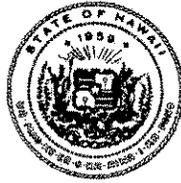


LINDA LINGLE
GOVERNOR



LILLIAN B. KOLLER, ESQ.
DIRECTOR

HENRY OLIVA
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES

P. O. Box 339
Honolulu, Hawaii 96809-0339

April 24, 2006

Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

**Subject: Final Environmental Assessment for Arc of Hilo Facilities Expansion
TMK 2-3-32" 6, 7 & 8, Island of Hawaii.**

The Department of Human Services has reviewed the comments received during the comment period for the Draft EA, which began on March 8, 2006. Our agency has determined that the project will not have significant impacts and has issued a FONSI. Please publish the notice in the next available edition of the OEQC Environmental Notice.

In our earlier letter, we attached:

- Four copies of the Final EA for submittal to OEQC (current deadline is 4/26)
- A sample transmittal letter for OEQC, which is based on the presumption that DHS will declare a FONSI (Finding of No Significant Impact), based on the fact that no significant impacts have been identified, as we discussed earlier
- A completed OEQC Environmental Notice Publication Form
- A distribution list for the Final EA
- A sample "Dear Participant" letter

The summary description was e-mailed earlier by our consultant. Please contact Guy Tagomori at 692-7729, or consultant Ron Terry at (808) 982-5831, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Henry Oliva".

Henry Oliva
Deputy Director

Attachments

2006-05-08 HA FEA ARC OF HILO FACILITIES EXPANSION

MAY - 8 2006

FILE COPY

**FINAL ENVIRONMENTAL ASSESSMENT
ARC OF HILO FACILITIES EXPANSION**

TMK (3rd) 2-3-32: 6, 7, and 8
Pi'ihonua, South Hilo District, Hawai'i Island, State of Hawai'i

May 2006

Prepared for:

The Arc of Hilo
1099 Waianuenue Avenue
Hilo, Hawai'i 96720-2019

RECEIVED

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OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

FINAL ENVIRONMENTAL ASSESSMENT
ARC OF HILO FACILITIES EXPANSION

TMK (3rd) 2-3-32: 6, 7, and 8
Pi'ihonua, South Hilo District, Island of Hawai'i, State of Hawai'i

APPLICANT:

The Arc of Hilo
1099 Waiuanue Avenue
Hilo HI 96720-2019

APPROVING AGENCY:

Department of Health and Human Services
Hawaii Department of Human Services
601 Kamokila, Room 505
Kapolei HI 96707

CONSULTANT:

Geometrician Associates LLC
HC 2 Box 9575
Keaau HI 96749

and

Durrant Media Five
557 Manono Street
Hilo HI 96720

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)

TABLE OF CONTENTS

SUMMARY		ii
PART 1: PROJECT DESCRIPTION, PURPOSE AND NEED AND E.A. PROCESS		1
1.1 Project Description and Location		1
1.2 Purpose and Need		2
1.3 Summary of Regulatory Requirements		3
1.4 Public Involvement and Agency Coordination		3
1.5 Property Ownership		4
PART 2: ALTERNATIVES.....		4
2.1 No Action		4
2.2 Alternative Locations and Strategies		4
PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION.....		5
3.1 Physical Environment		5
3.1.1 Geology, Soils and Geologic Hazard		5
3.1.2 Drainage, Water Features and Water Quality		8
3.1.3 Flora, Fauna, and Ecosystems		11
3.1.4 Air Quality, Noise and Scenic Resources		12
3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions		15
3.2 Socioeconomic and Cultural		15
3.2.1 Socioeconomic Characteristics		16
3.2.2 Cultural Setting		18
3.2.3 Archaeology and Historic Sites.....		19
3.3 Infrastructure		19
3.3.1 Utilities		19
3.3.2 Traffic and Parking		21
3.4 Secondary and Cumulative Impacts.....		22
3.5 Required Permits and Approvals.....		22
3.6 Consistency With Government Plans and Policies		22
3.6.1 Hawai'i State Plan.....		22
3.6.2 Hawai'i County General Plan and Zoning		23
3.6.3 Hawai'i State Land Use Law		23
3.6.4 Coastal Zone Management Act Consistency		24
PART 4: DETERMINATION.....		24
PART 5: FINDINGS AND REASONS		26
REFERENCES		
LIST OF FIGURES		1
FIGURE 1 Project Location		2
FIGURE 2 TMK Map		
LIST OF TABLES		8
TABLE 1 Project Site Plant Species List		12
TABLE 2 Findings of Records Search, Phase I ESA		15
TABLE 3 Selected Socioeconomic Characteristics.....		
APPENDIX 1 Site Plan		
APPENDIX 2 Phase I Environmental Site Assessment		
APPENDIX 3 Archaeological Report/Cultural Impact Assessment		
APPENDIX 4 Traffic Impact Analysis		
APPENDIX 5 Comments in Response to Pre-Consultation		
APPENDIX 6 Comments on Draft EA and Responses (Final EA only)		

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

The Arc of Hilo, a non-profit tax-exempt charitable organization, proposes to expand its existing facilities located on Waianuenue Avenue in Hilo, Hawai'i. Arc of Hilo serves to improve the quality of life for people with developmental and other disabilities on the island of Hawai'i through educational, vocational, and skill training as well as employment and residential opportunities. In the past four years, the Arc of Hilo has expanded its operations from an annual budget of \$1.5 million to over \$5 million, with a concurrent doubling in the number of clients served. This rapid expansion creates a strong and critical need for expanded facilities. The proposed project involves construction of a new 11,135-square foot Community Support Services (CSS) facility structure that will house offices, classrooms, and storage space; a 4,737-square foot Auditorium/ Gymnasium; and an expanded parking lot with a new circulation plan and an additional driveway. The project will utilize more fully the current Arc of Hilo site that occupies 5.395 acres of leased State land in Pi'ihonua.

Minor traffic impacts from the proposed project can be mitigated through driveway left-turn restrictions. Because the site is greater than one acre in extent, the contractor will obtain an NPDES permit and develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to contain sediment and storm water runoff during construction. Furthermore, construction equipment will be kept in good working condition to minimize the risk of fluid leaks that could enter runoff and groundwater. Significant leaks or spills, if they occur, will be properly cleaned up and disposed of at an approved site. Archaeological and cultural surveys have determined that no significant historic sites or cultural resources are present; if archaeological resources are encountered during land-altering activities associated with construction, work in the immediate area of the discovery will be halted and the State Historic Preservation Division will be contacted.

Sensitive receptors to noise exist 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.

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

1.1 Project Description and Location

The Arc of Hilo, a non-profit tax-exempt charitable organization that provides vital services to persons with developmental and other disabilities, proposes to expand its existing facilities located on Waianuenue Avenue in Hilo, Hawai'i (Figs. 1-2 & Appendix 1, Site Plan). The proposed project involves construction of a new 11,135-square foot Community Support Services (CSS) facility structure that will house offices, classrooms, and storage space; a 4,737-square foot Auditorium/ Gymnasium; and an expanded parking lot with a new circulation plan and an additional driveway. The project will more fully utilize the current Arc of Hilo site that occupies 5.395 acres of leased State land in Pi'ihonua.

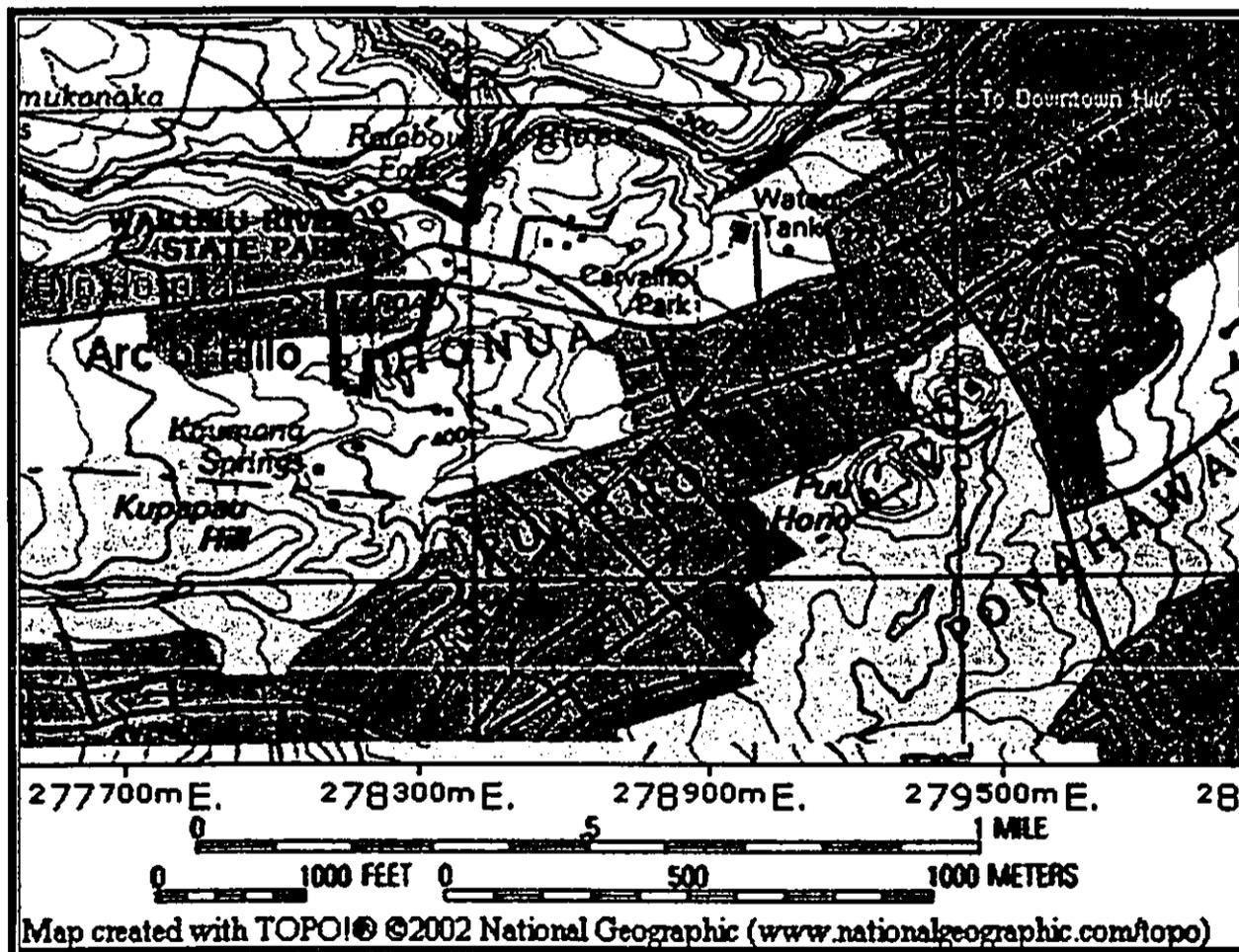


Figure 1. Project Location

The construction budget for the project is approximately \$5.2 million, and will be paid for by a combination of funds from Arc of Hilo and grants from State, federal and private agencies. If funding, permits, and design proceed as planned, the facility is expected to break ground in the summer of 2006 and to be complete by the summer of 2007.

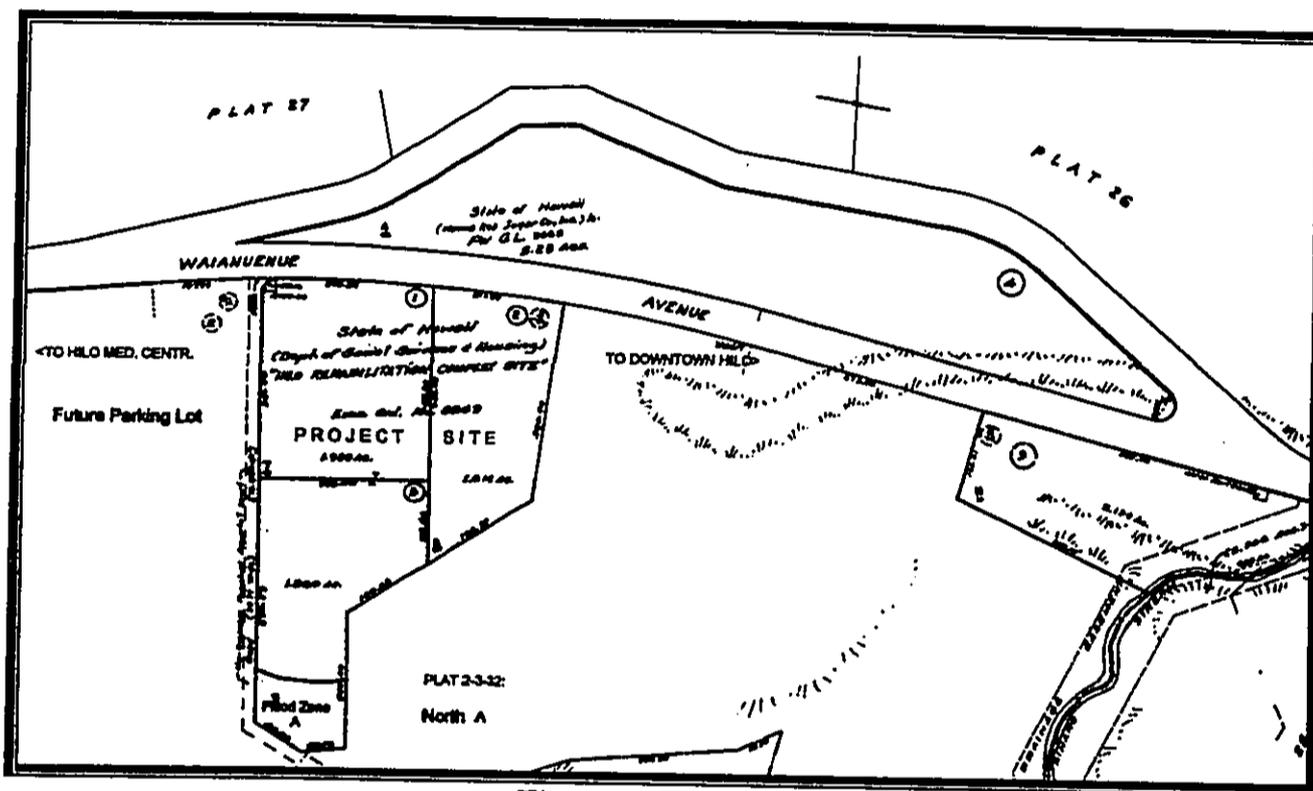


Figure 2. TMK Map

1.2 Purpose and Need

The Arc of Hilo serves to improve the quality of life for people with developmental and other disabilities on the island of Hawai'i through educational, vocational, and skill training as well as employment and residential opportunities. In the past four years, the Arc of Hilo has expanded its operations from an annual budget of \$1.5 million to over \$5 million, with a concurrent doubling in the number of clients served. This rapid expansion creates a strong and critical need for expanded facilities. Given the past and ongoing growth in the Arc of Hilo's budget, number of clients served, and expectation of future need, the present facilities are inadequate for servicing its client base. The proposed expansion is part of Arc of Hilo's strategic goals to improve present programs and develop new programs in order to better meet its clients needs.

1.3 Summary of Regulatory Requirements

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. Part 4 of this document states the anticipated finding that no significant impacts are expected to occur; Part 5 lists each criterion and presents the findings for each made by the State of Hawai'i Department of Human Services (DHS), the approving agency. As detailed in Section 4, DHS has concluded that no significant impacts are expected to occur, and has issued a Finding of No Significant Impact (FONSI).

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) has been prepared along with a NEPA Environmental Assessment. The project has been determined to be consistent with the 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, Office of the Chairperson
Department of Land and Natural Resources, Historic Preservation Division
Department of Land and Natural Resources, Land Division, Hawaii Island Office
Hilo Medical Center

County:

Planning Department
Public Works Department
Police Department
County Council

Private:

Hale Anuenue
Hospice of Hilo
Mr. and Mrs. Richard Henderson

Copies of communications received during preconsultation are contained in Appendix 5. The project was the subject of a Healthcare Corridor Planning Meeting held on April 5, 2004, at Arc of Hilo, that was attended by representatives from the various health-related facilities on Waiānue Avenue, as well as by DLNR, the Planning Department, and two residents. A public meeting on the project was held on January 23, 2006 (public newspaper notice and sign-in sheet at end of App. 5), at which members of the public had an opportunity to review the design for the project and ask questions of Arc of Hilo officials, the architect, and the environmental consultant. All comments indicated support for the proposed project, all questions related to programs rather than site or environmental issues, and no concerns or issues were raised.

Appendix 6 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.

1.5 Property Ownership

TMKs 2-3-32: 6, 7, and 8 are State of Hawai'i property under Executive Order to the Department of Human Services and leased by Arc of Hilo until 2027.

PART 2: ALTERNATIVES

2.1 No Action

Under the No Action Alternative, the new facilities would not be constructed. Services provided by the Arc of Hilo to its clients would, at some point, either be inadequate or would by necessity be moved to another location. Because this would be a more costly option, and because Arc of Hilo depends upon having a central location in which to operate safely and efficiently, Arc of Hilo considers the No Action Alternative highly undesirable.

2.2 Alternative Locations or Strategies

Because the current Arc of Hilo site is large enough and is compatible with planned and existing uses, and the proposed use is consistent with the Executive Order for the use of this State land, other alternative sites have not been considered. Additionally, relocation of ongoing operations would be a more costly option than expansion of existing on-site facilities. Therefore Arc of Hilo considers expansion of facilities at its present location to be the only sensible option at this time.

PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Basic Geographic Setting

The three parcels upon which the new facilities would be constructed is referred to in this EA as the *project site*. The term *project area* is used to describe the general environs of Pi'ihonua, and, in some cases, Hilo.

The project site is located at approximately 390 feet in elevation along Waianuenue Avenue, across the street from the Hilo Medical Center campus (see Fig. 1). The vegetation of the project area has been extensively modified for agriculture, ranching, house sites, and landscaping for the existing facilities, and the project site itself is covered with a secondary weedy forest and grassland wherever Arc of Hilo facilities are not present. 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 primarily for health and social services (including Hilo Medical Center, the under-construction State Veterans Home, and the Hawai'i County Economic Opportunity Council headquarters), with some residences, grazing, and vacant land.

3.1 Physical Environment

3.1.1 Geology, Soils and Geologic Hazards

Environmental Setting

Pi'ihonua is located on the lower flank of Mauna Loa volcano near Wailuku Stream (commonly called the Wailuku River). The surface consists of weathered Pleistocene-era (greater than 10,000 years old) basalt lava flows from Mauna Loa mantled with Pahala Ash (Wolfe and Morris 1996). The project site soil is classified by the Natural Resources Conservation Service (formerly Soil Conservation Service) as Hilo silty clay loam on 0-20% slopes, a dark brown and strongly to medium acid soil that is approximately 12 inches thick and is moderately corrosive. Permeability is rapid, runoff slow to moderate, and erosion hazard slight to moderate; bearing capacity is low, compressibility is high, and shear strength is low. It is mainly used for pasture and woodland (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 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 and has 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 general project area has a number of surface water bodies, including the Wailuku River, which is located about 0.15 mile north of the project site, just beyond Hilo Medical Center (see Fig. 1). A small perennial tributary stream also flows about 0.25 miles south of the project site and merges with the Wailuku River near Carvalho County Park at the intersection of Kaumana Drive and Waianuenue Avenue. A small ephemeral stream skirts the southern border of the project site. Additionally, a number of artesian springs are found approximately 0.2 miles southwest of the project site. No streams or springs appear to be present on the site itself. A ditch on the mauka part of the property diverts runoff that flows from above the property during and after heavy rainfall away from the Arc of Hilo facilities and conducts it south and then east through the property to the tributary stream below. The Flood Insurance Rate Maps (FIRM) 860C – 880C (9/16/88) show that the majority of the project site is in Flood Zone X, outside of the 100-year flood plain. Approximately the southern 100 feet of parcel TMK 2-3-32:006 is located within flood zone "A" (see line on Fig. 2), denoting the 100-year flood plain based on approximate designations, i.e., without base flood elevations determined (FEMA 2005).

The *Hawai'i Stream Assessment* (Hawai'i State CWRM 1990) inventoried streams statewide (including over 100 on the Hilo/Hamakua coast) for their water quality/supply, habitat, cultural and recreational resource values. Streams are ranked in various resources categories. Of particular importance are the *Candidate Streams for Protection*, which meet the criteria for either diversity of outstanding resources or "blue-ribbon resources." Four such streams are present on the Hamakua/Hilo coast: Waikoloa, Kolekole, Honoli'i, and Wailuku Streams. Wailuku Stream is listed as a candidate for both its scenic and recreational characteristics.

No waters of the U.S., including streams, pools, springs, or wetlands, are present.

Impacts and Mitigation Measure

Development of structures within the area designated as a flood zone will be avoided, and the use of this area will be in conformance with all flood zone regulations. All on-site roof and surface runoff will be directed to on-site drywells.

Because of the limited scale of construction and the environmental setting, the risks for flooding or impacts to water quality are negligible. No impacts to stream banks, stream waters, wetlands, or any other waters of the U.S., will occur, as none are present. There will be no effect on the Wailuku River.

The property directly mauka is being developed by Hilo Medical Center for expansion of existing parking lots. Drainage improvements associated with the construction are expected to decrease the level of runoff from the currently undeveloped property, lessening the need for the current diversion ditch (Hilo Medical Center 2006). Arc of Hilo and Hilo Medical Center officials are coordinating concerning this drainage work.

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 'ohi'a (*Metrosideros polymorpha*) and koa (*Acacia koa*) (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 Pi'ihonua 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 November 5, 2005. Table 1 is a list of plant species detected.

Many of the plants listed are cultivated and ornamental species used in landscaping. 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.

Residents have reported that Hawaiian Hawks (*Buteo solitarius*) and Hawaiian hoary bats (*Lasiurus cinereus semotus*) are often seen in the general area. Both are listed endangered species, and both are commonly observed in many parts of East Hawai'i. 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, which is already used for parking, agriculture, and other activities, lessen its value for bat habitat. In response to early consultation, the U.S. Fish and Wildlife Service stated that to the best of its knowledge, no listed or proposed threatened or endangered species, or designated or proposed critical habitat, are present (see letter of 11/23/05, App. 5).

A neighboring resident wrote in response to early consultation that invasive coqui frogs have infested a vegetated area of the facility planned for development and requested that Arc of Hilo attempt to eradicate the frog as part of project activities (see letter of 11/14/05, App. 5).

Impacts and Mitigation Measures

Because of the lack of native ecosystems, or threatened or endangered plant species, no adverse impacts to botanical resources would occur as a result of clearing and improvements. No adverse impact to Hawaiian Hawks or Hawaiian hoary bats is expected. Arc of Hilo will make attempts to deal with the coqui frog situation.

**Table 1
Project Site Plant Species List**

Scientific Name	Family	Common Name	Life Form	Status
<i>Ageratum conyzoides</i>	Asteraceae	Maile honohono	Herb	A
<i>Andropogon virginicus</i>	Poaceae	Broomsedge	Herb	A
<i>Archontophoenix alexandrae</i>	Arecaceae	Alexandra palm	Tree	A
<i>Ardisia elliptica</i>	Myrsinaceae	Shoebuttton ardisia	Tree	A
<i>Begonia sp.</i>	Begoniaceae	Begonia	Herb	A
<i>Brachiaria mutica</i>	Poaceae	California grass	Herb	A
<i>Buddleia asiatica</i>	Buddleiaceae	Buddleia	Shrub	A
<i>Canavalia sp.</i>	Fabaceae	Canavalia	Vine	?
<i>Cardamine flexuosa</i>	Brassicaceae	Bittercress	Herb	A
<i>Carica sp.</i>	Caricaceae	Papaya	Tree	A
<i>Chamaecrista nictitans</i>	Fabaceae	Partridge pea	Herb	A
<i>Chamaesyce hirta</i>	Euphorbiaceae	Spurge	Herb	A
<i>Chamaesyce hypericifolia</i>	Euphorbiaceae	Graceful spurge	Herb	A
<i>Chamaesyce prostrata</i>	Euphorbiaceae	Spurge	Herb	A
<i>Christella dentata</i>	Thelypteridaceae	Cyclosorus	Fern	A
<i>Clusia rosea</i>	Clusiaceae	Autograph tree	Tree	A
<i>Cocos nucifera</i>	Arecaceae	Coconut	Tree	A
<i>Coix lacryma-jobi</i>	Poaceae	Job's tears	Herb	A
<i>Colocasia esculenta</i>	Araceae	Taro	Herb	A
<i>Commelina diffusa</i>	Commelinaceae	Honohono	Herb	A
<i>Conyza sp.</i>	Asteraceae	Horseweed	Herb	A
<i>Cordyline fruticosa</i>	Agavaceae	Ti	Shrub	A
<i>Crotalaria pallida</i>	Fabaceae	Smooth rattlepod	Herb	A
<i>Crotalaria sp.</i>	Fabaceae	Crotalaria	Herb	A
<i>Cuphea carthagenensis</i>	Lythraceae	Tarweed	Herb	A
<i>Cynodon dactylon</i>	Poaceae	Bermuda grass	Herb	A
<i>Cyperus halpan</i>	Cyperaceae	Cyperus	Herb	A
<i>Cyperus rotundus</i>	Cyperaceae	Nut grass	Herb	A
<i>Cyrtomium falcatum</i>	Dryopteridaceae	Holly fern	Fern	A
<i>Desmodium triflorum</i>	Fabaceae	Desmodium	Herb	A
<i>Dichorisandra thyrsoflora</i>	Commelinaceae	Blue ginger	Herb	A
<i>Dicranopteris linearis</i>	Gleicheniaceae	Uluhe	Fern	I
<i>Digitaria ciliaris</i>	Poaceae	Crabgrass	Herb	A
<i>Digitaria violascens</i>	Poaceae	Crabgrass	Herb	A
<i>Diplazium esculentum</i>	Athyriaceae	Paca	Fern	A
<i>Dissotis rotundifolia</i>	Melastomataceae	Dissotis	Herb	A
<i>Dracaena sp.</i>	Agavaceae	Money tree	Shrub	A

Table 1, con'td				
Scientific Name	Family	Common Name	Life Form	Status
Drymaria cordata	Caryophyllaceae	Pipili	Herb	A
Eleusine indica	Poaceae	Wiregrass	Herb	A
Emilia fosbergii	Asteraceae	Pualele	Herb	A
Emilia sonchifolia	Asteraceae	Flora's paintbrush	Herb	A
Erechtites hieracifolia	Asteraceae	Erechtites	Herb	A
Hedychium coronarium	Zingiberaceae	White ginger	Herb	A
Hedychium falvescens	Zingiberaceae	Yellow ginger	Herb	A
Hedyotis corymbosa	Rubiaceae	Hedyotis	Herb	A
Heliconia sp.	Heliconiaceae	Heliconia	Herb	A
Hippobroma longiflora	Campanulaceae	Star-of-Bethlehem	Herb	A
Hyptis pectinata	Lamiaceae	Comb hyptis	Vine	A
Impatiens sp.	Balsaminaceae	Impatiens	Herb	A
Ipomoea alba	Convolvulaceae	Moon flower	Vine	A
Ipomoea triloba	Convolvulaceae	Little bell	Vine	A
Justicia betonica	Acanthaceae	White shrimp plant	Herb	A
Kyllinga brevifolia	Cyperaceae	Kyllinga	Herb	A
Kyllinga memorialis	Cyperaceae	Kyllinga	Herb	A
Lepisorus thunbergianus	Polypodiaceae	Pleopeltis	Fern	I
Lindernia crustacea	Scrophulariaceae	Lindernia	Herb	A
Ludwigia octovalvis	Onagraceae	Kamole	Herb	A
Ludwigia palustris	Onagraceae	Marsh purslane	Herb	A
Lygodium japonicum	Schizaeaceae	Japanese climbing fern	Fern	A
Macaranga mappa	Euphorbiaceae	Bingabing	Tree	A
Melastoma sp.	Melastomataceae	Melastoma	Shrub	A
Melinis minutiflora	Poaceae	Molasses grass	Herb	A
Melochia umbellata	Sterculiaceae	Melochia	Tree	A
Mimosa pudica	Fabaceae	Sleeping grass	Herb	A
Musa sp.	Musaceae	Banana	Shrub	A
Nephrolepis exaltata	Nephrolepidaceae	Sword fern	Fern	I
Oxalis corniculata	Oxalidaceae	Wood sorrel	Herb	A
Oxalis corymbosa	Oxalidaceae	Wood sorrel	Herb	A
Paederia foetida	Rubiaceae	Maile pilau	Vine	A
Panicum maximum	Poaceae	Guinea grass	Herb	A
Panicum repens	Poaceae	Torpedo grass	Herb	A
Paraserianthes falcataria	Fabaceae	Albizia	Tree	A
Paspalum conjugatum	Poaceae	Hilo grass	Herb	A
Paspalum dilatatum	Poaceae	Dallis grass	Grass	A
Pennisetum sp.	Poaceae	Pennisetum	Herb	A
Philodendron sp.	Araceae	Philodendron	Vine	A

Scientific Name	Family	Common Name	Life Form	Status
Phlebodium aureum	Polypodiaceae	Phlebodium	Fern	A
Phyllanthus debilis	Euphorbiaceae	Niuri	Herb	A
Pilea microphylla	Urticaceae	Artillery plant	Herb	A
Pityrogramma calomelanos	Pteridaceae	Silver fern	Fern	A
Plumeria sp.	Apocynaceae	Plumeria	Shrub	A
Polygala paniculata	Polygalaceae	Bubblegum plant	Herb	A
Polyscias sp.	Araliaceae	Panax	Shrub	A
Psidium cattleianum	Myrtaceae	Waiawi	Tree	A
Psidium guajava	Myrtaceae	Guava	Tree	A
Psilotum nudum	Psilotaceae	Moa	Herb	A
Pycreus polystachyos	Cyperaceae	Sedge	Herb	I
Rhynchelytrum repens	Poaceae	Natal red top	Herb	A
Rubus rosifolius	Rosaceae	Thimbleberry	Herb	A
Sacciolepis indica	Poaceae	Glenwood grass	Herb	A
Schefflera arboricola	Araliaceae	Dwarf umbrella tree	Shrub	A
Schizachyrium ondensatum	Poaceae	Schizachyrium	Herb	A
Setaria palmifolia	Poaceae	Palmgrass	Herb	A
Solanum americanum	Solanaceae	Popolo	Herb	I?
Solenostemon sp.	Lamiaceae	Coleus	Herb	A
Spathodea campanulata	Bignoniaceae	African tulip	Tree	A
Spermocoe assurgens	Rubiaceae	Buttonweed	Herb	A
Sporobolus indicus	Poaceae	Smutgrass	Herb	A
Syngonium sp.	Araceae	Syngonium	Vine	A
Thunbergia fragrans	Acanthaceae	White thunbergia	Vine	A
Torenia asiatica	Scrophulariaceae	Olaa beauty	Herb	A
Tradescantia zebrina	Commelinaceae	Zebrina	Herb	A
Trema orientalis	Ulmaceae	Gunpowder tree	Tree	A
Wedelia trilobata	Asteraceae	Wedelia	Herb	A
Youngia japonica	Asteraceae	Oriental hawksbeard	Herb	A
Zingiber zerumbet	Zingiberaceae	Awapuhi	Herb	A

A = alien, E = endemic, 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 tradewinds keep the project area relatively 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 contains several sites that are considered significant for their scenic character in the Hawai'i County General Plan, including Rainbow Falls and Kaimukanaka Falls, both located makai of Hilo Medical Center, and Boiling Pots, mauka of the project site. However, the project site is sufficiently distant from these scenic sites (and because of topography not visible from them) that the proposed activities will not affect the visual quality of these resources.

Impacts and Mitigation Measures

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, such as the State Veteran Home. 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.

Removal of non-scenic, alien trees and vegetation would be required in order to site the project on the property. As landscaping involving native Polynesian and other plants is planned for the parking lot in conformance with County regulations, and existing and separately planned landscaping and greenhouse/agriculture activities already incorporate vegetation, the removal of existing trees would not substantially affect the scenic character of the project area. 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 Myounghee Noh & Associates (MNA). 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).

The ASTM standard is presently the accepted industry standard for Phase I Environmental Site Assessments, but it will soon be replaced by a new standard established 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 obtained 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	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	½ mile	None
State Landfill and/or Solid Waste Disposal Site List	½ mile	None
State Leaking UST List	½ mile	1
Federal RCRA Generators List	½ mile	2
State Registered UST List	¼ mile	1
Federal ERNS List	Subject Site	None
State Spill List	Subject Site	None

See Appendix 2 for explanation of databases

It is MNA'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 LUST.

Site Check

During a site check conducted on October 28 and soil sampling performed on December 7, 2005, MNA observed the subject site and surrounding areas. At the time of the site visit, the subject property was in use by the Arc of Hilo facility. One single story building located on site housed the Adult Day Health Program and the Commercial Services Program. Also on the subject site were two greenhouses used for growing hydroponic lettuce, basil, and tropical plants. At the time of the site visit, the subject property was adjoined by only one site. Currently the adjacent 1011 Waiianuenue Avenue is owned by the State of Hawai'i. It was densely vegetated and not in use, but is planned for a parking lot.

MNA's findings are as follows:

- *Hazardous Materials and Regulated Wastes:* MNA observed no evidence of hazardous materials or regulated wastes on the subject and adjoining sites.
- *Storage Tanks:* MNA observed no Underground Storage Tanks (USTs) in use at the subject property at the time of this ESA. One propane Aboveground Storage Tank (AST) was in use by the Arc of Hilo; however, no other ASTs were visible within the line of sight of the subject site. Several years ago there was a leaking UST at Hilo Medical Center, approximately 742 feet west of the subject site; however, site cleanup was completed in October 1999, and MNA has no reason to believe that the diesel contamination migrated to the subject site.
- *Potential Asbestos-, Polychlorinated Biphenyl (PCB)- or Lead-Containing Material:* MNA found evidence of materials that could contain asbestos, lead, and PCBs. The ceiling and floor tiles found in the building may contain asbestos, the paint on the building may contain lead, and light ballasts in the building may contain PCBs. As no disturbance of these areas is planned as part of this action, sampling and analysis of material or other potential hazardous substances was not included in the scope of the ESA and is not currently necessary.
- *Surface Soil Sampling:* MNA performed soil sampling of arsenic and lead on December 7, 2005. No measurable quantities of these metals were found. All arsenic results were below the HDOH Soil Action Level of 22 mg/Kg, and all lead results were below the HDOH Soil Action Level of 22 mg/Kg.
- *Offsite Contamination Source:* No potential offsite contamination sources were identified during the course of this Phase I site assessment.

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

3.2 Socioeconomic and Cultural

3.2.1 Socioeconomic Characteristics

The project would affect and benefit Hilo and, more generally, East Hawai'i. Table 3 provides information on the socioeconomic characteristics of Hilo along with those of Hawai'i County as a whole for comparison, from the United States 2000 census.

Table 3
Selected Socioeconomic Characteristics

CHARACTERISTIC	ISLAND OF HAWAI'I	HILO
Total Population	148,677	36,836
Percent Caucasian	31.5	15.8
Percent Asian	26.7	39.6
Percent Hawaiian	9.7	13.3
Percent Two or More Races	28.4	26.5
Median Age (Years)	38.6	38.0
Percent Under 18 Years	26.1	25.8
Percent Over 65 Years	13.5	15.8
Percent Households with Children	21.3	37.8
Average Household Size	2.75	2.85
Percent Housing Vacant	15.5	9.6

Source: U.S. Bureau of the Census, May 2001. *Profiles of General Demographic Characteristics, 2000 Census of Population and Housing, Hawai'i*. (U.S. Census Bureau Web Page).

Impacts

The expansion of Arc of Hilo's facilities will have a substantial benefit on the social environment of East Hawai'i by providing services for the developmentally disabled, as discussed in Section 1.2.

The proposed project would have a minor positive economic impact for Hawai'i County, particularly in that it would provide economic benefit for individuals with learning and other disabilities.

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 Pi'ihonua, 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 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'u, 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 *pāhoehoe* 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).

Pi'ihonua Ahupua'a

As part of an archaeological assessment study, Maly (1996) conducted historical research for the lands of Wainaku, Pōhohawai, Waiākea, and Pi'ihonua. He discusses the significance of the use of the Hawaiian word *wai* in the place names: Pōhohawai, Waiākea, 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. Maly refers to the origins of the names Waiākea and Pi'ihonua in the Hawaiian legend of Ka'ao Ho'oniua Pu'uwai no Ka-Miki. Pi'ihonua literally translates to: "Ascending Earth," and the *ahupua'a* is named for Pi'ihonua-a-ka-lani, the brother of Waiākea and Pana'ewa, and the father of the chiefesses 'Ohele and Waiānueue (Maly 1996:A-4).

Pi'ihonua along with Punahoa and Waiākea were held by Kamehameha I until the time of his death in 1819, at which time his holdings, including Pi'ihonua, were passed down to his son, Liholiho. Kelly (1981) speculates that Pi'ihonua may have been given to Chief Kalaeokekio by Kauikeaouli or Boki in 1828. Pi'ihonua was surrendered at the time of the *Māhele* and classified as Crown Land (Kelly 1981); no *kuleana* claims were registered for lands in the vicinity of the current subject property (Maly 1996). Following the *Māhele*, the population of Hilo grew and the scattered upland habitations gave way to sugar cultivation (McEldowney 1979:37). At the turn of the century, there were remnants of *heiau* and at least one intact *heiau* within Pi'ihonua. Thrum (1907) describes a *heiau* named Kaipālaloa that had been destroyed and another called Papiro, which was purportedly for bird catchers and canoe builders. Stokes (1991) reported another *heiau* in Pi'ihonua called Pinao that was once located near the intersection of Waiānueue and Ululani Streets (Maly 1996).

Beginning in the late 1880s Pi'ihonua was home to the Hawaii Mill Company, built on the Alenaio Stream (Kelly 1981). 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 Pi'ihonua until the mid twentieth century, at which time many of the fields were converted to pasturage associated with cattle ranching.

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 of 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 upper Pi'ihonua ahupua'a. The Office of Hawaiian Affairs (East Hawai'i), the Hilo Hawaiian Civic Club, and Kumu Pono Associates 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 Pi'ihonua, was written by Rechtman Consulting, Inc. It is attached as Appendix 2 and summarized in this and the previous section.

On November 5, 2005, Rechtman Consulting conducted an intensive on-foot survey of the project area and determined that no archaeological resources or other historic properties are present. In addition, they concluded that the potential for subsurface archaeological resources to be present is extremely remote.

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 November 21, 2005, by Rechtman Consulting, acting as an agent of the U.S. Department of Housing and Urban Development (HUD). This date initiated a 30-day period during which the SHPO was requested to concur or otherwise comment with the findings. ~~As of January 19, 2006, the applicant continues to await a response from the SHPO, who is expected~~ SHPO wrote on February 15, 2006, to concur that the proposed action would have no effect on historic properties (see end of App. 3).

In the unlikely event that archaeological resources 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 facilities is 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 is provided by Hawaiian Telcom.

Water is supplied by the Hawai'i County Department of Water Supply. The Arc of Hilo currently has one 2-inch water service and water meter, which is capable of serving as many as 40 single-family homes. Presently the Arc of Hilo uses an average of 42,000 gallons per month, with a maximum monthly usage during the last year of 52,000 gallons.

Wastewater treatment is currently provided via a 4-inch lateral to the County sewer main on Waianuenue Avenue.

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. The Arc of Hilo will continue to coordinate with DWS concerning appropriate water facilities and charges. For wastewater treatment, the project will connect to the existing sewer line in Waianuenue Avenue. 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

A Traffic Impact Assessment Report (TIAR) was prepared for the project by Phillip Rowell and Associates in December 2005. The report is attached as Appendix 4 and is summarized below.

Parking and Driveway

The facilities include 47 new parking spaces and a new circulation plan with sufficient turning radii to accommodate buses, large trucks and emergency vehicles (see App. 1, Site Plan). The plan requires improvement to a driveway that is currently in occasional use. This driveway will

require a permit from the Hawai'i County Department of Public Works and must comply with Chapter 22 of the Hawai'i County Code.

Existing Roadway and Traffic Conditions

A reconnaissance of the area was performed in order to identify the existing roadway conditions, cross-section, speed limits and right-of-way controls, as well as any other factors that might affect access to and egress for the proposed project. Waianuenue Avenue is a two-lane, two-way County road connecting Kaumana Drive and downtown Hilo with the Hilo Medical Center. There are no separate turn lanes for traffic turning into the project's parking lot from Waianuenue Avenue. Access and egress is provided by two, two-way driveways along the south side of Waianuenue Avenue. All traffic movements are allowed at both driveways. The driveway located along the mauka (west) side of the project is the main driveway.

In order to establish existing traffic levels, traffic counts were conducted on Monday, November 28, 2005, a normal school and work day. Just under 600 eastbound and westbound vehicles pass by the project site during either the AM or PM peak hours. Next, background traffic conditions, defined as future traffic conditions without the proposed project, were estimated by superimposing background traffic growth in the vicinity onto existing traffic volumes. Historical traffic counts from the Hawai'i State Department of Transportation were reviewed to determine the historical traffic growth rate along Waianuenue Avenue. The year 2008 was used as the horizon year.

Traffic Impacts and Proposed Mitigation Measures

The next step was to perform a trip generation study that could estimate the peak-hour traffic that the proposed project would generate. As there are few published studies or estimates for facilities similar to the Arc of Hilo, manual traffic counts were performed concurrently at both existing project driveways and then correlated to the existing building floor area, a common predictor of traffic levels. The number of additional peak hour trips that would be generated by use of the new building floor area was then estimated by extrapolating the results of these traffic counts. These trips were then distributed and assigned to right- or left-turns, based on the observed approach and departure routes. Additionally, the existing trips into and out of the facility were redistributed to account for the revised parking and circulation plan.

2008 background-plus-project traffic projections were estimated by superimposing the peak hourly traffic generated by the proposed project on the 2008 background (without project) peak hour traffic projections. This "worse-case" condition assumes that the peak hourly trips generated by the project coincide with the peak hour of the adjacent street.

The conclusions of the traffic impact assessment are:

- The new buildings at the ARC of Hilo would generate 56 new inbound and 22 new outbound trips during the morning peak hour. During the afternoon peak hour, the project would generate 36 new inbound and 48 new outbound trips.

- An analysis of the changes in traffic volumes along Waianuenue Avenue determined that east of the project, the morning and afternoon peak hourly volumes along Waianuenue Avenue would increase 11.9% and 10.7%, respectively. West of the project, peak hourly volumes would increase 3.2% and 2.1%, respectively. These increases include both background traffic growth and project trips.
- The Level-of-Service (LOS) analysis concluded that: a) All traffic movements would operate at LOS B (on a scale of A to F), or better, implying good operating conditions and minimal delays; and b) Traffic exiting from Waianuenue Avenue into either driveway would operate at LOS A. This means that these turning movements into and out of the project would have a negligible impact on traffic along Waianuenue Avenue, even though there are no separate left-turn lanes for traffic turning from Waianuenue Avenue into the facility.
- An assessment of the need for a separate left-turn lane for traffic turning into the project was performed using guidelines published by the Transportation Resource Board. The assessment determined that a separate left-turn lane was not warranted at either driveway during either peak period.
- Based on the findings of the LOS analysis of future background-plus-project conditions, the traffic impacts of the proposed project are minimal, and no mitigation is required to mitigate inadequate levels-of-service. All movements will operate at LOS B, or better, whereas LOS D is considered the minimum acceptable LOS for urban, peak hour conditions.
- It is recommended that left turns be prohibited from the lower driveway to address the problem of traffic weaving along Waianuenue Avenue and inadequate sight distance for left turns from this driveway to westbound Waianuenue Avenue.
- It is recommended that the need for a separate left-turn lane along Waianuenue Avenue be reassessed on a periodic basis, as changes in background traffic along Waianuenue Avenue may change the conclusions of the analysis. If the re-assessment determines that a separate left-turn lane is needed, it should be further determined whether the change is the result of change in background traffic along Waianuenue Avenue or an increase in traffic into and out of the project.

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 several planned projects near the project site; Hilo Medical Center is engaged in a project to expand public parking at a parcel adjacent to the project site (TMK 2-3-032:01). In addition, the old Hilo Hospital structure is being replaced by the State Veterans Home. Another project, the Hawai'i County Department of Water Supply's replacement of Pi'ihonua Reservoir No. 2, about a mile mauka of the project site, may also involve traffic congestion and detours on Waianuenue Avenue for short periods during construction in 2006. It is unlikely, although possible, that the traffic disruption for all three projects will coincide. It is important that project managers share schedules and consider coordination if conflicts occur. To this end, all relevant agencies have been informed of the

other agencies' projects during this EA process. There will be some minor traffic impacts associated with construction, grading and paving operations from these projects. Because the proposed action will have some minor traffic impacts, it would be prudent to coordinate movement of construction equipment and the timing of lane closures with these other nearby projects. Because air and water quality, and noise impacts due to these activities will be mitigated, it is not expected that 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
- Hawai'i County Public Works Department Grading & Driveway Permits
- National Pollutant Discharge Elimination System Permit (NPDES)
- Hawai'i State Department of Health Underground Injection Control Permit

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. Arc 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 is zoning designation Single Family Residential (RS-10), where community buildings are permitted uses. The property is not situated within the County's Special Management Area (SMA). It should be noted that the project design conforms with the front, side and rear setbacks for each of the three separate properties.

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 planned 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 program.

PART 4: DETERMINATION

In consideration of information presented herein and comments received in response to the Draft EA, the State Department of Human Services finds that no significant impacts are present and that an Environmental Impact Statement is not warranted. The agency has therefore issued 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 the Hilo area.
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, which would only improve existing facilities.

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 will not have any significant effect in the context of Chapter 343, Hawai'i Revised Statutes and section 11-200-12 of the State Administrative Rules.

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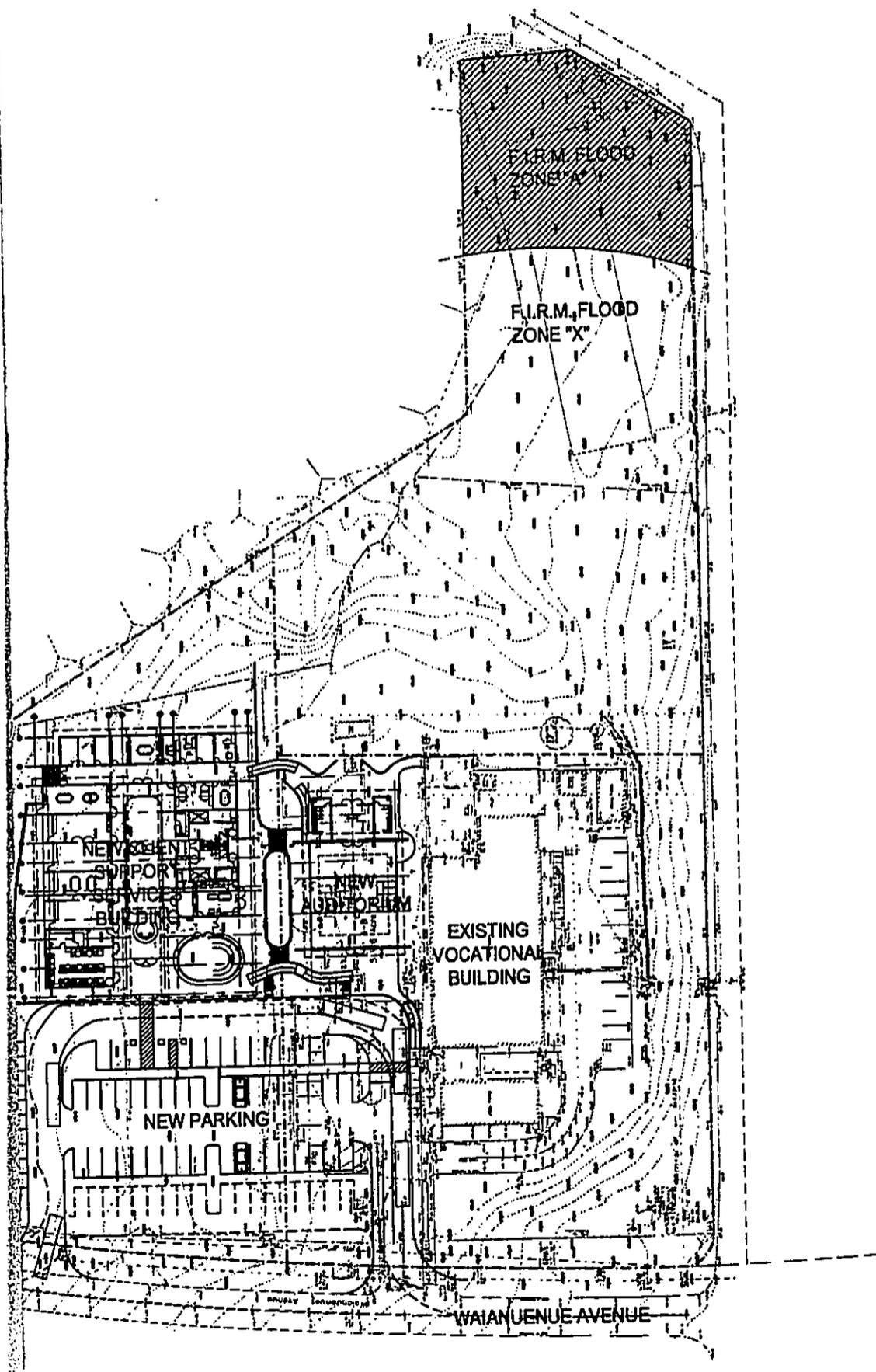
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APPENDIX 1

SITE PLANS

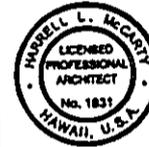


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CLIENT SUPPORT SERVICES COMMUNITY CENTER
HILO, HAWAII
TAX MAP #571
THE ARC OF HILO

Keyplan

No.	Rev.	Date	Description

Consultant

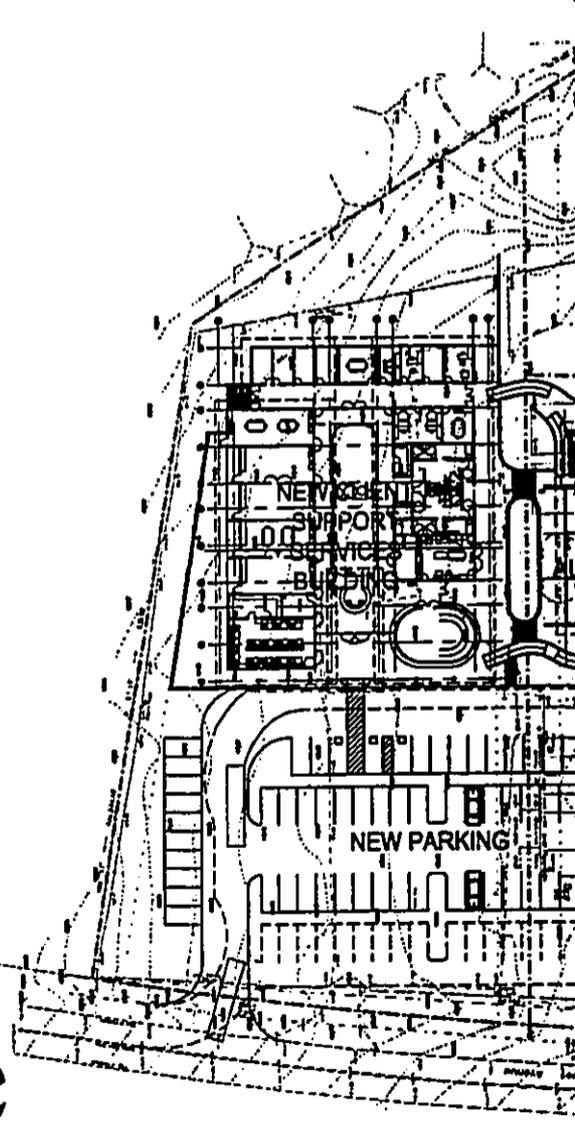
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OVERALL SITE PLAN

Sheet 1.0

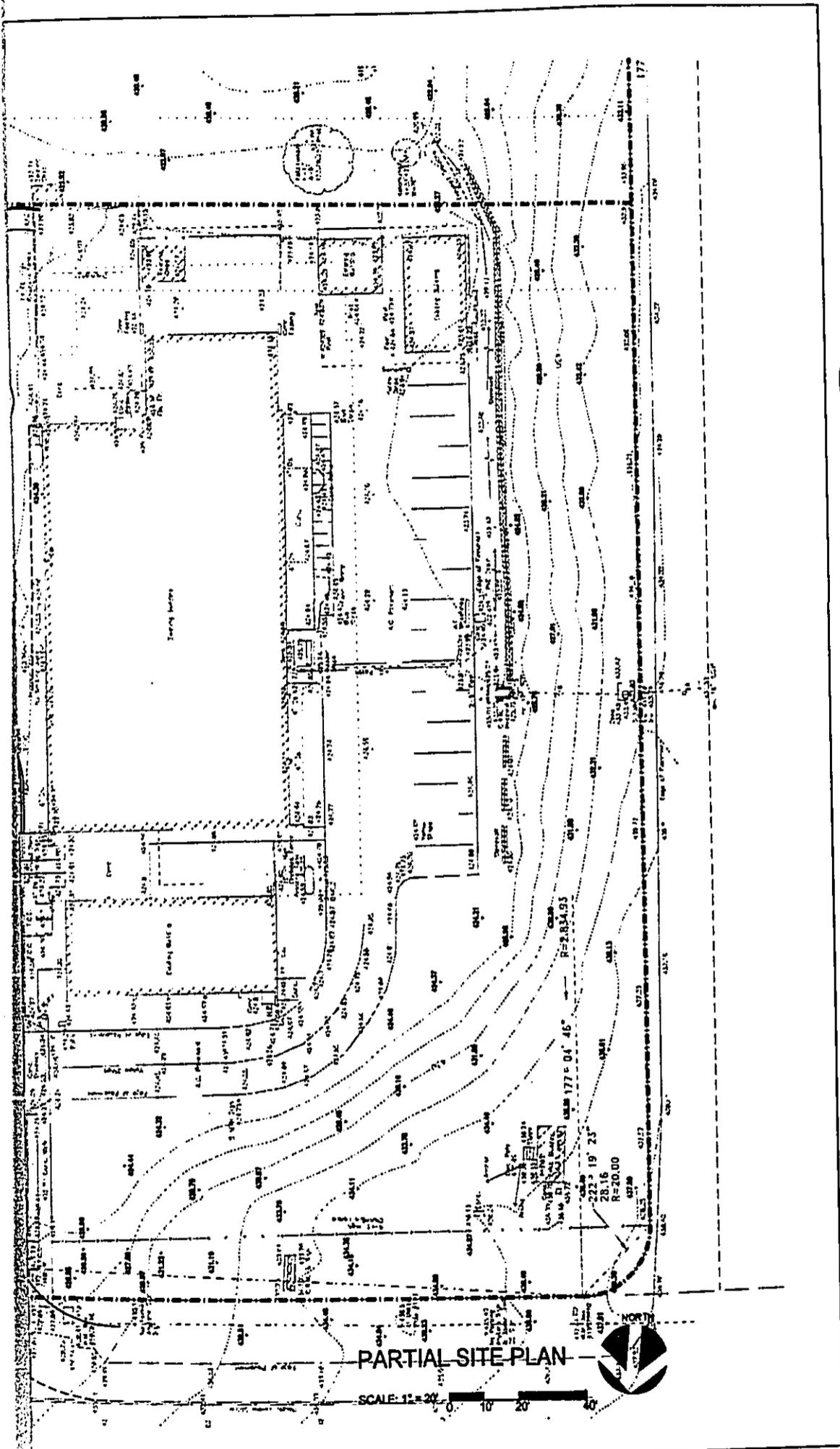


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THE ARC OF HILO

Keyplan

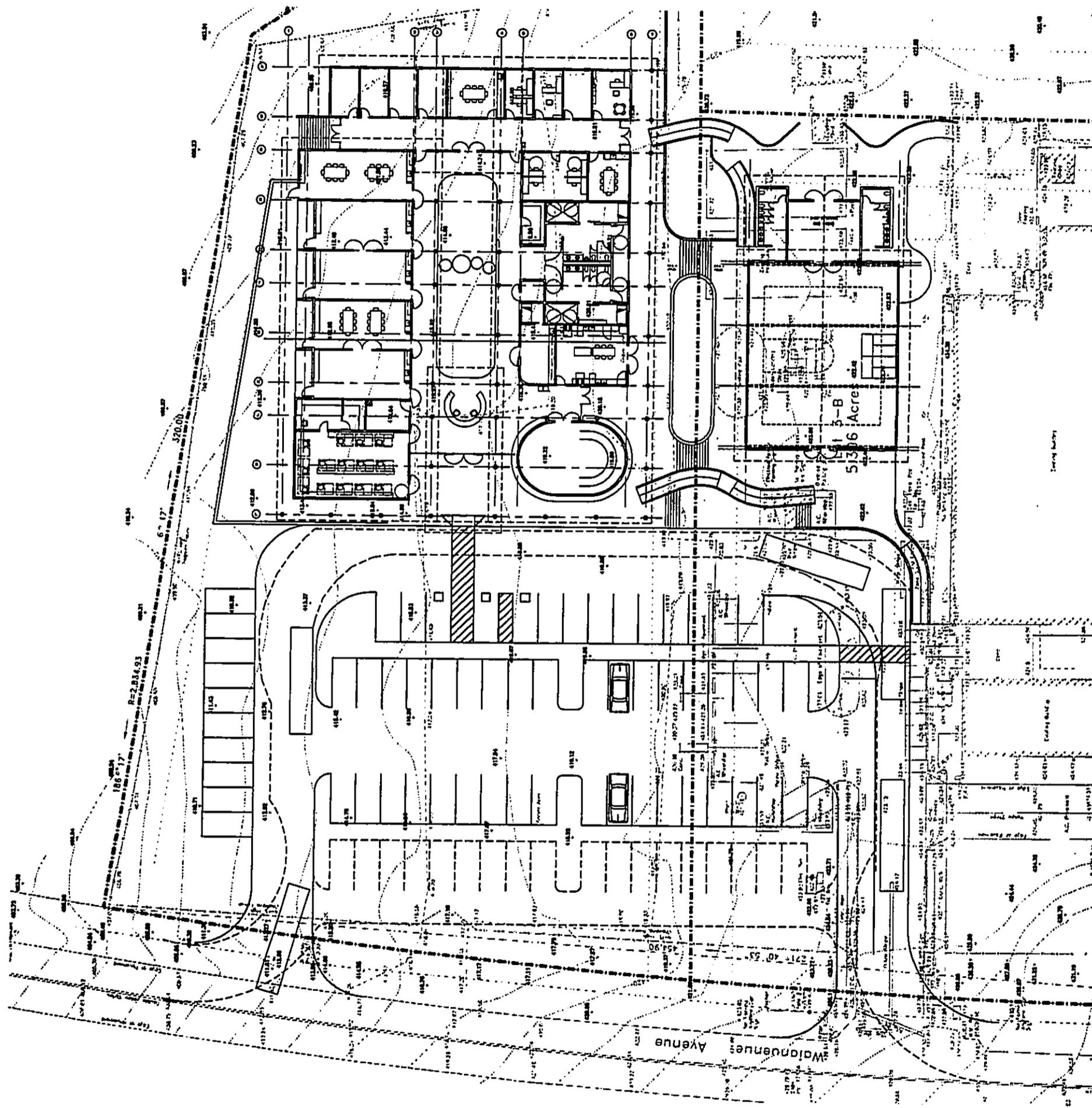
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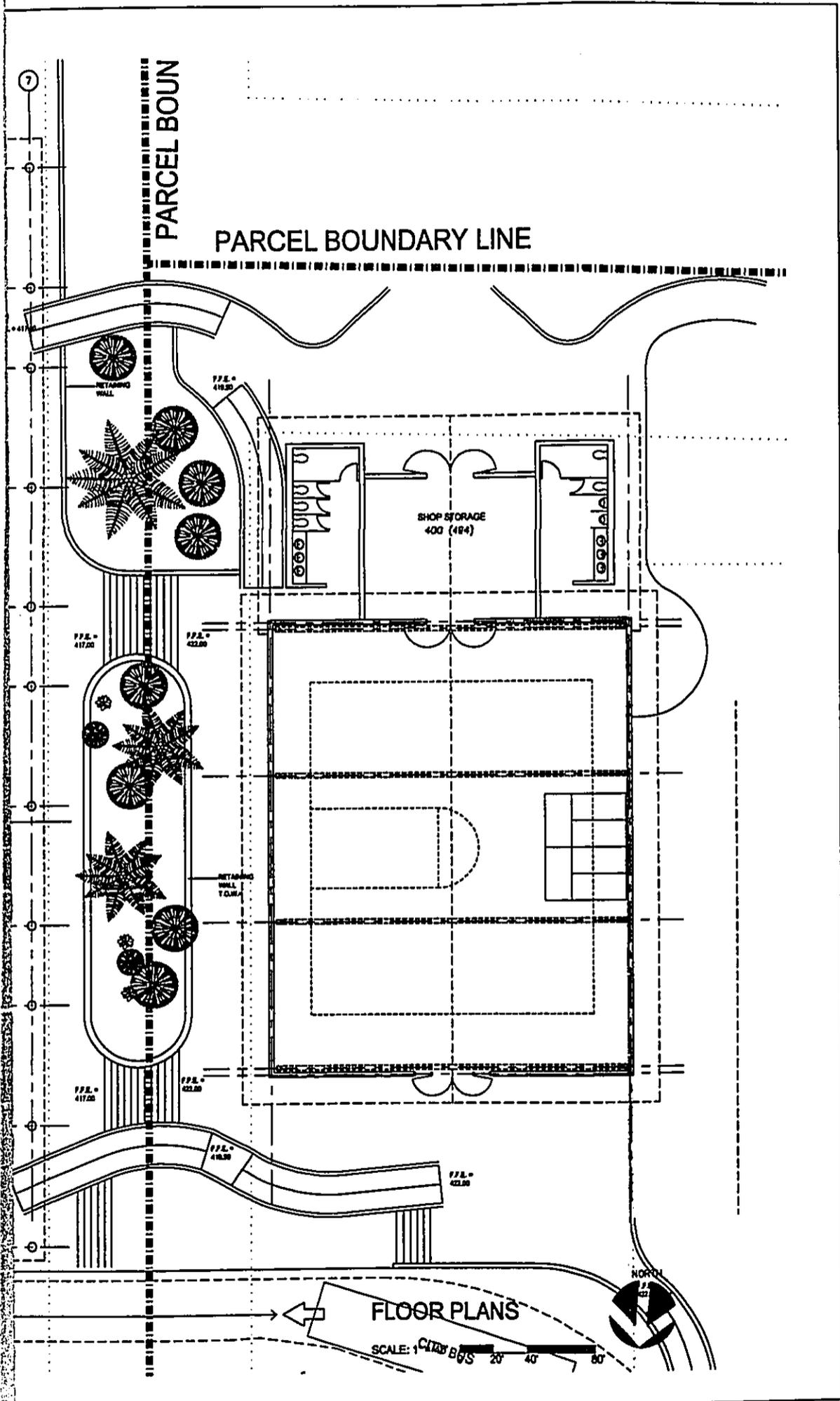
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THE ARC OF HILO

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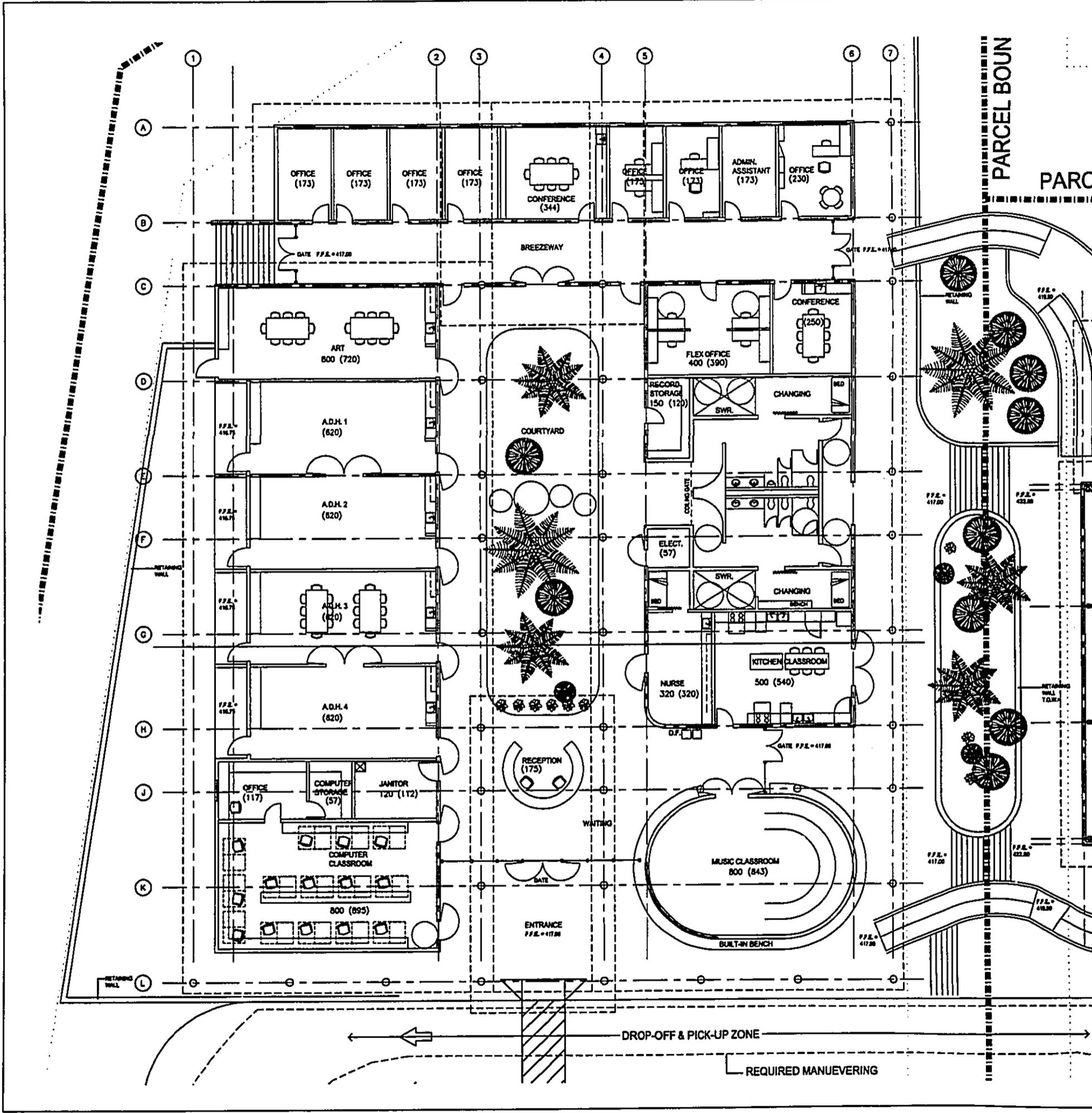
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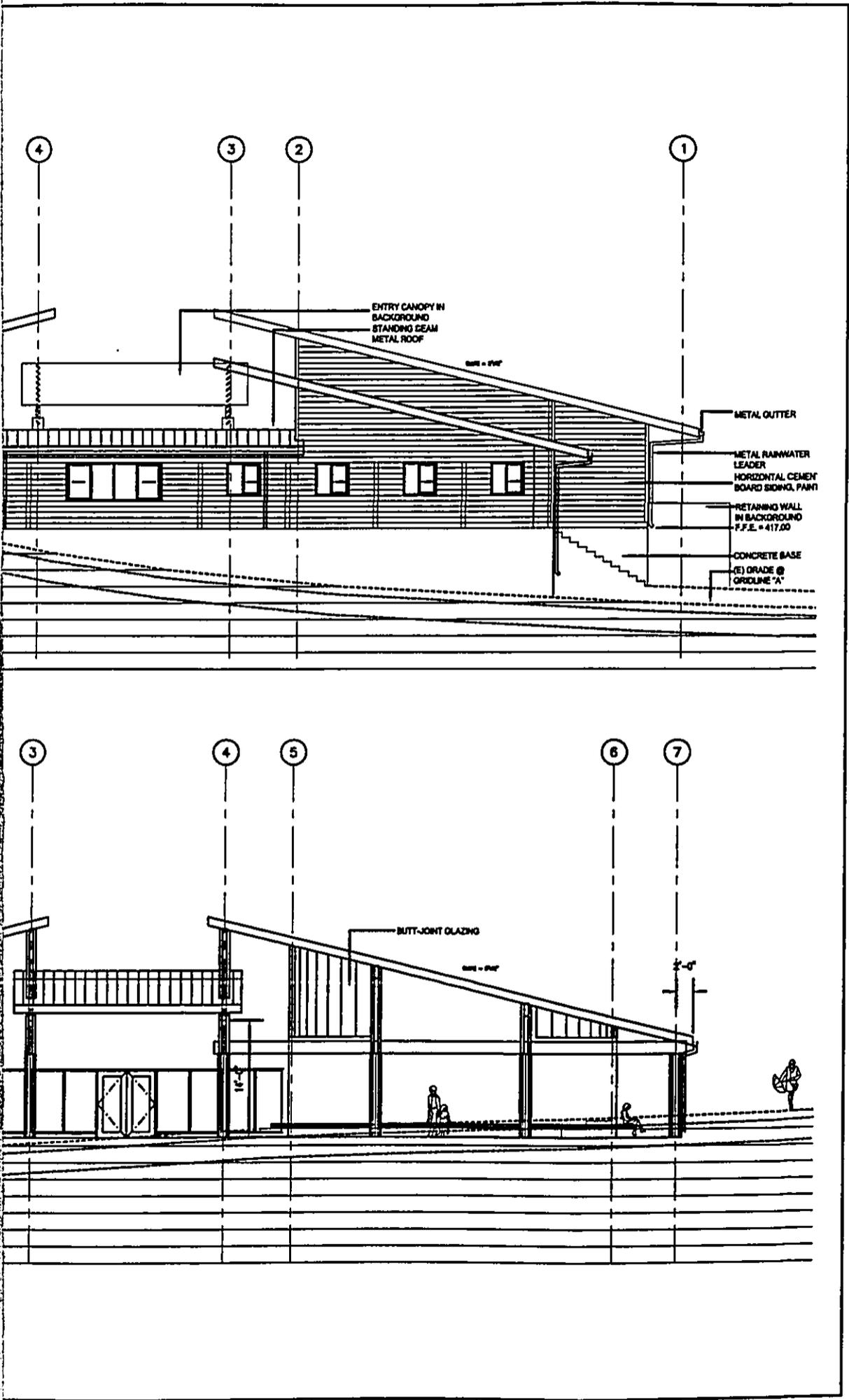


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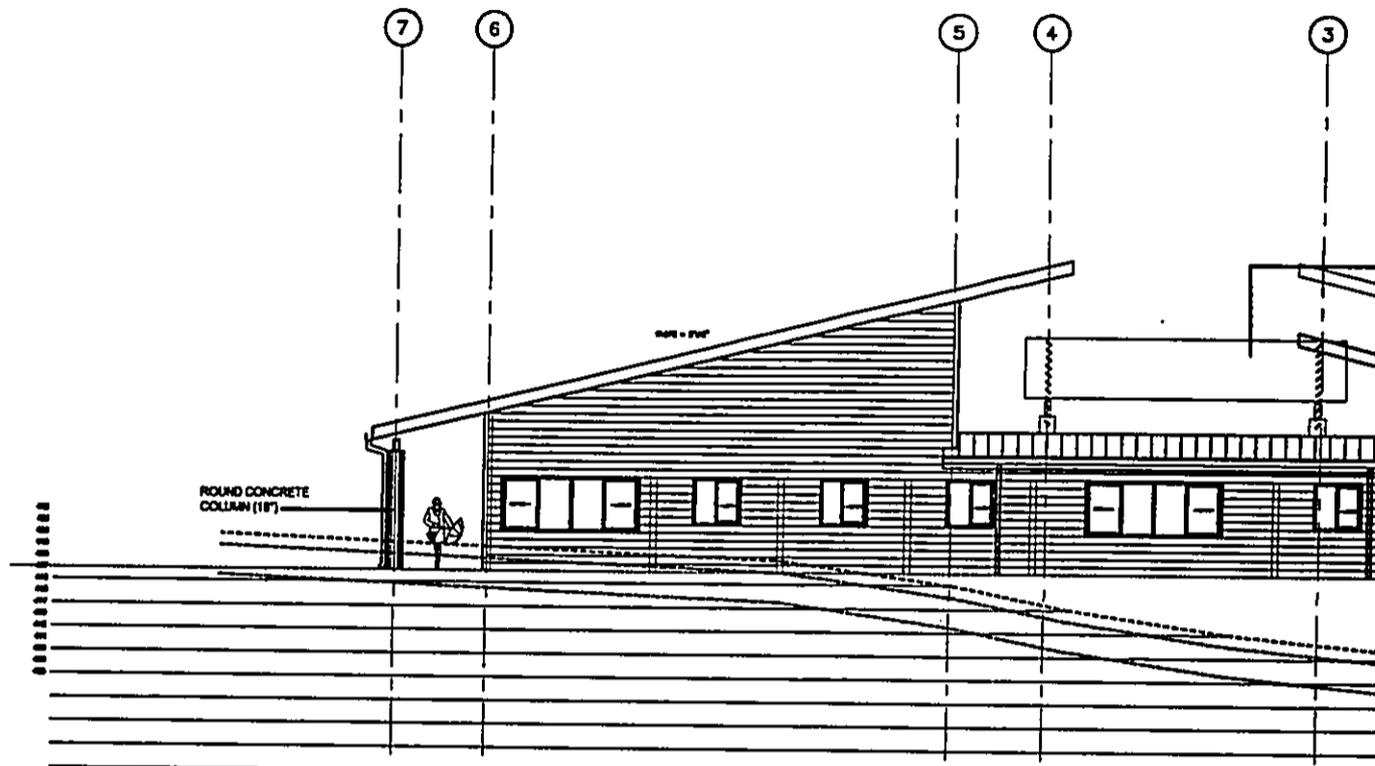
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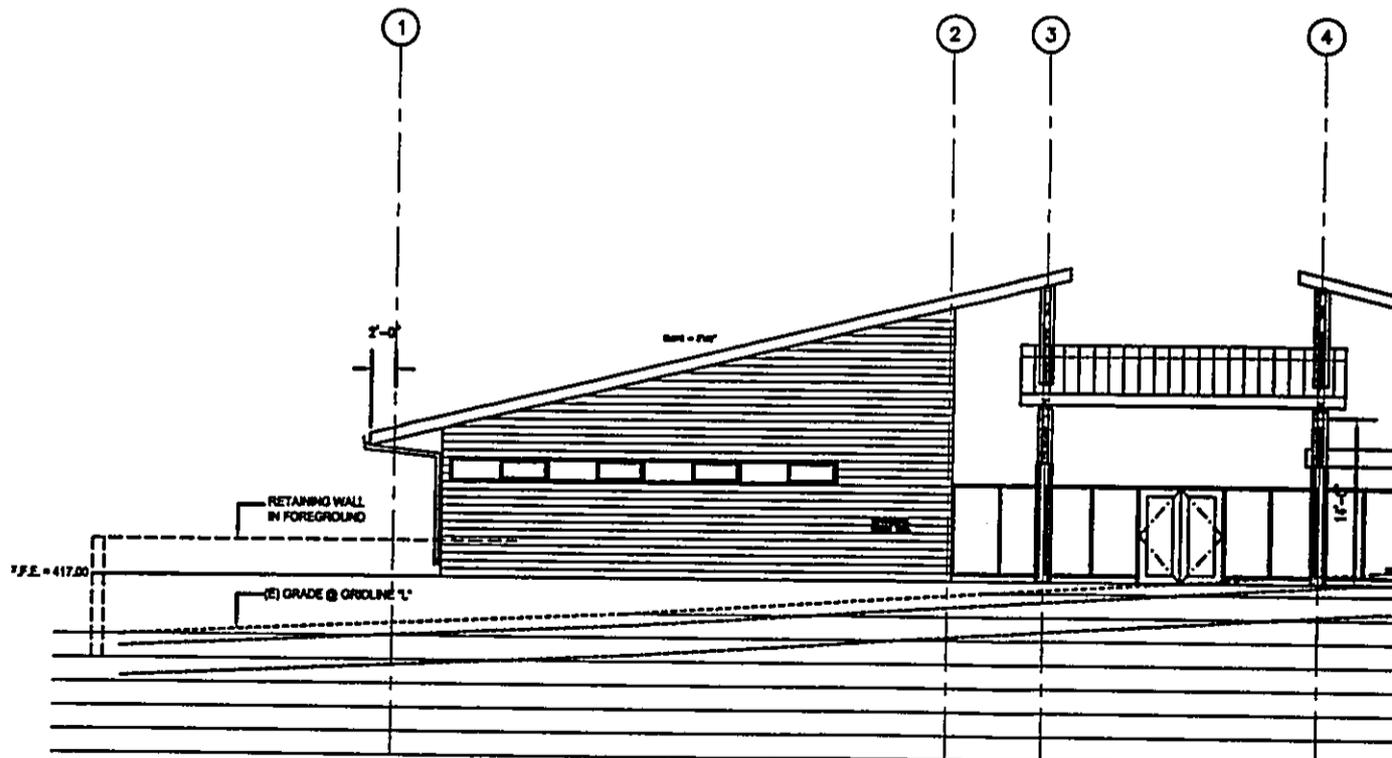
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CSS BUILDING
ELEVATIONS

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SOUTH / REAR ELEVATION
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NORTH / FRONT (WAIUANUE AVE.) ELEVATION
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TAX MAP 16-1
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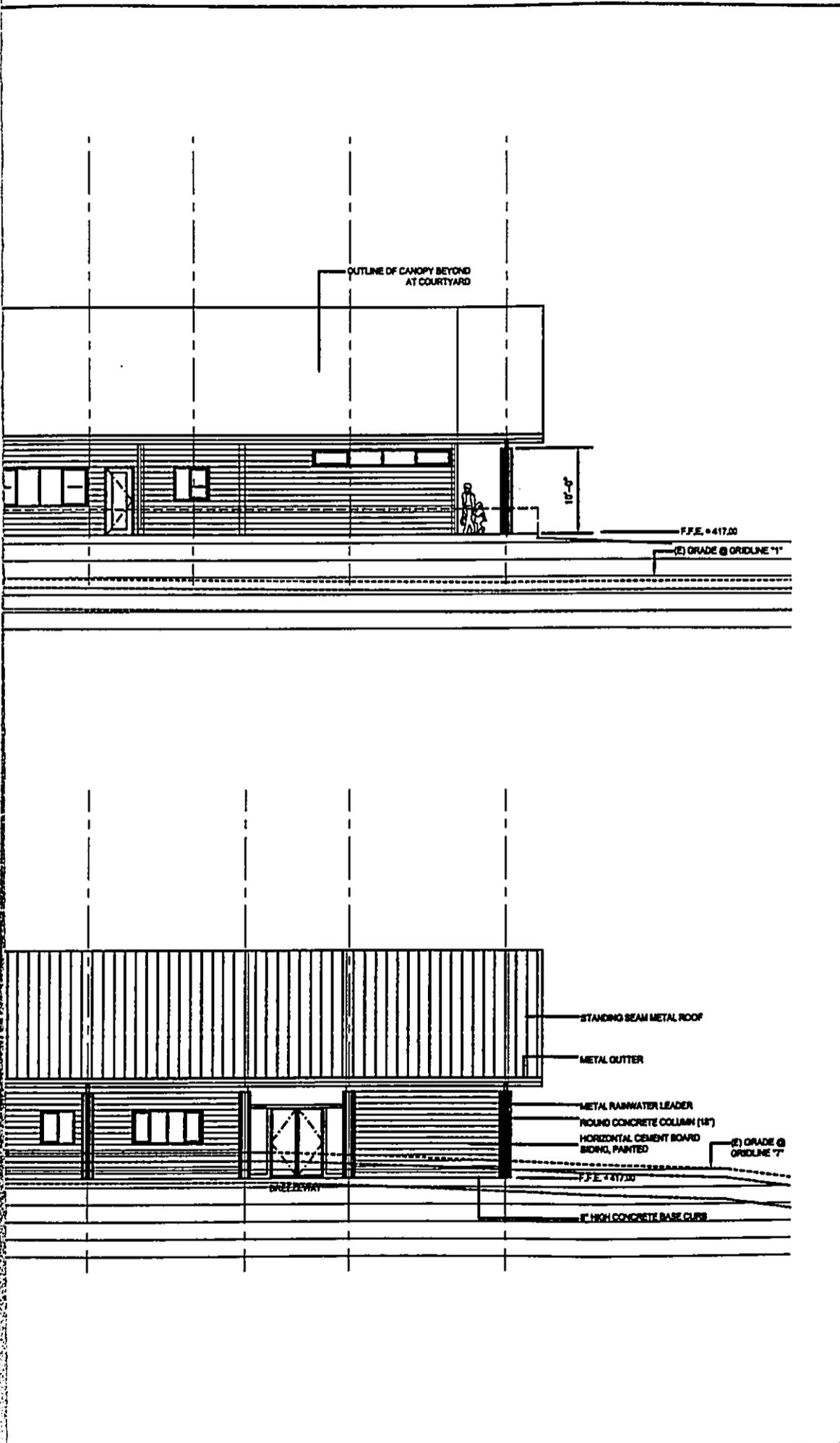
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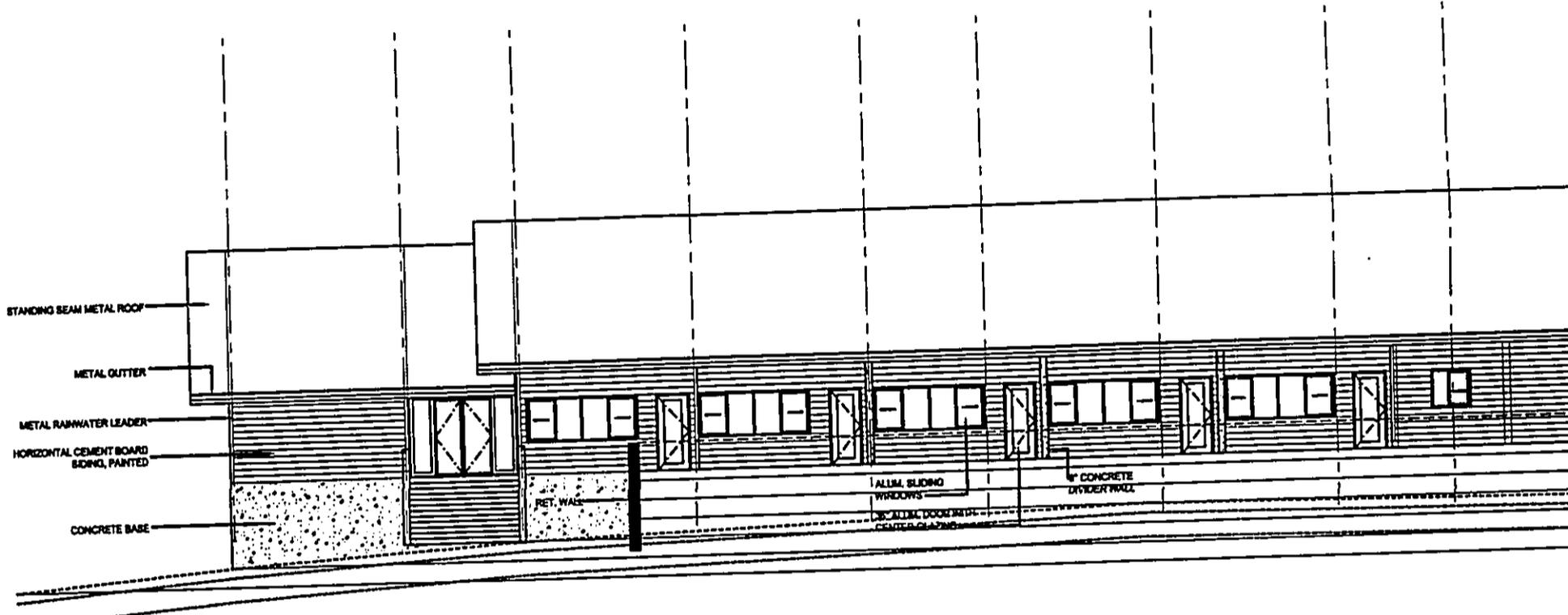
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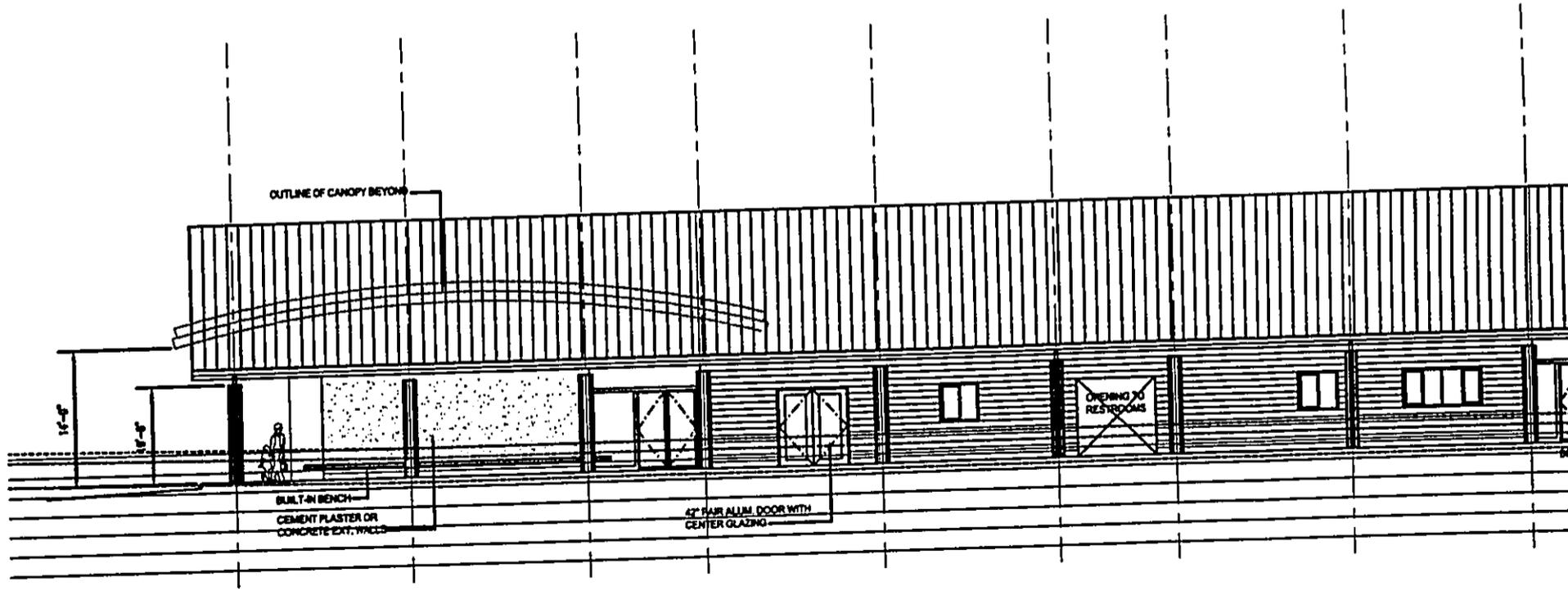
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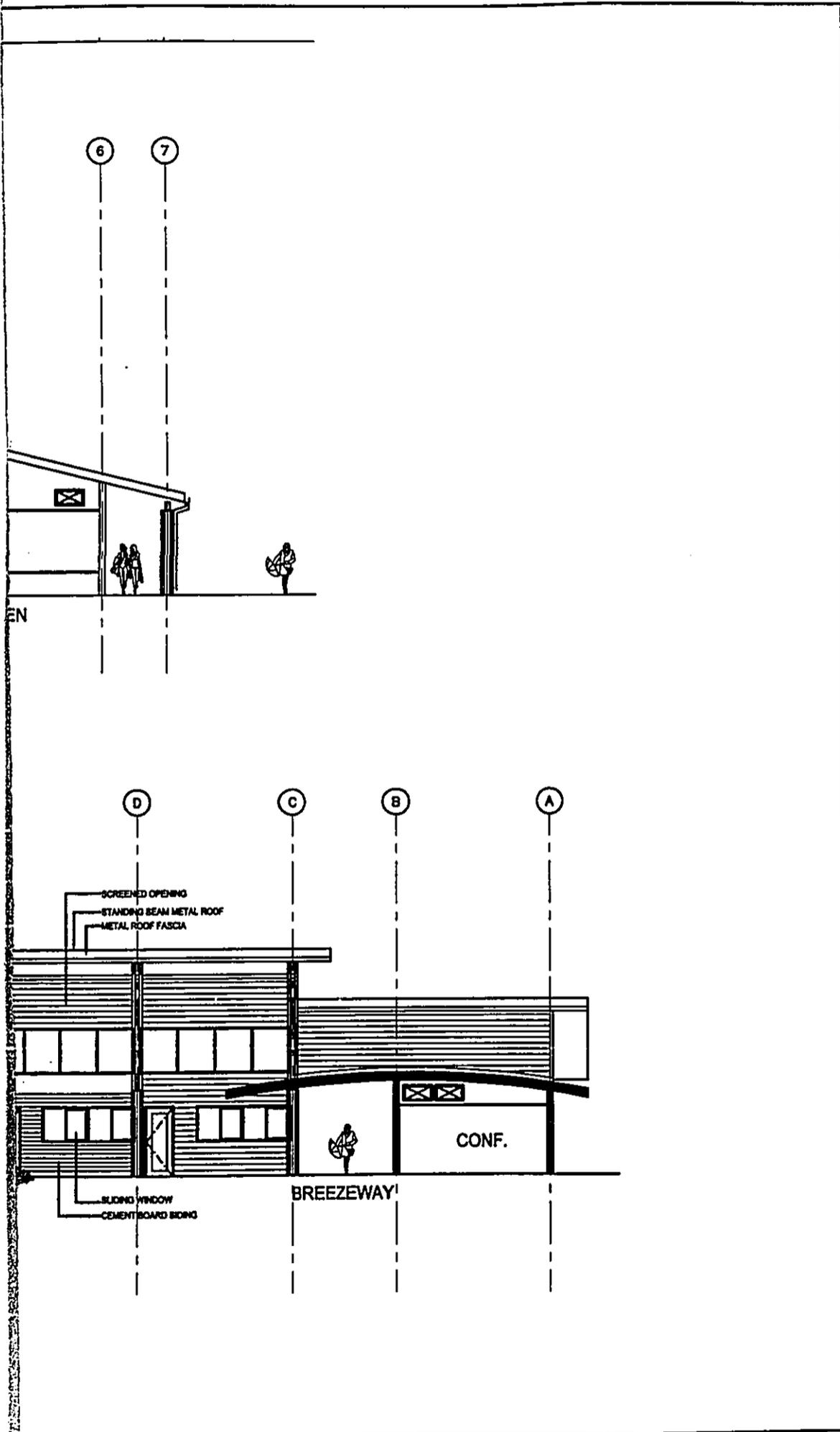




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WEST / SIDE ELEVATION (FACING EXISTING BLDG)
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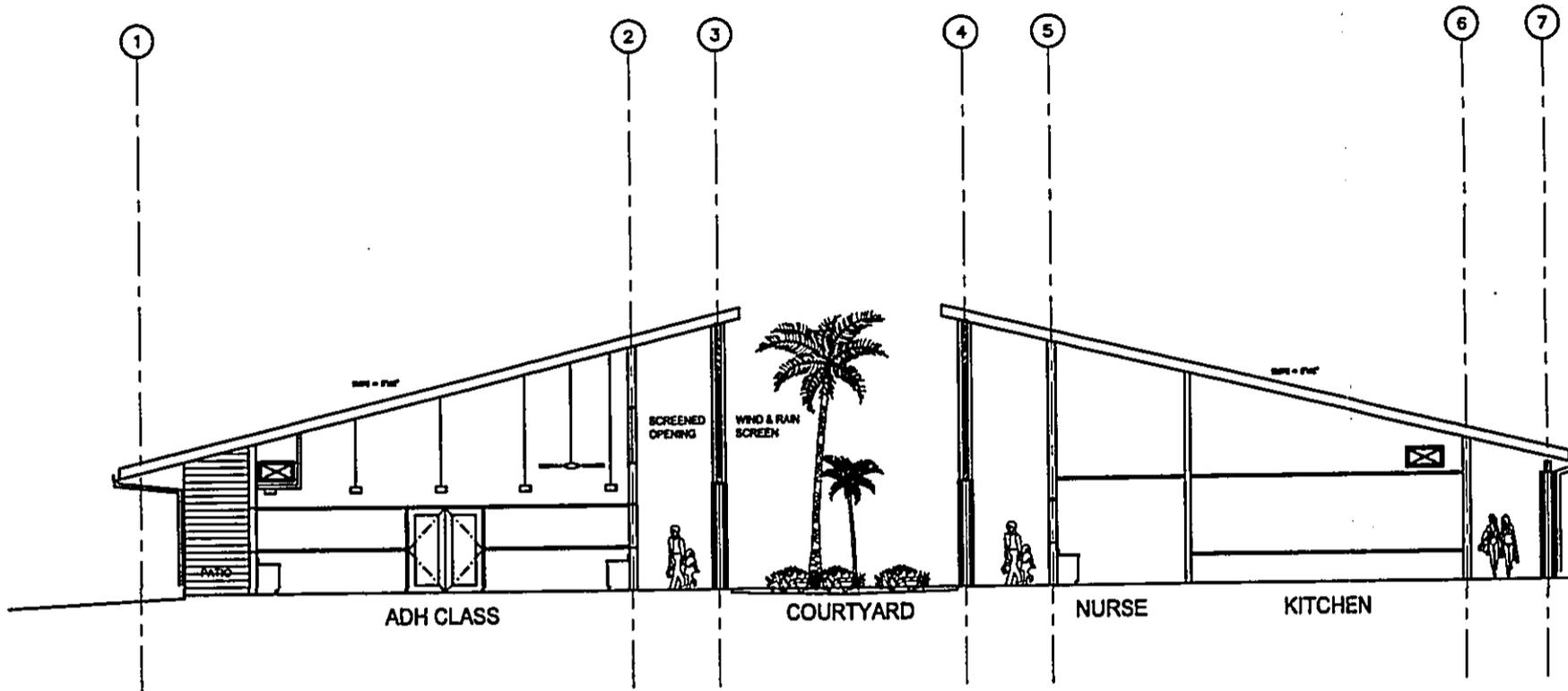
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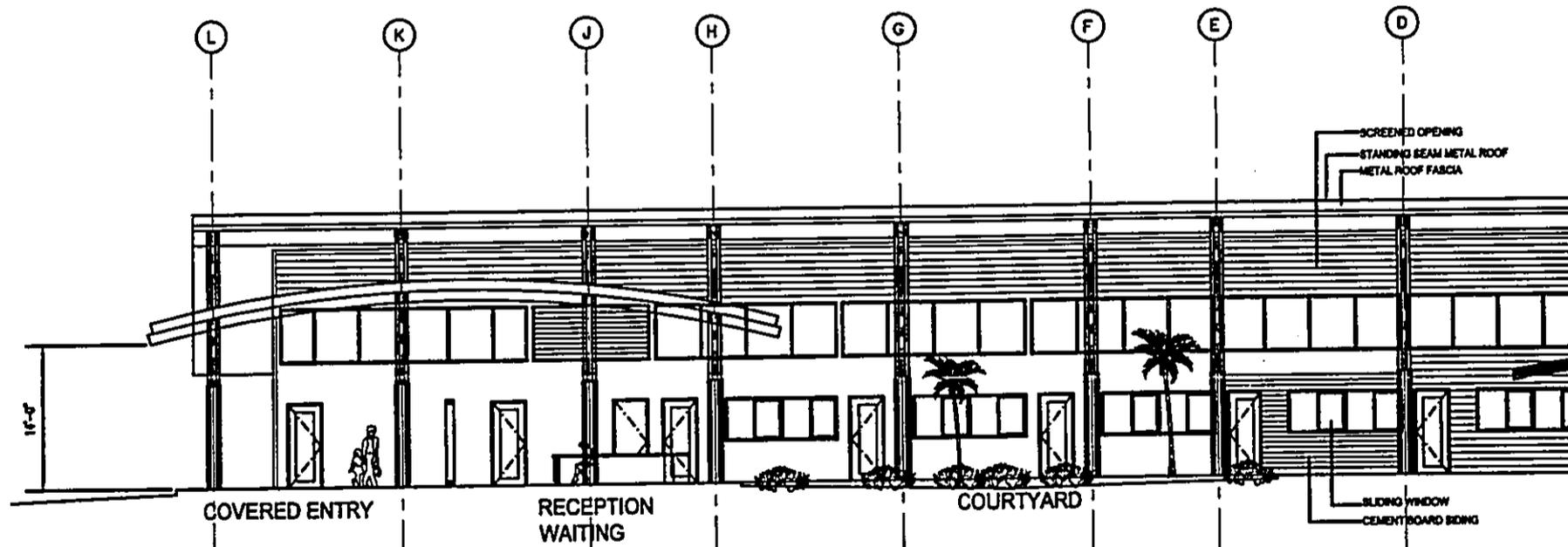
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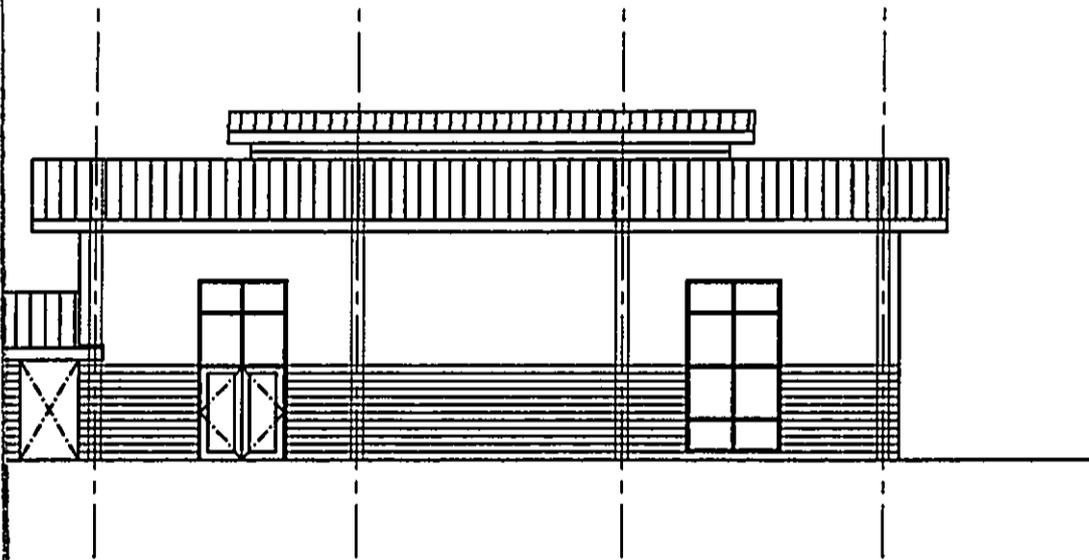
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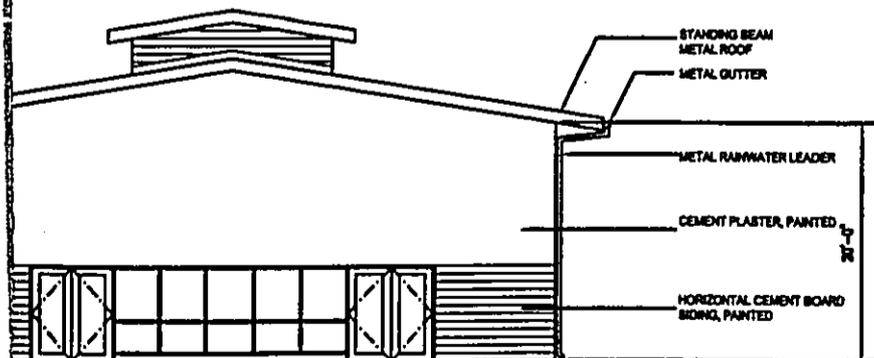
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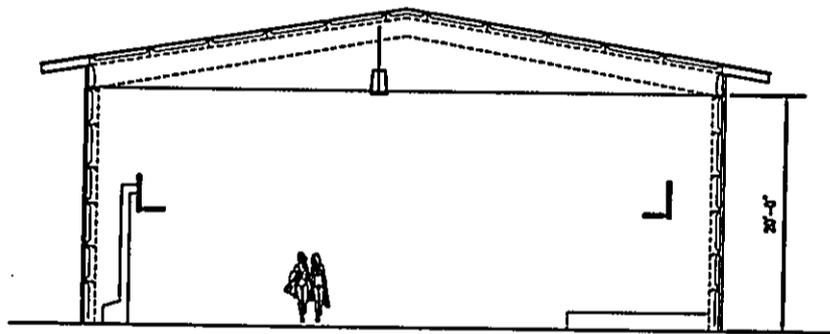
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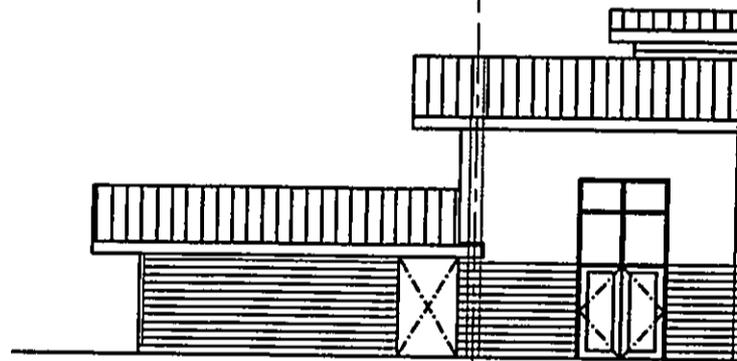


/ FRONT (WAIANUENUE AVE.) ELEVATION



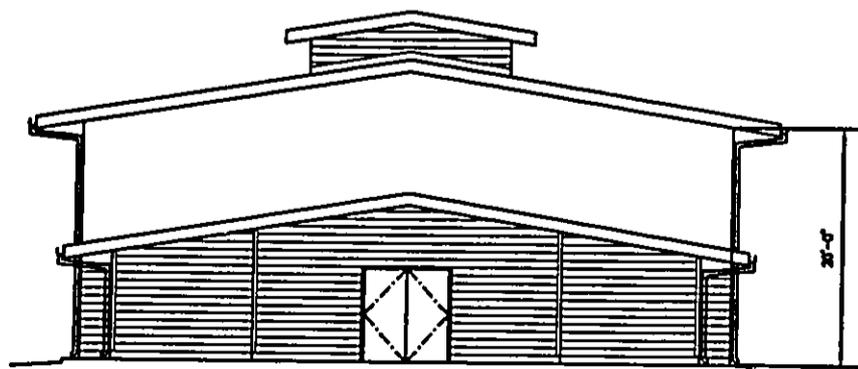
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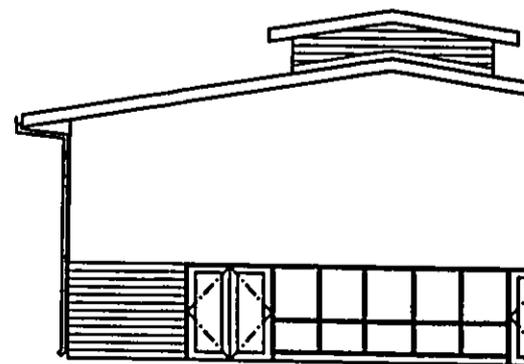
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SOUTH / REAR ELEVATION

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NORTH / FRONT (WAIANUENUE ...)

SCALE: $\frac{1}{8}" = 1'-0"$

APPENDIX 2

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**ENHANCED PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
THE ARC OF HILO
1099 WALANUENUE AVENUE
HILO, HAWAII 96720
TMKS (3) 2-3-032:006, 2-3-032:007, 2-3-032:008**

DECEMBER 2005



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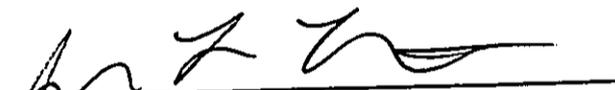
Geometrician
HC 2 Box 9575
Keaau, Hawaii 96749

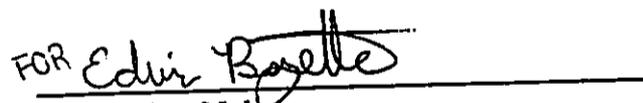
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ENVIRONMENTAL SITE ASSESSMENT
THE ARC OF HILO
1099 WAIANUENUE AVENUE
HILO, HAWAII 96720
TMKS (3) 2-3-032:006, 2-3-032:007, 2-3-032:008**

5.396 acres

MNA Job No. 20426

December 30, 2005


Joanna Boyette
Project Manager

FOR 
Myounghee Noh
Principal Consulting Chemist

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TABLE OF CONTENTS

SIGNATURE PAGE	i
TABLE OF CONTENTS	ii
LIST OF ABBREVIATIONS.....	v
1.0 EXECUTIVE SUMMARY	1
1.1 FINDINGS SUMMARY.....	1
1.2 RECOGNIZED ENVIRONMENTAL CONDITIONS.....	2
2.0 INTRODUCTION	3
2.1 PURPOSE	3
2.2 DETAILED SCOPE OF SERVICES.....	3
2.2.1 <i>Site History</i>	5
2.2.2 <i>Regulatory Records</i>	5
2.2.3 <i>Site Reconnaissance</i>	5
2.2.4 <i>Site Geology and Hydrogeology</i>	5
2.2.5 <i>Data Evaluation and Reporting</i>	6
2.3 SIGNIFICANT ASSUMPTIONS	6
2.4 LIMITATIONS AND EXCEPTIONS	6
2.5 SPECIAL TERMS AND CONDITIONS	6
2.6 USER RELIANCE	6
3.0 SITE DESCRIPTION	7
3.1 LOCATION AND LEGAL DESCRIPTION	7
3.2 SITE AND VICINITY GENERAL CHARACTERISTICS	7
3.2.1 <i>Geology</i>	8
3.2.2 <i>Hydrogeology</i>	8
3.3 CURRENT USE OF THE SITE	9
3.4 STRUCTURES, ROADS, AND OTHER IMPROVEMENTS	10
3.5 PAST USES OF THE SITE.....	10
3.6 CURRENT AND PAST USES OF ADJOINING PROPERTIES.....	10
4.0 USER PROVIDED INFORMATION.....	11
4.1 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS	11
4.2 SPECIALIZED KNOWLEDGE	11
4.3 VALUATION REDUCTION	11
4.4 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION	11
4.5 REASON FOR PERFORMING A PHASE I.....	11
5.0 RECORDS REVIEW	13
5.1 STANDARD ENVIRONMENTAL RECORD SOURCES	13
5.1.1 <i>General Overview</i>	13

5.1.2	Federal National Priorities List.....	13
5.1.3	Federal RCRA CORRACTS TSD Facilities List	14
5.1.4	State Hazardous Waste Sites (State-equivalent NPL)	14
5.1.5	Federal CERCLIS List.....	14
5.1.6	Federal RCRA non-CORRACTS TSD facilities list.....	14
5.1.7	State Landfill / Solid Waste Disposal Sites.....	14
5.1.8	State Registered UST List.....	14
5.1.9	State Leaking UST (LUST) List.....	15
5.1.10	Federal RCRA Generators List.....	15
5.1.11	Federal ERNS List.....	16
5.1.12	State Spill List	16
5.2	ADDITIONAL ENVIRONMENTAL RECORD SOURCES.....	16
5.3	HISTORICAL USE INFORMATION ON THE SUBJECT SITE	16
5.3.1	Aerial Photographs	17
5.3.2	Historical Topographic Maps	17
5.3.3	Sanborn Fire Insurance Maps.....	17
6.0	SITE RECONNAISSANCE.....	17
6.1	METHODOLOGY AND LIMITING CONDITIONS	17
6.2	GENERAL SITE SETTING	18
6.3	HAZARDOUS MATERIALS AND REGULATED WASTES.....	18
6.4	UNDERGROUND STORAGE TANKS	18
6.5	ABOVEGROUND STORAGE TANKS	18
6.6	ASBESTOS, LEAD, & PCB INDICATIONS	18
6.7	SOLID WASTE DISPOSAL	18
6.8	PHYSICAL SETTING ANALYSIS AGAINST POTENTIAL MIGRATION	18
7.0	SURFACE SOIL SAMPLING & ANALYSIS	19
7.1	PURPOSE	19
7.2	METHODOLGY.....	19
7.3	LABORATORY ANALYTICAL RESULTS.....	19
7.3.1	Arsenic Results	19
7.3.2	Lead Results.....	21
8.0	INTERVIEWS.....	21
8.1	GLEN CALVERT.....	21
8.1	MIKE GLEASON.....	21
9.0	SUMMARY OF FINDINGS.....	22
10.0	OPINION.....	23
11.0	CONCLUSION.....	23
	REFERENCES.....	24

TABLES

Table 1. Aquifer Classification System	9
Table 2. Users and Primary Uses of the Subject Sites	10
Table 3. Users and Primary Uses of Adjoining Properties	11
Table 4. State Registered UST	15
Table 5. State Leaking UST (LUST) Sites.....	15
Table 6. Federal RCRA Generators	15
Table 7. Summary of Soil Sampling and Analysis	21

FIGURES

Figure 1. Site Location.....	4
Figure 2. Site Map.....	12
Figure 3. Sample Areas.....	20

APPENDICES

Appendix A	Regulatory Record Sources
Appendix B	EDR Site Assessment Report
Appendix C	Photographs
Appendix D	Soil Arsenic & Lead Laboratory Report
Appendix E	Qualifications of Environmental Professionals

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 & 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
mg/Kg	Milligrams per Kilogram
MNA	Myounghee Noh & Associates, L.L.C.
NPL	National Priorities List
PCB	Polychlorinated Biphenyls
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
TMK	Tax Map Key
TRIS	Toxic Release Inventory System
TSD	Treatment Storage and Disposal
UIC	Underground Injection Control
USGS	United States Geological Survey
UST	Underground Storage Tank

1.0 EXECUTIVE SUMMARY

Myounghee Noh & Associates, L.L.C. (MNA), was retained to conduct an Enhanced Phase I Environmental Site Assessment (ESA) for the subject site located at 1099 Waianuenue Avenue, Hilo, Hawaii, 96720, in October 2005. This work was completed for Geometrician, HC 2 Box 9575, Keaau, Hawaii 96749. The subject site and owned by the State of Hawaii and was in use as The Arc of Hilo.

1.1 FINDINGS SUMMARY

Based on the information obtained during the site assessment performed in October-December 2005, MNA provides the following summary:

- **Database Search for Subject and Adjoining Sites:** The subject and adjoining properties were not listed in any of the federal or state databases searched by EDR (Appendix B). The findings are summarized in the table below.

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	1/2 mile	None
Federal RCRA Non-CORRACTS TSD Facilities List	1/2 mile	None
State-Equivalent CERCLIS	1/2 mile	None
State Landfill and/or Solid Waste Disposal Site List	1/2 mile	None
State Registered UST List	1/4 mile	1
State Leaking UST List (LUST)	1/2 mile	1
Federal RCRA Generators List	1/2 mile	2
Federal ERNS List	Subject site	None
State Spill List	Subject site	None

It is MNA'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 Hawaii Department of Health records on LUST.

- **Site Check:** During a site check conducted on October 28 and soil sampling performed on December 7, 2005, MNA observed the subject site and surrounding areas. MNA's findings are as follows:

Subject Site – 1099 Waianuenue Avenue

At the time of the site visit, the subject property was in use by The Arc of Hilo facility. One single story building located on site housed the Adult Day Health Program and the Commercial Services Program. Also on the subject site were two greenhouses used for growing hydroponic lettuce, basil, and tropical plants.

Adjoining Site – 1011 Waianuenue Avenue

At the time of the site visit, the subject property was adjoined by only one site. Currently 1011 Waianuenue Avenue is owned by the State of Hawaii. It is densely vegetated and not in use.

- **Hazardous Materials and Regulated Wastes:** MNA observed no evidence of hazardous materials or regulated wastes on the subject and adjoining sites.
- **Storage Tanks:** MNA observed no USTs in use at the subject property at the time of this ESA. One propane Aboveground Storage Tank (AST) was in use by The Arc of Hilo; however, no other ASTs were visible within the line of sight of the subject site.
- **Potential Asbestos-, Polychlorinated Biphenyl (PCB)- or Lead-Containing Material:** MNA found evidence of materials that could contain asbestos, lead, and PCBs. The ceiling and floor tiles found in the building may contain asbestos, the paint on the building may contain lead, and light ballasts in the building may contain PCBs. Sampling & analysis of material or other potential hazardous substances was not part of this ESA.
- **Surface Soil Sampling:** MNA performed sampling of arsenic and lead on December 7, 2005. All arsenic results were below the HDOH Soil Action Level of 22 mg/Kg, and all lead results were below the HDOH Soil Action Level of 22 mg/Kg.
- **Offsite Contamination Source:** No potential offsite contamination sources were identified during the course of this Phase I site assessment.

1.2 RECOGNIZED ENVIRONMENTAL CONDITIONS

MNA observed no *recognized environmental conditions* in connection with the subject property.

2.0 INTRODUCTION

This report presents the results of a Phase I Environmental Site Assessment (ESA) of the subject site at 1099 Waianuenue Avenue, Hilo, Hawaii, 96720, TMKs (3) 2-3-032:006, 2-3-032:007, and 2-3-032:008 (Figure 1). This ESA was conducted by Myounghee Noh & Associates, L.L.C., herein referred to as MNA, for Geometrician, HC 2 Box 9575, Keaau, Hawaii 96749. The subject site was owned by the State of Hawaii and was in use as The Arc of Hilo.

2.1 PURPOSE

The purpose of this Phase I ESA is to identify any *recognized environmental conditions* (REC) at the subject site, with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and petroleum products. This practice is intended to permit a user to satisfy one of the requirements to qualify for the *innocent landowner defense* to CERCLA liability, "all appropriate inquiry into the previous ownership and uses of the site consistent with good commercial or customary practice." The term *recognized environmental conditions* denotes the presence, or likely presence, of any hazardous substances or petroleum products on the site under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the site or into the ground, ground water, or surface water of the site [American Society for Testing and Materials (ASTM), 2000].

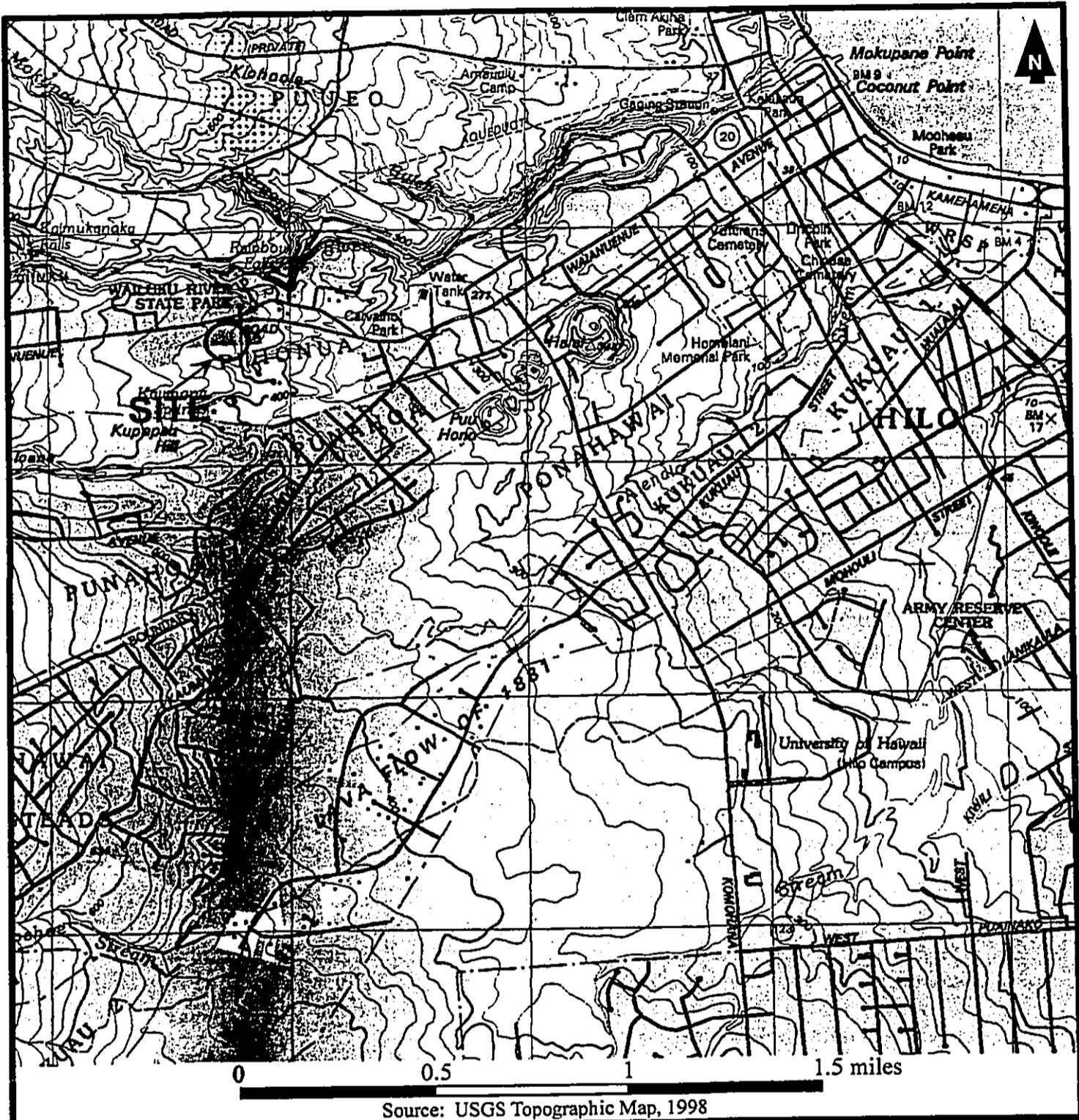
The assessment was performed in accordance with the prescribed practice in *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-00, 2000).

2.2 DETAILED SCOPE OF SERVICES

The Enhanced Phase I ESA has five components: Records Review; Site Reconnaissance; Surface Soil Sampling and Analysis; Interview; Report. MNA conducted the ESA using information sources with the potential to identify past or current releases of hazardous materials at the site. MNA performed the following:

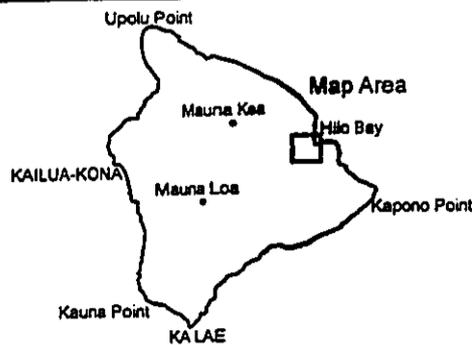
2.2.1 Site History

MNA examined documents consisting of topographic maps, tax records, and aerial photographs. The purpose of this basic research was to identify previous and current uses of the site, adjoining properties, and the surrounding area.



Source: USGS Topographic Map, 1998

Figure 1. Site Location



**Phase I ESA
The Arc of Hilo
1099 Waiānuenuenu Avenue
Hilo, Hawaii 96720**

December 2005
Job No. 20426
Page 4



**Myounghee Noh &
Associates, L.L.C.**

2.2.2 Regulatory Records

MNA examined government records with respect to environmental conditions, citations, complaints, and permits at the subject site, at adjoining properties, and the surrounding area. MNA reviewed records from the following federal or state programs:

- 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
- Toxic Release Inventory System (TRIS)
- Emergency Response Notification System (ERNS)
- RCRA-Large Generator
- RCRA-Small Generator
- Spill

2.2.3 Site Reconnaissance

MNA performed a site reconnaissance to obtain information indicating the likelihood of contamination, to interview available site personnel, if any, and conduct a brief assessment of the adjoining properties. During the site reconnaissance, MNA looked for stained surface soil, dead or stressed vegetation, hazardous materials, aboveground and underground storage tanks, disposal areas, groundwater wells, sumps, and storm drains.

2.2.4 Site Geology and Hydrogeology

MNA reviewed published information on surface and subsurface conditions at the site and surrounding area. MNA used this information to assess topography, drainage, surface water bodies, subsurface geology, and groundwater occurrence in the area to assess the impact of migration of any potentially hazardous materials in connection with the site.

2.2.5 Data Evaluation and Reporting

MNA evaluated the information collected and prepared this report documenting the assessment. Section 2 presents the introduction, Section 3 contains the site description, Section 4 contains information obtained from the user, Section 5 records review, Section

6 site reconnaissance, Section 7 surface soil sampling and analysis, Section 8 personal interview, Section 9 summary of findings, Section 10 opinion, and Section 11 conclusions.

2.3 SIGNIFICANT ASSUMPTIONS

The conclusion presented in this report is based upon the assumption that reasonably ascertainable and relevant information pertaining to the environmental condition of the subject site was made available to MNA during the assessment. Information obtained from government agencies and other resources is presumed to be accurate and updated.

2.4 LIMITATIONS AND EXCEPTIONS

The Phase I ESA provides a "snap shot" of the site conditions and is, by its nature, limited. Summary and conclusion apply to site conditions existing at the time of our investigation and those reasonably foreseeable. They cannot apply to site changes of which MNA is not aware of and has not had the opportunity to evaluate.

This report is based upon visual observations of the site and vicinity, and interpretation of the available historical and regulatory information and documents reviewed. MNA cannot ensure the accuracy of the historical or regulatory information. This report is intended exclusively for the purpose outlined, and applies only to the subject site.

This ESA does not include investigations regarding asbestos, lead paint, or geotechnical concerns.

2.5 SPECIAL TERMS AND CONDITIONS

This Phase I ESA was conducted and prepared by MNA for the exclusive use of Geometrician, The Arc of Hilo and their representatives. This report shall not be relied upon or transferred to any other party without written authorization from Geometrician and The Arc of Hilo.

2.6 USER RELIANCE

This report is an instrument of service of MNA, which summarizes its findings and opinions with respect to the subject site history and *recognized environmental conditions* at the subject site. Note that said findings and opinions are predicated on information that MNA obtained on the dates and from individuals stated herein, from public records review, a site reconnaissance, and ancillary Phase I ESA assignments. This assessment relies upon the accuracy and completeness of the information provided. The information obtained for this assessment is used without extraordinary verification. It is possible that other information exists and is discovered, or environmental conditions change subsequent to submittal of this Phase I ESA report to Geometrician, to which MNA shall not be held responsible for exclusion there from.

3.0 SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The subject site is the parcel located at 1099 Waianuenue Avenue, Hilo, Island of Hawaii (Figure 1). Tax Map Key of the site is Division 3, Zone 2, Section 3, Plat 032, and Parcels 006, 007, & 008. The site's Zoning is Unimproved Residential; Flood Zone X, area determined to be outside the 500 year flood plain. According to the County of Hawaii record, the parcel consists of 5.396 acres.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

Hilo is located on the windward (eastern) side of the island of Hawaii, the youngest and largest island in the Hawaiian Archipelago. The city is situated between the island's two major volcanic mountain peaks, Mauna Kea and Mauna Loa, and has a population of 40,759, according to the 2000 U.S. Census Poll (Foronda, 2001). The project site is located in the Waiakea region of the district.

Polynesian inhabitants settled along the shores of Hilo Bay as early as 1100 AD and began farming, fishing, and trading their goods along the Wailuku River (HDIA, 2005). With King Kamehameha I's unification of the islands in 1791, Hilo emerged as a significant locality in Hawaiian history. Not only was the city an ideal location for the King to headquarter his efforts to conquer the neighboring islands, it was abundant in resources including sugarcane, taro, bananas, coconuts, and breadfruit trees (Foronda, 2001).

The city maintained a sustenance-based economy until the early 1800s when the arrival of the sandalwood trade, the intensification of the whaling industry, and the arrival of New England missionaries (funded by the American Board of Commissions of Foreign Ministries) generated a shift to market-based economic practices (PBR Hawaii, 2004). Sugar plantations first surfaced at this time, but cattle, timber, and whaling industries remained the prime contributors to Hilo's economic growth. This economic trend continued until the mid-1800s when the sugarcane industry gained momentum and a dependable Hawaiian sugar trade was established. Several changes in land use were observed at the beginning of the 20th century as sugarcane production continued to intensify in the early 1900s. Areas deemed too rocky for sugarcane production were allocated as pasture for the Parker and Shipman Ranches. In the 1920s, many areas in the Waiakea region were designated as forest reserve (PBR Hawaii, 2004).

In the second half of the 20th century, a multitude of major construction projects were completed in the Hilo region including wharfs in Hilo Bay, bridges, breakwater, the Hilo Airport, and Saddle Road, which runs between Mauna Kea and Mauna Loa to the other side of the island (PBR Hawaii, 2004). Despite these major structural accomplishments,

the mid- to late-1900s also brought economic hardship to the Hilo area. The sugarcane and sea trade industries began declining while attempts to establish a tourism industry were unsuccessful due to the area's high annual rainfall and vulnerability to natural disasters. Restoration efforts to preserve the city's historic elements and revive the economy took off in the 1980s and 1990s (Foronda, 2001). Because of these restoration endeavors, the city has experienced a significant turnaround, although not without periodic downturns. In recent times, tourism has emerged as the city's primary industry. However, the Hilo district also plays a strong supporting role in the island's agriculture industry through its cultivation of tropical fruits, flowers, and macadamia nuts (PBR Hawaii, 2004).

3.2.1 Geology

Published geologic and hydrogeologic reports and maps were reviewed to obtain information regarding subsurface conditions in the general area of the property. The Island of Hawaii is of volcanic origin and was built by the Kohala, Mauna Kea, Mauna Loa, Kilauea, and Hualalai volcanoes and is comprised of numerous thin, extremely permeable tholeiitic basalt lava flows (Stearns, 1985).

Hawaii, the youngest and largest Hawaiian Island, is as large as all the others combined. In 1996, Hazlett and Hyndman described the island as follows:

It sprawls over an area the size of Connecticut, spanning 90 miles from north to south and 80 miles from east to west. Five large volcanoes coalesce to make the visible part of the Big Island; a sixth lies buried beneath the surface. The southern part of the island is still volcanically active and building out along much of the coastline. To the north, volcanism is in the waning stages. Of all the Hawaiian Islands, the Big Island shows the greatest diversity of rocks and landscapes.

The U.S. Soil Conservation Service mapped the basic soil type of the area as Hilo silty clay loam. It is a well-drained soil with intermediate water holding capacity. The depth to the water table is more than six feet (EDR, 2005).

Virtually the entire region is covered with pre historic lavas of the Kau Basalt, onto which long tongues of historic lavas from the northeast rift have flowed. Other than scanty recent alluvium, no sediments occur (Water Resources Research Center, 1993).

3.2.2 Hydrogeology

The permanent source of potable groundwater is a basal aquifer. This aquifer is floating on and displacing salt water, which saturates the base of the island. The basal aquifer is recharged by precipitation. The precipitation percolates through soil and rock until it is either confined by an impermeable layer or floating on basal salt water (Stearns, 1985). The groundwater in the region is known to be either basal water floating on salt water or

water perched on ash, soil, or alluvium and underlain with basal water (Stearns, 1985). In 1993, Water Resources Research Center described the water as follows:

A voluminous basal lens extends at least 4 miles inland of the coast, beyond which high-level water has been encountered. The lens may reach farther inland, but it has hardly been explored. Toward the rift zone dike-impounded high-level water probably occurs. Elsewhere the high-level water is likely to be perched. The flux of groundwater in the basal lens is enormous; the fresh water springs at Hilo-Waiakea have been measured at 150 million gallons per day (mgd). The gradient is about 5 ft/mile, and the permeability of the basalt is probably at least 5,000 ft/day.

The Hawaii Department of Health (HDOH) has established an Underground Injection Control (UIC) line to serve as a boundary between drinking and non-drinking water portions of underlying aquifers. Areas above (mauka side of) the UIC line are within drinking-water portions of the aquifer, while areas below (makai side of) the UIC are within non-drinking water portions of the underlying aquifer. At the subject site, the UIC line coincides with Kilauea Avenue. Since the project site is located on the mauka side of Kilauea Avenue, it lies within a drinking-water portion of the local aquifer, and only limited types of injection wells are allowed in the area. Furthermore, injection wells in the area require a UIC Permit or Permit Exemption from the HDOH. According to the Mink & Lau Technical Report #191, published by the University of Hawaii Water Resources Research Center, the subject site is located above one aquifer as indicated in Table 1 (Mink, 1990).

Table 1. Aquifer Classification System

Aquifer Code	80401111
Island Code	8 – Island of Hawaii
Aquifer Sector	04 – Northeast Mauna Loa
Aquifer System	01 – Hilo
Aquifer Type, hydrogeology	1 – Basal
Aquifer Condition	1 – Unconfined
Aquifer Type, geology	1 – Flank
Status Code	11111
Development Stage	1 – Currently used
Utility	1 – Ecologically important
Salinity (in mg/L Cl)	1 – Fresh (<250)
Uniqueness	1 – Irreplaceable
Vulnerability to Contamination	1 – High

3.3 CURRENT USE OF THE SITE

Currently, the subject site is owned by the State of Hawaii. The Arc of Hilo currently uses the site as a center for people with disabilities for vocational training and commercial services such as a laundry and a plant nursery.

3.4 STRUCTURES, ROADS, AND OTHER IMPROVEMENTS

The site is bordered by State of Hawaii Land to the east, south, and west, and by Waiianuenue Avenue to the north (Figure 2). The building area was mostly paved, while there is a large patch of gravel on the east for use as a parking lot. In 2000 two greenhouses were erected on the subject site for use in plant propagation. The subject site uses city water and sewer services.

3.5 PAST USES OF THE SITE

Information regarding past uses of the subject site was obtained from interview, review of tax records, and aerial photographs. The current owner, State of Hawaii, has owned the site since 1949. Table 2 lists the users and property uses of the subject site.

Table 2. Users and Primary Uses of the Subject Sites

Period (approx.)	Property User	Area (acre)	Primary Use
TMK 2-3-032-001			
1978-2005	Department of Social Services & Housing, Arc of Hilo	1.86	Rehabilitation Complex
Subdivided from TMK 2-3-032:001 in 1978 (See Table 3)			
TMK 2-3-032-002			
1978-2005	Department of Social Services & Housing, Arc of Hilo	1.922	Rehabilitation Complex
Subdivided from TMK 2-3-032:001 in 1978 (See Table 3)			
TMK 2-3-032-003			
1978-2005	Department of Social Services & Housing, Arc of Hilo	1.914	Rehabilitation Complex
Subdivided from TMK 2-3-032:001 in 1978 (See Table 3)			

3.6 CURRENT AND PAST USES OF ADJOINING PROPERTIES

Information regarding past uses of the adjoining properties was obtained from County of Hawaii tax records and review of aerial photographs. The property use information is summarized in Table 3, and the site location is depicted in Figure 2.

Table 3. Users and Primary Uses of Adjoining Properties

Period (approx.)	Property User	Area (acre)	Primary Use
1099 Waianuenue Avenue, Hilo, Hawaii TMK (3) 2-3-032:006, 007, & 008			
2005	State of Hawaii, Ernest Pung	39.171	Pasture
1991-2005	State of Hawaii	42.05	Vacant
1973-1991	State of Hawaii, M.K. Sugar Company	42.558	Sugarcane land
1965-1973	State of Hawaii, Mauna Kea Sugar Company	50.307	Sugarcane land
1955-1965	State of Hawaii, Hilo Sugar Company	50.307	Sugarcane land
1943-1955	Territory of Hawaii	60.52	Undocumented

4.0 USER PROVIDED INFORMATION

4.1 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

No environmental liens or activity and use limitations are known for the subject site. The subject site was assessed by MNA for *recognized environmental conditions* including petroleum and other hazardous material releases.

4.2 SPECIALIZED KNOWLEDGE

No specialized knowledge pertaining to the subject site was identified during this assessment.

4.3 VALUATION REDUCTION

There is no information pertaining to the valuation reduction of the subject site.

4.4 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The State of Hawaii is the legal fee owner of the subject site. The subject site is currently in use by The Arc of Hilo providing vocational training and onsite services such as laundry and a greenhouse.

4.5 REASON FOR PERFORMING A PHASE I

The purpose of this Phase I ESA is to identify any *recognized environmental conditions* at The Arc of Hilo, 1099 Waianuenue Avenue, Hilo, Island of Hawaii TMK (3) 2-3-032:006, 007, & 008, particularly CERCLA impacts (from hazardous substances releases or spills), which may affect the real estate ownership transaction of the subject site.

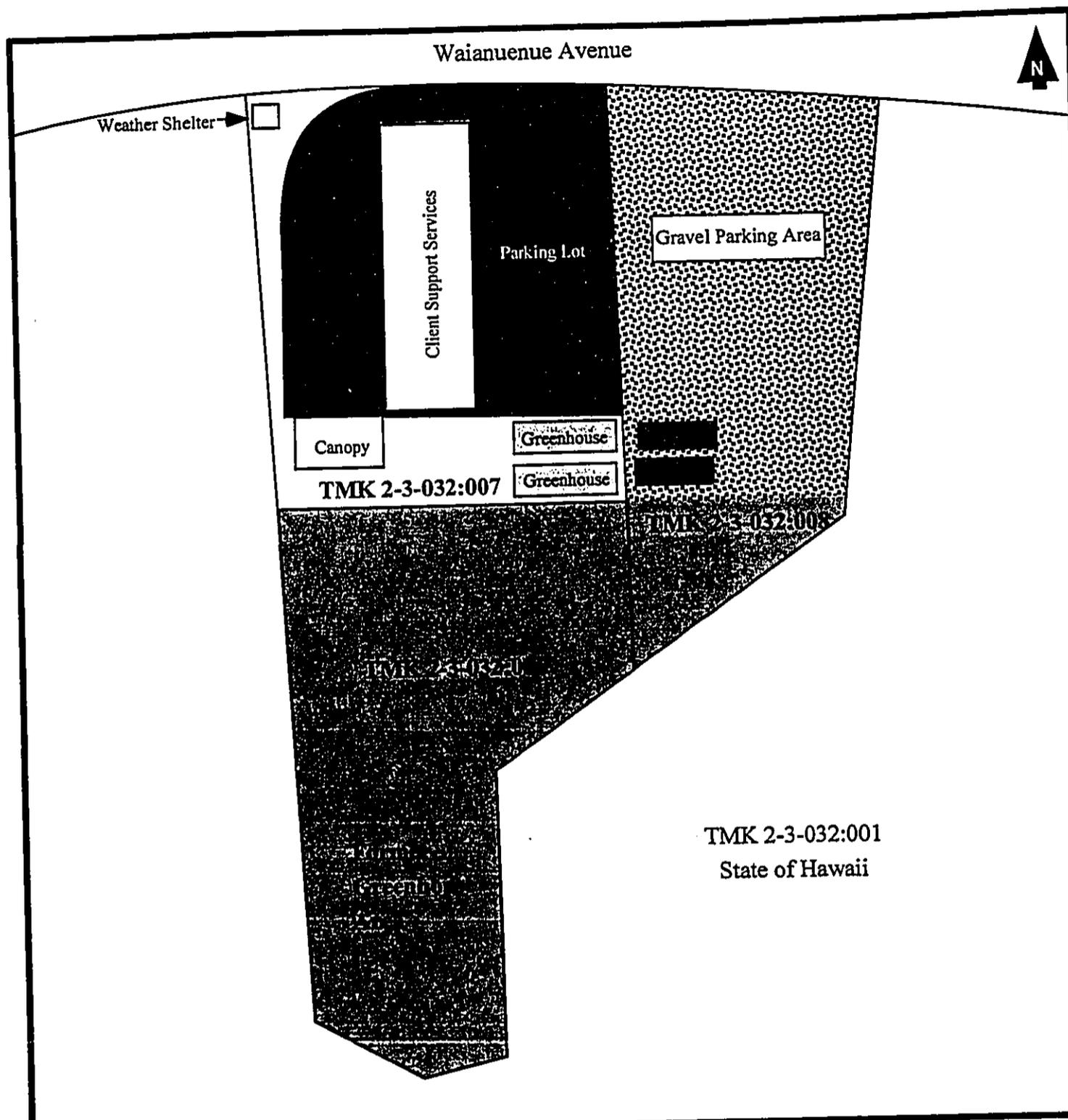


Figure 2. Site Map



Phase I ESA
 The Arc of Hilo
 1099 Waianuenue Avenue
 Hilo, Island of Hawaii

December 2005
 Job No. 20426
 Page 12



**Myounghee Noh &
 Associates, L.L.C.**

5.0 RECORDS REVIEW

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

5.1.1 General Overview

MNA used Environmental Data Resources, Inc., (EDR) (800-352-0050) for searching standard federal and state government databases of known or potential sources of hazardous materials or waste. The record sources are listed in Appendix A, and the EDR assessment report is provided in Appendix B. MNA conducted further local searches as needed.

ASTM E 1527-00 specifies a minimum search distance for specific environmental record sources. The following sources are specified for incidents or sites within one mile of the subject site:

- Federal NPL site list
- Federal RCRA CORRACTS TSD facilities list
- State hazardous waste sites (State-equivalent NPL)

The following sources are specified for incidents or sites within one-half mile of the subject site:

- Federal CERCLIS list
- Federal RCRA non-CORRACTS TSD facilities list
- State-equivalent CERCLIS
- State landfill and/or solid waste disposal site list
- State leaking UST list

The following sources are for incidents on the subject and adjoining properties:

- Federal RCRA generators list
- State registered UST list

Finally, the following is for incidents for the subject site:

- Federal ERNS list

5.1.2 Federal National Priorities List

The NPL, compiled by the Environmental Protection Agency (EPA), is a list of sites with the highest priority for cleanup under the EPA's Hazard Ranking System [40 Code of Federal Regulations (CFR) Part 300]. EDR found no NPL sites within one mile of the subject site (EDR, 2005).

5.1.3 Federal RCRA CORRACTS TSD Facilities List

The RCRA CORRACTS TSD facilities list is compiled by the EPA. The list contains those RCRA regulated facilities, which are undergoing "corrective action" due to a release of hazardous substance. EDR revealed no facilities within one mile of the subject site (EDR, 2005).

5.1.4 State Hazardous Waste Sites (State-equivalent NPL)

The State Hazardous Waste Sites are sites or areas in which the Office of Hazard Evaluation and Emergency Response (HEER) has an interest, has investigated or may investigate. EDR found no hazardous waste sites listed within one mile of the subject site (EDR, 2005).

5.1.5 Federal CERCLIS List

The CERCLIS list, compiled by the EPA, contains sites currently or formerly under review by EPA for potential hazardous substance contamination for possible inclusion on the NPL. EDR found no CERCLIS sites listed within 1/2 mile of the subject site (EDR, 2005).

5.1.6 Federal RCRA non-CORRACTS TSD facilities list

The RCRA non-CORRACTS TSD facilities list, compiled by the EPA, contains RCRA permitted treatment, storage, and disposal facilities. EDR found no RCRA TSD site listed within 1/2 mile of the subject site (EDR, 2005).

5.1.7 State Landfill / Solid Waste Disposal Sites

The HDOH records contain an inventory of permitted landfills in the State of Hawaii. EDR found no permitted solid waste landfills, incinerators, or transfer stations within 1/2 mile of the subject site (EDR, 2005).

5.1.8 State Registered UST List

This database is compiled by the HDOH Solid and Hazardous Waste Branch, UST section. EDR's search revealed one UST site within 1/4 mile of the subject site. There are no registered USTs currently on the subject or adjoining properties (EDR, 2005). A summary of this finding is presented in Table 4.

Table 4. State Registered UST

UST Facility	Site	Address	Note
<i>Within 1/8 to 1/4 mile:</i>			
Hilo Medical Center	742 ft. West	1190 Waianuenue Avenue	3-Diesel USTs, out of use 1-Gasoline UST, out of use

5.1.9 State Leaking UST (LUST) List

This database is compiled by the HDOH Hazardous Waste Branch, UST section. EDR and HDOH's database searches found one LUST sites within 1/2 mile of the subject site (EDR, 2005). A summary of these findings is presented in Table 5.

Table 5. State Leaking UST (LUST) Sites

LUST Facility	Site	Address	Incident detail	Detail date
<i>Within 1/8 to 1/4 mile:</i>				
Hilo Medical Center	742 ft. West	1190 Waianuenue Avenue	Site Cleanup Completed	10/11/1999

5.1.10 Federal RCRA Generators List

This database, compiled by the EPA, contains RCRA registered small or large quantity generators of hazardous waste. RCRA Large Quantity Generators are facilities that generate at least 1,000 kg/month of non-acutely hazardous waste (or 1 kg/month of acutely hazardous waste). RCRA Small and Very Small Quantity Generators are facilities that generate less than 1,000 kg/month of non-acutely hazardous waste. EDR's search found two generators within 1/2 mile of the subject site (EDR, 2005). A summary of these findings is presented in Table 6.

Table 6. Federal RCRA Generators

Facility	Site	Address	Classification
<i>Within 1/8 to 1/4 mile:</i>			
Clinical Labs of Hawaii	742 ft. West	1190 Waianuenue Avenue	Small Quantity Generator
Hilo Medical Center	742 ft. West	1190 Waianuenue Avenue	Small Quantity Generator

5.1.11 Federal ERNS List

The ERNS list, compiled by the EPA, contains CERCLA hazardous substance releases or spills, as maintained at the National Response Center. EDR's search revealed no reported incident on the subject site (EDR, 2005).

5.1.12 State Spill List

This database is compiled by the HDOH Hazard Evaluation and Emergency Response (HEER) office. EDR and MNA's search revealed no previous spill incidents on the subject site (EDR, 2005; HEER, 2005).

5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

There are no further environmental record sources known to MNA that are likely to have additional environmental information pertaining to the subject property.

5.3 HISTORICAL USE INFORMATION ON THE SUBJECT SITE

5.3.1 Aerial Photographs

Aerial photographs of the subject and adjoining properties were reviewed at the R.M. Towill Corporation in Honolulu. Photographs reviewed are summarized as follows:

- 1950: The subject site was covered with foliage. To the west of the subject site was the Hilo Medical Center and residential dwellings. To the east was the city of Hilo. North and south of the subject site were heavily vegetated.
- 1952: The photograph did not show enough detail to view the subject site
- 1964: The subject site remained the same. To the west, the hospital had expanded with more buildings. To the east and south, more residences were visible. To the north was farmland.
- 1969: No significant changes were depicted in the 1969 photograph.
- 1977: One large building was visible on the subject site. Immediately surrounding the subject site, the foliage had been cleared. On the west side of the building, an access road was visible.
- 1982: Several buildings were visible on the subject site, one large building and two additional structures. To the west of the site, two parking lots were visible.
- 1992: The subject site remained the same. To the west, another parking lot was added. To the southeast, a new structure that may have been a residential dwelling was visible.
- 1994: No significant changes were depicted in the 1994 photograph.
- 1996: The buildings on the subject site remained the same. To the east of those buildings, a large portion of the subject site had been cleared to be used as a parking lot.

No readily apparent evidence of *recognized environmental conditions* at the subject or adjoining properties was noted on any of the aerial photographs reviewed.

5.3.2 Historical Topographic Maps

Historical United States Geological Survey (USGS) topographic maps for the subject site and vicinity were reviewed for the years 1963, 1981, and 1995. The maps depicted the following:

Quadrangle: Hilo, Hawaii Scale: 1:24,000 Series 7.5 Minute

- 1963: No structures were visible on the subject site. Waianuenue Avenue was visible north of the subject site. To the west, the Hilo Hospital and residences were visible. To the east, the city of Hilo was visible. The area immediately north and south of the subject site was vacant.
- 1981: One large building was visible on the subject site as well as an access road to the west of that building. To the west, the Hilo Hospital had expanded by adding more buildings. More residences were visible to the east.
- 1995: The map did not show enough detail to view the subject site or surrounding area.

No readily apparent evidence of *recognized environmental conditions* at the subject or adjoining properties was noted on any of the topographic maps reviewed.

5.3.3 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps for the subject site and vicinity were unavailable.

6.0 SITE RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

Joanna Boyette conducted the site reconnaissance. The reconnaissance focused on identifying historical, current, and potential CERCLA impacts, which may affect ownership transfer of the subject site. This includes identifying the presence, or likely presence, of any hazardous substances or petroleum products on the site under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the site or into the ground, ground water, or surface water of the site (ASTM E 1527-00, 2000).

A survey of potential environmental hazards and conditions within the subject and adjoining sites was conducted in October 2005. Information regarding the current and

previous uses of the site was obtained through a review of available records and interview with the manager of the subject site.

6.2 GENERAL SITE SETTING

The subject site is located in the Waiakea region of Hilo, Hawaii, and it is situated to the south of Waianuenue Avenue. The site is bordered by State of Hawaii land to the east, south, and west. Dense vegetation surrounds the subject site. The site location is depicted in Figure 2, and photographs are presented in Appendix C.

6.3 HAZARDOUS MATERIALS AND REGULATED WASTES

MNA observed no evidence of hazardous materials or regulated wastes at the subject site or surrounding area.

6.4 UNDERGROUND STORAGE TANKS

MNA observed no signs of storage tanks, such as dispenser pumps, fill pipes, or vent pipes.

6.5 ABOVEGROUND STORAGE TANKS

MNA observed a propane tank used by The Arc of Hilo (Photograph 5). No other aboveground storage tanks were within the line of sight of the subject site.

6.6 ASBESTOS, LEAD, & PCB INDICATIONS

MNA found evidence of materials that could contain asbestos, lead, and polychlorinated biphenyls (PCBs). The ceiling and floor tiles found in the building may contain asbestos. In addition, the paint on the building may contain lead, and light ballasts in the building may contain PCBs. Sampling & analysis of material or other potential hazardous substances was not part of this ESA.

6.7 SOLID WASTE DISPOSAL

MNA observed no signs of waste accumulation on the subject site. Domestic refuse is picked up by the County of Hawaii.

6.8 PHYSICAL SETTING ANALYSIS AGAINST POTENTIAL MIGRATION

MNA found no potential offsite contamination sources that may migrate to the subject site.

7.0 SURFACE SOIL SAMPLING & ANALYSIS

7.1 PURPOSE

The purpose of this investigation was to screen surface soil samples for arsenic and lead at the project area. It was suspected that the subject site was formerly used for sugarcane cultivation. Arsenic is one of the heavy metals associated with some commonly used crop protection chemicals in sugarcane agriculture. Lead analysis was performed to verify the background soil lead level.

7.2 METHODOLOGY

According to the current plan, the area around the existing greenhouses will be disturbed for construction; however, the subject ground was largely gravel fill. Sampling and analysis of gravel fill material will not provide useful information with respect to determining soil arsenic levels; therefore, the entire unpaved area was targeted as a sampling unit and divided into four decision units, Area 1 through Area 4. Multi-incremental samples were collected at 1 to 2 inches below ground surface (bgs) and 5 to 9 inches bgs before encountering rocks.

Discrete soil samples were collected by Alvin Yogi and Myounghee Noh using a hand-held auger and shovel on December 7, 2005 (Photographs 9-16). At each sampling location, the first inch of surface organic material was removed. Upper surface samples were collected at 1 to 2 inches bgs and labeled as T1; lower surface samples were collected at 5 to 10 inches bgs and labeled B1. Equal volumes of the discrete samples were combined onsite and placed in plastic bags, T1 and B1. The samples were then homogenized by hand in the plastic bag. After separating twigs, roots, gravel, and rocks, the soil samples were sealed in the same plastic bags and labeled before being submitted for laboratory analysis. Similar collection procedure was followed for sampling in Areas 2 through 4 (Figure 3).

7.3 LABORATORY ANALYTICAL RESULTS

ESN Pacific performed the laboratory analysis for arsenic and lead using the SW846 method. Included in this section are summaries of the analytical results and the complete laboratory results are provided in Appendix D.

7.3.1 Arsenic Results

No measurable quantities of arsenic were found in the samples. All arsenic results were found to be below the HDOH Soil Action Level of 22 mg/Kg.

7.3.2 Lead Results

No measurable quantities of lead were found in the samples. All lead results were found to be below the HDOH Soil Action Level of 200 mg/Kg.

Table 7. Summary of Soil Sampling and Analysis

Sample ID	Description	Sample Matrix	Arsenic, mg/Kg (EPA 7061M)	Lead, mg/Kg (EPA 7420)
426S-T1	Area 1, 1-2" bgs	Silty clay	<5.0	<5.0
426S-B1	Area 1, 5-9" bgs	Silty clay	<5.0	<5.0
426S-T2	Area 2, 1-2" bgs	90% cinder, 10% soil	<5.0	<5.0
426S-B2	Area 2, 5-9" bgs	30% cinder, 70% soil	<5.0	<5.0
426S-T3	Area 3, 1-2" bgs	90% cinder, 10% soil	<5.0	<5.0
426S-B3	Area 3, 5-9" bgs	90% cinder, 10% soil	<5.0	<5.0
426S-T4	Area 4, 1-2" bgs	Silty clay	<5.0	<5.0
426S-B4	Area 4, 5-9" bgs	Silty clay	<5.0	<5.0
HDOH* Soil Action Level			22	200

*Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final - May 2005

8.0 INTERVIEWS

8.1 GLEN CALVERT

MNA interviewed Glen Calvert of The Arc of Hilo, the primary user of the subject site. Mr. Calvert is one of the managers and has been working at The Arc of Hilo for two years. Mr. Calvert stated that The Arc of Hilo works with people with disabilities providing vocational training, employment, and recreation services.

According to Mr. Calvert, the building currently located on the subject site had been built in 1975 or 1976. The main purpose of the facility was for the Adult Day Health Program and for commercial services such as janitorial, plant nursery, and laundry services. The two greenhouses on the subject site were used to grow hydroponic lettuce, basil, and a few tropical plants for sale. Mr. Calvert was unaware of any hazardous materials on the subject site.

8.1 MIKE GLEASON

MNA interviewed Mike Gleason of The Arc of Hilo. Mr. Gleason is the President and CEO and has been working at The Arc of Hilo for five and a half years. Mr. Gleason stated that the subject site was most likely a sugarcane field prior to being used by The

Arc of Hilo. He was unaware of any USTs or fuel tanks used by The Arc of Hilo. He also stated that The Arc of Hilo did not use any heavy equipment that required fuel on site.

9.0 SUMMARY OF FINDINGS

Based on the information obtained during the site assessment performed in October-December 2005, MNA provides the following summary:

- **Database Search for Subject and Adjoining Sites:** The subject and adjoining properties were not listed in any of the federal or state databases searched by EDR (Appendix B). The findings are summarized in the table below.

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	1/2 mile	None
Federal RCRA Non-CORRACTS TSD Facilities List	1/2 mile	None
State-Equivalent CERCLIS	1/2 mile	None
State Landfill and/or Solid Waste Disposal Site List	1/2 mile	None
State Registered UST List	1/4 mile	1
State Leaking UST List (LUST)	1/2 mile	1
Federal RCRA Generators List	1/2 mile	2
Federal ERNS List	Subject site	None
State Spill List	Subject site	None

It is MNA'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 Hawaii Department of Health records on LUST.

- **Site Check:** During a site check conducted on October 28 and soil sampling performed on December 7, 2005, MNA observed the subject site and surrounding areas. MNA's findings are as follows:

Subject Site – 1099 Waianuenue Avenue

At the time of the site visit, the subject property was in use by The Arc of Hilo facility. One single story building located on site housed the Adult Day Health Program and the Commercial Services Program. Also on the subject site were two greenhouses used for growing hydroponic lettuce, basil, and tropical plants.

Adjoining Site – 1011 Waianuenue Avenue

At the time of the site visit, the subject property was adjoined by only one site. Currently 1011 Waianuenue Avenue is owned by the State of Hawaii. It is densely vegetated and not in use.

- **Hazardous Materials and Regulated Wastes:** MNA observed no evidence of hazardous materials or regulated wastes on the subject and adjoining sites.
- **Storage Tanks:** MNA observed no USTs in use at the subject property at the time of this ESA. One propane Aboveground Storage Tank (AST) was in use by The Arc of Hilo; however, no other ASTs were visible within the line of sight of the subject site.
- **Potential Asbestos-, Polychlorinated Biphenyl (PCB)- or Lead-Containing Material:** MNA found evidence of materials that could contain asbestos, lead, and PCBs. The ceiling and floor tiles found in the building may contain asbestos, the paint on the building may contain lead, and light ballasts in the building may contain PCBs. Sampling & analysis of material or other potential hazardous substances was not part of this ESA.
- **Surface Soil Sampling:** MNA performed sampling of arsenic and lead on December 7, 2005. All arsenic results were below the HDOH Soil Action Level of 22 mg/Kg, and all lead results were below the HDOH Soil Action Level of 22 mg/Kg.
- **Offsite Contamination Source:** No potential offsite contamination sources were identified during the course of this Phase I site assessment.

10.0 OPINION

Based on the site assessment findings, it is our opinion that there are no adverse environmental conditions existing currently on the subject site. There was a leaking UST at Hilo Medical Center, approximately 742 feet west of the subject site; however, site cleanup was completed in October 1999, and MNA has no reason to believe that the diesel contamination migrated to the subject site.

11.0 CONCLUSION

MNA performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E 1527-00 of the property located at 1099 Waianuenue Avenue, Hilo, Island of Hawaii, 96720. Any exceptions to, or deletions from, this practice are described in Section "2.4 LIMITATIONS AND EXCEPTIONS." This assessment has revealed no evidence of *recognized environmental conditions* in connection with the property.

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Enhanced Phase I ESA for The Arc of Hilo, Hilo, Hawaii
December 2005

APPENDIX A
Regulatory Record Sources

[MNA 20426]

A

Myounghee Noh & Associates, L.L.C.

- **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, which 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 or 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, which report generation, storage, transportation, treatment, or disposal of hazardous waste. RCRA TSDs are facilities, which treat, store and/or dispose of hazardous waste.
- **Solid Waste & Landfill** - The 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

U.S. Geological Survey (USGS, 702.648.6819). The database contains information for over 1,000,000 wells and other sources of groundwater, which 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, which 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, which 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.

Enhanced Phase I ESA for The Arc of Hilo, Hilo, Hawaii
December 2005

APPENDIX B

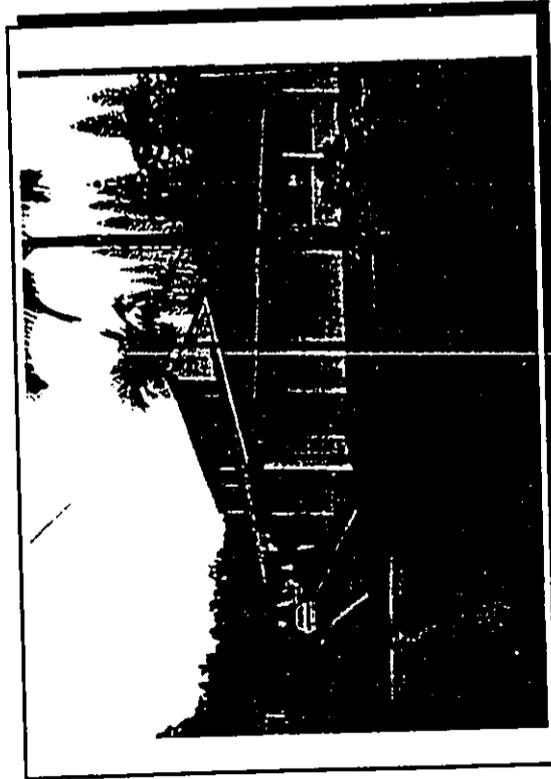
EDR Site Assessment Report

Note: because of length, Appendix B has not been duplicated as part of the EA. The report is available for inspection at Arc of Hilo offices.

Enhanced Phase I ESA for The Arc of Hilo, Hilo, Hawaii
December 2005

APPENDIX C

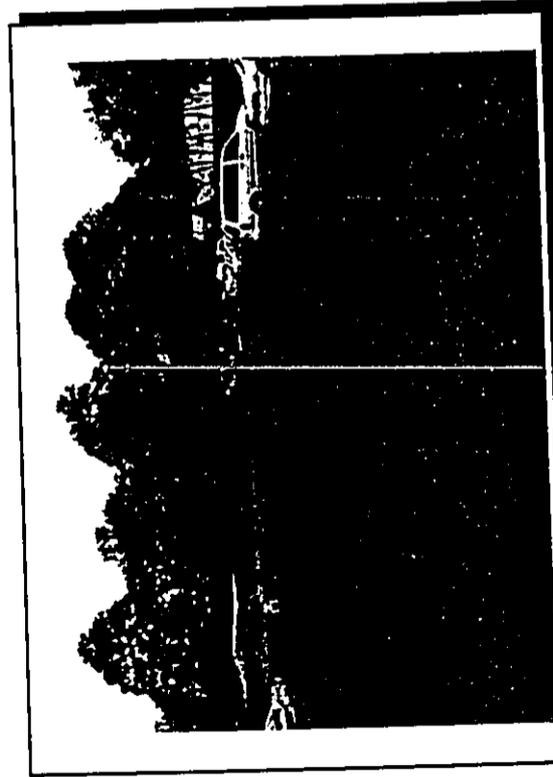
Photographs



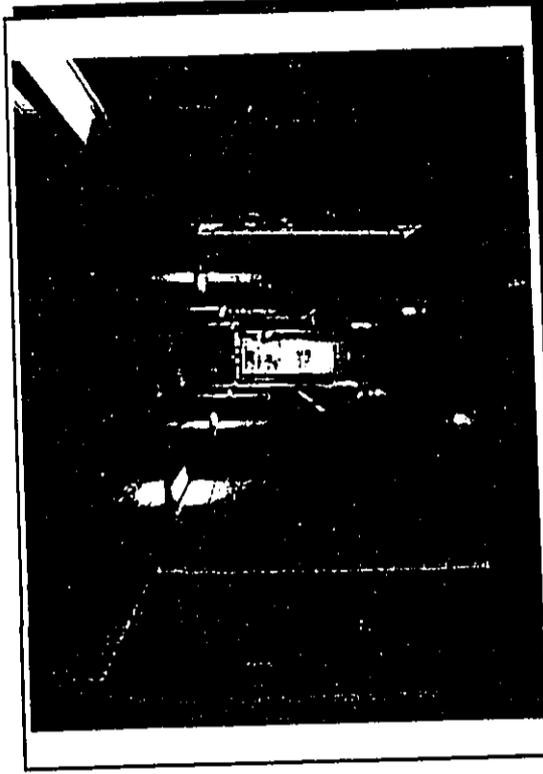
Photograph 1. A view of The Arc of Hilo located on the subject site. The building is used for vocational training and recreational services (October 28, 2005).



Photograph 2. A view of the pool located on the subject site. The greenhouse is shown in the background (October 28, 2005).



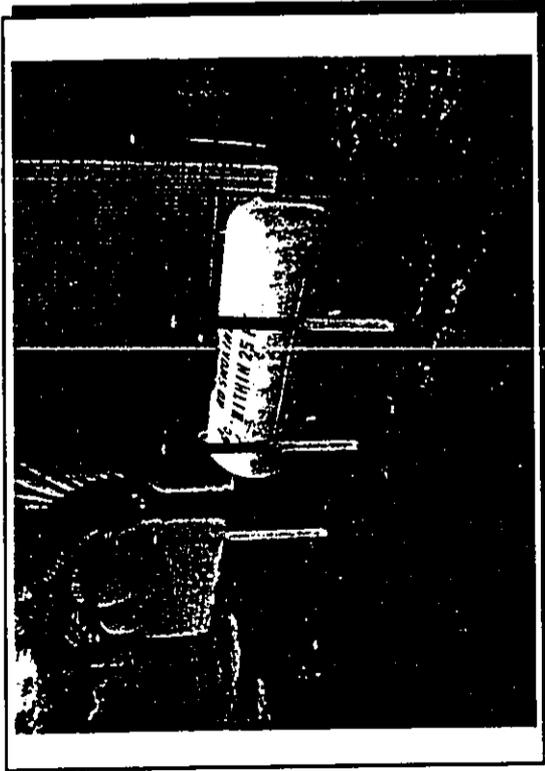
Photograph 3. A view of the gravel parking lot located on the subject site. The employee break area (blue tarp) is shown in the rear left (October 28, 2005).



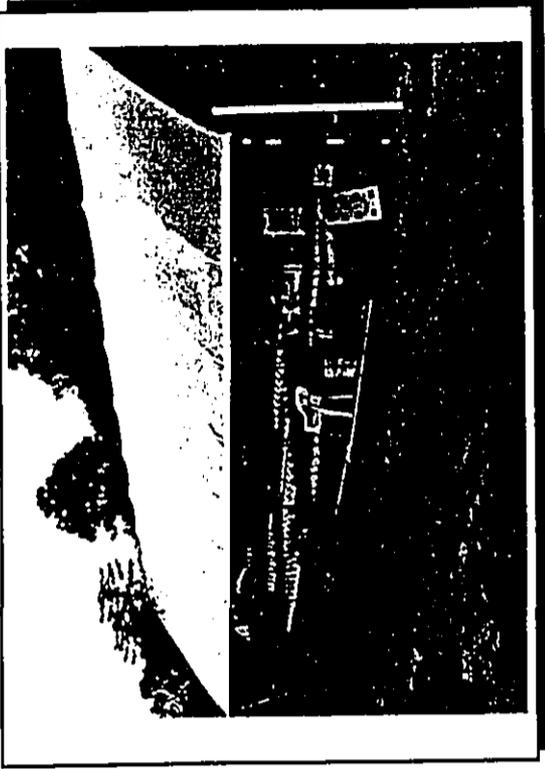
Photograph 4. A view of the hallway of the main building (October 28, 2005).



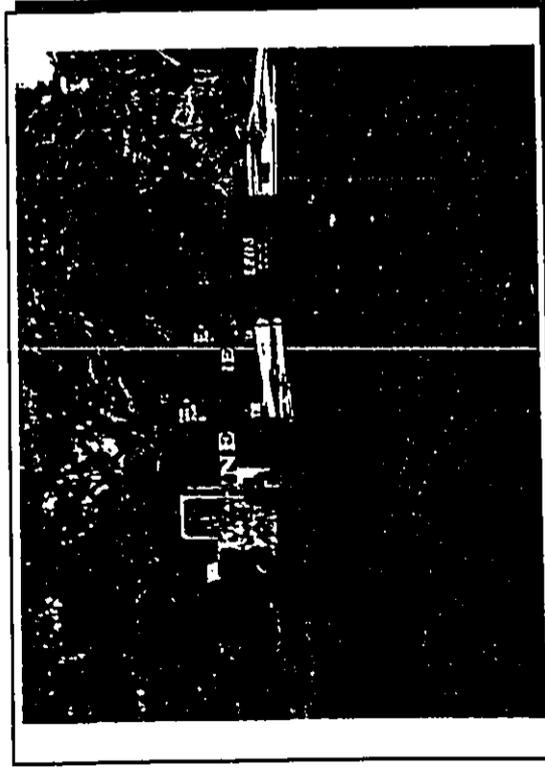
MNA 20426



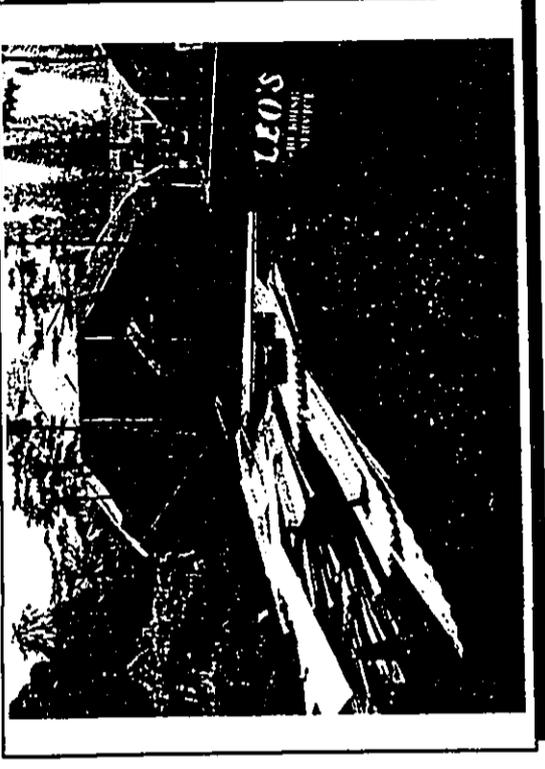
Photograph 5. A view of the propane tank used by The Arc of Hilo, north side of the main building (October 28, 2005).



Photograph 6. A view of one of two greenhouses used by The Arc of Hilo (October 28, 2005).



Photograph 7. A view of storage containers on the subject site. The containers were no longer on site at a subsequent site visit (October 28, 2005).



Photograph 8. A view of construction debris found on the subject site. The debris was no longer on site at a subsequent site visit (October 28, 2005).



MNA 20426



Photograph 9. A view of Sampling Area 1, south of the main building (December 7, 2005).



Photograph 10. A view of a sample location at Area 1. Two-inch core samples were collected using a hand-held auger (December 7, 2005).



Photograph 11. The west portion of Area 1 was heavily vegetated (December 7, 2005).

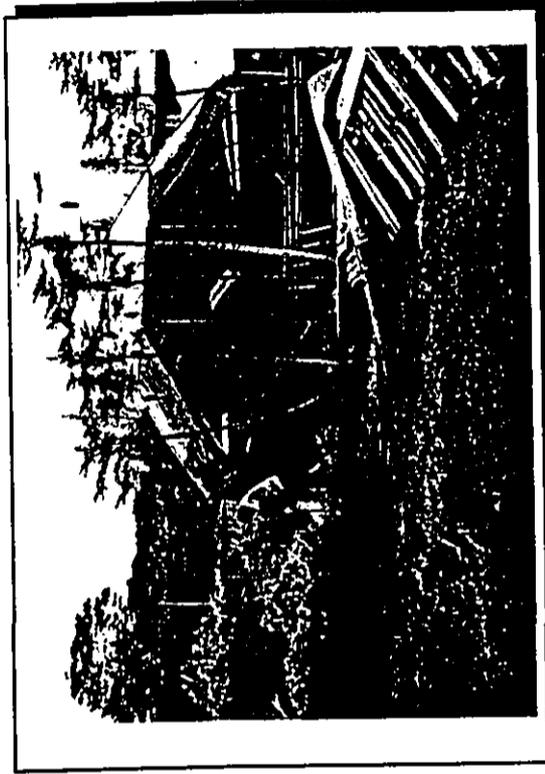


Photograph 12. The sampling around the greenhouses (Area 3) did not yield much soil. The area was largely gravel fill (December 7, 2005).

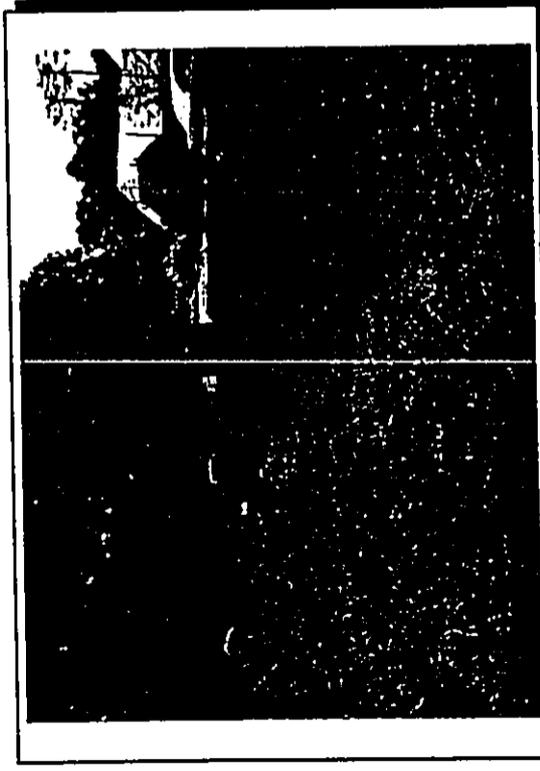




Photograph 13. Sampling in Area 3 encountered a high water level (December 7, 2005).



Photograph 14. A view of sampling in Area 3. The construction debris shown in Photograph 8 still remained onsite but the containers were no longer present (December 7, 2005).



Photograph 15. A view of Sampling Area 4 (left) and Area 3 (gravel). The elevated fill area is apparent (December 7, 2005).



Photograph 16. The soil in Area 4 appeared to be native soil (December 7, 2005).



MNA 20426

Enhanced Phase I ESA for The Arc of Hilo, Hilo, Hawaii
December 2005

APPENDIX D

Soil Arsenic & Lead Laboratory Results

[MNA 20426]

D

Myounghee Noh & Associates, L.L.C.

Myounghee Noh & Associates, LLC PROJECT #20426 Arc
Wainuenuue / Arc of Hilo

ESN Project #D512080307

TOTAL METAL ANALYSES OF SOILS

SAMPLE NUMBER	DATE ANALYZED	Lead (Pb) EPA 7420 (mg/kg)	Arsenic (As) EPA 7061M (mg/kg)	FLAGS
Blank	12/13/2005	nd	nd	
426S-T1	12/13/2005	nd	nd	
426S-B1	12/13/2005	nd	nd	
426S-T2	12/13/2005	nd	nd	
426S-B2	12/13/2005	nd	nd	
426S-T3	12/13/2005	nd	nd	
426S-B3	12/13/2005	nd	nd	
426S-T4	12/13/2005	nd	nd	
426S-B4	12/13/2005	nd	nd	
426S-B4 Dup	12/13/2005	nd	nd	
DETECTION LIMITS		5.0	5.0	

**Multiply detection limit by dilution factor, DF, for any diluted samples.*

QA/QC DATA - LABORATORY CONTROL SPIKE ANALYSES

Spike Added	250	250
Measured Conc.	254	218
% Recovery	101.6%	87.1%

QA/QC DATA - MATRIX SPIKE ANALYSES

Sample Name: 0310 397S-TB

Spike Added	250	250
Measured Conc.	252	230
% Recovery	100.9%	92.1%

Spike Added	250	250
Measured Conc.	246	233
% Recovery	98.5%	93.2%

RPD	2.4%	1.2%
-----	------	------

ACCEPTABLE RECOVERY LIMITS: 65% TO 135%

RPD LIMITS: 20%

ANALYSES PERFORMED BY : B. Capps

Enhanced Phase I ESA for The Arc of Hilo, Hilo, Hawaii
December 2005

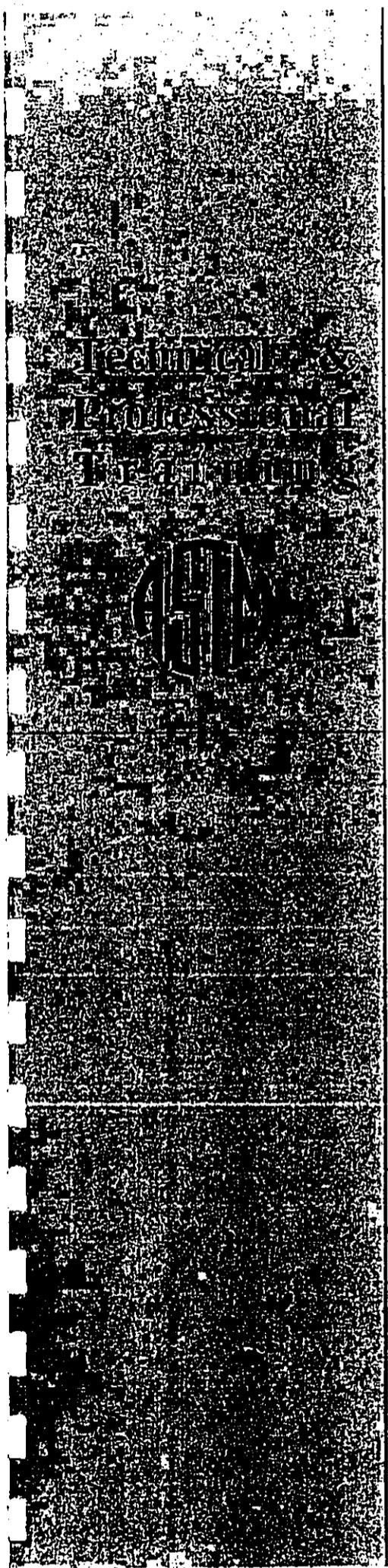
APPENDIX E

Qualifications of Environmental Professionals

[MNA 20426]

E

Myounghee Noh & Associates, L.L.C.



Joanna Boyette

Is Awarded 1.4 CEUs

*for successful completion of
the course on*

**Environmental Site Assessments
for Commercial Real Estate**

**May 21 - 22, 2002
Las Vegas, NV**

James A. Thomas

President

Scott W. Mungby

Manager, Technical & Professional Training

APPENDIX 3

**ARCHAEOLOGICAL REPORT/CULTURAL IMPACT
ASSESSMENT**

**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**

**Arc of Hilo Property
(TMKs:3-2-3-32:6, 7, and 8)**

**Pi'ihonua Ahupua'a
South Hilo District
Island of Hawai'i**



PREPARED BY:

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and
Robert B. Rechtman, Ph.D.**

PREPARED FOR:

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

November 2005

RECHTMAN CONSULTING, LLC

**HC 1 Box 4149 Kea'au, Hawaii 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**

**Arc of Hilo Property
(TMK: 3-2-3-32:6, 7, and 8)**

**Pi'ihonua Ahupua'a
South Hilo District
Island of Hawai'i**

RECHTMAN CONSULTING
RC

CONTENTS

INTRODUCTION	1
PROJECT AREA DESCRIPTION.....	5
BACKGROUND STUDIES	8
Previous Archaeology.....	8
Culture-Historical Background.....	11
CURRENT PROJECT EXPECTATIONS	12
THE AREA OF POTENTIAL EFFECTS AND THE IDENTIFICATION OF HISTORIC PROPERTIES.....	13
Consultation.....	13
Fieldwork.....	13
DETERMINATION OF EFFECTS.....	13
REFERENCES CITED.....	14

FIGURES

1. Project area location.....	2
2. Portion of TMK:3-2-3-32 showing the current study parcels (6, 7, and 8).	3
3. Aerial photograph of the current project area.	4
4. View to west of current project area along Waiānuenue Avenue.....	5
5. View to southwest of existing vocational center and paved parking lot.....	5
6. View to south of the green houses and swimming pool on Parcel 7.	6
7. View to south of the gravel parking lot on Parcel 8.	6
8. View to north of the fence and paved road along the western property boundary.	7
9. View to south from Parcel 7 towards Parcel 6.....	7
10. Schematic plan of the proposed improvements to the Arc of Hilo property.	8
11. Previous archaeological studies conducted in the vicinity of the subject parcels.....	10
12. Hilo Bay showing <i>ahupua'a</i> (from Kelly 1981:2).....	11

INTRODUCTION

At the request of Ron Terry, Ph.D. of Geometrician Associates, LLC, on behalf of his client the Arc of Hilo, Rechtman Consulting, LLC conducted an assessment of potential effects to historic properties (including traditional cultural properties) that might result from the proposed expansion of the Arc of Hilo facility on approximately 5.4 acres in Pi'ihonua Ahupua'a, South Hilo District, Island of Hawai'i (Figures 1, 2, and 3). The project area consists of three parcels (TMKs:3-2-3-32:6,7,8) located along the southern edge of Waiānuenue Avenue across from the Hilo Hospital. The property has been previously bulldozed and is currently fenced on all sides (Figure 4). Current development on the parcels is substantial and includes the remnants of dilapidated shade house on Parcel 6, a large building used as a vocational center (Figure 5), a paved parking lot, two green houses and a small swimming pool on Parcel 7 (Figure 6), and a gravel parking lot on Parcel 8 (Figure 7). The project area is located approximately 450 feet above sea level. The eastern boundary of the property runs along the upper edge of a stream channel, while paved roads are present along the remaining boundaries (Figure 8). The soil in 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. Permeability is rapid, runoff moderate, and erosion hazard slight. Its Capability Subclass is IV, and it is mainly used for pasture and woodland (Sato et al. 1973). Vegetation in the study area ranges from thick grassland to manicured lawn, with a variety of weed trees and planted trees present (Figure 9). Other floral species on the parcel includes a variety of non-native grasses, vines, ferns, shrubs and ornamentals. The existing vegetation pattern indicates that the study property has undergone substantial alteration in the past including mechanized clearing and earth moving.

The Arc of Hilo plans to expand the facility to utilize the entire 5.4 acres, adding a new building, a larger swimming pool, five additional greenhouses, an expanded paved parking lot, and a walking path (Figure 10). The Arc of Hilo leases these 5.4 acres, which includes three parcels (TMKs:3-2-3-32:6, 7, and 8) from the State of Hawai'i. Funding for a portion of the proposed improvements is being provided by 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 Statutes and rules of the County of Hawai'i Planning Department.

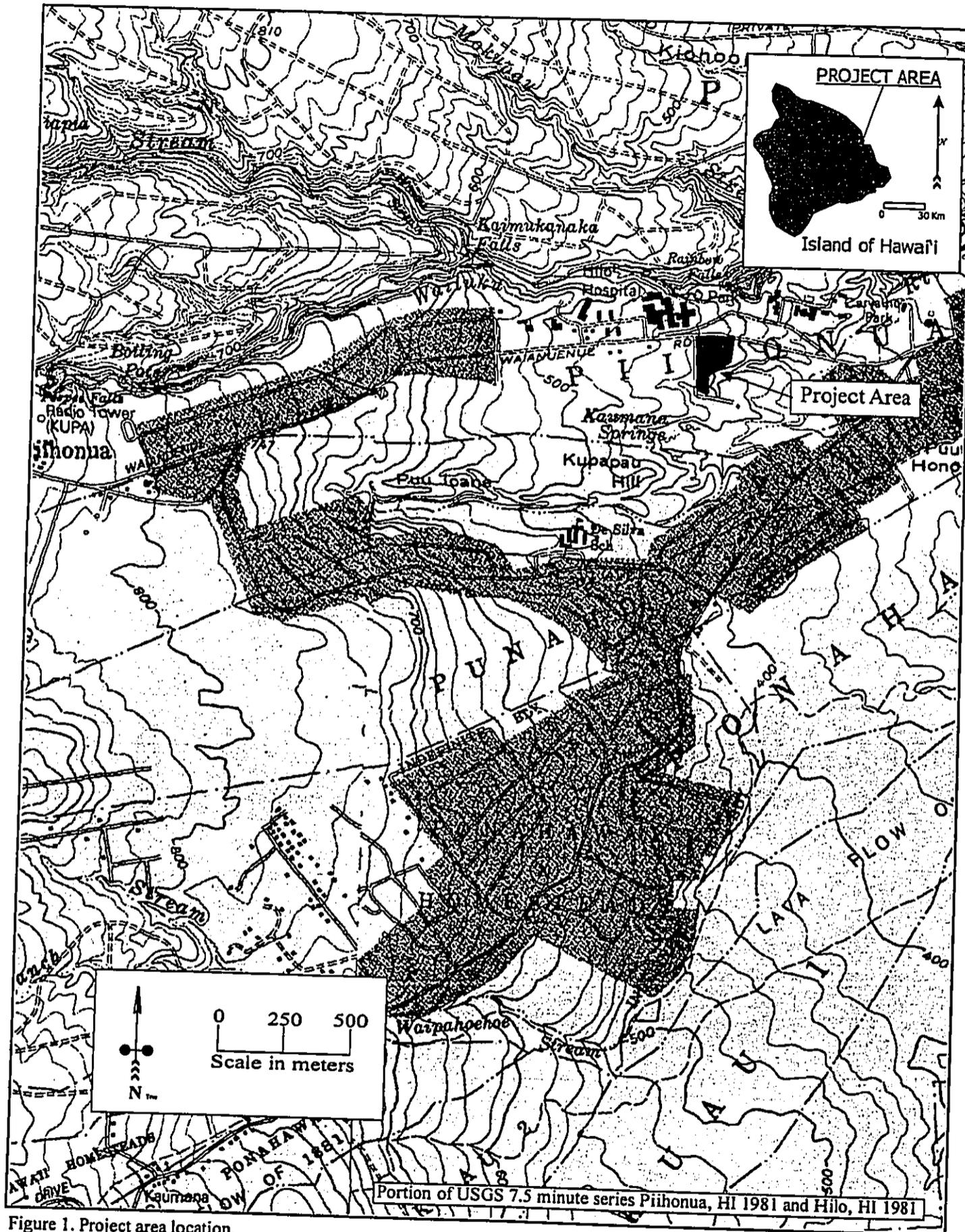


Figure 1. Project area location.

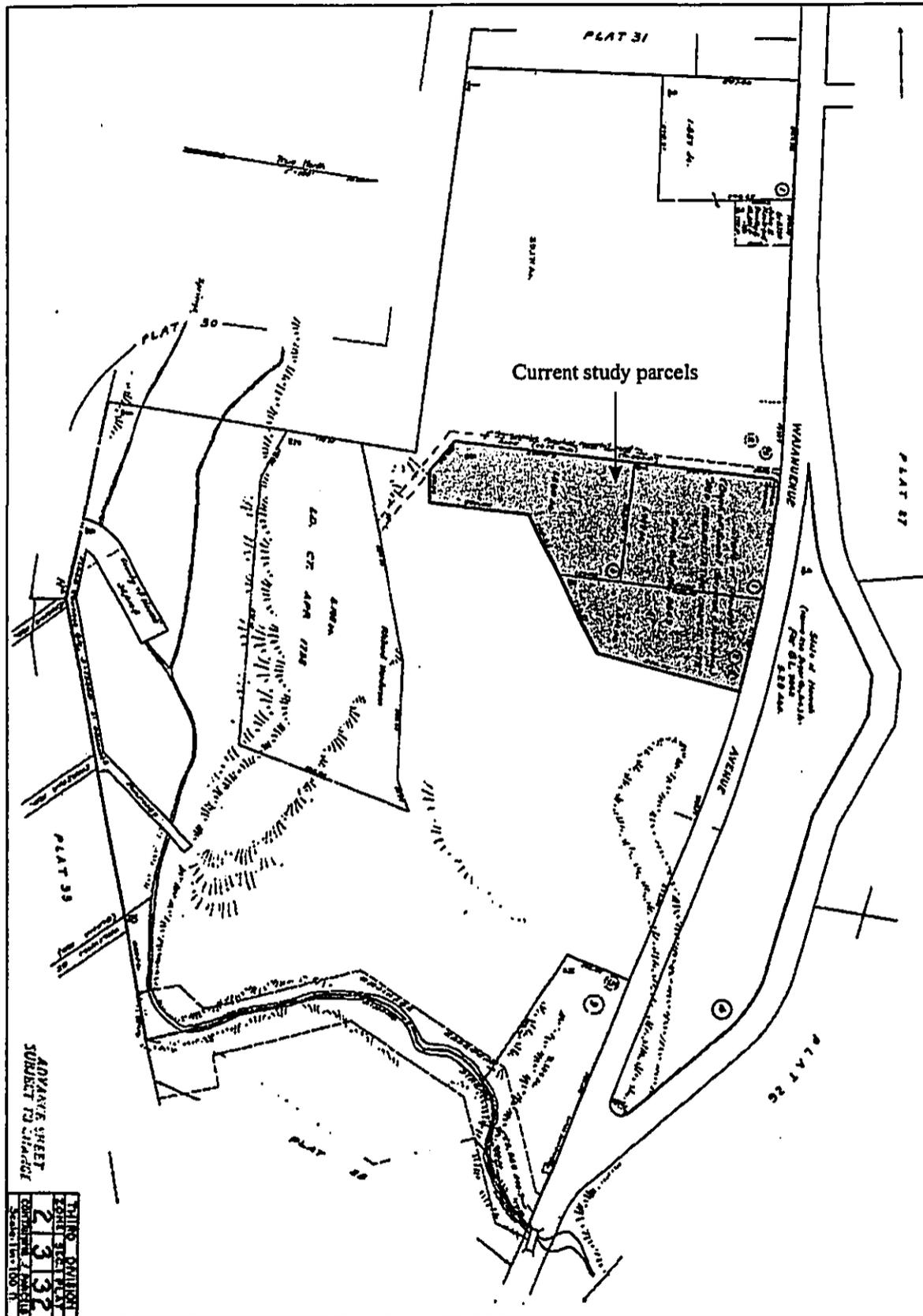


Figure 2. Portion of TMK:3-2-3-32 showing the current study parcels (6, 7, and 8).



Figure 3. Aerial photograph of the current project area.



Figure 4. View to west of current project area along Waiānuenu Avenue.



Figure 5. View to southwest of the existing vocational center and paved parking lot.



Figure 6. View to south of the green houses and swimming pool on Parcel 7.



Figure 7. View to south of the gravel parking lot on Parcel 8.

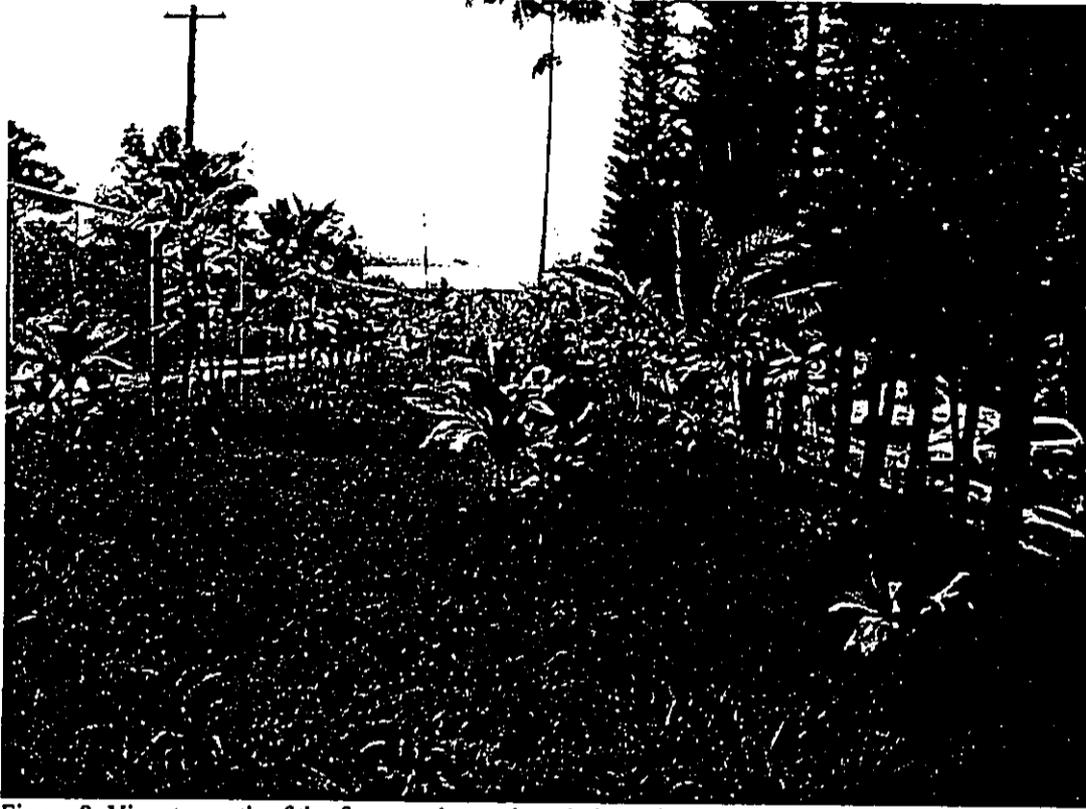


Figure 8. View to north of the fence and paved road along the western property boundary.



Figure 9. View to south from Parcel 7 to Parcel 6. The dilapidated shade house is present within the forested area at the back of the photograph.

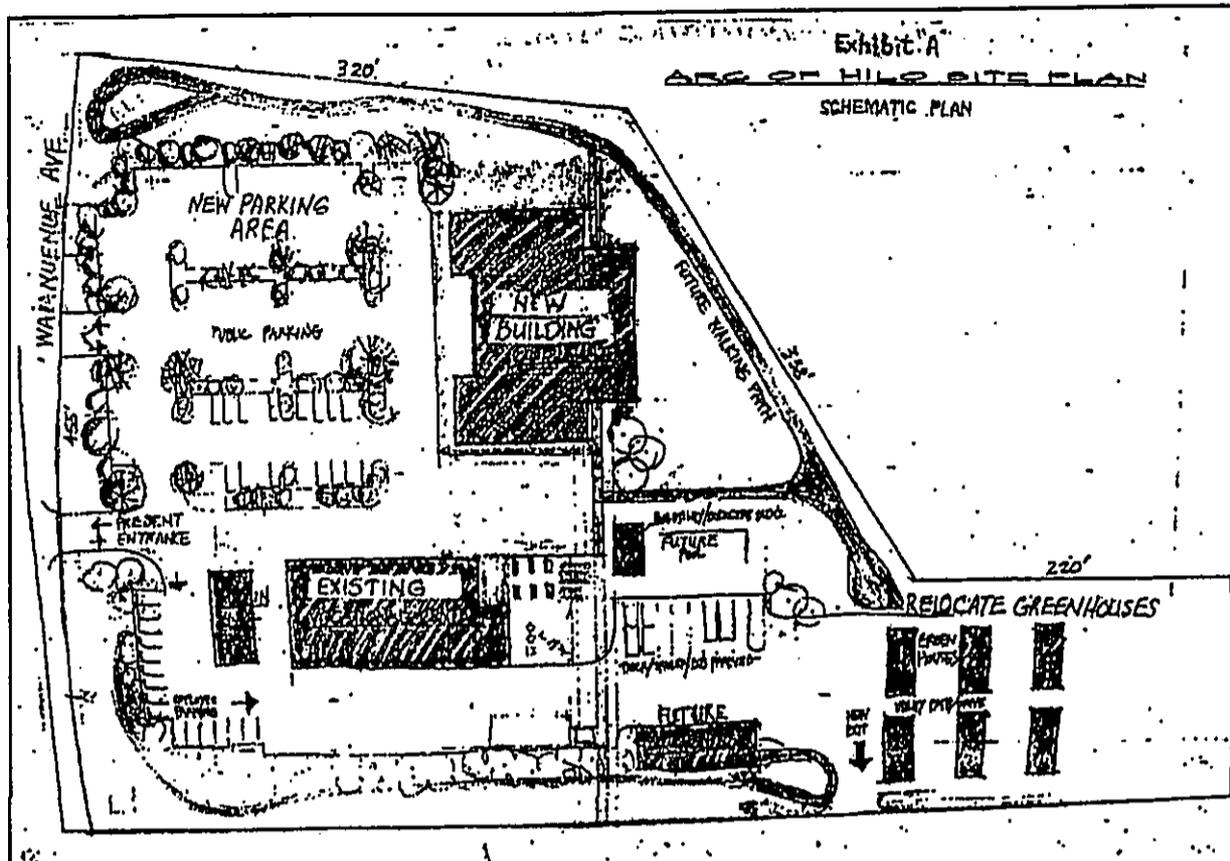


Figure 10. Schematic plan of the proposed improvements to the Arc of Hilo property.

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

There have been six prior archaeological studies conducted in the immediate vicinity of the current project area (Rechtman 2004a, 2004b; Sinoto 1978; Spear 1992; Walker and Rosendahl 1996; Walters, Kimura and Associates 1978). The specific locations of these studies are shown in Figure 11.

In 1976 Walters, Kimura and Associates (W.K.A.) investigated a 117-acre area as part of an environmental assessment for a proposed Kaumana Springs Wilderness Park (see Figure 11). This study area was located to the south and west of the current project area on the opposite side of the drainage channel that runs along the eastern edge of the current study property. In their report, W.K.A. failed to recognize the historic significance of agricultural features that they encountered reasoning that the area had been extensively altered by historic cultivation:

No archaeological or historical sites have been located in the Kaumana Springs Wilderness Park area by the CDP [Hilo Community Development Plan]. The project site was formerly used for agriculture as evidenced by the furrowed land and rock mounds and walls, which were created when the land was cleared for cultivation. This use destroyed any possible archaeological or historical sites, which might have formerly been in the area. (Walters, Kimura and Associates 1976:9; cited in Sinoto 1978:2)

Aki Sinoto (1978) studied the same 117-acre property and found, contrary to the W.K.A. study, that much of the area had not been impacted by historic cultivation. Instead, Sinoto found that the area retained extensive archaeological features that he interpreted as Precontact in age. Sinoto identified six major clusters of features. He identified stone terraces, alignments, walls, mounds, and cairns, platforms, enclosures, 'auwai and stone reinforced stream banks (Sinoto 1978:2,3); and concluded that the sites contain remnant features from Precontact Hawaiian agriculture and habitation, adding that some of the walls appear to be more recent and may have been associated with ranching. He suggests that the area represented a single continuous site (SHPD Site 50-10-34-18696). Sinoto also posited that the paucity of sites in the surrounding areas was due to later mechanized agricultural activities.

In 1992, Scientific Consulting Services (SCS) conducted an inventory survey (Spear 1992) of a 12-acre parcel (a portion of TMK:3-2-3-32:1) located to the east of the current project area. Spear (1992) identified two Historic-era stacked stone walls on the 12-acre parcel. He concluded that one of the walls was likely associated with cattle ranching, and that other may have been used for water control and erosion prevention associated with sugarcane cultivation or cattle ranching (1992:11).

In 1996, Paul H. Rosendahl Ph.D., Inc. (PHRI) (Walker and Rosendahl 1996) prepared a study for a parcel on Waiānuenu Avenue across from the Hilo Hospital that surrounds the current project area to the south, east, and west (TMK:3-2-3-32:1), and which included the parcel earlier studied by SCS. After concluding that the 42.3 acres had likely been impacted by historic sugarcane cultivation, PHRI surveyed only 11% (approximately 4.6 acres) of the property. As a result, they missed the two walls previously documented by Spear (1992), and neglected to include Spear's study in their review of previous archaeology. PHRI recorded no sites within the 4.6 acres they surveyed, concluding that areas outside the streambed were modified by sugarcane cultivation, whereas areas within the streambed may not have been affected by historic land use and may therefore contain archaeological remains (Walker and Rosendahl 1996:13).

In 2004, Rechtman Consulting, LLC (Rechtman 2004a) surveyed a roughly four-acre portion of the parcel previously surveyed by Walker and Rosendahl (1996). The Rechtman Consulting, LLC survey area was located to the west of the current project area along Waiānuenu Avenue. The survey identified no historic properties and noted that the property had previously undergone mechanical clearing.

Also in 2004, Rechtman Consulting, LLC (Rechtman 2004b) conducted an archaeological inventory survey and limited cultural assessment of a parcel located along the southern edge of Waiānuenu Avenue further to the west of the current project area (TMK:3-2-3-30:5 por.) (see Figure 11). This project area was a portion of the parcel that had been previously surveyed by W.K.A. (1976) and Sinoto (1978). Rechtman (2004b) recorded two Historic stone wall remnants (SIHP Site 24267 and 24268) within this project area that had not been previously identified during the earlier studies.

Additional archaeological sites reported in the nearby area include SHPD Site 18696, and Historic Period structures such as the Old Hilo Hospital (SHPD Site 7450), a Portuguese oven (SHPD Site 7482), and the Hilo County Jail (SHPD Site 7457) (Spear 1992). Other studies that have been conducted in the broader area include: Kelly and Athens (1982), Wickler (1990), and Wickler and Ward (1992); all associated with the improvements to the Alenaio Stream drainage basin.

Culture-Historical Background

This section summarizes the general cultural history of Hilo and more specifically the history of Pi'ihonua Ahupua'a. For a more in-depth historical background the reader is referred to Kelly (1981), Maly (1996), 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'u, 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* that today retain their original names (Kelly 1981:3). 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 1981:5).

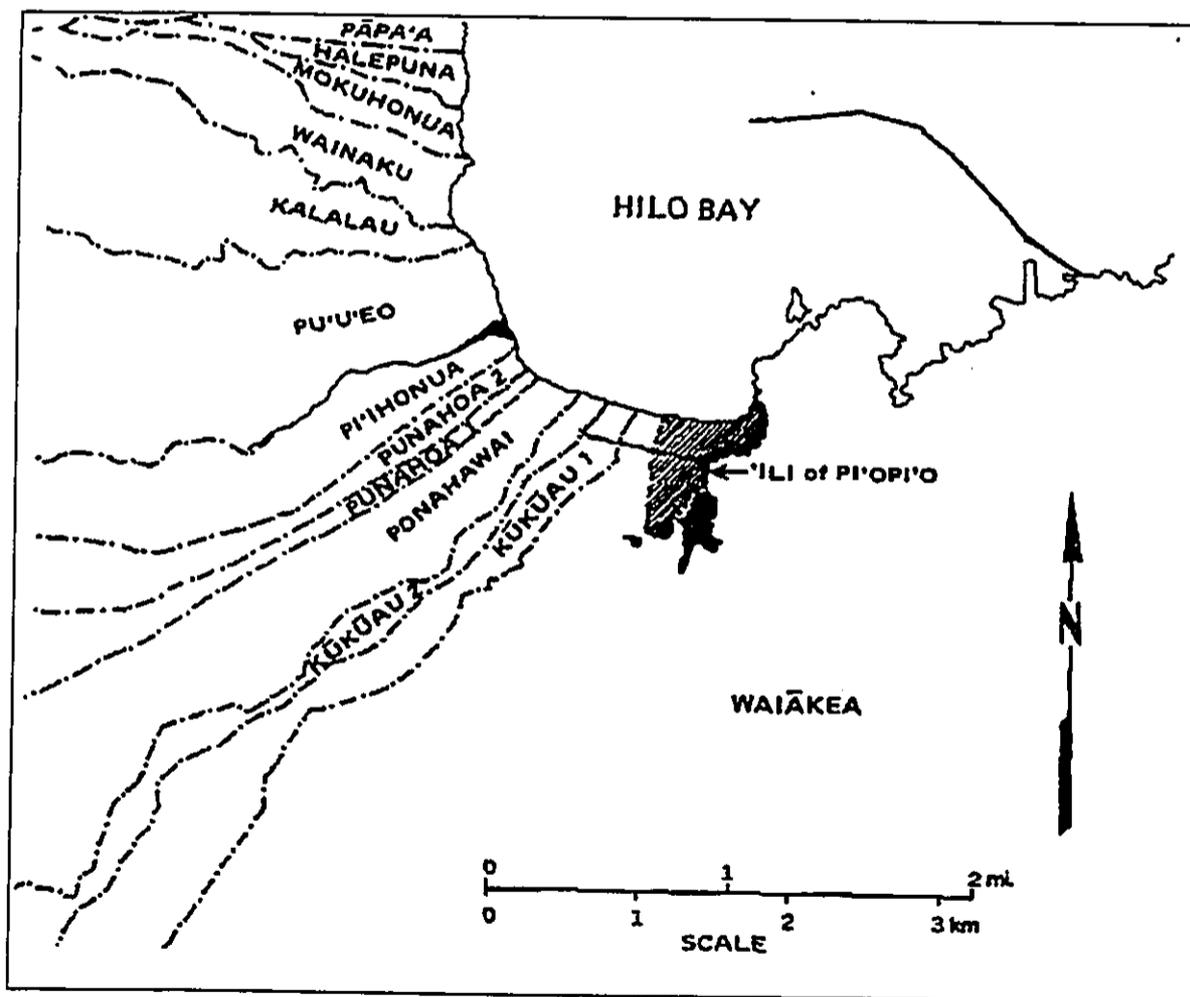


Figure 12. Hilo Bay showing *ahupua'a* (from Kelly 1981:2).

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 Waiakeia 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 *pāhoehoe* 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)

Pi'ihonua Ahupua'a

As part of an archaeological assessment study, Maly (1996) conducted historical research for the lands of Wainaku, Pōhohawai, Waiākea, and Pi'ihonua. He discusses the significance of the use of the Hawaiian word *wai* in the place names: Pōhohawai, Waiākea, Wainaku, and Wailuku (River). According to Maly, the word *wai* (water) can be likened to 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. Maly refers to the origins of the names Waiākea and Pi'ihonua in the Hawaiian legend of Ka'ao Ho'oniua Pu'uwai no Ka-Miki. Pi'ihonua literally translates to: "Ascending Earth," and the *ahupua'a* is named for Pi'ihonua-a-ka-lani, the brother of Waiākea and Pana'ewa, and the father of the chiefesses 'Ohele and Waiānuenuē (Maly 1996:A-4).

Pi'ihonua along with Punahoa and Waiākea were held by Kamehameha I until the time of his death in 1819, at which time his holdings, including Pi'ihonua were passed down to his son, Liholiho. Kelly (1981) speculates that Pi'ihonua may have been given to Chief Kalaeokekio by Kauikeaouli or Boki in 1828. Pi'ihonua was surrendered at the time of the *Māhele* and classified as Crown Land (Kelly 1981); and no *kuleana* claims were registered for lands in the vicinity of the current subject property (Maly 1996). Following the *Māhele*, the population of Hilo grew and the scattered upland habitations gave way to sugar cultivation (McEldowney 1979:37). At the turn of the century, there were remnants of *heiau* and at least one intact *heiau* within Pi'ihonua. Thrum (1907) describes a *heiau* named Kaipālaloa that had been destroyed and another called Papio, which was purportedly for bird catchers and canoe builders. Stokes (1991) reported another *heiau* in Pi'ihonua called Pinao that was once located near the intersection of Waiānuenuē and Ululani Streets (Maly 1996).

Beginning in the late 1880s Pi'ihonua was home to the Hawaii Mill Company, built on the Alenaio Stream (Kelly 1981). 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). Based on archival records, it appears that in 1965 the Mauna Kea Sugar Company succeeded the Hilo Sugar Company, at least as far as leasing the property within which current project area is now located. Commercial sugar production lasted in Pi'ihonua until the mid twentieth century, at which time many of the fields were converted to pasturage associated with cattle ranching. It is not entirely clear whether the current project area was planted in cane or was a treed area adjacent to the cane field (Myounghee Noh & Associates personal communication 2005).

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. The proximity of the study area to known water sources (Sinoto 1978; Wolforth 1999) also supports an expectation of agricultural use. However, based on the specific history of project area land use (development) and the results of the prior archaeological studies in the immediate 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 leased property (all three parcels). 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 (Rechtman 2004a, 2004b; Sinoto 1978; Spear 1992; Walker and Rosendahl 1996; Walters, Kimura and Associates 1978) demonstrate the possibility, albeit limited, 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 a reexamination of past consultations with the Office of Hawaiian Affairs, the Hilo Hawaiian Civic Club, and Kumu Pono Associates; along with an archaeological survey of the entire parcel.

Consultation

As part of an earlier study (Rechtman 2004b) 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 upper Pi'ihonua Ahupua'a. The Office of Hawaiian Affairs (East Hawai'i) the Hilo Hawaiian Civic Club, and Kumu Pono Associates 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. A recent follow-up phone call was made to the east Hawai'i Office of Hawaiian Affairs, but there was no one available who could provide pertinent information.

Fieldwork

On October 28, 2005 Matthew R. Clark, B.A. and Oliver M. Bautista, B.A., under the supervision of Robert B. Rechtman, Ph.D., conducted an intensive pedestrian survey of the entire project area. A thorough examination of the surface of the project area revealed no archaeological resources. And given the history of land use on the property coupled with the results of nearby archaeological studies, the likelihood of subsurface resources is extremely remote. Also, 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.

DETERMINATION OF EFFECTS

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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RECHTMAN CONSULTING, LLC

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phone: (808) 966-7636 fax: (808) 443-0065
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ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

November 21, 2005

RC-0355

Peter Young
State Historic Preservation Officer
K kuhihewa Building Room 555
601 Kamokila Blvd
Kapolei, HI 96707

Dear Peter:

Please find enclosed *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* for the Arc of Hilo property (TMKs: 3-2-3-32:6, 7, and 8) in Pi'ihonua Ahupua'a, South Hilo District, Island of Hawai'i. As specified in 36 CFR 800.4 (d)(1) we look forward to receiving your concurrence or objection within 30 days.

Should you have any questions, or would like further information please feel free to contact me.

Regards,



Bob Rechtman, Ph.D.
Principal Archaeologist

Cc: Ron Terry, Ph.D.

COPY

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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

ROBERT K. MASUDA
DEPUTY DIRECTOR - LAND

DEAN NAKANO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT

ENFORCEMENT
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAOHOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

February 15, 2006

Robert Rechtman, PhD
HC 1 Box 4149
Kea'au, Hawai'i 96749-9710

LOG NO: 2006.0316
DOC NO: 0602MM15
Archaeology

Dear Dr. Rechtman:

**SUBJECT: National Historic Preservation Act (NHPA) Section 106 Review [Federal/HUD] -
Proposed Expansion of Arc of Hilo Facility
Pi'ihonua Ahupua'a, South Hilo District, Island of Hawai'i
TMK: (3) 2-3-032:006, 007, 008**

Thank you for your letter dated November 21, 2005, requesting our concurrence on your determination of "no historic properties affected" for this undertaking.

The proposed undertaking is to expand the existing Arc of Hilo facility from its current configuration of a vocational center, shade house, gravel parking lot and small swimming pool to a larger facility encompassing the entire 5.4-acre area now leased from the State of Hawai'i. New construction will include a new building, larger swimming pool, additional shade houses, an expanded parking area, and a walking path.

We believe a good faith effort has been made to identify historic properties within the 5.4-acre Area of Potential Affect (APE). Your effort consisted of cultural-historic background research and consultations, coupled with an intensive pedestrian survey of the APE. No surface archaeological features were encountered, and we agree with your conclusion that based on the results of archaeological studies conducted in nearby areas, the likelihood of subsurface resources is remote.

Therefore we concur with your determination of "no historic properties affected" for this undertaking.

In the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Hawaii Section, needs to be contacted immediately at (808) 327-3690.

Aloha,

Peter Young, Chair
State Historic Preservation Officer

MM:dlb

APPENDIX 4

TRAFFIC IMPACT ANALYSIS REPORT

Phillip Rowell and Associates

47-273 'D' Hui Iwa Street Kaneohe, Hawaii 96744 Phone: (808) 239-8206 FAX: (808) 239-4175 Email: prowell@qto.net

FINAL REPORT

January 9, 2006

Geometrician Associates
HC 2 Box 9575
Keaau, Hawaii 96749

Attn: Mr. Ron Terry

Re: **Traffic Impact Assessment Report
Expansion of The ARC of Hilo
1099 Waiuanue Avenue
Hilo, Hawaii**

Dear Mr. Terry:

Phillip Rowell and Associates have prepared the following Traffic Impact Assessment Report for the proposed expansion of The ARC of Hilo. The report is presented in the following format:

- A. Project Location and Description
- B. Purpose and Objective of Study
- C. Methodology
- D. Description of Existing Streets and Intersection Controls
- E. Existing Peak Hour Traffic Volumes
- F. Level-of-Service Concept
- G. Existing Levels-of-Service
- H. 2008 Background Traffic Projections
- I. Project Trip Generation
- J. 2008 Background Plus Project Traffic Projections
- K. Impact Analysis of 2008 Conditions
- L. Other Traffic Related Issues
- M. Summary and Conclusions

A. Project Location and Description

The ARC of Hilo is located at 1099 Waiuanue Avenue in the Hilo area of the Island of Hawaii. The approximate location on Hawaii is shown on Attachment A. The site of the proposed expansion is adjacent to the existing facility.

The proposed expansion consists of an additional 17,000 square foot building and associated parking. A preliminary site plan of the proposed expansion is shown as Attachment B.

Access and egress is provided by two, two-way driveways along the south side of Waiuanue Avenue. All traffic movements are allowed at both driveways. The driveway located along the west side of the project is the main driveway and is referred to as Drive A in this report. The driveway is paved.

The second driveway, referred to as Drive B, is located approximately 150 east of Drive A. This driveway is currently unpaved and gated. This driveway will be paved and will serve as the entrance and exit to the new parking area.

B. Purpose and Objective of Study

1. Quantify and describe the traffic related characteristics of the proposed project.
2. Identify potential deficiencies adjacent to the project that will impact traffic operations in the vicinity of the proposed project.

C. Methodology

1. *Define the Study Area*

The intersections to be analyzed were defined based on our understanding and knowledge of the area and a preliminary estimate to the number of trips that the project will generate. As there are no intersections along Waianuenue Avenue within one-quarter mile of the project driveways, only the intersections of the driveways along Waianuenue Avenue are analyzed in this traffic assessment.

2. *Analyze Existing Traffic Conditions*

Existing traffic volumes at the study intersections were obtained from traffic counts completed on Monday, November 28, 2005. The intersection configuration and right-of-way controls were determined at the time of the surveys. Existing traffic operating conditions of the driveways was determined using the methodology described in the 2000 *Highway Capacity Manual (HCM)*¹.

3. *Estimate Horizon Year Background Traffic Projections*

Background traffic conditions are defined as future traffic conditions without the proposed project. Background traffic volumes were estimated by superimposing background traffic growth in the vicinity onto existing traffic volumes. The year 2008 was used as the horizon year.

4. *Estimate Project-Related Traffic Characteristics*

The next step was to estimate the peak-hour traffic that the proposed project will generate. This was done by performing a trip generation study for the project. Manual traffic counts were performed concurrently at both existing project driveways. The results were then correlated to the existing building floor area. The number of peak hour trips generated by the new building floor area was then estimated by extrapolating the results of the traffic counts. These trips were then distributed and assigned based on the observed approach and departure routes. Additionally, the existing trips into and out of the project were redistributed to account for the new parking lot and circulation plan.

5. *Analyze Project-Related Traffic Conditions*

The project-related traffic was then superimposed on 2008 background traffic volumes at the driveways. The HCM methodology was used again to conduct a level-of-service analysis for background plus project conditions. The purpose of this analysis was to identify potential operational deficiencies in the vicinity of the proposed project.

¹ Institute of Transportation Engineers, *Highway Capacity Manual*, Washington, D.C., 2000

D. Description of Existing Streets and Intersection Controls

Waianuenue Avenue is a two-lane, two-way County road connecting Kaumana Drive and the Hilo Medical Center. For purposes of the analysis in this report, Waianuenue Avenue has an east-west orientation and The ARC of Hilo is located along the south side. There are no separate turn lanes for traffic turning into the project's parking lot from Waianuenue Avenue.

E. Existing Peak Hour Traffic Volumes

The existing traffic volumes are based on manual traffic counts completed on Monday, November 28, 2005. The counts were performed between 6:30 AM and 8:30 AM and between 3:00 PM and 5:00 PM. The morning and afternoon peak hour traffic volumes are summarized in Appendix C. The counts shown include all vehicles (autos, vans and trucks).

F. Level-of-Service Concept

"Level-of-Service" is a term which denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level-of-service (LOS) is a qualitative measure of the effect of a number of factors which include space, speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

There are six levels-of-service, A through F, which relate to the driving conditions from best to worst, respectively. The characteristics of traffic operations for each level-of-service are summarized in Table 1. In general, LOS A represents free-flow conditions with no congestion. LOS F, on the other hand, represents severe congestion with stop-and-go conditions. *Level-of-Service D is considered an acceptable level-of-service for urban peak hour conditions.*²

Table 1 Level-of-Service Definitions for Unsignalized Intersections⁽¹⁾

Level-of-Service	Expected Delay to Minor Street Traffic	Delay (Seconds)
A	Little or no delay	<10
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	See note (2) below	>50.1

Notes:

(1) Source: *Highway Capacity Manual, 2000.*

(2) When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improvement of the intersection.

² Institute of Transportation Engineers, *Traffic Access and Impact Studies for Site Development, A Recommended Practice*, 1991, page 35.

G. Existing Levels-of-Service

The existing levels-of-service were estimated using the methodology described in the *Highway Capacity Manual*. The results of the level-of-service analysis of existing conditions are summarized in Table 2. The level-of-service analysis implies good operating conditions, minimal delays and high levels-of-service.

Table 2 Existing (2005) Levels-of-Service

Intersection, Approach and Movement	AM Peak Hour		PM Peak Hour	
	Delay ¹	LOS ²	Delay	LOS
Waianuenue Av at Drive A				
Westbound Left & Thru	8.0	A	8.7	A
Northbound Left & Right	12.5	B	12.4	B
Waianuenue Av at Drive B				
	8.0	A	8.7	A
	10.3	B	13.3	B

NOTES:

(1) Delay in seconds per vehicle.

(2) LOS denotes Level-of-Service calculated using the operations method described in *Highway Capacity Manual*. Level-of-Service is based on delay.

H. 2008 Background Traffic Projections

Historical traffic counts from SDOT³ were reviewed to determine the historical traffic growth rate along Waianuenue Avenue. The nearest SDOT count station is located at the intersection of Waianuenue Avenue at Kaumana Drive (Count Station 18-B). The traffic count data for Waianuenue Avenue adjacent to the project indicated that between 1996 and 2002, eastbound traffic decreased from 4,440 to 4,274 vehicles per day and the westbound traffic decreased from 4,854 vehicles per day to 4,411 vehicles per day. This represents decreases of 4% and 9%, respectively. Peak hour volumes were not provided.

As the historical data indicated that traffic along Waianuenue Avenue adjacent to Waianuenue Avenue actually decreased since 2001, it was decided to use the existing traffic volumes as 2008 background projections.

³ State of Hawaii Department of Transportation, *Traffic Survey Data, Island of Hawaii, 2002*

I. Project Trip Generation

Future traffic volumes generated by the project were estimated using the procedures described in the *Trip Generation Handbook*.⁴ For this project, future trips generated by the project were estimated using trip generation rates calculated using the number of existing trips into and out of the project and the square footage of the existing building. The result of these calculations are the number of trips into and out of the project per 1,000 square feet of building area for this specific type of use. This trip generation rate was then be applied to the new building as the uses and densities will be comparable to the existing facility. The results of this analysis are summarized in Table 3. Shown in the last column are the total peak hour trips into and out of the project during the morning and afternoon peak hours upon completion of the new building.

Table 3 Trip Generation Calculations for Proposed Project

Time Period	Direction	Existing Trips	Existing Square Feet (SF)	Trips per 1,000 SF	New Floor Area	New Trips	Total Trips ⁽¹⁾
AM Peak Hour	In	33	10.0	3.3	17.0	56	89
	Out	13		1.3		22	35
	Total	46		4.6		78	124
PM Peak Hour	In	21		2.1		36	57
	Out	28		2.8		48	76
	Total	49		4.9		84	133

NOTES:
 (1) Total trips are the sum of "Existing Trips" plus "New Trips." The "Total Trips" were distributed and assigned to the driveways in order to account for redistribution of traffic between the two driveways and use of the new parking lot.

As shown the proposed project will generate 56 new inbound and 22 new outbound trips during the morning peak hour. During the afternoon peak hour, the project will generate 36 new inbound and 48 new outbound trips.

The Institute of Transportation Engineers recommends that a traffic impact study should be performed if, in lieu of another locally preferred criterion, development generates an additional 100 vehicle trips in the peak direction (inbound or outbound) during the site's peak hour.⁵ Based on the criterion, a traffic impact study is not warranted since the project will generate only 56 new outbound trips per hour during the morning peak hour.

The directions of approach and departure were determined from the traffic counts. The trips at the driveways were redistributed to account for the new parking lot and new internal circulation plan. The resulting trip assignments are also shown in Attachment D.

J. 2008 Background Plus Project Projections

2008 background plus project traffic projections were estimated by superimposing the peak hourly traffic generated by the proposed project on the 2008 background (without project) peak hour traffic projections. This assumes that the peak hourly trips generated by the project coincide with the peak hour of the adjacent street. This represents a worse-case condition. The resulting 2008 background plus project peak hour traffic projections are shown in Attachment E.

⁴ Institute of Transportation Engineers, *Trip Generation Handbook*, Washington, D.C., 1998, p. 7-12

⁵ Institute of Transportation, *Traffic Access and Impact Studies for Site Development, A Recommended Practice*, 1991, page 5.

K. Impact Analysis of 2008 Conditions

Based on criteria recommended by the Institute of Transportation Engineers, a traffic impact study is not warranted because the project generates only 56 new outbound trips per hour during the morning peak hour, which is less than 100 trips per hour required to warrant a traffic impact analysis. However, an analysis of the changes in peak hourly traffic at along Waiianuenu Avenue east of and west of the project and a level-of-service was performed to identify potential traffic operational deficiencies adjacent to the project for 2008 background plus project conditions.

Analysis of Hourly Traffic Volumes

Analysis of the changes in total approach traffic along Waiianuenu Avenue was performed for the morning and afternoon peak hours. This analysis is summarized in Table 4.

Table 4 Analysis of Changes of Total Intersection Approach Volumes ⁽¹⁾

Location	Direction	AM Peak Hour				PM Peak Hour			
		Existing	2008 Background Plus Project	Change ⁽²⁾		Existing	2008 Background Plus Project	Change ⁽²⁾	
				Volume	%			Volume	%
East (Hilo Side) of Project	Eastbound	275	295	20	7.3%	473	518	45	9.5%
	Westbound	321	372	51	15.9%	287	301	34	12.7%
	Total	596	667	71	11.8%	740	819	79	10.7%
West of Project	Eastbound	270	279	9	3.3%	449	456	7	1.6%
	Westbound	296	305	9	3.0%	250	258	8	3.2%
	Total	566	584	18	3.2%	699	714	15	2.1%

Notes:

- (1) Volumes shown are total intersection approach volumes or projections.
- (2) Background versus existing. Volume change may not equal number of trip generated because of rounding of background traffic projections.
- (3) Background plus project versus background.

East of the project, the morning and afternoon peak hourly volumes along Waiianuenu Avenue will increase 11.9% and 10.7%, respectively. West of the project, peak hourly volumes will increase 3.2% and 2.1%, respectively. These increases include both background traffic growth and project trips.

Level-of-Service Analysis

The level-of-service analysis was performed using the following assumptions:

1. The existing lane configurations at the driveways intersections are unchanged.
2. The peak hour of the project generated traffic coincides with the peak hour of traffic along the adjacent streets.
3. All project generated traffic will use the parking lots on the project site. This will result in a worse-case analysis of the driveways.

The results of the Level-of-Service analysis for 2008 conditions are summarized in Table 5. Shown in the table are average vehicle delays and the levels-of-service of the controlled movements. Results for uncontrolled movements are not shown as the methodology does not calculate delays of uncontrolled movements.

Table 5 Background Plus Project (2008) Levels-of-Service

Intersection and Movement	AM Peak Hour		PM Peak Hour	
	Delay ¹	LOS ²	Delay	LOS
Waiianuenue Avenue at Drive A				
Westbound Left and Thru	8.0	A	8.7	A
Northbound Left and Right	12.5	B	12.4	B
Waiianuenue Avenue at Drive B				
Westbound Left and Thru	8.0	A	8.7	A
Northbound Left and Right	10.3	B	13.3	B

NOTES:
 (1) Delay in seconds per vehicle.
 (2) LOS denotes Level-of-Service calculated using the operations method described in *Highway Capacity Manual*. Level-of-Service is based on delay.

The conclusions of the level-of-service analysis are:

1. All traffic movements will operate at Level-of-Service B, or better. This implies good operating conditions and minimal delays.
2. Traffic turning from Waiianuenue Avenue into either driveway will operate at Level-of-Service A. This means that these turning movements into and out of the project have a negligible impact on traffic along Waiianuenue Avenue, even though there are no separate left turn lanes for traffic turning from Waiianuenue Avenue into the project.

L. Other Traffic Related Issues

Left Turn Lane Assessment

An assessment of the need for a separate left turn lane for traffic turning into the project was performed using guidelines published by the Transportation Resource Board⁶. This guideline is a graph and is reproduced as Attachment F. The volume inputs and conclusions are summarized in Table 6. The assessment determined that a separate left turn lane was not warranted at either driveway during either peak period. Accordingly, based on the findings of an accepted standard, a separate left turn lane is not recommended.

It should be noted that the number of left turns into Drive B are just below the volume required to justify a separate left turn lane. As traffic volumes increase, the percentage of left turns will decrease, which may trigger the need for a separate left turn lane. As the level-of-service is high (Level-of-Service A), no savings in delay or improvement of the level-of-service are expected if a left turn storage lane is installed. Since the cost of widening Waiianuenue Avenue to provide a separate left turn lane would be significant, a separate left turn lane is not recommended at this time but the intersection should be monitored and the need for a separate left turn lane re-assessed periodically after completion of the project.

⁶ Transportation Resource Board, NCHRP Report 457, *Evaluating Intersection Improvements: An Engineering Study Guide*, 2001, Washington, D.C. p21-22

Table 6 Assessment of Need for Separate Left Turn Lanes

Intersection	Approach	Time	Opposing Volume	Advancing Volume	Left Turn Volume	Left Turn %	Warranted (Yes or No)
Waianuenue Avenue at Drive A	WB	AM	274	327	27	8%	No
Waianuenue Avenue at Drive B	WB	AM	277	271	53	14%	No

Acceleration and Deceleration Lanes

Provision of acceleration and deceleration lanes along Waianuenue Avenue would provide an area for traffic to change speeds. A review of the available literature regarding acceleration and deceleration lanes did not find guidelines or warrants for either. The references discussed the need for a storage lanes rather than a deceleration lane.

The standard reference regarding design of roadways is *A Policy on Geometric Design of Highways and Streets* published by the American Association of State Highway and Transportation Officials (AASHTO). This reference provides guidelines for the design of acceleration and deceleration lanes. The length of the deceleration lane is dependent on the difference between the design speeds of the major roadway and the turning roadway. Accordingly, if the design speed of the major roadway (Waianuenue Avenue) is comparable to the design speed of the turning roadway (the driveways), these speed change lanes will not be required.

Weaving Along Waianuenue Avenue

As traffic approaches from the east to turn left from Waianuenue Avenue at Drive A, traffic must weave with traffic turning left from Drive B. This crossing of traffic may cause conflicts as this crossing of traffic and through traffic must use the same lane. To mitigate this conflict, it is recommended that left turns from Drive B be prohibited. This will resolve the problem of the weaving traffic as well as address a concern of the Client regarding the available sight distance for traffic turning left from the project. As the number of vehicles turning left from this driveway in minimal (5 during the morning peak hour and 4 during the afternoon peak hour), reassignment of these left turns to Drive A will not change the levels-of-service of traffic into and out of the driveways.

Regional Traffic Impacts

As the employees and clients of The ARC of Hilo may reside or work over a large area of Hilo and the Island of Hawaii, it is reasonable to assume that project generated traffic will have an impact beyond the immediate vicinity of the project. However, the further away one is from the project, the less the impact since traffic will dissipate over distance. Since the impact in the immediate vicinity of the project is insignificant, it is also reasonable to assume that the traffic impacts of the project will also be insignificant at locations more distant from the project.

M. Summary and Conclusions

The conclusions of the traffic impact assessment are:

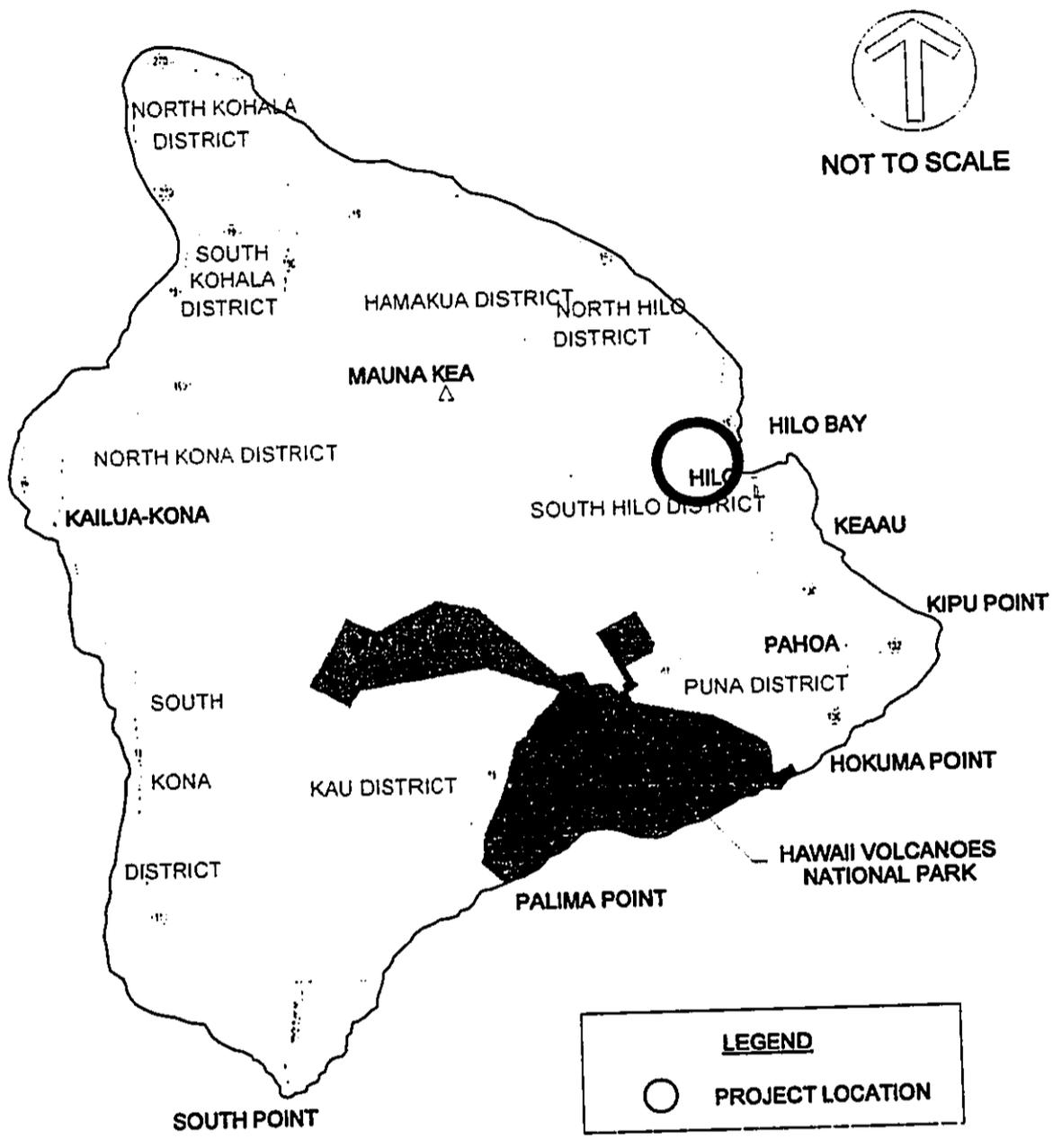
1. The new building at The ARC of Hilo will generate 56 new inbound and 22 new outbound trips during the morning peak hour. During the afternoon peak hour, the project will generate 36 new inbound and 48 new outbound trips.

2. The Institute of Transportation Engineers recommends that a traffic impact study should be performed if, in lieu of another locally preferred criterion, development generates an additional 100 vehicle trips in the peak direction (inbound or outbound) during the site's peak hour.⁷ Based on the criterion, a traffic impact analysis is not warranted.
3. An analysis of the changes in traffic volumes along Waianuenue Avenue determined that east of the project, the morning and afternoon peak hourly volumes along Waianuenue Avenue will increase 11.9% and 10.7%, respectively. West of the project, peak hourly volumes will increase 3.2% and 2.1%, respectively. These increases include both background traffic growth and project trips.
4. The level-of-service analysis concluded the following:
 - a. All traffic movements will operate at Level-of-Service B, or better. This implies good operating conditions and minimal delays.
 - b. Traffic during from Waianuenue Avenue into either driveway will operate at Level-of-Service A. This means that these turning movements into and out of the project have a negligible impact on traffic along Waianuenue Avenue, even though there are no separate left turn lanes for traffic turning from Waianuenue Avenue into the project.
5. An assessment of the need for a separate left turn lane for traffic turning into the project was performed using guidelines published by the Transportation Resource Board. The assessment determined that a separate left turn lane was not warranted at either driveway during either peak period at this time.
6. Based on the findings of the level-of-service analysis of future background plus project conditions, the traffic impacts of the proposed project are minimal and no mitigation is required to mitigate inadequate levels-of-service. All movements will operate at Level-of-Service B, or better, whereas Level-of-Service D is considered the minimum acceptable level-of-service for urban, peak hour conditions.
7. It is recommended that left turns be prohibited from Drive B to address concerns relative to weaving traffic along Waianuenue Avenue and inadequate sight distance for left turns from Drive B to westbound Waianuenue Avenue.
8. It is recommended that the need for a separate left turn lane along Waianuenue Avenue be re-assessed on a periodic basis as changes in background traffic along Waianuenue Avenue may change the conclusions of the analysis. If the re-assessment determines that a separate left turn lane is needed, it should be further determined whether the change is the result of change in background traffic along Waianuenue Avenue or an increase in traffic into and out of the project. If a separate left turn lane is needed, the cost should be pro-rate between the contributors to the growth in traffic.

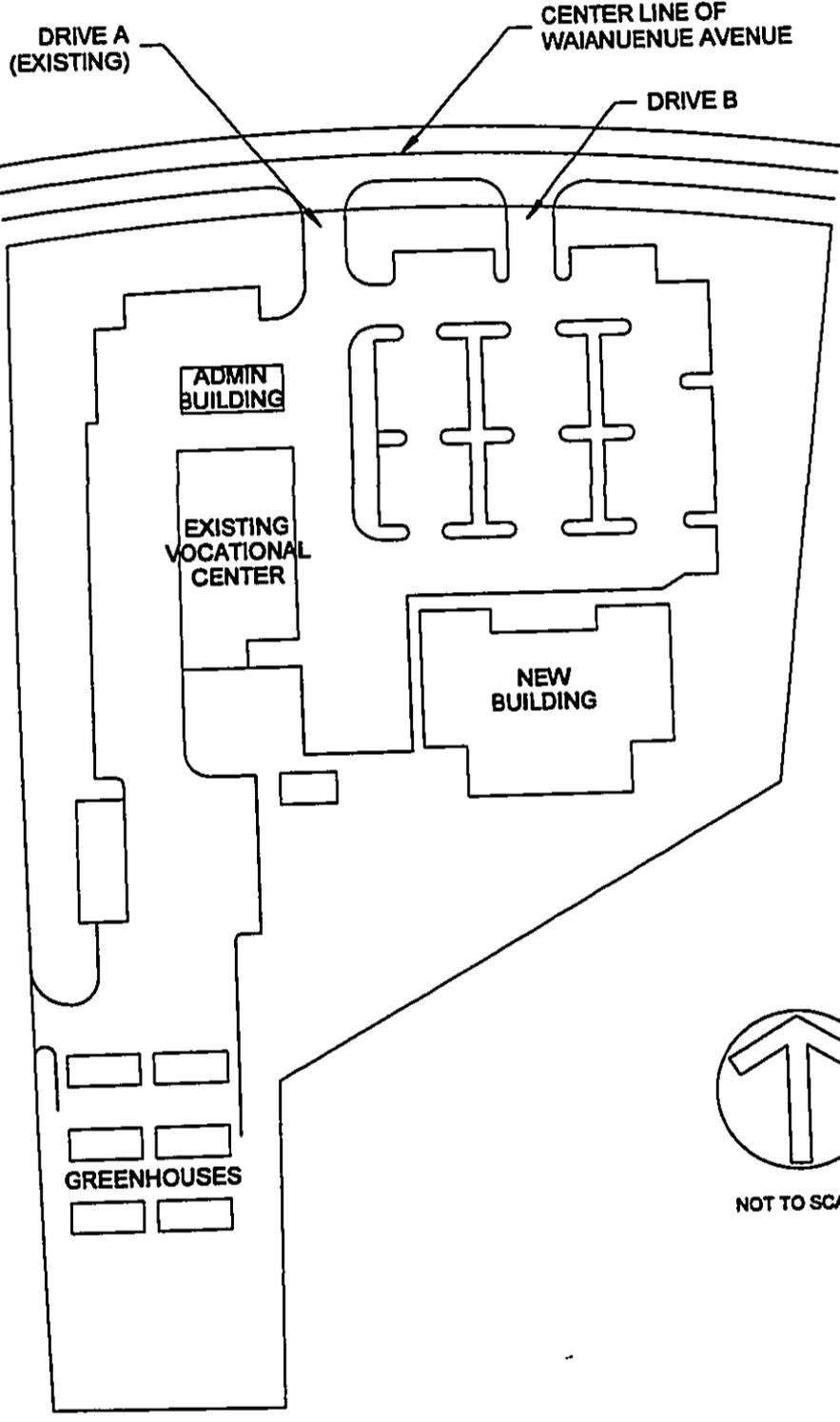
Respectfully submitted,
PHILLIP ROWELL AND ASSOCIATES
Phillip J. Rowell
Phillip J. Rowell, P.E.
Principal

List of Attachments

- Attachment A** Project Location on Hawaii
- Attachment B** Preliminary Site Plan
- Attachment C** Existing (2005) Peak Hour Traffic Volumes
- Attachment D** Peak Hour Project Trip Assignments
- Attachment E** Background (2008) Plus Project Peak Hour Traffic Projections
- Attachment F** Guideline for Separate Left Turn Lane



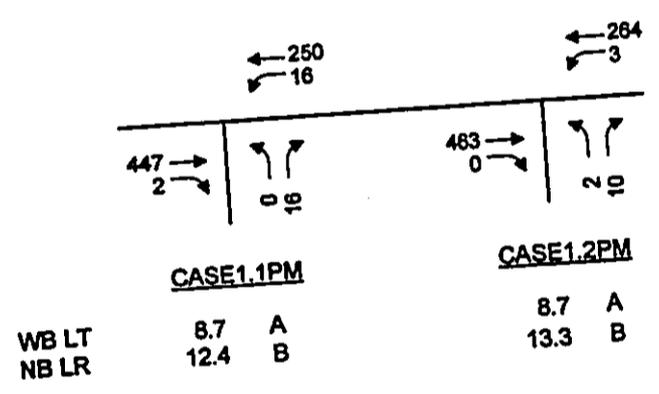
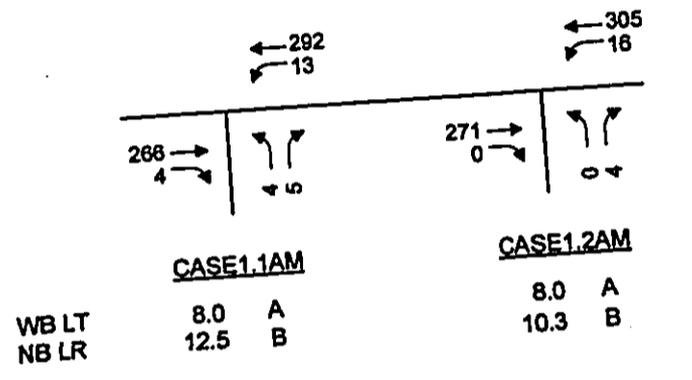
**Attachment A
PROJECT LOCATION ON HAWAII**



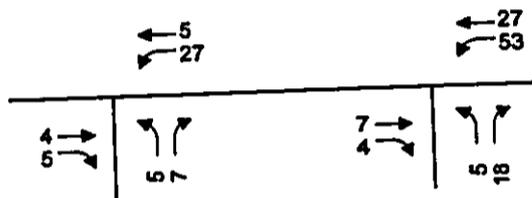
ATTACHMENT B
ARC OF HILO SITE PLAN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

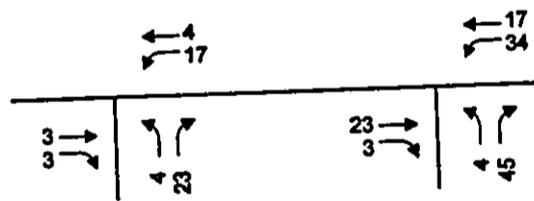
**ATTACHMENT C
EXISTING (2005) PEAK HOUR TRAFFIC VOLUMES**



**ATTACHMENT D
PEAK HOUR PROJECT TRIP ASSIGNMENTS**

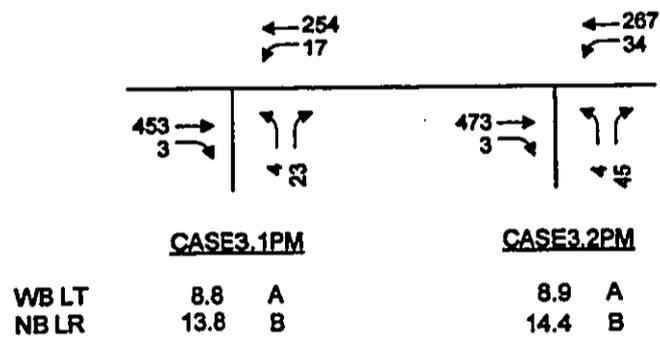
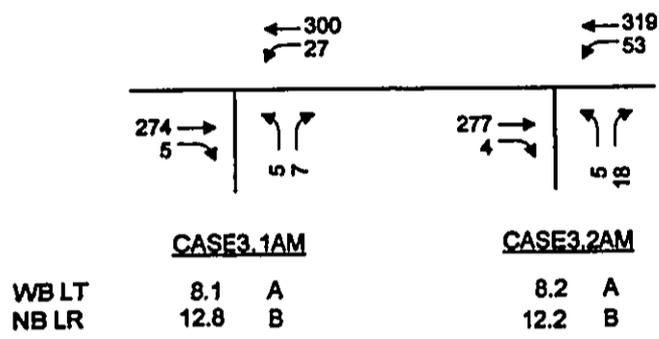


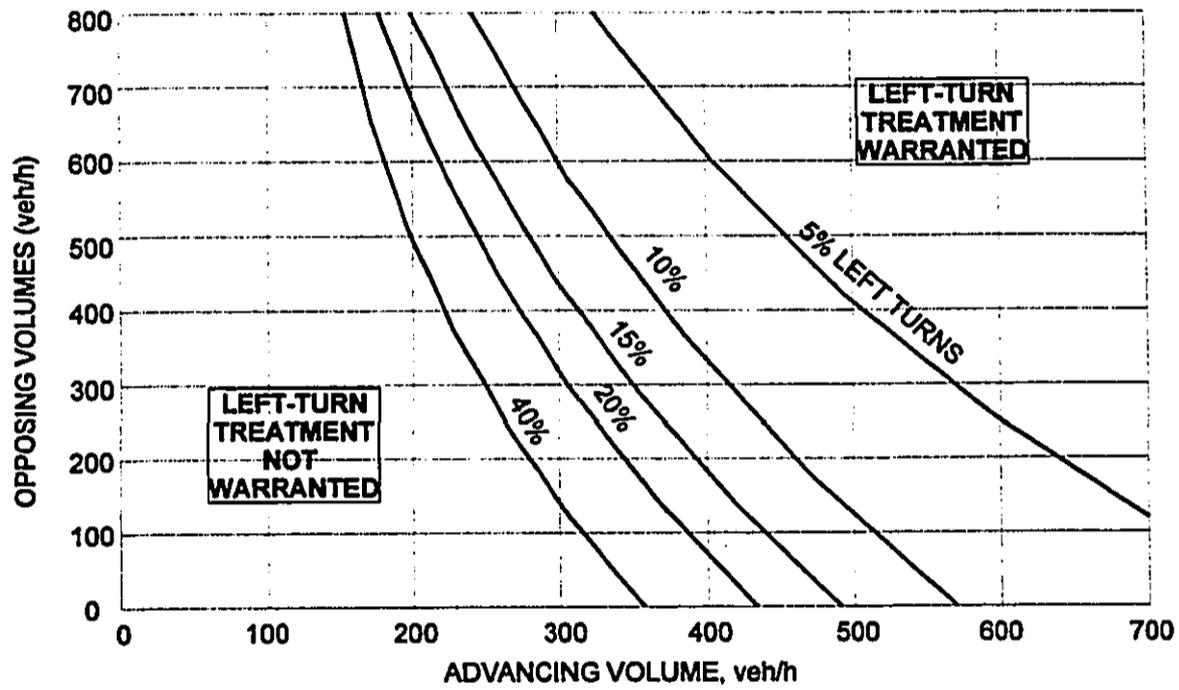
AM PROJECT TRIPS



PM PROJECT TRIPS

**ATTACHMENT E
BACKGROUND (2008) PLUS PROJECT PEAK HOUR TRAFFIC PROJECTIONS**





Source: NCHRP Report 457
Evaluating Intersection Improvements: An Engineering Study Guide
2001, page 22

Attachment F

**GUIDELINES FOR DETERMINING THE NEED FOR
A MAJOR ROAD LEFT-TURN BAY AT A TWO-WAY
STOP CONTROLLED INTERSECTION**

TWO-LANE ROAD - 60 km/hr (40 mph)

APPENDIX 5

COMMENTS IN RESPONSE TO PRE-CONSULTATION

RICHARD HENDERSON

P.O. BOX 655
HILO, HAWAII 96721-0655

November 14, 2005

Mr. Ron Terry
Principal
Geometrician Associates, LLC
HC 2 Box 9575
Keaau, Hawaii 96749

Dear Ron;

Re: Environmental Assessment (EA) for Arc of Hilo Expansion.

This is in response to your notice dated November 9, 2005 of the proposed Environmental Assessment for the Arc of Hilo expansion.

I own the property on the Puna side of the Arc of Hilo site and have noticed that there is a sizable colony of Coqui frogs residing in the back part of the Arc site that is closest to my property. Last night at around 7:30 pm I was driving out of my driveway and the sound of the frogs was very loud at the back mauka corner of the Arc lot. It is my understanding that the proposed improvement will involve the clearing of the back lot and the relocation of the Arc greenhouses. At that time a major effort should be made to eliminate the Coqui frog infestation on the Arc property before they spread through out the neighborhood.

If you need any further information I can be reached at 961-5252 Ext. 128 or my home at 935-1528.

Sincerely,



CC: Mike Gleeson

Harry Kim
Mayor



Patricia G. Engelhard
Director

Pamela N. Mizuno
Deputy Director

County of Hawai'i
DEPARTMENT OF PARKS AND RECREATION
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720
(808) 961-8311 • Fax (808) 961-8411

November 15, 2005

Mr. Ron Terry, Principal
Geometrician Associates, LLC
HC 2 Box 9575
Kea'au, HI 96749

Project: **Environmental Assessment (EA) for Arc of Hilo Expansion**
TMK: (3rd) 2-3-32: 6, 7, and 8

We have reviewed the Project Summary for the above-referenced project and have no comments to offer.

Thank you for including the Department of Parks and Recreation as part of the review process.

Sincerely,


Patricia G. Engelhard
Director

My Documents\Park Projects\Geometrician Associates-ARC Hilo Expansion - 11-05



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

REPLY TO
ATTENTION OF

November 18, 2005

Regulatory Branch

File Number POH-2005-614

Mr. Ron Terry
Principal
Geometrician Associates, LLC
HC 2 Box 9575
Kea'au, HI 96749

Dear Mr. Terry:

This responds to your request for written comments for the preparation of a draft Environmental Assessment (dEA) which addresses activities and impacts of the proposed Arc of Hilo Expansion Project, Piihonua, Hawaii (TMK (3) 2-3-32: 6, 7, 8).

The dEA should provide information that indicates whether waters of the United States, as represented by wetlands, springs and ephemeral streams are in, or adjacent to, the proposed project area. Further, the location of perennial or intermittent streams relative to the proposed project area should be noted. The dEA should state in appropriate sections whether there is a potential for waters of the U.S., including the above waterbodies and other special aquatic sites, to be directly and/or indirectly impacted by construction of project structures and associated ground disturbing activities within the proposed improvement area.

Upon our receipt of the dEA, it may then be determined whether a Department of Army (DA) permit for Section 404 activities of the Clean Water Act may, or may not be, required for the proposed Arc of Hilo Expansion Project.

Thank you for your consideration of potential impacts to the aquatic environment of the Hilo District watershed. Please contact Mr. Farley Watanabe of my staff at 808-438-7701, or facsimile 808-438-4060, or by e-mail Farley.K.Watanabe@usace.army.mil if you have any questions or need additional information. Please refer to the file number above in any future correspondence with us.

Sincerely,

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

Harry Kim
Mayor



Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

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

November 22, 2005

Mr. Ron Terry
Geometrician Associates, LLC
HC 2 Box 9575
Keaau, HI 96749

Dear Mr. Terry:

Subject: Pre-Environmental Assessment Consultation
Applicant: Arc of Hilo
Land Owner: State of Hawaii
Project: Expansion of Operations
TMK: 2-3-32:6,7 and 8, 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 various new structures and facilities to be developed on three parcels.

We have the following to offer for these parcels:

1. The State Land Use designation is Urban.
2. The General Plan designation is Low Density Urban, which 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*".
3. The County zoning is Single-Family Residential (RS-10). Community buildings are permitted uses.

Hawai'i County is an equal opportunity provider and employer.

Mr. Ron Terry
Geometrician Associates, LLC
Page 2
November 23, 2005

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

Please note that Plan Approval will be required prior to the construction or installation of any new structure or development or any addition to an existing structure or development. Since the project area consists of three separate parcels, all improvements must comply with the minimum 20 feet front, 20 feet rear and 10 feet side yard setbacks for each parcel.

Finally, 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
P:\WPWIN60\ETI\EA\draftPre-consul\TerryArc23032006007008.doc

Harry Kim
Mayor



County of Hawaii
POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-8869

Lawrence K. Mahuna
Police Chief

Harry S. Kubojiri
Deputy Police Chief

November 23, 2005

Mr. Ron Terry
Geometrician Associates, LLC
HC 2 Box 9575
Keaau, Hawaii 96749

Dear Mr. Terry:

Subject: Environmental Assessment (EA) for Arc of Hilo Expansion, Island of Hawaii, TMK (3rd) 2-3-32: 6, 7, and 8

Staff, upon review of the site and above-mentioned document, has neither concerns nor comments to offer in regard to this request at this time. There will be no impact on traffic in the area, and it is not required that our agency obtain a copy of the EA when it is completed.

Thank you for the opportunity to comment.

Sincerely,

James M. Day
JAMES M. DAY
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

LW/lli



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawai'i 96850

In Reply Refer To:
1-2-2006-SP-037

NOV 23 2005

Mr. Ron Terry
Gemetrician Associates, LLC
HC 2 Box 9575
Kea'au Hawai'i 96749

Dear Mr. Terry:

Thank you for your letter dated November 9, 2005, requesting a list of threatened and endangered species that may occur in the vicinity of the Arc of Hilo expansion site (TMK 2-3-032-006, 007, and 008) in Hilo on the island of Hawai'i. Your letter was received on November 14, 2005. The proposed project is for Arc of Hilo and includes the development of new structures and facilities that will help the Arc of Hilo fulfill its mission. The structures and facilities are not described in your letter, but you state that they will be described and illustrated in an Environmental Assessment that is being prepared of this project. Your letter also states that the U.S. Department of Housing and Urban Development is providing funds for this project.

We reviewed the information you provided and pertinent information in our files, including data compiled by the Hawai'i Natural Heritage Program. To the best of our knowledge, no federally listed or proposed threatened or endangered species, or designated or proposed critical habitats occur on the project site.

We appreciate your efforts to conserve endangered species. If you have questions, please contact Assistant Field Supervisor Gina Shultz (phone: 808/792-9400; fax: 808/792-9581).

Sincerely,

Patrick Leonard
Field Supervisor

TAKE PRIDE[®]
IN AMERICA 

Notice of Public Meeting

The Arc of Hilo invites the public to a meeting at 6:30 p.m. on Monday, January 23rd, 2006 at 1099 Waianuenue Avenue in Hilo. The Arc of Hilo, a non-profit tax-exempt charitable organization, proposes to expand its existing facilities. The Arc of Hilo serves to improve the quality of life for people with developmental and other disabilities on the island of Hawaii through educational, vocational and skill training as well as employment and residential opportunities. In the past four years, the Arc of Hilo has expanded its operations from an annual budget of \$1.5 million to over \$5 million, with a concurrent doubling in the number of clients served. This rapid expansion creates a strong and critical need for expanded facilities. The proposed project involves construction of a new Community Client Support Services structure that will house offices, classrooms, and storage space; an Auditorium/Gymnasium; and an expanded parking lot with a new circulation plan and an additional driveway. James H. Case one of the founders of the organization that became The Arc of Hilo will be present to review the plans for the expansion. Mr. Case, father of Congressman Ed Case, helped to start the organization fifty nine years ago. The environmental consultant for the project, Ron Terry, Ph.D., will also be on hand to explain the findings of the Environmental Assessment and the public involvement process. Scott Fleming of Durant Media Five architectural firm will be attending to show and discuss up to date designs of the project.

<u>Name</u>	<u>Address</u>	<u>Phone No</u>
Fran Calvert	HCR 2 Box 6042 Keau	982-7511
Vicki Linter	1099 Waiannuenue Hilo	935-8534
Mike Middlesworth	2316C Anakakele Hilo	959-1447
KEN CORROY	GEN DEL KEAAU	966-4518
Paige Delima	194 Kaiunani St	935-4137
WILLIAM FARR	305A AINALAKO RD. HILO	959-0773
Sam Wallis	108 Lukihi Pl Hilo	966-6176
Rob Zimmerman	POB 11464 HILO	989-5991
WILLIAM MCKNIGHT	P.O. BOX 982 KURTISTOWN	988-0936
COTT FEMING	557 Menono St, Hilo, HI	935-9358
Marion Leong	165A Hokuwai	961-3509
Bobby Cooper	486-B AKOUEA RD HILO	935-0253
Bruce Hansen	558 Kamehameha Ave	935-0279
Jerry & TRINA	P.O. BOX 304	
NAHM-MIJO	KURTISTOWN HI-96760	966-715
BETH MOORE	PO BOX 818 HILO HI 96721	
David Ridley	1787 Haleokea St, HILO	959-5911
CHRIS RIDLEY	1787 HALEOKEA ST HILO	959-5911
Mike Gleason	671 B Waiannuenue Ave	935-862

APPENDIX 6

COMMENTS ON DRAFT EA AND RESPONSES

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

March 28, 2006

Mr. Ron Terry
Geometrician Associates
HC 2 Box 9575
Kea'au, HI 96749

Dear Mr. Terry:

Subject: Review of Draft Environmental Assessment (DEA)
Applicant: The Arc of Hilo
Location: Pi'ihonua, South Hilo, Hawai'i TMKs: (3)2-3-032:6, 7 and 8

The proposed expansion of the Arc of Hilo facilities consists of a new 17,225 square foot Community Support Services Facility structure that will house offices, classrooms, storage space, an auditorium/gymnasium, an expanded parking lot, and additional driveway.

We have no further comments to add to our Pre-Environmental Assessment Consultation letter of November 22, 2005. There is one clarification to be made: page 22 of the DEA lists "Hawai'i County Planning Department Approval" among the required permits and approvals. Please note that the specific application that will be required is a "Plan Approval." The Plan Approval Application includes a proposed landscaping and planting plan which will be reviewed against the Planning Department's Rule 17. Rule 17 includes standards for landscaping of parking lots and landscaped buffers for building sites adjoining residential districts.

Should you have questions, please contact Deborah Chang of my staff at 961-8288, Ext. 254.

Sincerely,

A handwritten signature in cursive script that reads "Chris J. Yuen".

CHRISTOPHER J. YUEN
Planning Director

DLC:pak
P:\public\WPWIN60\Deborah\Comments\DEAarcof hilo.doc

Mr. Ron Terry
Page 2
March 28, 2006

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

Mr. Guy Tagomori
Hawaii State Department of Human Services
601 Kamokila St., Rm. 515
Kapolei, HI 96707



geometrician

ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@hawaiiantel.net

April 15, 2006

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

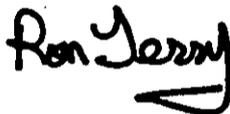
Dear Mr. Yuen:

Subject: Arc of Hilo Facilities Expansion Environmental Assessment

Thank you for your comment letter dated March 28, 2006, on the Draft EA, in which you stated that Planning Department approval specifically refers to Plan Approval, a clarification that has been added to the Final EA. As discussed in Section 3.1.4 of the EA, the applicant is aware of the need for a landscaping plan that complies with County regulations, and this plan is under preparation.

We appreciate your review of the document, and look forward to working with your department during the Plan Approval process. If you have any questions about the project, please contact me at 982-5831, or Glen Calvert of Arc of Hilo at 935-8535.

Sincerely,



Ron Terry, Principal
Geometrician Associates

LINDA LINGLE
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: oeqc@health.state.hi.us

March 30, 2006

Henry Oliva
Department of Human Services
PO Box 339
Honolulu, HI 96809-0339

Dear Mr. Oliva:

Attn: Guy Tagomori

Subject: Draft Environmental Assessment (EA) for ARC of Hilo Facilities Expansion

We have the following comments to offer:

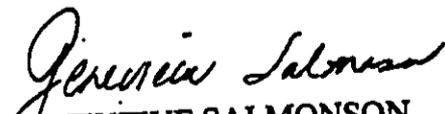
Sustainable building techniques: Please consider applying sustainable building techniques presented in the "Guidelines for Sustainable Building Design in Hawaii." In the final EA include a description of any of the techniques you will implement. Go to our website at <http://www.state.hi.us/health/oeqc/guidance/sustainable.htm> or contact our office for a paper copy of the guidelines.

Paving: Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible. For the text of this section of HRS contact our office for a paper copy or go to our website at <http://www.state.hi.us/health/oeqc/guidance/index.html>.

Public meeting: In the final EA include a summary of the issues raised at the January 23rd, 2006 public meeting. You need not include a transcript, just a synopsis.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,


GENEVIEVE SALMONSON

Director

c: Ron Terry

geometrician

ASSOCIATES, LLC

integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@hawaiiantel.net

April 15, 2006

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

Dear Ms. Salmonson:

Subject: Arc of Hilo Facilities Expansion Environmental Assessment

Thank you for your comment letter dated March 30, 2006, on the Draft EA. As the consultant for the project, I offer the following response to your specific comments:

1. *Sustainable building guidelines.* The consulting architect for the project is aware of the guidelines, and the Arc of Hilo is proud to have a design that is functional, aesthetic, and sustainable. A sustainable building is built to minimize energy use, expense, waste, and impact on the environment. It seeks to improve the region's sustainability by meeting the needs of Hawai'i's residents and visitors today without compromising the needs of future generations. To this end, the design for the new buildings for the Arc of Hilo shall incorporate the following sustainable elements:

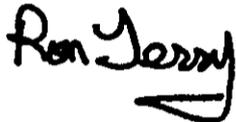
- (a) Almost all interior spaces will utilize natural ventilation via operable windows and louvered openings in lieu of air conditioning. The building has been sited to take advantage of naturally occurring wind patterns.
- (b) Many spaces will utilize natural ventilation in lieu of mechanical ventilation.
- (c) Wall framing and roof framing cavities will be filled with foil-faced batt insulation to deflect unwanted heat gain.
- (d) Glazing will be insulated to deflect unwanted heat gain.
- (e) Building insulations will be formaldehyde free to alleviate noxious material off-gasing.
- (f) Paintable coating will be low VOC to alleviate noxious material off-gasing.
- (g) Many primary building materials will be readily available in the Hawaiian islands.
- (h) A large majority of the building users take advantage of public transportation to reach the building.
- (i) Ample windows and louvered openings are provided to allow for abundant natural daylighting of interior spaces.
- (j) Solar water heating may be used to heat hot water for Toilet Room Showers.
- (k) Plumbing fixtures will utilize low-flow models.
- (l) Self-closing faucets will be utilized at lavatories and sinks.

2. *Paving with glass.* In Hilo, there are two asphalt manufacturers, Glover and Yamada & Sons; it appears that neither are currently producing asphalt with recycled glass. For the foreseeable future, projects in the Hilo area will not be able to utilize recycled glass.

3. *Public meeting.* No issues were raised at the meeting, and commenters expressed simply strong support for the project and no concerns. The Final EA contains the statement "All comments indicated support for the proposed project, all questions related to programs rather than site or environmental issues, and no concerns or issues were raised."

Again, thank you for your comment. If you have any questions about the project, please contact me at 982-5831, or Glen Calvert of Arc of Hilo at 935-8535.

Sincerely,



Ron Terry, Principal
Geometrician Associates



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD06/2286

March 21, 2006

Ron Terry
Geometrician Associates
HC 2 Box 9575
Keaau, HI 96749

**RE: Draft Environmental Assessment for the Proposed Arc of Hilo Expansion Project,
South Hilo, Hawai'i Island, TMK: 2-3-32: 6, 7 & 8.**

Dear Mr. Terry,

The Office of Hawaiian Affairs (OHA) is in receipt of your March 8, 2006 request for comment on the above listed proposed project. OHA offers two substantive comments pertaining to the proposed expansion project:

- 1) Our staff asks that the proposed expansion and redevelopment of the Arc of Hilo facilities include a landscaping plan specifying that native plants will be incorporated, and comprise a dominant portion of, the effort to replant in areas disturbed by construction activities. This will help to promote a native ecosystem in Pi'ihonua and create a setting that is conducive to native animals, namely avian species.
- 2) OHA also asks that a preconstruction meeting be held with all applicable staff to stipulate that, in accordance with Section 6E-46.6, Hawaii Revised Statutes and Chapter 13-300, Hawaii Administrative Rules, if any significant cultural deposits or human skeletal remains are encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) shall be contacted.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or jessey@oha.org.

'O.wau iho nō,

A handwritten signature in cursive script, appearing to read "Clyde W. Nāmu'o".

Clyde W. Nāmu'o
Administrator

CC: Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Guy Tagomori
Hawaii State Department of Human Services
601 Kamokila Blvd., Room 515
Kapolei, HI 96707

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phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@hawaiiantel.net

April 15, 2006

Clyde Namu`o, Administrator
Office of Hawaiian Affairs
711 Kapiolani Blvd., Suite 1250
Honolulu HI 96813

Dear Mr. Namu`o:

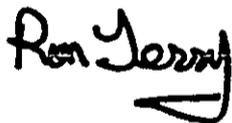
Subject: Arc of Hilo Facilities Expansion Environmental Assessment

Thank you for your comment letter dated March 21, 2006, on the Draft EA. As the consultant for the project, I offer the following response to your specific comments:

1. *Landscaping plan.* A landscaping plan incorporating native, Polynesian and other plants is under development.
2. *Preconstruction meeting.* The applicant will hold a preconstruction meeting to inform personnel of proper procedures, which are already outlined in the Draft EA, should human skeletal remains or cultural deposits be discovered during construction.

Again, thank you for your comment. If you have any questions about the project, please contact me at 982-5831, or Glen Calvert of Arc of Hilo at 935-8535.

Sincerely,



Ron Terry, Principal
Geometrician Associates



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

REPLY TO
ATTENTION OF

March 8, 2006

Regulatory Branch

File No. POH-2005-614-3

Mr. Ron Terry
Principal
Geometrician Associates, LLC
HC 2 Box 9575
Kea'au, HI 96749

Dear Mr. Terry:

This responds to your request for comments on the Final Environmental Assessment (FEA) and finding of No Significant Impact (FONSI) Statement for the the proposed Arc of Hilo Expansion Project, Piihonua, Hawaii Island (TMK (3) 2-3-32: 6, 7, 8). We have reviewed the FEA with respect to the Corps' authority to issue a Department of Army (DA) permit under 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 provided in the FEA, I have determined that the proposed activity will not involve the discharge of dredged or fill material into waters of the United States, namely the drainageway tributary to Ainako Stream, and adjacent wetlands; therefore, a DA permit will not be required. This preliminary jurisdictional determination does not excuse the applicant, The Arc of Hilo, from complying with other federal, state, or county permits, certifications or requirements that may be required.

If you have any questions regarding this preliminary determination, please contact Mr. Farley Watanabe by phone at 438-7701, by fax at 438-4060, or by electronic mail at Farley.K.Watanabe@usace.army.mil and reference the above file number.

Sincerely,

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

geometrician

ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@hawaiiintel.net

April 15, 2006

George P. Young, P.E.
Chief, Regulatory Branch
U.S. Army Engineer District
Ft. Shafter HI 96858-5440

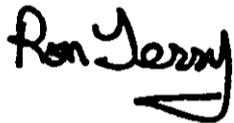
Dear Mr. Young:

Subject: Arc of Hilo Facilities Expansion Environmental Assessment

Thank you for your comment letter dated March 8, 2006, on the Draft EA, in which you stated that based on information presented in the Draft EA, you were able to determine that the project would not involve the discharge of dredged or fill material into waters of the U.S., and would therefore not require a DA permit. The applicant understands the responsibility to comply with other requirements related to polluted runoff, and will be preparing grading and NPDES permits incorporating appropriate measures.

Thank you for your review of the document. If you have any questions about the project, please contact me at 982-5831, or Glen Calvert of Arc of Hilo at 935-8535.

Sincerely,



Ron Terry, Principal
Geometrician Associates