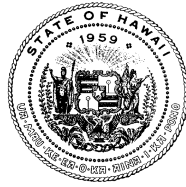


DAVID Y. IGE
GOVERNOR OF HAWAII



VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

November 9, 2016

Dr. Alan Downer, Administrator
Hawai'i State Historic Preservation Division
Department of Land and Natural Resources
Kakuhihewa Building
601 Kamokila Blvd., Suite 555
Kapolei, Hawaii 96707

Subject: Initiation of Consultation under Section 106 of National
Historic Preservation Act (NHPA), 36 CFR Part 800
Proposed Replacement and Realignment of the Kihei
Wastewater Pump Station No. 16 Force Main (SFM)
Paeahu and Palauea Ahupua'a, Makawao District
(Honua'ula Moku), Maui Island,
TMK: (2) 2-1-023:999 and 2-1-007:999
Clean Water Station Revolving Fund Project No. C150077-24

Dear Dr. Downer,

The County of Maui, Wastewater Reclamation Division (County) has implemented a proactive sewer force main (SFM) replacement program to alleviate failures and avoid a major wastewater spill event to beaches in the area and possible U.S. Environmental Protection Agency (EPA) fines as stipulated in the EPA Consent Decree filed on November 8, 1999. In line with this effort, the County is proposing to replace and realign the existing sewer force main (SFM) with a new and longer pipeline to bypass the existing gravity sewer transition manhole that the Kihei Wastewater Pump Station (WWPS) No. 16 currently discharges into.

The proposed project is located within the Makena Alanui Road and Wailea Alanui Drive right-of-ways (ROW) (Attachments 1 and 2) and crosses Paeahu and Palauea Ahupua'a located in Makawao District (Honua'ula Moku), Maui Island, TMK: (2) 2-1-023:999 and 2-1-007:999 (Attachment 3). The existing system collects wastewater from the Makena Surf Condominium project and nearby development. The gravity sewer collection system tributary to the Kihei WWPS No. 16 ranges in diameter from 8 in. to 12 in. sewer pipe. The pumped wastewater discharges into a gravity sewer system that is owned by the Wailea Community Association and conveys the wastewater to the Kihei WWPS No. 10. The existing SFM was installed over 30 years ago and consists of a 6 in. diameter cast iron pipeline approximately 5,076 ft. long and runs near the centerline of the northbound lanes of the Makena Alanui Road. The SFM currently discharges into the high point of the existing Wailea Community Association gravity sewer

system at the transition manhole located approximately 1,000 ft. from the intersection of Wailea Alanui Drive and Kaukahi Street.

The proposed project examined two alternatives (Alternative A and B) that extends primarily along the northbound lanes of the Makena Alanui Road and Wailea Alanui Drive ROW. While Alternative B provided the least challenges with regard to traffic impacts during construction, the basis of design report found that this alternative was too complex from a constructability perspective due to horizontal and vertical dimensional constraints, numerous conflicts with existing utilities (storm drains, water, electrical and communications), landscape features, maintenance difficulty, and potential impacts to drainage structures potentially affected by construction. As a result, Alternative A was recommended for construction.

The EPA awards capitalization grants to States to establish State Revolving Fund (SRF) programs within State Agencies (SRF Agency) that was authorized under the Clean Water Act (CWA) (33 u.s.c. 1251 et. seq., as amended). As the proposed project will be funded through SRF assistance, and as SRF assistance is made available to States by federal capitalization funds, the proposed project is considered a Federal undertaking as defined by §800.16(y) and therefore subject to Section 106 of the National Historic Preservation Act (NHPA), 36 CFR Part 800. In compliance with the 1990 *Programmatic Agreement on Historic Preservation for the State Revolving Fund*, whereby the EPA authorized the SRF Agency or other designated State agency to carry out the requirements and responsibilities of NHPA as a condition of its award of any capitalization grants, the County, as a political subdivision of the State, is initiating consultation pursuant to Section 106 §800.3 for the proposed project. The purposes of this letter are as follows:

- 1) Introduce and provide background on the proposed undertaking;
- 2) Initiate consultation with SHPO pursuant to Section 106 Sub Part 800.3 as stated above;
- 3) Advise SHPO that the County intends to initiate consultation with Native Hawaiian Organizations (NHO) listed in the federal database and includes the Office of Hawaiian Affairs and the Maui/Lānaʻi Islands Burial Council, as well as others to be named or identified by SHPD or other means; and,
- 4) Invite public involvement in Section 106 consultation through advertisements in the Maui newspaper and Office of Hawaiian Affairs' newspaper, Ka Wai Ola.

Project Site Location

Less than a half-mile from the coastline, the proposed alignment of recommended alternative is located entirely within the Makena Alanui Road and Wailea Alanui Drive ROW (Attachment 2 and 4).

Undertaking Description and Area of Potential Effect (APE)

Approximately 1.5 miles long, the new SFM will be constructed of green PVC pipe along with ductile iron (DI) fittings and convey wastewater from the Kihei WWPS No. 16 where it will cross the southbound lane of Makena Alanui Road to the northbound lane and extend beneath the northbound lane toward the Four Seasons Resort Maui at Wailea to the transition sewer manhole. Once operational, the existing SFM will then be flushed and remain in place to serve as a redundant SFM.

The construction method planned for the new SFM alignment will consist of both open trench installation and horizontal directional drilling (HDD) (refer to attachments) with the depth of excavation in open trench sections estimated between 5 and 7 ft. In total, construction of the new SFM will include approximately 1,704 linear ft. of open trenching and 6,566 linear ft. of HDD.

Based on available information, the proposed action will not impose adverse visual, auditory, or other environmental impacts to any previously identified historic properties adjacent to the proposed realignment corridor. Accordingly, the APE for the proposed action extends no further than the approximate footprint of the realignment corridor (Attachment 2). The County requests concurrence with the above described APE.

Current Subsurface Conditions

Geotechnical investigation borings generally encountered granular soils consisting of silty sands and silty gravels. The granular soils were in a medium dense to dense condition, extending to depths ranging from about 4 feet to the maximum depths drilled. Cobbles were encountered at varying depths in the granular soil layers. Underlying the silty sand in boring 83 was brown clayey silt in a stiff condition, extending to the maximum depth drilled. The granular soils in the remaining borings were underlain by highly to moderately weathered basalt interbedded with seams of clinker, extending to the maximum depths drilled. Neither groundwater nor seepage water was encountered. HDD operations are expected to encounter the underlying granular soils and weathered basalt.

Previous Archaeological Studies and Documentation

A review of archaeological studies within a 400-meter radius of the proposed APE shows a total of 24 studies ranging from archaeological inventory survey to archaeological monitoring (Table 1; Attachments 5 through 7). While there are no historic properties currently listed on the National and/or State Registers of Historic Places within a 400-meter radius of the proposed APE, a total of 51 historic properties were documented within a 200-meter radius of the proposed APE as a result of previous archaeological work in the vicinity (Table 2; Attachments 5 through 7). These sites are reflective of pre-contact habitation, both permanent and temporary, agricultural and fishing activities, as well as ceremonial practices. Post-contact, or historic era sites and features were also recorded in the vicinity with the majority consisting of animal husbandry features associated with ranching. Finally, several habitation features containing Euro-American cultural materials (e.g. nails, glass shards, and ceramic sherds) appear to have also been either continuously occupied or recurrently used with windows of disuse since from late pre-contact time period into the historic era.

Consultation

In addition to consulting with the SHPD office, the County will consult with the Office of Hawaiian Affairs (OHA), Maui County Cultural Resources Commission, Aha Moku Advisory Committee, Aha Moku o Maui, Inc. and the Honua'ula Moku Representative, and any other individuals or organizations that express interest. Initial contact will be by formal letters followed by meetings and correspondence, as necessary to address the Section 106 requirements.

Dr. Alan Downer, Administrator
November 9, 2016
Page 4

Section 106 notice/advertisement will be also be included in the Maui News and Star Advertiser. Native Hawaiian organizations and Native Hawaiian descendants with ancestral, lineal or cultural ties to, cultural knowledge or concerns for, and cultural or religious attachment to the proposed project are asked to provide a response within 30 days of notification. We ask that you review the information provided in this letter and respond with formal comment within 30 days of receipt of this letter to Sue Liu, via email to sue.liu@doh.hawaii.gov or by U.S. Postal Service to Sue Liu, Wastewater Branch, Hawaii Department of Health, 919 Ala Moana Blvd, Room 309, Honolulu, Hawaii, 96814. Please feel free to contact Sue Liu by telephone at 586-4294 if you have any questions. We look forward to working with SHPD and your continued participation and guidance in this Section 106 consultation process as it pertains to these much needed improvements.

Sincerely,



SINA PRUDER, P.E. CHIEF
Wastewater Branch

Enclosures

cc: Mr. Albert Hahn, County of Maui, (via email at Albert.Hahn@co.maui.hi.us)
Mr. Eassie Miller, (via email at EassieMiller@KennedyJenks.com)
Ms. Tanya Lee-Greig, (via email at LeeGreig@culturalsurveys.com)

References

Bordner, Richard

1981 *Environmental Impact Statement for Makena Road Makena, Maui, Hawaii Appendix C Archaeological and Historical Sites Proposed Makena Road*. Prepared for Maui County Department of Public Works, Wailuku, HI. Environmental Impact Study Corp. and Muroda and Associates, Inc., Honolulu and Maui, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Chaffee, David B. and Robert L. Spear

1994 *An Archaeological Inventory Survey of 6 acres in the Ahupua'a of Papa'anui, Makawao District, Makena, Island of Maui, Hawai'i [TMK:2-1-07:12, Lot B]*. Prepared for Malia Aina Ltd. Scientific Consultant Services, Inc., Kaneohe, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Clark, Matthew, Mark Winburn and Robert Rechtman

2004 *An Archaeological Inventory Survey of a 30- Acre Parcel (MF-9) wintin the Wailea Development Area (TMK:2-2-1-08:por.42)*. Prepared for CMI Development, Inc, Badwin Ave, Suit 107, Makawao Hi 96768. Rechtman Consulting LLC, Kea'u, Hawaii 96749. On file at SHPD Maui Office.

Clark, Stephan D. and Paul L. Cleghorn

1990 *Archaeological Salvage Excavations at Site 50-Ma-29 and Limited Monitoring of Site 50-Ma-B10-31, Mākena, Makawao, Maui Island, State of Hawai'i*. Prepared for Hawaii State Properties, Inc., Honolulu, HI. Public Archaeology Section, Applied Research Group Bernice Pauahi Bishop Museum, Honolulu, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Clark, Stephen D.

1974 *A Reconnaissance Survey of Makena Properties for Seibu Corp.* Prepared for Seibu Corporation. Bernice P. Bishop Museum, Honolulu, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Dega, Michael F.

2000 *An Arcaheological Inventory Survey of a Proposed Parking Log Extension in Makena Kalihi Ahupua'a, Honua'ula Makawao District, Island of Maui, Hawaii (TMK:2-1-07:72)*. Prepared for Pacific Rim Land, Maui, Hawaii. Scientific Consultant Services, Kapiolani Blvd, Honolulu, Hawaii, 96813. On file at SHPD Maui Office.

Gosser, Dennis

1990 *Phase I Archaeolgoical Test Excavations at Parcel SF-10, Wailea, Makawao District, Island of Maui*. Prepared for Prepared for Wailea Resort Co., Ltd. Bishop Museum, Honolulu, Hawaii.

Gosser, Dennis and Paul L. Cleghorn

1990 *Results of a Phase I Archaeological Survey of the "Southern Acreage" in Wailea, Makawao, Maui.* Prepared for Wailea Resort Company, Ltd., Kihei, HI. Public Archaeology Section, Applied Research Group Bishop Museum, Honolulu, HI. On file at Department of Land and Natural Resources, State Historic Preservation Division.

Jourdane, Elaine

1988 *Final Mitigation Procedures at TMK 2-1-7:79, Waipao, Makena, Makawao, Maui.* Prepared for S&F Land Company, Inc., Puunene, HI. B. P. Bishop Museum, Honolulu, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Kirch, Patrick V.

1969 *An Archaeological Survey of the Alexander and Baldwin Property Surrounding Wailea, Kihei, Maui (TMK: 2-1-08).* Dept. Anthropology, B. P. Bishop Museum, Honolulu, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

1970 *Archaeology in the Ahupuaa of Palauea, Southeast Maui.* Dept. Anthropology, B. P. Bishop Museum, Honolulu, HI.

1971 *Archaeological Excavations at Palauea, Southeast Maui, Hawaiian Islands. Anthropology and Physical Anthropology in Oceania* 6(1):62-86.

Rechtman, Robert B.

1999 *Archaeological Monitoring at Development Parcel A/B Wailea Resort Property Land of Paeahu, Makawao District Island of Maui.* Prepared for TSA International, Ltd. c/o Wilson Okamoto and Associates, Inc. Paul H. Rosendahl, Ph.D., Inc.

Rogers-Jourdane, Elaine

1979 *Archaeological Reconnaissance Survey on Wailea Property in the Ahupua'a of Paeahu, Makawao District, Maui Island.* Prepared for Wailea Development Company. Department of Anthropology, Bernice P. Bishop Museum, Honolulu, HI. On file at Department of Land and Natural Resources State Historic Preservation Division.

Rosendahl, Paul H.

1981 *Archaeological Reconnaissance Survey of Pukolu Home Sites Parcel, Kihei, Island of Maui (TMK:2-1-08:Por.42).* Prepared for Wailea Development Company. Paul H. Rosendahl, Ph.D., Inc., Hilo, HI.

1984 *Archaeological Field Inspection Wailea Point Condominiumsite Wailea Resort, Paeahu Makawao, Island of Maui.* Prepared for Wailea Point Development, Kihei, HI. Paul H. Rosendahl, Inc., Kurtistown, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Schilt, Rose and Susan Dobyns

1980 *Archaeological Reconnaissance and Testing on Wailea Properties in the Ahupua'a of Paeahu, Makawao District, Maui Island, Hawai'i*. Prepared for Wailea Development Company. Department of Anthropology, Bernice P. Bishop Museum, Honolulu, HI. On file at Bernice P. Bishop Museum.

Shapiro, William A and Alan E. Haun

1989 *Archaeological Reconnaissance Survey and Limited Subsurface Reconnaissance, Murray Pacific Project Area, Land of Palauea, Makawao District, Island of Maui (TMK 2-1-23:2, 2-1-11:09, 12, 13, 30)*. Paul H. Rosendahl, Ph.D., Inc., Hilo, HI.

Shun, Kanalei and Charles F. Streck

1982 *Archaeological Test Excavations and Monitoring of the Wailea Development Company Sewerline Construction from Polo Beach to Wailea Beach, Maui, Hawai'i*. Prepared for Wailea Development Company. Department of Anthropology Bernice P. Bishop Museum, Honolulu, HI. On file at Bernice P. Bishop Museum Library & Archives.

Sinoto, Aki

1978 *Archaeological Reconnaissance Survey of Makena Shores Property, Makawao, Maui*. Prepared for Roy Y. Takeyama, Attorney at Law, Honolulu, HI. Dept. Anthropology, B.P. Bishop Museum, Honolulu, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Sinoto, Aki and Elaine Rogers-Jordane

1979 *Archaeological Phase I Survey of Makena Surf Property, Makawao, Maui (TMK 2-1-07:36, 79, 81)*. Prepared for Makena Surf Ltd. Dept. Anthropology, B.P. Bishop Museum, Honolulu, HI. On file at State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division.

Spear, Robert L.

1987 *Intensive Archaeological Survey and Testing, Development Parcels A/B and C, Wailea Resort, Land of Paeahu, Makawao District, Island of Maui*. Paul H. Rosendahl, Ph.D., Hilo, HI.

Walker, Alan T., Alan E. Haun and Paul H. Rosendahl

1985 *Intensive Survey and Salvage Research Excavations Wailea Point Condominium Site*. Prepared for Wailea Point Development, Inc., 3750 Wailea Alanui Kihei, Maui 96753. Paul Rosendahl, Ph.D. INC, Kurtistown, Hawaii. On file at Hawaii State Historic Preservation Division.

Wilson, John and Michael F. Dega

2004 *An Archaeological Assessment Report on a 9.4-Acre Land Parcel in Wailea, Paeahu Ahupua'a, Makawao District, Maui Island, Hawai'i*. Scientific Consultant Services, Inc., Honolulu, Hawai'i.

Table 1. Previous Archaeological Studies within a 0.5-Mile Radius of the Proposed APE (see also Attachments x through x)

Reference	Ahupua‘a/Area	Description
(Kirch 1969)	Paeahu, Palauea, Keaehou, and Pāpa‘anui	Archaeological Survey: Identified eight historic properties dating from the time period prior to Western contact to the post-contact historic era. Pre-contact sites included ceremonial sites (Pohakunahanaha Heiau [Walker Site 1971]); as well as, habitation complexes and features (SIHP -1358 and -1362). Early historic sites included both long-term (SIHP -1351 and -1281) and temporary habitation sites (SIHP -1353 and possible -1352). Historic ranch era sites included an animal pen (SIHP -1027) and a cattle wall.
(Kirch 1970) (Kirch 1971)	Palauea	Archaeological Survey and Excavation: Survey, excavation, and stabilization of SIHP -1028 (BPBM 50-Ma-B11-2) and -1029 (BPBM 50-Ma-B11-3) both of which represent pre-contact Hawaiian use of the area, the former being interpreted as a habitation complex and the latter a ceremonial complex.
(Stephen D. Clark 1974)	Keaehou to Onau	Archaeological Reconnaissance: Identified a total of 113 historic properties (SIHP -1838 through -2250), some of which contained multiple components. Site types ranged from mounds representing possible burial sites and pre-contact habitation complexes to shelters and modified outcrops with evidence of continued use in to the historic time period.
(Sinoto 1978)	Keaehou, Waipao, Kalihi, Pāpa‘anui	Archaeological Reconnaissance: Identified and documented 18 historic properties consisting of pre-contact to historic era habitation enclosures, ceremonial sites, boundary wall, cultural deposits, a canoe shed, and other features of an indeterminate function (SIHP -1815 through -1832). Of particular note, an enclosure that was interpreted as a heiau within Kalihi Ahupua‘a (Site B10-29 [BPBM Site no] assigned SIHP -1830) was also previously recorded by Davis and Bordner in 1977 during an archaeological reconnaissance for the realignment of the Makena coastal road.
(Rogers-Jourdane 1979)	Paeahu	Archaeological Reconnaissance: Identified seven surface features consisting of two C-shaped enclosures, two U-shaped enclosures, three wall segments, and one circular enclosure; as well as, SIHP 50-50-14-1281.

Reference	Ahupua'a/Area	Description
(Sinoto and Rogers-Jordane 1979)	Keauhou, Waipao, Kalihi, Pāpa'anui	Archaeological Survey: Detailed mapping and excavation refined and updated the interpretations of the Bishop Museum reconnaissance of the Makena Shores project area (Sinoto 1978). Chronological interpretations were based on construction techniques, artifact content, and, due to possible C-14 sample contamination by modern camping activities, obsidian hydration rind dates. Historic properties with a clear pre-contact association included a canoe shed (-1823), two heiau or ko'a (shrine) sites (-1823 and -1830 [-0245]), in addition to a site of an indeterminate function (-1829). Sites associated with the Transitional Time Period or late pre-contact to early historic time period consisted of two habitation sites (-1820, -1821, and -1827) which contained stratigraphy reflective of a continuous occupation sequence. The lower deposits contained indigenous artifacts and were overlain by deposits that contained both indigenous and historically introduced artifact remains with no apparent hiatus in occupation (p.52). A historic property of an indeterminate function dating to the early historic time period (-1822) was also identified and documented. Five sites associated with the historic time period consisted of one possible animal pen (-1819), the Kukahiko Family Cemetery (-1816), a habitation enclosure (-1826) and two sites of indeterminate function (-1818 and -1828). Finally, there were five documented historic properties where chronology could not be determined, one of which was interpreted as a temporary habitation shelter and four where function could not be determined.
(Schilt and Dobyns 1980)	Paeahu	Archaeological Survey and Subsurface Testing: Recorded a total of 79 structures consisting of 78 sites, which were classified into ten site types: WWII bunkers, rock cairns, walls/wall segments, C-shaped features, circular enclosures, rectangular enclosures, hill side terraces, platform, and a 'rubble.'
(Bordner 1981) Environmental Impact Study Corporation	Palauea to Mo'omuku	Archaeological Review and Reconnaissance: A total of 44 historic properties were identified along the proposed re-alignment of Makena Road. Within Palauea Ahupua'a, thirteen historic properties comprised of multiple features were identified and include wall networks (n=2), mounds or <i>ahu</i> (n=2), enclosures (n=7), C-shapes (n=2), a terrace (n=1), a rock shelter (n=1), platforms with a possible ceremonial function (n=2), and a platform with a possible habitation function (n=1).
(Rosendahl 1981)	Paeahu	Archaeological Reconnaissance: No historic properties or cultural material remains were identified.
(Shun and Streck 1982)	Paeahu Palauea	Archaeological Testing and Monitoring: Tested habitation complexes B12-4 and B12-6. Additional features of B12-4, consisting of <i>'ili'ili</i> paving and dense midden concentration, were identified during grubbing activities.
(Rosendahl 1984)	Paeahu	Field Inspection: Re-identified Sites 50-Ma-B12-4, a coastal residential complex; 50-Ma-B12-10 and -11, stone walls; 50-Ma-B12-12 and -13, walled shelters; and 50-Ma-B12-14, a temporary habitation shelter.

Reference	Ahupua'a/Area	Description
(Walker et al. 1985)	Paeahu	Intensive Archaeological Survey and Salvage Research: Identified nine features comprising site complex 50-Ma-B12/13, consisting of four C-shaped shelters, four U-shaped shelters, and a terrace. Also identified four features comprising site complex 50-Ma-B12-4, consisting of two walled house enclosures and two partially enclosed terraces.
(Spear 1987)	Paeahu	Archaeological Inventory Survey: Five historic properties with 13 component structural features were documented. Site types included a walled shelter complex, surface midden and artifact scatter, a walled enclosure, a platform complex, and a walled shelter.
(Jourdane 1988)	Waipao	Archaeological Mitigation (Monitoring): No additional historic properties or cultural material remains were identified.
(Shapiro and Haun 1989)	Palauea	Archaeological Reconnaissance: Identified 19 sites consisting of 78 component features dating to pre-Contact and historic time periods, consisting of walls, enclosures, midden scatters, site complexes, a mound, and platforms.
(Walker et al. 1985)	Palauea	Intensive Survey and Salvage: The survey identified nine features comprising site complex 50-Ma-B12/13. These features consisted of four C-shaped shelters (Features D-G), four U-shaped shelters (Features A-C, and I), and a terrace (Feature H). The survey also identified four features comprising site complex 50-Ma-B12-4, consisting of two walled house enclosures and two partially enclosed terraces (Features A-D). Associated excavations yielded a total of 6,583 artifacts of both pre-contact and early historic origin
(Stephan D. Clark and Cleghorn 1990)	Keauhou and Kalihi	Archaeological Data Recovery: Refined the description of SIHP -1830 and re-evaluated previous function determinations (Davis and Bordner 1977; Sinoto and Rogers-Jordane 1979) based on subsurface testing and laboratory analysis. Identified SIHP-1830 as a bi-level historic property whose surface architecture is defined by an Upper Terrace area which is comprised of an enclosed platform (Feature 1) and associated walls and a Lower Terrace area comprised of terrace features paved with angular basalt cobbles and sparse waterworn pebbles (Features 2-7) and a boulder paving (Feature 8). Soil stratigraphy shows that during the mid to late 1700's aeolian sand dune formation began along the site's Lower Terrace area which was interpreted as factor in the site function shifting from one of habitation to that of a cemetery. A total of 33 individuals were identified in the Lower Terrace area during subsurface testing in both a semi-flexed and extended positions within the later Aeolian dune formation. The roughly paved terraces (Features 2-7) were further interpreted as burial markers associated with the cemetery while Feature 1 was likely filled and served as a possible gathering center for interment ceremony.
(Gosser 1990)	Palauea	Archaeological Testing: Tested mounds identified by Landrum and Cleghorn in 1989, which looked like possible burial monuments. Collected sparse amounts of marine shell but no human remains were encountered.

Reference	Ahupua'a/Area	Description
(Gosser and Cleghorn 1990)	Paeahu to Waipao	Archaeological Inventory Survey: Identified over 250 features comprising 41 historic properties. Common site types included temporary shelters, recurrent and permanent habitation, agricultural features, religious and ceremonial sites, boundary features, and burials.
(Chaffee and Spear 1994)	Papa 'anui	Archaeological Inventory Survey: Documented six historic properties (SIHP -3513 through - 3518) comprised of 25 component features related to both temporary and long-term habitation, as well as, lithic reduction activities and agriculture.
(Rechtman 1999)	Paeahu	Archaeological Monitoring: A total of 125 burial numbers and 12 groups of previously reinterred remains were assigned.
(Dega 2000)	Kalihi	Archaeological Inventory Survey: Survey showed that the majority of the project area was either disturbed, lacked significant archaeological deposits, or both. Two extant surface features were recorded and included one wall facing and a double sided terrace.
(M. Clark et al. 2004) Clark et al. 2004 M-1266	Paeahu	Archaeological Inventory Survey: Two archaeological sites were recorded; a complex of ten World War II era training features (SHPD Site 5516) and a Pre-contact rock shelter with associated petroglyphs (SIHP site 5517). Four backhoe trenches were also excavated in the northwestern portion of the project area yielding negative results.
(Wilson and Dega 2004)	Paeahu	Archaeological Assessment: No historic properties or cultural material remains were identified.

Table 2. Previously Identified Historic Properties within a 400-Meter Radius of the Proposed APE (see also Attachments x through x)

SIHP No.1 50-50-14-	Formal Type	Possible Function	Time Period
197	Heiau	Ceremonial	Pre-contact
232	Wall	Animal Husbandry	Historic Ranch
235	Complex	Habitation	Not Stated
238	Complex	Habitation	Not Stated
240	Complex	Habitation	Pre-contact
241	Platform	Indeterminate	Pre-contact
244	Wall	Animal Husbandry	Historic Ranch
260	Platform	Ceremonial	Pre-contact
261	Complex	Habitation and Agriculture	Pre-contact to Historic Ranch
262	Complex	Habitation and Agriculture	Pre-contact
1027	Enclosure	Animal Husbandry	Historic Ranch
1028	Complex	Habitation	Pre-contact
1029	Complex	Ceremonial	Pre-contact
1353	C-Shape	Shelter	Indeterminate
1358	Surface Scatter	Habitation	Pre-contact
1361	Heiau	Ceremonial	Pre-contact
1362	Platform	Ceremonial	Pre-contact
1820	Enclosure	Habitation	Late Pre-contact to Early Historic
1821	Enclosure	Habitation	Early Historic
1822	Alignment	Indeterminate	Early Historic
1823	U-shape Enclosure	Canoe Shed	Pre-contact
1827	Enclosure	Habitation	Late Pre-contact to Early Historic
1828	Terrace	Indeterminate	Historic
1829	Remnant Alignments	Indeterminate	Pre-contact
1830	Complex	Habitation	Pre-contact
1831	Enclosure	Temporary Habitation	Indeterminate
1832	Heiau	Ceremonial	Pre-contact
2529	Terraces	Habitation	Pre-contact
2545	Complex	Temporary Habitation	Pre-contact
2547	Complex	Agriculture	Pre-contact
2548	Complex	Indeterminate	Indeterminate
2689	Platform	Indeterminate	Indeterminate
2690	Enclosure	Possible Habitation	Pre-contact

¹ Bishop Museum Temporary Nos. – Ma=Maui, B12=Keauhou Ahupua‘a followed by next consecutive number
PHRI Temporary Nos. – prefixed by “T”

SIHP No.1 50-50-14-	Formal Type	Possible Function	Time Period
2691	Enclosure	Habitation, Possible Ceremonial	Pre-contact
2693	Complex	Habitation	Pre-contact
2694	Complex	Habitation	Pre-contact
2695	Complex	Habitation	Pre-contact
2696	Complex	Habitation	Pre-contact
2697	Complex	Habitation and Agriculture	Pre-contact
2698	Complex	Habitation	Pre-contact
3513	Complex	Habitation	Pre-contact
3514	Complex	Agriculture	
3515	Complex	Agriculture	
3516	Complex	Temporary Habitation	
3518	Midden Scatter	Temporary Habitation	Pre-contact
5517	Rock Shelter	Temporary Habitation	Pre-Contact
Ma-B12-12	U-Shape	Temporary Habitation	Pre-contact to Historic
Ma-B12-13	Shelter	Temporary Habitation	Pre-contact to Historic
T1	Scatter	Activity Area	Pre-contact
T3	Wall	Animal Husbandry	Historic Ranch
T9	Complex	Habitation	Pre-contact



Attachment 1 A portion of the Makena 7.5 minute USGS topographic quadrangle showing proposed Kihei Wastewater Pump Station No. 16 Force Main (SFM) route.



Attachment 2. Google earth map showing location of the proposed Kihei Wastewater Pump Station No. 16 Force Main (SFM) route.



Northbound Lane Wailea Alanui

Attachment 4 Typical Built Environment, Makana Alanui (left) Wailea Alanui (Right)

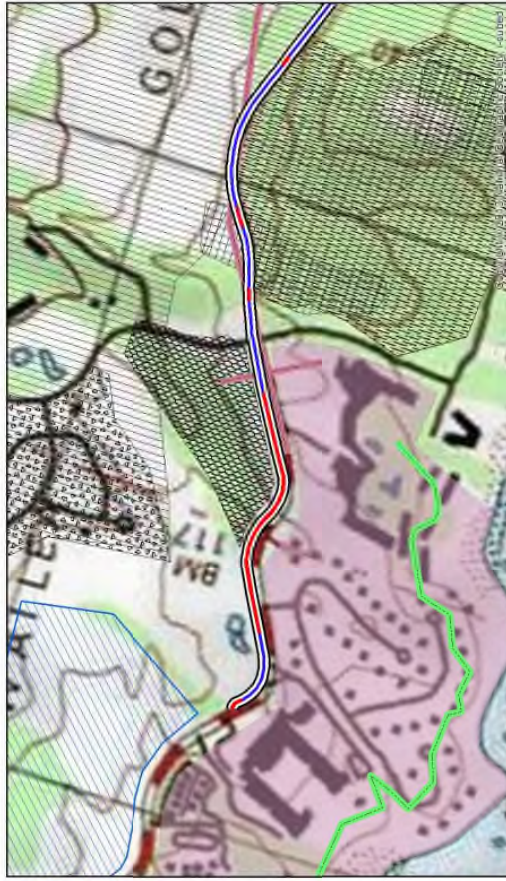
Overall Project Corridor



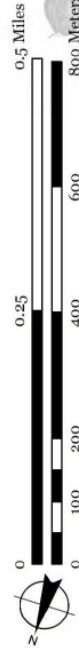
- HDD Replacement
- Open Trench
- Overall SPM Line
- Rosendahl 1981
- Gasser 1990
- Kirsh 1970
- Environmental Impact Study Corp., 1984
- Shun and Struck, 1982
- Clark et al., 2004
- Shapiro and Hain 1988
- Gasser and Cleghorn 1990
- Kirsh 1970
- Wilson and Dege 2004
- See Table

Formerly Wailea Development Parcels A, B and C	
Reference	
Walker et al.	1985
Rosendahl	1984
Reinisch-Henke et al.	2000
Reinisch-Henke	2002
Reichman	1999
Speer	1987
Schiff and Bobys	1980
Regier-Jordan	1979

Coverage of Previous Archaeological Studies Within a 0.5-Mile Radius



Previously Identified Historic Properties Within a 200-Meter Radius



Attachment 5. A portion of the Makena 7.5 minute USGS topographic quadrangle (Inset and Upper Right Data Frame) and ESRI Orthophoto Basemap (Lower Right Data Frame) showing the northern section of the proposed Kihei Wastewater Pump Station No. 16 Force Main (SFM) route in relation to previous archaeological studies and previously documented historic properties.

Overall Project Corridor

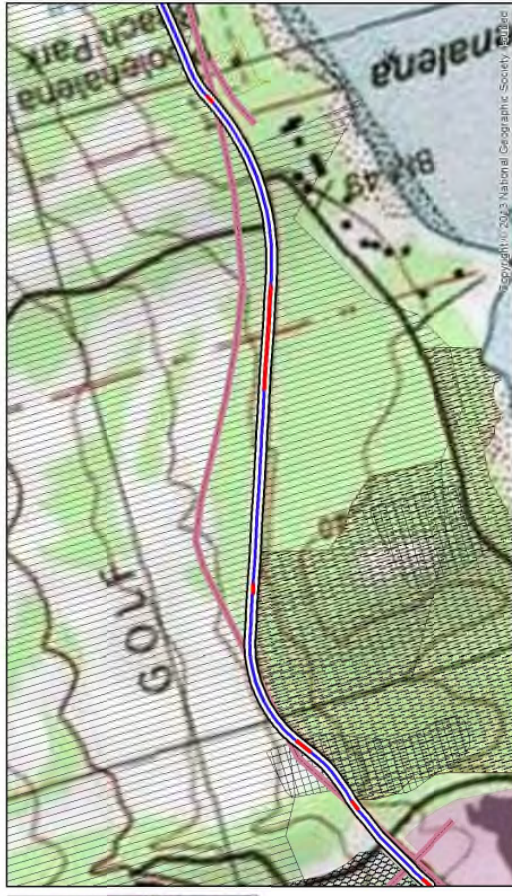


- HDD Replacement
- Open Trench
- Overall SFM Line
- Shapino and Haun 1988
- Gossler 1990
- Kirch 1970
- Wilson and Dega 2004
- See Table

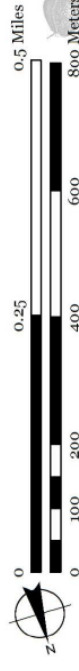
Formerly Wailea Development Parcels A, B and C	
References	
Wahler et al.	1985
Rosendahl	1984
Rouano-Harulis et al.	2000
Pantlison and Rotunno-Harulis	2002
Reichman	1999
Spier	1987
Schiff and Robyns	1980
Rogers-Jourdain	1979

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Coverage of Previous Archaeological Studies Within a 0.5-Mile Radius



Previously Identified Historic Properties Within a 200-Meter Radius

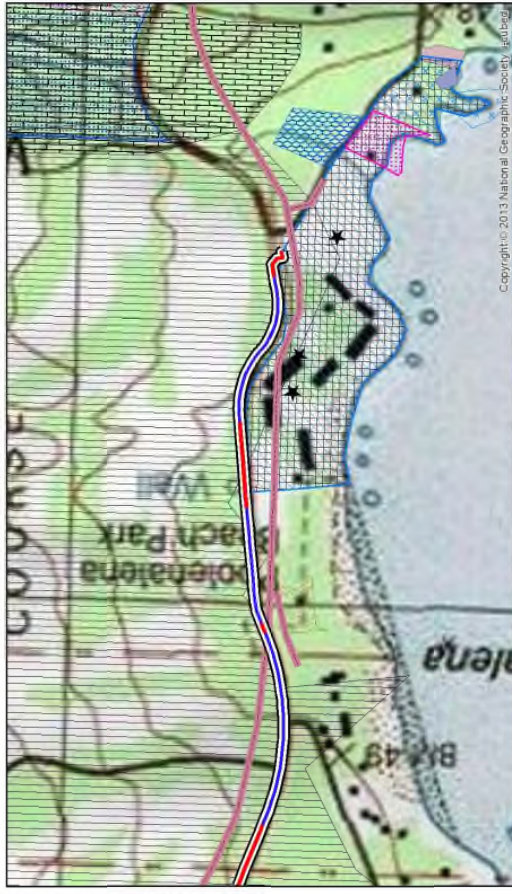


Attachment 6. A portion of the Makena 7.5 minute USGS topographic quadrangle (Inset and Upper Right Data Frame) and ESRI Orthophoto Basemap (Lower Right Data Frame) showing the central section of the proposed Kihel Wastewater Pump Station No. 16 Force Main (SFM) route in relation to previous archaeological studies and previously documented historic properties.

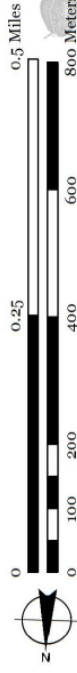
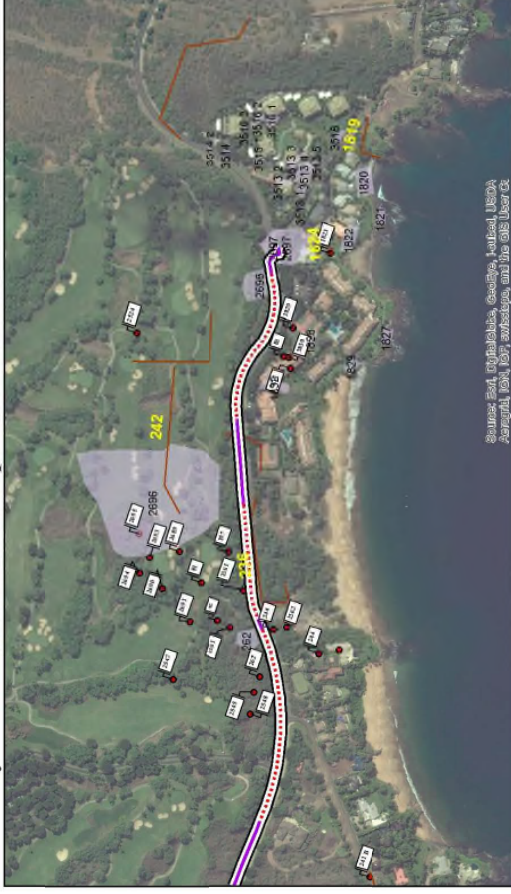
Overall Project Corridor



Coverage of Previous Archaeological Studies Within a 0.5-Mile Radius



Previously Identified Historic Properties Within a 200-Meter Radius



Attachment 7 A portion of the Makena 7.5 minute USGS topographic quadrangle (Inset and Upper Right Data Frame) and ESRI Orthophoto Basemap (Lower Right Data Frame) showing the southern section of the proposed Kihei Wastewater Pump Station No. 16 Force Main (SFM) route in relation to previous archaeological studies and previously documented historic properties.