

Planning Department

25 Aupuni Street, Rm. 109 • Hilo, Hawaii 96720 • (808) 961-8288

LARRY S. TANIMOTO
Mayor

Duane Kanuha
Director

William L. Moore
Deputy Director

RECEIVED

'90 MAY 31 P1:39

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

May 22, 1990

Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, HI 96813

Gentlemen:

Environmental Assessment - Negative Declaration
Applicant: National Park Service
TMK: 6-2-2: 6,8 and 16

Enclosed please find 4 copies of an environmental assessment-negative declaration for the construction of a road to service Pu'ukohola Heiau National Historic Park and related improvements within the Pu'ukohola Heiau Historic District and on state-owned lands. This report is filed for publication in your bulletin.

Should you have any questions, please contact this office.

Sincerely,

DUANE KANUHA
Planning Director

CRK:aam

Enclosures

cc: DLNR-Hnl. (w/encl.)
National Park Service (w/encl.)

1990-06-08 - HA - PEA
Pu'ukohola Heiau Road

FILE COPY

RECEIVED

'90 MAY 31 P1:39

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

ENVIRONMENTAL ASSESSMENT

NEGATIVE DECLARATION

APPLICANT:	National Park Service
APPROVING AGENCY:	Hawaii County Planning Commission through the Planning Department
CONSULTING AGENCY:	Department of Land and Natural Resources
CLASS OF ACTION	Development within the Pu'ukohola Historic District (Site No. 10-05-4139) which is listed on the State and National Register of Historic Places and on state- owned land

ENVIRONMENTAL ASSESSMENT

NEGATIVE DECLARATION

APPLICANT:	National Park Service
APPROVING AGENCY:	Hawaii County Planning Commission through the Planning Department
CONSULTING AGENCY:	Department of Land and Natural Resources
CLASS OF ACTION	Development within the Pu'ukohola Historic District (Site No. 10-05-4139) which is listed on the State and National Register of Historic Places and on state- owned land

PROPOSAL

The applicant, National Park Service (NPS), proposes to construct a new road to service the Pu'ukohola Heiau National Historic Park and Spencer Beach Park. The existing road would be removed and revegetated, as appropriate. The project site is situated to the south of the existing Visitor Center Headquarters, Kawaihae 2nd, South Kohala, Hawaii, TMK: 6-2-2: 6, 8 and 16.

PROJECT DESCRIPTION

The applicant proposes to construct a paved road within a 40-foot wide corridor approximately 1,900 feet in length from Queen Kaahumanu Highway to Pu'ukohola Heiau Park and Spencer Beach Park. The two lane road (ten feet each) would be constructed with three feet of stabilized shoulder on each side and installed with underground water lines and electrical conduits. The National Park Service will be responsible for maintaining the new road.

The road would traverse lands owned by the NPS and by the State. The State Board of Land and Natural Resources has granted an easement to NPS over its lands.

Upon completion of the new road and the placement of underground water lines and electrical conduits, NPS would remove all surface material on the existing road to Spencer Beach Park together with the power poles, overhead wires and surface pipeline. Fill slopes along the road shoulders would be removed and the terrain restored to its natural contours; and, if feasible, planted with selected indigenous species. The road corridor would then be covered with fill material and revegetated, as appropriate.

In support of the request, the applicant stated:

"Construction of a new access road to Spencer Beach Park would permit the removal of the existing road which constitutes the park's most significant and pressing resource management problem. The road passes within a few feet of both Pu'ukohola heiau and Mailekini heiau, essentially splitting the park in two. More important though is the damage which the road indirectly causes to the heiau. On that segment of the road next to the two heiau are a large fill slope and a cut. The former is located on the lower side of the road next to Mailekini heiau and the latter on the upper side of the road next to Pu'ukohola heiau. The fill slope appears unstable and could slide, depositing soil material onto Mailekini. (The cut along the road may have weakened the soil material on the slope above.) Over time, this could threaten the stability of the stacked-stone walls of Pu'ukohola heiau. Moreover, every vehicle using the road sets up vibrations shaking these fragile stacked stone structures. Over time this weakens them and causes rocks to loosen and tumble down. Damage is already evident on the Mailekini heiau. The presence of the existing road and the overhead lines alongside are a visual intrusion, preventing the re-establishment of the historic scene. Also, visitors using the existing interpretive trail from headquarters are exposed to auto traffic as they must cross the road to go from the base of Pu'ukohola heiau to Mailekini heiau and on down to the Pelekane area beyond.

"The National Park Service has secured Federal highway funds needed for the design, engineering, and construction of the new access road. The National Park Service, Denver Service Center, will provide engineering for the new road based on a predetermined alignment and provide supervision on this construction (scheduled at this time for FY 1990). Upon completion of the new access to Spencer Beach Park, the southern boundary of Pu'ukohola Heiau National Historic Site will become a line parallel to and lying 20 feet to the south of the centerline of the new road. Any remainder of the parcel will revert to the Queen Emma Foundation.

"The reversion was one of several conditions attached to the land donation. Other conditions which the National Park Service has agreed to consist of:

The reinterring onto National Park Service lands at Pu'ukohola Heiau National Historic Site any burials discovered on the nearby 370-acre parcel of land belonging to the Queen Emma Foundation and bounded roughly by the Waimea-Kawaihae Road, Queen Kaahumanu Highway, Waiulaula Gulch, and the ocean. No interruption or curtailment of electrical power to Mauna Kea Properties in connection with the planned removal of the existing road (and overhead powerline) to Spencer Beach Park.

The securing of funding for the design and construction of the new road within five years and the completion of construction within ten years.

"The quality of the visitor experience at the national historic site has been lowered by the inadequacies inherent in the present locations of both the park entrance road and the headquarters area, where visitor orientation and most

interpretation now takes place. The park's primary historic features are being presented to visitors in a manner which diminishes rather than enhances them."

PARK HISTORY AND EXISTING PARK CONDITIONS

The significant historic period of the park extends from 1791, with the construction and dedication of Pu'ukohola heiau by Kamehameha the Great, to 1835, the year of John Young's death.

The historic site's primary resources consist of the imposing Pu'ukohola heiau, atop "the hill of the whale," the Mailekini heiau below, and the ruins of John Young's homestead. Other resources include the Hale o Ka Puni heiau (this feature's actual presence has never been verified), and the Pelekane area, the residence of Hawaiian royalty. There are also numerous small rock structures, pictographs, petroglyphs, and other features which are important but appear to post-date the park's historic period.

Pu'ukohola heiau, like all Hawaiian temples, was constructed of dry laid, stacked stone (the material actually used here was mostly round, water-worn cobbles). Consequently, it was not designed to withstand use by large numbers of people. The structure is also susceptible to damage from earth tremors, winds, rain, the roots of trees and, of more consequence, from traffic caused vibrations and past operation of the nearby quarry. The heiau platform has undergone emergency preservation treatment, comprehensive stabilization and restoration by the National Park Service.

Although closed to the general public because of its fragile nature, Pu'ukohola heiau is still occasionally used for religious purposes by Hawaiians.

Mailekini heiau, also constructed from stacked stones without the use of mortar, has undergone emergency preservation and stabilization.

According to NPS, both heiau, but particularly Mailekini, are being adversely affected by the vibrations set up by vehicles using the road to Spencer Park. These effects are continuous and cumulative.

The homestead area of John Young, located across the State highway, consists of the remains of eight features: the main house, with its plastered masonry walls, two other Western style stone structures, a large Hawaiian style house platform, a large Hawaiian style terrace, and three other features associated with the platform and terrace. The main house, constructed in 1798, is considered to be the first Western-style house in Hawaii. Other structures associated with Young's homestead were buried some years ago under a fill of dredged coral during the construction of Kawaihae Harbor. These structures were outside of the proposed boundaries of the historic site.

Emergency preservation actions taken on the John Young house itself consist of the construction of a plywood reinforcing wall around and over the fragile standing plastered masonry walls to protect them from the elements and from further crumbling. Basic stabilization work on the John Young house is needed to prevent further deterioration and to enable visitors to view it.

The National Park Service has funded an historic resources study which will include researching to determine if information exists on the appearance of Pu'ukohola heiau and the John Young homestead during the historic period when they were in use.

According to Hawaiian legend and some historical maps, the Hale o Ka Puni heiau is located just offshore. However, despite National Park Service efforts to locate it, no physical evidence of this feature has ever been found. If it did exist, it is possible that it has been covered over with silt or was buried earlier during the large-scale dredge and fill operations which took place during the construction of the Kawaihae Harbor.

Existing facilities consist of a 20' x 48' temporary structure which serves as park headquarters, the visitor contact point, and maintenance office; nearby, there are an above-ground gasoline storage tank and pump, a small building used as a library, a maintenance shed and portable restrooms. The park's sewage is now being emptied into the sewage disposal site located at Spencer Beach Park. A small visitor parking lot has been constructed next to park headquarters. A paved park access road, originally built by the Corps of Engineers, connects the parking with the nearby state highway.

An interpretive trail from headquarters leads visitors down the hill to the base of Pu'ukohola heiau and Mailekini heiau and continues on down into the Pelekane area. From the Pelekane area, the trail then heads up toward the John Young homestead which can be

reached only by crossing the highway. A trail also runs along the coastal portion of the park. This trail receives only limited use since until recently it was partially overgrown with kiawe.

There are no wayside exhibits. Two small signs along Spencer Park road identify Pu'ukohola heiau and Mailekini heiau. None of the other park historic features have been signed.

According to the applicant, visitation at the park has shown significant and steady increases ever since park operations began in 1974. In 1975, the first full year of operation, total visitation was 14,255, a decade later that figure had grown to more than 48,000. By 1987 visitation had increased to nearly 55,000.

The existing pattern of visitation consists of visitors most commonly driving directly to headquarters from the highway. Orientation to the park's resources is provided at headquarters. Following orientation, visitors then normally take the short walk to the heiau via the interpretive trail, or they may return to their cars and drive, via the existing road to Spencer Beach Park, to an unimproved parking lot located at the base of Pu'ukohola heiau. Nearly all visitors remain in the park for no more than one hour.

A Development Concept Plan has been prepared by NPS dated October 1989, which studies existing park problems, suggest alternatives and recommends mitigation.

SOCIAL AND INSTITUTIONAL SETTING

The General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the project site as Open.

The State Land Use District classification of the project site is Urban.

The Hawaii County Zoning is Open and Agricultural-1 acre.

The property is located within the Special Management Area (SMA) of the County of Hawaii. A Special Management Area Use Permit Petition has been submitted to the Planning Commission to be processed in accordance with Rule 9 of the Planning Commission relating to SMA.

That portion of the road that is on state land is also within the boundaries of the Pu'ukohola National Historic Park boundaries, which is listed on the National Register of Historic Places.

ENVIRONMENTAL SETTING

Pu'ukohola Heiau National Historic Site is situated on the lower slopes of the great dome of Mauna Kea. The surface material in the park is composed of lava from past flows. From about 100 to 150 feet in elevation along the mauka side, the terrain slopes gradually down to sea level. Pu'u Kohola, Hawaiian for "hill of the whale," is the high point and the most prominent topographic feature in the park. It is here that Kamehameha had his great heiau built. The numerous rocks scattered throughout the area are debris from past explosive eruptions of Mauna Kea. These, and rocks transported from as far away as Pololu Valley, are the rocks used to construct the historic heiau of Pu'ukohola and nearby Mailekini, the houses of John Young, as well as the extensive rock walls and enclosures

located in the park. Makeahua Gulch, just to the north, acts as a divider separating the Mauna Kea flows from the steeper Kohala volcanic flows to the north.

The coral reef located offshore, one of but a few along the western coast of the Island of Hawaii, has been all but destroyed having been dredged for the construction of Kawaihae Harbor.

During and following the infrequent periods of heavy rainfall, the park's offshore area receives large amounts of silt and debris from the runoff. The harbor landfill has interrupted the flow of current along the coast and silt and debris deposited in the waters adjacent to the park remain there. Water quality and the benthic environment here have been degraded. Growth of coral has been retarded and the reef fish population reduced.

The soil cover at the park is a very thin, reddish brown, fine, sandy loam. This variety is typical of the arid regions of Hawaii (Kawaihae series). The soil is high in mineral content and low in organic matter. Where it is free of rocks, it can and does support low grasses, some shrubs, and a few scattered trees. The presence of groundwater down along the park shoreline has permitted the growth of trees (mostly kiawe). The Park Service has removed nearly all of these trees.

The vegetation of the park was studied by the Botany Department of the University of Hawaii in 1975 and 1976. Four separate plant communities were identified and more than 50 species were recorded. Of the total number, 38 species were introductions, 10 were indigenous, and 5 were endemic. The study concluded that the

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

located in the park. Makeahua Gulch, just to the north, acts as a divider separating the Mauna Kea flows from the steeper Kohala volcanic flows to the north.

The coral reef located offshore, one of but a few along the western coast of the Island of Hawaii, has been all but destroyed having been dredged for the construction of Kawaihae Harbor.

During and following the infrequent periods of heavy rainfall, the park's offshore area receives large amounts of silt and debris from the runoff. The harbor landfill has interrupted the flow of current along the coast and silt and debris deposited in the waters adjacent to the park remain there. Water quality and the benthic environment here have been degraded. Growth of coral has been retarded and the reef fish population reduced.

The soil cover at the park is a very thin, reddish brown, fine, sandy loam. This variety is typical of the arid regions of Hawaii (Kawaihae series). The soil is high in mineral content and low in organic matter. Where it is free of rocks, it can and does support low grasses, some shrubs, and a few scattered trees. The presence of groundwater down along the park shoreline has permitted the growth of trees (mostly kiawe). The Park Service has removed nearly all of these trees.

The vegetation of the park was studied by the Botany Department of the University of Hawaii in 1975 and 1976. Four separate plant communities were identified and more than 50 species were recorded. Of the total number, 38 species were introductions, 10 were indigenous, and 5 were endemic. The study concluded that the

vegetation in the park has undergone considerable alteration since Cook's arrival in 1778. Historical analyses of the pre-European flora described this arid portion of the island of Hawaii as consisting predominantly of the following species: pa'u-o-Hi'iaka (*Jacquemontia sandwicensis*), pili (*Heteropogon contortus*), 'ilima (*Sida fallax*), and kakonakona (*Panicum torridum*).

Although the native shrub, ilima, grows in the vicinity of the heiau, most of the vegetation now found in the park consists of historically introduced xerophitic alien plants. Kiawe (*Prosopis pallida*) was introduced in the late 1820's and buffelgrass (*Cenchrus ciliaris*), a perennial now covering much of the park, in the 1930's. Both are alien plants that have replaced native vegetation. Kiawe is a particular problem. Being a phreatophyte, it absorbs the available moisture, thereby preventing native vegetation from returning. The Park Service has removed nearly all of the kiawe trees which were growing along the coast. More recently, trees have also been removed along the existing road to Spencer Beach Park. Controlling buffelgrass in the park would be very difficult since it is the dominant grass all along the Kawaihae coast up to 500 feet elevation. Two additional alien plants, haole koa (*Leucocephala*) and lantana (*Lantana camara*) are found in the less arid gully bottoms. Most of the kiawe which formerly grew along the coastal portions of the park have been removed by the Park Service. Kiawe still cover most of the State-owned lands bordering the coral fill and also grow along Makeahua Gulch. These trees and shrubs will eventually be removed.

The presence of grasses and kiawe, in combination with dry weather and gusty winds, make fire a danger during most of the year. In 1984, a wildfire in the area burned over one-half of the park.

A native fern (*Ophioglossum concinnum*), a candidate for the Federal list of endangered and threatened plant species, has been identified by the National Park Service Cooperative Park Studies Unit growing in a small area east of Pu'ukohola heiau, but not in the vicinity of the proposed road. This may be the largest known growing area for the fern. Studies are ongoing on the biology of this plant, called pololei in Hawaiian, so that appropriate measures can be undertaken to assure its protection. The U.S. Fish and Wildlife Service has listed the plant as a Category 1 (sufficient information exists to support the biological appropriateness to list as threatened or endangered). They regard the fern's listing as a relatively low priority, however, because the plant is ephemeral, appearing only following periods of rainfall. Consequently, the Fish and Wildlife Service believes the pololei's distribution in Hawaii may be wider than what had previously been thought.

Animal life in the park is limited to mongoose, rats, and field mice. Birds, such as the white-eye, house sparrow, mynah, dove, and cardinal (all alien), are fairly common; a few owls have been identified near the area.

The climate at the park is arid, warm, and often windy. Records over the past several decades indicate a trend toward less rainfall and warmer temperatures. More than 90 percent of the days are free

of cloud cover. During most of the year, day time temperatures reach 90°F. The area has one of the lowest rainfall levels in the state, averaging about eight inches a year.

Winds are generally offshore during the nights and early mornings and onshore (westerly) during the day. From March to October, the park often experiences gusty winds that occasionally reach more than 60 knots. These winds stir up the fine soil material producing dust and often creating unpleasant conditions for visitors.

According to the Flood Insurance Rate Map (FIRM), prepared by the U. S. Army Corps of Engineers, designates the site within Zone X—an area outside of the 500-year flood plain.

A detailed archaeological surface survey of the road corridor was carried out by the National Park Service (Pacific Area Office) Archaeologist (Somers, 1988). The survey revealed that because surface data were insufficient to determine the significance of the features known to exist along the alignment, archeological test excavations needed to be conducted to test for and recover subsurface data. As a result of these excavations (Carter, 1989), a total of six archeological features were identified within or immediately adjacent to the alignment. Three of these have been interpreted as short-term shelters for humans that could have been used while Pu'ukohola Heiau was under construction in 1790-91. The other three have been interpreted as a windbreak for growing crops, a wall remnant, and possibly a clearing for a tent.

Results of the test excavations demonstrated that the shelters and the windbreak were important for their informational content and that the wall remnant and the clearing were not significant. In the process of determining that the shelters and the windbreak were likely to yield information important in prehistory or history, however, that potential was realized and the information was adequately recorded. Since the other two features were not significant and the shelters and the windbreak are no longer significant, no further data recovery at these features was required.

Pursuant to Title 36 CFR 800, the National Park Service sent a finding of no significant effect on historic properties to the State Historic Preservation Office (SHPO). The SHPO's response, concurring with the no effect determination, was received in May 1989 (see attached).

UTILITIES AND SERVICES

Access is gained to the property from Kawaihae Road, which is state road.

Water is available from a waterline along Kawaihae Road, which currently services the property.

As mentioned previously, sewage is presently disposed of at a sewage disposal site in Spencer Beach Park.

ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

Between one and one-half and two acres of vegetation consisting primarily of buffelgrass would be destroyed by the construction of

the new road to Spencer Beach Park. A few scattered kiawe shrubs and possibly one or two kiawe trees would also be destroyed. These are both introduced species which have replaced native plants. On those portions of the new road where cuts and /or fills are necessary (these would be minimal), it is anticipated that regrowth of the buffelgrass would take place within a very short time. Therefore, the loss of this vegetative cover is not considered to be significant or to adversely affect the park; moreover, with buffelgrass it would also be temporary. The pololei fern will not be affected due to its considerable distance from the proposed project.

During road construction, the potential for soil erosion along the road corridor would be increased. The likelihood of this actually occurring, however, is remote since the intervals between rainfall here often extend over a period of many months. Also, during construction, there would be an increase in the potential for the generation of wind-blown dust caused by the removal of vegetation and exposing the fine soil material. This impact, although minor, would be a certainty to occur because of the frequency of gusty winds. All activities connected with road construction shall be carried out in a manner so as to minimize their impact on the park visitors in accordance with standard construction practices. Construction should take place during the non-rainy season.

The proposed road would not affect recreation resources and

should be in the direction of separating conflicting historic and recreation resources that presently exist. The proposal is supported by the County Department of Parks and Recreation and the Department of Land and Natural Resources.

An archeological survey and test excavations indicate that no feature identified in the road corridor are significant. The State Historic Preservation Officer concurs that no further archaeological work is necessary. The removal of the existing road to Spencer Park between the two heiaus will, in fact, be a significant benefit to the cultural resources that the park is attempting to preserve and interpret.

View planes should also be improved with the installation of underground utilities within the road corridor and removal of the old overhead lines.

DETERMINATION

Based upon the above considerations and the best available information of the area, it is determined that the construction of a new road to service Pu'ukohola Heiau National Historic Park and Spencer Beach Park and related improvements will not have significant impacts on the environment. Therefore, a notice of negative declaration is now being filed with the environmental assessment.

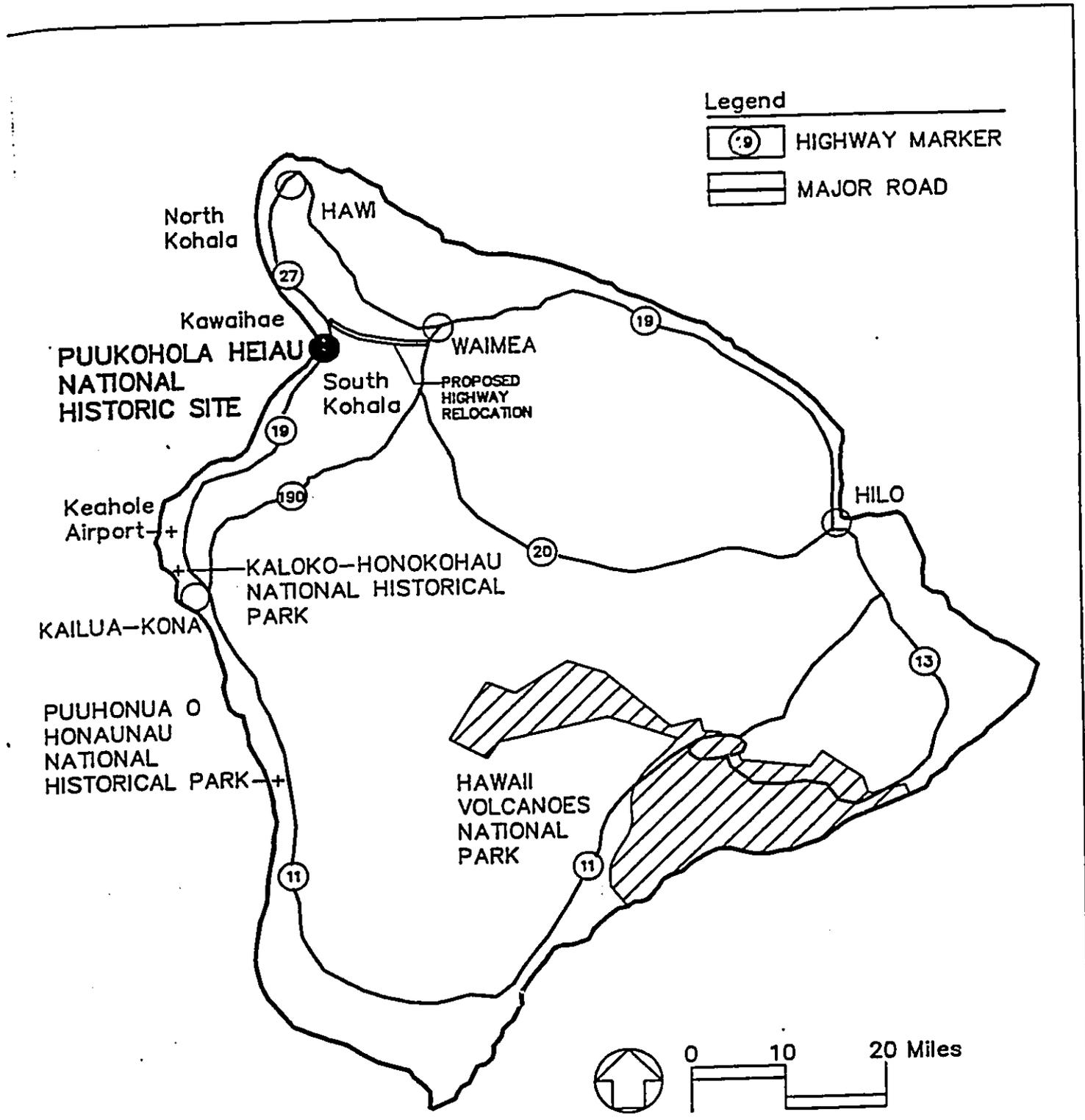
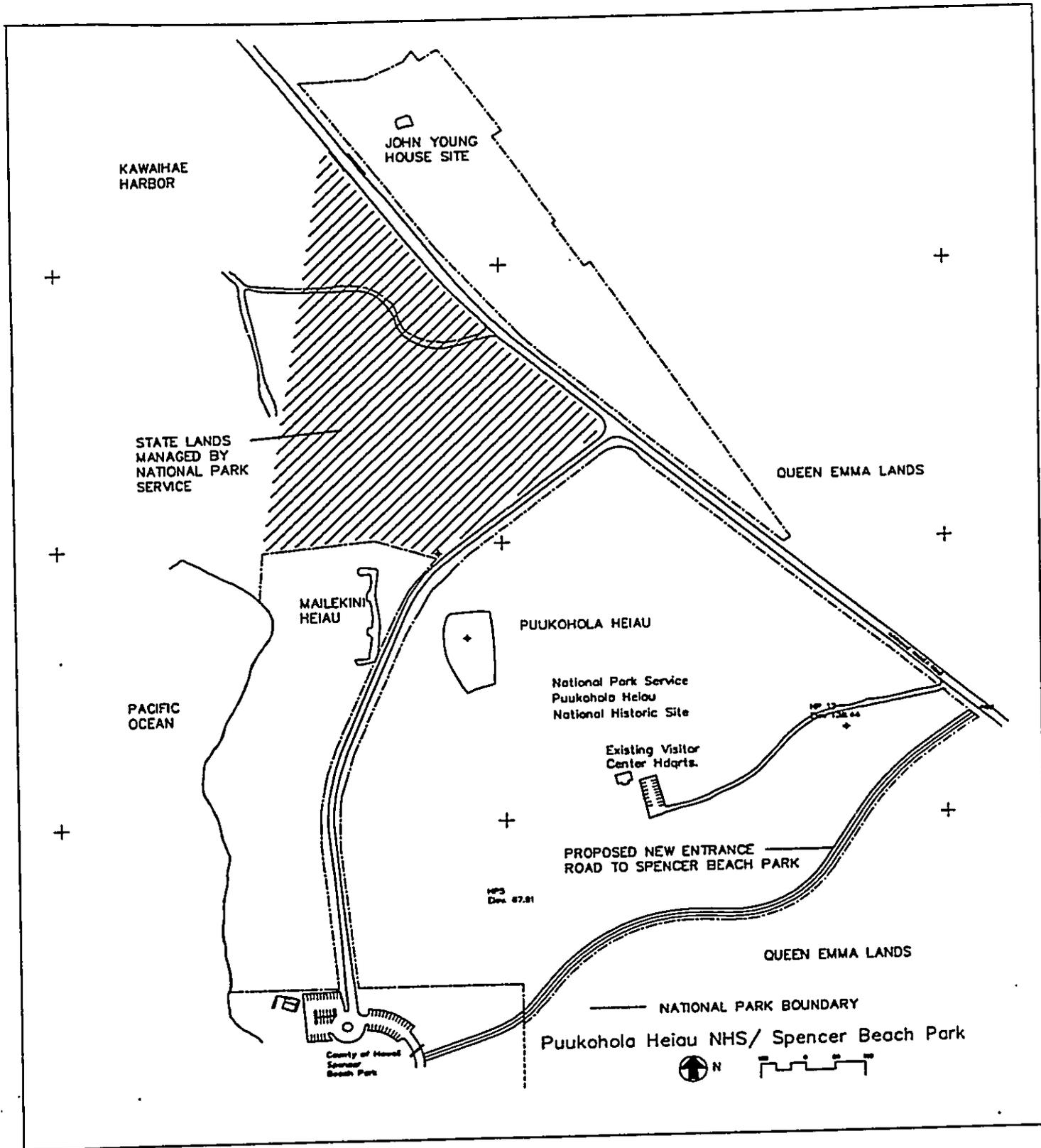
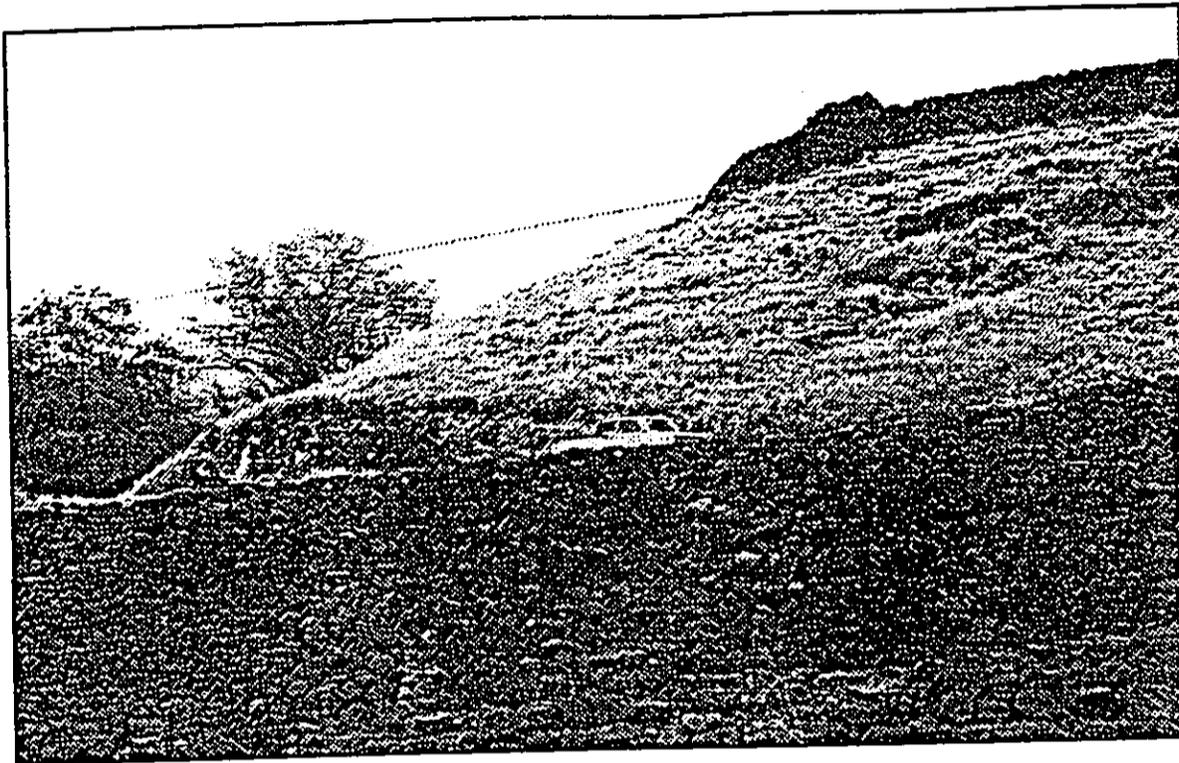


Figure 2.
LOCATION MAP

Puukohola Heiau National Historic Site
 Kawaihae, Island of Hawaii.





The existing road to Spencer Beach Park, running between Pu'ukohola and Mailekini *heiau*, is a visual intrusion on the historic scene at Pu'ukohola Heiau National Historic Site and contributes to the structural weakening of the fragile stacked-stone structures, the park's primary resources.



JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621
HONOLULU, HAWAII 96809

REF:HP-AL

MAY 30 1989

Mr. Bryan Harry, Director
U.S. Department of the Interior
National Park Service
Pacific Area Office
300 Ala Moana Blvd.
Room 6305
Honolulu, Hawaii 96850

Dear Mr. Harry:

SUBJECT: National Historic Preservation Act Review -- New
Access Road at Pu'ukohola Heiau National Historic
Sites
Kawaihae, South Kohala, Hawaii

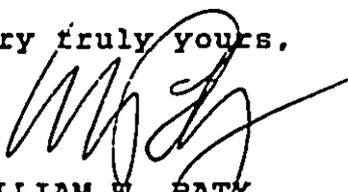
Thank you for your letter of April 25, 1989, which submitted
the archaeological survey for this study.

The survey identified five sites -- 2682 (T1, T2), 2681 (T3),
12,233 (T4), 12,234 (T5), and 12,235 (T6). [Note: We have
assigned State inventory numbers to T4-T6.] We agree that
sufficient information has been gathered to evaluate their
significance.

We agree with the significance evaluations with one
clarification. We would argue that site 12,234 (T5) was also
significant for its information content since the wall
contained some significant information. However, we agree that
the survey recorded and recovered an adequate and reasonable
amount of information in 2681, 2682, 12,333, and 12,234,
effectively making them "no longer significant".

This means that significant sites are no longer present within
the project area. So we agree that your proposed project will
have "no effect" on significant historic sites.

Very truly yours,


WILLIAM W. PATY
Chairperson and State
Historic Preservation Officer

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

LIBERT K. LANDGRAF
MANABU TAGOMORI
RUSSELL N. FUKUMOTO

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

RECEIVED

MAY 5 1989

PACIFIC AREA OFFICE