



Figure 135. Feature 26, Site 2270, view north-northwest, heading up to Reservoir 3 area; tape measure is 3.0 m long; note degraded patches of asphalt



Figure 136. Culvert pipe passing under Feature 26, Site 2270, near upper (north) end of road, view southeast; note this pipe is part of irrigation ditch Feature 7, Site 2273; scale bar is 2.0 m long



Figure 137. Feature 27, Site 2270, view northeast, from its intersection with road Feature 26; tape measure is 2.0 m long; this is part of a converted railroad right-of-way and can be followed easily for about 100 m after which the road becomes abandoned and difficult to follow



Figure 138. Feature 27, Site 2270, view south; tape measure is 3.0 m long; this is the point (just east of a wide meander in Gulch C) at which the current road deviates from the original road and follows an old railroad right-of-way to the northeast

Feature 28 is an earthen road that once traversed the entire length of the eastern arm of Gulch A in the current project area, and headed southwest over the plateau lands to the area around Reservoir 3. Originally, this road measured approximately 2.5 km from the northeast end of the eastern arm of Gulch A to Reservoir 3. Today, only a small portion of this historic-age road—approximately 400 m long—can be identified (Figure 139). Our survey through the eastern arm of Gulch A identified two features (Features 22 and 23) originally associated with this earthen road running through the gulch, but the road itself cannot be identified in the gulch due to flooding damage. Most of the southwest end of Feature 28 also cannot be identified on the ground, and has been abandoned and overgrown for quite some time. The portion that can be observed is in fair physical condition and measures approximately 2.5 m wide.



Figure 139. Feature 28, Site 2270, view southwest; the road here is 2.5 m wide

SIHP # 50-80-09-2271: Plantation Camp Structures and Debris

FORMAL SITE TYPE:	Structural Remains and Camp Garbage
NO. OF FEATURES:	2 (in the project area) ¹²
DIMENSIONS:	See Text Below
CONDITION ABOVE GROUND:	Fair
FUNCTIONAL INTERPRETATION:	Plantation Worker and Cannery Structures
AGE INTERPRETATION:	Historic Period—Plantation

Site 2271 consists of two distinct features in different parts of the project area. Feature 1 is the structural remains of a pineapple cannery and associated features just inside the northern project area boundary, on the plateau edge above the western arm of Gulch A. In addition to the main cannery building, a large, three-walled structure, Feature 1, also includes several other foundations and structural remains that provide insight into plantation working conditions in the early to middle 20th century. A small Japanese cemetery, designated Feature 3 (Site 2271) by Goodman and Nees (1991), was once located approximately 190 m north of the main pineapple-cannery building (Figure 140). As described at the beginning of this Results section, the human skeletal remains and headstones from this cemetery were removed some 20 years ago and reinterred/ placed elsewhere by the descendant families (cf. Sinoto and Pantaleo 1994, 1995).

Feature 2 is a small scatter of camp debris located near the upper end of Gulch C.

Significance Assessment

As described in the Conclusion to this report, Site 2271, Feature 1, is assessed as significant under criteria D for eligibility on the Hawai'i Register of Historic Places. Feature 2 (Site 2271) is evaluated as not a significant historic property.

Feature Descriptions

Feature 1 consists of six sub-features occupying an area of approximately 40.0 m (N/S) by 30.0 m (E/W), originally described and documented by Barrera (1987), Goodman and Nees (1991), and Sinoto and Pantaleo (1994). Sinoto and Pantaleo's (1994) plan map, produced during data recovery, is sufficient to satisfy the requirements of an AIS according to HAR §13-276 (Figure 141). We re-located this feature and found Sinoto and Pantaleo's (1994) description to be accurate compared with conditions on the ground. The following detailed description is based on their original descriptions with our updated observations.

Sub-feature A is a large, rectangular, three-walled concrete structure (Figure 142 and Figure 143) measuring 12.2 m (long axis, oriented E/W) by 6.4 m (short axis, oriented N/S) by 6.7 m high. The reinforced concrete walls were poured in place, and impressions of wooden forms can be seen on their surfaces. The walls are approximately 20 cm thick, and are covered by a 23-cm thick cap. Details along the interior walls indicate a second floor and slanted roof may have once been present. The open, north side of the structure may have once held a wooden wall no longer present. The interior of this structure has a concrete floor with some mortared bricks. Additional details of this wall's design and construction are described by Sinoto and Pantaleo (1994:12). The three walls are in relatively good physical condition, but the interior space is heavily overgrown with California grass and its concrete slab is in fair condition.

Sub-feature B is a concrete slab adjoining the east side of the main structure (Sub-feature A) measuring approximately 6.4 m (N/S) by 3.7 m (E/W). A collapsed wall covers the south end of this slab. A small, square, constructed pit measuring approximately 70 cm (long) by 70 cm (wide) by 50 cm (deep) is in the

¹² Additional features of Site 2271 occur outside of the current project area including mauka portions of Waiawa

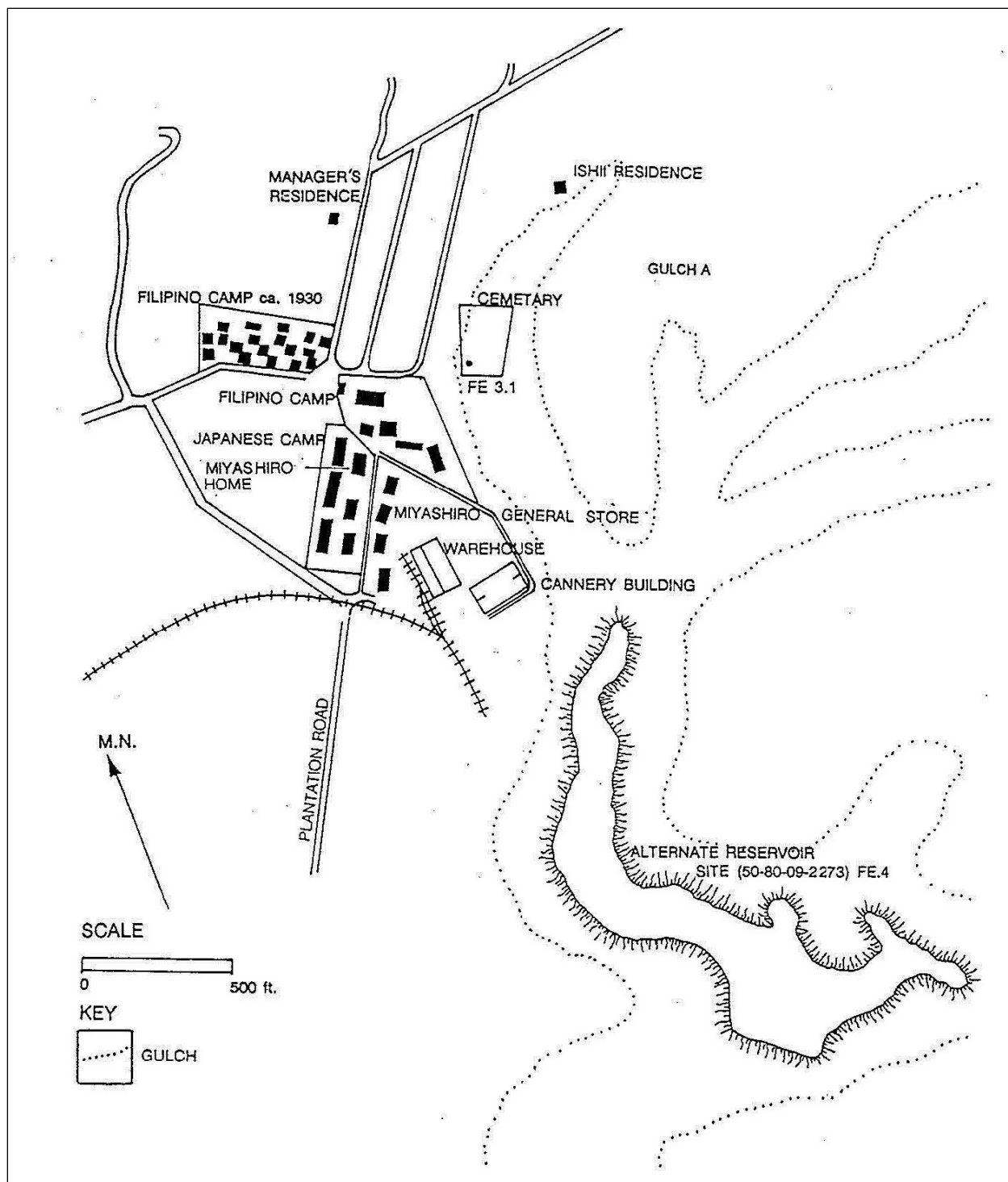


Figure 140. Goodman and Nees' (1991:75) plan map showing the spatial relationship between the pineapple cannery (Feature 1, Site 2271), the Japanese cemetery (Feature 3, Site 2271) and other features traced from historic maps

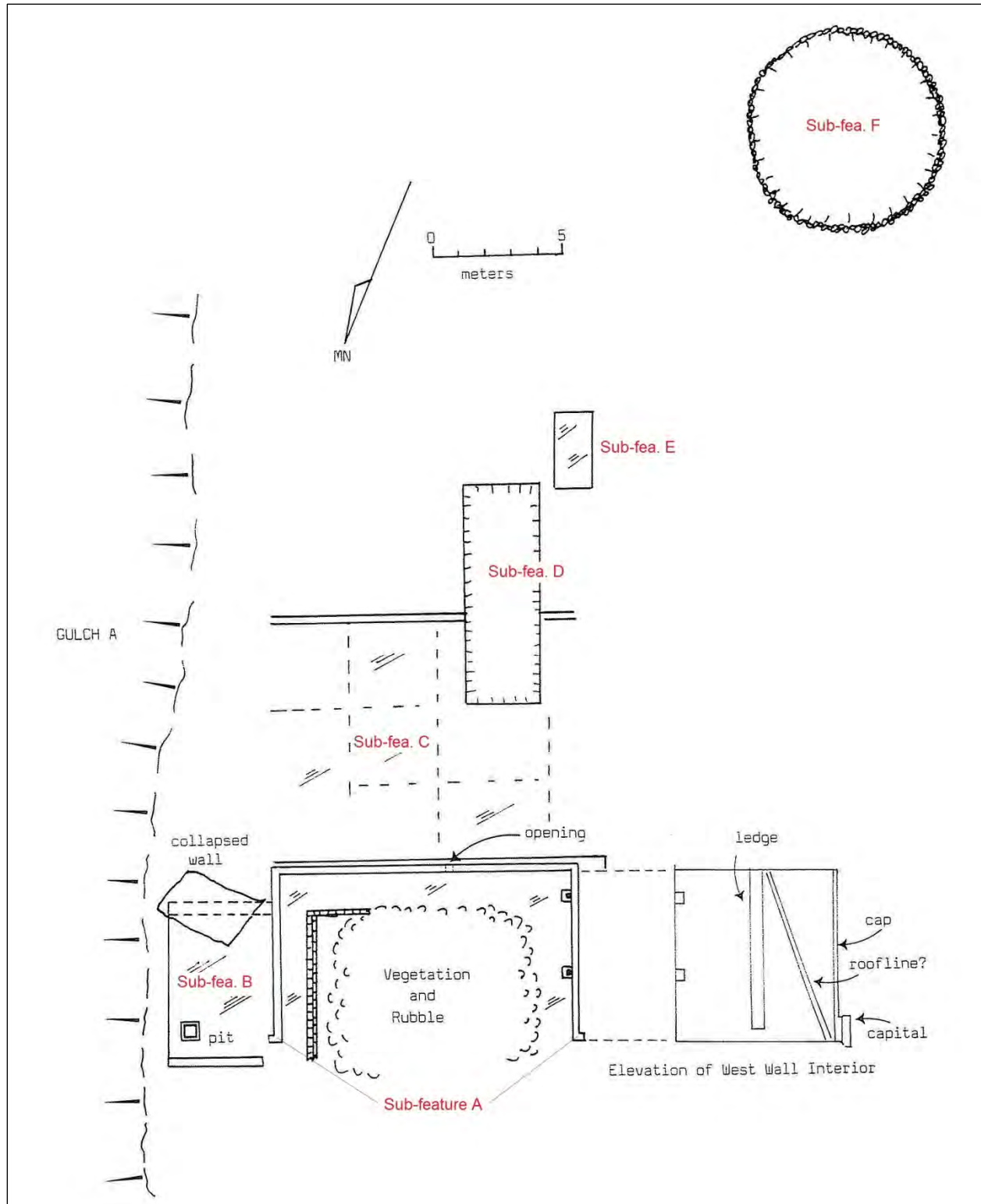


Figure 141. Plan view map of Feature 1, Site 2271, pineapple cannery complex, modified slightly from Sinoto and Pantaleo (1994:13); as described in the narrative feature description (above), we have re-labelled the sub-features on this map



Figure 142. Portion of the back (south) wall of the main pineapple cannery structure (Sub-feature A, Feature 1, Site 2271), view north; scale bar is 2.0 m high



Figure 143. Another view of a portion of the back (south) wall of the main pineapple cannery structure (Sub-feature A, Feature 1, Site 2271), view northwest; scale bar is 2.0 m high

northeast corner of the slab. This slab appears to have once supported a small wooden structure. This sub-feature is in fair physical condition.

Sub-feature C, a concrete slab on the south side of the main structure, measures approximately 12.0 m (E/W) by 10.0 m (N/S), and is divided into several small square areas, defined and separated from each other by low curbing. This area appears to have served as sub-divided work space for various tasks related to the cannery operations. This sub-feature is in poor physical condition due to extensive vegetation growth into the concrete, principally large Christmas berry trees.

Sub-feature D, a rectangular, concrete-lined tank or trough-like structure, is located at the southwest corner of the Sub-feature C slab. This trough-like structure is approximately 8.0 m (N/S) by 3.0 m (E/W) by 30 cm deep. It appears to have functioned as a washing or rinsing structure. This trough-like structure is in fair physical condition.

Sub-feature E, a thick, rectangular, concrete slab measuring approximately 3.2 m (N/S) by 1.3 m (E/W) by 53 cm thick, is located just south of the trough-like feature (Sub-feature D). This heavily-built slab, described as a “solid concrete ... platform” by Sinoto and Pantaleo (1994:17), appears to have been used to store or park heavy machinery. This thick slab is in fair physical condition.

Sub-feature F, a circular, cut basalt and mortar pit measuring approximately 7.3 m (diameter) by 1.0 m (deep) located in the southwest corner of this feature complex, almost certainly represents a water-storage (catchment) device. It is in fair physical condition.

Feature 2 is the ruins of a lumber-framed, corrugated sheet-metal structure near the south end of Reservoir 3 (Figure 144 and Figure 145). In addition to the remains of two partial walls, there is a fair amount of rubbish on the ground surface at this feature, including a rusted metal drum, hollow tiles (“cinder blocks”) a ceramic toilet tank, and other garbage. Feature 2, which occupies an area of approximately 10 m (N/S) by 10 m (E/W), is located at the north end of what was once known as the area of Ditchman’s Camp (also known as Irrigator’s Camp or Camp 3). We scoured the rest of this area and failed to find any other remains of this historic-era camp. Thurman et al. (2012) reported finding very little at this location as well, except for some portable rubbish and the sheet-metal structure. As stated above and below in our significance assessments, we do not believe this feature is a significant historic property.



Figure 144. Main portion of Feature 2, Site 2271, view west; scale bar is 1.5 m high



Figure 145. Another view of the main portion of Feature 2, Site 2271, view south; same scale as above

CONCLUSION

In support of Kamehameha Schools' motion for a land use change for a proposed solar farm development project, TCP Hawai'i conducted an Archaeological Inventory Survey (AIS) of an approximately 1,395-acre project area in Waiawa and Waipi'o Ahupua'a in accordance with HAR §13-276. We documented three historic properties, all plantation-era sites dating from the early to middle 20th century, consisting of 55 component features: (1) SIHP # 50-80-09-2270, a network of roads and railroad rights-of-way consisting of 28 features; (2) SIHP # 50-80-09-2273, an irrigation system consisting of 25 features; and (3) SIHP # 50-80-09-2271, the remains of workers' camps consisting of two features.

We conclude this report by first presenting our significance assessments, and then discussing the project effect and mitigation recommendations.

Significance Assessments

In accordance with HAR §13-284-6, significance of a historic property is evaluated by first establishing that it possesses "integrity of location, design, setting, materials, workmanship, feeling, and association," and, second, that it meets one or more of the following criteria:

- a. Be associated with events that have made an important contribution to the broad patterns of our history;
- b. Be associated with the lives of persons important in our past;
- c. Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
- d. Have yielded, or is likely to yield, information important for research on prehistory or history; or
- e. 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.

SIHP # 50-80-09-2270 is evaluated as significant under criterion d for its intrinsic informational value to research on Hawaiian history (Table 5). We documented 28 component features of this site, which provides important data on the geospatial location, extent and character of the plantation roads and a temporary railroad in Waiawa built around or just after the turn of the 19th/20th century. The temporary railroad was removed in the 1940s. Many of the roads are still in use. In general, Site 2270 informs us about the earliest efforts to develop Waiawa Uka as a commercial plantation growing first pineapple then sugarcane. In addition to earthen roads with little to no formal structural enhancements, features of Site 2270 also includes more formal dry-stacked rock structures built of shaped basalt blocks in Gulch C.

SIHP # 50-80-09-2273 is evaluated as significant under criteria c and d for its intrinsic informational value to research on Hawaiian history (d) and as exemplars of a distinctive construction method (c) using skillfully-shaped basalt blocks and mortar (see Table 5). We documented 25 component features of this site. In particular, it provides important data on the geospatial location, extent and character of the plantation irrigation infrastructure in Waiawa Uka built around or shortly after 1916 by the Oahu Sugar Company; and, excluding the interruption of World War II, continued to be used into the 1970s. In the context of the nearby Waiāhole Ditch System (upslope and mauka of the current project area), Site 2273 played an important role in the early 20th century commercial development of O'ahu and the Hawaiian Islands.

SIHP # 50-80-09-2271 consists of two distinct features in different parts of the project area. Feature 1, the structural remains of a pineapple cannery just inside the northern project area boundary, is evaluated as

significant under criterion d (see Table 5). In addition to a very large three-walled structure representing an abandoned pineapple cannery, Feature 1 also includes several other foundations and structural remains that provide insight into plantation working conditions in the early to middle 20th century. Feature 2, camp debris located near the upper end of Gulch C, is evaluated as not a significant historic property.

Table 5. Significance Assessments for Historic Properties in the Project Area

Site #*	Formal Type	# of features in Project Area	Comments	Significance Assessment
2270	Plantation road network & temporary railroad rights-of-way	28	Portions of this linear resource extend throughout project area and continue out of it to the north, west and south	d
2271	Plantation camp structures	2	Feature 1 only (not Feature 2) evaluated as a significant historic property	d (Fea. 1 only)
2273	Plantation irrigation system	25	Portions of this linear resource extend throughout project area and continue out of it to the north, west and south	c & d

* Each site number is formally preceded by “50-80-09.”

Project Effect and Mitigation Recommendations

In accordance with HAR §13-284-7, TCP Hawai‘i recommends an effect determination of “effect, with proposed mitigation commitments.”

Two of the three historic properties in the project area (SIHP #s 50-80-09-2270 and 50-80-09-2271) have yielded their informational and research value, and no additional relevant information can be gained by either further research or preservation of these. *We recommend no further archaeological or historic preservation work be conducted at these historic properties:*

Site 2270, the plantation-era network of roads and converted railroad rights-of-way, generally consists of earthen roads with no formal features such as curbing or alignments. One concrete ford (submerged bridge crossing) on the main lower access road into the property (Feature 25) is in extremely poor physical condition and has been modified (repaired) numerous times over the years. A small concrete bridge/ culvert (Feature 5) on the main upper access road into the property is an ordinary structure with no unique or noteworthy design features.

Site 2271, a plantation camp/ pineapple cannery (Feature 1) has already been documented and mapped in detail during a previous data recovery project (Sinoto and Pantaleo 1994, 1995).

*We recommend preservation of certain features of Site 2273, the plantation irrigation infrastructure system.*¹³ The specific features and preservation actions shall be described in detail in a Preservation Plan (Plan) drafted in consultation with, and approved by, the State Historic Preservation Division (SHPD). The Plan, which will conform to HAR § 13-277, will include the following: (1) Feature 22, a large water-distribution and -retention basin of the plateau east of Gulch A, and one of the most formal structures in the project area; (2) a representative section of Feature 23, the cut basalt and mortar irrigation ditch leading into the Feature 22 basin; (3) Feature 19, a large dam-like retention structure in the west end of Gulch B; and (4) a representative section of Feature 14, Sub-feature 3, the cut basalt and mortar irrigation ditch draining into Gulch B and directly associated with the Feature 19 dam. Other than the preservation work at these four features, we recommend no further archaeological or historic preservation work for the remaining features at Site 2273.

¹³ As described on p. 10 (Consultation section), our original recommendation of archaeological data recovery and architectural recordation has been changed to preservation based on consultation with SHPD.

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APPENDIX A: SHPD CORRESPONDANCE

This appendix includes written comments from SHPD regarding the (1) SunEdison project area (A-2 to A-3) and (2) KS' LUC project area (A-4 to A-7).

TCP Hawaii, LLC
KS LUC Waiawa AIS

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

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AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
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COMMISSION ON WATER RESOURCE MANAGEMENT
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ENGINEERING
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KAOHOLAWE ISLAND RESERVE COMMISSION
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STATE PARKS

April 21, 2014

Chris Monahan, PhD
Principal, Archaeologist
TCP Hawaii LLC
333 Aolua St., #303
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LOG NO: 2014.01283
DOC NO: 1404SL16
Archaeology

Dear Dr. Monahan:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –
Request for HAR 13-284-5(b) Determination of SunEdison's 50 MW Waiawa Solar Project
Waiawa and Waipi'o Ahupua'a, 'Ewa District, Island of O'ahu
TMK: (1) 9-4-006:034, 035, 036; (1) 9-6-004:024, 025, 026**

Thank you for the opportunity to respond to your letter dated March 19, 2014, requesting a determination pursuant to Hawaii Administrative Rules (HAR) §13-284-5(b) for SunEdison's proposed 50-MV Waiawa Solar Project. We received your submittal on March 19, 2014. In accordance with our consultation on March 10, 2014, your letter includes information on the proposed project, project area, previously-identified historic properties in and near the project area, and the nature and findings of previous archaeological studies.

Your letter indicates the project proponent is SunEdison and that they are working with the landowner, Kamehameha Schools (KS), and Hawaiian Electric Company (HECO) to develop a 50-Megawatt (MW) solar facility. All access roads are on private land owned by KS or by Castle & Cooke; no public roads occur in the project area. The project area consists of about 445.75 acres in Waiawa Ahupua'a with a small portion in Waipio Ahupua'a. Although SunEdison is proposing to develop only two of the three main construction footprint areas, all three areas are included in the current project area which is synonymous with the area of potential effects (APE). The project area/APE includes all staging, storage, and parking areas in addition to the main solar facilities, a perimeter security fence, and a 20-m wide buffer beyond the fence to incorporate all impacts associated with access and facility/fence installation.

Your letter also indicates that (1) the entire project area has been impacted by over 70 years of prior grubbing, grading, and/or plowing related to pineapple, and later, sugarcane commercial agriculture; (2) several archaeological reconnaissance surveys have been completed in the project area (Barrera 1987, Goodman and Nees 1991, and Thurman et al. 2012); (3) portions of four previously-identified historic properties occur in the project area: Sites 2270 (plantation road and railroad bed network), 2271 (plantation camps), 2272 (military storage areas), and 2273 (plantation irrigation and reservoir system); and (4) many of the features comprising these sites have not been systematically recorded. In addition, you indicate that Goodman and Nees (1991) identified no subsurface historic properties during subsurface testing within the northern-most construction area footprint immediately south of the main road leading up to the correctional facility. You conclude that no traditional Hawaiian sites likely exist within the project area due to extensive historic alteration of the project area and vicinity. Therefore, no subsurface testing (excavation) is recommended. Based on the above and the passage of time, you recommend that (1) the four previously-recorded sites within the current project area be re-visited to evaluate and document their current condition, and (2) any as-yet undocumented features of Sites 2270, 2271 and/or 2273 be identified, if present, and recorded.

We concur with your assessments and recommend **an archaeological inventory survey be conducted within the entire project area** in order to identify, document, and evaluate all existing historic properties. We also concur that low potential exists for encountering intact historic properties below the agricultural zone atop the plateaus that

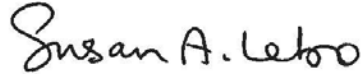
TCP Hawaii, LLC
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Chris Monahan, PhD
April 21, 2014
Page 2

characterize the entirety of the project area. However, testing may be appropriate should any areas be identified that have not been extensively disturbed (e.g., within Site 2271, Plantation Camp No. 41). We look forward to the opportunity to review and accept a report that details the findings of the AIS prior to commencement of any project construction-related ground-disturbing activity.

Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

A handwritten signature in black ink that reads "Susan A. Lebo". The signature is written in a cursive, flowing style.

Susan A. Lebo, PhD
Oahu Lead Archaeologist

TCP Hawaii, LLC
KS LUC Waiawa AIS

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

JESSE K. SOUKI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

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
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

June 12, 2014

Mr. Leo R. Asuncion, Acting Director
Office of Planning, State of Hawaii
P.O. Box 2359
Honolulu, HI 96804

LOG NO: 2014.02357
DOC NO: 1405GC14
Archaeology

Dear Mr. Asuncion:

SUBJECT: **Chapter 6E-42 Historic Preservation Review -
Motion to Amend Decision and Order – Ref. No. P-14388
Land Use Commission Docket No. A87-610, Kamehameha Schools
Waiawa Ahupua‘a, ‘Ewa District, Island of O‘ahu
TMK: (1) 9-4-006:034 por., 035 por., 036, 037 por.; 9-6-004:024 por., 025, 026;
9-6-005:001 por. [formerly (1) 9-4-006:026 por.; 9-6-004:001 por. and 016 por.; 9-6-005:001
por., 007 por. and 014 por.]**

Thank you for the opportunity to respond to your request for comments on the subject Motion to Amend Decision and Order for Land Use Commission Docket No. A87-610 as it relates to the State Historic Preservation Division (SHPD), Department of Land and Natural Resources (DLNR) jurisdiction on this Motion. The fee owner, Kamehameha Schools (KS), seeks to expressly authorize the use of portions of their property for solar farm development for a period not to exceed 35 years. The proposed Motion to Amend Decision Order applies to the **entire 1,395-acre KS property**, while the proposed solar farm development applies to only about 577 acres. We received this submittal on May 22, 2014.

Description of Proposed Solar Farm Project

The motion involves a proposal to establish solar farm systems within one or more utility easements with the 1,395-acre KS property and for the systems to be installed in two phases (Phases I and II) or areas. The Phase I area totals about 300 acres in the northwestern portion of the KS property and involves installation of a pier-mounted 50-MW photovoltaic modular system. The Phase II area totals about 277 acres in the eastern portion of the KS property and involves installation of a pier-mounted 65-MW photovoltaic modular system. in 300 acres in NW portion. Grading will include approximately 400,000 cubic yards and installation of the support piers involves “pile driving” and the construction of retention basins and drainages. The project description also indicates that visual impacts from the solar farm arrays will be minimal.

Applicant Statement Concerning Historic Resources within the Phase I and II Areas

The Land Use Commission Docket indicates that based on “the annual reports” the following previous archaeological studies have been conducted within the subject project area:

an archaeological reconnaissance and inventory survey of the KS Property was approved by SHPD as an acceptable inventory survey report on July 7, 1992. A Cultural Impact Assessment was prepared by Cultural Surveys Hawaii, Inc. in 2003 in anticipation of the Gentry development. A Cultural Resources Preservation Plan was prepared in 2005 by Aki Sinoto Consulting. The plan identified four sites proposed for in situ preservation. This plan was approved by SHPD by letter dated October 25, 2007. In addition,

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prior to commencing ground disturbing activities within the proposed easement areas on the KS Property, SunEdison will conduct a [sic] further archaeological inventory survey of the proposed easement areas.

SHPD Review

Our records indicate that historic properties are present within subject KS property, including within and/or in immediate proximity to the proposed *Phase I and Phase 2 solar farm areas*. These records indicate that two archaeological surveys (1987, 1991) and five mitigation plans or reports (3 in 1994, 1 in 1995, and 1 in 2007) have been completed within the KS property. Our records also indicate that historic properties may be present *outside the Phase I and Phase II areas* within or in immediate proximity to the remaining 818-acre portion of the subject KS property that were not identified in the studies conducted by Barrera (1987) and by Goodman and Nees (1991) and that it remains unclear whether the entire acreage within the current subject KS property was included in these two studies. Both Barrera and Goodman reported the presence of historic properties outside their immediate survey areas. Barrera (1987) indicated "exposures of partially-buried terrace retaining walls were found in the bottoms of three of the gulches...one of the retaining wall locations is included in this report as Site 1469; the remaining sites were outside of the present survey area." Goodman and Nees (1991:5) indicated that Puoiki Heiau (Site 121), initially recorded by McAllister (1933), was located just outside the southeast boundary of the Phase II project area in Waiawa Gulch at the junction of Waiawa and Manana Streams.

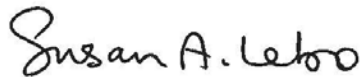
Based on the above description of Puoiki Heiau (Site 121) it remains unconfirmed whether this site is immediately inside or outside of the subject 1,395-acre KS property. It also is unclear whether other historic properties reported in proximity to Site 121 occur within the subject KS property. These historic properties were identified by Goodman during a one-day field reconnaissance within the Waiawa Gulch area of TMK: (1) 9-06-005 undertaken to investigate Site 121 (Goodman 1991). Goodman indicated that the possible *heiau* is located at the base of the ridge that separates Waiawa and Manana Ahupua'a and gulches, and lies between the end of this ridge and the juncture of Waiawa and Manana Streams. She also indicated other historic properties in the area include a large rockshelter with a terraced entrance, a petroglyph in the cliff face behind the shelter, a second petroglyph about 10 m away, a small cupboard formed by stacked boulders, a stacked cobble and boulder wall that may be an *'ili* or *ahupua'a* boundary wall, and on the flatlands near the "suspected heiau" are two formal platforms, some terracing, and a formal pit. Goodman (1991) also noted traditional Hawaiian artifacts in association with various structures and that time constraints precluded further exploration of the area.

SHPD Recommendation

Based on the above and the passage of more than 20 years since Goodman and Nees (1991) conducted their archaeological inventory survey (AIS), we have insufficient information for making a determination that no historic properties will be affected by the proposed Motion to Amend Decision and Order for the 1,395 acre KS property or by the proposed installation of solar farm systems in the Phase I and Phase II areas. Pursuant to Hawaii Administrative Rules (HAR) §13-275, we recommend that a **supplemental archaeological inventory survey (AIS)** be conducted for the entire 1,395-acre KS property by a qualified archaeologist in order to adequately determine the potential impacts of the Motion to Amend and the proposed Phase I and Phase II projects on archaeological historic properties, and to ensure that appropriate mitigation is implemented, if needed. We also recommend that the AIS include consultation with Native Hawaiian Organizations and other interested parties due to the presence of historic properties significant pursuant to HAR §13-284-6 under Criterion "e" as having important value to a particular ethnic group (e.g., Site 2271 (cemetery and grave site) and Site 121 (Puoiki Heiau)).

We look forward to reviewing the archaeological inventory survey report pursuant to HAR §13-276, as well as any subsequent mitigation plans as appropriate, based on findings of the survey. Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov for any questions or concerns regarding this letter.

Aloha,



Susan A. Lebo, PhD
Oahu Lead Archaeologist

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Attachment – Prior Studies

- 1987 – Archaeological Inventory Survey for Waiawa Ridge Golf Course (Barrera, February 1987); He surveyed about 1,242 acres which included some of the southern portion of the subject KS 1,395-acre KS property. His reconnaissance resulted in the identification of the following four sites: 50-80-09-1469 (road remnants), 1470 (historic dump), 1471 (cannery remnants), and 1472 (plantation remnants and terracing). They were assessed as being related to the Oahu Sugar Company and as being “of no archaeological value.” Barrera also indicated that terrace retaining walls occurred in the bottom on three gulches outside his project area.
- 1991 – Archaeological Inventory Survey (Goodman and Nees 1991); They surveyed 3,600 acres and identified 17 historic properties, 3 traditional Hawaiian and 14 historic (Table 1). Of the 17 sites, two sites (2263 and 2264) were recommended for preservation, four sites (2262, 2265, 2266, and 2271) were recommended for data recovery, and three sites (1471, 2264, and 2271) were recommend for archival research and detailed mapping. Four sites (1469, 1470, 1471, and 1472) were previously-identified by Barrera (1986).

Table 1. Historic Properties (50-80-09-) within 3,600-acre survey area (Goodman and Nees 1991).

Site	Site Description	Significance	Recommendation
1469	road-related alignments, walls, terraces, road bed, paved and unpaved surfaces	Not significant	No further work
1470	historic dump	Not significant	No further work
1471	cannery remnants	Not significant	No further work
1472	plantation Camp # remnants and terracing	Not significant	No further work
2261	rock alignment	Not significant	No further work
2262	surface lithic scatter	Criterion D	Data Recovery
2263	rockshelter complex with petroglyphs	Criterion D	Preservation
2264	Hawaiian trail	Criterion D	Preservation, Archival Research, Detailed Mapping
2265	rock mound complex with terraces, fire pit, stream retaining wall	Criterion D	Data Recovery
2266	terrace with depression, rock alignments, additional depressions	Criterion D	Data Recovery
2267	terrace	Not significant	No further work
2268	Waiahole Ditch	Not significant	No further work
2269	Ahren's Ditch	Not significant	No further work
2270	road/railroad system with alignments and retaining walls	Not significant	No further work
2271	irrigator-ditchman, cannery camps, structural remnants, historic cemetery and grave site	Criteria A, D, and E	Data Recovery, Archival Research, Detailed Mapping
2272	military areas, correction building remnants, tunnel complex	Not significant	No further work
2273	irrigation complex including reservoirs, pumping stations, structural remnants, ditches and tunnels	Not significant	No further work

- 1994 – Archaeological Data Recovery for Site 2262 and Site 2271 Feature 3 in Phase I Area (Sinoto and Pantaleo, January 1994); They recommended preservation of the following historic properties within the Phase I project area: Sites 2263 (rockshelter and petroglyphs), portions of 2264 (Hawaiian trail), as well as 2265 and 2266 (adjoining agricultural complexes).
- 1994 – “After the Fact” Archaeological Data Recovery Plan for Sites 2262 and 2271 Feature 3 in Phase I Area (Sinoto and Pantaleo, July 1994).

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KS LUC Waiawa AIS

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- 1994 - Data Recovery Plan for Site 2271 Feature 3 in Phase I Area (Sinoto and Pantaleo, July 1994). SHPD reviewed and accepted the plan on August 4, 1994 (Log No. 12365, Doc. No. 9408TD09).
- 1995 - Supplemental Archaeological Data Recovery for Site 2271 Feature 3 in Phase I Area (Sinoto and Pantaleo, February 1995). SHPD concurred with the significance evaluations and with preservation recommendations for Sites 2263, 2265 and 2266, requested that a mitigation plan for 2263 include an interpretive display, and accepted the report on March 2, 1995 (Log No. 13981, Doc. No. 9502TD20).
- 2007 - Cultural Resources Preservation Plan for Sites 2263, 2264, 2265, and 2266 (Sinoto and Tichenel 2005 [SHPD received August 2, 2007]). SHPD review and accepted this plan on October 25, 2007 (Log No. 2007.2651, Doc. No. 0710ED13).

APPENDIX B: CONSULTATION LETTERS

This appendix includes written requests for consultation from TCP Hawai‘i, LLC, to SHPD and OHA:
(1) initial letter to SHPD regarding the SunEdison project area (B-2 to B-7), (2) follow-up letter to SHPD requesting a determination for the SunEdison project area (B-8 to B-14), and (3) letter to OHA requesting consultation for the KS LUC project area (B-15 to B-21).



TCP Hawai‘i, LLC

Documenting Traditional Cultural Properties of Hawai‘i Preserving and Restoring Cultural and Natural Resources of Hawai‘i

March 5, 2014

To: Susan Lebo, Ph.D. (via email: Susan.A.Lebo@hawaii.gov)
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawai‘i 96707

Re: **Consultation for Historic Preservation Review of SunEdison’s Proposed 50 MW Waiawa Solar Project, Waiawa and Waipi‘o Ahupua‘a, ‘Ewa District, O‘ahu Island, Hawai‘i**
TMK (1) 9-6-004:024, 025 & 026; 9-4-006:034, 035 & 036

Aloha Dr. Lebo,

Thank you for agreeing to a consultation meeting to discuss the aforementioned project’s historic preservation review. As a privately-funded development on private land, this project may be reviewable by the State Historic Preservation Division (SHPD) under HRS Chapter 6E-42 and HAR §13-284. SunEdison is taking the proactive step of initiating consultation to ensure proper treatment of significant historic properties. In accordance with Hawai‘i state law, consultation for this project includes (1) notifying you of the proposed project; and (2) seeking your views on the identification, significance evaluations and mitigation treatment of these properties.

Project Description

The project proponent is SunEdison (240 Makee Rd., Unit 8D, Honolulu, HI 96815). The project representative is Nicola Doss (ph. 808-888-0314, email: ndoss@sunedison.com). SunEdison is working with the landowner, Kamehameha Schools, and Hawaiian Electric Company to develop a 50 Megawatt (MW) solar facility. SunEdison is developing the project in two phases: only Phase I (approx. 300 acres) is currently slated for development and construction at this time, with a potential Phase II (approx. 400 acres) in the future which would represent a separate set of ministerial, City and County approvals (**Figure 1**). However, as a good faith effort, and in the interests of full disclosure, SunEdison will include both Phase I and II areas in this historic preservation review. The proposed project is in Waiawa Ahupua‘a with a small portion in Waipi‘o on tablelands mauka of the H-1 freeway and east of the H-2 freeway. Nearly the entire project area has been previously impacted—mechanically grubbed, graded and plowed—by late 19th to 20th century commercial agriculture (first pineapple and then sugarcane). The ahupua‘a of Waiawa above the H-1 was part of LCA 7713:46 to Victoria Kāmamalu. There are no other LCAs in the project area.

Previous Archaeological Research in the Project Area

Although it has not been subject to a formal Archaeological Inventory Survey (AIS), in accordance with HAR §13-276, there has been significant previous archaeological work conducted in the current project area including: *Waiawa Ridge, Oahu: Archaeological Survey of Proposed Golf Course* (Barrera 1987);

Archaeological Reconnaissance and Inventory Surveys of 3,600 Acres in Waiawa Ahupua'a, 'Ewa, O'ahu (Goodman and Nees 1991); and *Archaeological Reconnaissance Survey of 1,680 Acres of Kamehameha Schools Lands in Waiawa Ahupua'a, 'Ewa District, Island of O'ahu* (Thurman et al. 2012). **Figure 2**, which depicts the location of these studies, shows that 99% of the current project area has already been surveyed. Barrera's findings were completely subsumed by Goodman and Nees' work; their survey coverage included plateau tops as well as all major gulches. Thurman et al. (2012) focused on the four gulches designated A through D by Goodman and Nees; did not survey the plateaus for new sites; but did re-visit (or attempt to re-visit) all previously-identified sites (or features thereof) in their project area.

Figure 3 depicts known historic properties in the current project area based on the previous surveys. **Table 1** provides summary details of these historic properties. It is worth mentioning that the only location Thurman et al. found new sites *not* identified by Goodman and Nees was in Gulch C, which is *not* in the current project area. The nearest new site identified by Thurman et al. is 500 meters away from the current project area. The four gulches are depicted in Figure 1. Portions of three previously-identified historic properties are in the current project area: Sites 2270 (plantation road and railroad network), 2271 (plantation camps) and 2273 (plantation irrigation and reservoir system). It is important to note that the geospatial depictions of Sites 2270 and 2273 are based on tracing lines from historic maps, rather than systematic, on-the-ground survey and mapping of these features. This level of documentation is entirely in keeping with standard practices from 1991 when these resources were first documented. The 2012 report by Thurman et al. did not attempt to systematically map or re-map these specific resources.

Possible Gaps in the Level of Documentation of Sites 2270, 2271 & 2273

Given the passage of time since Goodman and Nees' (1991) survey, and comparing their report with current documentation and reporting standards described in HAR §13-276, we believe the three known sites in the current project area should be re-visited to evaluate and document their current condition. It is clear from a close reading of Goodman and Nees' report, for example, that the documentation for certain sites—e.g., the railroad component of Site 2270 (see Goodman and Nees 1991, Figure 34)—was not an accurate depiction of conditions “on the ground” in 1991 but, rather, tracings of maps from the 1930s. Similar issues arise when trying to understand the extent and location of features for Site 2273. We do not believe any traditional Hawaiian sites are located in the current project area, which consists entirely of plateaus that have been thoroughly altered in historic times. We do believe, however, that additional, as-yet undocumented features of the Site 2273 plantation irrigation system, and perhaps Site 2270 (roads and railroad), are located in the current project area.

Conclusion

We would like to discuss possible solutions to addressing the data gaps we believe may exist in the extant archaeological reports. We appreciate your participation in early consultation, and look forward to discussing these matters in greater detail.

With aloha,



Christopher M. Monahan, Ph.D.
Principal Investigator, Archaeologist
TCP Hawai'i, LLC
333 Aoloa Street, #303
Kailua, HI 96734
(808) 754-0304
mookahan@yahoo.com

c: Nicola Doss, SunEdison (via email)
Jason Jeremiah, KS Cultural Resources (via email)
Sean McNamara, KS Cultural Resources (via email)

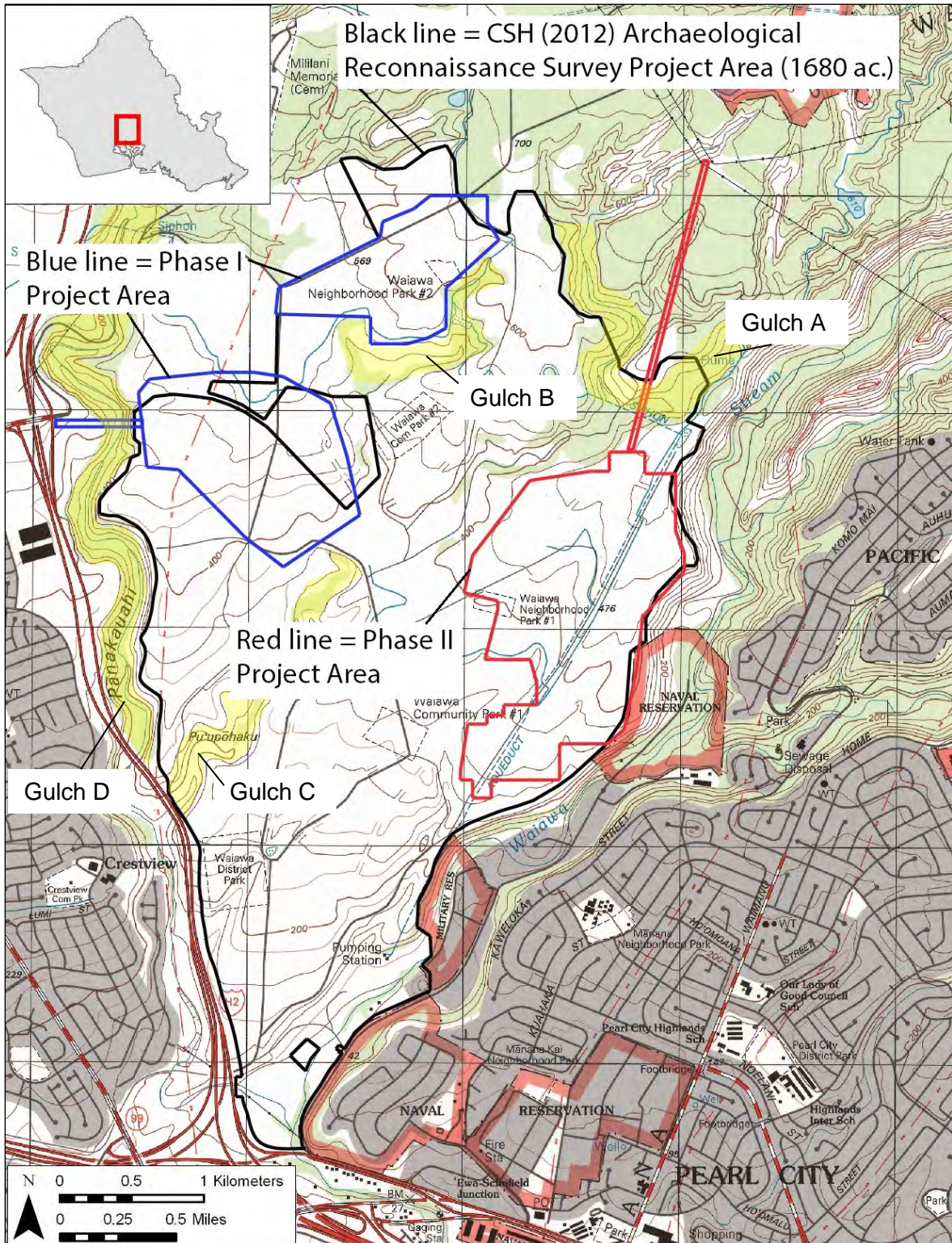


Figure 1. Project area consists of two phases: Phase I (~300 acres) in blue and Phase II (~400 acres) in red; CSH's (2012) Archaeological Reconnaissance Survey project area is depicted in black outline; note, gulches are highlighted in yellow

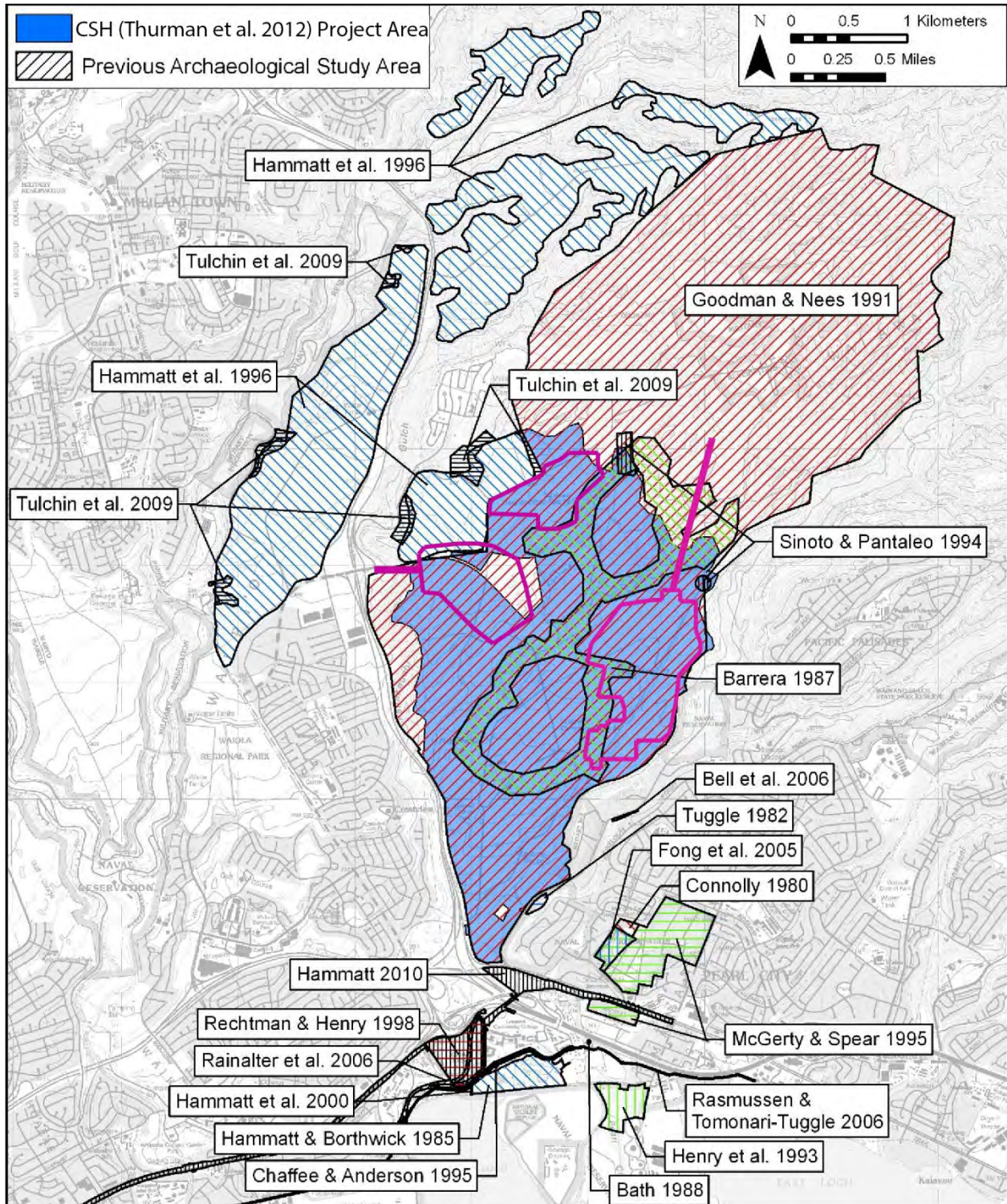


Figure 2. Previous archaeological studies in and near the project area; this figure is adapted directly from CSH's Archaeological Reconnaissance Report (Thurman et al. 2012); current project area depicted in magenta outline

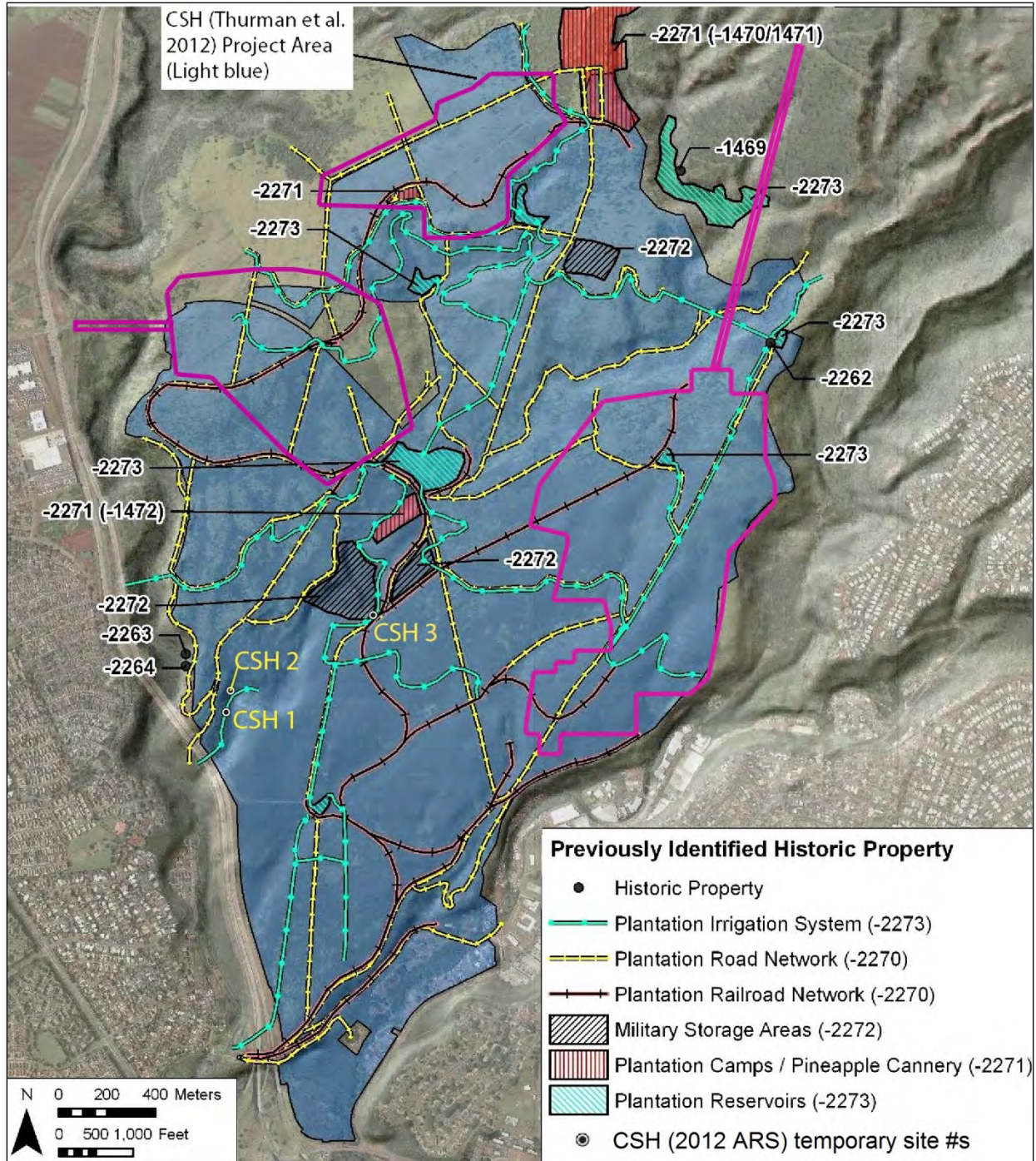


Figure 3. Location of previously identified historic properties in relation to the current project area (magenta outline); this figure is adapted directly from CSH's Archaeological Reconnaissance Report (Thurman et al. 2012)

Table 1. Previously Identified Historic Properties in the Current Project Area

Site #	Formal Type	Phase	Comments
2270	Plantation road & railroad network	I & II	Portions of this linear resource are in the project area
2271	Plantation camp (Camp no. 41)	I only	Two other camps in CSH's 1680-acre project area are not located in the current project area
2273	Plantation irrigation & reservoir system	I & II	Portions of this linear resource—including one small reservoir—are in the project area



TCP Hawai‘i, LLC

Documenting Traditional Cultural Properties of Hawai‘i Preserving and Restoring Cultural and Natural Resources of Hawai‘i

March 19, 2014

To: Susan Lebo, Ph.D. (via email: Susan.A.Lebo@hawaii.gov)
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawai‘i 96707

Re: **Request for HAR §13-284-5(b) Determination of SunEdison’s Proposed 50 MW Waiawa Solar Project, Waiawa and Waipi‘o Ahupua‘a, ‘Ewa District, O‘ahu Island, Hawai‘i**
TMK (1) 9-6-004:024, 025 & 026; 9-4-006:034, 035 & 036

Aloha Dr. Lebo,

Thank you for meeting with us on March 10, 2014, to discuss the aforementioned project’s historic preservation review. As a privately-funded development on private land, this project may be reviewable by the State Historic Preservation Division (SHPD) under HRS Chapter 6E-42 and HAR §13-284. The purpose of this letter is to request a determination, in accordance with HAR §13-284-5(b), regarding the identification and inventory of historic properties in the project area. As we discussed in last week’s meeting, this letter includes information on the proposed project, project area, previously-identified historic properties in and near the project area based on prior archaeological research, and previous level of effort by previous archaeological studies (e.g., pedestrian survey coverage, subsurface testing).

Proposed Project and Project Area Description

The project proponent is SunEdison (240 Makee Rd., Unit 8D, Honolulu, HI 96815). The project representative is Nicola Doss (ph. 808-888-0314, email: ndoss@sunedison.com). SunEdison is working with the landowner, Kamehameha Schools (KS), and Hawaiian Electric Company to develop a 50 Megawatt (MW) solar facility. As depicted in **Figure 1**, the proposed project consists of approximately 446.75 acres in Waiawa Ahupua‘a with a small portion in Waipi‘o on tablelands mauka of the H-1 freeway and east of the H-2 freeway. Currently, SunEdison is proposing to develop only two of the three main construction footprint areas depicted in Figure 1. The area along the east side of the map is not currently slated for development, but may be developed in the near future.

In order to streamline the historic preservation review process, SunEdison wishes to include all three construction footprint areas in the current project area. These construction footprint areas include all staging, storage and parking areas in addition to the main solar facilities and a perimeter security fence. The large polygons in Figure 1 depict a 20 m (60 ft) buffer around the perimeter security fence for each of the three main construction footprints. The project area also includes two linear transects representing utility tie-ins (one to the northeast, and one to the west); and access roads into and between the three construction footprints. All of the access roads are on private land owned by either KS or Castle & Cooke; there are no public roads included in the project area.

Nearly the entire project area has been previously impacted—mechanically grubbed, graded and plowed repeatedly over the course of at least 70 to 80 years—by late 19th to 20th century commercial agriculture (first pineapple and then sugarcane). The ahupua‘a of Waiawa above the H-1 was part of LCA 7713:46 to Victoria Kāmamalu. There are no other LCAs in the project area.

Results of Previous Archaeological Research in the Project Area

Although it has not been subject to a formal Archaeological Inventory Survey (AIS), in accordance with HAR §13-276, there has been substantial previous archaeological work conducted in the current project area including three survey efforts: (1) *Waiawa Ridge, Oahu: Archaeological Survey of Proposed Golf Course* (Barrera 1987); (2) *Archaeological Reconnaissance and Inventory Surveys of 3,600 Acres in Waiawa Ahupua‘a, ‘Ewa, O‘ahu* (Goodman and Nees 1991); and (3) *Archaeological Reconnaissance Survey of 1,680 Acres of Kamehameha Schools Lands in Waiawa Ahupua‘a, ‘Ewa District, Island of O‘ahu* (Thurman et al. 2012). **Figure 2**, which depicts the location of these and other previous archaeological studies, shows that 99% of the current project area has already been surveyed to at least a reconnaissance level. Barrera’s findings were completely subsumed by Goodman and Nees’ work; their survey coverage included plateau tops as well as all major gulches, and included subsurface excavation in or near a portion of the current project area (see below). Thurman et al.’s (2012) reconnaissance survey focused on the four gulches designated A through D by Goodman and Nees; did not survey the plateaus for new sites; but did re-visit (or attempt to re-visit) all previously-identified sites (or features thereof) in their project area.

Figure 3 depicts known historic properties—exclusively plantation and military sites—in the current project area based on the previous surveys. **Table 1** provides summary details of the four historic properties that occur in the project area. Note that all four of these historic properties also occur (i.e., have features or portions) outside of the current project area. It is also worth mentioning that the only location Thurman et al. (2012) found new sites *not* identified by Goodman and Nees was in Gulch C, which is *not* in the current project area. The nearest new site identified by Thurman et al. (2012) is 500 meters away from the current project area. The four gulches are depicted in Figure 1.

Portions of four previously-identified historic properties are in the current project area: Sites 2270 (plantation road and railroad-bed network), 2271 (plantation camps), 2272 (military storage areas) and 2273 (plantation irrigation and reservoir system). It is important to note that the geospatial depictions of the linear resources, Sites 2270 and 2273, are based on tracing lines from historic maps, rather than systematic, on-the-ground survey and mapping of these features. This level of documentation is entirely in keeping with standard practices from 1991 when these resources were first documented, and when the primary emphasis was on identifying the presence or absence of traditional Hawaiian sites. The 2012 report by Thurman et al. did not attempt to systematically map or re-map these previously-identified linear resources, but it did note that the extensive irrigation complex (Site 2273) has many formal features that have not been systematically recorded. Likewise, the geospatial location of the plantation camp (depicted by Goodman and Nees 1991:84, Figure 31 as “Camp No. 41”) once located in the current project area was derived from 1930s-era maps, rather than on-the-ground observations. It is not clear from Goodman and Nees’ discussion (1991:83–90) whether there is anything left to see at Camp No. 41. This particular plantation camp was *not* re-visited by Thurman et al. (2012).

Relevant Subsurface Testing

Goodman and Nees (1991) conducted backhoe excavation in an area they designated Plateau E, which, although not depicted with sufficient accuracy to plot on our project area maps, appears to be located within the northernmost construction area footprint immediately south of the main road leading up to the correctional facility. They excavated three trenches measuring 10–20 m long and 2.5–3.0 m deep (their methods and results are described on pp. 15 and 42–43, respectively); and identified no evidence whatsoever of subsurface cultural layers, materials or features, consistent with historical records

indicating extensive previous ground disturbance from decades of mechanized agriculture (pineapple and sugar).

Analysis

Given the passage of time since Goodman and Nees' (1991) survey, taking into consideration their results (including subsurface testing on the plateau), comparing their report with current documentation and reporting standards described in HAR §13-276, and in consideration of Thurman et al.'s (2012) reconnaissance survey, we believe the four known sites in the current project area should be re-visited to evaluate and document their current condition. It is clear from a close reading of Goodman and Nees' report, for example, that the documentation for certain sites—e.g., the railroad component of Site 2270 (see Goodman and Nees 1991, Figure 34)—was not an accurate depiction of conditions “on the ground” in 1991 but, rather, tracings of maps from the 1930s. Similar issues arise when trying to understand the extent and location of features for Site 2273 and for Camp No. 41 (a portion of Site 2271).

We do not believe any traditional Hawaiian sites are located in the current project area, which consists entirely of plateaus that have been thoroughly altered in historic times. We also do not believe that subsurface testing (excavation) is necessary in the current project area. We do believe, however, that additional, as-yet undocumented features of the Site 2273 plantation irrigation system, and perhaps Site 2270 (roads and railroad), are located in the current project area. Camp No. 41 (a portion of Site 2271) may have already been destroyed but we cannot determine this without a field inspection.

Conclusion

Based on our meeting with you on March 10, 2014, and the information presented here, we are requesting a determination regarding the adequacy of the identification and inventory of historic properties in the project area. Please contact me if you have any questions or concerns about this request.

With aloha,



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c: Nicola Doss, SunEdison (via email)
Jason Jeremiah, KS Cultural Resources (via email)
Sean McNamara, KS Cultural Resources (via email)

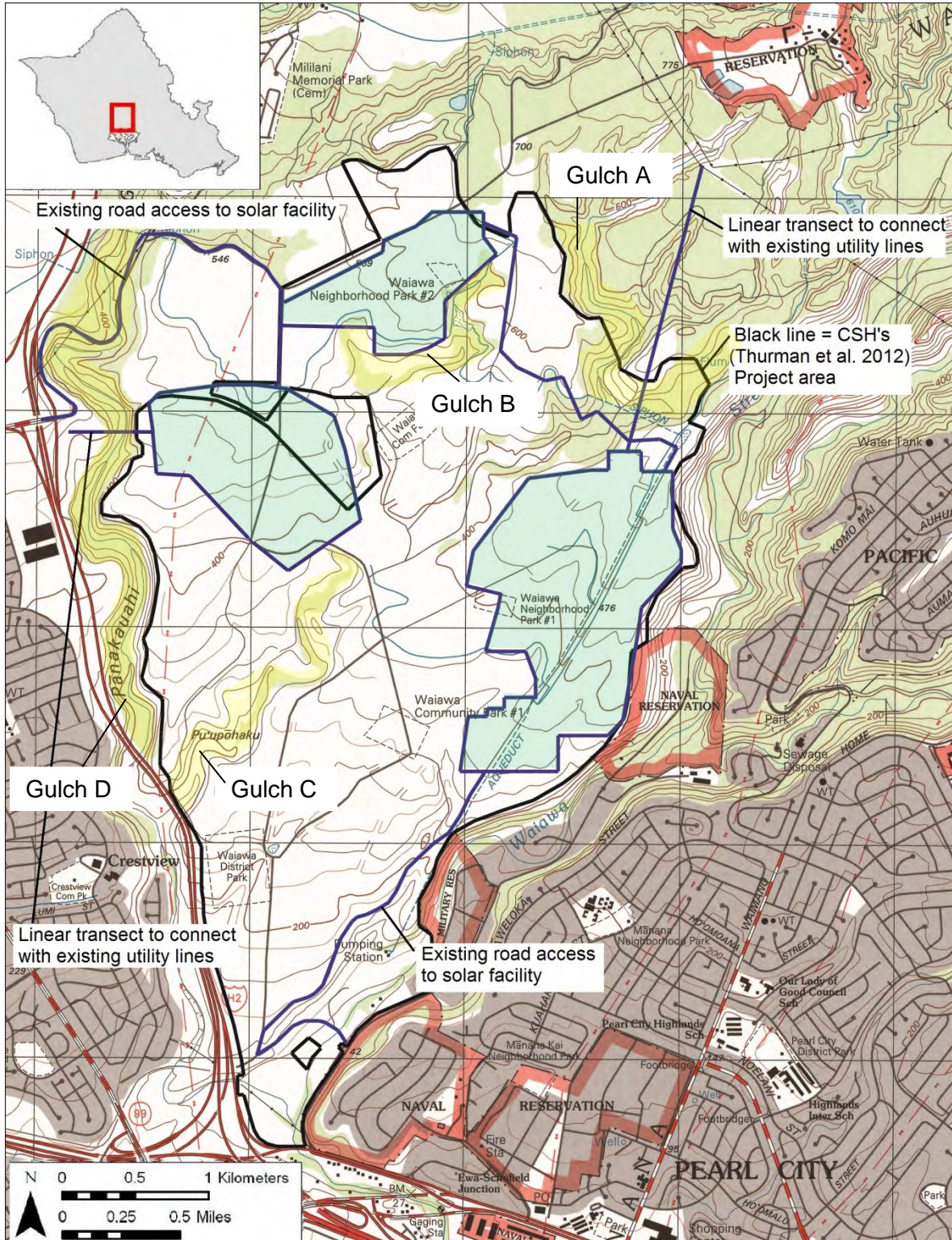


Figure 1. Project area consists of (a) three large polygons (light green) representing footprints of solar installations with a 20 m (60 ft) buffer around each; (b) two linear transects (blue lines) for utility tie-ins; and (c) access roads (blue lines); note, gulches, which will be avoided during project construction, are highlighted in light yellow

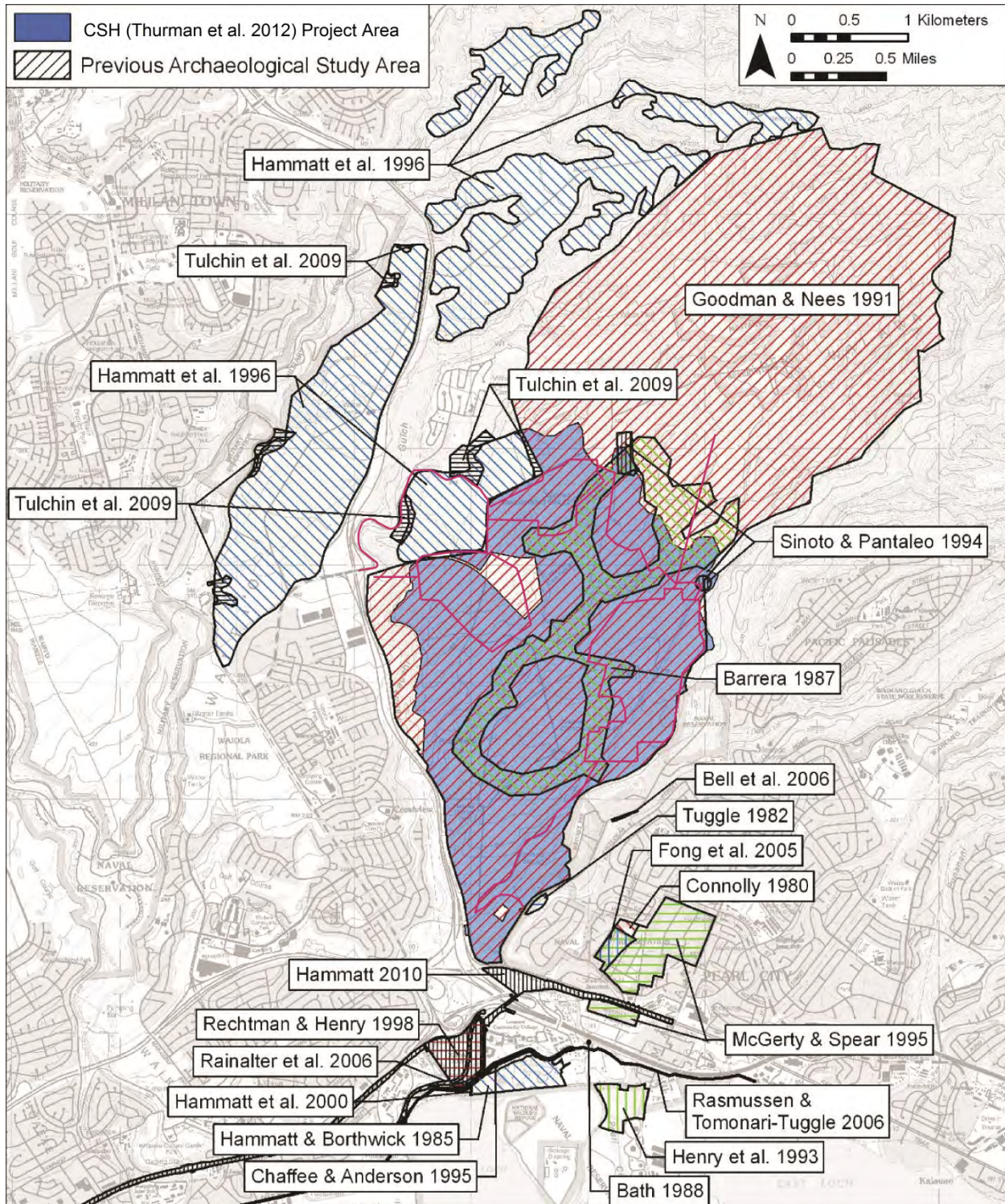


Figure 2. Previous archaeological studies in and near the project area; this figure is adapted directly from CSH's Archaeological Reconnaissance Report (Thurman et al. 2012); current project area depicted in magenta outline

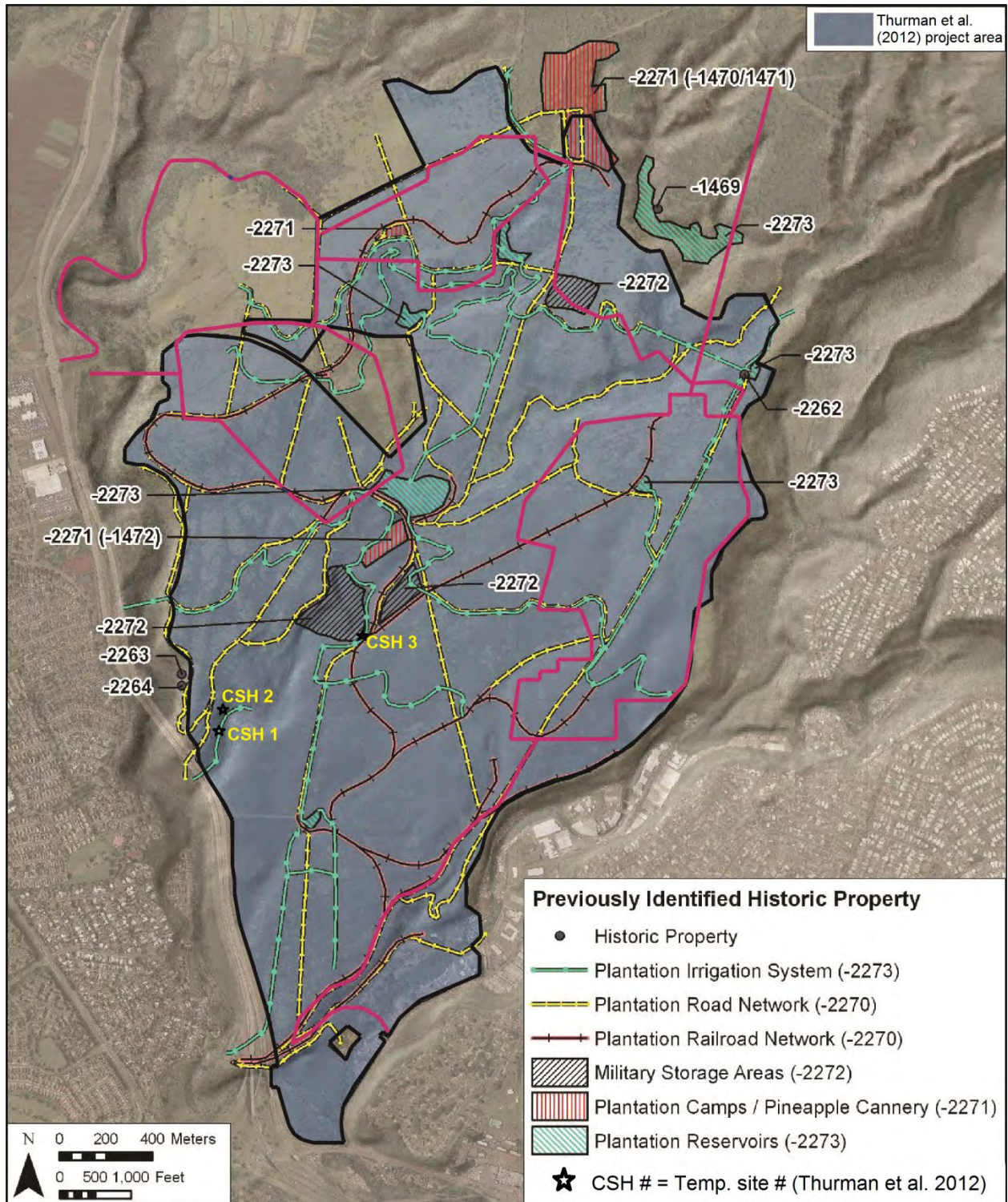


Figure 3. Location of previously identified historic properties in relation to the current project area (magenta outline); this figure is adapted directly from CSH's Archaeological Reconnaissance Report (Thurman et al. 2012)

Table 1. Previously Identified Historic Properties in the Current Project Area

Site #	Formal Type	Comments
2270	Plantation road & railroad network	Portions of this linear resource are in the project area
2271	Plantation camp (Camp no. 41)	Two other camps in CSH's 1680-acre project area are not located in the current project area
2272	Military storage area	Two other military storage areas are located nearby but well outside of the project area
2273	Plantation irrigation & reservoir system	Portions of this linear resource—including one entire small reservoir—are in the project area



TCP Hawai'i, LLC

**Documenting Traditional Cultural Properties of Hawai'i
Preserving and Restoring Cultural and Natural Resources of Hawai'i**

July 25, 2014

To: Kamana'opono Crabbe, Ph.D.
Ka Pouhana (Chief Executive Officer), Office of Hawaiian Affairs
560 N. Nimitz Highway, Suite 200
Honolulu, Hawai'i 96817

Re: Request for HAR §13-284 Consultation for an Archaeological Inventory Survey in Support of Kamehameha Schools' Motion to Amend Decision and Order – Ref. No. P-14388, Land Use Commission Docket No. A87–610, Waiawa Ahupua'a, 'Ewa District, O'ahu
TMK (1) 9-4-006:034 por., 035 por., 036, 037 por.; 9-6-004:024 por., 025, 026;
9-6-005:001 por. [formerly (1) 9-4-006:026 por.; 9-6-004:001 por. and 016 por.; 9-6-005:001 por., 007 por. and 014 por.]

Aloha e Dr. Crabbe,

Thank you for the opportunity to request consultation regarding the aforementioned project's historic preservation review. We seek the Office of Hawaiian Affairs' (OHA) participation as a consulting party to help ensure proper treatment of significant historic properties. In accordance with Hawai'i state law, consultation includes notifying you of the proposed project; and seeking your views on the identification, significance evaluations and mitigation treatment of these properties. This letter includes information on (1) the proposed project and project area description; (2) results of consultation to date with SHPD; (3) previously-identified historic properties in and near the project area based on prior archaeological research with particular attention to pre-contact Hawaiian sites; and (4) preliminary results from our ongoing Archaeological Inventory Survey (AIS) in the project area.

Proposed Project and Project Area Description

The project proponent is Kamehameha Schools (KS) (567 South King Street, Suite 200, Honolulu, HI 96813). The project representative is Jason Jeremiah (541-5376, jajeremi@ksbe.edu). As depicted in Figure 1, the project area consists of 1,395 acres, which represents the entire parcel subject to the Land Use Commission (LUC) action, plus two linear transects representing utility tie-ins and access roads into the property for a proposed solar farm development project. SunEdison (240 Makee Rd., Unit 8D, Honolulu, HI 96815; project representative Nicola Doss, 888-0314, ndoss@sunedison.com) is working with KS and Hawaiian Electric Company to develop a 50 Megawatt solar facility on a portion of the LUC project area. With the exception of the utility tie-ins and access roads, the solar project area is completely subsumed by the LUC project area, which is located on tablelands mauka of the H-1 freeway and east of the H-2 freeway in Waiawa Ahupua'a with a small portion in Waipi'o Ahupua'a.

Based on archival research, nearly the entire project area has been previously impacted—mechanically grubbed, graded and plowed repeatedly over the course of at least 70 to 80 years—by late 19th to 20th century commercial agriculture (first pineapple and then sugarcane). The ahupuaʻa of Waiawa above the H-1 was part of LCA 7713:46 to Victoria Kāmamalu. There are no other LCAs in the project area.

Results of Consultation to Date with SHPD

In March, 2014, we initiated consultation with Susan Lebo, Lead Oʻahu Archaeologist, regarding the SunEdison solar project, 99% of which consists of previously-impacted (by commercial plantation agriculture) plateau lands. We obtained a determination letter (Log No. 2014.01283, Doc No. 1404SL16) dated April 21, 2014, in which SHPD concurred with our assessment recommending an AIS of the entire project area. SHPD also requested an opportunity to review and accept a report that details the findings of the AIS prior to commencement of any project construction-related ground-disturbing activity. In June, 2014, while we were completing an AIS of the solar project area, which has not been submitted for review, SHPD, in a letter to the State Office of Planning, commented (Log No. 2014.02357, Doc No. 1405GC14 dated June 12) on the subject LUC motion and recommended an AIS of the *entire* 1,395-acre project area. On July 8, 2014, we began additional AIS fieldwork needed to satisfy SHPD's recommendation. As discussed below, this work is currently in progress.

Results of Previous Archaeological Research in the Project Area

Although the current project area has not been subject to a formal AIS, in accordance with HAR §13-276, there have been three previous archaeological projects that included all or portions of the current project area: (1) *Waiawa Ridge, Oahu: Archaeological Survey of Proposed Golf Course* (Barrera 1987); (2) *Archaeological Reconnaissance and Inventory Surveys of 3,600 Acres in Waiawa Ahupuaʻa, ʻEwa, Oʻahu* (Goodman and Nees 1991); and (3) *Archaeological Reconnaissance Survey of 1,680 Acres of Kamehameha Schools Lands in Waiawa Ahupuaʻa, ʻEwa District, Island of Oʻahu* (Thurman et al. 2012). Figure 2 shows that 99% of the current project area has already been surveyed to at least a reconnaissance level. Barrera's survey coverage and findings were completely subsumed by Goodman and Nees' (1991) work; their survey coverage included plateau tops as well as all major dry gulches, and included subsurface excavation in the current project area. Thurman et al.'s (2012) reconnaissance survey focused on the four dry gulches designated A through D by Goodman and Nees (these are identified in Figure 1); did not survey the plateaus for new sites; but did re-visit (or attempt to re-visit) all previously-identified sites (or features thereof) in their project area.

Figure 3 depicts known historic properties—almost entirely plantation-era and military (World War II) sites—in the current project area based on the previous surveys. Table 1 provides summary details of the six historic properties known to occur in the project area. Only one of these dates to pre-contact times and includes traditional Hawaiian material: Site 2262, a small lithic scatter including a basalt adze, an adze fragment, two polished flakes and two diagnostic flakes were found on the ground surface near the edge of the plateau above Gulch A. All materials from this site were collected during the survey by Goodman and Nees (1991); subsequent data recovery work by Sinoto and Pantaleo (1994), including 12 shovel probes and two excavation units, failed to find any additional material. Thurman et al. (2012) re-visited the site to look for more material, with negative results. We re-visited the site and also did not find any additional material.

Goodman and Nees (1991) conducted backhoe excavation in an area they designated Plateau E, which, although not depicted with sufficient accuracy in their report to plot on our project area maps, appears to be located in the northwestern corner of the current project area. They excavated three trenches measuring 10–20 m long and 2.5–3.0 meters deep; and identified no evidence whatsoever of subsurface cultural layers, materials or features, consistent with historical records indicating extensive previous ground disturbance from decades of mechanized agriculture (pineapple and sugar).

Goodman and Nees (1991) did identify an outstanding and rare example (for Oʻahu) of a large petroglyph site (Site 2263) with multiple well-preserved images; however, this site is located well outside (285

meters west) of the current project area boundary in Gulch D, also known as Pānakauahi, close to the H-2 highway. It is also important to note that, per the SHPD's recent (June 12, 2014) letter regarding the LUC project area, Puoiki Heiau (Site 121) is at least 400 meters east of the current project area, on the east side of Waiawa Stream, which forms a wide and deep chasm between the heiau and the current project area.

Thurman et al. (2012) identified three potential pre-contact sites in Gulch C, also known as Pu'upōhaku, none of which have yet received State site numbers. Two of these (designated CSH-1, three petroglyphs, and CSH-2, a possible rockshelter) are located outside of the current project area: CSH-1 is at least 110 meters to the west; CSH-2 is at least 80 meters to the west. One of these new sites identified by Thurman et al. (2012) (CSH-3, a possible lithic quarry on a bedrock outcrop) is within the current project area (in Gulch C), and has been re-visited and evaluated during the current AIS (see below).

Preliminary Results from our ongoing AIS in the Project Area

In addition to re-visiting and documenting all previously-identified historic properties, and recording additional features of these, we have been focusing specifically on conducting systematic pedestrian sweeps of all major dry gulches, which are the most likely places for extant traditional Hawaiian sites. We have completed pedestrian survey of all three (A, B and C) dry gulches in the current project area, and found no evidence of pre-contact Hawaiian sites. All three gulches have been heavily impacted by plantation activities, with bulldozed roads and associated features such as retaining walls and irrigation infrastructure in all gulches. We believe any Hawaiian sites that once may have been located in these gulches—and there were probably dryland (non-irrigated) gardening sites—were destroyed by plantation activities. We have documented extensive evidence in Gulch C, for example, of “rock harvesting” by plantation workers for shaping into basalt blocks used to build irrigation ditches on the plateaus.

We have re-visited and obtained accurate GPS information for CSH-1 (petroglyphs) and CSH-2 (possible rockshelter) to confirm they are located well outside the project area. We have re-visited CSH-3 to evaluate its status as a “possible lithic quarry.” We have determined CSH-3 is not a pre-contact Hawaiian lithic quarry and confirmed CSH-1 and CSH-2 are, indeed, at least 80–110 meters west of the current project area.

Conclusion

Please let us know if you would like to visit the project area to inspect any of the cultural resources described herein; and we will gladly make arrangements. We look forward to consultation with OHA concerning any specific concerns or issues you may wish to discuss relative to the AIS we are conducting.

With aloha,



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Sean McNamara, KS Cultural Resources (via email)
Kai Markell, OHA (via email)

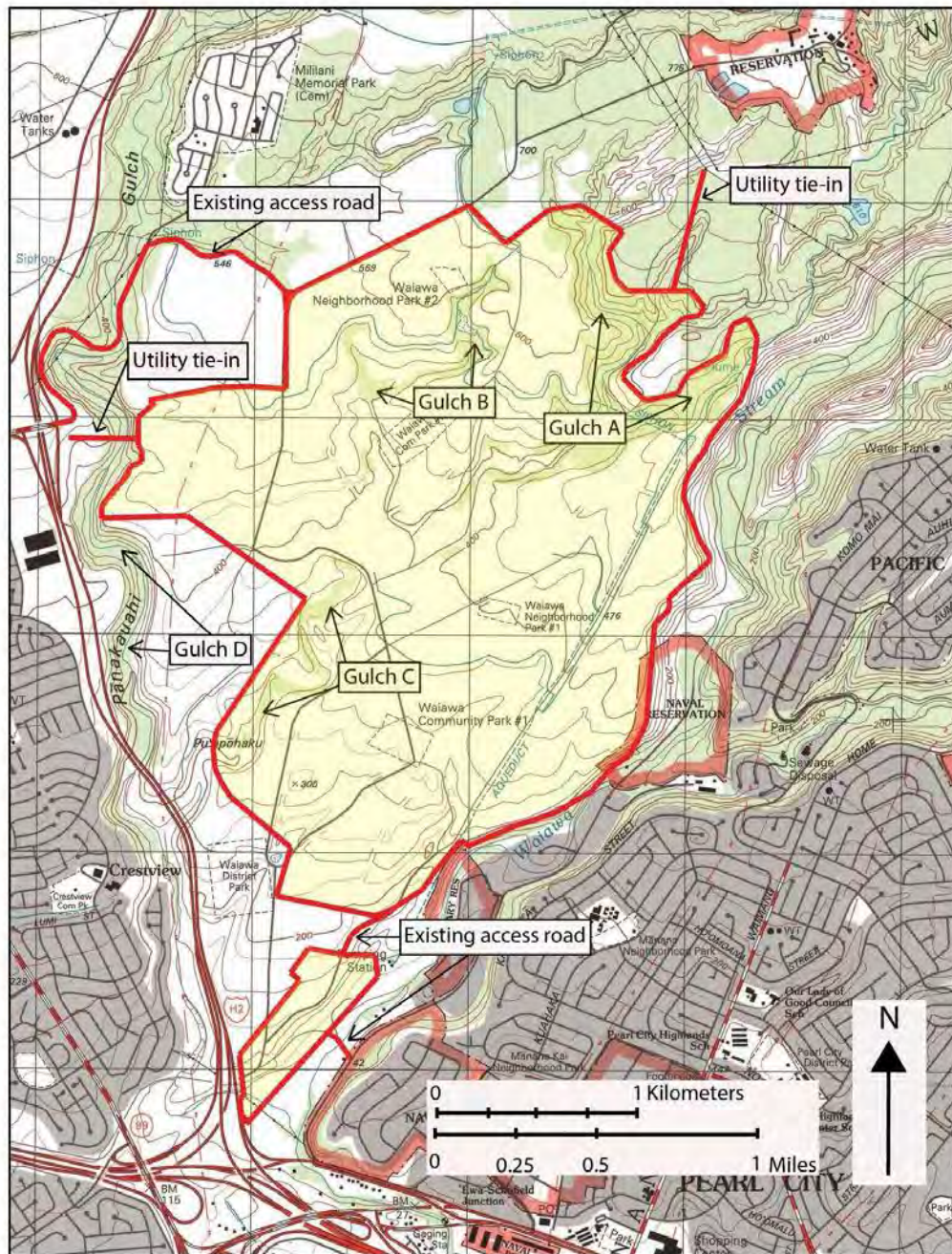


Figure 1. Project area depicted on USGS 7.5-minute series 1998 Waipahu quadrangle topographic map

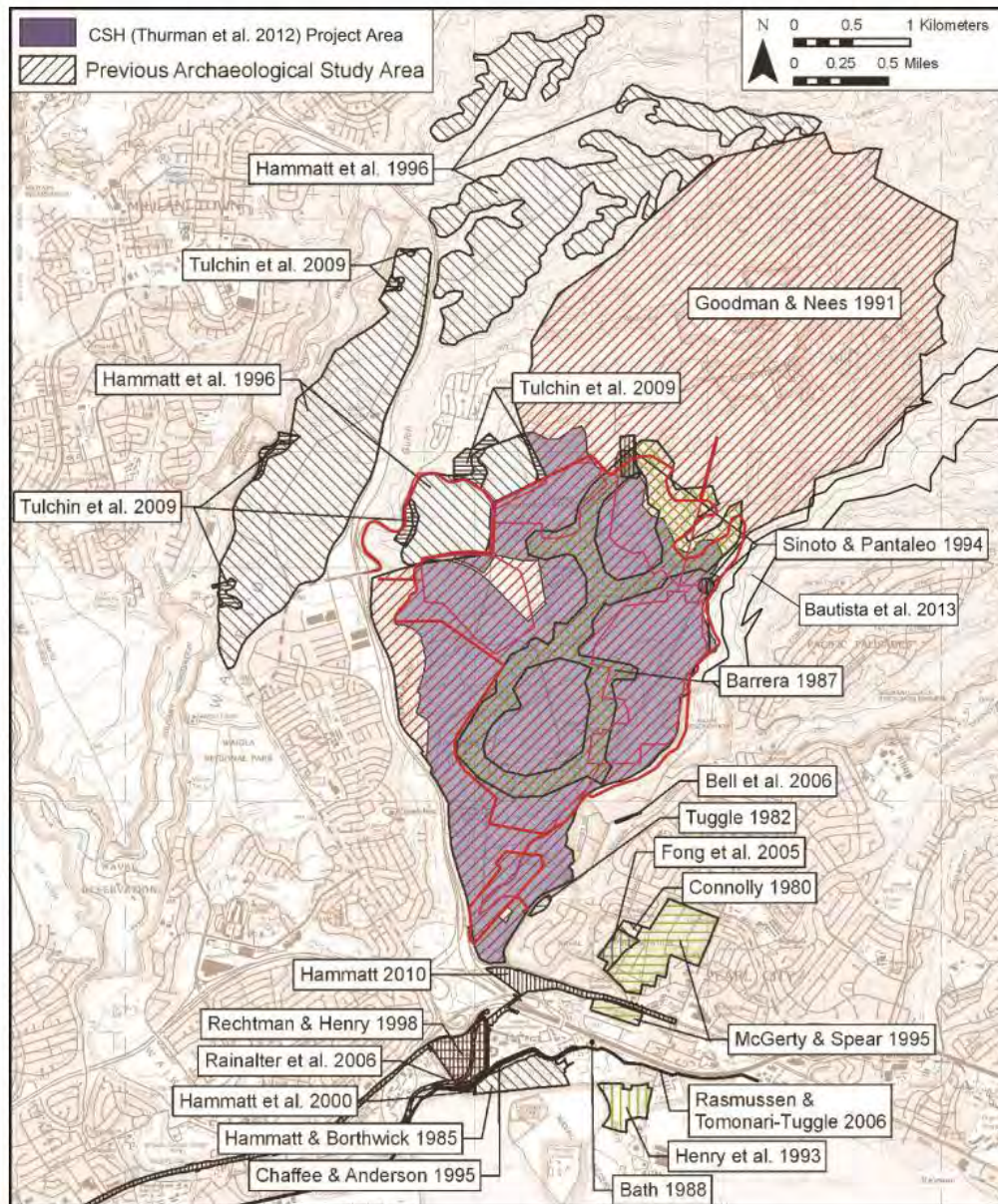


Figure 2. Location of previous archaeological studies including TCP Hawai'i's AIS of SunEdison's project area within the current KS LUC project area (depicted by three construction footprints in magenta and magenta lines depicting utility tie-ins and access roads); current project area in red

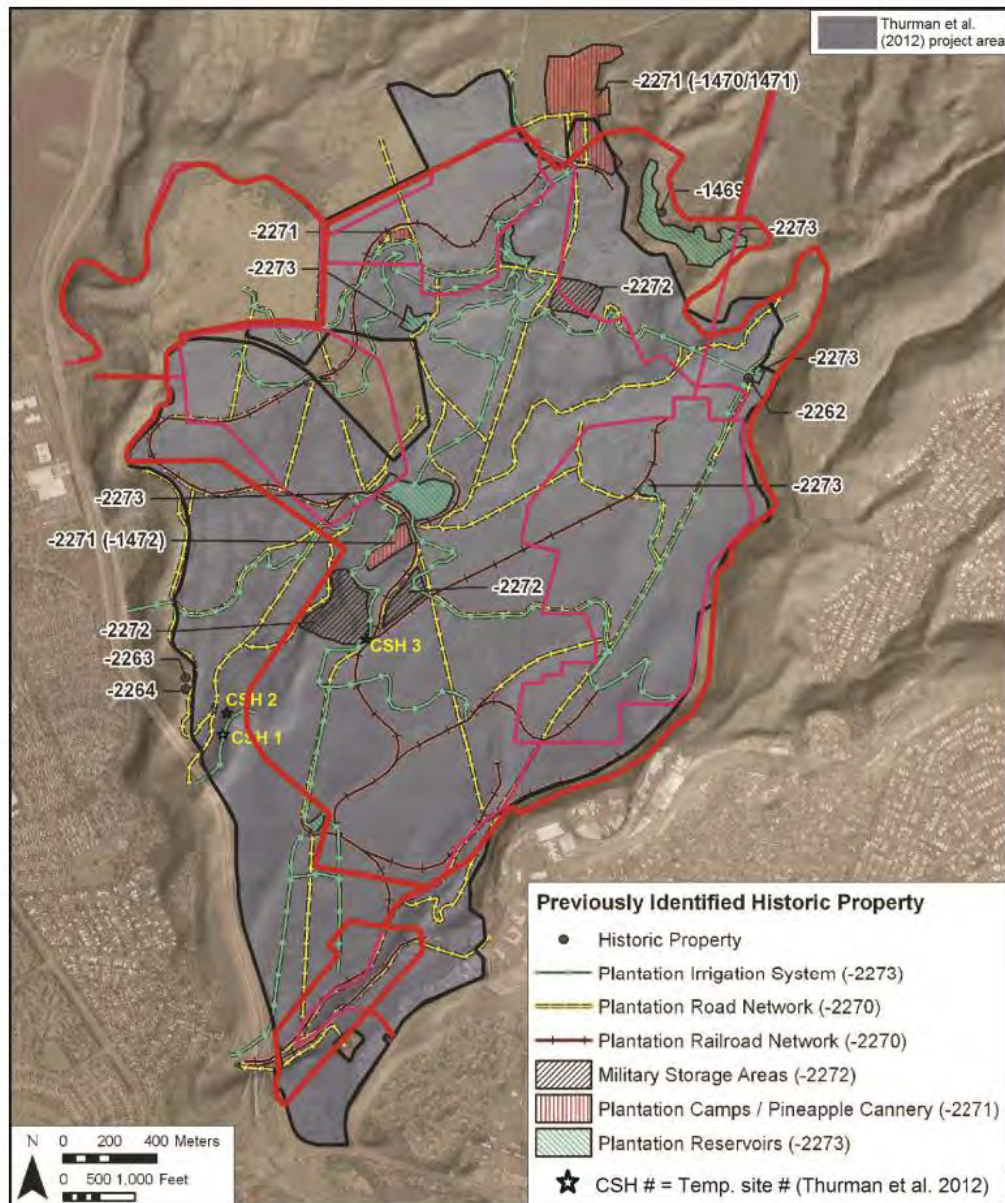


Figure 3. Previously identified historic properties located in and near the current project area (red lines)

Table 1. Previously Identified Historic Properties in the Current Project Area

Site #	Formal Type	Comments
1469	Historic-era boulder alignment	Excavated by Barrera and found to contain glass bottle in base of constructed rock material
2262	Pre-contact lithic processing location	Bishop Museum survey (Goodman and Nees 1991) and data recovery (Sinoto and Pantaleo 1994) collected all material from this small lithic scatter on the ground surface
2270	Plantation road & railroad network	Portions of this linear resource are in the current project area
2271	Plantation camps	Portions of at least three discrete camps, each assigned a separate feature number, may be located in the current project area
2272	Military storage area	Portions of at least three discrete storage areas may be located in the current project area
2273	Plantation irrigation & reservoir system	Portions of this linear resource—including several reservoirs—are in the project area