



U.S. Army Corps of Engineers  
Honolulu District

# PUBLIC NOTICE

Public Notice No. **POH-2006-531**

Date: December 16 2008

Reply to:  
District Engineer  
U.S. Army Corps of Engineers  
Building 230  
Fort Shafter, Hawai'i 96858-5440

Respond by: January 16, 2009

**WATERWAY NAME:** Un-named wetland (0.95 acres (41,149 sq. ft) of jurisdictional wetlands on Lot 8 of Tax Map Key (TMK) (2) 3-7-011: 028 located in Kahului, Maui Island, Hawai'i ("Lot 8 wetland")).

Interested parties are hereby notified that the U.S. Army Corps of Engineers has received an application for a Department of the Army Standard Permit to fill the Lot 8 wetland for the purpose of constructing the new Maui Medical Plaza at Kanaha facility, as described below and shown on the attached sheets.

1. **APPLICANT:** Mr. Benjamin Brown, 8056 Molt Road, Billings, MT 59106.
2. **AGENT:** Mr. Robert McDaniel III, Maui Medical Plaza at Kanaha, LLC, 350 Hukilike Street, Suite D, Kahului, Hawai'i, 96732.
3. **APPLICABLE STATUTORY AUTHORITY:** Section 404 of the Clean Water Act (33 U.S.C. 1344); and with due consideration of the public interest and potential environmental effects.
4. **LOCATION OF THE PROPOSED ACTIVITY:** 151 Hana Highway, Kahului, Maui Island, Hawai'i 96732; Tax Map Key (TMK) (2) 3-7-11: 28. (Figure 1).
5. **PURPOSE AND PROJECT DESCRIPTION:**

The purpose of this Public Notice is to solicit comments from the public, Federal, State and local agencies and officials, native Hawaiian organizations and individuals and other interested parties in order to consider and evaluate the impacts of the Applicant's proposed activity. The applicant seeks to construct a new building at a vacant, undeveloped 2.49 acre lot located within a developed industrial subdivision and adjacent to the State of Hawai'i, Kanahā Pond Wildlife Sanctuary in Kahului, Maui. The proposed project would involve construction of an enclosed, multi-storied building with an attached parking structure, and operations and regular maintenance of the facility and surrounding planned landscaping. The purpose of the proposed project is to provide a medical facility where health care professionals can administer services to members of the local community.

The activity proposed to take place in waters of the U.S. will involve permanently filling 0.95 acres (41,149 sq. ft.) of jurisdictional wetlands. The location, draft plans, and conceptual renderings of the proposed facility are indicated in Figures 2, 3, 4 and 5.

6. The following information is pertinent to the Applicant's proposed project:
- (i) The proposed project site is a 2.49 acre lot located at latitude 20° 53' 27" North and longitude 156° 27' 36" West;
  - (ii) A permit from the Corps is required because the proposed project involves a discharge of fill material regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344); and
  - (iii) Pursuant to the April 10, 2008 Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (33 CFR 325 and 332), and October 10, 2008, U.S. Army Corps of Engineers, Regulatory Guidance Letter No. 08-03, a compensatory mitigation plan must be submitted for review and approval by the Corps prior to issuance of this permit. The applicant is currently developing a draft compensatory mitigation plan with project features as summarized in the attached information sheet (Text: Abstract for Draft Mitigation Plan, prepared by Teal Partners (Nov 25, 2008));
  - (iv) The Applicant has not provided an estimate of the duration of construction or the anticipated work schedule for the proposed development;
  - (v) The Applicant has provided best management practices (BMP) with construction plans provided in Figure 2 (Sheet C-1); and
  - (vi) Additional information regarding the wetlands delineated and verified is in the reference: Robert W. Hobdy, June 2006, *Wetland Determination for the Kanaha Industrial Subdivision Project, Kahaha, Kahului, Hawaii*. Prepared for Benjamin L. Brown, applicant.

7. **IMPACTS OF PROPOSED ACTIVITIES IF AUTHORIZED:**

The proposed activity would permanently fill approximately 41,149 sq. ft. (0.95 acres or 30% of the entire 2.49-acre parcel) of jurisdictional wetlands with grading and additional fill to a finished graded elevation to 7 feet above mean sea level (MSL). Access to the parcel by the general public is already restricted by temporary fencing, which would be improved during construction through the placement of appropriate safety devices, structures, and signage. The site is directly adjacent to two (2) drainage canals that channel sheetflow and surface waters directly to Kahului Bay during high volume rain events. The protection of water quality within the canals is anticipated to remain the same during and after construction with the implementation of the construction contractor's Site-Specific Best Management Practices (BMP) to isolate, confine, and/or minimize discharges to the aquatic environment. In addition, the BMPP will also be required to contain measures to avoid, minimize or mitigate potential pollution events from construction equipment maintenance, leaks, spills and the protection of endangered species.

Anticipated short term impacts during facility construction include temporary disruption to existing localized traffic, increased noise, and impacts to ambient air quality. Noise and traffic near the site are anticipated to increase post-construction when the proposed medical facility is operational. A proposed construction and operations schedule not yet been submitted.

## **8. IMPACT ON TRADITIONAL CULTURAL AND HISTORIC PROPERTIES:**

The construction and operation of the new medical facility should not adversely impact listed properties on the Hawai'i Register of Historic Places, including the Kanahā Pond Wildlife Refuge, or any other adjacent historic properties or traditional cultural properties listed, or eligible for listing, on the Hawai'i and National Registers of Historic Places. Existing benthic surfaces within the project area are unlikely to contain *in situ* Native Hawaiian traditional cultural properties and burial remains.

This notice has been sent to the State Historic Preservation Officer, the State Office of Hawaiian Affairs, Hui Malama I Na Kupuna and the 'Aha Kiole Advisory Council. Any comments they have regarding historic properties and cultural resources will be considered before a final decision is made on the DA permit.

## **9. IMPACT ON ENDANGERED SPECIES, ESSENTIAL FISH HABITAT:**

Federally listed waterfowl, including the Hawaiian duck (*Anas wyvilliana*), Hawaiian coot (*Fulica alai*), and Hawaiian stilt (*Himantopus mexicanus knudseni*), are known to forage within the vicinity of the proposed project area; however, none have been observed to use the project site as habitat. Other federally listed species that may be considered before a final decision is made on the permit include Newell's shearwater (*Puffinus articularis newelli*), Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), Hawaiian hoary bat (*Lasirus cinereus semotus*), and Blackburn's sphinx moth (*Manduca blackburni*). The sphinx moth or their larvae and the sphinx moth's native plant host species 'aiea (*Nothocestrum spp.*) and non-native alternative host plant species tobacco (*Nicotiana glauca*) were not observed in a biological resources survey by Robert W. Hobdy in September 2006. Pursuant to Section 7 of the Endangered Species Act (ESA), the Corps has determined that the proposed project may affect, but is not likely to adversely affect, any federally-listed species since all proposed construction and operation activities will comply with plans and specifications that will avoid and minimize potential harm to protected species.

This notice has been sent to the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the State of Hawai'i Division of Aquatic Resources. Any comments they have on endangered or threatened species, designated critical habitat or essential fish habitat, will be considered before a final decision is made on the permit.

## **10. OTHER GOVERNMENT AUTHORIZATIONS/CERTIFICATIONS:**

Prior to the issuance of a valid Department of the Army permit, the applicant is required to obtain a Coastal Zone Management (CZM) Program consistency determination, or waiver from the Office of Planning, State Department of Business, Economic Development, and Tourism (DBEDT). The requirements for a CZM consistency statement and accompanying information are available for public review at the Department of Business, Economic Development & Tourism, Office of Planning, CZM Program Office, 235 S. Beretania Street, 6<sup>th</sup> Floor, Honolulu, HI 96813. Comments on the consistency statement should be submitted in writing to the Department of Business, Economic Development & Tourism, Office of Planning, CZM Program

Office, P.O. Box 2359, Honolulu, HI 96804 no later than 30 days from the date of this notice.

Prior to the issuance of a valid Department of the Army permit, the applicant is required to obtain an approved Section 401 Water Quality Certification (WQC), or waiver, from the Department of Health, Clean Water Branch. The requirements an approved Section 401 WQC and accompanying information are available for public review at the Department of Health, Clean Water Branch, 919 Ala Moana Boulevard, Room 300, Honolulu, HI 96815. Comments on the WQC application should be submitted in writing to the Department of Health, Clean Water Branch, P.O. Box 3378, Honolulu, HI 96801-3378 no later than 30 days from the date of this notice.

Other State and local approvals required may include a Community Noise Control Permit from the State Department of Health, and a Special Management Area Use Permit or Building/Grading Permit(s) from the County of Maui Department of Planning.

#### **11. EVALUATION FACTORS:**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered, including the cumulative effects thereof. Among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

#### **12. COMMENTS AND INQUIRIES:**

The U.S. Army Corps of Engineers (USACE) is soliciting comments from the public, Federal, State and local agencies and officials, native Hawaiian organizations and individuals and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the USACE to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Interested parties may submit in writing any comments that they have on issuance of a permit for the proposed activity. Comments on the described work, referencing

Public Notice No. POH-2006-531, should reach this office no later than Friday, January 16, 2009, to become part of the record and be considered in the decision. Please contact Ms. Joy Anamizu at 808-438-7023 if further information is desired concerning this notice. Electronic comments by e-mail can be posted at [CEPOH-EC-R@usace.army.mil](mailto:CEPOH-EC-R@usace.army.mil). Facsimile comments can be sent to 808-438-4060.

It is Corps of Engineers policy that any objections will be forwarded to the applicant for comment or rebuttal before the objection is resolved. If the objecting party so requests, all personal information will be deleted from the forwarded letter, or the objections will be sent in paraphrased, summary form.

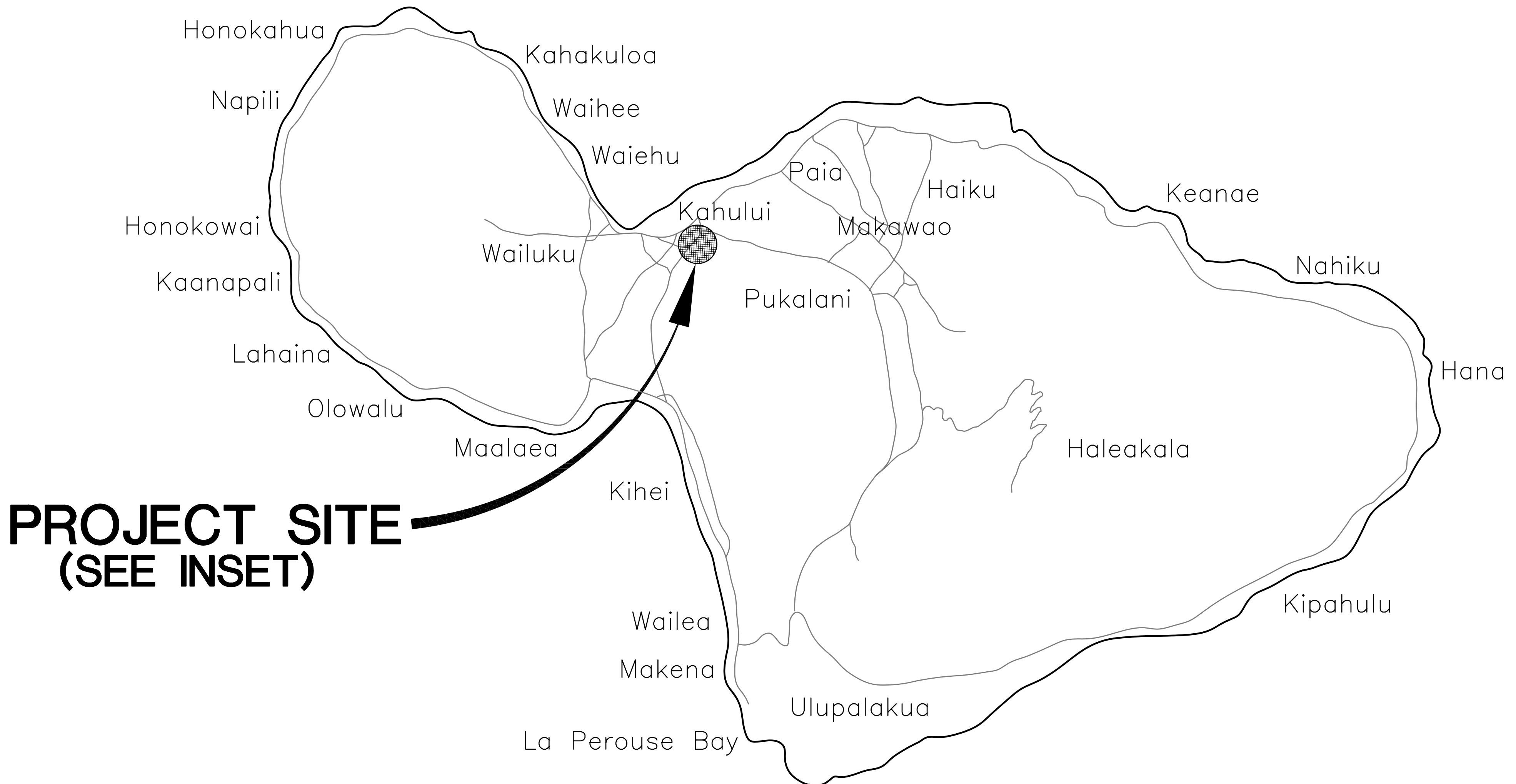
**13. REQUEST FOR PUBLIC HEARING:**

Any person may request, in writing, within 30 days from the date of this notice that a public hearing be held to consider issuance of a permit for the proposed project. Requests for public hearing must specifically state the reasons for holding a public hearing.

**14. Attachments:**

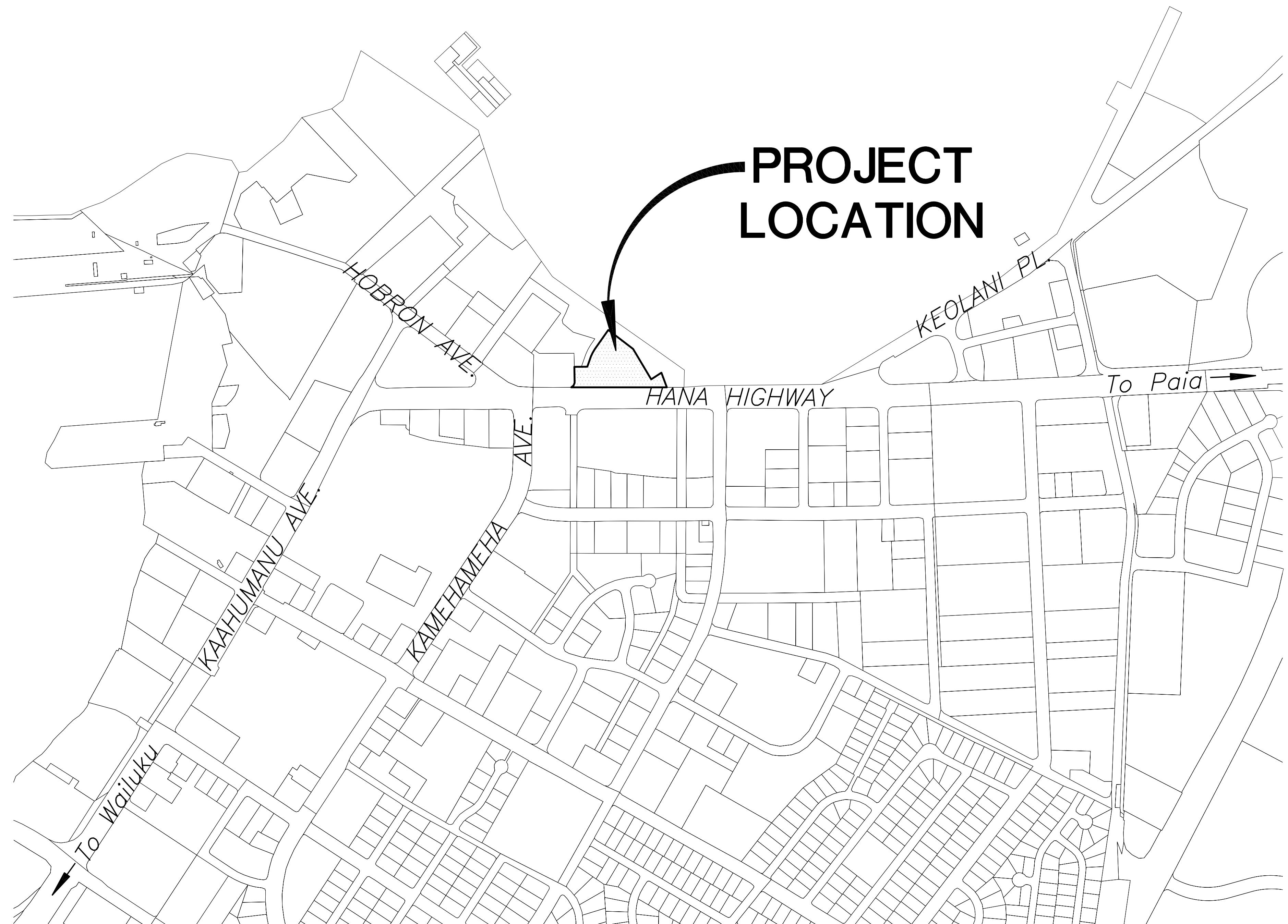
- Figure 1. General location and vicinity maps
- Figure 2. Grading and BMP Plan (building footprint)
- Figure 3. Grading Plan (detention basin + building footprint)
- Figure 4. Delineated jurisdictional wetland on topographical survey map
- Figure 5. Conceptual drawing of new building
- Figure 6. Renderings of proposed building
- Text 7. Abstract of draft Compensatory Mitigation Plan

**15. Additional references** relevant to this proposed project can be requested from the Applicant's Agent, Mr. Robert McDaniel III at 808-283-8811 or 808-872-1144 or by e-mail at [bob@mauimedicalplaza.com](mailto:bob@mauimedicalplaza.com).



**PROJECT SITE  
(SEE INSET)**

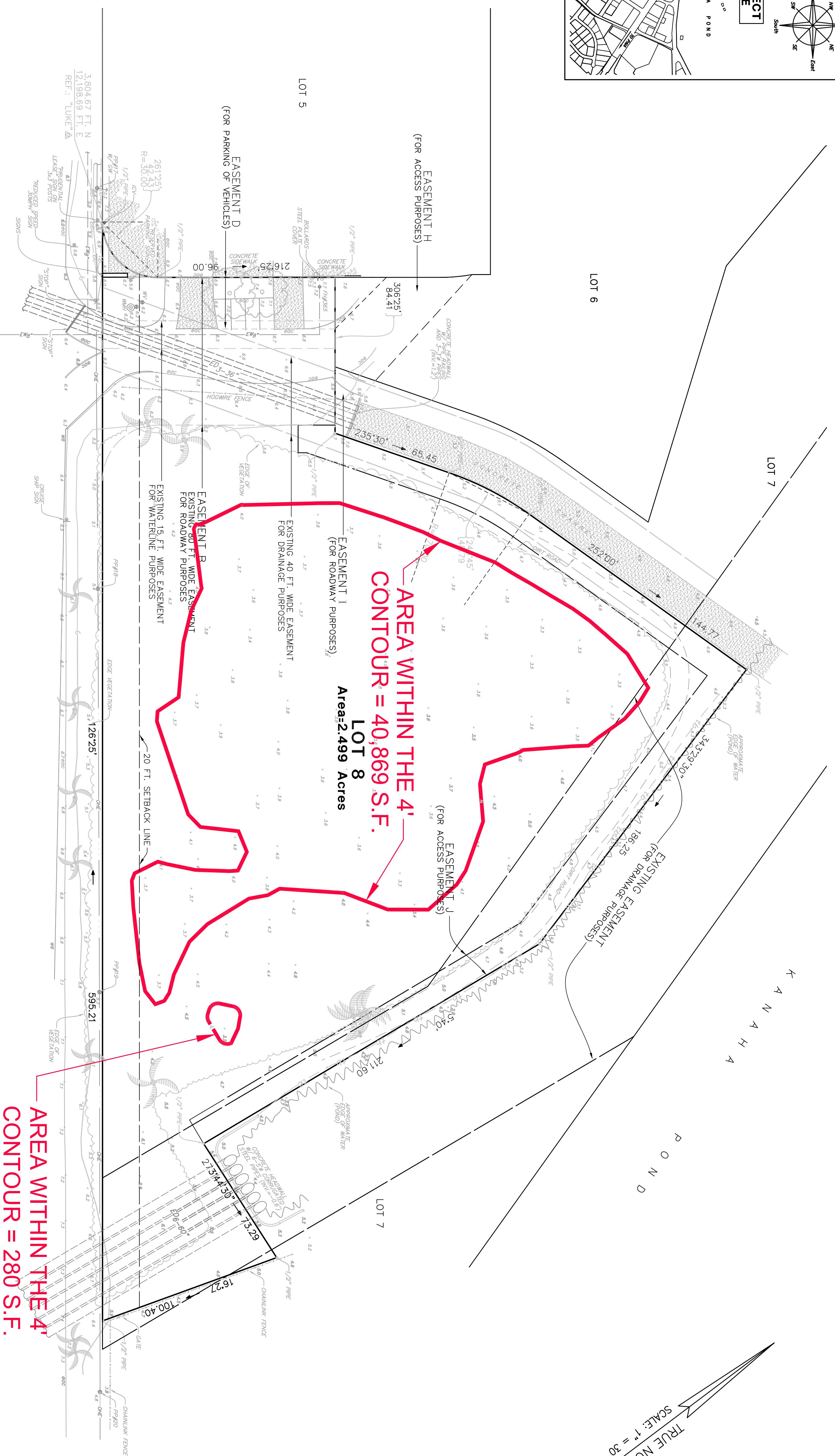
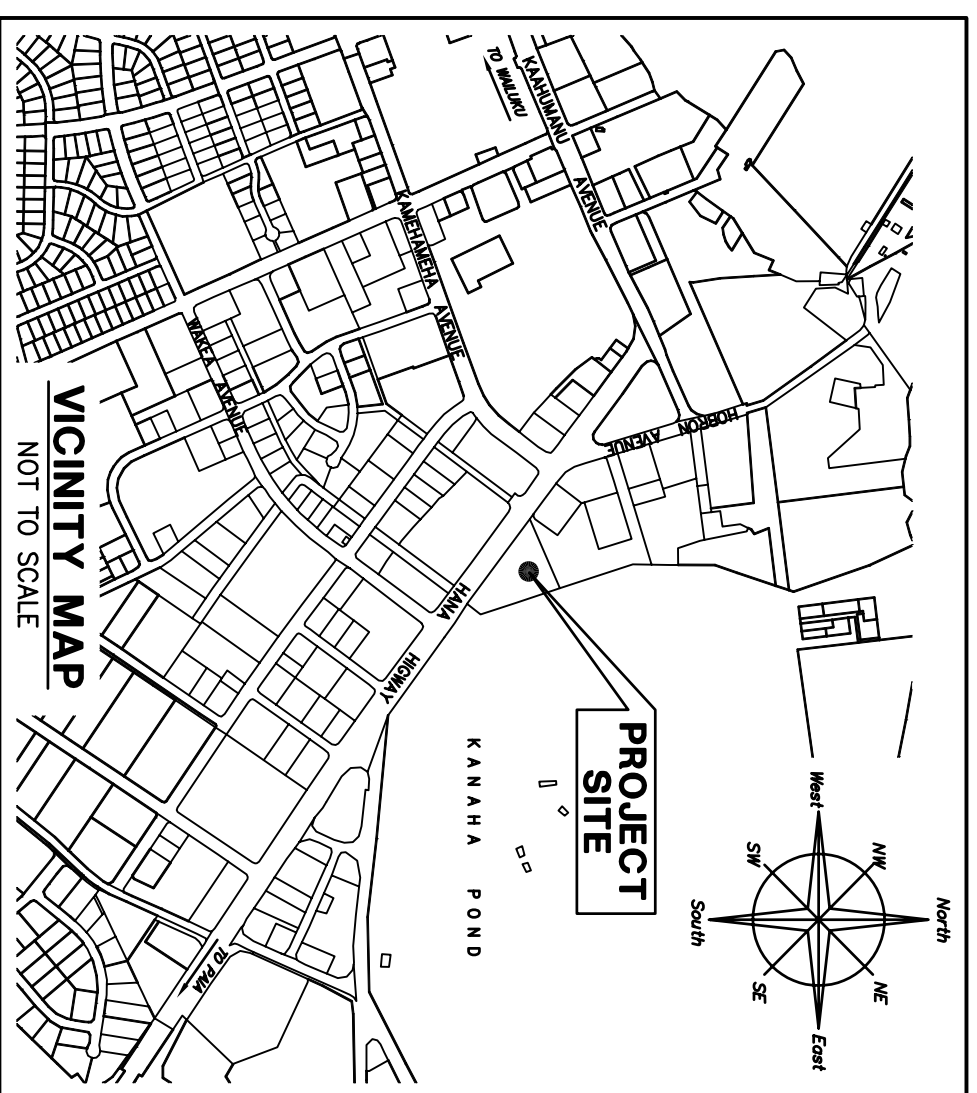
**ISLAND OF MAUI**  
NOT TO SCALE



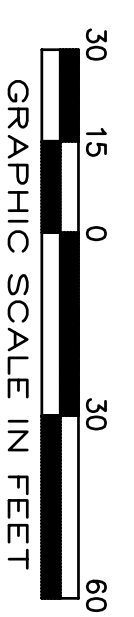
**PROJECT  
LOCATION**

INSET

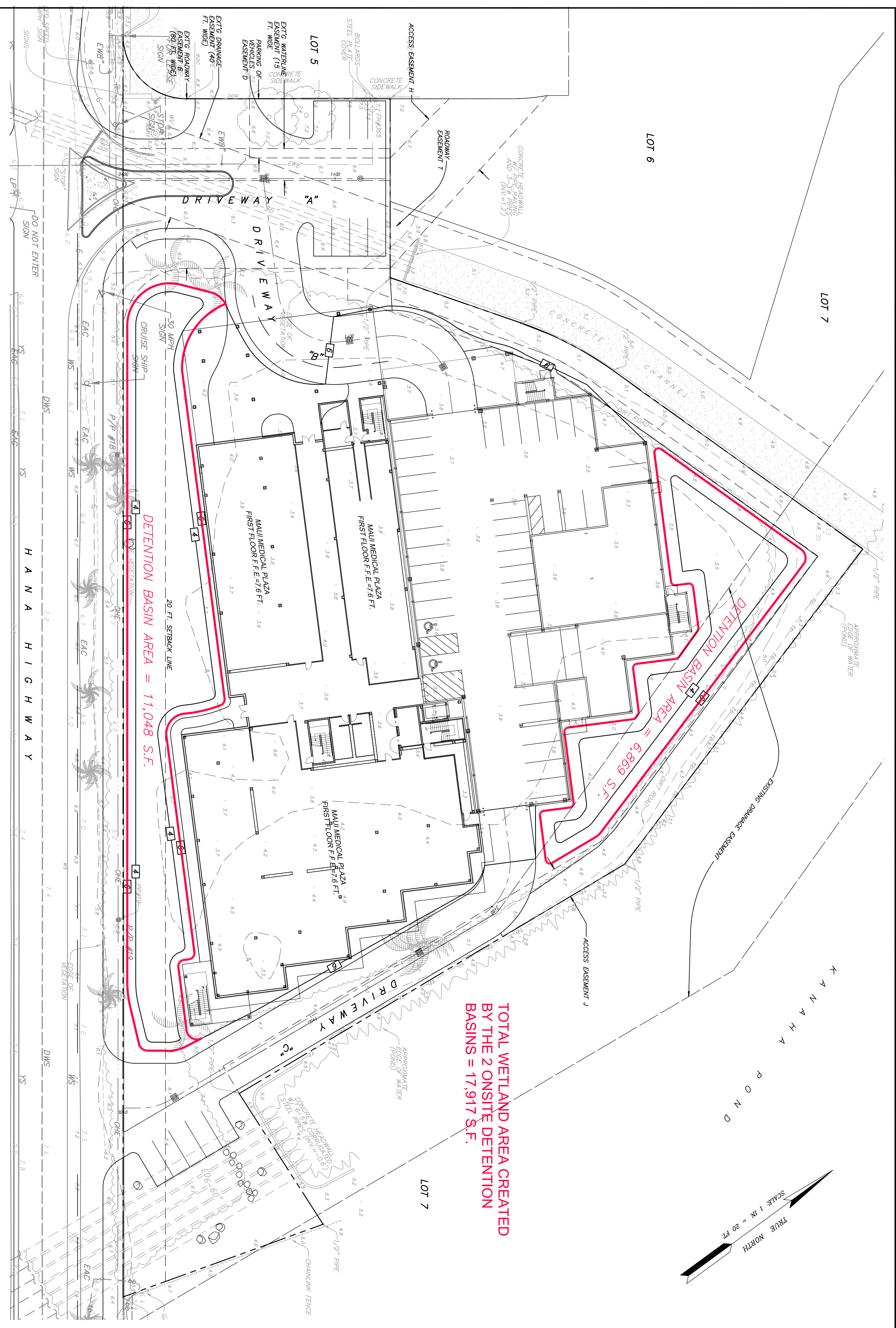




**TOPOGRAPHIC SURVEY MAP**  
OF  
**LOT 8, KANAHA INDUSTRIAL SUBDIVISION II**  
BEING A PORTION OF GRANT 3343 TO CLAUS SPRECKELS  
AT KAHULUI, WAILUKU COMMONS, MAUI, HAWAII



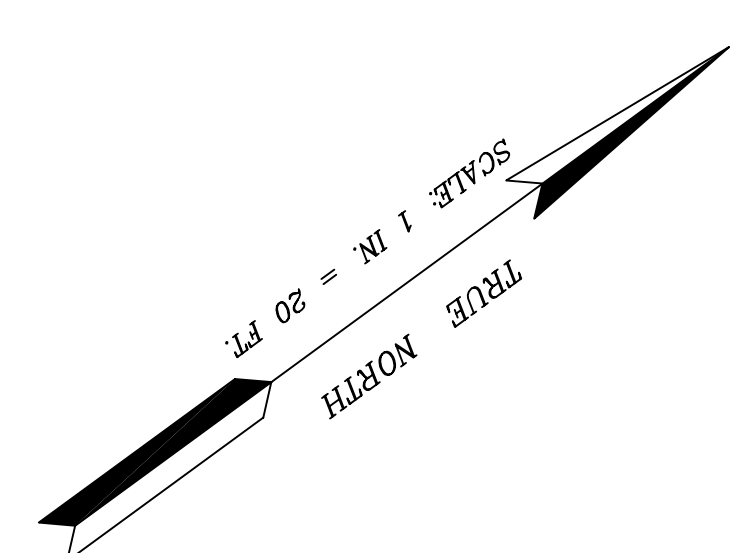




**TOTAL WETLAND AREA CREATED  
BY THE 2 ONSITE DETENTION  
BASINS = 17,917 S.F.**

**DETENTION BASIN AREA = 11,048 S.F.**

**DETENTION BASIN AREA = 6,869 S.F.**



SCALE: 1 IN. = 20 FT.

**GRADING PLAN**

SCALE: 1 IN. = 20 FT.

**APPROXIMATE EARTHWORK QUANTITIES**  
THE EARTHWORK QUANTITIES SHOWN HEREIN ARE FOR SECURING THE GRADING PERMIT ONLY. THE CONTRACTOR SHALL VERIFY THE QUANTITIES AND COMPLETE THE GRADING AS SHOWN ON THE PLAN.  
CLEARING AND GRUBBING = 212 ACRESF.  
EMBANKMENT = 6,792 C.Y.  
EXCAVATION = 113 C.Y.

**LEGEND:**  
300.0 EXISTING GRADE SPOT ELEVATION  
300 EXISTING CONTOUR LINE  
300 FINISH GRADE CONTOUR LINE

REVISION	DATE	NOTE

DESIGNED BY: S.A.O.  
DRAWN BY: L.C.O.  
PROJECT NO.: 2006-52  
DRAWING NAME: GRAD-00  
DATE: 8-26-07 (PERMIT SUBMITTAL)

SHEET NO. **C-3** OF SHEETS

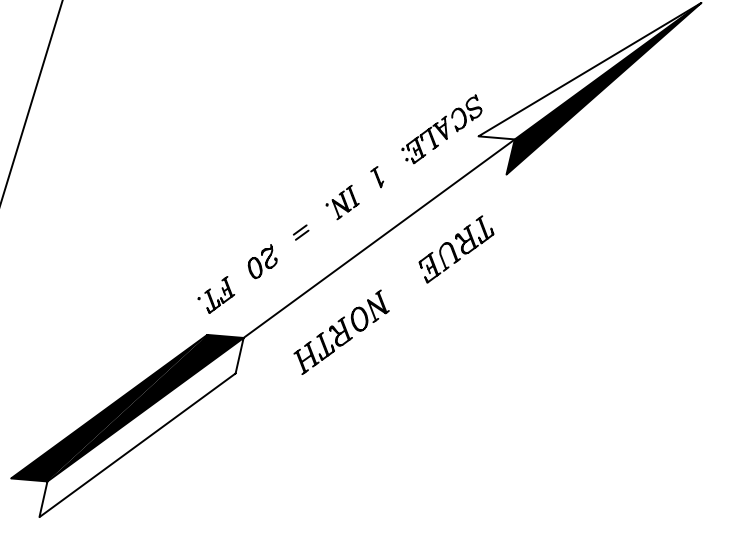
**MAUI MEDICAL PLAZA**  
TMK: (2) 3-7-11: 28  
KAHALUI, MAUI, HAWAII  
GRADING PLAN

THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF HAWAII. I CERTIFY THAT I AM THE DESIGNER OF THIS WORK AND I AM NOT PROVIDING ANY SERVICES TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF OTOMO ENGINEERING, INC.

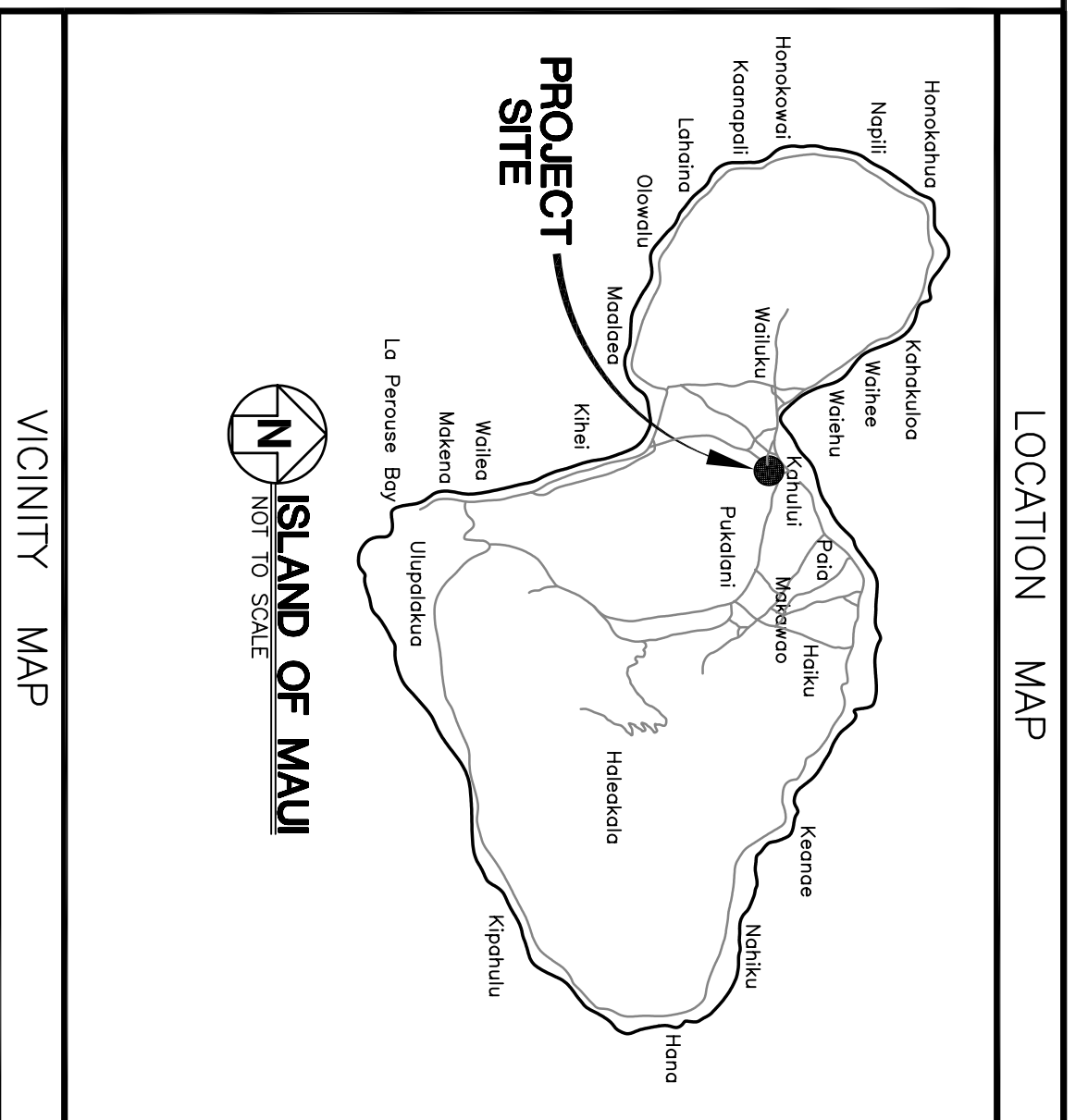
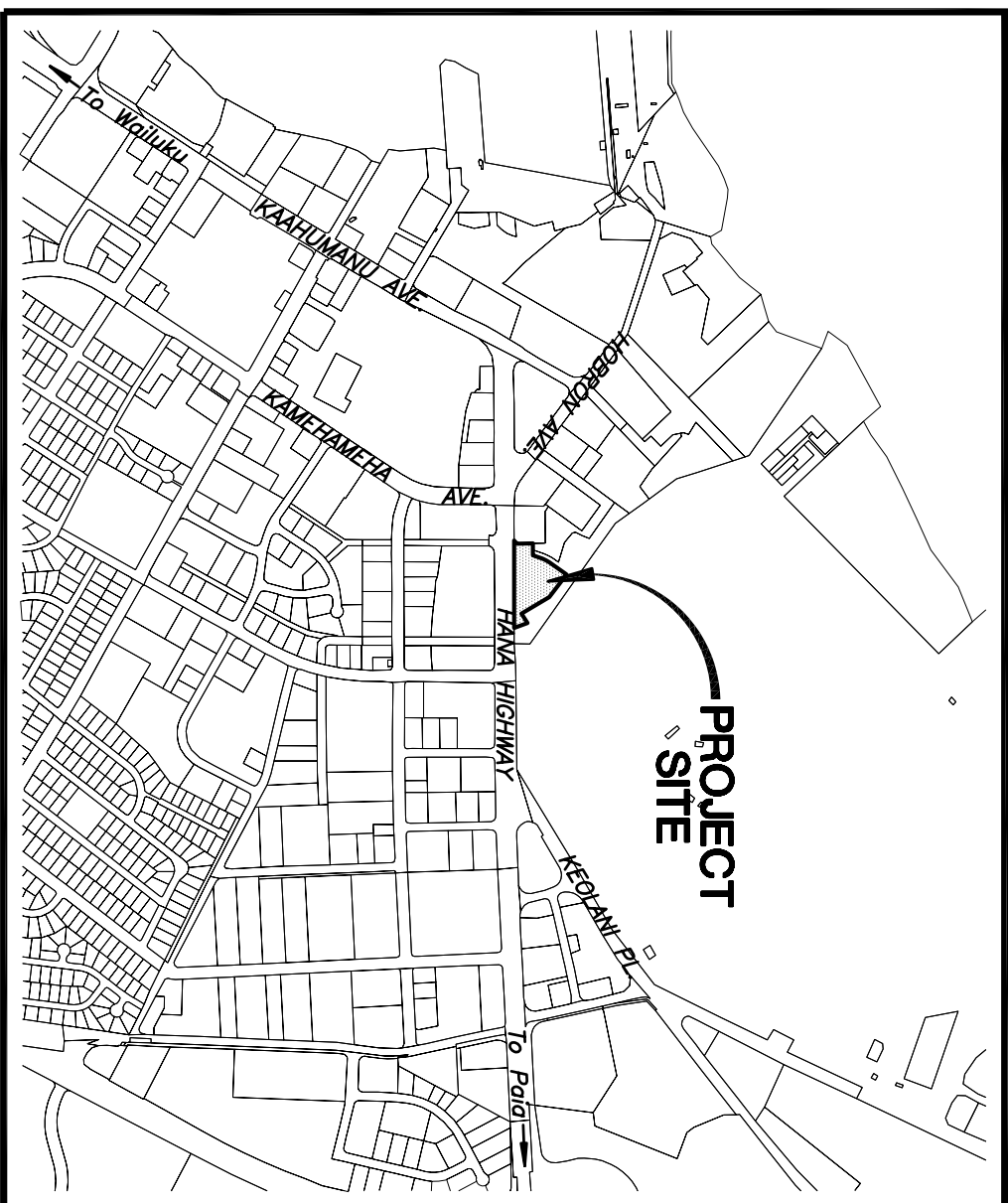
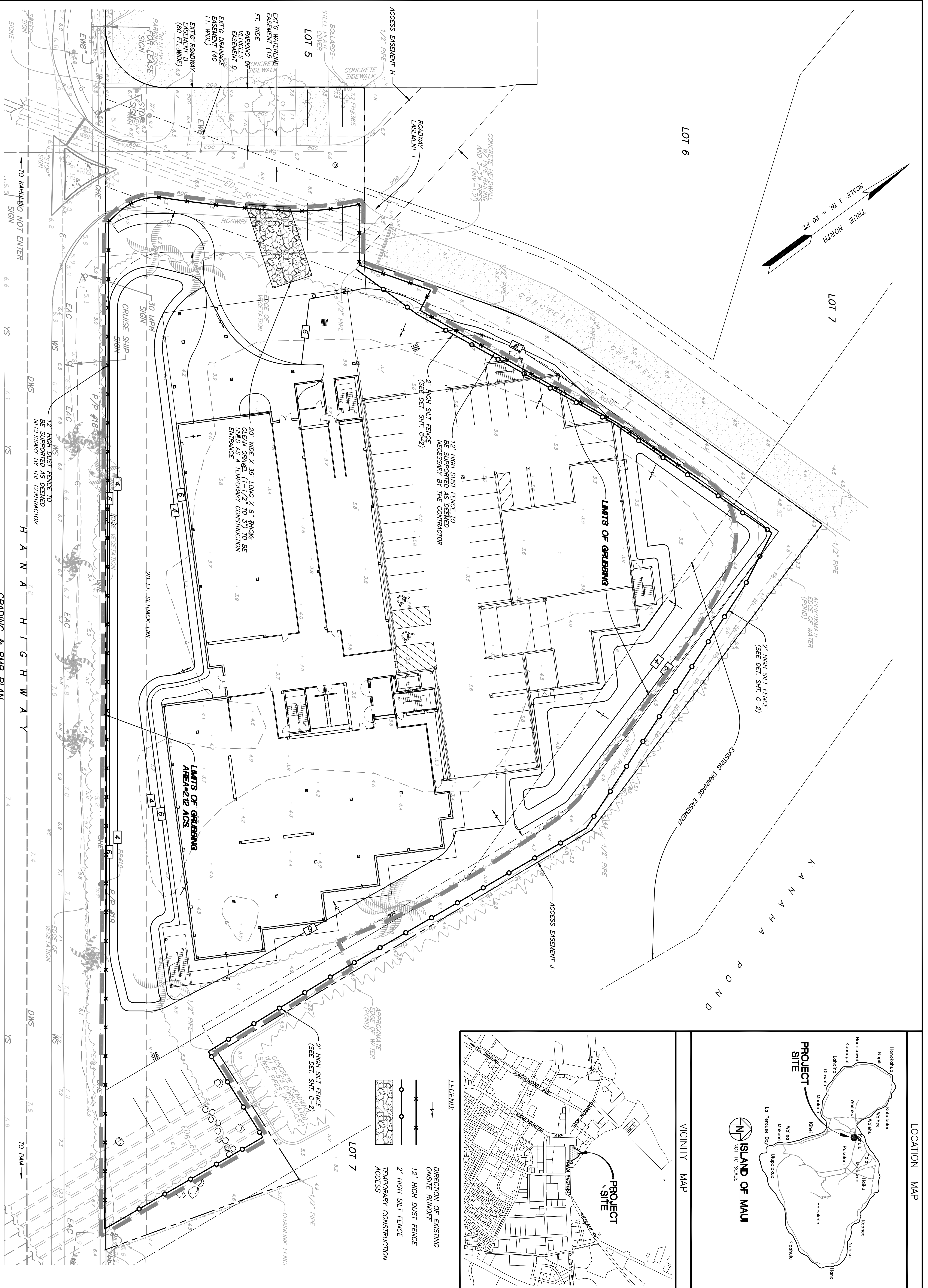
Signature: *Stacy A. Otomo* Date: 7-31-07  
Professional Engineer No. 5113-C  
HAWAII, U.S.A.

**OTOMO ENGINEERING, INC.**  
CONSULTING CIVIL ENGINEERS  
100 S. WAILANA STREET, SUITE 300  
KAHALUI, MAUI, HAWAII 96732  
PHONE: (808) 242-0022  
FAX: (808) 242-5779





SCALE 1 IN. = 20 FT.

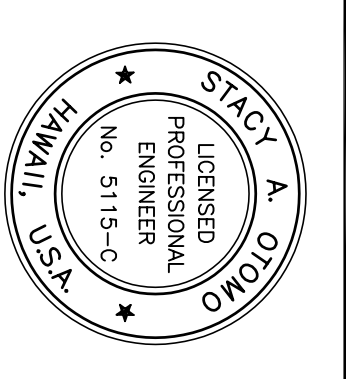


- LEGEND:**
- x—x— DIRECTION OF EXISTING ONSITE RUNOFF
  - o—o— 12' HIGH DUST FENCE
  - x—x— 2' HIGH SILT FENCE
  - x—x— TEMPORARY CONSTRUCTION ACCESS

# MAUI MEDICAL PLAZA

**TMK: (2) 3-7-11: 28**  
**KAHALUI, MAUI, HAWAII**  
**GRADING & BMP PLAN**

**OTOMO**  
 ENGINEERING, INC.  
 CONSULTING CIVIL ENGINEERS  
 300 S. WAILUKU STREET, SUITE 303  
 WAILUKU, HAWAII 96793  
 PHONE: (808) 242-0032  
 FAX: (808) 242-5779



THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER UNDER SECTION 16-115-2 OF THE HAWAIIAN CONSTITUTION AND CHAPTER 16-115 OF THE HAWAIIAN STATUTES, AND I AM NOT PROVIDING ANY SERVICES TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF OTOMO ENGINEERING, INC. BEFORE PROCEEDING WITH THE WORK.

Signature: Stacy A. Otono  
 Date: 7-31-07

REVISION	DATE	NOTE

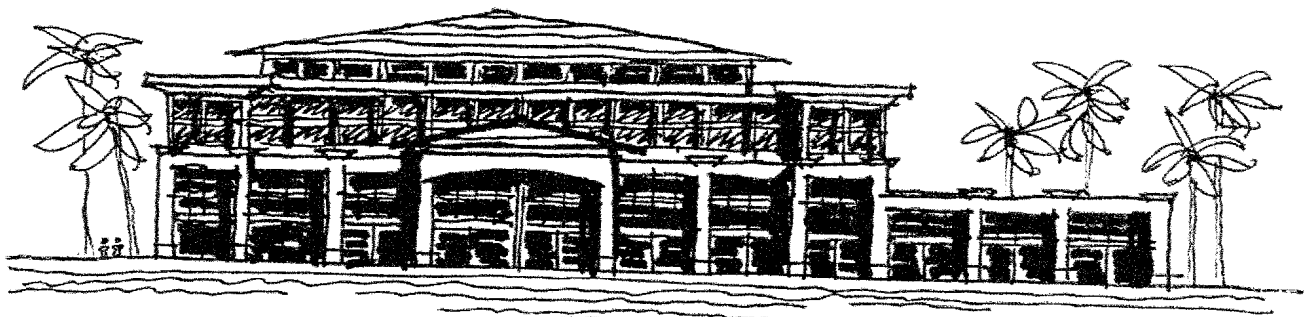
DESIGNED BY: S.A.O.  
 DRAWN BY: L.C.O.  
 PROJECT NO.: 2006-52  
 DRAWING NAME: GRADING & BMP  
 DATE: 8-20-07 (PERMIT SUBMITTAL)

SHEET NO. **C-1** OF SHEETS





KANAHA POND/HALEAKALA SIDE



HANA HIGHWAY SIDE

**SCHEME 'A' - CONCEPT PHASE**  
KANAHA PROJECT, LOT 8

R. HARTMAN ARCHITECT LLC

07-12-06  
PAGE 1 OF 1







## ABSTRACT

### Mitigation for .95 acres of altered wetland at Maui Medical Plaza Kahului, Maui on Lot 8 of the Kanaha Industrial Subdivision

#### A. Goals and objectives

The goal is to establish a successful wetlands system of low stature, native sedgeland vegetated with Hawaiian plants at the Kanaha Pond Wildlife Sanctuary (KPWS) to serve as mitigation for .95 acres of altered wetland on Lot 8 of the Kanaha Industrial Subdivision (Figure 1: Site locus; Figure 2: Aerial photograph of the site).

Figure 3 shows the proposed wetland restoration area.

##### 1. Functions lost at impact site

The Jurisdictional Determination (III B. 2) found that the wetlands on Lot 8 of the Kanaha Industrial Subdivision were of “ low biologic/ecologic quality” but that they benefit the watershed and downstream receiving waters. “These wetlands ... filter and reduce the amount of chemicals (pollutants, debris, solid waste, etc) that are in the surrounding area from entering the water resources in the nearby area.” They are assessed as “having value for the protective function they perform in conserving the water quality of downstream receiving waters.”

These functions would be impaired by construction of Maui Medical Plaza.

##### 2. Functions to be gained at mitigation site

The mitigation site is currently covered by invasive date palms. The plan is to remove the date palms to achieve approximately 1 acre of wetland that will provide filtration for contaminated stormwater and groundwater from up gradient in the watershed. The restoration will also provide wildlife habitat and increase the area of indigenous plant species to enhance the value of the Kanaha Pond Wildlife Sanctuary.

##### 3. Overall watershed improvements

These wetlands will add to the KPWS capacity to filter and reduce the amount of chemicals that flow from Hana Highway and the Kanaha Industrial Subdivision toward the receiving waters.

#### B. Baseline Information

##### 1. Impact Site

Lot 8 is 2.5 acres of industrial land with 595 feet of frontage on Hana Highway. It is a triangular lot, with a 50’ wide drainage canal on the east separating the site from Kanaha Pond Wildlife Sanctuary and a 20’ wide canal on the north separating the site from industrial property. Site elevations range from ~3.5’ to 6’ MSL. The Soil Survey maps indicate that the underlying soils on the property are Jaucus Sand, Saline, 0 to 12% (JcC). The berm areas on the site perimeter appear to be dredged spoils from the excavated canals. There are shallow deposits of various soils, including a shallow clay layer, in portions of the interior of the lot. Of the total land area, 41,149 sq. ft. (.95 acres) is jurisdictional wetlands (see Figure 1). The site is vegetated with non-native shrubs, *Pluchia*, grasses, *Distichlis spicata* and a few trees.

Lot 8 has .95 acres of jurisdictional wetland of “ low biologic/ecologic quality.” The wetlands store and filter surface water runoff from up gradient properties, specifically from Hana Highway. The Hana highway edge of the property may be a source of persistent inputs of common roadway pollutants that are washed unto the site during storm events.

Lot 8 is within sight of the Kanaha Pond Wildlife Sanctuary but is separated from it by a man-made canal and does not abut it. Restoration of a degraded acre at Kanaha Pond Wildlife Sanctuary would result in higher value wetlands than can be accomplished on Lot 8 and add value to a public asset.

## 2. Mitigation Site

### a. Soils, vegetation hydrology

### b. Historic and existing land uses & resources impacted

Duvall and Alexander (2005) reported that since 1988 there have been varying ecosystem level restoration efforts on 50 acres of the 235 acre Kanaha Pond Wildlife Sanctuary. These included broad-scale native coastal plant restoration and protection to give habitat improvement for three federally-listed endangered waterbirds: Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot (*Fulica alai*) and Hawaiian duck (*Anas wyvilliana*).

The restoration focused on:

- establishment of Hawaiian threatened and endangered plant species on parallel unconsolidated coastal sand dunes;
- additional wetland creation for kaluha (*Bulboschoenus maritimus*) and makaloa (*Cyperus laevigatus*) sedgeland enhancement from sourbush (*Pluchea indica*; *P. symphitifolia*) infestations; and
- broad scale replacement of alien vegetation with low stature native dune or wetland species.

## C. Mitigation Site Selection and justification

### 1. Site selection

While it may be technically feasible to mitigate for the construction of Maui Medical Plaza on Lot 8 of the Kanaha Industrial subdivision, the created/restored wetland would be of low value compared to what could be accomplished at the nearby Kanaha Pond Wildlife Sanctuary.

### 2. Success/future land use compatibility

Because the Kanaha Pond Wildlife Sanctuary’s overall restoration plan has been reviewed by the ACOE and because the site is managed by Hawaii’s Department of Land and Natural Resources, the mitigation restoration proposed has a very high likelihood of success.

## D. Mitigation Work Plan

### 1. Location

The proposed mitigation site is shown in Figure 3.

### 2. Construction

#### a. Planning and mapping

- Confirm size of date palm area and location within boundaries of Kanaha Pond Wildlife Sanctuary
- Confirm that no rare, endangered or threatened species exist on site



## DRAFT

- Take soil borings to identify depth to ground water/hydric soils ~ 15 to 20 distributed over site
- Determine disposal strategy for vegetation to be removed (shredding, composting, removal from site and any permits that may be needed)
- Estimate amount of soil/overburden to be removed, if any, to achieve desired wetland types & map (plan & profile)
- Develop a soil storage site or application site; if it is to be removed from the site determine permits needed
- Develop a vegetation list appropriate to each wetland type and determine planting density

### b. Construction

- Assign field manager to confirm all site work conforms to plan and follows best management practices
- Schedule construction outside of breeding season for the endangered birds (Sept. 1 through March 30)
- Determine if special equipment is needed to avoid soil compaction, etc.
- Remove vegetation by cutting the palms off as low as possible and grinding the stumps with a tub grinder
- Remove overburden/fill/excess soil
- Confirm elevations adequate for wetland types chosen
- Plant vegetation; seed with seed heads from native plants adjacent to the mitigation site

### c. Planned hydrology, vegetation, soils, buffers

The mitigation goal is to restore the wetland area now vegetated with date palms to low stature, native sedgeland with Hawaiian plants (for example, Makaloa and Kaluha). The area adjacent to the date palm site within the sanctuary already has the desired hydrology and vegetation.

- Hydrology: The existing hydrology at the site appears to be appropriate for the proposed vegetation; therefore no change in hydrology is proposed.
- Vegetation: List species to be planted/seeded
- Soils: remain the same
- Buffers: the site is within a permanently protected area. Date palms on the nearby Lot 8 of Kanaha Industrial subdivision will be eradicated.

## E. Performance Standards

### 1. Success criteria

- Eradication of date palms
- Re-establishment of native Hawaiian vegetation
- Hydrology comparable to adjacent sedgeland [install monitoring wells; develop metric]
- Upon completion of construction, all slopes, soils, substrates, and constructed features within and adjacent to the area have been stabilized.
- The water table should be within 12" of the surface for at least two weeks during the growing season in the year following construction.

2. Functions lost at impact site; gained at mitigation site will be shown in Table 1.

3. Describe soils, vegetation and hydrology parameters

## F. Site Protection and maintenance

### 1. Parties and responsibilities

The Kanaha Pond Wildlife Sanctuary is owned by the State of Hawaii and managed by the Department of Land and Natural Resources. Management and maintenance responsibility lies within that department.

### 2. Evidence of legal protective measures: Refer to 1952 enabling legislation

### 3. Maintenance plans and schedule: To be developed with KPWS staff

## G. Monitoring Plan

### 1. Schedule, parties, responsibilities

Maui Medical Plaza LLC will hire a monitoring contractor and will pay for monitoring.

Term of monitoring: 5 years

Report Frequency: Years 1,2,3 and 5

Monitoring Frequency: Stabilization inspection upon completion of construction; monitoring well inspection and data recording in the year following construction; Vegetation inspection in August of Years 1, 2, 3, 5.

The monitoring contractor will notify the Adaptive Management Team when monitoring well data and vegetation data will be collected.

### 2. Data collected assessment tools and methods

a. Stabilization inspection: Upon completion of construction, all slopes, soils, substrates, and constructed features within and adjacent to the area will be assessed to confirm they have been stabilized. This will be documented with photographs.

b. Monitoring well data will be recorded and reported for years 1,2,3 and 5 to confirm whether or not the water table was within 12” of the surface for at least two weeks during the growing season.

### c. Vegetation Sampling

**Transects** will be used to sample vegetation.

The monitoring contractor will use a point frame method for herbaceous sites and the quadrat method for shrub and tree sites.

**Point frame** is frame with strings across marked at points or with cross strings. Plant occurrence and identification is noted at each point. Frames are placed at random distances along each transect. Frame will be  $\frac{1}{4}$  m<sup>2</sup> with 20 points selected for each transect.

**Quadrats** will be 2 x 10 m in size and trees and shrubs within the quadrat recorded as dead, live or stressed. This size quadrat helps to minimize trampling on the site when plants are small. The monitoring contractor will have to walk along each transect, creating a path, but there is no need to have more trampling than absolutely necessary.

**Sampling** will be done in late summer/early fall to avoid bird breeding season.

**Photographs.** In addition to the transects, a color photograph of each transect will be taken from a height sufficient (from a 6’ step ladder placed on a high point) to get a representative picture of the wetland appearance.

**Duration.** Monitoring will be done in years 1,2,3, and 5 or until success criteria are achieved, whichever is later.

### d. Annual Report

The results of the monitoring will be summarized and submitted as a draft to the Adaptive Management Team.

### e. Assessment

## DRAFT

At the end of the 5<sup>th</sup> year, an assessment will be done of the entire site and the following items would be covered:

- Delineation
- Functions and values assessment
- Lessons learned

## H. Adaptive management plan

### 1. Parties/ responsibilities

An Adaptive Management Team will be established. The Team will meet, at a minimum, once per year after receipt of the draft annual monitoring report is available to review data and decided if remedial measures are needed. The Adaptive Management Team will review Success Criteria. If all areas are on track, the annual report will be finalized. If management actions need to be undertaken, the activities will be undertaken and the results would be included in the following year's report.

### 2. Possible Remedial measures

- Invasive species management will be triggered should invasive species be more than \_\_\_% aerial coverage of wetlands. Invasive species management techniques may include, but not be limited to, biological control, physical control (mowing, cutting, pulling), and chemical control (use of approved herbicides).
- Inadequate vegetation growth – replanting / other plants
- Inadequate hydrology – soil removal/addition

## I. Financial assurances

1. Parties: USACOE; US EPA; US Fish and Wildlife; HI Depts of Health /Land and Natural Resources; Maui Medical Plaza LLC (MMP LLC)

2. Types of assurance, contents and schedule

Draft agreement to accept mitigation at KPWS

Draft Financial plan

- a. Construction costs – to be paid by MMP LLC
- b. Monitoring costs – to be paid by MMP LLC and successor corps.
- c. Maintenance costs - to be paid by MMP LLC and successor corps.

Attachments

References

Figures

Tables







Location for proposed medical facility

Proposed Compensatory Mitigation Site



151 Hana Hwy, Kahului, HI 96732

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20°53'25.66" N 156°27'32.47" W

elev 3 ft

Eye alt 805 ft

**Regulatory Branch (CEPOH-EC-R)**  
**U.S. Army Engineer District, Honolulu**  
**Building 230**  
**Fort Shafter, HI 96858-5440**