LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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CHAIRPERSON
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ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Ref. No.: 05HD-258
Author: LD-WTM

MEMORANDUM

TO: Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control

FROM: Peter T. Young, Chairperson
Board of Land and Natural Resources

SUBJECT: **Finding of No Significant Impact (FONSI) to the Environment for Hospice of Hilo General Inpatient Facility on State Lands at Waiakea, South Hilo, Island of Hawaii; Tax Map Key:3rd/2-4-01:Portion of 24**

The Department of Land and Natural Resources, Land Division, has reviewed the comments received during the 30-day public review period and the applicant's responses to these comments for the above referenced environmental assessment. Accordingly, we have determined that this project will not have a significant environmental effect and have issued a FONSI determination. Please publish this notice in your next scheduled publication of the Environmental Notice.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the final environmental assessment.

If you have any questions, please feel free to contact Wesley T. Matsunaga at (808) 974-6203. Thank you.

Enclosures

cc: Land Board Member
Central Files
District Files

RECEIVED
'06 DEC 27 P1:56
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

2007-01-23-HA-FEA- HOSPICE OF HILO GENERAL INPATIENT FACILITY

JAN 2 3 2007

# FINAL ENVIRONMENTAL ASSESSMENT

# HOSPICE OF HILO GENERAL INPATIENT FACILITY

Portion of TMK (3rd) 2-4-1:024
Hilo, Hawai'i Island, State of Hawai'i

December 2006

Prepared for:

Hospice of Hilo
1011 Waianuenue Avenue
Hilo, Hawai'i 96720

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OFC. OF ENVIL. QUALITY CONTROL

and the

Department of Land and Natural Resources, Land Division
P.O. Box 621
Honolulu HI 96813

# FINAL ENVIRONMENTAL ASSESSMENT

# HOSPICE OF HILO GENERAL INPATIENT FACILITY

Portion of TMK (3rd) 2-4-1:024
Hilo, Island of Hawai'i, State of Hawai'i

APPLICANT:

Hospice of Hilo
1011 Waianuenue Avenue
Hilo HI 96720

APPROVING AGENCY:

Department of Land and Natural Resources, Land Division
P.O. Box 621
Honolulu HI 96813

CONSULTANT:

Geometrician Associates LLC
HC 2 Box 9575
Keaau HI 96749

CLASS OF ACTION:

Use of State Land
Use of Federal Funds

This document is prepared pursuant to:

The Hawai'i Environmental Protection Act,
Chapter 343, Hawai'i Revised Statutes (HRS), and
Title 11, Chapter 200, Hawai'i Department of Health Administrative Rules (HAR).

## TABLE OF CONTENTS

## SUMMARY OF THE PROPOSED ACTION, ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The Hospice of Hilo, a non-profit charitable organization, proposes to lease a 3.5-acre portion of a 39.456-acre, State-owned parcel in Hilo, County of Hawai'i and construct a new general inpatient facility. Hospice of Hilo provides end-of-life care for residents of East Hawai'i, and the proposed project would allow for extension of hospice services to provide acute hospice care for inpatients. The new facility will be a 12-bed, single-story homelike hospice center with attractively landscaped grounds and will comprise the following elements:

- Staff and Administrative Offices;
- Conference Rooms and Office/Outreach Space;
- Multi-Denominational Chapel and Meeting Room;
- Laundry and Storage Rooms;
- Visitor and Children Meeting Rooms;
- Staff and Visitor Restrooms;
- File and Equipment Storage Rooms; and
- Parking for 36 vehicles, with several ADA accessible stalls.

Areas for future expansion of patient rooms (to a total maximum of 18) and parking have been identified. Access to the facility would be via a single driveway off of Kapiolani Street. The parking lot will have two turn-around areas for emergency vehicles. Landscaping will be an integral component of the facility and will provide a pleasant atmosphere and an attractive visual buffer for the adjacent residences along Mohouli Street.

Because construction will involve disturbance of more than one acre, the contractor would be required to obtain an NPDES permit and develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to contain sediment and storm water runoff during construction. The contractor would also be instructed to comply with provisions of Hawai'i Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, "Fugitive Dust", and Chapter 10, "Erosion and Sedimentation Control," of the Hawai'i County Code. Sensitive receptors to noise exist (i.e., nearby residences) and the contractor will be required to consult with the Department of Health, and, if appropriate, obtain a permit per Title 11, Chapter 46, HAR (Community Noise Control) prior to construction, which may include various mitigation measures.

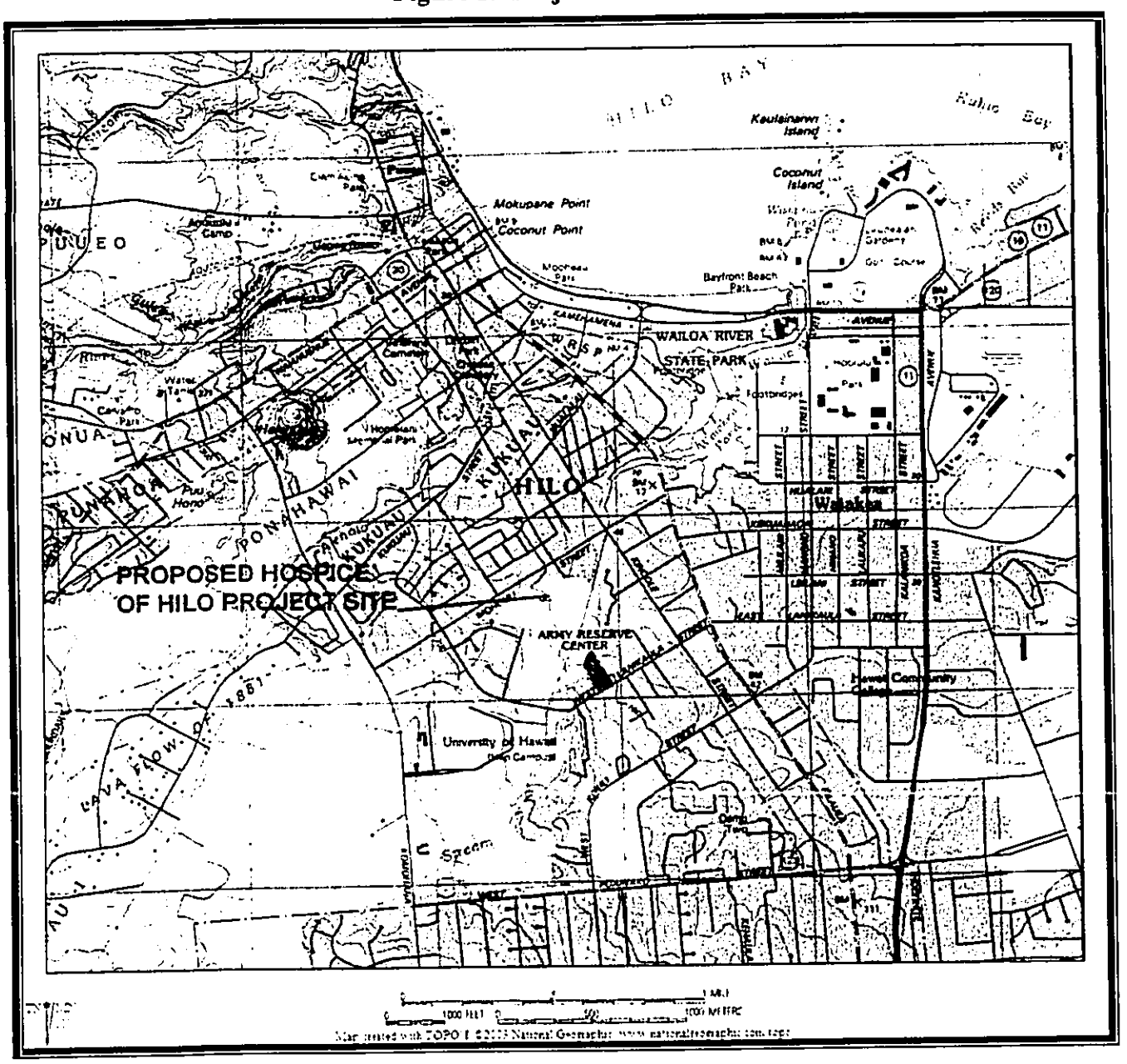
Archaeological and cultural surveys have determined that no significant historic sites or cultural resources are present; if archaeological resources or human remains are encountered during land-altering activities associated with construction, work in the immediate area of the discovery would be halted and the State Historic Preservation Division will be contacted.

## PART 1: PROJECT DESCRIPTION, PURPOSE AND NEED AND ENVIRONMENTAL ASSESSMENT PROCESS

### 1.1 Project Location

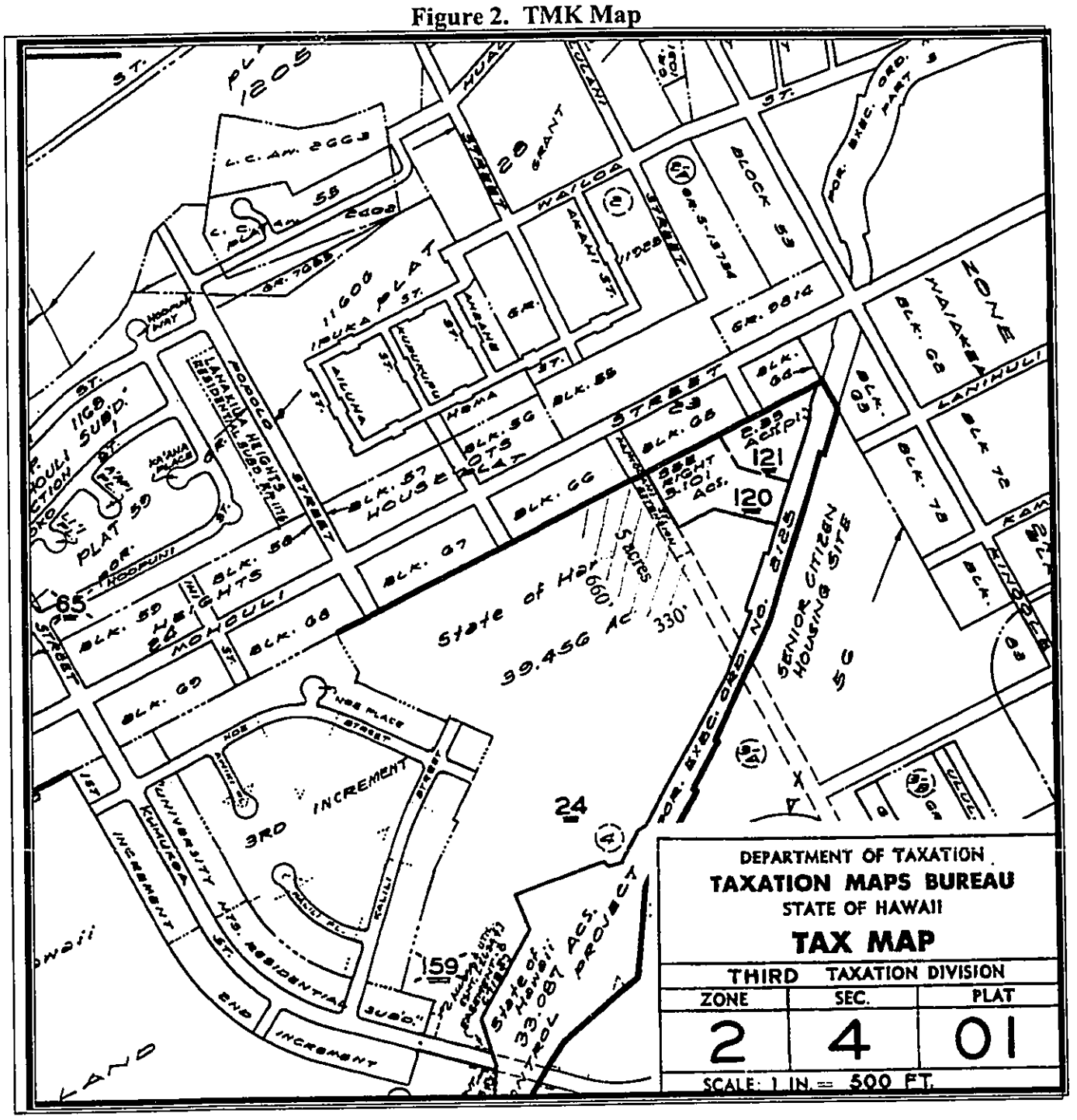
The Hospice of Hilo, a non-profit charitable organization, proposes to lease a 3.5-acre portion of a 39.456-acre property and construct a new general inpatient facility. The property is near the intersection of Kapiolani and Mohouli Streets, Hilo, County of Hawai'i (N 19 deg 42.582 min, W 155 deg 4.976 min) (Figs. 1-2).

**Figure 1. Project Location**



The project site is presently vacant and undeveloped and is accessed by Kapiolani Street, a two-lane County Road. The parent property is owned by the State of Hawai'i and designated for use by the University of Hawai'i at Hilo (UHH). It has not yet been determined whether the lessor will be the Land Division of the Department of Land and Natural Resources (DLNR) or UHH. There is a potential for a partnership between Hospice and the new School of Pharmacy or nursing program at UHH.

**Figure 2. TMK Map**



## 1.2 Project Description

Hospice of Hilo has been welcomed by the community and has grown from serving 47 patients who utilized Hospice's program of care in 1992 to 239 patients in 2005. As Hospice of Hilo has matured, it has become clear that providing acute hospice care for inpatients could successfully complement its existing services. Currently, if a patient does not have a care giver in the home or a care giver who is physically and mentally capable of providing the care, the client has the option of going into one of three local long term care facilities in East Hawai'i, or hiring private care givers, which can be very expensive.

The proposed project would extend Hospice of Hilo's program of end-of-life, palliative care for the growing population of the Big Island, including its primary service area, the eastern and southern portions of Hawai'i County. Hospice of Hilo's current facility site on Waianuenue Avenue is too small for facility expansion or new construction.

The new facility will be a 12-bed, single-story homelike hospice center with four wings connected by central hallways and attractively landscaped grounds. It will comprise the following elements (Appendix 1, Site Plan):

- Staff and Administrative Offices;
- Conference Rooms and Office/Outreach Space;
- Multi-Denominational Chapel and Meeting Room;
- Laundry and Storage Rooms;
- Visitor and Children Meeting Rooms;
- Staff and Visitor Restrooms;
- File and Equipment Storage Rooms; and
- Parking for 36 vehicles, with several ADA accessible stalls.

The center will have twelve furnished private suites, each with a sleeping and sitting area for the patient, an ample closet, a partitioned sleeping area for a visiting family member and a private bath specially designed to accommodate the needs of the patient. Health care fixtures and equipment will be concealed in cabinets and in the walls. Suites will be designed with provisions for individual temperature, noise and air quality control. Each patient area will have direct access to an outside screened lanai.

The front of the house will include spacious entry, living, dining, food preparation, meditation and sunroom areas for use by patients, families and visitors. These areas will encourage socialization and interaction and will enhance the homelike ambience of the center.

Integrated into the design of the center will be work and storage areas, offices and meeting rooms for use by the professional staff and volunteers. These areas will allow and support the provision of core services by physicians, nurses, social workers, nurse-aides, spiritual and bereavement counselors, volunteers, administrators and other support staff.

Areas for future expansion of patient rooms (to a total maximum of 18) and parking have been identified. Access to the facility will be via a single driveway off of Kapiolani Street. The parking lot will have two turn-around areas for emergency vehicles. Landscaping will be an integral component of the facility and will provide a pleasant atmosphere and an attractive visual buffer for the adjacent residences along Mohouli Street.

## 1.3 Environmental Assessment Process

This Environmental Assessment (EA) process is being conducted in accordance with Chapter 343 of the Hawai'i Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawai'i Administrative Rules (HAR), is the basis for the environmental impact process in the State of Hawai'i. According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria. If, after considering comments to a Draft EA, the approving agency concludes that no significant impacts would be expected to occur, then the agency issues a Finding of No Significant Impact (FONSI), and the action will be permitted to occur. If the agency concludes that significant impacts are expected to occur as a result of the proposed action, then an Environmental Impact Statement (EIS) will be prepared before the action proceeds. Parts 4 and 5 of this EA present the analysis and anticipated finding (for the Draft EA) and the final finding (for the Final EA).

Separately, environmental documentation in conformance with the National Environmental Policy Act (NEPA) and the implementing regulations of the U.S. Department of Housing and Urban Development (HUD) for NEPA, at 24 CFR Part 58, is also being undertaken. A HUD Environmental Review record under HUD's Community Development Block Grant Program (CDBG) will be prepared along with a NEPA Environmental Assessment. The project will also include an individual review for consistency under the Coastal Zone Management Program.

## 1.4 Public Involvement and Agency Coordination

The following agencies and organizations were consulted in development of this document.

Federal:
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers

State:
- Department of Land and Natural Resources, Director
- Department of Land and Natural Resources, Historic Preservation Division
- Department of Land and Natural Resources, Land Division, Hawaii Island Office
- Office of Hawaiian Affairs, Hilo Office
- University of Hawai'i at Hilo

County:
Planning Department
Public Works Department
Police Department
County Council

Private:
Hawaiian Civic Club of Hilo
Christ Lutheran Church
Adjacent residential property owners (14)

Copies of communications received during preconsultation are contained in Appendix 4. Other than a phone call from one neighbor concerning archaeological sites outside of the project area, residents provided no phone or written responses to consultation letters. The *Hawai'i Tribune Herald* covered the project in front page story of October 12, 2006, which provided the community with information (see App. 5). A meeting of the Board of Land and Natural Resources will provide additional opportunity for additional public input.

Appendix 5 contains written comments on the Draft EA and the responses to these comments. Various places in the EA have been modified to reflect input received in the comment letters; additional or modified non-procedural text is denoted by double underlines, as in this paragraph.

## PART 2: ALTERNATIVES

### 2.1 No Action

Under the No Action Alternative the new facility would not be constructed. While the No Action Alternative would avoid direct and physical impacts to the project site, the site is highly suitable for the intended use. Additionally, the services Hospice of Hilo provides to its patients and their families would at some point be inadequate. Patients and their families may be forced to seek inadequate and more costly substitutes for hospice care. Because the No Action Alternative would prevent Hospice of Hilo from the effective pursuit of its mission, Hospice of Hilo considers this alternative unacceptable.

### 2.2 Alternative Locations or Strategies

Hospice of Hilo's current site on Waianuenue Avenue is too small for either facility expansion or new development. Because the project site is suitable for the intended use and the proposed use is consistent with planned State and County uses for the area, other alternative sites are not considered in the EA in depth, although an extensive process of alternative evaluation was undertaken in initial project planning.

Hospice of Hilo is non-profit agency with a limited budget serving critical community needs. Hospice looked at purchasing private land, but the cost was prohibitive and would have meant monies would have had to be spent on the land instead of on much-needed facilities for those at the end of their lives, and the project would have been much more difficult to bring to fruition. The use of government lands, therefore, appeared to be clearly justified and appropriate. The County has only a very limited extent of lands in this area. The applicant therefore discussed with the State land agent a number of available State parcels in the Hilo area and analyzed them with respect to access, cost of development, compatibility with adjacent land uses and planned State uses, and environmental impact. One choice was land in Pi'ihonua adjacent to the Hospice headquarters. Unfortunately the remaining land in this area consists of small remnants that are steep and/or have access problems and are thus difficult to develop. There was one acceptable 11-acre parcel above Hale Anuenue, but this was being sought by another non-profit agency. Another potential site was a large parcel along the north side of the Mohouli Street Extension, close to where the County Fire Department is considering placing a new administration/training office. However, the nature of Hospice's service require a residential/quiet setting, and the heavily traveled Mohouli Street and the potential proximity of a fire station were not favorable factors. Very few other unplanned State parcels with reasonable access and few environmental problems exist. Although the current site is part of land that had actually been identified for University use, all parties realized that the Hospice facility could have a symbiotic relationship with UHH's proposed nursing program.

## PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

*Basic Geographic Setting*

The proposed lease area is referred to in this EA as the *project site*. The term *project area* is used to describe the general environs of this portion of Hilo.

The project site is located at approximately 75 to 110 feet in elevation near the intersection of Kapiolani and Mohouli Streets (see Fig. 1). The vegetation of the project area has been extensively modified for agriculture and pasture, and the project site itself is covered primarily with a secondary weedy forest and grassland. The average maximum daily temperature in this part of Hilo is approximately 75 degrees F, with an average minimum of 65 degrees, and annual rainfall averages approximately 150 inches (U.H. Hilo-Geography 1998:57). Adjacent land use is mixed, with residential areas directly adjacent to the north, Christ Lutheran Church located directly across Kapiolani Street, and the remainder of adjacent lands (i.e., lands of the parent parcel) vacant and undeveloped. These lands have been identified by the State of Hawai'i for use in the future by the University of Hawai'i at Hilo.

### 3.1 Physical Environment

#### 3.1.1 Geology, Soils and Geologic Hazards

*Environmental Setting*

The project site is located in the ahupua'a of Waiākea, on the lower flank of Mauna Loa volcano. The surface consists of weathered Holocene-era (750 to 1,000 years old) basalt lava flows from Mauna Loa of the Ka'u Basalt series (Wolfe and Morris 1996). The project site soil is classified by the Natural Resources Conservation Service (formerly Soil Conservation Service) as Keaukaha extremely rocky muck on 6-20% slopes, an organic and strongly acid soil that is approximately 0 to 8 inches thick, with about 25% of the area occupied by lava outcrops. Its capability subclass is VIIs, which means that this soil has very severe limitations that make it very unsuited for cultivation, and restrict its use to mainly pasture and woodland or wildlife (U.S. Soil Conservation Service 1973).

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. Volcanic hazard assessed by the United States Geological Survey in this area of Hilo as Zone 3 on a scale of ascending risk 9 to 1 (Heliker 1990:23). The high hazard risk is based on the fact that Mauna Loa is an active volcano. Volcanic hazard Zone 3 areas have had 1-5% of their land area covered by lava or ash flows since the year 1800, but are at lower risk than Zone 2 areas because of their greater distance from recently active vents and/or because the local topography makes it less likely that flows will cover these areas.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Probability Rating (*Uniform Building Code, 1997 Edition*, Figure 16-2). Zone 4 areas are at risk from major

earthquake damage, especially to structures that are poorly designed or built. The project site does not appear to be subject to subsidence, landslides or other forms of mass wasting.

*Impacts and Mitigation Measures*

The project site is susceptible to lava flow and seismic hazard. However, as much of the island has a similar hazard, geologic hazards impose no particular constraints on the proposed action, and the proposed facilities are not imprudent to construct. Project design takes soil properties into account. All facilities will be built in conformance with the Uniform Building Code's seismic standards.

### 3.1.2 Drainage, Water Features and Water Quality

*Existing Environment*

The project area is approximately one-half mile from Waiākea Pond and the Wailoa River State Park, the nearest surface water body (see Fig. 1). The Waiākea Flood Control Channel, an artificially channelized intermittent stream, is located about 300 feet south of the southern edge of the project site. No streams, pools, springs, or wetlands appear to be present on the site itself. The Flood Insurance Rate Maps (FIRM) 880C (10/6/92) show that the entire project site is in Flood Zone X, outside of the 100-year flood plain. The nearest area designated as a flood zone is the Waiākea Flood Control Channel itself, designated zone "AE" (FEMA 2006).

*Impacts and Mitigation Measure*

Because of the environmental setting, the risks for flooding or impacts to water quality are negligible or nonexistent. No impacts to stream banks, stream waters, wetlands, or any other waters of the U.S. will occur, as none are present.

In order to minimize the potential for sedimentation and erosion, the contractor shall perform all earthwork and grading in conformance with Chapter 10, Erosion and Sediment Control, Hawai'i County Code. Because the project will disturb more than one acre of soil, a National Pollutant Discharge Elimination System (NPDES) permit must be obtained by the contractor before the project commences. This permit requires the completion of a Storm Water Pollution Prevention Plan (SWPPP). In order to properly manage storm water runoff, the SWPPP will describe the emplacement of a number of best management practices (BMPs) for the project. These BMPs may include, but will not be limited to, the following:

- Minimization of soil loss and erosion by revegetation and stabilization of slopes and disturbed areas of soil, possibly using hydromulch, geotextiles, or binding substances, as soon as possible after working;
- Minimization of sediment loss by emplacement of structural controls possibly including silt fences, gravel bags, sediment ponds, check dams, and other barriers in order to retard and prevent the loss of sediment from the site;

- Minimizing disturbance of soil during periods of heavy rain;
- Phasing of the project to disturb the minimum area of soil at a particular time;
- Application of protective covers to soil and material stockpiles;
- Construction and use of a stabilized construction vehicle entrance, with designated vehicle wash area that discharges to a sediment pond;
- Washing of vehicles in the designated wash area before they egress the project site;
- Use of drip pans beneath vehicles not in use in order to trap vehicle fluids;
- Routine maintenance of BMPs by adequately trained personnel;
- Coordination of storm water BMPs and wind erosion BMPs whenever possible; and
- Significant leaks or spills, if they occur, shall be properly cleaned up and disposed of at an approved site.

### 3.1.3 Flora, Fauna and Ecosystems

*Existing Environment*

The natural vegetation of this part of Hilo was most likely lowland rain forest dominated by ʻohiʻa (*Metrosideros polymorpha*) and hala (*Pandanus tectorius*) (Gagne and Cuddihy 1990). These original communities, however, have been destroyed or heavily degraded by cattle grazing, agriculture and clearing for farms and residences, and the vegetation of the project area is now either managed (i.e., farms, pasture or landscaped grounds) or adventive "communities" of various alien weeds. A walk-through biological survey of the project site was performed by botanist Layne Yoshida on April 1, 2006 and May 29, 2006. Table 1 is a list of plant species detected.

Many of the plants listed are cultivated and ornamental species used in landscaping and have apparently escaped from adjacent properties. No listed, candidate or proposed endangered plant species were found during the survey. In terms of conservation value, no botanical resources requiring special protection are present (USFWS 2000).

Hawaiian Hawks (*Buteo solitarius*) and Hawaiian hoary bats (*Lasiurus cinereus semotus*) are often seen in the general area. Both are listed endangered species, but they are commonly observed in many parts of East Hawaiʻi. The native trees favored by Hawaiian Hawks for nesting are not present in the alien vegetation on the project site and immediately surrounding areas. The urban setting of the project site lessens its value for bat habitat.

*Impacts and Mitigation Measures*

Because of the lack of native ecosystems and threatened or endangered plant species, no adverse impacts to botanical resources would occur as a result of clearing and improvements. As the area does not represent valuable habitat, no adverse impact to Hawaiian Hawks or Hawaiian hoary bats, or any other native animal, is expected.

**Table 1**
**Plant Species List**

| Scientific Name | Family | Common Name | Life Form | Status |
|---|---|---|---|---|
| Ageratum conyzoides | Asteraceae | Ageratum | Herb | A |
| Alstonia macrophylla | Apocynaceae | Alstonia | Tree | A |
| Archontophoenix alexandrae | Arecaceae | Alexandra Palm | Tree | A |
| Ardisia crenata | Myrsinaceae | Hilo Holly | Shrub | A |
| Ardisia elliptica | Myrsinaceae | Shoe Button Ardisia | Tree | A |
| Begonia sp. | Begoniaceae | Begonia | Herb | A |
| Blechnum appendiculatum | Blechnaceae | Hammock Fern | Fern | A |
| Brachiaria mutica | Poaceae | California Grass | Herb | A |
| Canavalia sp. | Fabaceae | Mauna Loa | Vine | I(?) |
| Cecropia obtusifolia | Cecropiaceae | Trumpet Tree | Tree | A |
| Cestrum nocturnum | Solanaceae | Night Jasmine | Shrub | A |
| Chamaesyce hypericifolia | Euphorbiaceae | Graceful Spurge | Herb | A |
| Chloris sp. | Poaceae | Fingergrass | Herb | A |
| Christella dentata | Thelypteridaceae | Cyclosorus | Fern | A |
| Citrus sp. | Rutaceae | Orange/ Lime | Tree | A |
| Clusia rosea | Clusiaceae | Autograph Tree | Tree | A |
| Cocos nucifera | Arecaceae | Coconut | Tree | A |
| Codiaeum variegatum | Euphorbiaceae | Croton | Shrub | A |
| Comellina diffusa | Commelinaceae | Honohono | Herb | A |
| Cordyline fruticosa | Agavaceae | Ti | Shrub | A |
| Cuphea carthagenensis | Lythraceae | Tarweed | Herb | A |
| Davallia sp. | Davalliaceae | Hare's Foot Fern | Fern | A |
| Desmodium triflorum | Fabaceae | Desmodium | Herb | A |
| Dichorisandra thyrsiflora | Commelinaceae | Blue Ginger | Herb | A |
| Dieffenbachia sp. | Araceae | Dumb Cane | Shrub | A |
| Digitaria sp. | Poaceae | Crabgrass | Herb | A |
| Dioscorea pentaphylla | Dioscoreaceae | Yam | Vine | A |
| Dioscorea sp. | Dioscoreaceae | Yam | Vine | A |
| Diplazium esculentum | Athyriaceae | Paca | Fern | A |
| Dissotis rotundifolia | Melastomataceae | Dissotis | Herb | A |
| Dracaena marginata | Agavaceae | Money Tree | Shrub | A |

| Table 1, continued | | | | |
|---|---|---|---|---|
| **Scientific Name** | **Family** | **Common Name** | **Life Form** | **Status** |
| Dracaena sp. | Agavaceae | Dracaena | Shrub | A |
| Drymaria cordata | Caryophyllaceae | Pilipili | Herb | A |
| Elusine indica | Poaceae | Wiregrass | Herb | A |
| Epipremnum pinnatum | Araceae | Taro Vine | Vine | A |
| Eragrostis sp. | Poaceae | Eragrostis | Herb | A |
| Eragrostis tenella | Poaceae | Love Grass | Herb | A |
| Eugenia uniflora | Myrtaceae | Surinam Cherry | Shrub | A |
| Ficus microcarpa | Moraceae | Banyan | Tree | A |
| Filicium decipiens | Sapindaceae | Fern Tree | Tree | A |
| Hedyotis corymbosa | Rubiaceae | Hedyotis | Herb | A |
| Hippobroma longiflora | Campanulaceae | Star-of-Bethlehem | Herb | A |
| Impatiens sp. | Balsaminaceae | Impatiens | Herb | A |
| Ipomoea (?) sp. | Convolvulaceae | Morning Glory | Vine | A |
| Ipomoea alba | Concolvulaceae | Moon Flower | Vine | A |
| *Ipomoea indica* | *Convolvulaceae* | *Morning Glory* | Vine | *I* |
| Kalanchoe pinnata | Crassulaceae | Air Plant | Herb | A |
| Kyllinga nemoralis | Cyperaceae | Kyllinga | Herb | A |
| Lantana camara | Verbenaceae | Lantana | Shrub | A |
| Lepisorus thunbergianus | Polypodiaceae | Pleopeltis | Fern | I |
| Lygodium japonicum | Schizaeaceae | Climbing Fern | Fern | A |
| Macaranga mappa | Euphorbiaceae | Bingabing | Tree | A |
| Mangifera indica | Anacardiaceae | Mango | Tree | A |
| Manihot esculenta | Euphorbiaceae | Cassava | Shrub | A |
| Melastoma sp. | Melastomataceae | Melastoma | Shrub | A |
| Melochia umbellata | Sterculiaceae | Melochia | Tree | A |
| Merremia tuberosa | Convolvulaceae | Wood Rose | Vine | A |
| Miconia calvescens | Melastomataceae | Miconia | Shrub | A |
| Mimosa pudica | Fabaceae | Sleeping Grass | Herb | A |
| Monstera sp. | Araceae | Monstera | Shrub | A |
| Musa sp. | Musaceae | Banana | Shrub | A |
| Nephrolepis exaltata | Nephrolepidaceae | Sword Fern | Fern | I |
| Nephrolepis multiflora | Nephrolepidaceae | Sword Fern | Fern | A |
| Odontosoria chinensis | Dennstaedtiaceae | Lace Fern | Fern | I |
| Oplismenus hirtellus | Poaceae | Basket Grass | Herb | A |
| Oxalis corniculata | Oxalidaceae | Yellow Wood Sorrel | Herb | A |
| Paederia foetida | Rubiaceae | Maile Pilau | Vine | A |
| Pandanus tectoris | Pandanceae | Hala | Tree | (I) |
| Panicum maximum | Poaceae | Guinea Grass | Herb | A |
| Panicum repens | Poaceae | Torpedo Grass | Herb | A |
| Paspalum conjugatum | Poaceae | Hilo Grass | Herb | A |
| Paspalum sp. | Poaceae | Paspalum | Herb | A |

| Table 1, continued | | | | |
|---|---|---|---|---|
| **Scientific Name** | **Family** | **Common Name** | **Life Form** | **Status** |
| Passiflora edulis | Passifloraceae | Lilikoi | Vine | A |
| Persea americana | Lauraceae | Avocado | Tree | A |
| Philodendron sp. | Araceae | Philodendron | Vine | A |
| Phlebodium aureum | Polypodiaceae | Phlebodium | Fern | A |
| Phyllantus debilis | Euphorbiaceae | Niruri | Herb | A |
| Phymatosorus grossus | Polypodiaceae | Maile Scented Fern | Fern | A |
| Pilea microphylla | Urticaceae | Artillery Plant | Herb | A |
| Polygala paniculata | Polygonaceae | Milkwort | Herb | A |
| Psidium cattleianum | Myrtaceae | Waiawi | Tree | A |
| Psidium guajava | Myrtaceae | Guava | Tree | A |
| Psilotum nudum | Psilotaceae | Moa | Herb | I |
| Pycreus polystachyos | Cyperaceae | Sedge | Herb | I |
| Raphiolepis sp. | Rosaceae | Raphiolepis | Shrub | A |
| Rhododendron sp. | Ericaceae | Azalea | Shrub | A |
| Rhodomyrtus tomentosa | Myrtaceae | Downy Myrtle | Shrub | A |
| Rubus rosifolius | Rosaceae | Thimbleberry | Herb | A |
| Sambucus mexicana | Caprifoliaceae | Mexican Elder | Shrub | A |
| Schefflera actinophylla | Arailiaceae | Octopus Tree | Tree | A |
| Schinus terebinthifolius | Anacardiaceae | Christmas Berry | Tree | A |
| Setaria palmifolia | Poaceae | Palmgrass | Herb | A |
| Spathodea campanulata | Bignoniaceae | African Tulip | Tree | A |
| Spathoglottis plicata | Orchidaceae | Malayan Ground Orchid | Herb | A |
| Sporobolus indicus | Poaceae | Dropseed | Herb | A |
| Stachytarpheta sp. | Verbenaceae | Vervain | Herb | A |
| Syngonium sp. | Araceae | Syngonium | Vine | A |
| Syzygium cumini | Myrtaceae | Java Plum | Tree | A |
| Thunbergia fragrans | Acanthaceae | White Thunbergia | Vine | A |
| Trema orientalis | Ulmaceae | Gunpowder Tree | Tree | A |
| Wedelia trilobata | Asteraceae | Wedelia | Herb | A |
| Xanthosoma sp. | Araceae | 'Ape | Herb | A |
| Youngia japonica | Asteraceae | Hawksbeard | Herb | A |
| Zingiber zerumbet | Zingiberaceae | 'Awapuhi | Herb | A |

A=Alien, I=Indigenous

### 3.1.4 Air Quality, Noise, and Scenic Resources

*Environmental Setting*

Air pollution in East Hawai'i is minimal, originating mainly from volcanic emissions of sulfur dioxide, which convert into particulate sulfate and produce a volcanic haze (vog) that occasionally blankets the area. The persistent trade winds usually keep the project area free of vog for most of the year.

Noise on the project site is low and is derived mainly from motor vehicles, with occasional noise from residential and road maintenance activities.

The project area does not contain any sites that are considered significant for their scenic character in the Hawai'i County General Plan.

*Impacts and Mitigation Measures*

Because the potential for fugitive dust emissions would exist during construction, the contractor would prepare a dust control plan compliant with provisions of Hawai'i Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, "Fugitive Dust".

Development would entail limited excavation, grading, compressors, vehicle and equipment engine operation, and construction of new infrastructure. These activities may generate noise exceeding 95 decibels at times, impacting nearby sensitive noise receptors (i.e., nearby residences along Mohouli Street). In cases where construction noise is expected to exceed the Department of Health's (DOH) "maximum permissible" property-line noise levels, contractors would obtain a permit per Title 11, Chapter 46, HAR (Community Noise Control) prior to construction. DOH would review the proposed activity, location, equipment, project purpose, and timetable in order to decide upon conditions and mitigation measures, such as restriction of equipment type, maintenance requirements, restricted hours, and portable noise barriers.

The facility by nature will have a calm and serene atmosphere and will generate minimal noise for neighbors. A landscaped buffer of nearly 100 feet will be present between the edge of the nearest facility structure and the property line of residences along Mohouli Street, reducing noise further.

Removal of non-scenic, alien trees and vegetation would be required in order to site the project on the property. As attractive landscaping is planned around the structures, parking areas, and roadways, in conformance with County regulations (see App. 1, Site Plan), the removal of existing trees would not substantially affect the scenic character of the project area. The landscaping would serve as an effective visual buffer between the facility and residences adjacent to the project site located along Mohouli Street. No important viewplanes or scenic sites recognized in the Hawai'i County General Plan would be affected.

### 3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions

A Phase I Environmental Site Assessment (ESA) was performed on the project site by Graham Knopp Consulting (GKC). The report is summarized below and contained in full in Appendix 2.

A Phase I Environmental Site Assessment aims to identify *recognized environmental conditions* that exist on the project site, and existing *recognized environmental conditions* in the project area that have the potential to impact the subject property. The term *recognized environmental conditions* means the presence or likely presence of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property (American Society for Testing and Materials [ASTM] 2000 & 2005).

The ASTM standard is presently the accepted industry standard for Phase I Environmental Site Assessments, but it will be replaced by a new standard beginning November 1, 2006, termed the *All Appropriate Inquiries* standard finalized by the EPA. While the EPA standard is not yet effective, the Phase I Environmental Site Assessment performed for the project conforms to both the ASTM standard and the proposed EPA standard.

In a Phase I Environmental Site Assessment, evidence of *recognized environmental conditions* may be discovered by execution of the following:

- A records search of federal and State databases of hazardous material use, storage, and releases, including, but not limited to, hazardous material generators, leaking underground storage tanks, and reported hazardous material releases;
- Interviews with landowners, nearby residents, and regulatory agency members concerning the subject property's history of land use;
- Other records searches, including tax records, aerial photography, and, when available, fire insurance maps; and
- A visual survey of the property and immediately surrounding areas.

*Phase I ESA Findings*

Database Search for Subject and Adjacent Properties

The project site and adjacent properties were not listed in the federal and State databases covered by Environmental Data Resources. No other sources of offsite potential contamination were found to exist in the project area. The findings of this records search are summarized in Table 2, below.

**Table 2**
**Findings of Records Search, Phase I ESA**

| Search Type | Distance Searched | Findings |
|---|---|---|
| Federal NPL Site List | 1 mile | None |
| Federal RCRA CORRACTS TSD Facilities List | 1 mile | None |
| State Hazardous Waste Sites | 1 mile | None |
| Federal CERCLIS List | ½ mile | None |
| Federal RCRA Non-CORRACTS TSD Facilities List | ½ mile | None |
| State-Equivalent CERCLIS (SHWS) | ½ mile | 3 |
| State Landfill and/or Solid Waste Disposal Site List | ½ mile | None |
| State Leaking UST List | ½ mile | 5 |
| Federal RCRA Generators List | ½ mile | 2 |
| State Registered UST List | ½ mile | 2 |
| Federal ERNS List | Subject & Adjacent Sites | None |
| Federal CERCLIS NFRAP List | Subject & Adjacent Sites | None |
| State Spill List | Subject & Adjacent Sites | None |

It is GKC's opinion that the above sites do not pose a significant threat to the subject site. This opinion is based on distance (the listed sites are too far away to pose potential migration threats) and the State of Hawai'i Department of Health records on LUSTs.

Site Visit

During site visits conducted on April 1, 2006 and May 29, 2006, GKC observed the subject site and surrounding areas. No evidence indicating the potential release of hazardous materials on the site was observed. Some household waste was observed along the eastern periphery of the proposed project site (i.e., near the residences along Mohouli Street).

GKC's findings are as follows:

- *Hazardous Materials and Regulated Wastes*: GKC observed no evidence of hazardous materials or regulated wastes on the subject and adjoining sites.
- *Storage Tanks*: GKC observed no Underground Storage Tanks (USTs) or Above-ground Storage Tanks (ASTs) in use at the subject property at the time of this ESA.
- *Potential Asbestos-, Polychlorinated Biphenyl (PCB)- or Lead-Containing Material*: GKC Observed no materials that could potentially contain asbestos, lead, or PCBs.
- *Offsite Contamination Source*: No potential offsite contamination sources were identified during the course of this Phase I Site Assessment.

In summary, GKC observed no *recognized environmental conditions* in connection with the project site.

## 3.2 Socioeconomic and Cultural

### 3.2.1 Socioeconomic Characteristics

Hospice of Hilo's primary service area currently includes the entire districts of South Hilo and Puna, as well as North Hilo from Laupahoehoe south, and Ka'u from South Point Road northeast. This area is referred to in this report as East Hawai'i, which is the primary area of benefit, although the service would be available on a first-come, first-served basis for all island residents. Social measures for East Hawai'i are the characteristics of a disadvantaged region (Table 3). In several of its component districts, the median family income is less than 65 percent that of the State as a whole. Over 15 percent of individuals have income below the poverty level, double the statewide rate. Similar patterns obtain for households receiving welfare, food stamps, and disability payments. Several segments of the population that typically exhibit disadvantaged measures of social welfare, including the elderly and Native Hawaiian populations, are disproportionately represented in the population of East Hawai'i as compared to the State.

**Table 3**
**Selected Social Characteristics**

| SOCIAL CHARACTERISTIC | Hilo | Puna | Ka'u | State |
|---|---|---|---|---|
| Resident Population (2000) | 47,386 | 31,335 | 5,827 | 1,205,306 |
| Percentage of Population Age 65 Years & Over | 16.5 | 12.0 | 16.0 | 12.3 |
| Percentage of Native Hawaiians | 19.6 | 20.0 | 22.9 | 12.8 |
| Median Family Income | $35,506 | $26,354 | $26,064 | $43,176 |
| Percentage of Population Below 100% of Federal Poverty Level | 11.7 | 22.9 | 13.6 | 7.6 |
| Percentage of Households Receiving Financial Aid, 1998 | 9.3 | 19.8 | 12.0 | 5.9 |

Sources: 2000 and 1990 U.S. Census of Population; Hawai'i State Department of Health, 1999. *Primary Care Needs Assessment Data Book.* Notes: 1) All data apply to year 1990 except resident population. 2) Ka'u region also includes portion of West Hawaii; Hilo region includes South Hilo (Hilo to Hakalau) only.

Population in Hawai'i County has shown unbroken, if unevenly distributed, growth since about 1970 (Table 4). Growth spurts are primarily attributable to up cycles in visitor industry facility construction. The two districts with the greatest growth rates have been Puna and North Kona. After a relatively quiet period from the early 1990s to about 2000, the visitor industry and construction boomed, boosting incomes and tax revenues. Annual economic growth in West Hawai'i and the Puna area of East Hawai'i have been in excess of 2-3 percent (www.Hawai'i.gov/dbedt/selected).

**Table 4**
**Population Trends**

| | Hawai'i County | South Hilo | Puna | Ka'u |
|---|---|---|---|---|
| 1970 | 63,468 | 33,915 | 5,154 | 3,398 |
| 1980 | 92,053 | 40,538 | 11,751 | 3,699 |
| 1990 | 120,317 | 44,639 | 20,781 | 4,438 |
| 2000 | 142,390 | 47,386 | 31,335 | 5,827 |
| 1970-2000 Annual Growth | 2.73% | 1.12% | 6.20% | 1.81% |

Sources: 1980 and 1990. U.S. Census of Population, various published reports; 2000: *Profiles of General, Demographic Characteristics 2000 Census of Population and Housing Hawai'i, 2000.* Issued May 2001 by U.S. Bureau of the Census.

The key conclusion is that population in East Hawai'i, a proportion of which includes the hospice critical elderly group, is likely to continue to rise, and contribute to the need for more acute hospice care for inpatients. Given long-standing migration trends, the County's annual growth rate of 2.73 percent over the last thirty years is expected to be sustained into the future. This rate is probably a useful guide to future increases in the overall population served by Hospice of Hilo.

The majority of Hospice of Hilo's client base is over 60 years old. The proportion of patients in this age category has varied through the years from about 80 to 100 percent. Hawai'i in general, and East Hawai'i in particular, are in line with the national trend of a rapidly aging population, as census data reveal. An important corollary of the aging population is the fact that Social Security beneficiaries will at least double in number by the year 2040. Furthermore, the number of "young old" (between 65 and 80) will roughly double over the next half century, but the number of "old old" (81 or older) is expected to triple or quadruple. This will tend to leave many with elderly or already deceased children (and very elderly spouses), unable to care for them. Census data indicate an increasing trend towards a greater number of households of one person, from 5.3 percent in 1980 to 8.2 percent in 2000, a condition especially true among the elderly. If the trends of an increasingly aging population and an increasing number of older, lone householders continues – as appears almost certain – there will be an even more pressing need for to provide acute hospice care for inpatients for the Hospice of Hilo program

According to the HMSA Foundation's *Health Trends in Hawai'i* from various years, Hawai'i residents consistently achieve a level of health higher than people in the U.S. as a whole. When one considers such factors as ethnicity, gender and poverty, however, large disparities exist. Highlights include a very long life expectancy (although native Hawaiians on average live five years less), low infant mortality, and better cancer, heart disease, HIV mortality, and overall disease mortality rates.

Conversely, Hawai'i suffers more hepatitis A and C, measles, rubella, tuberculosis (the highest rate in the U.S.), and alcoholism than the U.S. as a whole. The U.S. is experiencing an increase in life-limiting liver diseases due to the rising number of hepatitis, alcohol abuse and the long-term of use of pain relievers with accumulative toxic effects on the liver. Furthermore, indicator rates for most of these diseases or conditions appear to be improving or at least stable. Drinking problems and the incidence of overweight individuals, however, continue to rise.

There is a potential for Hospice of Hilo to see an increase in admissions of patients with liver disease related to the prevalence of hepatitis and alcoholism in Hawai'i. Even though the overall health of Hawai'i residents is greater, the over-arching fact that the population is aging means that there will be a higher number of residents prone to life-limiting illnesses. The trend of improving health will thus *not* lead to a decline in need to provide acute hospice care for inpatients

*Impacts*

The new Hospice of Hilo facilities would benefit the social environment by providing end-of-life services required by the growing East Hawai'i population as well as the entire island. Hospice services are not provided elsewhere on the island and the new facility would assist in meeting demands consequent of demographic changes including population growth.

The proposed project would also have a minor short-term positive economic impact for Hawai'i County through design and construction services, and minor long-term positive impacts through provision of employment in hospice services.

### 3.2.2 Cultural Setting

*Existing Environment*

A letter report providing cultural and archaeological information for the project site, including its context in the ahupua'a of Waiākea, was written by Rechtman Consulting, Inc. It is attached as Appendix 2 and summarized in this and the next section, which also includes information from other sources.

The purpose of the study was to document the presence of any historic properties or traditional cultural properties that might exist within the project area, assess the significance of any such resources, and provide a statement of impact to any such resources as a result of the proposed construction of the parking lot. The study used historic maps and documents, archaeological summaries of the area, and field investigation. This information provided a context for the search for potential historic or traditional cultural properties.

The earliest historical knowledge of Hilo comes from legends written by Kamakau (1961) of a 16$^{th}$ century chief 'Umi-a-Liloa (son of Liloa), who at that time ruled the entire island of Hawai'i. Descendants of Umi and his sister-wife were referred to as "Kona" chiefs, controlling Ka'ū, Kona, and Kohala, while descendants of Umi and his Maui wife were "Hilo" chiefs, controlling Hāmākua, Hilo, and Puna (Kelly 1981:1). According to Kamakau (1961), both sides fought over

control of the island, desiring access to resources such as feathers, *māmaki* tapa, and canoes on the Hilo side, and *wauke* tapa and warm lands and waters on the Kona side (c.f. Kelly 1981:3).

Sometime near the end of the 16th century or early in the 17th century, the lands of Hilo were divided into *ahupua'a,* which till today retain their original names (Kelly 1981:3). These include the *ahupua'a* of Pu'u'eo, Pi'ihonua, Punahoa, Pōnohawai, Kūkūau and Waiākea. The design of these land divisions was such that residents could have access to all that they needed to live, with ocean resources at the coast, and agricultural and forest resources in the interior. However, only Pi'ihonua and Waiākea provided access to the full range of resources stretching from the sea up to 6,000 feet along the slopes of Mauna Kea (Kelly 1981:5).

Historical accounts (McEldowney 1979) place the current study area in a zone of agricultural productivity. As Isabella Bird recorded upon arriving in Hilo in 1873:

> "Above Hilo, broad lands sweeping up cloudwards, with their sugar cane, *kalo*, melons, pine-apples, and banana groves suggest the boundless liberality of Nature" (Bird 1964:38).

Handy and Handy (1972) also describe the general region as an agricultural area:

> "On the lava strewn plain of Waiakea and on the slopes between Waiakea and Wailuku River, dry taro was formerly planted wherever there was enough soil. There were forest plantations in Panaewa and in all the lower fern-forest zone above Hilo town along the course of the Wailuku River" (Handy and Handy 1972:539).

Maly (1996) refers to a 1922 article from the Hawaiian Language newspaper, *Ka Nupepa Kū 'oku 'a*, where planting on *pāhoehoe* lava flats is described:

> "There are *pahoehoe* lava beds walled in by the ancestors in which sweet potatoes and sugar cane were planted and they are still growing today. Not only one or two but several times forty (*mau ka 'au*) of them. The house sites are still there, not one or two but several times four hundred in the woods of the Panaewa. Our indigenous bananas are growing wild, these were planted by the hands of our ancestors" (Maly 1996:A-2).

*Waiākea Ahupua'a*

As part of an archaeological assessment study, Maly (1996) conducted historical research for the lands of Wainaku, Pōnohawai, Waiākea, and Pi'ihonua. He discusses the significance of the use of the Hawaiian word *wai* in the place names: Waiākea, Pōnohawai, Wainaku, and Wailuku (River). According to Maly, the word *wai* (water) has strong metaphorical associations with the Hawaiian concept of wealth (*waiwai*), stressing its cultural importance (Maly 1996:A-2). In this context, the importance of Hilo can be better understood, with its copious streams that fed taro pondfields and its numerous fishponds.

Waiākea along with Punahoa and Pi'ihonua were held by Kamehameha I until the time of his death in 1819, at which time his holdings, including Waiākea, were passed down to his son, Liholiho. Following the *Māhele,* the population of Hilo grew and the scattered upland habitations gave way to sugar cultivation (McEldowney 1979:37).

By 1905, according to Thrum (1923) the Hawaii Mill Company had 10 miles of cane flumes and produced twenty-five tons of sugar per day. In 1920 Hawaii Mill Company was taken over by the Hilo Sugar Company (Kelly 1981). Commercial sugar production lasted in Waiākea until the mid twentieth century, at which time many of the fields were converted to pasturage associated with cattle ranching.

Following the *Māhele*, Kamehameha IV leased large portions of Waiākea to outside interests for pasture and sugarcane cultivation (Moniz n.d.). In 1861 S. Kipi leased the Crown Lands of Waiākea for the rate of $600 dollars a year to be used as pasture land for five years (Kelly et al. 1981; Maly 1996). In 1874 the first lease for sugarcane cultivation in Waiākea was granted to Rufus A. Lyman for a term of 25 years. The lease granted him all the privileges of the land including the use of the fishponds and the cutting of firewood (Maly 1996). This lease was eventually transferred to the Waiākea Mill Company, founded by Alexander Young and Theo H. Davis, and the Waiākea sugar plantation was established.

Established in 1879, the Waiākea Mill Company started with about 350 acres of cultivated lands they had acquired from Lyman. In 1888 the company acquired a 30-year lease that increased their land holdings in Waiākea Ahupua'a. When the lease ran out in 1918 the acreage under cultivation had increased to nearly 7,000; but without a lease the *ahupua'a* fell under the homesteading laws, which required the government to lease the land to individual growers. Waiākea Mill Company was expected to grind the crop for the independent growers under a contract that gave the company 40% of the proceeds from the sale of the refined sugar. Contractual and legal problems combined with a declining sugar market and the devastating *tsunami* of 1946 led the Waiākea Mill Company to cease operation in 1947. During the 68 years of its operation, the Waiākea Mill Company was a major force in shaping the economic and social growth of Hilo, and certainly left its mark on both the cultural and physical landscapes of the area.

The productive areas were interconnected with a plantation railroad system connecting fields with the mill at Wailoa Stream. By the 1920s, the current project location appears to have been an area under cultivation by the Waiākea Mill Company, as part of a field designated as Lot 2. A 1930 map indicates that a branch line and a spur line of the plantation railway system traversed Lot 2 to the east and south of the current project area.

As discussed in the next section, no significant archaeological remains reflecting cultural history or supporting cultural values appear to be present. Furthermore, no caves, springs, pu'u, native forest groves, gathering resources or other natural features are present on or near the project site. The vegetation is highly disturbed and does not contain the quality and quantity or resources that would be important for native gathering.

*Impacts and Mitigation Measures*

As part of the current study, an effort was made to obtain information about any potential traditional cultural properties and associated practices that might be present, or have taken place in the project area. The Office of Hawaiian Affairs (East Hawai'i) and the Hawaiian Civic Club of Hilo were contacted but had no information relative to the existence of traditional cultural properties in the immediate vicinity of the current project area; nor did they provide any information indicating current use of the area for traditional and customary practices.

As no resources or practices of a potential traditional cultural nature (i.e., landform, vegetation, etc.) appear to be present on or near the project site, and there is no evidence of any traditional gathering uses or other cultural practices, the proposed construction would not appear to impact any culturally valued resources or cultural practices.

### 3.2.3 Archaeology and Historic Sites

*Existing Environment*

A letter report providing cultural and archaeological information for the project site, including its context in the ahupua'a of Waiākea, was written by Rechtman Consulting, Inc. It is attached as Appendix 3 and summarized in this and the previous section.

On May 17, 2006, Rechtman Consulting conducted an intensive on-foot survey of a 5-acre portion of the property including the entire project area. They identified one archaeological site near the center of the project site, an isolated stacked cobble mound (Site 25548). Rechtman Consulting concluded, based upon the site context and excavation results, that the mound was a result of land clearing for sugar cultivation, and did not meet criteria for significance as a historic property. Nor were any other archaeological resources or historic properties are present. No sites were recommended for preservation.

*Impacts and Mitigation Measures*

In conformance with Section 106 of the National Historic Preservation Act, the State Historic Preservation Officer (SHPO) was consulted by letter of August 15, 2006, by Rechtman Consulting, acting as an agent of the U.S. Department of Housing and Urban Development (HUD). By letter of November 20, 2006, the SHPO concurred that no historic properties would be affected by the action (see beginning of App. 3).

In the unlikely event that archaeological resources or human remains are encountered during future development activities within the current study area, work in the immediate area of the discovery should be halted and DLNR-SHPD contacted as outlined in Hawai'i Administrative Rules 13§13-275-12.

## 3.3 Infrastructure

### 3.3.1 Utilities

*Existing Facilities and Services*

Electrical power to the facility would be provided by Hawai'i Electric Light Company (HELCO), a privately owned utility company regulated by the State Public Utilities Commission, via their island-wide distribution network. Telephone service would be provided by Hawaiian Telcom.

Water is supplied by the Hawai'i County Department of Water Supply. There are no sewer lines servicing this portion of Mohouli Street at present.

*Impacts and Mitigation Measures*

The proposed action would not have any substantial impact on existing electrical or telephone facilities. Appropriate coordination with HELCO and Hawaiian Telcom will be conducted during the design and construction of the improvements.

It appears there is more than adequate potable water volume to service the proposed expansion. Hospice of Hilo will continue to coordinate with DWS concerning appropriate water facilities and charges. Wastewater treatment will utilize an individual wastewater treatment system. No capacity problems are anticipated.

In summary, the utility infrastructure for the facility is adequate and no adverse impacts are expected.

### 3.3.2 Traffic and Parking

*Existing Roadway and Traffic Conditions*

The proposed facility will be accessed by a private driveway off of Kapiolani Street, a two-lane, County-maintained roadway that is itself accessed via Mohouli Street.

*Traffic Impacts and Proposed Mitigation Measures*

The facilities include parking spaces and a circulation plan with sufficient turning radii to accommodate buses, large trucks and emergency vehicles (see App. 1, Site Plan).

Based upon their current operations, Hospice of Hilo estimates that the project would produce approximately 150 vehicle trips per day, including ingress and egress by staff, volunteers, and visitor traffic, and patient transits. It is expected that the trip times, however, would not be concentrated during peak traffic hours because of the timing of staff shifts at the facility and the nature of visitor traffic. Because the visits are not concentrated in peak traffic periods it is anticipated that the project would have an only negligible impact on traffic congestion on

Kapiolani and Mohouli Streets. The relatively small-scale project would not be expected to cause traffic congestion on Kapiolani and Mohouli Streets.

During the construction period equipment would be stored on site, and during this time traffic associated with project construction would be limited to worker traffic, as well as gravel trucks hauling waste and materials to and from the site. The contractor will be required to develop a traffic control plan that minimizes disruption to traffic on Mohouli Street.

## 3.4 Secondary and Cumulative Impacts

Cumulative impacts result when implementation of several projects that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. The adverse effects of the project – very minor and temporary disturbance to air quality, noise, visual and traffic congestion quality during construction – are very limited in severity, nature and geographic scale. At the current time there are a number of planned and ongoing projects near the project site, including private residential developments located mauka of Mohouli Street, and projects related to UH-Hilo such as the Pacific Basin Agricultural Research Center and the China-U.S. Center. While these will increase traffic in the project area, improvements are planned that will ultimately alleviate traffic congestion, including the Mohouli Street Improvements and Puainako Street Widening projects. Because the proposed action will have at least minor traffic impacts during construction, it would be prudent as part of the traffic control plan to coordinate movement of construction equipment and the timing of lane closures with these other nearby projects, if they coincide. Because air and water quality, and noise impacts due to these activities will be mitigated to very minor levels, it is not expected that other impacts will accumulate with those of the proposed action.

## 3.5 Required Permits and Approvals

The following permits and approvals would be required:

- Hawai'i County Building Division Approval and Building Permit
- Hawai'i County Planning Department Plan Approval, Subdivision Approval
- Hawai'i County Planning Commission Use Permit
- Hawai'i County Public Works Department Grubbing, Grading & Driveway Permits
- Hawai'i State Department of Health National Pollutant Discharge Elimination System Permit (NPDES)
- Hawai'i State Department of Health Underground Injection Control Permit or Exemption

## 3.6 Consistency with Government Plans and Policies

### 3.6.1 Hawai'i State Plan

Adopted in 1978 and last revised in 1991 (Hawai'i Revised Statutes, Chapter 226, as amended), the Plan establishes a set of themes, goals, objectives and policies that are meant to guide the State's long-run growth and development activities. The three themes that express the basic purpose of the *Hawai'i State Plan* are individual and family self-sufficiency, social and

economic mobility and community or social well-being. Hospice of Hilo provides services beneficial to the social well being of the Hilo community and the County of Hawai'i and the project is consistent in every sense with the plan.

### 3.6.2 Hawai'i County General Plan and Zoning

The *Hawai'i County General Plan Land Use Pattern Allocation Guide (LUPAG).* The LUPAG map component of the *General Plan* is a graphic representation of the Plan's goals, policies, and standards as well as of the physical relationship between land uses. It also establishes the basic urban and non-urban form for areas within the planned public and cultural facilities, public utilities and safety features, and transportation corridors. The project site is classified as Low Density Urban in the LUPAG. The proposed project is consistent with this designation, which is intended for residential use, with ancillary community and public uses, and neighborhood and convenience-type commercial uses.

*Hawai'i County Zoning.* The project site and adjacent properties are zoning designation Single Family Residential (RS-10). The proposed project is a permitted use under the zoning code Section 25-2-61(a)(6) if a use permit is granted. The property is not situated within the County's Special Management Area (SMA).

### 3.6.3 Hawai'i State Land Use Law

All land in the State of Hawai'i is classified into one of four land use categories – Urban, Rural, Agricultural, or Conservation – by the State Land Use Commission, pursuant to Chapter 205, HRS. The property is in the State Land Use Urban District. The proposed use conforms with this State Land Use District designation.

### 3.6.4 Coastal Zone Management Act Consistency (CZMA)

The purpose of the federal Coastal Zone Management Act (CZMA) of 1972 (U.S.C. 1451-1464) is to preserve, protect, develop and where possible enhance the resources of the coastal zone. Projects with federal involvement significantly affecting areas under jurisdiction of the State CZM Agency must undergo review for consistency with the State's approved coastal program. The entire State of Hawai'i is included in the coastal zone for such purposes.

The objectives of the Hawai'i Coastal Zone Management Program are presented below, along with discussion of the consistency of the project with each:

> *Recreational Resources*: *Provide coastal recreational opportunities accessible to the public.* The proposed facility expansion does not affect trails or dedicated public right-of-way or any State, County or federal park. No streams, shoreline areas or other waterways are affected.
>
> *Historic Resources*: *Protect, preserve, and where desirable, restore those natural and man-made historic and prehistoric resources in the CZM that are significant in Hawaiian*

*and American history and culture*. No significant historic sites eligible for preservation in place will be affected.

*Scenic and Open Space Resources*: *Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.* No scenic landmarks are present, and the project does not involve the construction of structures visible between the nearest coastal roadway and the shoreline.

*Coastal Ecosystems*: *Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems*. No activities near the coastline are involved, and there will be no effect on coastal ecosystems. All injection wells will conform with appropriate laws and regulations in order to ensure minimal impacts on groundwater and coastal waters.

*Economic Uses*: *Provide public or private facilities and improvements important to the State's economy in suitable locations*. The location is highly suitable for a social service facility, and the project would not adversely affect existing economic activities.

*Coastal Hazards*: *Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence*. The proposed facility expansion is not adjacent to the coast and no coastal hazards are involved.

*Managing Development*: *Improve the development review process, communication, and public participation in the management of coastal resources and hazards*. The proposed activity conforms with the State and County land use designations for the area and would support land use in accordance with State and County plans.

*Beach Protection*. No beaches are present or would be affected by the proposed project

*Marine Resources*. The project will not affect marine resources in any adverse way.

In summary, the project does not impact these coastal zone resources and appears to be consistent with the objectives of the Hawai'i Coastal Zone Management Program.

## PART 4: ANTICIPATED DETERMINATION

Based on evaluation of the environmental setting and impacts, and in consideration of the comments on the Draft EA, the applicant believes that the proposed action will not have a significant effect upon the environment and thus expects that the Hawai'i State Department of Land and Natural Resources will issue a Finding of No Significant Impact (FONSI).

## PART 5: FINDINGS AND REASONS

Chapter 11-200-12, Hawai'i Administrative Rules, outlines those factors agencies must consider when determining whether an Action has significant effects:

1. *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* No valuable natural or cultural resources would be committed or lost.
2. *The proposed project will not curtail the range of beneficial uses of the environment.* No restriction of beneficial uses would occur.
3. *The proposed project will not conflict with the State's long-term environmental policies.* The State's long-term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. The project is minor and fulfills aspects of these policies calling for an improved social environment. It is thus consistent with the State's long-term environmental policies.
4. *The proposed project will not substantially affect the economic or social welfare of the community or State.* The project would not have any adverse effect on the economic or social welfare of the County or State, and would benefit the social welfare of East Hawai'i and the entire island.
5. *The proposed project does not substantially affect public health in any detrimental way.* The proposed project would not be detrimental to public health in any way, and would allow a non-profit organization to improve the quality of services it provides.
6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* No secondary effects are expected to result from the proposed action.
7. *The proposed project will not involve a substantial degradation of environmental quality.* The project is minor and environmentally benign, and would thus not contribute to environmental degradation.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* The project site supports overwhelmingly alien vegetation. Impacts to rare, threatened or endangered species of flora or fauna will not occur.
9. *The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.* The project is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* No adverse effects on these resources would occur. Mitigation of construction-phase impacts will preserve water quality. Ambient noise impacts due to construction will be temporary and restricted to daytime hours.
11. *The project does not affect nor would it likely to be damaged as a result of being located in environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area.* Although the project is located in an area with volcanic and seismic risk, the entire Island of Hawai'i

shares this risk, and the project is not imprudent to construct, and employs design and construction standards appropriate to the seismic zone.

12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* No scenic vistas and viewplanes will be adversely affected by the project.
13. *The project will not require substantial energy consumption.* The construction and operation of the facilities would require minimal consumption of energy. No adverse effects would be expected.

For the reasons above, the proposed action would not have any significant effect in the context of Chapter 343, Hawai'i Revised Statues and section 11-200-12 of the State Administrative Rules.

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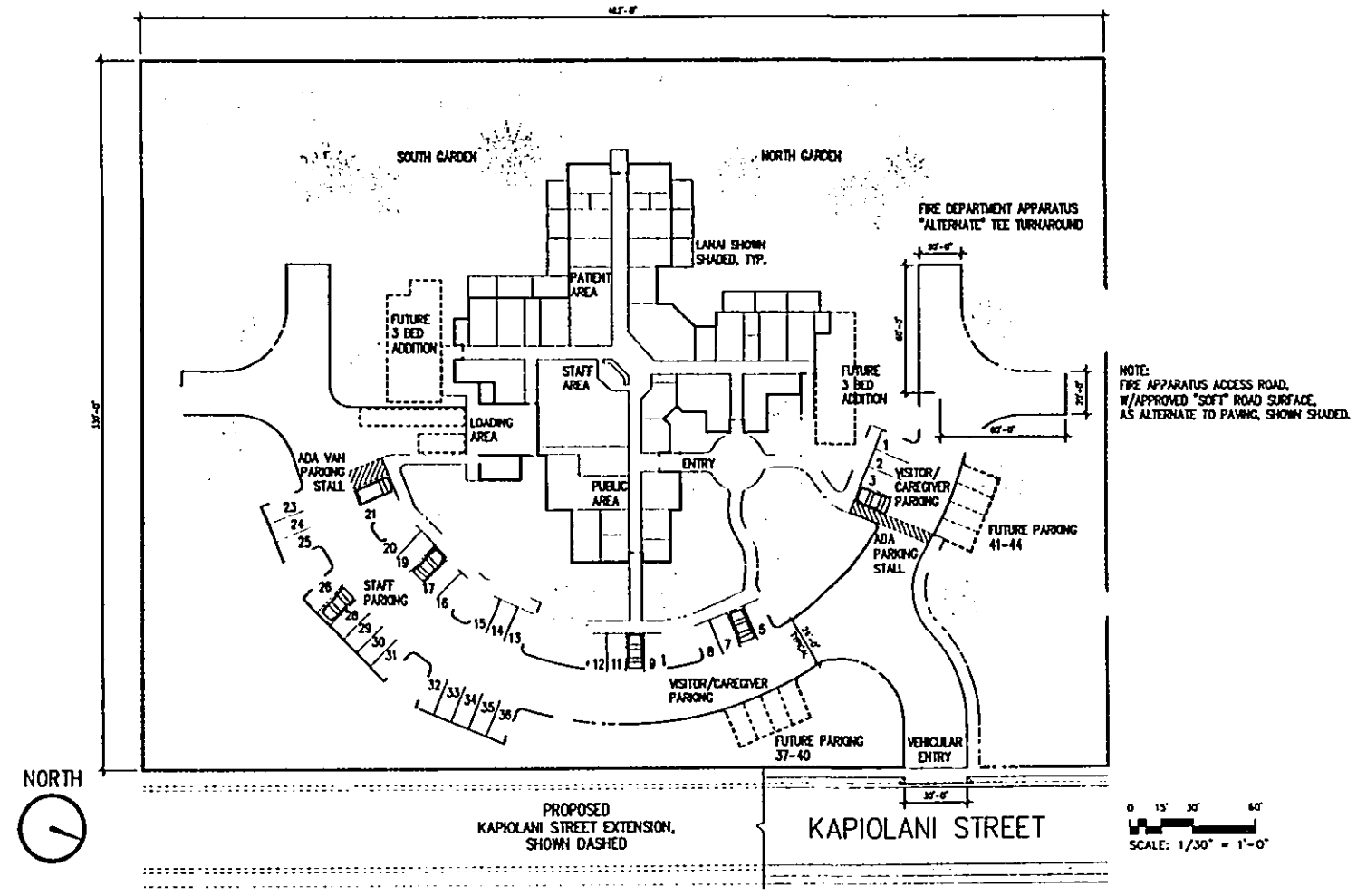
# APPENDIX 1

# SITE PLAN

# HOSPICE OF HILO ~ SITE PLAN




## ZONING:

ZONING DISTRICT:
DIVISION 1, RS-10, SINGLE FAMILY RESIDENTIAL DISTRICT

HEIGHT LIMIT:
35 FOOT HEIGHT LIMIT

MINIMUM BUILDING SITE AREA:
10,000 SQUARE FEET

MINIMUM BUILDING SITE AVERAGE WIDTH:
70 FEET MINIMUM SITE AVERAGE WIDTH

MINIMUM YARDS:
FRONT AND REAR YARDS - 20 FOOT SETBACK
SIDE YARDS - 10 FOOT SETBACK

## PROJECT DESCRIPTION:

PARKING REQUIREMENTS:

1 PARKING STALL PER BED REQUIRED - 12 TOTAL.
1 ACCESSIBLE PARKING STALL REQUIRED.
(2 PROVIDED, WITH 1 BEING VAN ACCESSIBLE)

12 VISITOR/CAREGIVER PARKING STALLS SHOWN.
24 STAFF/VOLUNTEER PARKING STALLS SHOWN.
36 PARKING STALLS PROVIDED.

2 LOADING STALLS REQUIRED.
1 AT 12'X50' AND 1 AT 10'X22' PROVIDED.

FUTURE ADDITIONAL 8 PARKING STALLS SHOWN DASHED.

BUILDING AREA:

12 BED INPATIENT FACILITY SHOWN.
TOTAL BUILDING AREA = 15,500 SQUARE FEET.

FUTURE 8 BED ADDITION (APPROX. 2500 SQ. FT.) SHOWN DASHED.

## SITE LOCATION:

(T.M.K. 2-4-001:024)
KAPIOLANI STREET AT MOHOULI STREET
HILO, HAWAII

SITE AREA:
3.5 ACRES SHOWN

## PERMITTED BUILDING USE:

(b7) HOSPITALS
(USE PERMIT REQUIRED)

PROPOSED USE:
HOSPICE CARE

# APPENDIX 2

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

# Phase I Environmental Site Assessment (ESA)

# Hospice of Hilo General Inpatient Facility Site

# Portion of TMK: (3rd) 2-4-1:024

# Kapiolani Street, Hilo, County of Hawai'i

# May 17, 2006

***PREPARED FOR:***

*Hospice of Hilo*

*1011 Waianuenue Avenue*

*Hilo, HI 96720*

***PREPARED BY:***

*Graham Knopp Consulting*

*P.O. Box 10344*

*Hilo, HI 96721*



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Hospice of Hilo
1011 Waianuenue Avenue
Hilo, Hawai'i 96720

Phase I Environmental Site Assessment
Proposed Hospice of Hilo General Inpatient Facility Site
Kapiolani Street
Portion of TMK: (3rd) 2-4-01:024
Hilo, Hawai'i

Date: May 12, 2006

Graham P. Knopp, Ph.D.
Environmental Scientist

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(808) 938-8583

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## LIST OF ABBREVIATIONS

**AST**: Aboveground Storage Tank
**ASTM**: American Society for Testing and Materials
**CERCLA**: Comprehensive Environmental Response, Compensation, and Liability Act
**CERCLIS**: Comprehensive Environmental Response, Compensation and Liability Information System
**CFR**: Code of Federal Regulations
**CORRACTS**: RCRA Facilities that are undergoing corrective action
**EDR**: Environmental Data Resources, Inc.
**EPA**: Environmental Protection Agency
**ERNS**: Emergency Response Notification System
**ESA**: Environmental Site Assessment
**HDOH**: Hawaii Department of Health
**HEER**: Hazard Evaluation and Emergency Response
**LUST**: Leaking Underground Storage Tank
**NPL**: National Priorities List
**PCBs**: Polychlorinated Biphenyls
**RCRA**: Resource Conservation and Recovery Act
**REC**: Recognized Environmental Conditions
**TRIS**: Toxic Release Inventory System
**TSD**: Treatment, Storage, and Disposal (of hazardous waste)
**TMK**: Tax Map Key, a unique numerical sequence designating a particular parcel
**USACE**: United States Army Corps of Engineers
**USDA**: United States Department of Agriculture
**USGS**: United States Geological Survey
**UST**: Underground Storage Tank

# Executive Summary

Graham Knopp Consulting (GKC), acting at the request of the Hospice of Hilo, conducted a Phase I Environmental Site Assessment (ESA) of a 5 acre portion of State of Hawai'i owned land, TMK 2-4-1:024, located in Hawai'i County at the southern terminus of Kapiolani Street (subject site). Hospice of Hilo retained GKC to perform the Phase I ESA as part of its due diligence process. It is the understanding of GKC that the subject site will be leased from the State of Hawai'i by the non-profit Hospice of Hilo in order to construct a new inpatient facility.

The site reconnaissance, interviews, records review, and historical review conducted as part of the Phase I ESA were performed to identify potential and actual recognized environmental conditions at the proposed Hospice of Hilo site. On the basis of this assessment, the following major findings and conclusions have been drawn. The reader is advised to review these in conjunction with the remainder of the report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

# Section 1
# Introduction

## 1.1 Background

GKC, acting at the request of the Hospice of Hilo, conducted a Phase I ESA of the proposed Hospice of Hilo General Inpatient Facility Site, located in Hawai'i County at the southern terminus of Kapiolani Street on an approximately 5 acre portion of TMK (3rd) 2-4-1:024 (subject site, see Figure 1). Hospice of Hilo retained GKC to perform the Phase I ESA as part of its due diligence process.

The five-acre subject site is undeveloped and contains no structures.

## 1.2 Purpose

The purpose of a Phase I ESA is to identify recognized environmental conditions associated with a property. Recognized environmental conditions are defined as the presence or likely presence of any hazardous substances (as defined by the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]) or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

The standard for performance of Phase I ESAs has been defined by ASTM E1527-00 (ASTM 2000). However, the EPA has recently released a new standard known as the "All Appropriate Inquries" (AAI) rule that takes effect on November 1, 2006 (ASTM 2005). This new rule sets new standards with respect to interviews, investigation of site history, evaluation of so-called "data gaps" and evaluation of the impact of Recognized Environmental Conditions upon purchase price of the property. This work meets the standards of both ASTM E1527-00 and the AAI final rule.

## 1.3 Scope of Services

This Phase I ESA was conducted in accordance with the scope of work and the terms and conditions specified in GKC's proposal to Geometrician Associates LLC, acting for the Hospice of Hilo, dated March 6, 2006 for a Phase I ESA, and as such, meets the requirements of American Society for Testing and Materials (ASTM 2000) Standard E 1527-00 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, as well as the *All Appropriate Inquiries Standard* (ASTM 2005) except for the limitations discussed in Subsection 1.5, Limitations and Exceptions of Assessment.

The following activities were conducted as part of the Phase I ESA:

- Interviews with employees and others who have knowledge of the property to assess current and historical property use or releases of hazardous substances or petroleum products at the property;
- A visual inspection of readily accessible areas of the property. Sampling and testing of soil and potentially hazardous materials was not a part of this scope of work;
- A review of readily available documents identifying historical uses of the property and adjacent properties;
- A review of available local, state, and federal environmental agency records within the minimum search distance for the property as specified by the ASTM standard, including the following records (see Appendix A for descriptions):
    - National Priorities List (NPL)
    - Resource Conservation and Recovery Act (RCRA) facilities that are undergoing "corrective action" (CORRACTS)
    - RCRA-Treatment, Storage, & Disposal (TSD)
    - Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) List
    - Solid Waste & Landfill
    - Leaking Underground Storage Tank (LUST)
    - Water Wells
    - RCRA-Violators/Enforcement
    - Underground Storage Tank (UST) list
    - Emergency Response Notification System (ERNS)
    - RCRA-Large Generator
    - RCRA-Small Generator
    - Spills
- A review of published information on surface and subsurface conditions at the site and surrounding area were reviewed. This information included topography, drainage, surface water bodies, subsurface geology, and groundwater occurrence in the area and was used to assess the potential for any nearby hazardous material releases to affect the subject site; and
- An assessment of data gaps encountered during the investigation, as well as an assessment of the impacts of recognized environmental concerns, if found, upon the anticipated value of the property.

## 1.4 Methodology Used

This Phase I ESA included the visual inspection of readily accessible areas of the property and the review of reasonably ascertainable records information. The methodology used for the site reconnaissance consisted of a visual and physical assessment of property in order to obtain

information indicating the presence or likely presence of recognized environmental conditions. Graham Knopp, Ph.D. of GKC performed the site reconnaissance on April 1, 2006. Appendix C contains qualifications of the environmental professional.

## 1.5 Limitations and Exceptions of Assessment

Hospice of Hilo and Geometrician Associates LLC are advised that the Phase I ESA conducted at the site is a LIMITED INQUIRY into a property's environmental status and is not sufficient to discover every potential source of environmental liability, if any, at the site. ***Therefore, GKC cannot under any circumstances make a statement of warranty or guarantee, express or implied, that the site is free of recognized environmental conditions, environmental impairment, or that the site is "clean" or that impairments, if any, are limited to those that were discovered while GKC was performing the ESA.*** This limiting statement is not meant to compromise the findings of this report; rather it is meant as a statement of limitations within the intended scope of this assessment.

GKC's findings and opinions are based on information that was available and obtained at the time of the assessment through site reconnaissance, standard investigatory techniques used in the industry at the time, records review, and other related activities. It is possible that other information exists or may subsequently become known that may impact or change the site after GKC's observation.

In conducting the Phase I ESA and preparing this report, GKC reviewed, interpreted, and relied upon information provided by others, including but not limited to Hospice of Hilo and Geometrician Associates LLC, individuals, government authorities, subcontractors, and other entities. GKC did not perform an independent evaluation of the accuracy or completeness of such information, and GKC will not be responsible for any errors or omissions contained in such information.

***This report, along with the findings and conclusions, either in completed form, summary form or by extraction, was prepared for and intended for the sole use of Geometrician Associates LLC and Hospice of Hilo, and therefore may not contain sufficient information for other purposes or parties. Geometrician Associates LLC and the Hospice of Hilo are the only intended beneficiaries of this report.*** The contents of this report continue to be the property of GKC and are protected by copyright. This report may not be disclosed to, used by, or relied upon by any person or entity other than Geometrician Associates LLC and Hospice of Hilo without the expressed written consent of GKC.

Authorization for disclosure to a third party or authorization for third-party reliance upon this final report will be considered by GKC upon the written request of Geometrician Associates LLC or the Hospice of Hilo. GKC reserves the right to deny authorization for the disclosure of or reliance upon this report to third parties.

# Section 2
# Site Description

## 2.1 Location and Description

The subject site is located in Hilo, Hawai'i County, State of Hawai'i. The subject site does not have a street address at this time, but is located at the southern terminus of Kapiolani Street. The subject site is located near the intersection of Kapiolani and Mohouli Streets, to the south of residential properties located along Mohouli Street. The subject site is presently undeveloped.

Figure 1 shows the location of the subject site. Figure 1 was developed from the Hilo Quadrangle, United States Geological Survey (USGS) 7.5-minute quadrangle map dated 1995. The subject site is a 5-acre portion of TMK 2-4-1:024, and the term "subject site" refers only to this area and does not refer to the entire parcel. When discussion concerns the entire parcel TMK: 2-4-1:024 the term "parent parcel" is used.

## 2.2 Site and Vicinity Characteristics

Geometrician Associates LLC informed GKC of the boundaries and dimensions of the subject site. The northern boundary of the subject site is the property lines of the residences along Mohouli Street, while the southern boundary is demarcated by Kapiolani Street, and the single-lane road that extends from it towards the Waiakea Stream flood control channel. The property, being a total area of 5 acres, has dimensions of 330' by 660'. The project site was not surveyed and staked at the time of this investigation. Geometrician Associates LLC supplied UTM coordinates of the subject site property corners that were utilized during the site visit. Figure 2 represents the layout of the parcel, but is not drawn to scale.

The subject site is located in an area of predominantly residential uses. The subject site is bordered by residences along Mohouli Street to the north and is undeveloped in other directions, although the Christ Lutheran Church is located across Kapiolani Street roughly toward the northeast. The University of Hawai'i at Hilo is located approximately 0.4 miles to the south. The University Heights residential subdivision is located approximately 600 feet from the subject site in the makai (i.e., southwest) direction. Areas located makai (i.e., east) of the subject side are used for subsidized elderly housing complexes accessed from Kamana Street.

## Figure 1 - Site Location Map

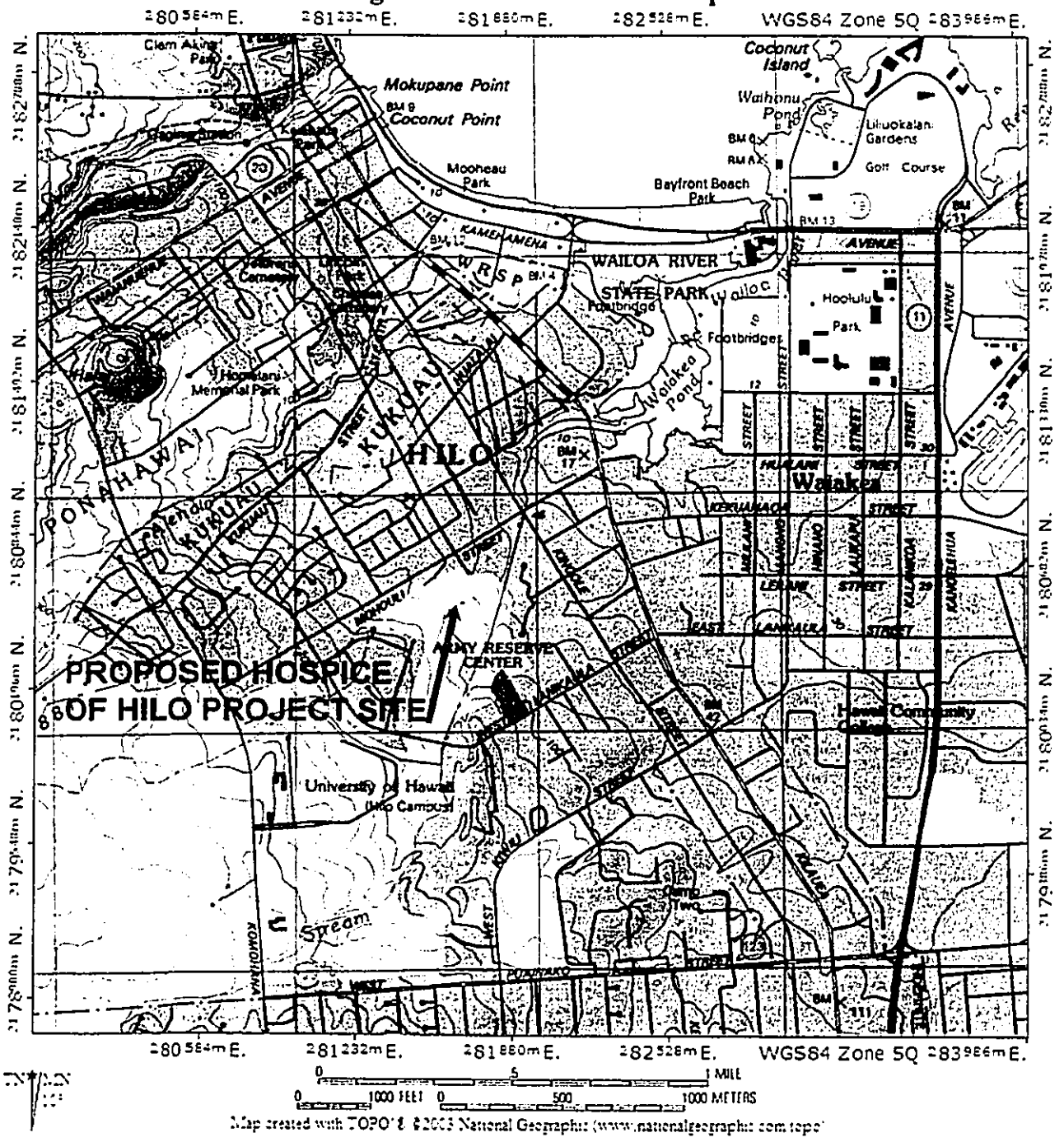
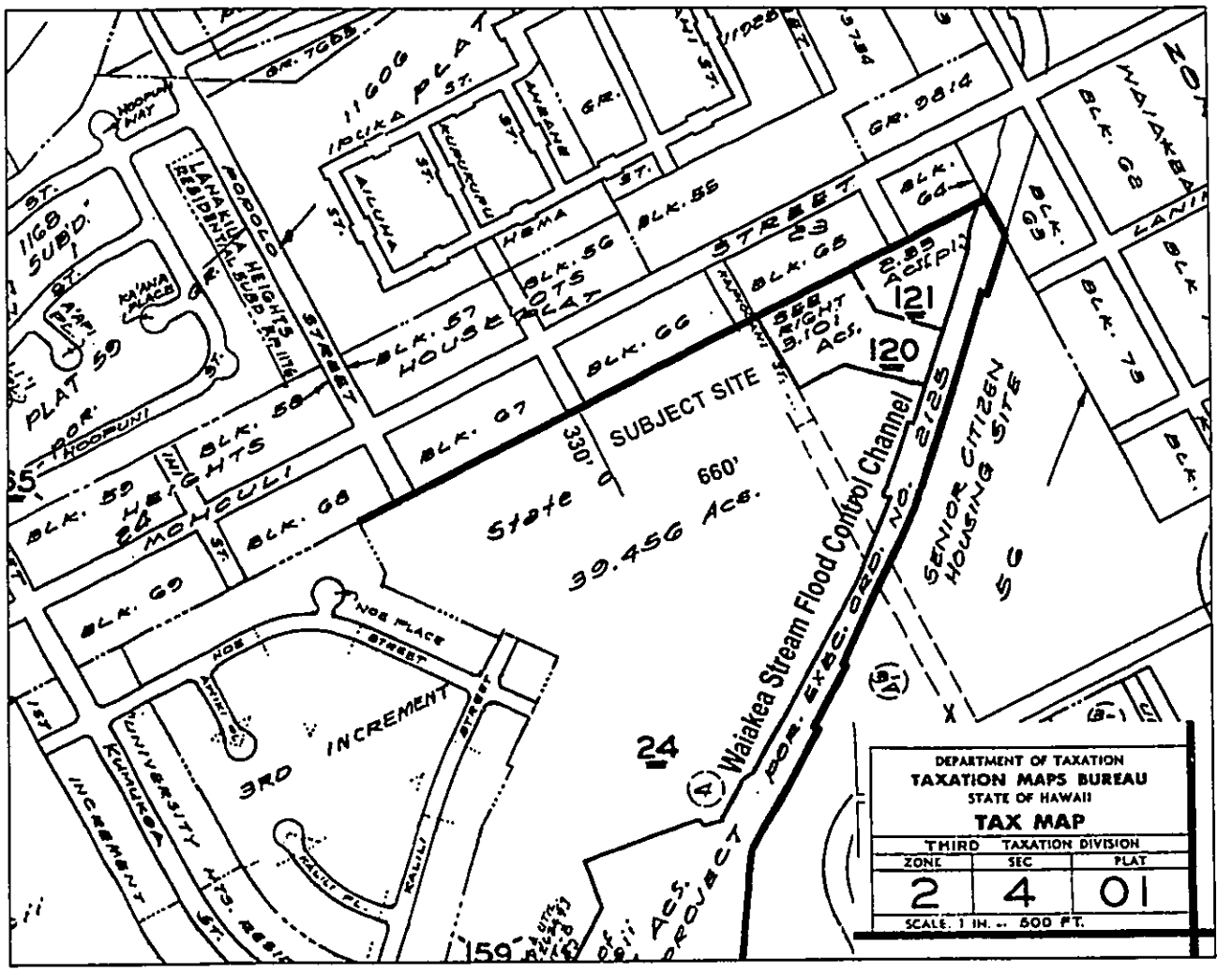


**Figure 2 – Site TMK Map**




## 2.3 Physical Characteristics of the Subject site

The subject site has irregular topography (see Section 3.2), is generally sloping upwards to the west, and appears to be composed primarily of secondary forest.

## 2.4 Current Uses of Property

The current property is not utilized and has remained undeveloped. There are no structures or other improvements on the subject site. A single-lane unimproved road skirts the southern boundary of the subject site.

## 2.5 Current Uses of Adjacent Properties

Current uses of the properties adjoining the site are as follows:

| | |
|---|---|
| North: | Residences along the south side of Mohouli Street (TMKs 2-4-1: 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22 |
| South: | Undeveloped/unoccupied with forest cover |
| East: | Christ Lutheran Church at 595 Kapiolani Street |
| West: | Undeveloped/unoccupied with forest cover |

# Section 3
# Records Review

## 3.1 Standard State and Federal Environmental Record Sources

GKC reviewed various state and federal record sources to assess the environmental status of the subject site and properties surrounding the site. These sources list properties with identified or possible contamination, facilities that generate hazardous waste, sites with underground storage tanks (USTs), and properties involved in state and federal enforcement actions. The following information is based on information provided by Environmental Data Resources, Inc. (EDR 2006), a computerized database service that routinely updates its databases from federal and state sources.

The database and the search radii reviewed for the property conform to ASTM Standard E 1527-00 (ASTM 2000) for Phase I ESAs and the All Appropriate Inquiries Standard (ASTM 2005). The database search is included in Appendix C.

The findings of the records search are summarized in Table 1, which includes the search radius for each particular database (see Appendix A for descriptions of each database).
The subject site was not identified on any of the databases searched. No adjacent sites were identified on any of the databases searched. No sites were identified on any of the databases searched within 0.25 mile of the subject site. Eight sites were identified between 0.25 and 0.5 mile of the subject site. These are displayed in Table 2 below, in order of increasing distance from the subject site. Table 2 below also describes each particular listed site location relative to the subject site, the type of release and corrective action taken, if any.

## Table 1 - Findings of Records Search

| Search Type | Distance Searched | Findings |
|---|---|---|
| Federal NPL Site List | 1 mile | None |
| Federal RCRA CORRACTS TSD Facilities List | 1 mile | None |
| State Hazardous Waste Sites (State Equivalent NPL) | 1 mile | None |
| Federal CERCLIS List | ½ mile | None |
| Federal RCRA Non-CORRACTS TSD Facilities List | ½ mile | None |
| State-Equivalent CERCLIS (SHWS) | ½ mile | 3 |
| State Landfill and/or Solid Waste Disposal Site List | ½ mile | None |
| State Leaking UST List | ½ mile | 5 |
| Federal RCRA Generators List | ½ mile | 2 |
| State Registered UST List | ½ mile | 2 |
| Federal ERNS List | Subject and Adjacent Sites | None |
| Federal CERCLIS NFRAP List | Subject and Adjacent Sites | None |
| State Spill List | Subject and Adjacent Sites | None |

## Table 2 – Summary of Listed Sites

| SITE NAME AND ADDRESS | DISTANCE AND DIRECTION FROM SUBJECT SITE | DATABASE(S) LISTED | COMMENTS |
|---|---|---|---|
| Sun Sun Lau Chop Suey House, 1055 Kinoole Street | 1748 ft. NNE | SHWS, SPILLS | Diesel fuel release of 150 gallons. Site remediated. Site located down gradient with respect to the expected direction of ground water flow. |
| USDA FS PSW EXPT STATION, Kawili St. | 2159 ft. ENE | RCRA-SQG, FINDS, CERC-NFRAP | No violations noted. Site located down gradient with respect to the expected direction of ground water flow. |
| Hilo Radiator and Glass, 1335 Kinoole Street | 2230 ft. ESE | FINDS, LUST | Site cleanup completed. Site located down gradient with respect to the expected direction of ground water flow. |
| Hilo Shopping Center, 1255 Kinoole Street | 2477 ft. ENE | SHWS, SPILLS | Diesel fuel release of 25 gallons. Site located down gradient with respect to the expected direction of ground water flow. |
| Fairway Service Station, 1260 Kilauea Avenue | 2480 ft. ENE | LUST, UST | Site cleanup completed. Site located down gradient with respect to the expected direction of ground water flow. |
| Hilo Quality Cleaners, 865 Kinoole Street | 2557 ft. N | SPILLS, LUST, FINDS, SHWS, RCRA-SQG | No violations reported regarding SQG status. Diesel release reported upon removal of UST, cleanup completed. Site located down gradient with respect to the expected direction of ground water flow. |
| Duke's Kilauea Shell, 1104 Kilauea Ave | 2566 ft. ENE | LUST, UST | Site cleanup completed. Site located down gradient with respect to the expected direction of ground water flow. |
| Pacific Rent-All, Inc., 1080 Kilauea Avenue | 2610 ft. NE | FINDS, LUST | Site cleanup completed. Site located down gradient with respect to the expected direction of ground water flow. |

The EDR database review also identified certain regulated activities in the vicinity of the subject site that could not be plotted on the overview map due to the lack of address information. These facilities were identified in the "Orphan Summary" of the EDR report. Based upon GKC's reconnaissance of the area and the nature of the regulated activities, these sites were judged to not represent a significant risk of environmental impairment to the subject site. In summary, due to both the distance and direction to the listed sites, they are not expected to impact the subject site and do not, therefore, constitute Recognized Environmental Concerns.

## 3.2 Physical Setting

The subject site is located approximately 75 to 110 feet above mean sea level, located about one mile south of Hilo Bay and about 0.5 mile southwest of Waiakea Pond, the nearest perennial surface water body. No streams, pools, springs, or wetlands appear to be present on the site itself. A transient stream channel, the Waiakea Flood Control Channel, is located approximately 500 feet south of the subject site, accessed by the single-lane road along the southern periphery of the project site. The Flood Insurance Rate Maps (FIRM) 880C (10/6/92) show that the entirety of the project site is in Flood Zone X, outside of the 100-year flood plain. The nearest area designated as a flood zone is limited to the Waiakea Flood Control Channel itself, designated zone "AE" (FEMA 2005).

The underlying terrain consists of lava flows from Mauna Loa volcano of the Ka'u Basalt series, of approximate age from 1,500 to 750 years of age (Wolfe and Morris 1996). Relief on the site is generally hummocky, being relatively flat on the eastern side, then rising more steeply towards the eastern (i.e., mauka) portion of the subject site.

The project site soil is classified by the Natural Resources Conservation Service (formerly Soil Conservation Service) as Keaukaha extremely rocky muck on 6-20% slopes, an organic and strongly acid soil that is approximately 0 to 8 inches thick, with about 25% of the area occupied by lava outcrops. This soil's capability subclass is VIIs, which means that this soil has very severe limitations that make it very unsuited for cultivation, and restrict its use to mainly pasture and woodland, or wildlife (U.S. Soil Conservation Service 1973).

There is little information available concerning hydrogeology of the project area. However, for the purpose of this work we assume that the movement of ground water generally follows the area's topography (i.e., to the north-northeast). The subject site is located mauka of the underground injection control line, meaning that the area potentially could be used as a source for drinking water (HDOH 2006).

## 3.3 Historical Use Information

Historical use information incorporated documents including aerial photographs, tax records, historical topographic maps and Department of Land and Natural Resources documents. This research demonstrated that the parcel has been either unused or use for pasturing of livestock since about 1925. This research also revealed that the adjacent residential properties were

developed in the 1950s. While the parent parcel was a portion of the Waiakea Cane Lots, it is not certain that sugar cane has ever been cultivated on the subject site or parent parcel.

Information regarding history of use of the subject site prior to these dates was revealed through interviews (see Section 5.0).

### 3.3.1 Aerial Photographs

GKC viewed aerial photographs provided by R.M. Towill Corp. of Honolulu, on April 10, 2006. A review of the aerial photographs listed below revealed the following information regarding the subject site and the surrounding land uses. The scales of many of the photos were not available.

**Table 2 –Aerial Photograph Summary**

| DATE | SCALE | COMMENT |
|---|---|---|
| 2/22/1949 | N/A | Subject site and parent parcel occupied by apparent secondary forest cover, as are adjacent parcels. Nearest sugar cane cultivated south of Waiakea Stream channel. |
| 9/12/1951 | N/A | Subject site and parent parcel occupied by apparent secondary forest cover. Sugar cane cultivated south of Waiakea Stream channel. Five residences along Mohouli Street. |
| 12/13/1952 | N/A | As above. |
| 9/15/1964 | N/A | Subject site and parent parcel occupied by apparent secondary forest cover makai of rock wall (apparently identical to wall noted in site visit). Waiakea Stream channelized makai of Hilo College. Residences along Mohouli to Komohana Street. Nearest sugar cane cultivation >1 mile from subject site in Pi'ihonua. |
| 10/10/1969 | 6"=12,000' | Subject site and parent parcel occupied by apparent secondary forest cover. Christ Lutheran Church constructed adjacent to subject site. |
| 3/30/1974 | 6"=7,600' | Subject site and parent parcel occupied by apparent secondary forest cover. Linear feature (i.e., apparently the rock wall observed) extends to stream channel. |
| 1/14/1977 | 6"=15,000' | Subject site and parent parcel occupied by apparent secondary forest cover. Kamana housing projects visible. |
| 1/9/1978 | N/A | Subject site and parent parcel occupied by apparent secondary forest cover. University Heights subdivision visible approximately 600 feet mauka of project site. |
| 11/30/1978 | 6"=6000' | Subject site and parent parcel occupied by apparent secondary forest cover. |
| 11/2/1985 | 6"=16,000' | Subject site and parent parcel occupied by apparent secondary forest cover. |
| 2/24/1992 | 6"=9000' | Subject site and parent parcel occupied by apparent secondary forest cover. |
| 1/23/1998 | N/A | Subject site and parent parcel occupied by apparent secondary forest cover. |

### 3.3.2 Fire Insurance Maps

No fire insurance maps were available for the subject site or adjacent properties.

### 3.3.3 City Directories

City directories yielded no information concerning the subject site. City directories yielded information concerning adjacent properties that was more recent than tax information reviewed.

### 3.3.4 Historical Topographic Maps

Three 7.5' topographic maps were available from 1963, 1981, and 1995. The 1963 and 1981 map indicate vegetative cover over the entire project site. The 1995 map indicates vegetative cover of approximately the northern half of the project site. No structures are shown on any of the maps on the subject site and the parent parcel.

### 3.3.5 Other Historical Sources Reviewed

GKC reviewed tax records located at the Hawai'i County Real Tax Office (see Appendix D). Records for the subject site indicate that the subject site and the parent parcel were a portion of lot 2 of the Waiakea Cane Lots. Hawai'i County tax records for the parent parcel begin in 1938 and indicate that the parent parcel was owned by the Territory of Hawai'i and later by the State of Hawai'i. During the period 1938 – 1966 the parent parcel was leased to six different parties, apparently for pasture of livestock. Current parcels TMKs: 2-4-1:120 and 2-4-1:121 (i.e., Christ Lutheran Church) were dropped from the parent parcel in 1967.

Hawai'i County Tax Records yield information beginning in 1938, when the parcel was apparently subdivided from Lot 8 of the Waiakea Cane Lots (see Appendix D).

## Table 3 – Hawai'i County Real Tax Records Summary

| Period | Owner | Tenant/Lessee | Use | Comments |
|---|---|---|---|---|
| Pre-1938 | Territory of Hawaii | Hideichi Fukunaga & Teshiko Kamasaki | Ag./Pastureland | General Lease 2618 |
| 1938 | Territory of Hawaii | Hidekichi Fukunaga | Ag./Pastureland | General Lease 2618 |
| 1938 | Territory of Hawaii | Hilo Dairy | Ag./Pastureland | General Lease 2618 |
| 1938-1956 | Territory of Hawaii | Kazuo Miyasaki | Ag./Pastureland | General Lease 2618 |
| 1956-1958 | Territory of Hawaii | George Holowaty | Ag./Pastureland | General Lease 3568 |
| 1958-1966 | Territory/State of Hawaii | Walter Perreira | Ag./Pastureland | General Lease 3568 |
| 1966- | State of Hawaii | None | Vacant | |

Past uses of the properties adjoining the site are as follows:

North: These residential parcels, the "Mokaulele Heights House Lots", were subdivided between 1949 and 1952 and the residences constructed from 1951 to 1959, according to Hawai'i County Tax Records. Prior to this subdivision these parcels were included in the parent parcel.

South: Parcel 2-4-1:120, now containing Christ Lutheran Church, was dropped from the parent parcel (containing the subject site) in 1967 and the existing structures developed on this parcel in 1967. Before this time this parcel probably had identical uses as the subject site and parent parcel.

East: Parent parcel (see Table 3 above)

West: Parent parcel (see Table 3 above)

GKC reviewed files at the DLNR Land Division office at 75 Aupuni St., Rm. 204 in Hilo on April 17, 2006. These files indicate that the State leased the land for pasturing purposes from 1955 to 1965. No records indicating use of the subject site prior to 1955 were available.

## 3.4 Previous Reports

No previous Phase I reports were reviewed in preparation of this report. GKC is not aware of the preparation of any Phase I reports for the parent parcel or adjacent parcels.

# Section 4
# Site Reconnaissance

## 4.1 Methodology and Limiting Conditions

On April 1, 2006 GKC conducted a walk-through of the subject site. The purpose of the walk-through was to inspect the subject site, for potential environmental concerns, including, but not limited to, the following:

- Hazardous substance and waste management activities;
- Evidence of potential hazardous substance spills or releases (*e.g.*, stressed vegetation, discolored soil, etc.);
- USTs (*e.g.*, protruding fill or vent pipes);
- Disposal areas, ground water wells, and sumps;
- Equipment potentially containing polychlorinated biphenyls (PCBs); and
- Potential property or adjacent property activities that could affect the environmental condition of the subject site.

Photographs taken during the site visit are included in Appendix E.

## 4.2 General Site Setting and Observations

The site contained no evidence of past structures, apart from several small animal pens. A number of rock mounds were observed, as was a rock wall near the mauka border of the subject site. No evidence of industrial use was observed. No evidence of disposal of construction waste, or hazardous material containers was observed.

One 55 gallon steel drum was observed on the site with no cover and in a highly corroded state. This drum appeared to contain rain water. No hydrocarbon sheen or other indications of hazardous materials was observed in or near the drum.

Several areas of dumped household waste were observed along the northern periphery of the site, near the property lines of the residences located along Mohouli Street. This household waste included plastic gardening materials, aluminum roofing material, and other assorted household items. No hazardous materials were observed in this household waste, however, at times the household waste was covered by dense foliage and was not visible.

## 4.3 Hazardous Substances and Petroleum Products in Connection with Identified Uses

No hazardous materials were identified during the site visit, although *de minimis* quantities may exist as the observed disposed household waste.

## 4.4 Hazardous Substances and Petroleum Products Containers and Unidentified Substance Containers

The 55 gallon drum observed was probably not used for storage of hazardous materials as it was left in place without a cover. It may have been used for storage of water for livestock.

## 4.5 Storage Tanks

No above-ground storage tanks (ASTs) were observed. No evidence of underground storage tanks (USTs) was observed.

## 4.6 Indication of Polychlorinated Biphenyls

No materials potentially containing polychlorinated biphenyls (PCBs) were observed.

# Section 5
# Interviews

As part of the Phase I ESA, select persons were interviewed to provide insight into conditions at the site. The individuals interviewed are listed below followed by a summary of the interview.

## 5.1 Interview with Local Government Officials

DLNR Land Agent Harry Yada was contacted concerning history of use of the site. He had no knowledge of the use of hazardous materials on the subject site or parent parcel.

## 5.2 Interview with Others

Mr. Kenneth Bell of 167 Makani Circle (phone: 808/959-9616) was interviewed by phone on April 25, 2006. Mr. Bell, born in 1915 in lower Waiakea, has extensive knowledge relating to land use and sugar cane cultivation in Waiakea (Maly 1996). Mr. Bell retired in 1980 from his position as superintendent of the Bulk Sugar Plant of HT&T, a division of C. Brewer.

Mr. Bell was queried concerning his knowledge of the subject site and sugar cane cultivation. He stated that since his youth (i.e., circa 1925) the area was open land used for pasturing livestock and was not used for sugar cane cultivation. He also stated that he did not recall the subject area ever being used for sugar cane cultivation.

# Section 6
# Findings

The findings of this assessment have been categorized into recognized environmental conditions, historical recognized environmental conditions, and *de minimis* conditions. For each of these issues, GKC's opinion of impact on the property is included.

## 6.1 Recognized Environmental Conditions

A recognized environmental condition is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

## 6.2 Historical Recognized Environmental Conditions

A historical recognized environmental condition is defined as an environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.

Historical recognized environmental conditions identified at the facility are listed below.

- ***Historical Recognized Environmental Condition:*** The parent parcel is a portion of the former Waiakea Cane Lots. While this suggests that the project area may have been used for sugar cane cultivation, based upon tax records and interviews there is no evidence that the subject site was used for this purpose since at least 1925, and given the poor soil conditions sugar cane may not have ever been cultivated on the site. This question is of potential concern because sugar cane cultivation commonly utilized arsenic compounds as herbicides during the period of approximately 1915 to 1945 (Escobar et al. 2006, Peard 2006).
- ***Opinion of Impact:*** Given the history of use it seems unlikely that arsenic compounds may persist on the site and this possibility does not constitute a Recognized Environmental Concern.

## 6.3 *de minimis* Issues

A *de minimis* recognized issue is defined as a condition that generally does not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.
*de minimis* issues identified at the facility are listed below. GKC's opinion of impact on the property is included for each issue.

- ***de minimis issue:*** Household waste has been disposed of in several locations along the northern periphery of the subject site.
- ***Opinion of Impact:*** During land clearing care this household waste should be collected and properly disposed. This household waste does not likely contain significant quantities of hazardous materials and therefore does not constitute a Recognized Environmental Concern.

## 6.4 Data Gaps

During the site visit dense foliage likely prevented the observation of a portion of household waste disposed on the property.

Also, it is possible the property was used for sugar cane cultivation prior to 1925.

## 6.5 Impact of REC's on Purchase Price

Because no Recognized Environmental Concerns were identified during this assessment, the property value is not likely to be affected by environmental concerns.

# Section 7
# Conclusions

GKC has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-00 (ASTM 2000) and the *All Appropriate Inquiries* standard (ASTM 2005) for the proposed Hospice of Hilo site located in Hilo, County of Hawai'i. Any exceptions to, or deletions from, this practice are described in Subsection 1.5 of this report. This section has been developed based on the discussion of the issues provided in Section 7.

This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

# Section 8
# References


American Society for Testing and Materials (ASTM). 2000. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment, E-1527-00. Washington, D.C.

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FEMA, 2006, *Flood Zone Mapping,* http://www.fema.gov/lhm/fq_term.shtm.

Hawaii Department of Health Safe Drinking Water Branch, Underground Injection Control Map, County of Hawai'i, 2006.

Maly, Kepa. 1996. Historical documentary research and oral history interviews : Waiakea cane lots (12, 13, 17, 18, 19, 20 & 20-A), Ahupua'a of Waiakea, District of South Hilo, Island of Hawai'i (TMK:2-4-01,7,10). Prepared for: UHH Ho'oikaika Club.

Peard, John. April 26, 2006. State of Hawai'i Department of Health. Personal Communication.

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U.S. Soil Conservation Service. 1973. *Soil Survey of Island of Hawai'i, State of Hawai'i.* Washington: U.S.D.A. Soil Conservation Service.

Wolfe, E.W., and J. Morris. 1996. *Geologic Map of the Island of Hawai'i.* USGS Misc. Investigations Series Map i-2524-A. Washington, D.C.: U.S. Geological Survey.

# Appendix A
# Description of Regulatory Record Sources

- National Priorities List (NPL) - The NPL is the U.S. Environmental Protection Agency's (EPA) database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the U.S. Department of Health and Human Services and the EPA in order to become an NPL site.
- CORRACTS - The EPA maintains this database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing "corrective action." A "corrective action order" is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA.
- RCRA-Treatment, Storage, & Disposal (TSD) CORRACTS - The EPA's RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment or disposal of hazardous waste.
- Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) List - The CERCLIS list contains sites which are either proposed to be, or are on the NPL, and sites which are in the screening and assessment phase for possible inclusion on the NPL. The information on each site includes a history of all pre-remedial, remedial, removal and community relations activities or events at the site, financial funding information for the events, and unrestricted enforcement activities.
- NFRAP - NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.
- RCRA-TSD - The RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDs are facilities that treat, store and/or dispose of hazardous waste.
- Solid Waste & Landfill - This database can be obtained from the Hawaii Department of Health (HDOH), Solid and Hazardous Waste Branch (808.586.4240).
- Leaking Underground Storage Tank (LUST) - This database can be obtained from the HDOH Solid and Hazardous Waste Branch Underground Storage Tank (UST) Section (808.586.4226).
- Water Wells - The Ground Water Site Inventory (GWSI) database was provided by the United States Geological Survey (USGS, 702.648.6819). The database contains information for over 1,000,000 wells and other sources of groundwater that the USGS has studied, used, or otherwise had reason to document through the course of research.
- RCRA-Viol/Enf - The RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. RCRA Violators are facilities which have

been cited for RCRA Violations at least once since 1980. RCRA Enforcements are enforcement actions taken against RCRA violators.

- UST list - This database can be obtained by the HDOH UST Section (808.586.4226). The agency release date for UST Section Database was January 2002.
- Toxic Release Inventory System (TRIS) - Section 313 of the Emergency Planning and Community Right-to-Know Act (also known as SARA Title III) of 1986 requires the EPA to establish an inventory of Toxic Chemicals emissions from certain facilities. Facilities subject to this reporting are required to complete a Toxic Chemical Release Forms (Form R) for specified chemicals.
- Emergency Response Notification System (ERNS) - This is a national database containing records from October 1986 to the release date below and is used to collect information for reported releases of oil and hazardous substances (202.260.2342). The database contains information from spill reports made to federal authorities including the EPA, the U.S. Coast Guard, the National Response Center, and the Department of Transportation.
- RCRA-LgGen - RCRA Large Generators are facilities that generate at least 1,000kg/month or non-acutely hazardous waste (or 1kg/month of acutely hazardous waste).
- RCRA-SmGen - RCRA Small and Very Small Generators are facilities that generate less than 1,000kg/month or non-acutely hazardous waste.
- SPILL - This database can be obtained from the HDOH Hazard Evaluation Emergency Response office (HEER, 808.586.4249). The Spills list provides a short description of circumstances of each spill.

# CORRECTION

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

# Appendix A
# Description of Regulatory Record Sources

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# Appendix B
# Environmental Professional's Qualifications

**Graham P. Knopp, Ph.D. - Environmental Scientist**

**Experience:**
Seven years of experience in environmental assessment and analysis including preparation of the following documents:

- Phase I and II Environmental Site Assessments for commercial and industrial properties of a wide range in sizes and uses;
- Environmental Assessments and Environmental Impact Statements for local, state, and federal governments, and private sector clients;
- Conservation District Use Applications;
- Storm water and ground water monitoring plans and reports; and
- Storm Water Pollution Prevention plans.

Experience includes three years with Kleinfelder Associates of Oakland, California. Presently an associate with Geometrician Associates, (Ron Terry, Ph.D., Proprietor), specializing in environmental impact analysis.

**Education:**
B.S. – Physics – University of Wisconsin – Madison, 1992
M.S. – Astronomy – University of Hawai'i at Manoa, 1995
Ph.D. – Astronomy – University of Hawai'i at Manoa, 1997

# Appendix C
# Database Search

# The EDR Radius Map™ Report

**Hospice of Hilo**
**S. Terminus of Kapiolani St.**
**Hilo, HI 96720**

**Inquiry Number: 1647371.1s**

**April 04, 2006**


## The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
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Please contact EDR at 1-800-352-0050
with any questions or comments.

**Important Information about The EDR FieldCheck® System**

*The FieldCheck® system enables EDR's customers to make certain online modifications to the maps and text contained in EDR Radius Map Reports, such as relocating/deleting plotted sites or plotting/deleting orphan sites that would otherwise appear with an EDR Radius Map Report, and/or adding sites that would otherwise not appear with an EDR Radius Map Report. Such modifications may be based on site visits, independent data verification and/or other actions taken or decisions made by EDR's customer. As a result, the maps and text contained in this Report may have been so modified. EDR has not taken any action to verify any such modifications, and this report and the findings set forth herein must be read in light of this fact. GRAHAM KNOPP CONSULTING should be contacted for information concerning all such modifications.*


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

S. TERMINUS OF KAPIOLANI ST.
HILO, HI 96720

### COORDINATES

| | |
|---|---|
| Latitude (North): | 19.708400 - 19° 42' 30.2" |
| Longitude (West): | 155.083300 - 155° 4' 59.9" |
| Universal Tranverse Mercator: | Zone 5 |
| UTM X (Meters): | 281636.7 |
| UTM Y (Meters): | 2180422.8 |
| Elevation: | 94 ft. above sea level |

## USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 19155-F1 HILO, HI |
| Most Recent Revision: | Not reported |

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## FEDERAL RECORDS

| | |
|---|---|
| **NPL** | National Priority List |
| **Proposed NPL** | Proposed National Priority List Sites |
| **Delisted NPL** | National Priority List Deletions |
| **NPL RECOVERY** | Federal Superfund Liens |
| **CERCLIS** | Comprehensive Environmental Response, Compensation, and Liability Information System |
| **CORRACTS** | Corrective Action Report |
| **RCRA-TSDF** | Resource Conservation and Recovery Act Information |
| **RCRA-LQG** | Resource Conservation and Recovery Act Information |
| **RCRA-SQG** | Resource Conservation and Recovery Act Information |

# EXECUTIVE SUMMARY

**ERNS**..... Emergency Response Notification System
**HMIRS**..... Hazardous Materials Information Reporting System
**US ENG CONTROLS**..... Engineering Controls Sites List
**US INST CONTROL**..... Sites with Institutional Controls
**DOD**..... Department of Defense Sites
**FUDS**..... Formerly Used Defense Sites
**US BROWNFIELDS**..... A Listing of Brownfields Sites
**CONSENT**..... Superfund (CERCLA) Consent Decrees
**ROD**..... Records Of Decision
**UMTRA**..... Uranium Mill Tailings Sites
**ODL**..... Open Dump Inventory
**TRIS**..... Toxic Chemical Release Inventory System
**TSCA**..... Toxic Substances Control Act
**FTTS**..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
**SSTS**..... Section 7 Tracking Systems
**PADS**..... PCB Activity Database System
**MLTS**..... Material Licensing Tracking System
**MINES**..... Mines Master Index File
**FINDS**..... Facility Index System/Facility Registry System
**RAATS**..... RCRA Administrative Action Tracking System

**STATE AND LOCAL RECORDS**

**SWF/LF**..... Permitted Landfills in the State of Hawaii
**UST**..... Underground Storage Tank Database
**SPILLS**..... Release Notifications
**INST CONTROL**..... Sites with Institutional Controls
**VCP**..... Voluntary Response Program Sites
**BROWNFIELDS**..... Brownfields Sites

**TRIBAL RECORDS**

**INDIAN RESERV**..... Indian Reservations

**EDR PROPRIETARY RECORDS**

**EDR Historical Auto Stations**EDR Proprietary Historic Gas Stations
**EDR Historical Cleaners**..... EDR Proprietary Historic Dry Cleaners

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

# EXECUTIVE SUMMARY

## FEDERAL RECORDS

**CERCLIS-NFRAP:** Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 10/24/2005 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Dist / Dir | Map ID | Page |
|---|---|---|---|---|
| *USDA FS PSW EXPT STATION* | *KAWILI ST* | *1/4 - 1/2 ENE* | *2* | *6* |

## STATE AND LOCAL RECORDS

***SHWS:*** *The State Hazardous Waste Sites* records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the SHWS list, as provided by EDR, and dated 08/24/2005 has revealed that there are 13 SHWS sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Dist / Dir | Map ID | Page |
|---|---|---|---|---|
| *UNIVERSITY OF HAWAII AT HILO* | *200 W KAWILI ST* | *1/2 - 1 SE* | *11* | *15* |

| Lower Elevation | Address | Dist / Dir | Map ID | Page |
|---|---|---|---|---|
| *SUN SUN LAU CHOP SUEY HOUSE* | *1055 KINOOLE ST* | *1/4 - 1/2 NNE* | *1* | *6* |
| *HILO SHOPPING CENTER* | *1255 KILAUEA AVE* | *1/4 - 1/2 ENE* | *A4* | *7* |
| *HILO QUALITY CLEANERS* | *865 KINOOLE ST* | *1/4 - 1/2 N* | *6* | *9* |
| *HILO QUALITY WASHERETTE* | *210 HOKU ST* | *1/2 - 1 N* | *9* | *13* |
| *LARRY'S KAIKOO CHEVRON* | *835 KILAUEA AVE* | *1/2 - 1 NE* | *10* | *14* |
| *HILO MACARONI FACTORY* | *639 KINOOLE ST* | *1/2 - 1 N* | *12* | *16* |
| *USDA FOREST SERVICE PSW EXPERI* | *1643 KILAUEA AVE* | *1/2 - 1 ESE* | *13* | *17* |
| *EXEMPT UST CLOSURE AT EXCELSIO* | *458 KEKUANAOA ST* | *1/2 - 1 ENE* | *14* | *18* |
| *HATADA BAKERY (FORMER)* | *55 KUKUAU ST* | *1/2 - 1 N* | *15* | *19* |
| *ROBERTS BAKERY, BOILER UST REM* | *374 KINOOLE ST* | *1/2 - 1 NNW* | *16* | *19* |
| *BAYSIDE CHEVRON SERVICE* | *774 KAMEHAMEHA AVE* | *1/2 - 1 NNE* | *18* | *20* |
| *HILO SODA WORKS* | *270 E KAWILI ST* | *1/2 - 1 E* | *19* | *22* |

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 02/01/2006 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

# EXECUTIVE SUMMARY

| Lower Elevation | Address | Dist / Dir | Map ID | Page |
|---|---|---|---|---|
| *HILO RADIATOR & GLASS*<br>Facility Status: Site Cleanup Completed | *1335 KINOOLE ST* | *1/4 - 1/2 ESE* | *3* | *7* |
| *FAIRWAY SERVICE STATION*<br>Facility Status: Site Cleanup Completed | *1260 KILAUEA AVE.* | *1/4 - 1/2 ENE* | *A5* | *8* |
| *HILO QUALITY CLEANERS*<br>Facility Status: Site Cleanup Completed | *865 KINOOLE ST* | *1/4 - 1/2 N* | *6* | *9* |
| *DUKE'S KILAUEA SHELL*<br>Facility Status: Site Cleanup Completed<br>Facility Status: Site Cleanup Completed | *1104 KILAUEA AVE.* | *1/4 - 1/2 ENE* | *B7* | *11* |
| *PACIFIC RENT-ALL, INC*<br>Facility Status: Site Cleanup Completed | *1080 KILAUEA AVE* | *1/4 - 1/2 NE* | *B8* | *13* |

EDR PROPRIETARY RECORDS

**EDR Manufactured Gas Plants:** The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

| Lower Elevation | Address | Dist / Dir | Map ID | Page |
|---|---|---|---|---|
| HILO GAS COMPANY LTD | 51-53 PONAHAWAI ST | 1/2 - 1 N | 17 | 20 |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

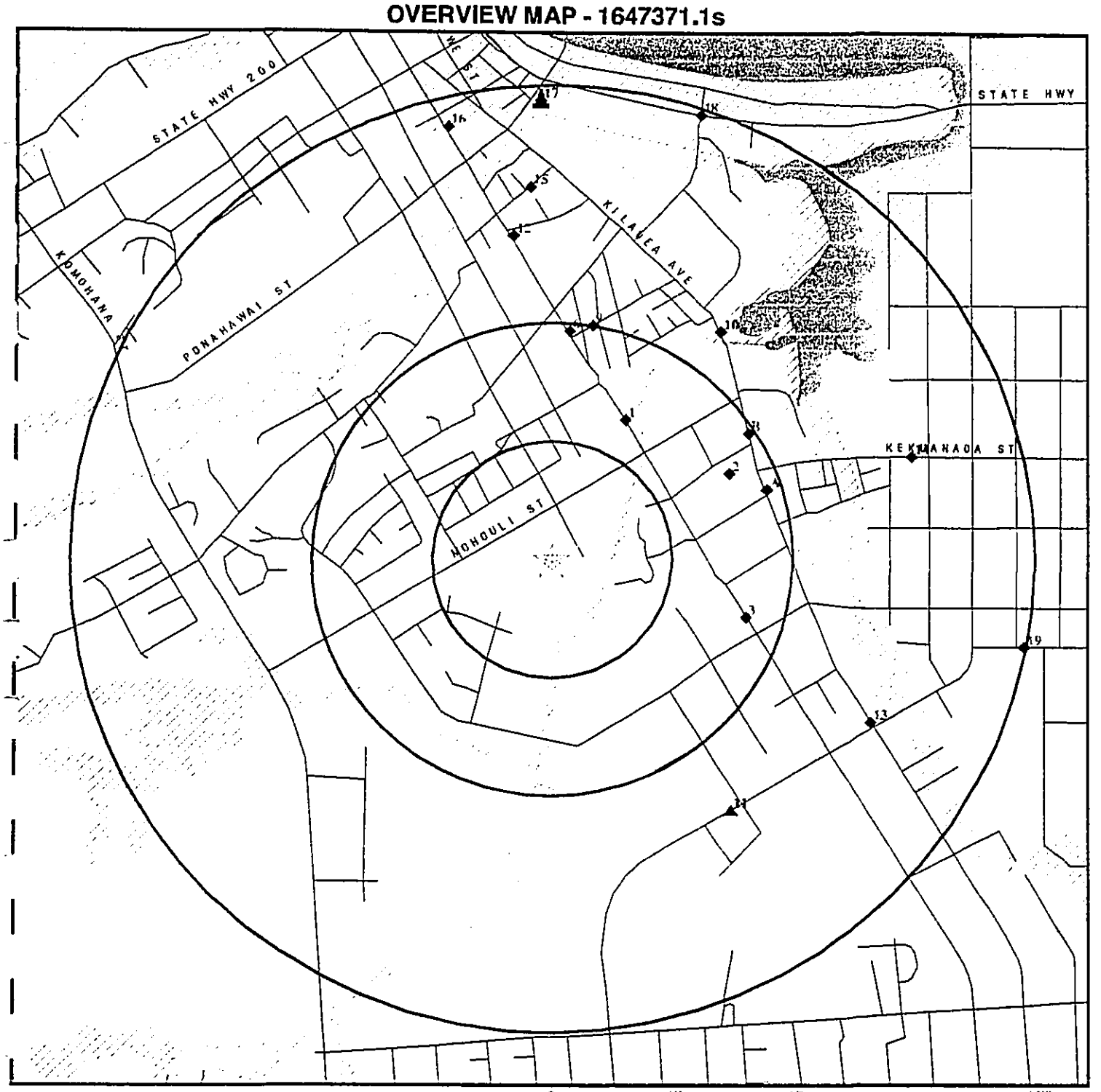
| Site Name | Database(s) |
|---|---|
| ALAMO RENT A CAR, HILO INTERNATIONAL AIRPORT | SPILLS, SHWS |
| HILO JUDICIARY CENTER PROJECT | INST CONTROL, SHWS |
| LAEHALA STREET DRUM SITE | SPILLS, SHWS |
| HILO ARSENIC | SPILLS, SHWS |
| POHAKULOA TRAINING AREA | SPILLS, SHWS |
| POHAKULOA TRAINING AREA | CERCLIS |
| HILO BAY FRONT SOCCER FIELD | CERC-NFRAP |
| SOUTH HILO LANDFILL | SWF/LF |
| FAA - HILO TOWER (ITO - ATCT) | LUST, UST |
| HAWAIIAN CEMENT - HILO TERMINAL | LUST, FINDS |
| YAMADA TRANSFER, INC. | LUST, FINDS |
| FAA - HILO VORTAC | UST |
| FAA - HILO TOWER (ITO - ATCT) | UST |
| DAGS HILO MAINTENANCE FACILITY | HAZNET, RCRA-SQG, FINDS, HAZNET |
| BUDGET RENT A CAR HILO | RCRA-SQG, FINDS |
| UNITEK SOLVENT SVCS INC HILO | RCRA-SQG |
| USARMY POHAKULOA TRAINING AREA | RCRA-SQG, FINDS |
| USDA ARS | HAZNET, HAZNET, RCRA-SQG, FINDS |
| KULANI CORRECTIONAL FACILITY | RCRA-LQG, FINDS |
| HILO PORT/PIER 3 | ERNS |
| HILO PORT PIER 2 | ERNS |
| PIER NO.2 PORT OF HILO | ERNS |
| PORT OF HILO PIER 3 | ERNS |
| HAWAII METALS RECYCLING - SOUTH HILO LANDFILL | FINDS |
| HAWAII METAL RECYCLING DBA BIG ISLAND RECYCLING - HILO | FINDS |
| DWS HILO | FINDS |
| HAWAII FUELING FACILITIES CORP. (HFFC) - HILO | FINDS |
| ABC CONSTRUCTION, HILO | FINDS |
| DOLLAR RENT A CAR, HILO AIRPORT | FINDS |
| FAA - HILO TOWER (ITO - ATCT) | FINDS |
| HERTZ RENTAL CAR, HILO AIRPORT | FINDS |
| HILO PIER ONE | FINDS |
| NATIONAL CAR RENTAL SYSTEM, INC. HILO AIRPORT | FINDS |
| HILO AUTO AND TRUCK SERVICE | FINDS |
| UNITEK SOLVENT SVCS INC HILO | FINDS |
| UH HILO PACIFIC AQUACULTURE | FINDS |
| HILO SODA WORKS TANK CLOSURE | FINDS |
| KUI & I OF HILO FLORIST | FINDS |
| HIANG HILO | FINDS |
| FAA - HILO VORTAC | FINDS |
| UNVERSITY OF HAWAII AT HILO - | FINDS |
| NORTH HILO BASEYARD | FINDS |
| NAS POOL-OLD HILO AIRPORT | FINDS |
| FAA - HILO ASR-8 | FINDS |
| HILO BURRITO | FINDS |
| KILAUEA & KAUMANA WARDS, HILO/ | FINDS |
| HILO MOLASSES PLT | FINDS |
| UNIVERSITY OF HAWAII AT HILO, HI | FINDS |
| HILO POLICE VEHICLE OVERTURNED IN WAILOA RIVER | FINDS |
| HOME DEPOT - HILO | FINDS |

# EXECUTIVE SUMMARY

HILO PARTNERS/COST U LESS
UNIVERSITY OF HAWAII AT HILO, HI

SPILLS
US BROWNFIELDS

# OVERVIEW MAP - 1647371.1s




- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Hospice of Hilo | CLIENT: Graham Knopp Consulting |
| ADDRESS: S. Terminus of Kapiolani St. Hilo HI 96720 | CONTACT: Graham Knopp |
| LAT/LONG: 19.7084 / 155.0833 | INQUIRY #: 1647371.1s |
| | DATE: April 04, 2006 |

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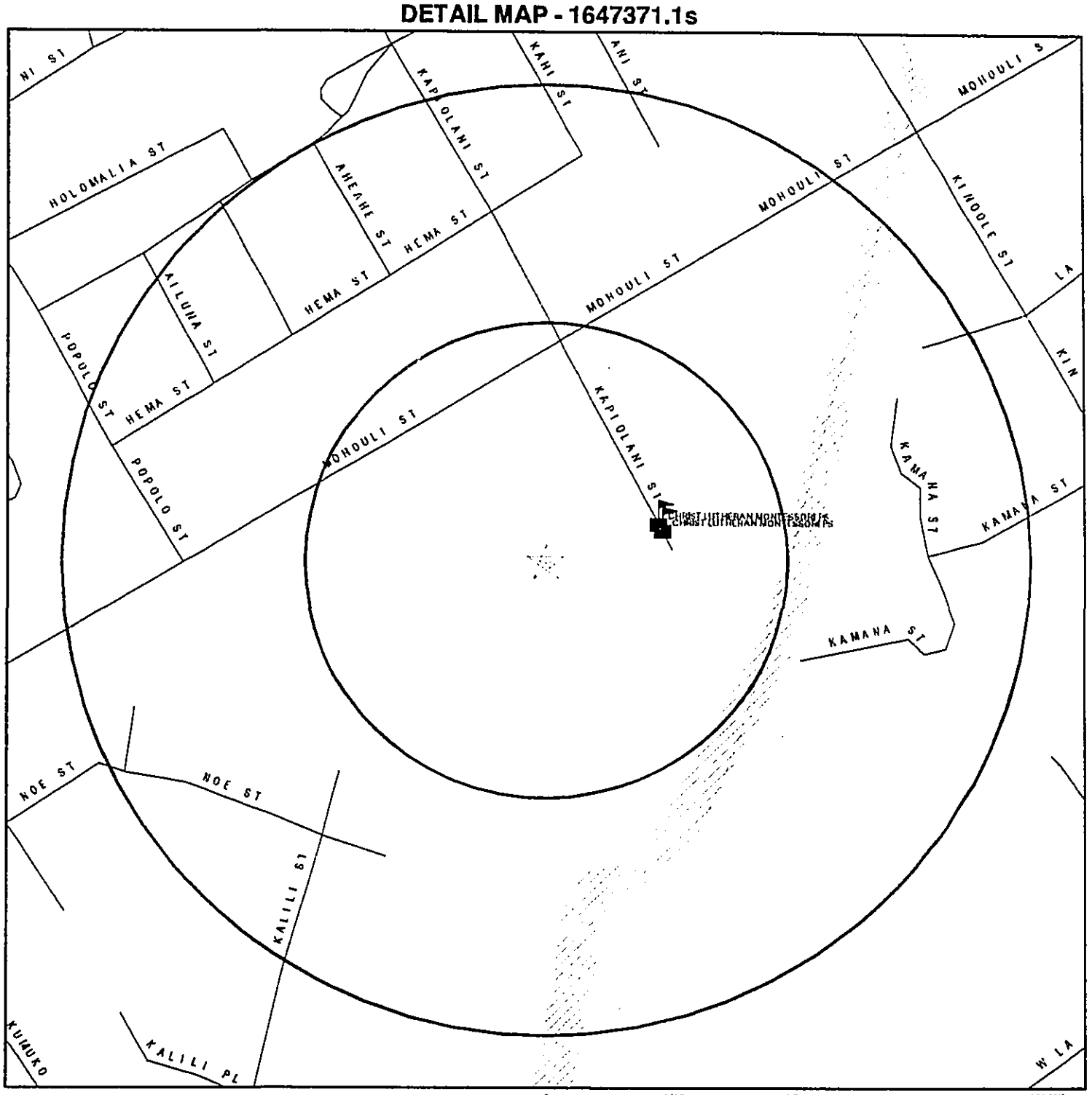
# DETAIL MAP - 1647371.1s




- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Hospice of Hilo | CLIENT: Graham Knopp Consulting |
| ADDRESS: S. Terminus of Kapiolani St. | CONTACT: Graham Knopp |
| Hilo HI 96720 | INQUIRY #: 1647371.1s |
| LAT/LONG: 19.7084 / 155.0833 | DATE: April 04, 2006 |

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**NOTE:**

**REMAINDER OF PHASE I E.S.A. APPENDIX C REMOVED FROM ENVIRONMENTAL ASSESSMENT TO REDUCE BULK.**

**FINDINGS AVAILABLE FOR REVIEW FOR PARTIES WITH DEMONSTRATED INTEREST UPON REQUEST TO HOSPICE OF HILO**

# Appendix D
# Historical Research Documentation

COUNTY OF HAWAI'I PARCEL HISTORY (TT101) FOR: 

TMK: 2-4-001-024-0000

01/20/1999 ----------

INSTR-DESC:GRANT OF NON-EXCL ESMT
INSTR_NO:9900008596
TRANS NO:89874
INSTR-DATE:01/19/1999
REC-DATE:01/20/1999

AREA:39.4560 ACRES
FROM: STATE OF HAWAII, BY ITS BOARD OF LAND & NATURAL RESOU
RCES
TO: STANLEY MARPLE RANDOLPH TRS OF UNREC REV TR AGRMT DTD

DOES HEREBY GRANT NON-EXCL & PERP ESMT TO CONSTRUCT, MAINTAI
N & REPAIR
ACCESS & UTILITY ESMT
SUBJ/ACCESS & UTILTY ESMT (2634 SF) IN FAVOR OF TMK 2424-72
TMB NOTE: ESMT SHOWN; DES
F/D: LOD S-28325; CONSIDERATION - $785.00

| GROUP# | NAME | F | TC | %-OWNER | TITLE-DESC |
|---|---|---|---|---|---|
| 2 | 0011 STATE OF HAWAII | | | | |

| | | | | |
|---|---|---|---|---|
| FOR ASSESSMENT YEAR 2006 | | | | |
| PITT 8 LAND VALUE: | $1,061,400 | EXEMPT LAND VALUE: | | $1,061,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 2005 | | | | |
| PITT 8 LAND VALUE: | $1,377,400 | EXEMPT LAND VALUE: | | $1,377,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 2004 | | | | |
| PITT 8 LAND VALUE: | $1,796,200 | EXEMPT LAND VALUE: | | $1,796,200 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 2003 | | | | |
| PITT 8 LAND VALUE: | $710,200 | EXEMPT LAND VALUE: | | $710,200 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 2002 | | | | |
| PITT 8 LAND VALUE: | $710,200 | EXEMPT LAND VALUE: | | $710,200 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 2001 | | | | |
| PITT 8 LAND VALUE: | $710,200 | EXEMPT LAND VALUE: | | $710,200 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 2000 | | | | |
| PITT 8 LAND VALUE: | $710,200 | EXEMPT LAND VALUE: | | $710,200 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |

MAILING ADDRESS: STATE OF HAWAII
<
<
00000 0000

10/07/1987 ----------

| GROUP# | NAME | F | TC | %-OWNER | TITLE-DESC |
|---|---|---|---|---|---|
| 2 | 0011 STATE OF HAWAII | | | | |

| | | | | |
|---|---|---|---|---|
| FOR ASSESSMENT YEAR 1999 | | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 1998 | | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 1997 | | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |
| FOR ASSESSMENT YEAR 1996 | | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | | $0 |

COUNTY OF HAWAI'I PARCEL HISTORY (TT101) FOR:

TMK: 2-4-001-024-0000



| | | | |
|---|---|---|---|
| FOR ASSESSMENT YEAR 1995 | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1994 | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1993 | | | |
| PITT 8 LAND VALUE: | $769,400 | EXEMPT LAND VALUE: | $769,400 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1992 | | | |
| PITT 8 LAND VALUE: | $1,479,600 | EXEMPT LAND VALUE: | $1,479,600 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1991 | | | |
| PITT 8 LAND VALUE: | $1,035,700 | EXEMPT LAND VALUE: | $1,035,700 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1990 | | | |
| PITT 8 LAND VALUE: | $887,800 | EXEMPT LAND VALUE: | $887,800 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1989 | | | |
| PITT 8 LAND VALUE: | $887,800 | EXEMPT LAND VALUE: | $887,800 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |
| FOR ASSESSMENT YEAR 1988 | | | |
| PITT 8 LAND VALUE: | $631,297 | EXEMPT LAND VALUE: | $631,297 |
| BUILDING VALUE: | $0 | EXEMPT BUILDING VALUE: | $0 |

----------SEE PARCEL SHEETS FOR MORE INFORMATION----------

DOCUMENT CAPTURED AS RECEIVED

TERRITORY OF HAWAII

FIELD BOOK LAND SHEET

Por. Lot 2, Waiakua Cane Lots

| ZONE | SEC. | PLAT. | PARCEL |
|---|---|---|---|
| 2 | 4 | 1 | 24 |

| OWNER | TITLE HISTORY | MAILING ADDRESS | |
|---|---|---|---|
| ~~Hidekichi Fukunaga & Toshiko Kamasaki (T.H.)~~ | | | |
| ~~Hidekichi Fukunaga TH 19~~ | GL 2618 TH to Hidekichi Fukunaga 19/25/38 to 19/25/53 A/R $77.15 yrs | | |
| ~~Hilo Dairy TH~~ | Trans/GL 2618 fr. Hidekichi Fukunaga 8/6/38 | | |
| ~~Kazuo Miyazaki TH~~ | Trans/GL 2618 fr. Hilo Dairy 10/20/38 | Box 36, Hilo | |
| ~~Kazuo Miyazaki (TH)~~ | Reduction in Area & Rent G.L. No. 2618 Date:5t/10/46 Effective Date:4/25/46 Reduction $12 per annum. New Rent $65. | | |
| ~~Executors of Kazuo~~ | Rev Pnt#1453:2/14/55 fr TH 41.012acfor mature purposes Rent:$10 mo TMB Note: G.L.#2618 expired 9/24/54 TMB -PM-56 '55 | | 41.012 ac |
| ~~George Holowaty (TH)~~ | Cane Rev Pnt 1453:1/31/56 fr K Miyazaki 41.012ac to& par 25 TMB 320 '56 | | 41.012 ac |
| (~~Walter Porreiro~~) (TH) | For 1957 fr 2401-24 9.0 Ac & fr 2401-36 0.88Ac fr TH TMB 1961 '56 | | 51.030 ac |
| ~~Walter E. Porreiro Tr for~~ State of Hawaii | GL 3568:10/25/56 fr TH 51.05Ac & Term 21 yrs Ann Rent $200 CSF 12603 TMB 1961'56 | | 51.030 ac |
| | Par/Surr:7/25/57 Holowaty to T.H. to 2401-25 15.40Ac new rental $140 | | 35.63 Ac |
| | Trans/GL:12/1/58 fr Geo. Holowaty 35.63 ac. Cons$1,000 | | 35.63 Ac. |
| | Par/withdrawal G/L#3568 4.298ac drpd into 2401-25 | | 31.332 Ac. |
| | Par/Surr GL#3568 11/1/63 4.298ac to S H new rental$123 | | |
| | For 1966: R/S: GL#3568 cancld on 1/14/65 | | 35.002 Ac |
| | For 1966: 3.670 ac fr par-25 | | 31.901 Ac. |
| | For 1967 3.101 Ac dropped into 2401-120 TMB 6266'66. | | 29.571 Ac. |
| | For 1967 2.33 Ac dropped into 2401-121 TMB 6266'66. | | |
| | For 1972: 35.00 ac fr par-159; s/dinto lots 1 to 66incl plus Rd Lot (3.888ac); & drpd into new tax keys 2424.99 to 165incl TMB M-221'71 | | 39.456 Ac. |

| YEAR | 1963 | 1964 | 1965 | 1966 | 71-72 | 72-73 | 73-74 | 1979 | Year |
|---|---|---|---|---|---|---|---|---|---|
| AREA | | 31.332 ac. | | 35.002 Ac. 29.571Ac | | 39.456 Ac | | | |
| LAND | | 6579 | 6579 | | | | | | |
| IMP. | | - | - | | | | | | |
| TOT. | | 6579 | 6579 | | | | | | |
| EX. | | - | - | | | | | | |
| NET | | 6579 | 6579 | EXEMPT | | | | | |

Goichi Yoshimoto

# Appendix E
# Site Photographs

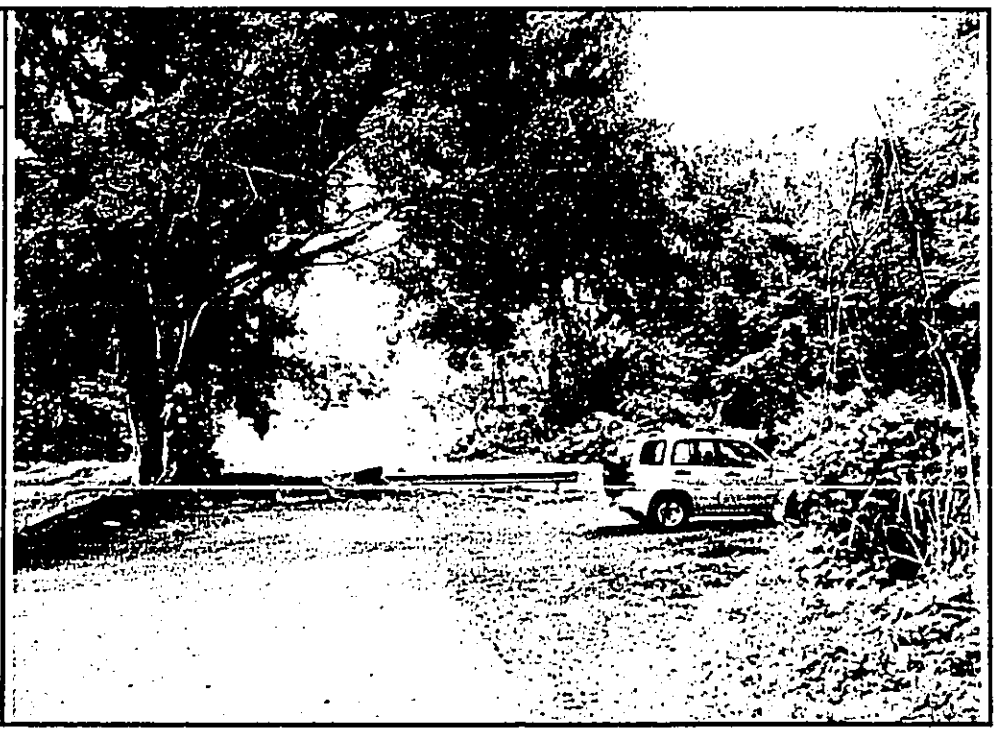
## Photographic Log

| Photo No. | Date |
|---|---|
| 1 | 4/1/06 |

**Description**
Terminus of Kapiolani Street. Southeast corner of subject site is near telephone pole (i.e., iron pipe near base of pole).

| Photo No. | Date |
|---|---|
| 2 | 4/1/06 |

**Description**
Gate and access road along southern periphery of subject site.



# Photographic Log

| Photo No. | Date |
|---|---|
| 3 | 4/1/06 |

**Description**
Typical view of interior of site. covered by secondary forest.4

| Photo No. | Date |
|---|---|
| 4 | 4/1/06 |

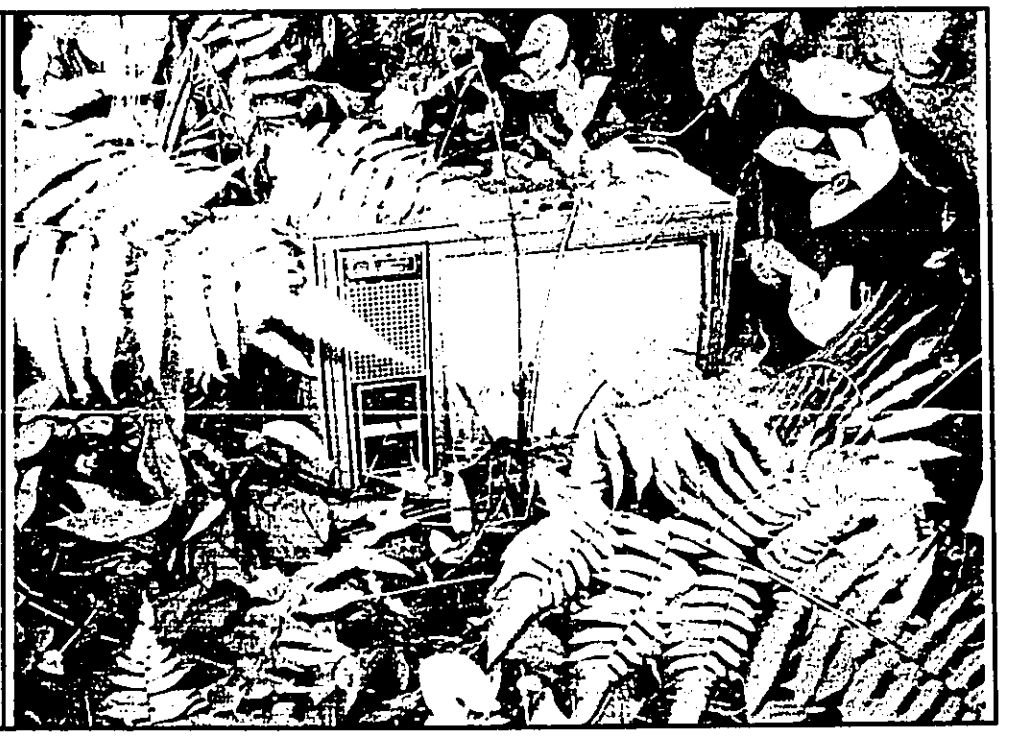
**Description**
Highly corroded 55 gallon drum observed without cover.

| Photo No. | Date |
|---|---|
| 5 | 4/1/06 |

**Description**
Example of household waste observed near northern periphery of subject site.

| Photo No. | Date |
|---|---|
| 6 | 4/1/06 |

**Description**
Example of household waste observed near northern periphery of subject site.



| Photo No. | Date |
|---|---|
| 7 | 4/1/06 |

**Description**
Example of household waste observed near northern periphery of subject site including aluminum roofing material.

Graham Knopp Consulting
Graham Knopp, Ph.D.
Environmental Scientist

P.O. Box 10344
Hilo, HI 96721
Cell: (808) 938-8583
Office: (808) 959-7016
Email: gpknopp@yahoo.com

Hospice of Hilo
1011 Waianuenue Avenue
Hilo, Hawaii 96720
June 28, 2006

**Attention: Brenda Ho, Executive Director**

**Subject: Amendment of Phase I Environmental Site Assessment Proposed Hospice of Hilo General Inpatient Facility Site**

This letter amends the Phase I Environmental Site Assessment (ESA) submitted to the Hospice of Hilo on May 17, 2006 in order to account for the modification in subject site. The consequent changes to the submitted ESA are described by section below.

We have been advised by Geometrician Associates, LLC that the subject site for the Proposed Hospice of Hilo General Inpatient Facility Site (portion of TMK: (3rd) 2-4-01:024) has been modified. The change is essentially a rotation of the site perpendicularly 90 degrees, so that the long axis of the 300'x 600', 5-acre site extends along the direction of Kapiolani Street. Attached are a Site Location Map and a Site TMK Map that may substitute for Figures 1 and 2 of the ESA.

There are no overall changes to the findings and conclusions of the submitted ESA; no Recognized Environmental Conditions were discovered with regard to the subject site given the modified subject site.

Changes to Submitted ESA

Section 1.0: No change.

Section 2.0: The subject site essentially has been rotated 90 degrees so that the long axis of the 300' by 600' site extends in the direction of Kapiolani Street (i.e., approximately NW-SE, see attached location map).

Section 3.0: The subject site is located approximately 75 to 110 feet above mean sea level.

Section 4.0 : On May 29, 2006 GKC conducted a walk-through of the modified subject site. The site contained no evidence of past structures. No evidence of industrial use was

observed. No evidence of disposal of construction waste, or hazardous material containers was observed. No hazardous materials were identified during the site visit. No above-ground storage tanks (ASTs) were observed. No evidence of underground storage tanks (USTs) was observed. No materials potentially containing polychlorinated biphenyls (PCBs) were observed. The modified subject site will still include areas that contain dumped household waste.

Section 5.0: No change.

Section 6.0: No change.

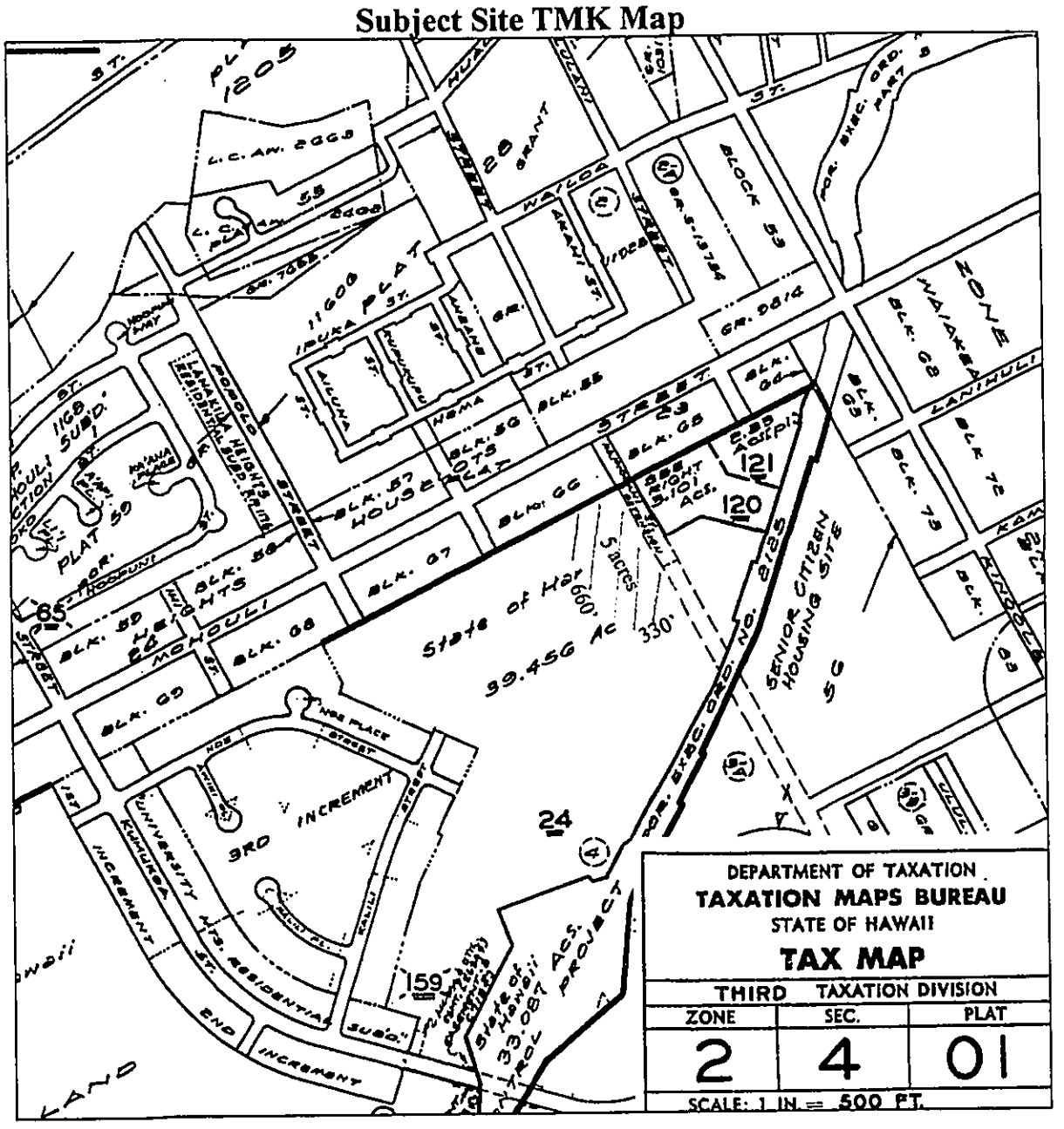
In summary, no evidence suggesting the past release, or potential for release, of hazardous substances was found on the modified subject site. Therefore no Recognized Environmental Concerns were discovered with regard to the subject site.

Sincerely,

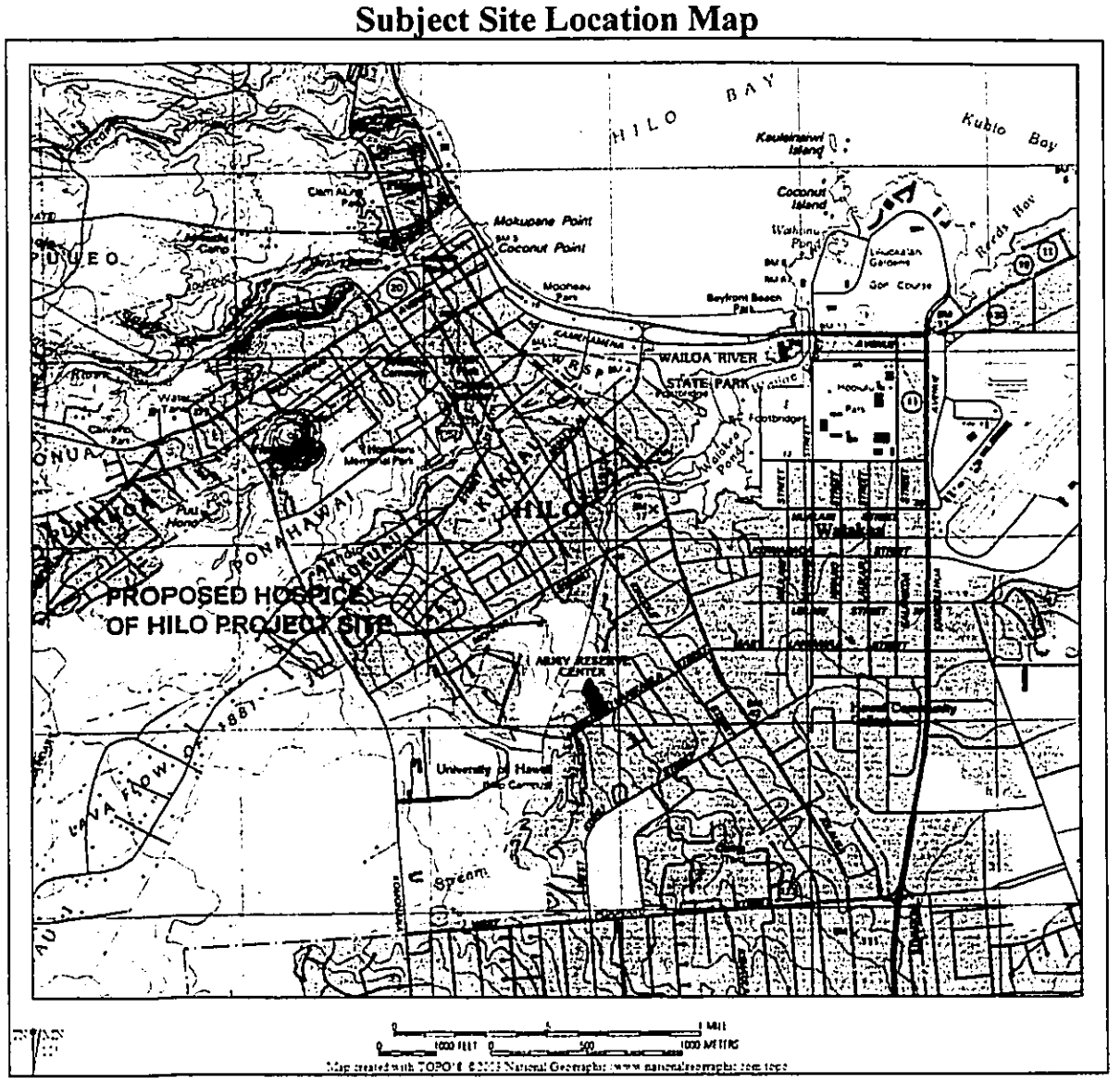
Graham Knopp, Ph.D.
Graham Knopp Consulting

attachments: Subject Site Location Map, Subject Site TMK Map

# Subject Site TMK Map



# Subject Site Location Map



# APPENDIX 3

# ARCHAEOLOGICAL REPORT/CULTURAL IMPACT ASSESSMENT

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

**STATE OF HAWAII**
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

November 20, 2006

Ron Terry
Geometrics Associates
P.O. Box 396
Hilo, Hawaii 96721

LOG NO: 2006.3792
DOC NO: 0611NM29
Archaeology

Dear Mr. Terry:

**SUBJECT:** **Chapter 6E-8 Historic Preservation Review –Draft EA Hospice of Hilo General Inpatient Facility**
**Waiakea, South Hilo, Hawaii**
**TMK: (3) 2-4-001: 024 por.**

The aforementioned project consists of a construction of a new inpatient facility. We have reviewed your DEA and attached archaeological assessment report in Appendix 3.

The *Request for SHPO Concurrence with a Determination of No Historic Properties Affected Pursant to the National Environmental Policy Act and in Compliance with Section 106 of the National Historic Preservation Act, Hopsice of Hilo Property, Waiakea Ahupuaa, South Hilo District, Hawaii Island, TMK:3-2-4-001: 0024 por.* (Clark and Rechtman, Rechtman Consulting LLC, 2006) is acceptable. No historic properties were found.

We concur with your determination that **no historic properties will be affected** by this undertaking. If you have any questions, please contact Nancy McMahon, the Kauai Archaeologist at 808.742.7033.

Aloha,

Melanie Chinen, Administrator
State Historic Preservation Division

NM:gvf

Cc: Harry Yada, DLNR- Land Division, Hawaii Island P.O. Box 936, Hilo, HI 96721
OEQC, 235 South Beretania Street, Suite 702, Honolulu, HI 96813

RC-0417

# Request for SHPO Concurrence with a Determination of No Historic Properties Affected Pursuant to the National Environmental Policy Act and in Compliance with Section 106 of the National Historic Preservation Act

## Hospice of Hilo Property
(TMK:3-2-4-01:024 por.)

Waiākea Ahupua'a
South Hilo District
Island of Hawai'i


PREPARED BY:

Matthew R. Clark, B.A.
and
Robert B. Rechtman, Ph.D.


PREPARED FOR:

Ron Terry, Ph.D.
Geometrician Associates, LLC
HCR 2 Box 9575
Kea'au, HI 96749

August 2006


**RECHTMAN CONSULTING, LLC**
HC 1 Box 4149 Kea'au, Hawai'i 96749-9710
phone: (808) 966-7636 fax: (808) 443-0065
e-mail: bob@rechtmanconsulting.com
ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

# Request for SHPO Concurrence with a Determination of No Historic Properties Affected Pursuant to the National Environmental Policy Act and in Compliance with Section 106 of the National Historic Preservation Act

Hospice of Hilo Property
(TMK:3-2-4-01:024 por.)

Waiākea Ahupua'a
South Hilo District
Island of Hawai'i

RECHTMAN CONSULTING

# CONTENTS



# FIGURES

# INTRODUCTION

At the request of Ron Terry, Ph.D. of Geometrician Associates, LLC, on behalf of his client the Hospice of Hilo, Rechtman Consulting, LLC conducted an assessment of potential effects to historic properties (including traditional cultural properties) that might result from the proposed development of a Hospice of Hilo facility on approximately 5 acres in Waiākea Ahupua'a, South Hilo District, Island of Hawai'i (Figures 1). The project area consists of a rectangular portion of a 39.456-acre parcel owned by the State of Hawai'i (TMK:3-2-4-01:024). The area is located within the town of Hilo, south of Mohouli Street along the eastern edge of a proposed extension to Kapiolani Street (Figure 2). The 200-meter long western boundary of the area is marked by a paved road (Kapiolani Street) and a gated gravel road (Figures 3 and 4), while the 100-meter long northern boundary abuts developed residential parcels (Figure 5). Undeveloped secondary forestland is present to the south and west of the project area. The area itself is also currently undeveloped, but as indicated by the vegetation present and the presence of bulldozer push, portions of it were once mechanically cleared.

The project area is located approximately 100 feet above sea level. The soil in the northern portion of the study area is classified as Keaukaha extremely rocky muck (rKFD), a dark brown and strongly acid soil that is approximately 8 inches thick, and follows the undulating topography of the underlying *pāhoehoe* flow. The soil in the southern portion of the study area is classified as Papai extremely stony muck (rPAE), a well-drained, thin, extremely stony organic soil formed over fragmented *'a'ā*. the permeability of these soils is rapid, runoff moderate, and erosion hazard slight; the Capability Subclass is IV, and the soils of this type are mainly used for pasture and woodland (Sato et al. 1973). These soils have formed over Mauna Loa lava flows that that are approximately 750-1,500 years old (Wolfe and Morris 1996). Vegetation in the study area is dense and extremely varied. A recent survey of vegetation identified 104 alien and 7 indigenous species within a secondary forest setting (Geometrician Associates, LLC unpublished data). The existing vegetation pattern indicates that the study property has undergone substantial alteration in the past including mechanized clearing and earth moving.

Funding for a portion of the project is being provided by a Community Development Block Grant (CDBG) through the Department of Housing and Urban Development (HUD). This project is thus considered a Federal undertaking, and is subject to (among other regulations) the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. Section 106 provides for concurrent compliance (36 CFR §800.3(b)) with respect to these authorities. As the property is State of Hawai'i land, environmental documentation is also being prepared in compliance with Chapter 343 Hawai'i Revised Statues and rules of the County of Hawai'i Planning Department.

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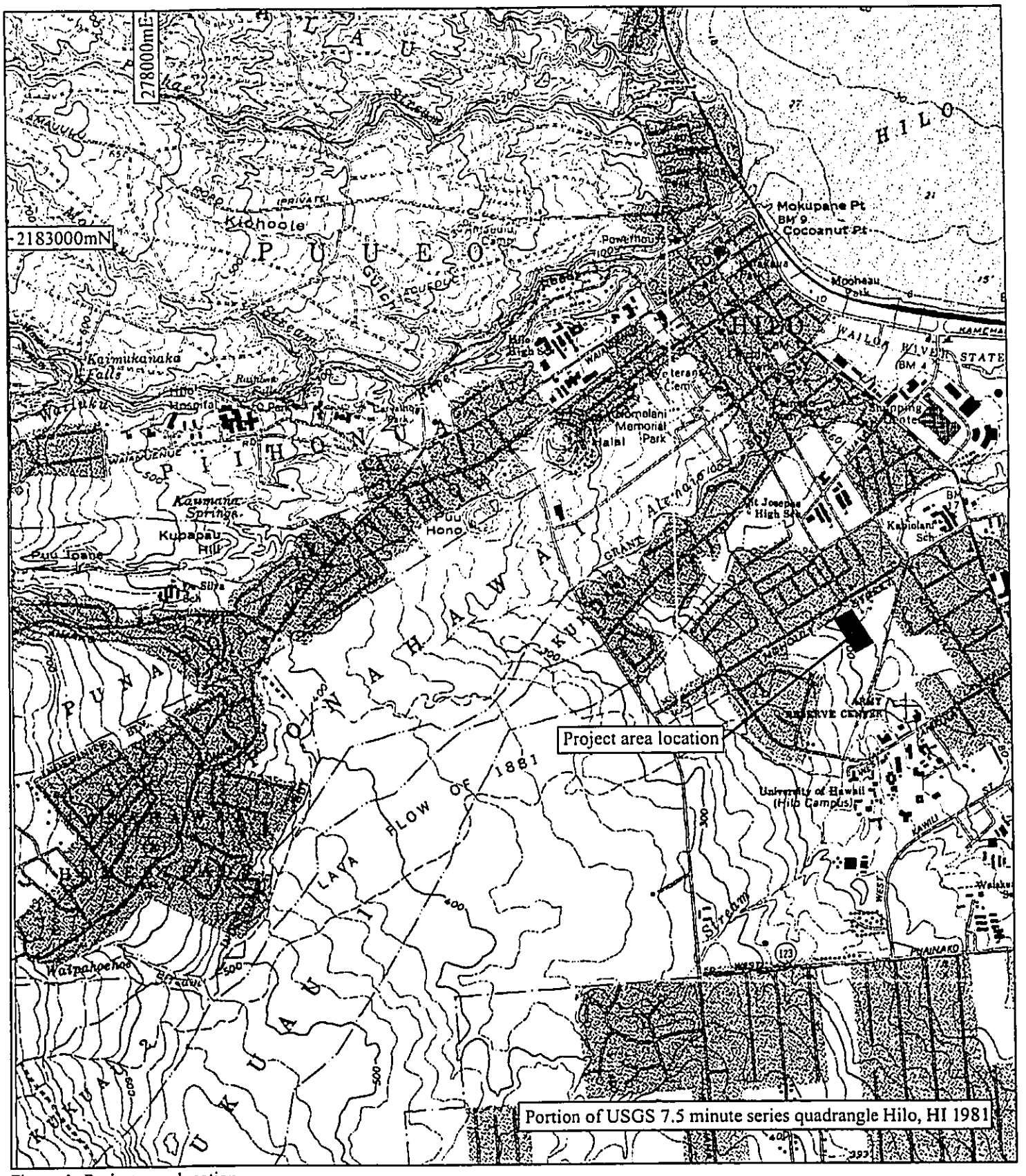


Figure 1. Project area location.

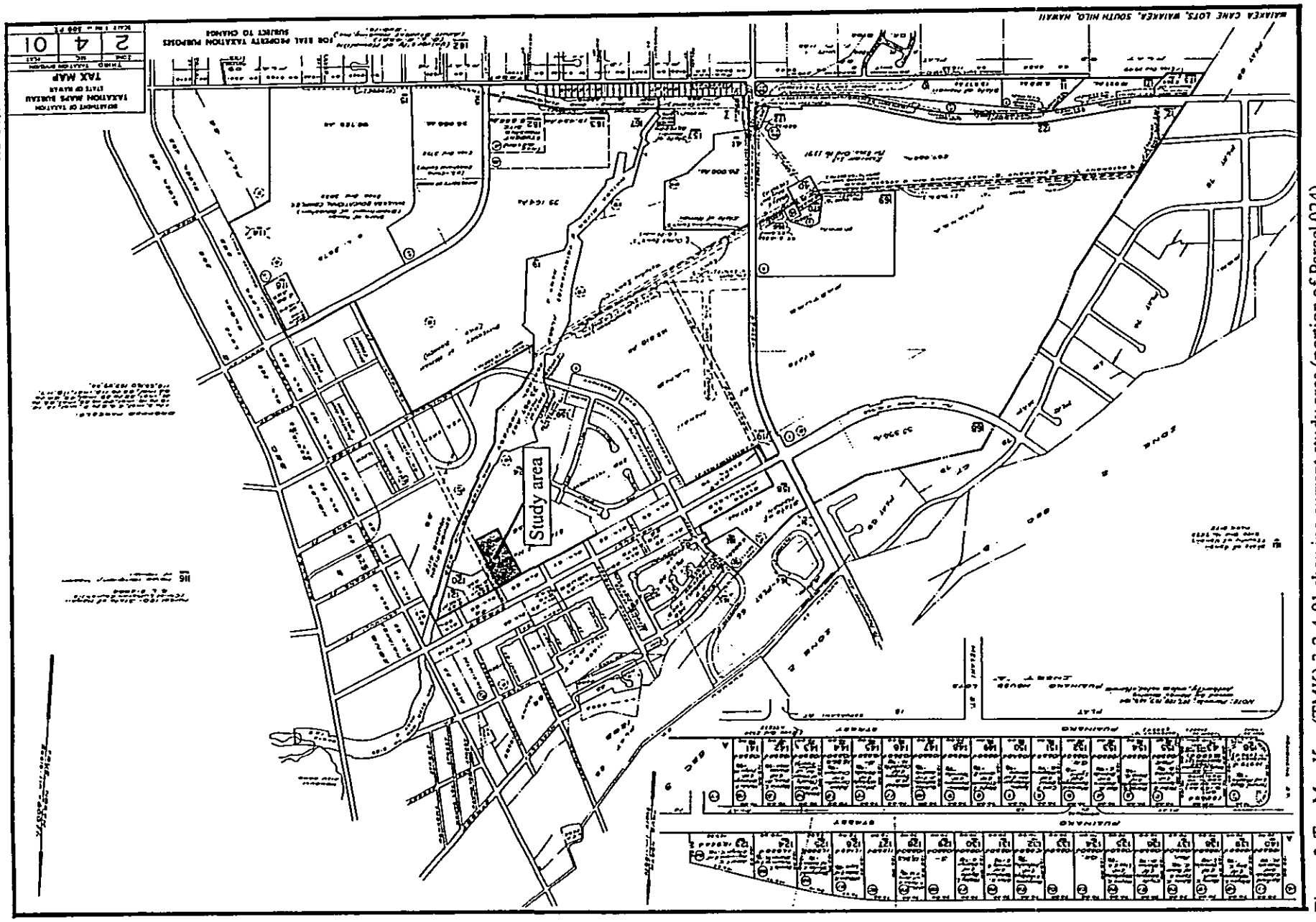


Figure 2. Tax Map Key (TMK):3-2-4-01 showing current study area (portion of Parcel 024).



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Figure 3. View to north of Kapiolani Street along the western property boundary.

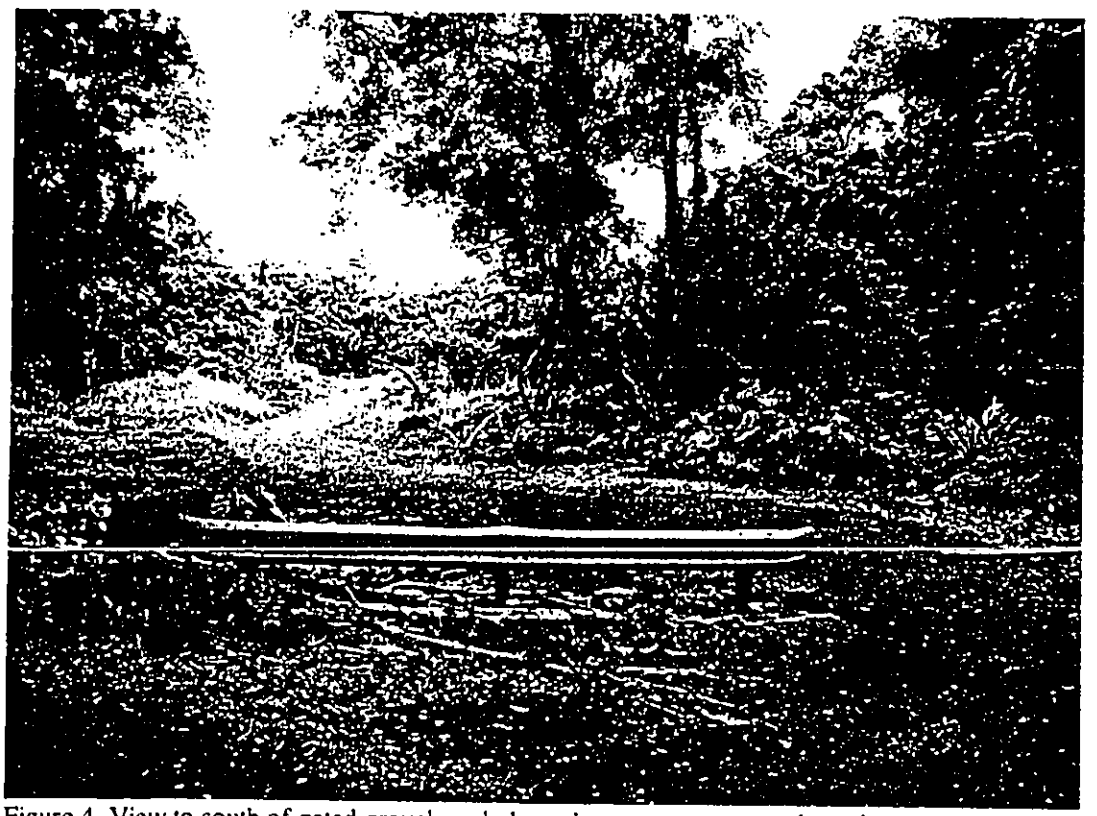

Figure 4. View to south of gated gravel road along the western property boundary.

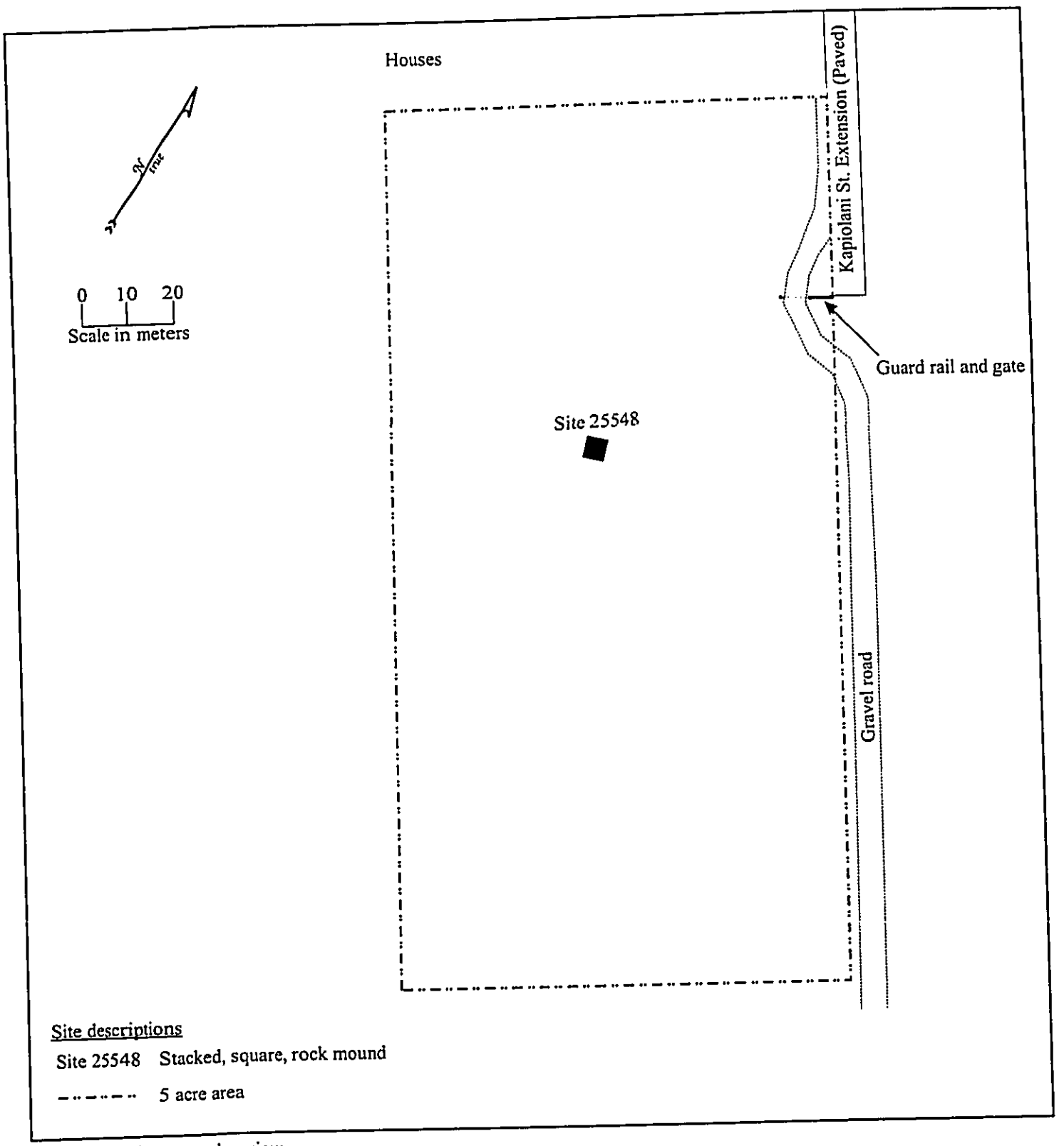


Figure 5. Project area plan view.

# BACKGROUND STUDIES

This section of the report describes and synthesizes prior archaeological, cultural, and historical studies that are relevant to the current project area; and provides a brief culture-historical background.

## Previous Archaeology

One early archaeological study of East Hawai'i was conducted by Hudson (1932) for the B. P. Bishop Museum. He noted that, "there was an important village and trading center around Hilo Bay" (1932:20), but related that, "no archaeological remains are to be found within the town of Hilo itself except a few stones which are said to have been taken from heiaus..." (1932:226). Hudson relates that one *heiau* was formerly present in Waiākea Ahupua'a near the route of the present Kilauea Avenue, he writes:

> There was a heiau named Kapaieie near Honokawailani in Waiakea. Bloxam who passed the site on his way from Hilo to the volcano say that its center was marked by a single coconut tree. At the time of his visit nothing remained but ruined walls choked with weeds. He was told that the priests would lie in wait for passersby and dispatch them with clubs. Thrum [1907:40] states that the site was famed in the Hilo-Puna wars buts its size and class are unknown. No remains of any kind could be found and no Hawaiians with whom I talked had ever heard of it. (Hudson 1932:240)

More recent archaeological studies in the area (Borthwick et al. 1993; Escott 2004; Hunt and McDermott 1993; Maly et al.1994; Rechtman and Henry 1998; and Spear 1995) have identified, almost exclusively, historic archaeological remains associated with the Waiākea Sugar Plantation, which operated in Waiākea Ahupua'a between 1879 and 1947 (Rechtman and Henry 1998). Common features recorded during these studies and associated with sugarcane cultivation include stacked rock mounds, enclosures, core-filled walls, and parallel wall alignments used for irrigation and marking the routes of railroad tracks associated with the plantation. Each of the aforementioned studies is discussed in detail below.

Hunt and McDermott (1993) conducted an archaeological inventory survey of the then proposed Pū'āinakō Street extension within Waiākea Ahupua'a to the southeast of the current project area. As a result of that survey 11 sites containing 97 features were recorded within the proposed road alignment. All of the recorded sites and features were determined to be historic in origin and associated with the Waiākea Sugar Plantation. Three volcanic glass flakes recovered from an excavation beneath one of the features suggesting Precontact use of the project area, but no surface Precontact remains were present.

Borthwick et al. (1993) conducted an Archaeological Inventory survey of two small parcels (TMKs:3-2-4-01:040 and 157) located to the southeast of the current project area within Waiākea Ahupua'a (see Figure 2). As a result of that survey four sites were recorded that were all of historic origins and related to the use of the area by the Waiākea Sugar Plantation.

Maly et al. (1994) conducted an Archaeological Inventory Survey of a 4.5-acre parcel located to the south of the current project area (TMK:3-2-4-57:001). Four sites containing a total of 51 features were recorded as a result of that study. The identified features included rock mounds, walls, and an enclosure. It was determined that all of the features were associated historic use of the area for sugarcane cultivation. Nevertheless, further investigation was recommended at the sites to test for the possibility of subsurface Precontact cultural deposits. Subsequent data recovery work was carried out by Spear (1995). No Precontact cultural deposits were located during the data recovery excavations and it was concluded that all of the sites were constructed during Historic times for sugarcane cultivation.

Rechtman and Henry (1998) conducted an archaeological Inventory Survey of roughly 40 acres located within Waiākea Ahupua'a between Kāwili Street and Pū'āinakō Street to the south of the current project area (TMK:3-2-4-01:005; see Figure 2). As a result of that survey a single site (SIHP Site 21461) consisting of 117 features was recorded on the subject parcel. The recorded features included seven walls, five sets of parallel walls, three enclosures, and 102 mounds. These features were all related to the historic use of the parcel for sugarcane cultivation. The mounds were all situated on bedrock at the top or bottom edges of slopes and were determined to be clearing piles. The parallel walls represented either irrigation ditches or right-of-ways associated small gauge railroad lines. While the remaining core-filled walls and the enclosures were used for an undetermined historic function likely related to sugarcane cultivation.

Escott (2004) conducted an Archaeological Inventory Survey of a 258-acre parcel located to the northwest of the current project area within Waiākea Ahupua'a (TMK:3-2-4-01:122; see Figure 2). As a result of the survey, Escott (2004) recorded nineteen archaeological sites, all of which were interpreted as being historic in age and related either to sugarcane cultivation, ranching, or military activities. The recorded sites included two rock alignments, a rock concentration, a rock mound, six sugarcane fields, an enclosed lava blister, a water catchment, three dirt roads, two World War II era U.S. military fighting positions, the old location of the Fair View Dairy where later military activities took place during World War II, and a old fence line marked by three iron fence posts. The six sugarcane field sites all contained multiple features, nearly all of which were recorded as various shaped clearing mounds.

## Culture-Historical Background

This section summarizes the general cultural history of Hilo and more specifically the history of Waiākea Ahupua'a. For a more in-depth historical background the reader is referred to Kelly et al. (1981), Maly (1996a), Maly (1996b), Moniz (n.d.), and McEldowney (1979).

The earliest historical knowledge of Hilo comes from legends written by Kamakau (1961) of a 16th century chief 'Umi-a-Liloa (son of Liloa) who at that time ruled the entire island of Hawai'i. Descendants of Umi and his sister-wife were referred to as "Kona" chiefs, controlling Ka'ū, Kona, and Kohala, while descendants of Umi and his Maui wife were "Hilo" chiefs, controlling Hāmākua, Hilo, and Puna (Kelly et al. 1981). According to Kamakau (1961) both sides fought over control of the island, desiring access to resources such as feathers, *māmaki* tapa, and canoes on the Hilo side; and *wauke* tapa, and warm lands and waters on the Kona side (c.f. Kelly et al. 1981).

Sometime near the end of the 16th century or early in the 17th century, the lands of Hilo were divided into *ahupua'a* that today retain their original names (Kelly et al. 1981). These include the *ahupua'a* of Pu'u'eo, Pi'ihonua, Punahoa, Pōnohawai, Kūkūau and Waiākea (Figure 12). The design of these land divisions was that residents could have access to all that they needed to live, with ocean resources at the coast, and agricultural and forest resources in the interior. However, only Pi'ihonua and Waiākea provided access to the full range of resources stretching from the sea up to 6,000 feet along the slopes of Mauna Kea (Kelly et al. 1981).

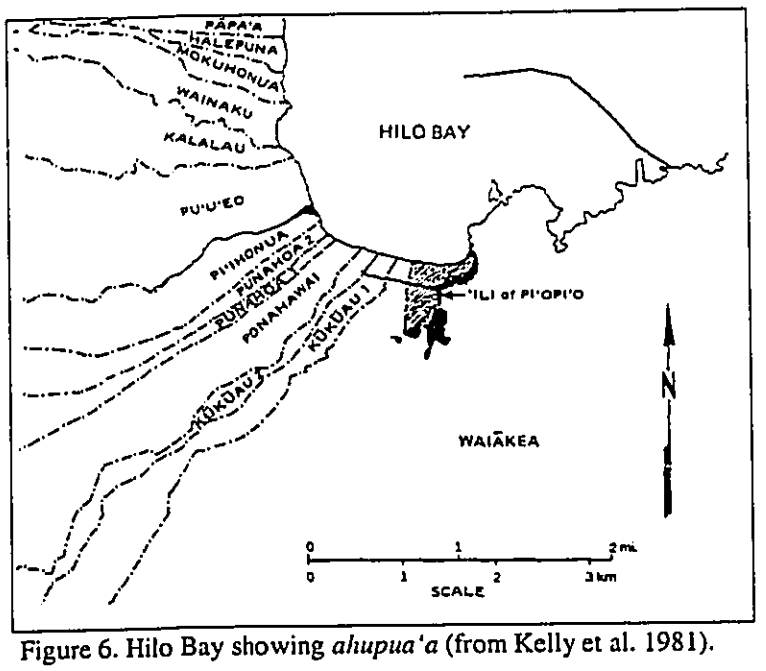

Figure 6. Hilo Bay showing *ahupua'a* (from Kelly et al. 1981).

Historical accounts (McEldowney 1979) place the current study area in a zone of agricultural productivity. As Isabella Bird recorded upon arriving in Hilo in 1873:

> Above Hilo, broad lands sweeping up cloudwards, with their sugar cane, *kalo*, melons, pine-apples, and banana groves suggest the boundless liberality of Nature. (Bird 1964:38)

Handy and Handy (1972) also describe the general region as an agricultural area:

> On the lava strewn plain of Waiakea and on the slopes between Waiakea and Wailuku River, dry taro was formerly planted wherever there was enough soil. There were forest plantations in Panaewa and in all the lower fern-forest zone above Hilo town along the course of the Wailuku River. (Handy and Handy 1972:539)

Maly (1996a) refers to a 1922 article from the Hawaiian Language newspaper, *Ka Nupepa Kū'oku'a*, where planting on *pāhoehoe* lava flats is described:

> There are *pahoehoe* lava beds walled in by the ancestors in which sweet potatoes and sugar cane were planted and they are still growing today. Not only one or two but several times forty (*mau ka'au*) of them. The house sites are still there, not one or two but several times four hundred in the woods of the Panaewa. Our indigenous bananas are growing wild, these were planted by the hands of our ancestors. (Maly 1996a:A-2)

Hilo was one of the larger population centers on the Island of Hawai'i, and also an area frequented by the *ali'i* (Moniz n.d.). Captain George Vancouver, an early European explorer who met with Kamehameha I at Waiākea in 1794, recorded that Kamehameha was there preparing for his invasion of the neighbor islands, and that Hilo was an important center because his canoes were being built there (Moniz n.d.:7). The people of Hilo had long prepared for Kamehameha's arrival and collected a large number of hogs and a variety of plant foods, to feed the ruler and his retinue. Kelly et al. (1981) surmises that the people of Hilo had actually prepared for a year prior to Kamehameha's visit and expanded their fields into the open lands behind Hilo to accommodate the increased number of people that would be present. Kelly et al. (1981) also speculates that many of the fish ponds in Waiākea were created to feed Kamehameha, his chiefs, and craftsmen. It was during this early Historic Period that Waiākea Ahupua'a became part of Kamehameha I's personal land holdings (Moniz n.d.:11).

William Ellis, one of the first missionaries to arrive in Hawai'i, spent five days in Waiākea in 1823 (Ellis 1963). He described it as a well-watered place, with some of the heaviest rains and densest fog he had encountered on the island. He considered the inhabitants lucky because of the well-stocked fishponds, fertile soil, and nearby woods as a source of lumber. Ellis (1963) estimated that nearly 400 houses were present near the bay, with a population of not less than 2,000 inhabitants. Ellis eventually set up a mission station in Waiākea that lasted until 1825 before moving to Punahoa 2nd Ahupua'a (Moniz n.d.).

As a result of the Māhele in 1848, nearly all of the *ahupua'a* of Waiākea became Crown Lands (for the occupant of the throne). According to Moniz (n.d.:12) twenty-six kuleana claims (LCAw.)were registered for lands in Waiākea; most of these lands were centered along fishponds or major inland roads, and none were in the immediate vicinity of the current study area. Most of the awards were for houselots and cultivated sections. One of the Land Commission Awards (LCAw. 7713) was for the *'ili* of Pi'opi'o, which was traditionally the residence of chiefs, and which later served as the location of the original mission station in Waiākea (Moniz n.d.:9). This land was given by Kamehameha I to his wife Ka'ahumanu, and then awarded to Victoria Kamalumalu during the *Māhele*. Kamehameha IV, Alexander Liholiho, as the occupant of the throne during the *Māhele*, received the rest of the Ahupua'a.

Following the *Māhele*, Kamehameha IV leased large portions of Waiākea to outside interests for pasture and sugarcane cultivation (Moniz n.d.). In 1861 S. Kipi leased the Crown Lands of Waiākea for the rate of $600 dollars a year to be used as pasture land for five years (Kelly et al. 1981; Maly 1996a). In 1874 the first lease for sugarcane cultivation in Waiākea was granted to Rufus A. Lyman for a term of 25 years. The lease granted him all the privileges of the land including the use of the fishponds and the cutting of firewood (Maly 1996a). This lease was eventually transferred to the Waiākea Mill Company, founded by Alexander Young and Theo H. Davis, and the Waiākea sugar plantation was established.

Established in 1879, the Waiākea Mill Company started with about 350 acres of cultivated lands they had acquired from Lyman. In 1888 the company acquired a 30-year lease that increased their land holdings in Waiākea Ahupua'a. When the lease ran out in 1918 the acreage under cultivation had increased to nearly 7,000; but without a lease the *ahupua'a* fell under the homesteading laws, which required the government to lease the land to individual growers. Waiākea Mill Company was expected to grind the crop for the independent growers under a contract that gave the company 40% of the proceeds from the sale of the refined sugar. Contractual and legal problems combined with a declining sugar market and the devastating *tsunami* of 1946 led the Waiākea

Mill Company to cease operation in 1947. During the 68 years of its operation, the Waiākea Mill Company was a major force in shaping the economic and social growth of Hilo, and certainly left its mark on both the cultural and physical landscapes of the area.

As depicted on a 1918 map (Figure 7), the company lands were divided into house lots, cane lots, and fields. The productive areas were interconnected with a plantation railroad system. The narrow gauge railway was laid out in a dendritic pattern with all lines ultimately feeding into a main line that terminated at the mill site and barge berth at the inland end of the Waiākea Fishpond. Refined sugar was placed on barges that carried the product via the Wailoa Stream to Hilo Bay, where it was loaded onto cargo vessels bound for the U.S. mainland. By the 1920s, the current project location appears to have been an area under cultivation by the Waiākea Mill Company, as part of a field designated as Lot 2 (Figure 8). A 1930 map indicates that a branch line (Branch 1) and a spur line (Spur D) of the plantation railway system traversed Lot 2 to the east and south of the current project area (Figure 9).

# CURRENT PROJECT EXPECTATIONS

Based on soil substrate and elevation, the current project area falls within the Upland Agricultural Zone (Zone II) as defined by McEldowney (1979). The archaeological expectations for the zone include Precontact agricultural features and habitation sites. However, based on the specific history of project area land use (sugarcane cultivation and ranching) and the results of the prior archaeological studies in the vicinity of the property, it appears that very few if any pre-nineteenth and twentieth century features will be present.

# THE AREA OF POTENTIAL EFFECTS AND THE IDENTIFICATION OF HISTORIC PROPERTIES

Given the nature of the proposed project, it was determined that an appropriate Area of Potential Effects (APE) would be the entire proposed leased property (5 acres). Records on file at the Department of Land and Natural Resources-State Historic Preservation Division indicate that the subject parcel has never been surveyed for historic properties, and that the results of archaeological studies on nearby parcels (Borthwick et al. 1993; Escott 2004; Hunt and McDermott 1993; Maly et al. 1994; Rechtman and Henry 1998; and Spear 1995) demonstrate the possibility that historic properties could be present on the study parcel. Given the APE and the possibility that the undertaking might affect historic properties, the process of identifying historic properties was initiated pursuant to 36 CFR§800.4 and included an examination of past studies (archaeological, archival, and oral-historical) in the general project area, consultation with the Office of Hawaiian Affairs, the Hilo Hawaiian Civic Club, and elder Hilo residents; along with an archaeological survey of the entire APE.

## Consultation

As part of the current study an effort was made to obtain information about any potential traditional cultural properties and associated practices that might be present, or have taken place within the project area. The Office of Hawaiian Affairs (East Hawai'i) and the Hilo Hawaiian Civic Club were contacted but had no information relative to the existence of traditional cultural properties in the immediate vicinity of the current project area; nor did they provide any information indicating current use of the project area for traditional and customary practices.

Mr. Kenneth Bell was also consulted with respect to past land use in and around the current project area. Mr. Bell has participated in many oral historical projects concerning the development of the Hilo area. He was born in 1915 and is of mixed Hawaiian/Caucasian ancestry. Mr. Bell's father, William John Bell, was superintendent of the Railroad, and Carpentry and Blacksmith Shops for the Waiakea Mill Company. The Bell family lived on Kilauea Avenue during the years employed by the Mill. The senior Bell retired in 1940. Kenneth was well acquainted with the former Waiakea Mill and Plantation operation, having spent time with his father riding rails throughout the system of fields. Kenneth Bell eventually went to work for HT&T (a division of C. Brewer) and retired as Superintendent of the Bulk Sugar Plant in 1980. Presently Mr. Bell lives in Hilo on Makani Circle. When asked in a telephone interview what he knew of the current project area, he indicated that the area was originally part of the sugar plantation lands and later may have been used for livestock (cattle and pigs).

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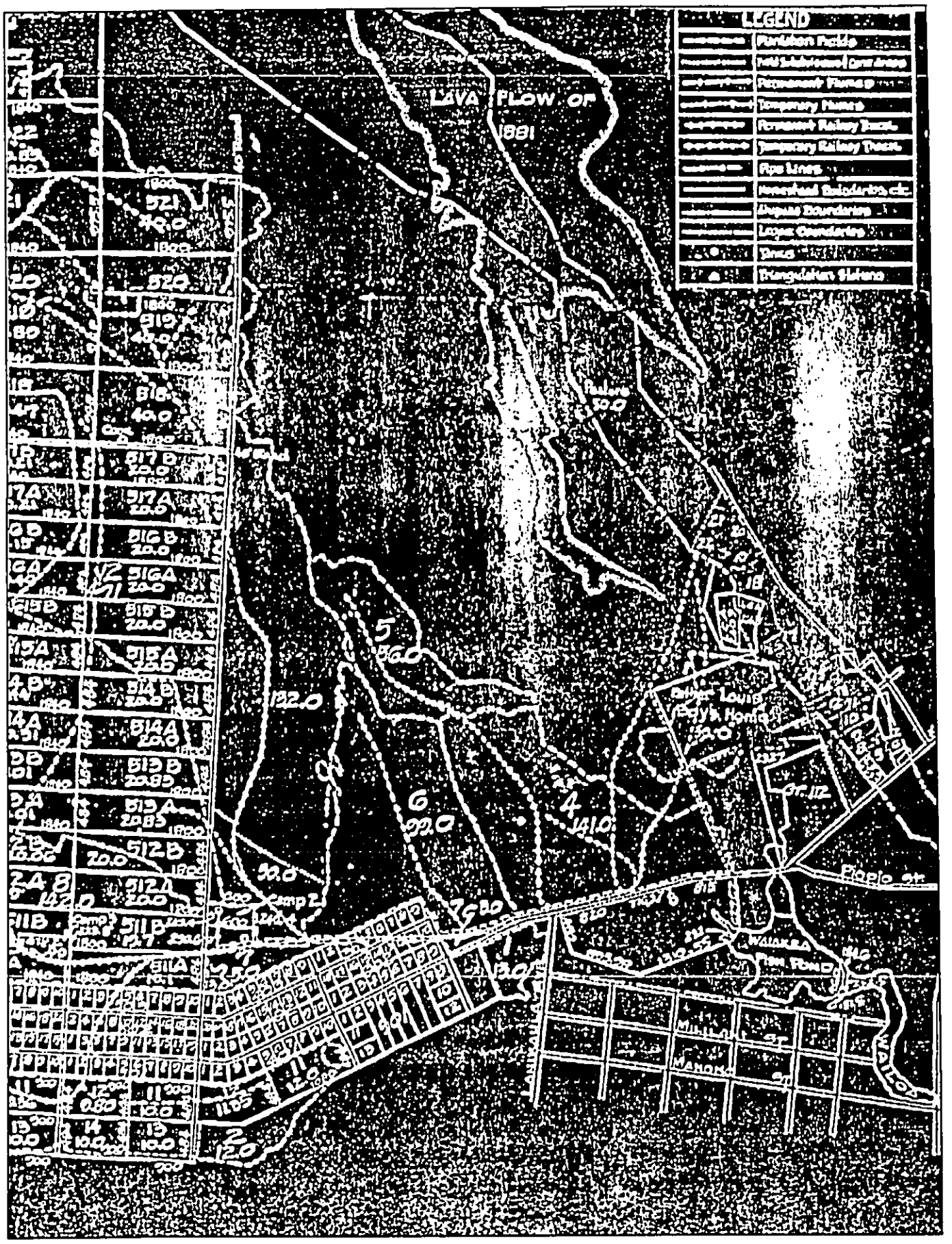


Figure 7. Waiākea Mill Company's 1918 map depicting company land divisions.

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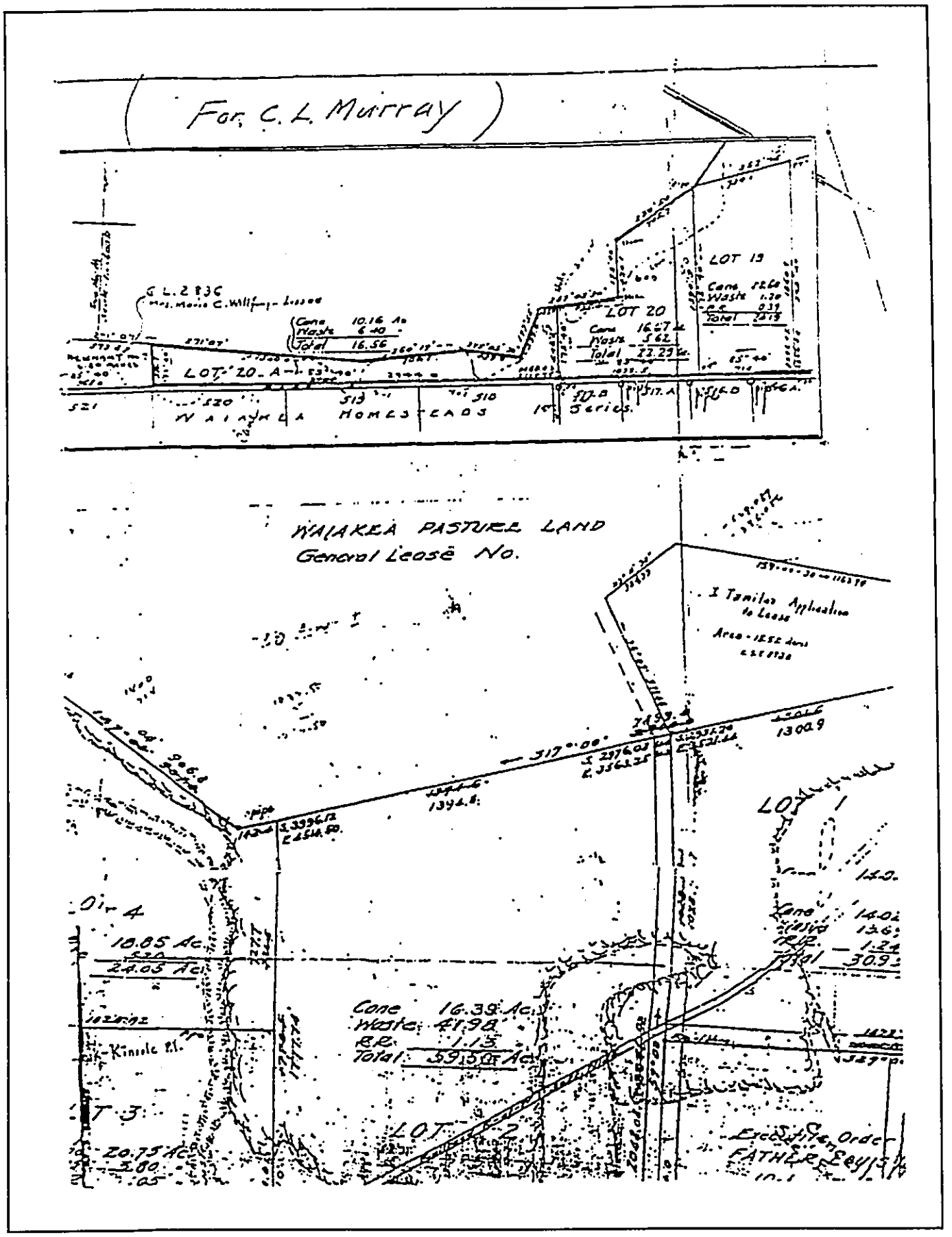


Figure 8. Waiākea Mill Company's 1925 map showing Lot 2 (from Hunt and McDermott 1993:29).

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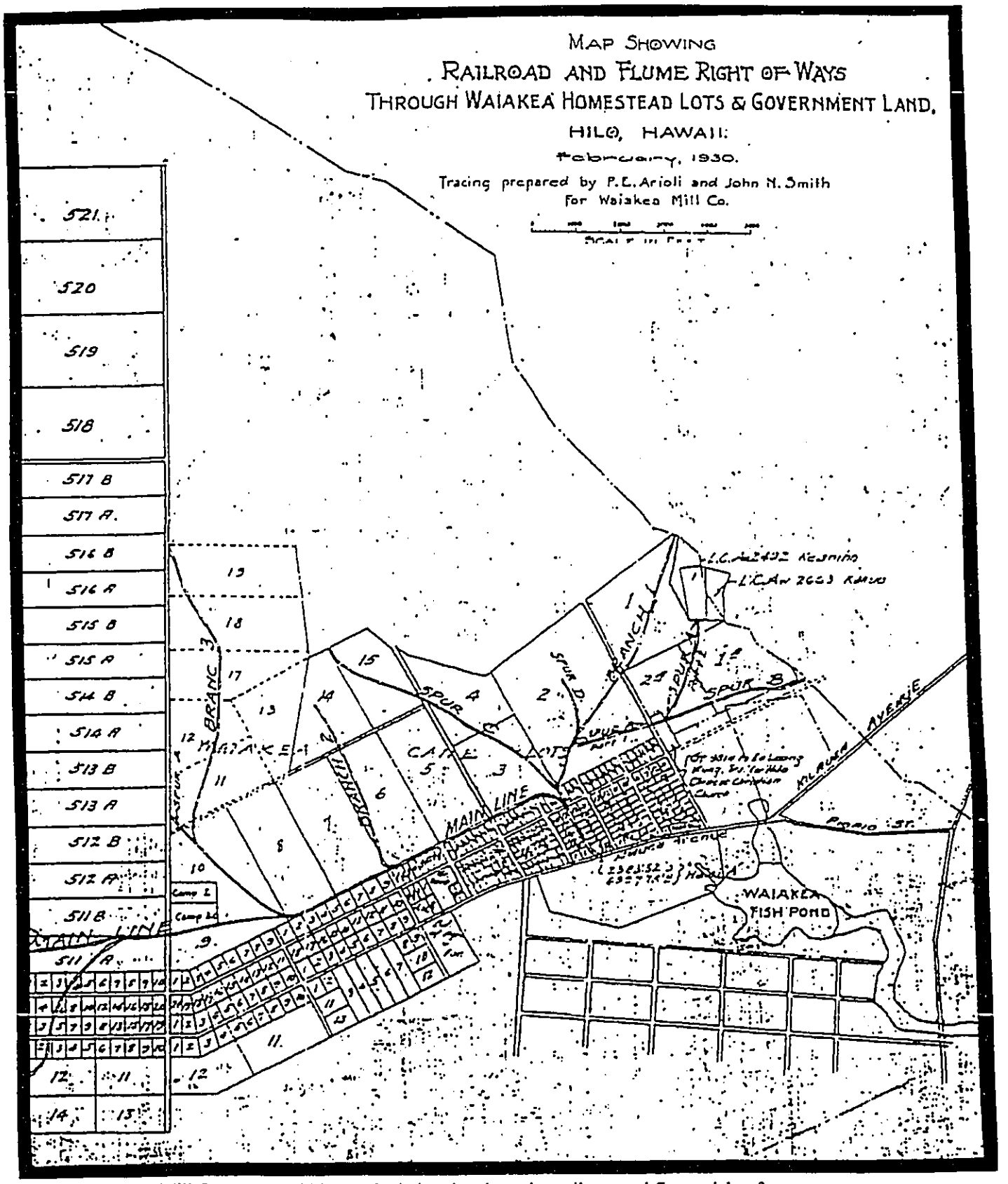



Figure 9. Waiākea Mill Company's 1930 map depicting the plantation railway and flume right of ways.

# Fieldwork

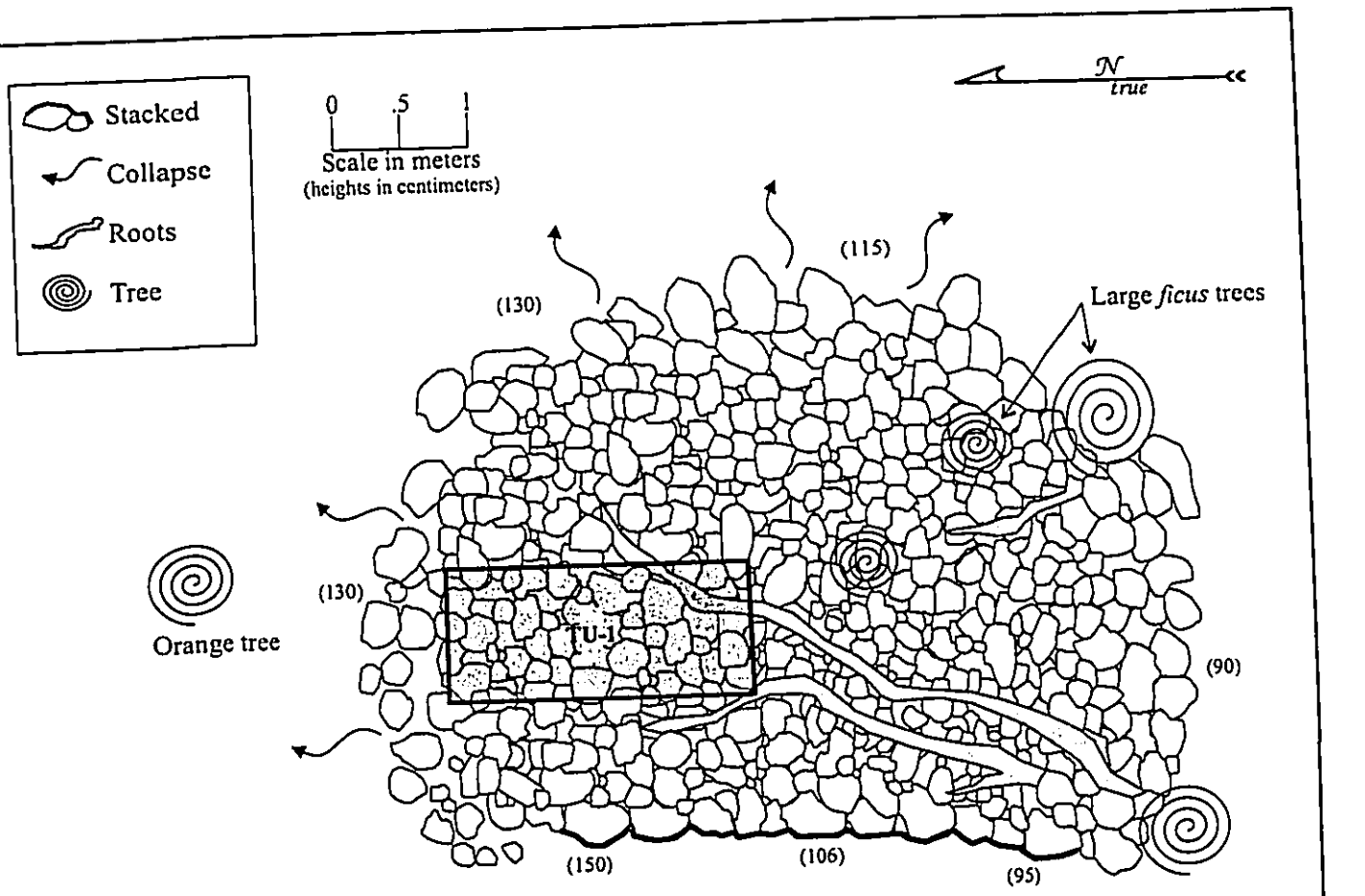
On May 17, 2006 Matthew R. Clark, B.A., Oliver M. Bautista, B.A., and Lizabeth A. Hauani'o under the supervision of Robert B, Rechtman, Ph.D., conducted an intensive pedestrian survey of the entire project area. Systematic survey of the project area produced no evidence that the area had been or was currently being accessed for the exercise of traditional and customary practices associated with any potential traditional cultural properties, but did reveal the presence of a single rock mound located in the approximate center of the project area (see Figure 5). On May 26, 2006 the same fieldworkers undertook subsurface excavation at this mound revealing the presence of historic and modern artifacts, and the mound's likely association with historic sugarcane cultivation in the area; a number of similar mounds have been recorded at nearby project areas that have been interpreted as clearing piles associated with activities of the Waiākea Sugar Plantation (Borthwick et al. 1993; Hunt and McDermott 1993; Maly 1996b; Maly et al. 1994; Rechtman and Henry 1998; Spear 1995).

During the field work Site 25548 was placed on a scaled map of the project area using a tape and compass, recorded in detail using a standardized description form, mapped in detail using a tape and compass, and photographed. A test unit (TU-1) was excavated at Site 25548 following natural stratigraphic layers that were, where applicable, excavated in arbitrary 10-centimeter levels. All recovered soil matrix was passed through 1/4-inch mesh screen. Level record forms, filled out for each level of each layer, were used to record soil descriptions, along with Munsell color notations, cultural constituents collected, and a general description of the level. Upon completion of the unit, photographs were taken, a profile drawing was prepared, and the unit was back-filled as close to its original specifications as possible. A description of this mound and the results of subsurface testing are presented below.

### SIHP Site 25548

Site 25548 consists of an isolated stacked cobble mound located in the central portion of the current project area (see Figure 5). The mound is roughly rectangular, measuring roughly 5 meters long (north/south) by 4 meters wide (east/west) (Figure 10). The western edge of the mound is neatly stacked (Figure 11), while the remaining sides were likely formerly stacked, but are now nearly completely collapsed (Figure 12). The western edge is vertical and stands up to 1.5 meters above the surrounding ground surface. The remaining edges rise a sloped 0.9 to 1.3 meters from ground surface to the surface of the mound, which is somewhat level. A banyan tree (approximately 30 years old judging by its size) is growing out of the southern end of the mound. Roots from this tree have caused much of the collapse observed at Site 25548 (interestingly, Rechtman and Henry (1998:19) noted that many of the 102 mounds they recorded also had banyan trees growing out of them). The mound is constructed on level soil and surrounded by a heavily vegetated soil ground surface. No cultural material of any kind was observed in the vicinity of Site 25548. A large orange tree was noted growing two meters to the north of the mound, however, and an area to the south and east of Site 25548, based on the vegetation present, appears to have been bulldozed in the not too distant past.

To aid in a determination of function, a 1 x 2 meter test unit (TU-1) was excavated at Site 25548 (see Figure 10). TU-1 was placed lengthwise parallel to the west wall of the feature, offset one meter to the east. The unit stretched from the feature's northern edge to its approximate center. Excavation of TU-1 revealed the presence of two stratigraphic layers (Layers I and II) resting on bedrock. Layer I, the architectural layer, consisted of piled small to large sized, angular and subangular, basalt cobbles with large airspaces between them and roots present throughout. The architectural layer was very loose and prone to easy collapse. Layer I was present from the surface of TU-1 to a depth of 120 centimeters beneath the surface of the unit (in the approximate center of the feature) where Layer II was encountered. Artifacts recovered from Layer I included a horseshoe discovered 20 centimeters below the surface of the unit along the east wall, and a small, green plastic tube discovered resting on Layer II at the base of Layer I near the south wall of the unit (Figure 13). The plastic tube may have filtered down through the architectural layer, as it appears to be of fairly modern origin.




TU-1 East wall profile

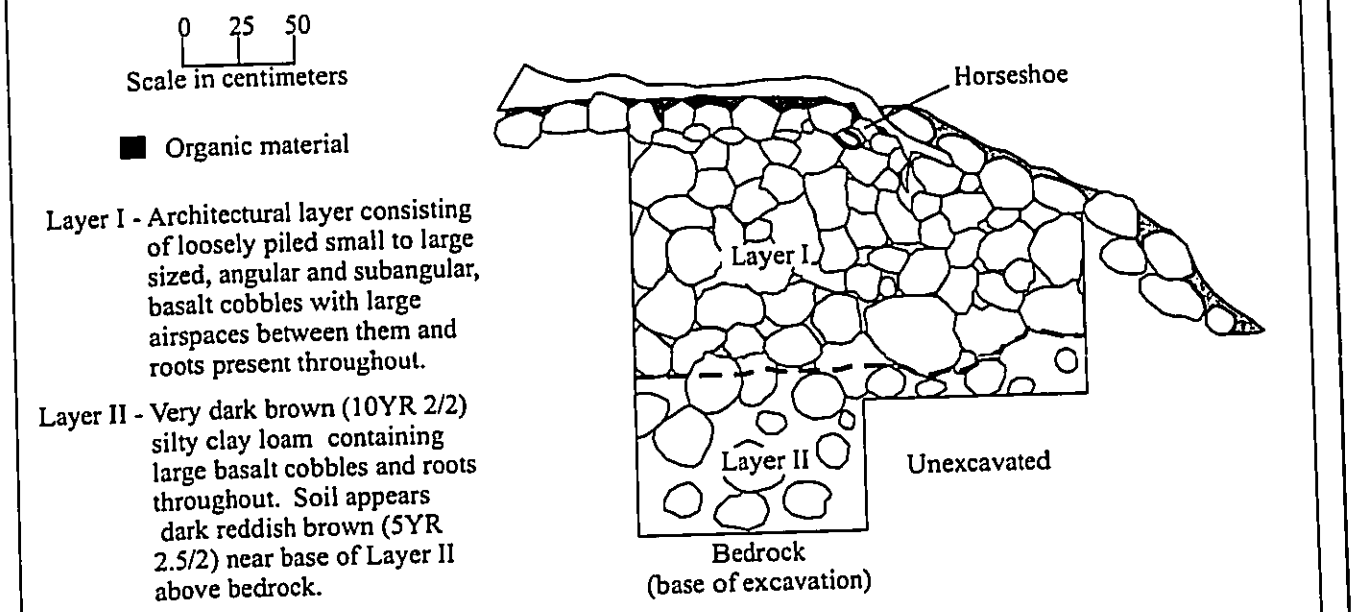



Figure 10. SIHP Site 25548 plan view and TU-1 profile.

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Figure 11. SIHP Site 25548, view to east of the mound's stacked western edge.

Figure 12. SIHP Site 25548, view to southeast of the mound's northwestern corner.

DOCUMENT CAPTURED AS RECEIVED

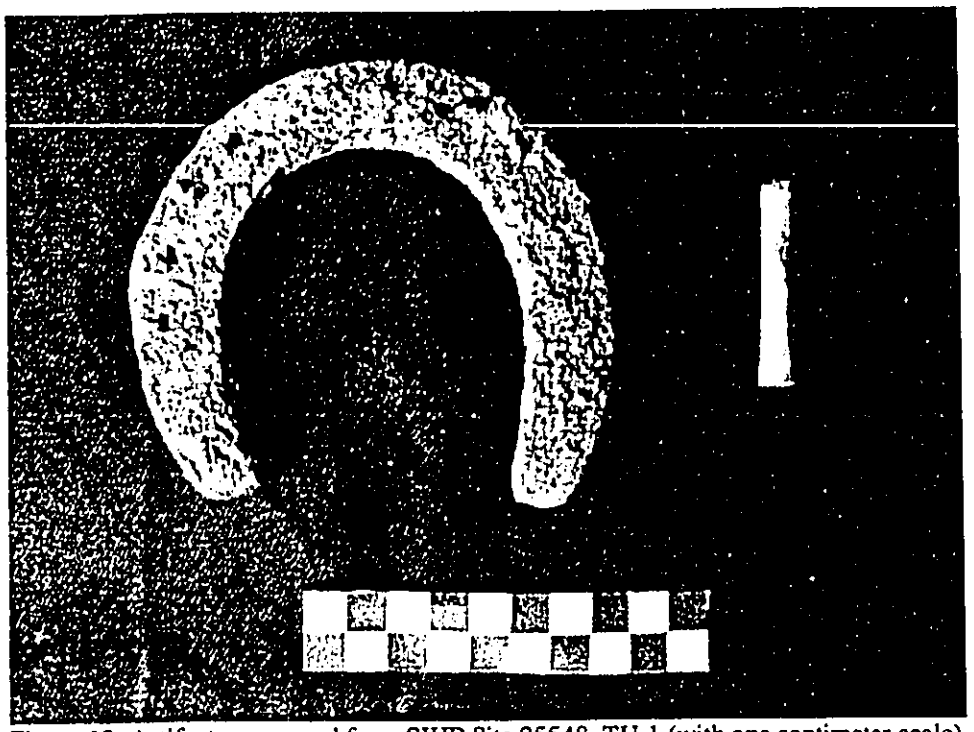

*Figure 13. Artifacts recovered from SIHP Site 25548, TU-1 (with one centimeter scale).*

Layer II consisted of very dark brown (10YR2/2) silty clay loam that was extremely sticky and wet, and contained large basalt cobbles and roots throughout. This soil layer appeared to be the original ground surface that Layer I was constructed upon. To begin, Layer II was excavated in arbitrary 10-centimeter levels across the entire two-meter long unit, and all soil matrix was passed through 1/4-inch mesh screen. However, upon completion of two culturally-sterile 10-centimeter levels, excavation was ceased in the northern half of the unit, and only the southern half was excavated to bedrock. The remainder of Layer II was excavated as a single level and passed through 1/4-inch mesh screen. The layer continued to a depth of 193 centimeters below the surface of the unit, or 73 centimeters beneath the base of Layer I, where smooth *pāhoehoe* bedrock was encountered and the excavation ceased (Figures 14 and 15). A slight color change was present just above bedrock where the Layer II soil had mixed with decomposing bedrock. The resulting soil maintained the basic characteristics of the Layer II soil, but became slightly more silty and was dark reddish brown (5YR 2.5/2) in appearance. No cultural material of any kind was recovered during the excavation of Layer II, but some small pieces of charcoal were observed within the screen.

Based on the formal surface attributes of Site 25548, its location within a known former field of the Waiākea Sugar Plantation, and the historic/modern artifacts recovered from TU-1, it is suggested that this feature represents a historic clearing mound associated with sugarcane cultivation. Several similar mounds have been recorded at nearby project areas (Borthwick et al. 1993; Hunt and McDermott 1993; Maly et al. 1994; and Rechtman and Henry 1998). Subsurface testing at these mound features has clearly demonstrated their historic origins and, for the most part the lack of Precontact cultural deposits beneath them (Spear 1995). Maly (1996b), who conducted oral interviews with knowledgeable individuals, during a study of several Waiākea Cane Lots, determined that clearing mounds such as Site 25548 were a common feature of the historic sugarcane field. Interviewees suggested that the mounds, while created during field clearing, also served other purposes, such as being used to load the harvested cane into carts or trucks, or being used by the field managers as high places from which they could watch the workers in the fields. One interviewee who worked for the Waiākea Sugar Plantation, Kenneth Bell (born 1915), recalled that the field managers "used to ride their horses all over the fields, and in some places they would ride up the ramps on these platforms to survey the fields", because, "from on top of the platforms on top of their horses, they could see all over the fields" (Maly 1996b:58). It is possible that the horseshoe recovered from near the surface of TU-1 was deposited at Site 25548 during one such visit by a field manager. The orange tree growing near the mound may also owe its roots, so to speak, to one such visit; perhaps a field manager surveying the fields once enjoyed an orange at the location of Site 25548, and a discarded seed eventually grew into the large orange tree that is present today.

DOCUMENT CAPTURED AS RECEIVED



Figure 14. SIHP Site 25548, TU-1 base of excavation overview.

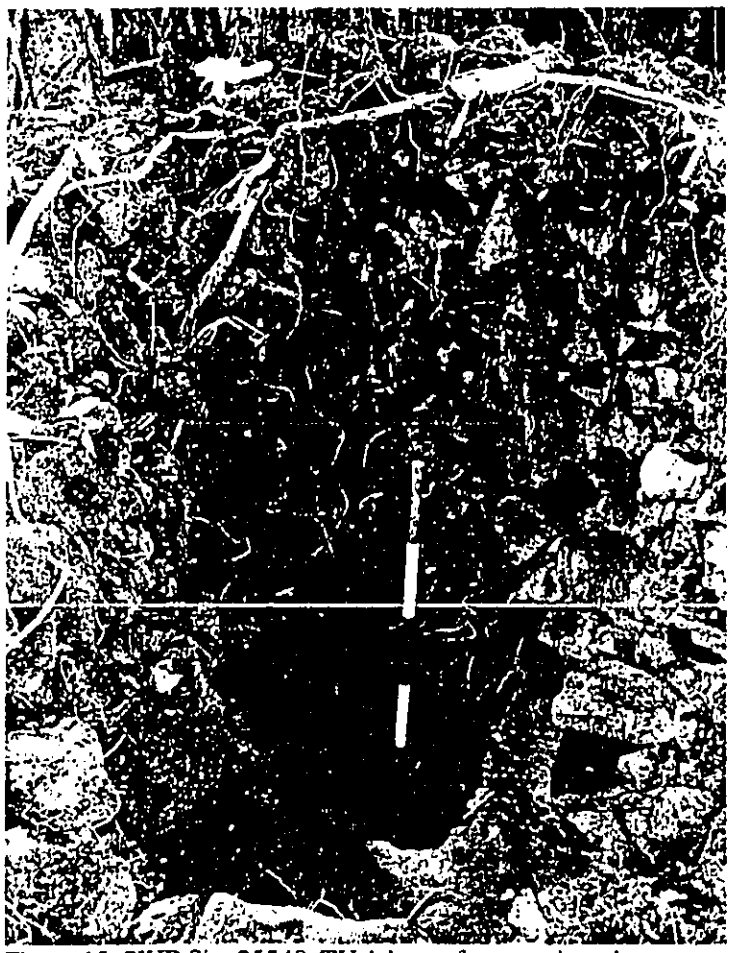

Figure 15. SIHP Site 25548, TU-1 base of excavation view to south.

# SIGNIFICANCE EVALUATION

Site 25548 is evaluated for eligibility for listing on the National Register of Historic Places based on the National Register criteria as contained in 36 CFR part 60.4. A quality of significance (National Register eligibility) in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

While Site 25548 may retain its integrity of location, design, materials, and workmanship, it clearly lacks its integrity of setting, feeling, and association. It is an isolated feature, a remnant of a former historic landscape associated with plantation-era Hilo. Further, even if other associated features were preserved, it is highly unlikely that such a grouping of features would be considered significant under any of the above criteria, and thus would no be considered eligible for listing in the National Register of Historic Places. It is concluded that Site 25548 should not be considered eligible for the National Register, and therefore is no considered a historic property.

# DETERMINATION OF EFFECTS

As Site 25548 is not considered eligible for listing in the National Register of Historic Places, by definition it is not considered a historic property; thus, there were no historic properties (including any traditional cultural properties and associated practices) identified within the APE associated with the above-described undertaking. Therefore, the determination is that no historic properties will be affected as a result of the proposed undertaking. It is requested that the Hawai'i SHPO provide concurrence with this determination within thirty days of receipt of this document as specified in 36 CFR Part 800.4(d)(1).

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# APPENDIX 4

# COMMENTS IN RESPONSE TO PRE-CONSULTATION

Harry Kim
*Mayor*

County of Hawaii
**PLANNING DEPARTMENT**
101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043
(808) 961-8288 • FAX (808) 961-8742

Christopher J. Yuen
*Director*
Brad Kurokawa, ASLA
LEED® AP
*Deputy Director*

April 25, 2006

Mr. Graham Knopp
Geometrician Associates, LLC
HC 2 Box 9575
Keaau, HI 96749

Dear Mr. Knopp:

| | |
|---|---|
| **Subject:** | **Pre-Environmental Assessment Consultation** |
| **Applicant:** | **Hospice of Hilo** |
| **Land Owner:** | **State of Hawaii** |
| **Project:** | **Inpatient Hospice Facility** |
| **TMK:** | **2-4-1:Portion of 24, South Hilo, Hawaii** |

This is in response to your request for comments on the above-referenced project.

According to your submittal, the project consists of the development of an inpatient, 12-bed single-story facility to provide end-of-life care, education and grief support to the community.

We have the following to offer:

1. The subject parcel consists of 39.456 acres. The project area is approximately 5.0 acres.

2. The State Land Use designation is Urban.

3. The General Plan designation is Low Density and High Density Urban. Low Density Urban is characterized as *"Residential, with ancillary community and public uses, and neighborhood and convenience-type commercial uses; overall residential density may be up to six units per acre"*. High Density Urban is characterized as *"General commercial, multiple family residential and related services (multiple family residential – up to 87 units per acre)"*.

4. The County zoning is Single-Family Residential (RS-10). According to Chapter 25, Zoning Code, Section 25-5-3(b), the proposed use may fall into one of two categories:
   (2) Care homes, defined in Section 25-1-5(b)(21) as *"a facility which is approved by the state pursuant to chapter 345, part IV or part VIII, Hawaii Revised Statutes, as amended, to provide living accommodations and general or rehabilitative care in homes with not more than one kitchen, to accommodate unrelated children or elderly, handicapped, or disabled adults. The term includes adult residential care homes, group child care homes and other facilities for children, elderly, handicapped, developmentally disabled and totally disabled".;* or
   (7) Hospitals, sanitariums, old age, convalescent, nursing and rest homes.
   Although additional information is required to make a determination, either activity would require that a Use Permit be issued.

5. Plan Approval may be required as a condition of approval of the Use Permit.

6. The project is not located within the County's Special Management Area.

We would like to have a copy of the Draft Environmental Assessment for our review and file.

If you have questions, please feel free to contact Esther Imamura or Larry Brown of this office at 961-8288, extension 257 or 258, respectively.

Sincerely,

CHRISTOPHER J. YUEN
Planning Department

ETI:cd
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Harry Kim
*Mayor*

Lawrence K. Mahuna
*Police Chief*

Harry S. Kubojiri
*Deputy Police Chief*

County of Hawaii
**POLICE DEPARTMENT**
349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-8869

April 27, 2006

Mr. Graham Knopp
Associate
Geometrician Associates
HC 2 Box 9575
Keaau, HI 96749

Dear Mr. Knopp:

**Subject: Environmental Assessment (EA) for Hospice of Hilo facility, Island of Hawai'i, located on an approximately 5.0 acre portion of TMK (3rd) 2-4-1:024**

Staff, upon reviewing the provided documents and visiting the proposed site, does not anticipate any significant impact on traffic and public safety in this area.

Thank you for allowing us the opportunity to comment.

Sincerely,

JAMES M. DAY
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

"Hawai'i County is an Equal Opportunity Provider and Employer"

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

May 26, 2006

Regulatory Branch

File No. **POH-2006-174**

Graham Knopp, Associate
Geometrician Associates, LLC
HC 2 Box 9575
Kea'au Hawaii 96749

Dear Mr. Knopp:

This responds to your notice, submitted on behalf of Hospice of Hilo, concerning preparation of an Environmental Assessment (EA) for proposed development of an approximately 5-acre inpatient hospice facility at Hilo, Hawaii (TMK 3-2-4-1: 024). We have reviewed the materials submitted with respect to the Corps' authority to issue Department of the Army (DA) permits pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Based on the information you provided, it appears that the project site consists entirely of uplands and that the proposed activity would not involve the discharge of dredged or fill material into waters of the United States, including adjacent wetlands. Based on this understanding, a DA permit will not be required. Please provide a copy of the EA when it becomes available.

Should you have questions concerning this determination, please contact Mr. Peter Galloway via e-mail (*peter.c.galloway@usace.army.mil*); by telephone at (808) 438-8416; or by fax at (808) 438-4060. Written inquiries should cite File No. **POH-2006-174** and may be sent to: Regulatory Branch (CEPOH-EC-R/P. Galloway); U.S. Army Engineer District, Honolulu; Building 230; Fort Shafter, Hawaii 96858-5440.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

# APPENDIX 5

# COMMENTS TO DRAFT E.A. AND RESPONSES

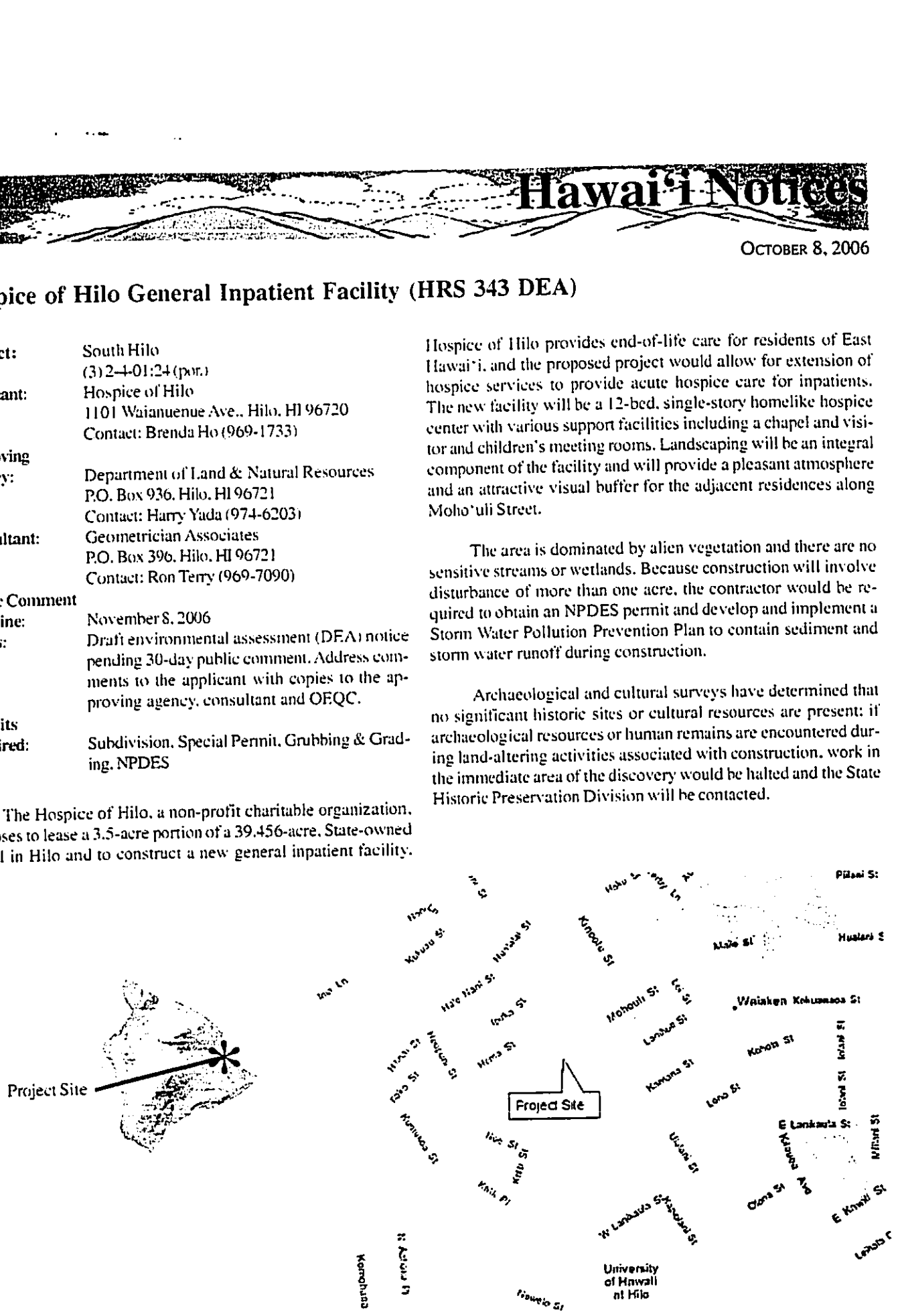
# Hospice of Hilo General Inpatient Facility (HRS 343 DEA)

| | |
|---|---|
| **District:** | South Hilo |
| **TMK:** | (3) 2-4-01:24 (por.) |
| **Applicant:** | Hospice of Hilo<br>1101 Waianuenue Ave., Hilo, HI 96720<br>Contact: Brenda Ho (969-1733) |
| **Approving Agency:** | Department of Land & Natural Resources<br>P.O. Box 936, Hilo, HI 96721<br>Contact: Harry Yada (974-6203) |
| **Consultant:** | Geometrician Associates<br>P.O. Box 396, Hilo, HI 96721<br>Contact: Ron Terry (969-7090) |
| **Public Comment Deadline:** | November 8, 2006 |
| ***Status:*** | Draft environmental assessment (DEA) notice pending 30-day public comment. Address comments to the applicant with copies to the approving agency, consultant and OEQC. |
| **Permits Required:** | Subdivision, Special Permit, Grubbing & Grading, NPDES |

The Hospice of Hilo, a non-profit charitable organization, proposes to lease a 3.5-acre portion of a 39.456-acre, State-owned parcel in Hilo and to construct a new general inpatient facility. Hospice of Hilo provides end-of-life care for residents of East Hawai'i, and the proposed project would allow for extension of hospice services to provide acute hospice care for inpatients. The new facility will be a 12-bed, single-story homelike hospice center with various support facilities including a chapel and visitor and children's meeting rooms. Landscaping will be an integral component of the facility and will provide a pleasant atmosphere and an attractive visual buffer for the adjacent residences along Moho'uli Street.

The area is dominated by alien vegetation and there are no sensitive streams or wetlands. Because construction will involve disturbance of more than one acre, the contractor would be required to obtain an NPDES permit and develop and implement a Storm Water Pollution Prevention Plan to contain sediment and storm water runoff during construction.

Archaeological and cultural surveys have determined that no significant historic sites or cultural resources are present; if archaeological resources or human remains are encountered during land-altering activities associated with construction, work in the immediate area of the discovery would be halted and the State Historic Preservation Division will be contacted.




Project Site Map

# Hospice facility for Hilo sought

## Agency seeks to have first inpatient home on a Neighbor Island

By JASON ARMSTRONG
*Tribune-Herald staff writer*

Hilo may get the first residential hospice facility in Hawaii built on a Neighbor Island.

Hospice of Hilo hopes to achieve that goal by opening an 18-bed inpatient home by early 2009, Executive Director Brenda Ho said.

The nonprofit agency is studying the impacts of developing a 3.5-acre site located mauka of Christ Lutheran Church, off Kapiolani Street near Mohouli.

The land is part of a 39.5-acre state parcel, which means the Department of Land and Natural Resources must approve its use.

Ho said Wednesday that she has received preliminary approval for a 65-year lease at a lower-than-market rate. She noted Hospice of Hilo now pays the state $800 a year for its 1.6-acre site on Hilo's Waianuenue Avenue.

Founded in 1983, Hospice of Hilo offers in-home care to terminally ill patients with six months or less to live.

But it's not reaching people who are too sick to stay at home or who lack caregivers, Ho said.

"They end up dying in the hospital," she said. The only alternative for such patients is one of the two inpatient facilities St. Francis Hospice runs on Oahu.

A far better option would be a home-like setting in Hilo offering acute care and easier access for family members, she said.

See HOSPICE Page A3



Relocating those patients to a Hospice home would free up needed hospital beds and cut the cost of their care by about half, Ho said. A hospital bed in Hawaii runs about $1,000 a day, excluding treatment and medicine, while Hospice's all-inclusive fee is closer to $600 a day, she added.

There's also a huge need for acute care, Ho said, noting Hawaii's fastest-growing elderly population lives on the Big Island.

Although the facility is still being designed, initial plans call for a single-story, 15,000-square-foot structure. It would have 18 beds, six added after full occupancy is reached, which should occur within the first year of operation, Ho said.

Each private suite would have a sleeping and sitting area, bathroom, closet and partitioned sleeping area for visiting family.

The facility would have parking for 36 vehicles, meeting rooms for visitors and children, laundry facilities and a chapel, according to a draft environmental assessment of the project's impacts. Ho estimated the home will cost $8 million to $9 million.

"We're concerned because it's so expensive to build in Hawaii," she said. "We will be seeking funding for this facility."

Extra employees also will be needed. Ho plans on hiring another 15 to 20 workers, including registered nurses, certified nurses aides and a full-time medical director.

The target property, which has been vacant since being taken out of pasture in 1966, has no significant archeological or historical sites, according to the draft study.

The 30-day public comment period on the proposed development ends Nov. 8. Comments should be addressed to Hospice of Hilo, with copies to the state DLNR and the Office of Environmental Quality Control.

The Hilo operation is the largest of three Big Island facilities that include centers in Kealakekua and Waimea.

Hospice of Hilo treated 239 patients last year, up from 47 in 1992. Some 84 percent were aged 60 and older, with lung cancer the most common ailment, followed by dementia.

After touring Hospice of Hilo in January 2004, J. Donald Schumacher, president of the National Hospice and Palliative Care Organization, said the Hilo facility could serve as a model for the nation's 3,300 hospice providers.

*Jason Armstrong can be reached at jarmstrong@hawaiitribune-herald.com.*

Hawaii Tribune-Herald
Thursday, October 12, 2006

**Harry Kim**
*Mayor*

**Darryl J. Oliveira**
*Fire Chief*

**Desmond K. Wery**
*Deputy Fire Chief*

# County of Hawai'i
**FIRE DEPARTMENT**
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720
(808) 961-8297 • Fax (808) 961-8296

October 16, 2006

Mr. Ron Terry
Geometrician Associates
P.O. Box 396
Hilo, Hawaii 96721

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
Project Name: Hospice of Hilo General Inpatient Facility
TAX MAP KEY: (3rd) 2-4:01:024 (por.) South Hilo, Hawaii

In regards to the above-mentioned Change of Zone application, the following shall be in accordance:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

"**Fire Apparatus Access Roads**

"**Sec. 10.207.** (a) **General.** Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) **Where Required.** Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"**EXCEPTIONS:** 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).

"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"**EXCEPTION:** Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

# CORRECTION

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

DOCUMENT CAPTURED AS RECEIVED



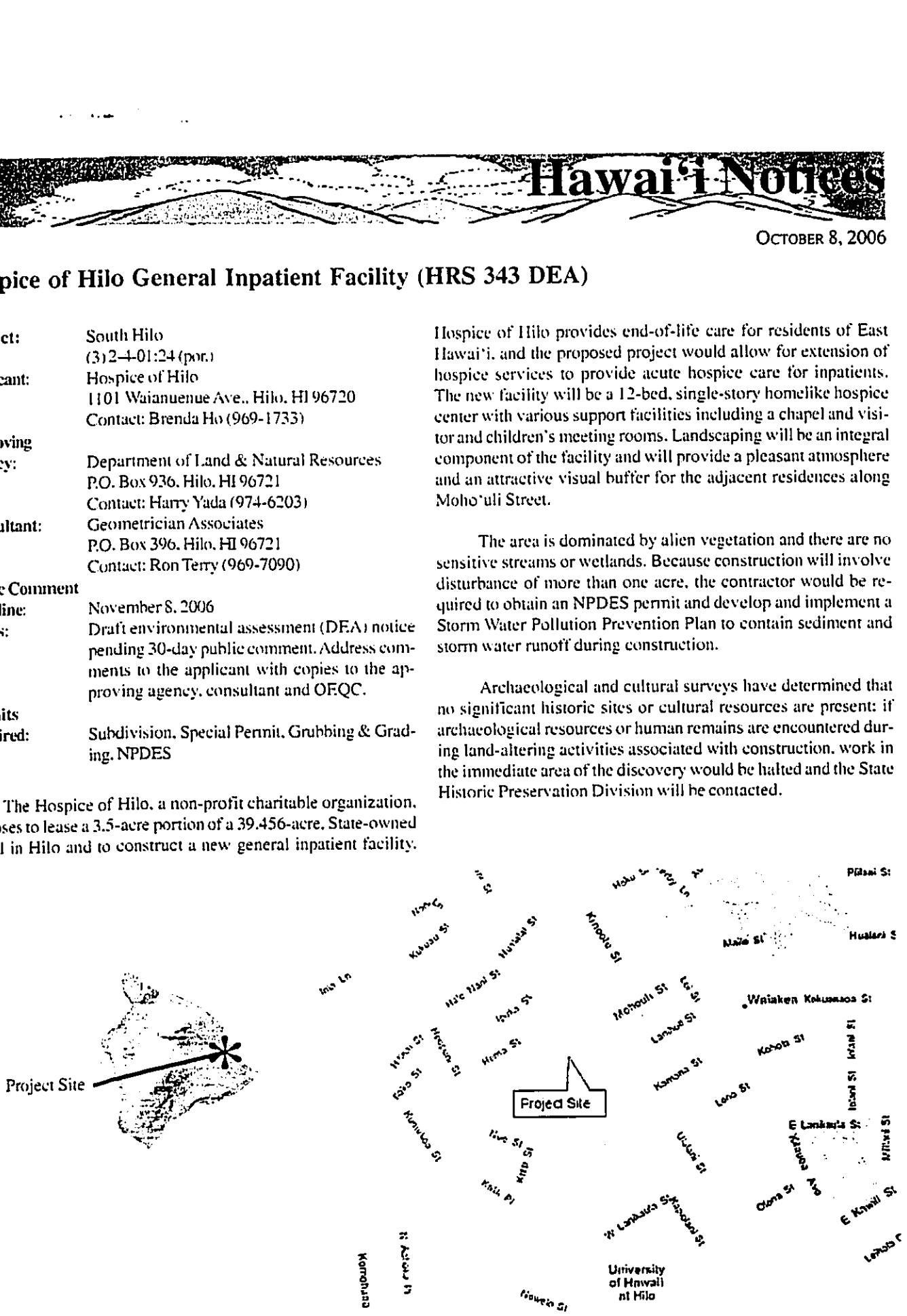
## Hospice of Hilo General Inpatient Facility (HRS 343 DEA)

| | |
|---|---|
| **District:** | South Hilo |
| **TMK:** | (3) 2-4-01:24 (por.) |
| **Applicant:** | Hospice of Hilo<br>1101 Waianuenue Ave., Hilo, HI 96720<br>Contact: Brenda Ho (969-1733) |
| **Approving Agency:** | Department of Land & Natural Resources<br>P.O. Box 936, Hilo, HI 96721<br>Contact: Harry Yada (974-6203) |
| **Consultant:** | Geometrician Associates<br>P.O. Box 396, Hilo, HI 96721<br>Contact: Ron Terry (969-7090) |
| **Public Comment Deadline:** | November 8, 2006 |
| **Status:** | Draft environmental assessment (DEA) notice pending 30-day public comment. Address comments to the applicant with copies to the approving agency, consultant and OEQC. |
| **Permits Required:** | Subdivision, Special Permit, Grubbing & Grading, NPDES |

The Hospice of Hilo, a non-profit charitable organization, proposes to lease a 3.5-acre portion of a 39.456-acre, State-owned parcel in Hilo and to construct a new general inpatient facility. Hospice of Hilo provides end-of-life care for residents of East Hawai'i, and the proposed project would allow for extension of hospice services to provide acute hospice care for inpatients. The new facility will be a 12-bed, single-story homelike hospice center with various support facilities including a chapel and visitor and children's meeting rooms. Landscaping will be an integral component of the facility and will provide a pleasant atmosphere and an attractive visual buffer for the adjacent residences along Moho'uli Street.

The area is dominated by alien vegetation and there are no sensitive streams or wetlands. Because construction will involve disturbance of more than one acre, the contractor would be required to obtain an NPDES permit and develop and implement a Storm Water Pollution Prevention Plan to contain sediment and storm water runoff during construction.

Archaeological and cultural surveys have determined that no significant historic sites or cultural resources are present: if archaeological resources or human remains are encountered during land-altering activities associated with construction, work in the immediate area of the discovery would be halted and the State Historic Preservation Division will be contacted.




Project Site Map

DOCUMENT CAPTURED AS RECEIVED

# Hospice facility for Hilo sought

## Agency seeks to have first inpatient home on a Neighbor Island

By JASON ARMSTRONG
*Tribune-Herald staff writer*

Hilo may get the first residential hospice facility in Hawaii built on a Neighbor Island.

Hospice of Hilo hopes to achieve that goal by opening an 18-bed inpatient home by early 2009, Executive Director Brenda Ho said.

The nonprofit agency is studying the impacts of developing a 3.5-acre site located mauka of Christ Lutheran Church, off Kapiolani Street near Mohouli.

The land is part of a 39.5-acre state parcel, which means the Department of Land and Natural Resources must approve its use.

Ho said Wednesday that she has received preliminary approval for a 65-year lease at a lower-than-market rate. She noted Hospice of Hilo now pays the state $800 a year for its 1.6-acre site on Hilo's Waianuenue Avenue.

Founded in 1983, Hospice of Hilo offers in-home care to terminally ill patients with six months or less to live.

But it's not reaching people who are too sick to stay at home or who lack caregivers, Ho said.

"They end up dying in the hospital," she said. The only alternative for such patients is one of the two inpatient facilities St. Francis Hospice runs on Oahu.

A far better option would be a home-like setting in Hilo offering acute care and easier access for family members, she said.

See HOSPICE Page A3

## HOSPICE From A1

Relocating those patients to a Hospice home would free up needed hospital beds and cut the cost of their care by about half, Ho said. A hospital bed in Hawaii runs about $1,000 a day, excluding treatment and medicine, while Hospice's all-inclusive fee is closer to $600 a day, she added.

There's also a huge need for acute care, Ho said, noting Hawaii's fastest-growing elderly population lives on the Big Island.

Although the facility is still being designed, initial plans call for a single-story, 15,000-square-foot structure. It would have 18 beds, six added after full occupancy is reached, which should occur within the first year of operation, Ho said.

Each private suite would have a sleeping and sitting area, bathroom, closet and partitioned sleeping area for visiting family.

The facility would have parking for 36 vehicles, meeting rooms for visitors and children, laundry facilities and a chapel, according to a draft environmental assessment of the project's impacts. Ho estimated the home will cost $8 million to $9 million.

"We're concerned because it's so expensive to build in Hawaii," she said. "We will be seeking funding for this facility."

Extra employees also will be needed. Ho plans on hiring another 15 to 20 workers, including registered nurses, certified nurses aides and a full-time medical director.

The target property, which has been vacant since being taken out of pasture in 1966, has no significant archeological or historical sites, according to the draft study.

The 30-day public comment period on the proposed development ends Nov. 8. Comments should be addressed to Hospice of Hilo, with copies to the state DLNR and the Office of Environmental Quality Control.

The Hilo operation is the largest of three Big Island facilities that include centers in Kealakekua and Waimea.

Hospice of Hilo treated 239 patients last year, up from 47 in 1992. Some 84 percent were aged 60 and older, with lung cancer the most common ailment, followed by dementia.

After touring Hospice of Hilo in January 2004, J. Donald Schumacher, president of the National Hospice and Palliative Care Organization, said the Hilo facility could serve as a model for the nation's 3,300 hospice providers.

*Jason Armstrong can be reached at jarmstrong@hawaiitribune-herald.com.*

Hawaii Tribune-Herald
Thursday, October 12, 2006

**Harry Kim**
*Mayor*

**Darryl J. Oliveira**
*Fire Chief*

**Desmond K. Wery**
*Deputy Fire Chief*

# County of Hawai'i
**FIRE DEPARTMENT**
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720
(808) 961-8297 • Fax (808) 961-8296

October 16, 2006

Mr. Ron Terry
Geometrician Associates
P.O. Box 396
Hilo, Hawaii 96721

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
Project Name: Hospice of Hilo General Inpatient Facility
TAX MAP KEY: (3rd) 2-4:01:024 (por.) South Hilo, Hawaii

In regards to the above-mentioned Change of Zone application, the following shall be in accordance:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

"**Fire Apparatus Access Roads**

"**Sec. 10.207.** (a) **General.** Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) **Where Required.** Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"**EXCEPTIONS:** 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).

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"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"**EXCEPTION:** Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

"(k) **Obstruction.** The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) **Signs.** When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."

Water supply shall be in accordance with UFC Section 10.301(c):

"(c) **Water Supply.** An approved water supply capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207.

DARRYL OLIVEIRA
Fire Chief

PBE:lpc

CC: Director, Office of Environmental Quality Control
Harry Yada, State Department of Land and Natural Resources – Land Division

# geometrician

ASSOCIATES, LLC

integrating geographic science and planning

phone: (808) 969-7090 PO Box 396 Hilo Hawai'i 96721 rterry@hawaii.rr.com


December 8, 2006

Darryl Oliveira, Chief
Hawai'i County Fire Department
25 Aupuni Street
Hilo HI 96720

Dear Chief Oliveira:

**Subject:** **Draft Environmental Assessment for Hospice of Hilo General Inpatient Facility, TMK 2-4-:01:24 (por), Hilo**

Thank you for your comment letter dated October 16, 2006, on the Draft EA, in which you referenced and provided relevant portions of the Fire Code. This information has been provided to the project architect.

Sincerely,

Ron Terry, Principal
Geometrician Associates

Cc: DLNR Land Division, Hilo Office

**Harry Kim**
*Mayor*

**Christopher J. Yuen**
*Director*

**Brad Kurokawa, ASLA**
**LEED® AP**
*Deputy Director*

County of Hawaii
**PLANNING DEPARTMENT**
101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043
(808) 961-8288 • FAX (808) 961-8742

November 6, 2006

Mr. Ron Terry
Geometrician Associates
P.O. Box 396
Hilo HI 96721

Dear Mr. Terry:

**SUBJECT: Environmental Assessment**
**Hospice of Hilo General Inpatient Facility**
**Tax Map Key: 2-4-1:Portion of 24**

This is to acknowledge receipt of the Draft Environmental Assessment for the aforementioned project.

After reviewing the document, we have no additional comments to offer.

If you have questions, please feel free to contact Esther Imamura or Larry Brown of this office at 961-8288, extension 257 or 258, respectively.

Sincerely,

CHRISTOPHER J. YUEN
Planning Director

ETI:mad
\\Coh31\planning\public\wpwin60\ETI\EAdraft\Pre-consul\Terry Hospice 2-4-1-24.rtf

*Hawai'i County is an Equal Opportunity Provider and Employer.*

xc: Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu HI 96813

Mr. Harry Yada
Hawaii State DLNR
Hawaii Island Land Division
P. O. Box 936
Hilo HI 96721

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phone: (808) 969-7090 PO Box 396 Hilo Hawai'i 96721 rterry@hawaii.rr.com


December 8, 2006

Christopher J. Yuen, Director
Hawai'i County Planning Dept.
101 Pauahi Street, Suite 3
Hilo HI 96720

Dear Mr. Yuen:

**Subject:** **Draft Environmental Assessment for Hospice of Hilo General Inpatient Facility, TMK 2-4-:01:24 (por), Hilo**

Thank you for your comment letter dated November 6, 2006, on the Draft EA, in which you stated that your agency had no additional comments to offer. We very much appreciate your review of the document.

Sincerely,

Ron Terry, Principal
Geometrician Associates

Cc: DLNR Land Division, Hilo Office

PHONE (808) 594-1888

FAX (808) 594-1865

**STATE OF HAWAI'I**
**OFFICE OF HAWAIIAN AFFAIRS**
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

October 26, 2006

HRD06/2751

Ron Terry
Geometrician Associates
P.O. Box 396
Hilo, Hawai'i 96721

**RE: Draft Environmental Assessment (DEA) for Hospice of Hilo General Inpatient Facility, South Hilo, Hawai'i; TMK 2-4-01:24 (por)**

Dear Mr. Terry,

The Office of Hawaiian Affairs (OHA) is in receipt of your undated request for comments on the above referenced DEA, received by our office on October 9, 2006. The applicant Hospice of Hilo proposes to construct a general inpatient facility in South Hilo. We offer the following comments.

Thank you for the consistent use of appropriate 'okina and kahakō. We are also pleased that the applicant has committed to immediately stopping excavation and contacting the State Historic Preservation Division if iwi or cultural items are uncovered. DEA at page 20.

We appreciate that you have contacted our Hilo office for pre-consultation on the EA, however, we request that our Honolulu office also be included on all HRS § 343 correspondence. In addition, page 5 of the DEA notes that 14 adjacent residential property owners were consulted prior to the preparation of the DEA. We were not able to locate a summary of the community input in the DEA. and we suggest that community involvement be included in the Final EA.

We are also concerned with the lack of alternatives presented in the EA. The no action alternative was rejected as "unacceptable" to the applicant, and the alternatives of expanding the present hospice facility or using other sites were summarily rejected without explanation. EA at page 5. The Office of Environmental Quality's (OEQC) *Environmental Guidebook* at page 17 requires, however, that "alternative methods and modes of [the] project be included in the draft EA." Thus, to comply with the spirit and language of HRS § 343 and the OEQC's guidelines, we request that this EA be amended to include an analysis of alternatives. Although the applicant need not discuss alternatives outside the scope of its purpose, the applicant should analyze alternatives that consider factors such as different implementation methods and facility

configurations to design a project "with the least detrimental effect on the environment." See. *Environmental Guidebook* at page 17.

Thank you for the opportunity to comment. If you have any further questions or concerns please contact Koa Kaulukukui at (808) 594-0244 or koalanik@oha.org.

Sincerely,

Clyde W. Nāmu'o
Administrator

C: Lukela Ruddle
OHA Hilo Office
162 A Baker Avenue
Hilo, Hawai'i 96720

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

Harry Yada
Department of Land and Natural Resources, Land Division
P.O. Box 936
Hilo, Hawai'i 96721

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December 8, 2006

Clyde Nāmu'o, Administrator
Office of Hawaiian Affairs
711 Kapi'olani Blvd., Suite 1250
Honolulu HI 96813

Dear Mr. Nāmu'o:

**Subject:** **Draft Environmental Assessment for Hospice of Hilo General Inpatient Facility, TMK 2-4-:01:24 (por), Hilo**

Thank you for your comment letter dated October 26 2006, on the Draft EA. As the author of the EA, I offer the following responses to your specific comments:

1. *Use of 'okina and kahakō, commitment to contact SHPD.* Thank you for your acknowledgements.

2. *Consulting with Honolulu office.* We will endeavor to include your Honolulu office on all future early consultation letters.

3. *Community involvement.* Other than a phone call from one neighbor concerning archaeological sites outside of the project area, we did not receive any phone or written responses to our letters to residents. A reporter wrote a Page 1 article on the project in response to our supplying a Draft EA to the *Hawai'i Tribune Herald*, which provided the community with information. A meeting of the Board of Land and Natural Resources will provide additional opportunity for additional public input. As you are probably aware, the project has received broad support from all segments of the community. This information and a copy of the newspaper article will be included in the Final EA.

4. *Alternatives.* In this case, as there are no adverse environmental impacts, analysis of different implementation methods and facility configurations would appear to be moot. We agree, however, that it is reasonable to consider alternative sites, and we would like to share some of Hospice's thinking regarding site selection.

Hospice of Hilo is non-profit agency with a limited budget serving critical community needs. Hospice looked at purchasing private land, but the cost was prohibitive and would have meant monies would have had to be spent on the land instead of on much-needed

facilities for those at the end of their lives, and the project would have been much more difficult to bring to fruition. The use of government lands, therefore, appeared to be clearly justified and appropriate. The County has only a very limited extent of lands in this area. The applicant therefore discussed with the State land agent a number of available State parcels in the Hilo area and analyzed them with respect to access, cost of development, compatibility with adjacent land uses and planned State uses, and environmental impact. One choice was land in the Pi'ihonua area adjacent to the Hospice headquarters. Unfortunately the remaining land in this area consists of small remnants that are steep and/or have access problems and are thus difficult to develop. There was one acceptable 11-acre parcel above Hale Anuenue, but this was being sought by another non-profit agency. Another potential site was a large parcel along the north side of the Mohouli Street Extension, close to where the County Fire Department is considering placing a new administration/training office. However, the nature of Hospice's service require a residential/quiet setting, and the heavily traveled Mohouli Street and the potential proximity of a fire station were not favorable factors. Very few other unplanned State parcels with reasonable access and few environmental problems exist. Although the current site is part of land that had actually been identified for University use, all parties realized that the Hospice facility could have a symbiotic relationship with UHH's proposed nursing program. This information will be included in the Final EA.

Again, thank you for your comment.

Sincerely,

Ron Terry, Principal
Geometrician Associates

Cc: DLNR Land Division, Hilo Office

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EPO-06-176

November 2, 2006

Mr. Ron Terry
Geometrician Associates
P.O. Box 396
Hilo, Hawaii 96721

Dear Mr. Terry:

SUBJECT: Draft Environmental Assessment for Hospice of Hilo General Inpatient Facility at South Hilo, Island of Hawaii, Hawaii
TMK: (3) 2-4-001: 024 (por.)

Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have no comments at this time. We strongly recommend that you review all of the Standard Comments on our website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiacai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
EH-Hawaii

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December 8, 2006

Kelvin H. Sunada, Manager
Environmental Planning Office
Hawai'i State Department of Health
P.O. Box 3378
Honolulu HI 96801-3378

Dear Mr. Sunada:

**Subject:** **Draft Environmental Assessment for Hospice of Hilo General Inpatient Facility, TMK 2-4-:01:24 (por), Hilo**

Thank you for your comment letter on the Draft EA dated November 2, 2006, in which you advised reviewing DOH-EPO's Standard Comments on the DOH website. We reviewed these comments in the preparation of the EA and included relevant discussion in various sections, including water quality and need for permits. Thank you for your review of the document.

Sincerely,

Ron Terry, Principal
Geometrician Associates

Cc: DLNR Land Division, Hilo Office