use of Halau Maluhia. The ground surface is generally bare of natural sediment east and north of the large, open building, so there is no likelihood of significant buried cultural deposits.

4 Conclusions

Field inspection of the area of potential effect for installation of wastewater improvements at TMK: (3) 8-3-06:019, 030, 033 and TMK: (3) 8-3-04:Por. 001 was sufficiently intensive to find all potentially significant historic properties. Field inspection and consultation with persons knowledgeable about the history of the area both indicate that there are no potentially significant historic properties in any of the four areas of potential effect. It is recommended that historic preservation review should conclude with the determination that there will be no historic properties affected during the *undertaking*.

Glossary

coconut The palm, *Cocos nucifera*.

detritus Material produced by the disintegration and weathering of rocks that has been moved from its site of origin, or a deposit of such material.

project The archaeological investigation, including laboratory analyses and report preparation. See also *undertaking*.

sand Detrital material ranging in size from 0.5 mm to 2 mm in diameter. See also *detritus*.

stone Rock fragment ranging from 250 mm to less than 600 mm.

undertaking Any action with the potential for an adverse effect on significant historic properties. See also *project*.

Hawaiian Terms

'a'ā Basaltic lava flows typified by a rough, jagged, spinose, clinkery surface. See also *pāhoehoe*.

hālau Long house, as for canoes or hula instruction.

lānai Porch, veranda, booth, shed; temporary roofed construction with open sides near a house.

makai Seaward.

mauka Inland, upland, toward the mountain.

pāhoehoe Basaltic lava flows typified by smooth, billowy, or ropy surface. See also 'a'ā.

Abbreviations

APE The geographic area or areas within which an *undertaking* may cause changes in the character or use of historic properties, if any such properties exist. See also *undertaking*.

cm The centimeter, a derived unit of length in the International System of Units, equal to 10^{-2} m. See also m (meter).

m The meter, a base unit of length in the International System of Units, equal to the length of the path traveled by light in vacuum during a time interval of $1/299,792,458$ of a second.

Bibliography

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NEIL ABERCROMBIE
GOV. HONORARY OF HAWAII



**HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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June 26, 2013

Thomas S. Dye, Ph.D.
T.S. Dye & Colleagues, Archaeologists, Inc.
735 Bishop Street, Suite 315
Honolulu, Hawaii 96813

LOG NO: 2013.1606
DOC NO: 1306MV20

Dear Dr. Dye,

**SUBJECT: Chapter 6E-42 Historic Preservation Review –
Draft Archaeological Assessment Report for a 1.5-Acre Project Area
Ke'ei Ahupua'a, South Kona District, Island of Hawai'i
TMK (3) 8-3-006:019, :030, :033 and 8-3-004:001 (portion)**

Thank you for the opportunity to review the draft report titled *Archaeological Assessment for Waste Water System Improvements Lands of Ke'ei I and II South Kona District Island of Hawaii, TMK: (3) 8-3-006:019, :030, :033 and 8-3-004:001 (portion)*, Thomas S. Dye (December 2012). This document was received by our office on February 1, 2013. We apologize for the extremely delayed review and thank you for your patience. The field work for this study consisted of a 100% pedestrian survey of the surface environment. No historic properties were identified. Therefore, no further analysis is indicated. The report documented the presence of multiple dry-stacked stone structures that might appear to be historic properties. However, through consultation with Native Hawaiian tenants of these properties, the structures were identified as being of modern construction, and therefore, do not meet the 50 year mark needed to be considered historic properties.

We concur with your recommendation that no further archaeological work is necessary within this project area. This report meets the requirements of HAR13-284-5 (5) (A) and is accepted by SHPD. Please send one hardcopy of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library.

Please contact Mike Vitousek at (808) 652-1510 or Michael.Vitousek@Hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Theresa K. Donham
Archaeology Branch Chief

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