JAS. W. GLOVER, LTD.

GENERAL CONTRACTORS

License No. ABC-3

July 11, 2017

Michael Yee, Director
Planning Department
County of Hawaii
101 Pauahi St., Suite 3
Hilo, Hawaii 96720-4224

LAND USE COMMISSION
STATE OF HAWAII
2017 JUL 13 A 7:32

Subject: Special Use Permit No. SP14-404
Jas. W. Glover, Ltd.
Restoration and Revegetation Plan
South Hilo, Hawaii
Tax Map Key: (3) 2-1-013:004 (por.)

Dear Mr. Yee,

Special Permit SP14-404 was issued by the State Land Use Commission to Jas. W. Glover, Ltd for a new quarry site on an 85.338 acre section of a 140.368-acre parcel of land identified as TMK (3) 2-1-013:004. Per condition No. 4 of SP14-404 requiring a Restoration and Revegetation Plan on previously unquarried land within the permit area, please find attached our plan. The previously unquarried portion is approximately 60 acres of land within the 85.338 acres of the permit. Included are topographic maps, photographs and a copy of the previously submitted botanical study for reference.

We are also attaching three (3) additional copies of this plan for you to submit to Kamehameha Schools, the Natural Resources Conservation Service and the Department of Public Works for their comments and Planning Department review and approval.

Thank you for reviewing this plan and we look forward to your approval. Should you or any of our staff have any questions, please feel free to contact me or Mike Pearring at 808-935-0871.

Sincerely,

Byron Fujimoto
Vice President

Cc: Maija Jackson, Planning Department
Daniel E. Orodenker, Land Use Commission

SITE RESTORATION AND REVEGETATION PLAN – SP14-404

The State of Hawaii Land Use Commission issued Special Permit SP14-404 to Jas. W. Glover, Ltd. for a new quarry site on an 85.338 acre section of a 140.368-acre parcel of land identified as TMK (3) 2-1-013:004 owned by Kamehameha Schools and situated within the State Land Use "Agricultural" District. Per condition no. 4 of Special Permit SP14-404, Jas. W. Glover, Ltd. has prepared the following Site Restoration and Revegetation Plan for approval prior to commencement of quarry activity on the previously unquarried land on the property subject to SP14-404. This Plan pertains to approximately 60 acres of previously unquarried land within the 85.338 acres of the permit. (See attached maps & photos).

Property Location

The property is located southeast of the Hawaii National Guard Site and Hilo International Airport, and approximately 3,000 feet west of the County of Hawaii's Sewer Treatment Plant. Surrounding uses include the Hawaii County transfer station and landfill sites, existing quarry operations, a skeet range, and vacant State-owned lands. Water, sewer, and electricity are not available at the subject property and portable restrooms will be used. Roads within the property are not used by the general public.

Property Description

The 140.368 parcel is partially forested and partially being actively quarried for rock and aggregate. The property is zoned Agricultural (A-5a) under the County's General Plan and is not located within the County's Special Management Area ("SMA"). The property is located within Zone X, outside the 500-year flood hazard area.

The U.S. Department of Agriculture, Soil Conservation Service, classifies the soils on the property as Paipai series (rPae) and Lava Flows, Pahoehoe (rLW). Paipai series consists of well-drained, thin, extremely stony organic soils over fragmental 'A'a lava. Permeability is rapid, runoff is slow and erosion hazard is slight. The Land Study Bureau's detailed land classification classifies the property as overall (master) productivity rating class "E" or Very Poor.

Existing Vegetation

The areas of the property that have not been quarried are forested with both native and non-native vegetation. Per condition #11 of SP14-404, a flora study was commissioned by Jas. W. Glover, Ltd. and conducted by Geometrician Associates, LLC in June 2017. A copy of this study is attached and has been submitted to the County Planning Department for review and approval. The study found "no threatened or endangered plant species listed or proposed for listing by the U.S. Fish and Wildlife Service (2017) appear to be present on the subject area. The vegetation does not provide highly or uniquely valuable habitat for native fauna. No existing or proposed federally designated critical habitat is present on the subject area. The history of nearby and onsite disturbance coupled with heavily invaded conditions and lowland context indicates that the subject area has very limited value in terms of conserving threatened or endangered native plant species".

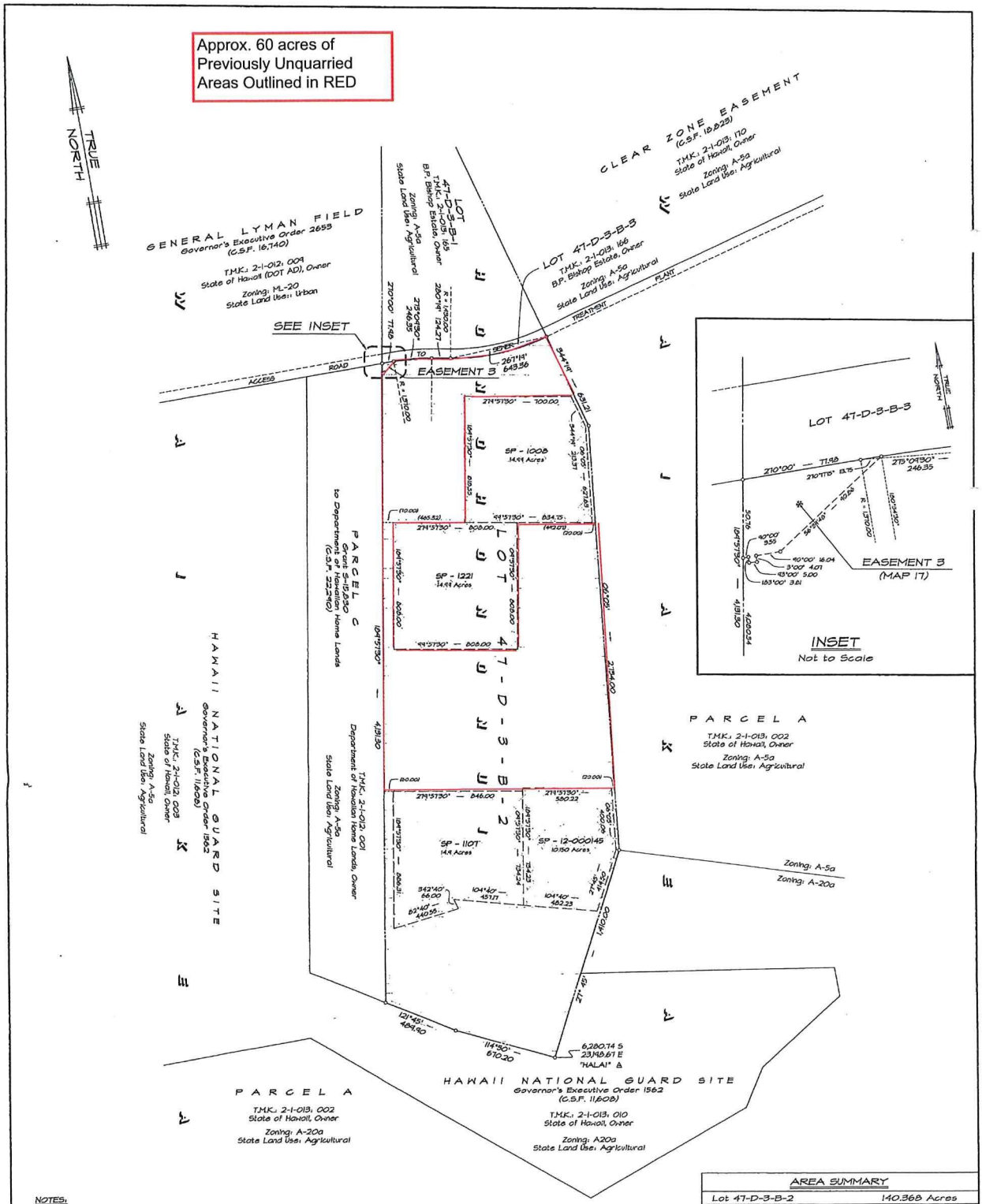
Restoration

We will maintain haul and access road integrity as long as we maintain quarry activities in the area and we will incorporate our restoration activities as mining progresses. Given the poor soils on the permit site, quarrying activities on the previously unquarried area of the permit site will not substantially alter or change the essential character of the land and its use except in terms of a lower elevation where rock has been removed. After mining, hazards from erosion will remain slight as the property is located outside the 500-year flood zone and not adjacent to any streams, rivers or other waterways.

With a lower topography due to mining, restoration efforts will focus on mitigating fall hazards by providing barriers to the quarry floor from adjacent roadways. Our restoration plan is to leave the property in a non-hazardous condition by constructing berms as physical barriers for access and benching or sloping quarry walls. We will concentrate on mined areas that border the eastern boundaries, paying special attention to restricting any unwarranted access. A berm (refer to attached diagram) will run parallel to the existing boundary line at the top of the boundary wall to provide a barrier to vehicle and pedestrian access. Exposed quarry walls along boundaries will either be blasted to create a second bench or graded with excess on-site material at an approximate one-to-one slope.

Revegetation

None of the current vegetation on the previously unquarried areas have been planted, but have grown from naturally scattered seed after previous bulldozing and pasture development activities, and our intent is to leave the property to allow for similar natural re-growth. The attached flora study also concluded that "No substantially adverse impact to native flora or vegetation would be expected as a part of clearing and utilizing the subject area for a quarry, as no intact native vegetation and no threatened or endangered species are present." The existing soils are classified as very poor so no agricultural or planting activities will be undertaken. Our plan is to allow for natural revegetation.



NOTES:

1. Adjacent property ownership shown is from County of Hawaii Real Property Tax Office Site.
2. Zoning designation and state land use designation obtained from County of Hawaii Arc Reader.
3. Land Use Pattern Allocation Guide (LUPAG) designation obtained from County of Hawaii Arc Reader. Designation is Extensive Agricultural (ea) and Important Ag. Lands (ial).
4. Site is with in Zone X, areas determined to be outside of the 0.2% annual chance floodplain. No baseflood elevations or depts are shown within this zone. Site is on Flood Insurance Rate Map, Community-Panel Number 155166 0005 C, Map Revised: September 16, 1988.

AREA SUMMARY	
Lot 47-D-3-B-2	140.368 Acres
SP - 1008	14.99 Acres
SP - 1221	14.99 Acres
SP - 1107	14.9 Acres
SP - 12-000145	10.150 Acres
Remainder Lot 47-D-3-B-2	85.338 Acres

PROJECT SITE

REMAINDER OF LOT 47-D-3-B-2 OF LAND COURT APPLICATION 433 AS SHOWN ON MAP 16

IN THE 'ILI OF HONOHONONUI
SOUTH HILO, ISLAND OF HAWAII, HAWAII
Tax Map Key: 3rd DIV. 2-1-013: 004

GRAPHIC SCALE
500 0 150 300 600 1200
(IN FEET)

PREPARED FOR:
Jas. W. Glover, Ltd.
890 Leilani Street
Hilo, Hawaii 96720

OWNER:
B. P. Bishop Estate
567 South King Street, Suite 200
Honolulu, Hawaii 96813

INABA ENGINEERING, INC.
213 Holomoana Ave.
Hilo, Hawaii 96720

ALAN Z. INABA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 5626
HAWAII, U.S.A.

This work was prepared by me or under my supervision.

Alan Z. Inaba
Licensed Professional Land Surveyor
Certificate Number 5626
License Expires: April 30, 2014
Land Court Surveyor Number 244
February 21, 2013
Revised: February 20, 2014

IEI #13005

13005-3dWaiver.dwg

Exhibit 8

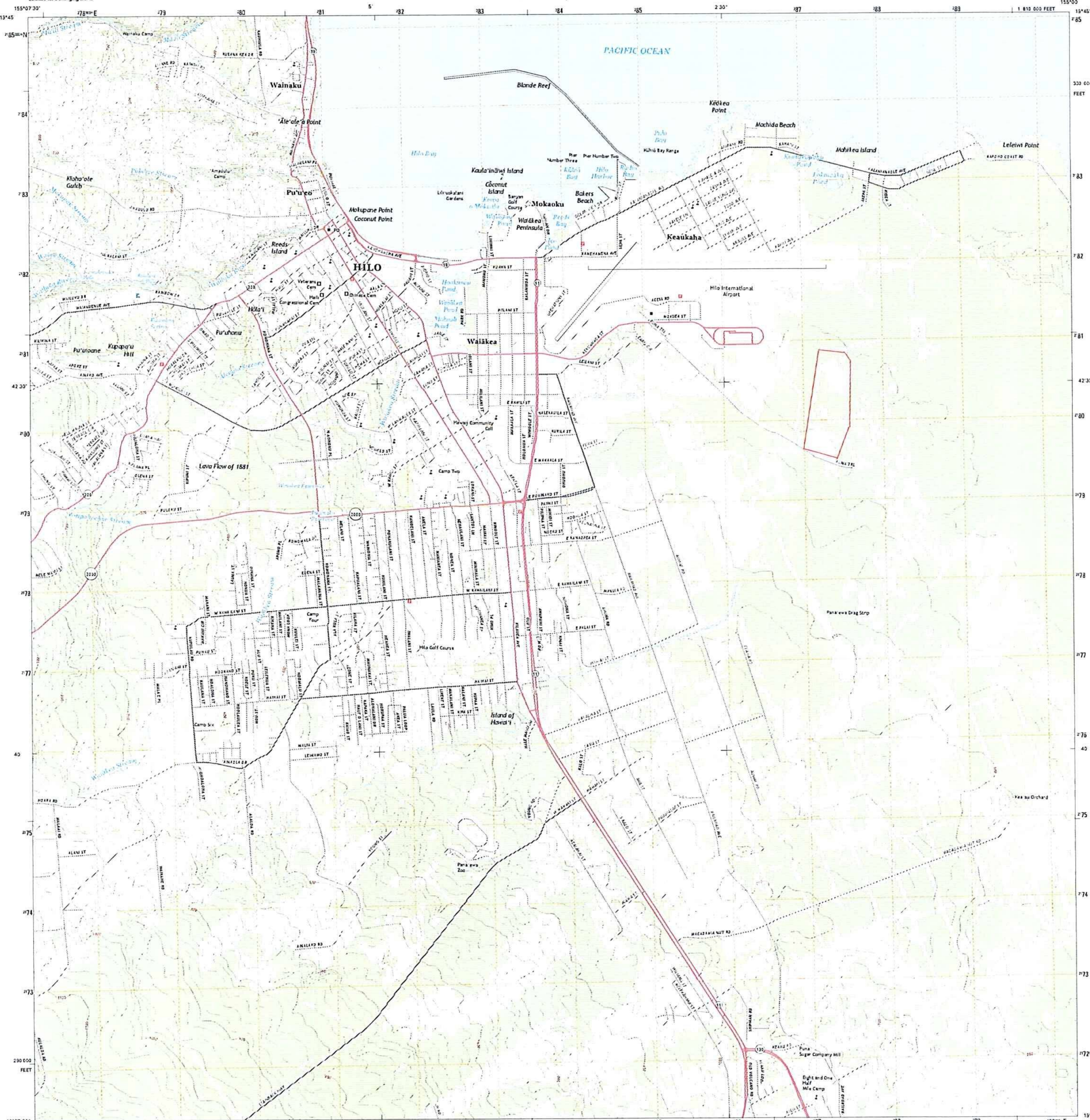

Blue Hawaiian
Helicopters
Hilo International Airport
UNQUARRIED AREA
Approx. 60 Acres
WWTP ROADWAY
ACCESS ROADWAY TO SITE
Google

USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

The National Map
US Topo

HILO QUADRANGLE
HAWAII-HAWAII CO.
7.5-MINUTE SERIES



SCALE 1:24 000

CONTOUR INTERVAL 20 FEET
DATUM IS LOCAL MEAN SEA LEVEL

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.11

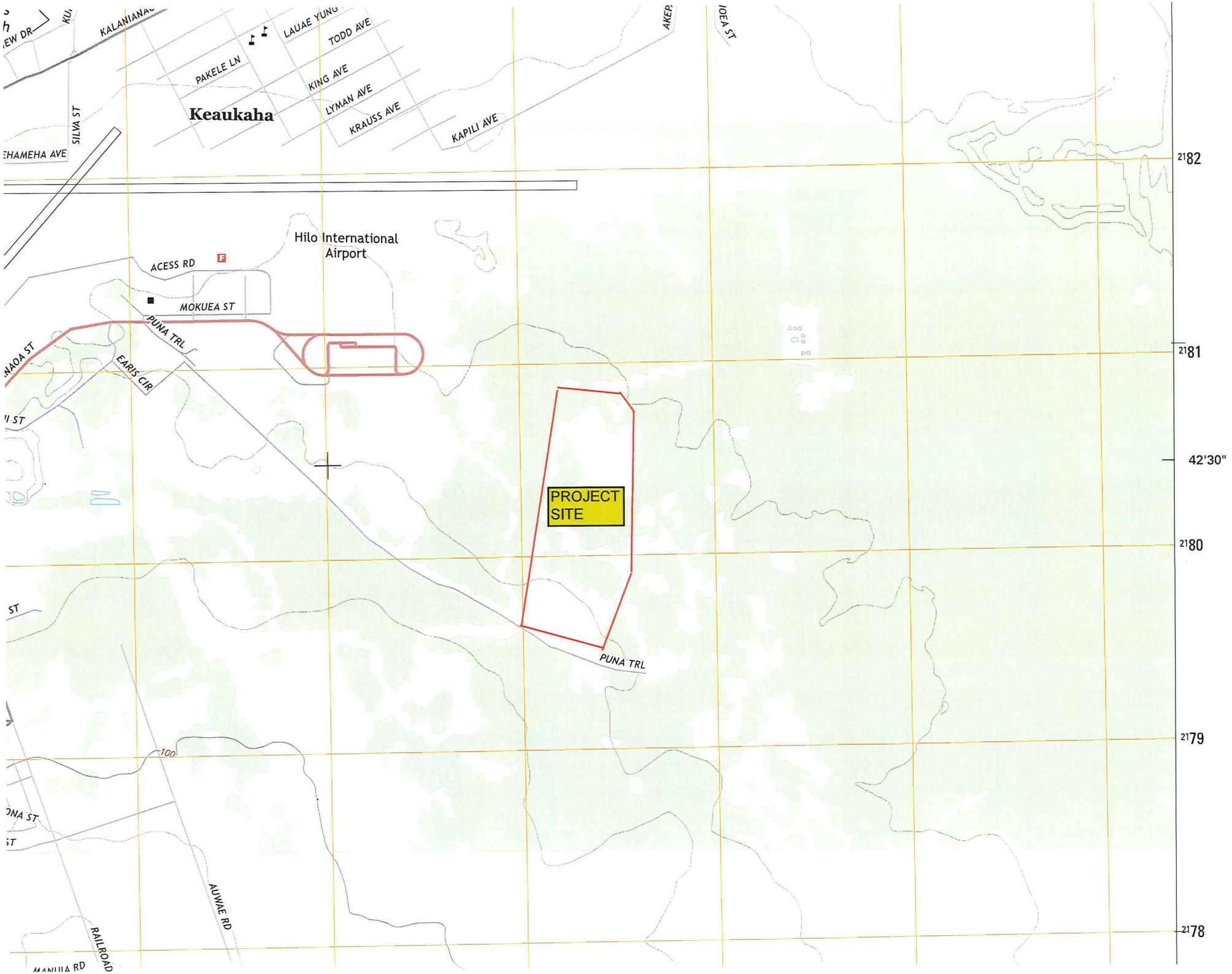
Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 05Q
10 000-foot ticks: Hawaii Coordinate System of 1983 (zone 1)

Imagery .... Digital Globe, January 2011
Roads .... ©2006-2012 TomTom
Names .... GNIS, 2012
Hydrography .... National Hydrography Dataset, 2011
Contours .... National Elevation Dataset, 2000
Boundaries .... Census, IBWC, IBC, USGS, 1972 - 2012

UTM GRID AND 2013 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

ROAD CLASSIFICATION
Expressway — Local Connector
Secondary Hwy — Local Road
Ramp — 4WD
Interstate Route — US Route — State Route

HILO, HI
2013


Keaukaha
PAKELE LN
TODD AVE
KING AVE
LYMAN AVE
KRAUSS AVE
KAPILI AVE
SILVA ST
LAUAE YUNG
AKEP
IOEA ST
Hilo International Airport
ACESS RD
MOKUEA ST
PUNA TRL
EARLS CIR
PROJECT SITE
PUNA TRL
AUWAE RD
RAILROAD
2182
2181
42'30"
2180
2179
2178

1. Photo looking from western boundary road at northwest corner of southern unquarried area.

2. Photo looking from western boundary road at southwest corner of northern unquarried area.

3. Photo looking east from western boundary-southern end of unquarried areas on left - active quarries on right (#SP-1107 in right foreground and SP 12-000145 in right background)

4. Photo looking south at northern end of southern unquarried area – from SP-1221.

5. Photo looking east at western end of eastern unquarried area – from SP-1221.

6. Photo looking north at southern end of northern unquarried area – from SP-1221.

Botanical Survey of a 60-acre Portion of TMK (3rd.) 2-1-003:004 Honohononui, South Hilo District, Island of Hawai'i

By Ron Terry, Ph.D., Layne Yoshida, B.A. and Jen Johansen, B.A.
Geometrician Associates, LLC
June 2017

Introduction

This botanical survey was prepared for Jas. W. Glover, Ltd. as part of compliance with conditions of Special Permit SP14-404, which was granted by the Hawai'i State Land Use Commission to allow quarry uses a 60-acre portion (the "subject area") of TMK 2-1-003:004 (Lot 47-D-3-B-2) (Figures 1-2). The subject area is currently mostly covered in forest.

Existing Vegetation Influences and Botanical Resources

The climate in the area is mild and moist, with an average annual rainfall of about 130 inches and a mean annual temperature of approximately 75 degrees Fahrenheit (UH Hilo-Geography 1998:57). Geologically, the project site is located on the flanks of Mauna Loa Volcano, and the surface consists of 'a'a lava flows dated to 750 to 1,500 years before the present (Wolfe and Morris 1996). The U.S. Natural Resources Conservation Service classifies the soil at the subject area as Papai extremely cobbly highly decomposed plant material, 2 to 10 percent slopes.

Prior to human settlement of Hawai'i, the natural vegetation of parts of Hilo with this geologic setting was mostly lowland wet forest, dominated by 'ōhi'a (*Metrosideros polymorpha*), lama (*Diospyros sandwicensis*), kolea (*Myrsine lessertiana*), kopiko (*Psychotria hawaiiensis*), hala (*Pandanus tectorius*) trees, the climbing fern 'uluhe (*Dicranopteris linearis*), and various other trees, ferns, grasses, sedges and herbs (Gagne and Cuddihy 1990).

Most of the native forest within two miles of the coast in Hilo has been transformed through agriculture and development into non-native, human managed vegetation. Even where direct development has not occurred, wildfire and invasion by aggressive non-natives have changed the vegetation in ways subtle to profound. In such areas, non-natives including strawberry guava (*Psidium cattleianum*), gunpowder tree (*Trema orientalis*), bingabing (*Macaranga mappa*), Chinese banyan (*Ficus microcarpa*), shoebutton ardisia (*Ardisia elliptica*), *Melastoma candida* and albizia (*Falcataria moluccana*), among others, usually dominate native species. The effect is most prominent near disturbed edges. Although some individual large trees, shrubs, herbs, vines and ferns may remain, the degree of native species diversity is usually low. Rare, threatened and endangered plants are rarely if ever found. For this reason, no critical plant habitat for this forest type in Hilo has ever been designated by the U.S. Fish and Wildlife Service.

We reviewed botanical surveys of areas near the proposed Glover quarry expansion. These included Whistler's (2003) survey of transect-based plots on 108 acres in the Keaukaha Military Reservation, Char's 23-acre survey for the Hilo Wastewater Treatment Plant, and various surveys conducted by Geometrician Associates for the Hawai'i County Department of Environmental Management in and around the South Hilo Sanitary Landfill, for the Sort Station, Vertical Landfill Expansion and miscellaneous other projects. Each of these surveys indicated a vegetation that generally conformed to

a pattern of substantial degradation, fairly low native species diversity, and an absence of rare or threatened or endangered plant species.

However, it is noteworthy that in a few very unusual locations, one endangered plant has persisted, if barely: *Cyrtandra nanawaleensis*, or haiwale. This inconspicuous low shrub in the African violet family (Gesneriaceae) plant was listed as endangered in 2015. At the time of its proposed listing in 2012, it was known only from a few locations in the lowland wet ecosystem of the Puna District on the island of Hawai'i (Federal Register: October 17, 2012). There were four occurrences with approximately 140 individuals in Nanawale, Keauohana, and Malama Ki Forest Reserves. Conversion of areas within the Halepuaa section of Nanawale FR to papaya production over the past 25 years was thought to have contributed to the decline of the species in this area. Biologists cited in the Federal Register indicated that *C. nanawaleensis* was in decline throughout its already limited range. Since that time, the plant has been detected in a few other locations, including Conservation District land near Pu'u Kaliu in Puna owned by Kamehameha Schools, where several patches with a few dozen plants were discovered by our firm during a botanical survey for a proposed quarry. A few small patches of *Cyrtandra* at the Keaukaha Military Reservation (KMR), assigned originally by botanist Art Whistler (2003) to the closely related species *C. paludosa*, were later determined to be C. *nanawaleensis*.

Methods

The botanical survey of the subject area was conducted systematically by having botanists slowly walk zigzag transects spaced 15 meters apart, which allowed a view of the entire ground surface and canopy. The survey was conducted by Ron Terry, Layne Yoshida and Jen Johansen on four separate days in May 2017. Ron Terry also visited the nearby KMR to examine a patch of *Cyrtandra nanawaleens*is to gain an idea of its appearance, growth habit and condition in very similar forest. During the survey, plant samples were collected and later analyzed in the lab, as appropriate, to generate or confirm plant IDs.

Results: Vegetation and Flora

The reader is referred to Figure 2 for photographs that illustrate the information presented below.

The vegetation was in general a closed-canopy forest dominated by the non-native species bingabing, albizia, gunpowder tree, strawberry guava and *Cecropia obtusifolia*. Jointly, they appeared to account for well over 75% of both cover and biomass. The only abundant native tree was 'ōhi'a, although hala and lama also penetrated the canopy in a few places. A large variety of shrubs, ferns, herbs and vines made up the lower vegetation levels. Although dominated by non-natives, numerous native ferns (including two native tree ferns) as well as kopiko, lama and the vining pandanus 'ie'ie (*Freycinetia arborea*) were also present. Unfortunately, the native component of the forest is clearly disappearing at a rapid rate. The vegetation still showed the effects of severe windfall from Tropical Storm Iselle, which hit the island in 2014.

Despite the domination by natives, 25 of the 115 species we identified were native (22%). Of these, 8 (7%) were endemic, i.e., found in Hawai'i and nowhere else, and 17 (15%) were indigenous. All plants detected in the survey are relatively common in Hawai'i. None are rare, threatened or endangered. No *Cyrtandra nanawaleensis* was detected, and the environment did not appear as conducive to its survival as it is at KMR. Inspection of KMR determined that rather than dominance by bingabing, which creates dense shade and cover the forest floor in the giant leaves shed by this plant, the non-

native canopy at KMR near the *Cyrtandra* patch is dominated by cecropia. These tall, rangy trees allow much more light penetration and do not shed and cover the native plants below as completely. No systematic determination of the presence or absence of wetlands, which requires examination of hydrology, soil, and vegetation, was performed as part of the biological survey. However, based on the authors' experience with jurisdictional wetlands and the climate and geology of the area, no wetlands appeared to be present and no wetlands vegetation was detected.

In summary, no threatened or endangered plant species listed or proposed for listing by the U.S. Fish and Wildlife Service (2017) appear to be present on the subject area. The vegetation does not provide highly or uniquely valuable habitat for native fauna. No existing or proposed federally designated critical habitat is present on the subject area. The history of nearby and onsite disturbance coupled with heavily invaded conditions and lowland context indicates that the subject area has very limited value in terms of conserving threatened or endangered native plant species.

Impacts and Mitigation Measures

No substantially adverse impact to native flora or vegetation would be expected as a part of clearing and utilizing the subject area for a quarry, as no intact native vegetation and no threatened or species are present. Jas. W. Glover Ltd., may wish to consider salvaging native and non-native trees for wood, in consultation with landowner Kamehameha Schools.

Report Limitations

No botanical survey of a large and/or densely vegetated area can claim to have detected every species present. Some plant species are cryptic in juvenile or even mature stages of their life cycle. Dry conditions can render almost undetectable plants that extended rainfall may later invigorate and make obvious. Thick brush can obscure even large, healthy specimens. The findings of this survey must therefore be interpreted with proper caution; in particular, there is no warranty as to the absence of any particular species.

REFERENCES

Char, W. 1988. "Botanical Survey, Hilo Wastewater Treatment Facility Relocation Site." Appendix A in Final Supplemental Environmental Impact Statement, Hilo Wastewater Treatment and Conveyance Facilities. Prep. by M&E Pacific for County of Hawai'i, Department of Public Works.

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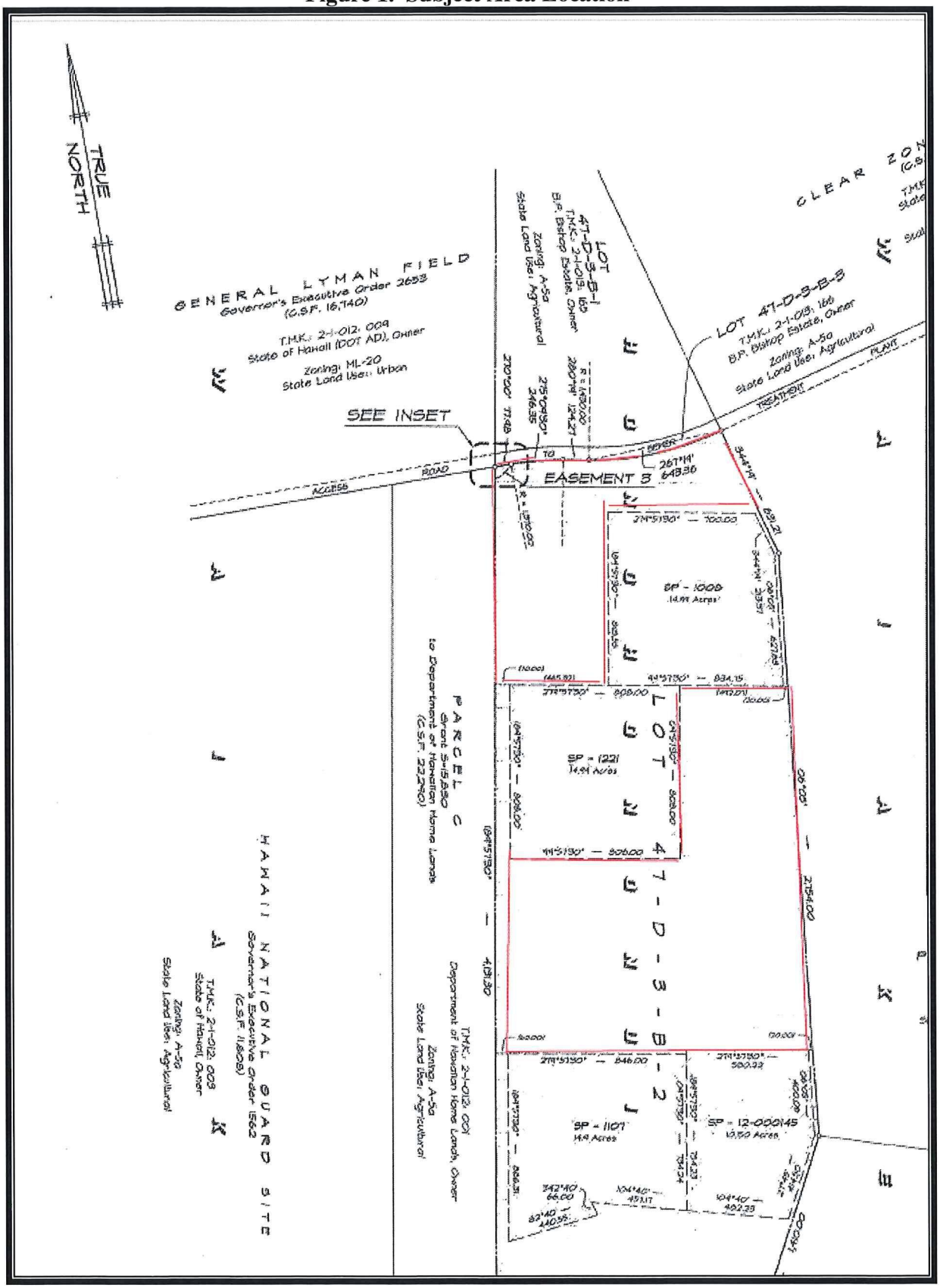
Whistler, A. 2003. *Forestry Inventory of the Keaukaha Military Reservation (KMR), Hawaii Island.* Reported prep. for the Environmental Office, Hawaii Army National Guard, Honolulu, Hawai'i.

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

Figure 1. Subject Area Location



Botanical Survey of a 60-acre Portion of TMK 2-1-003:004

Figure 2. Subject Area Vegetation Photos

2a. Dense canopy of bingabing and gunpowder tree ▲ ▼ 2b. ʻŌhiʻa penetrates canopy in a few spots

Figure 3. Subject Area Vegetation Photos

2c. Typical floor under bingabing canopy ▲ ▼ 2d. ʻIeʻie vines on ʻōhiʻa

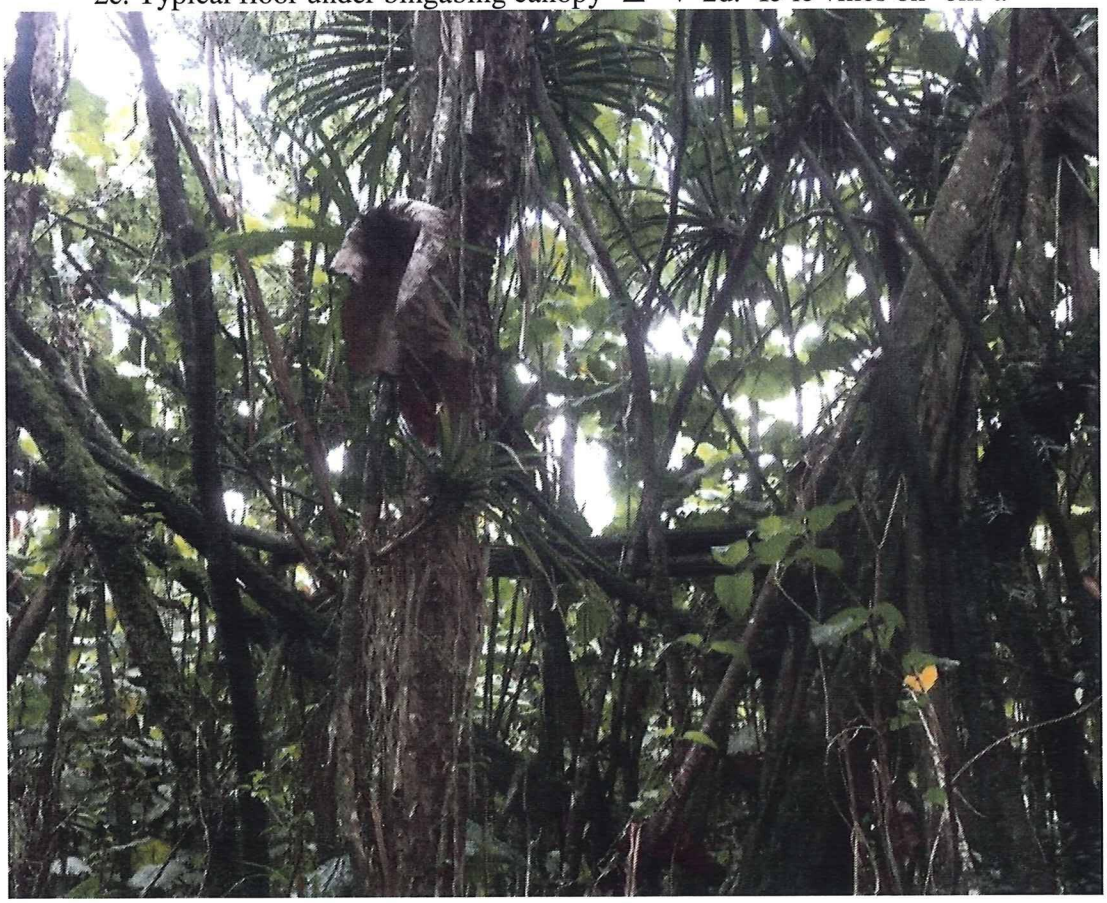
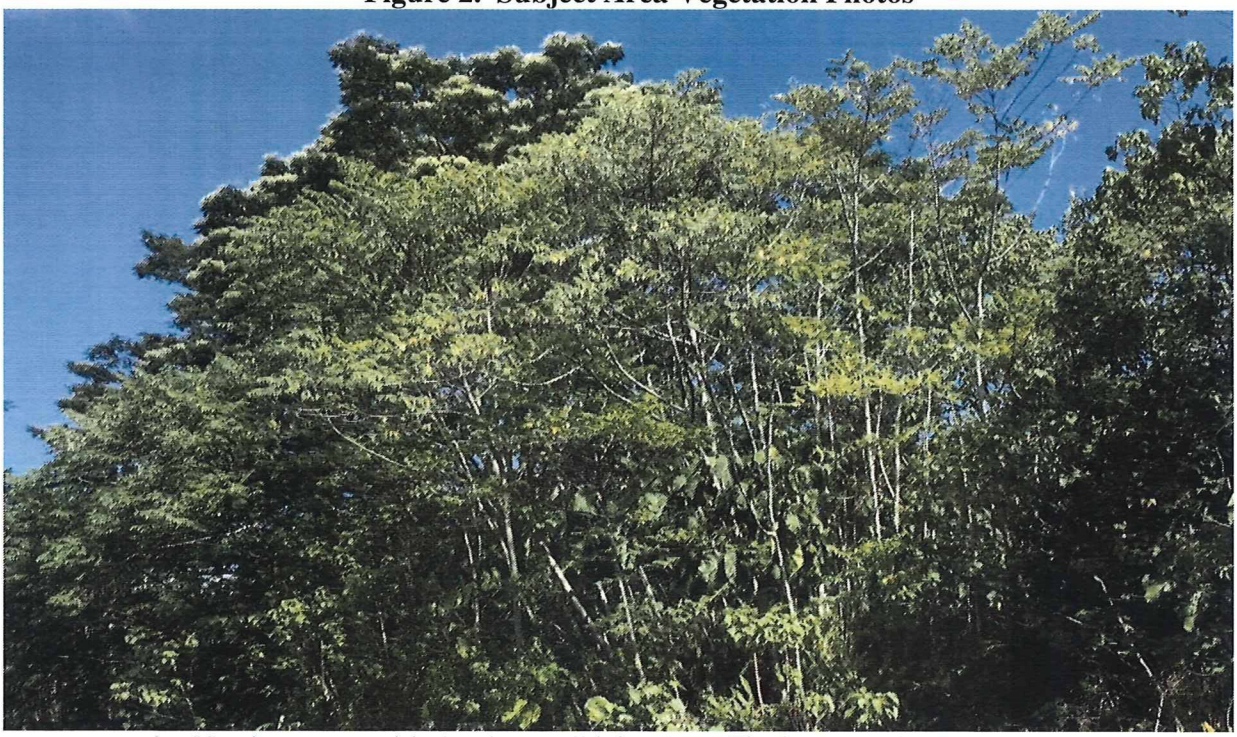


Figure 2. Subject Area Vegetation Photos



2e. Northern area with dominant albizia ▲ ▼ 2f. Patch of ʻōhiʻa and kopiko

Table 1. Plant Species Observed in Subject Area

Scientific Name	Family	Common Name	Life Form	Status*
Ageratum conyzoides	Asteraceae	Ageratum	Herb	A
Ageratum houstonianum	Asteraceae	Ageratum	Herb	A
Alistonia macrophylla	Apocynaceae	Alistonia	Tree	A
Alyxia stellata	Apocynaceae	Maile	Vine	I
Andropogon virginicus	Poaceae	Andropogon	Herb	A
Archontophoenix alexandrae	Arecaceae	King Palm	Tree	A
Ardisia elliptica	Primulaceae	Shoebutton Holly	Shrub	A
Arundina bambusifolia	Orchidaceae	Bamboo Orchid	Herb	A
Asplenium nidus	Aspleniaceae	Ekaha	Fern	I
Athyrium microphyllum	Athyriaceae	Akolea	Fern	E
Begonia hirtella	Begoniaceae	Begonia	Herb	A
Bidens alba	Asteraceae	Bidens	Herb	A
Bidens pilosa	Asteraceae	Beggar's Tick	Herb	A
Blechnum appendiculatum	Blechnaceae	Blechnum	Fern	A
Buddleia asiatica	Buddleiaceae	Buddleia	Shrub	A
Cassytha filiformis	Lauraceae	Kauanoa pehu	Vine	I
Castilleja arvensis	Orobanchaceae	Indian paintbrush	Herb	A
Cecropia obtusifolia	Urticaceae	Cecropia	Tree	A
Cestrum nocturnum	Solanaceae	Night Jasmine	Shrub	A
Chamaecrista nictitans	Fabaceae	Chamaecrista	Herb	A
Chloris barbata	Poaceae	Chloris	Herb	A
Christella cyatheoides	Thelypteridaceae	Kikawaio	Fern	E
Cibotium chamissoi	Dicksoniaceae	Hapu'u meu	Tree	E
Cibotium menziesii	Dicksoniaceae	Hapu'u i'i	Fern	I
Clidemia hirta	Melastomataceae	Clidemia	Herb	A
Clusia rosea	Clusiaceae	Autograph Tree	Tree	A
Cocculus orbiculatus	Menispermaceae	Huehue	Vine	I
Commelina diffusa	Commelinaceae	Honohono	Herb	A
Cordyline fruticosa	Agavaceae	Ti	Shrub	PI
Crotalaria spp.	Fabaceae	Rattlepod	Herb	A
Cuphea carthagenensis	Lythraceae	Tarweed	Herb	A
Cyperus polystachyos	Cyperaceae	Pycreus Sedge	Herb	I
Desmodium sandwicense	Fabaceae	Tickfoil	Herb	A
Desmodium triflorum	Fabaceae	Desmodium	Herb	A
Dicranopteris linearis	Gleicheniaceae	Uluhe	Fern	I
Dioscorea pentaphylla	Dioscoreaceae	Five-leaf Yam	Vine	PI
Diospyros sandwicensis	Ebenaceae	Lama	Tree	E
Dissotis rotundifolia	Melastomataceae	Dissotis	Vine	A
Elaphoglossum pellucidum	Dryopteridaceae	Hoe a Maui	Fern	E
Emilia fosbergii	Asteraceae	Pualele	Herb	A
Emilia sonchifolia	Asteraceae	Pualele	Herb	A
Epidendrum sp.	Orchidaceae	Epidendrum	Herb	A
Eragrostis sp.	Poaceae	Eragrostis	Herb	A
Euphorbia hirta	Euphorbiaceae	Garden Spurge	Herb	A
Euphorbia hypericifolia	Euphorbiaceae	Graceful Spurge	Herb	A
Falcataria moluccana	Fabaceae	Albizia	Tree	A

Table 1, continued

Scientific Name	Family	Common Name	Life Form	Status*
Ficus microcarpa	Moraceae	Chinese Banyan	Tree	A
Fimbristylis dichotoma	Cyperaceae	Fimbristylis	Herb	I
Freycinetia arborea	Pandanaceae	ʻIe ʻIe	Vine	I
Gonocormus minutus	Hymenophyllaceae	Gonocormus	Fern	I
Haplopteris elongata	Vittariaceae	ʻOheʻohe	Fern	I
Hedychium sp.	Zingiberaceae	Ginger	Herb	A
Hedyotis biflora	Rubiaceae	Hedyotis	Herb	A
Heterocentron subtriplinervium	Melastomataceae	Pearl Flower	Herb	A
Hyptis pectinata	Lamiaceae	Hyptis	Herb	A
Ipomoea indica	Convolvulaceae	Morning Glory	Vine	I
Kyllinga brevifolia	Cyperaceae	Kyllinga	Herb	A
Lantana camara	Verbenaceae	Lantana	Shrub	A
Lepisorus thunbergianus	Polypodiaceae	Lepisorus	Fern	I
Lygodium japonicum	Schizaeaceae	Japanese Climbing Fern	Fern	A
Macaranga mappa	Euphorbiaceae	Bingabing	Tree	A
Macaranga tanarius	Euphorbiaceae	Macaranga	Tree	A
Machaerina mariscoides	Cyperaceae	Uki	Herb	I
Mangifera indica	Anacardiaceae	Mango	Tree	A
Megathyrsus maximus	Poaceae	Guinea Grass	Herb	A
Melinis repens	Poaceae	Natal Red Top	Herb	A
Melinus minutiflora	Poaceae	Molasses Grass	Herb	A
Melochia umbellata	Sterculiaceae	Melochia	Tree	A
Metrosideros polymorpha	Myrtaceae	ʻŌhiʻa	Tree	E
Michelia sp.	Magnoliaceae	Michelia	Tree	A
Miconia calvescens	Melastomataceae	Miconia	Tree	A
Mimosa pudica	Fabaceae	Sleeping Grass	Herb	A
Morinda citrifolia	Rubiaceae	Noni	Tree	A
Myrsine lessertiana	Myrsinaceae	Kolea	Tree	E
Nephrolepis cordifolia	Nephrolepidaceae	Sword Fern	Herb	I
Nephrolepis exaltata	Nephrolepidaceae	Sword Fern	Fern	I
Nephrolepis multiflora	Nephrolepidaceae	Sword Fern	Fern	A
Ophioderma pendulum	Ophioglossaceae	Ophioderma	Fern	I
Oplismenus hirtellus	Poaceae	Basket Grass	Herb	A
Paederia foetida	Rubiaceae	Maile Pilau	Vine	A
Pandanus tectorius	Pandanaceae	Hala	Tree	I
Paspalum conjugatum	Poaceae	Hilo Grass	Herb	A
Paspalum urvillei	Poaceae	Paspalum	Herb	A
Passiflora edulis	Passifloraceae	Lilikoi	Vine	A
Pennisetum purpureum	Poaceae	Elephant Grass	Herb	A
Phaius tankervilleae	Orchidaceae	Chinese Ground Orchid	Herb	A
Philodendron sp.	Araceae	Philodendron	Herb	A
Phlebodium aureum	Polypodiaceae	Golden Polypody	Fern	A
Phyllanthus debilis	Euphorbiaceae	Phyllanthus	Herb	A
Phymatosorus grossus	Polypodiaceae	Laua'e	Fern	A
Pityrogramma calomelanos	Pteridaceae	Silver Fern	Fern	A
Pluchea carolinensis	Asteraceae	Pluchea	Shrub	A
Polygala paniculata	Polygalaceae	Milkwort	Herb	A

Table 1, continued

Scientific Name	Family	Common Name	Life Form	Status*
Psidium cattleianum	Myrtaceae	Strawberry Guava	Tree	A
Psilotum nudum	Psilotaceae	Moa	Fern ally	I
Psychotria hawaiiensis	Rubiaceae	Kopiko	Tree	E
Pteridium aquilinum subsp. decompositum	Hypolepidaceae	Bracken Fern	Fern	E
Pteris cretica	Pteridaceae	ʻOali	Fern	I
Rhynchospora caduca	Cyperaceae	Beak Rush	Herb	A
Rubus rosifolius	Rosaceae	Thimble Berry	Herb	A
Sacciolepis indica	Poaceae	Glenwood Grass	Herb	A
Sadleria cyatheoides	Blechnaceae	Amaʻu fern	Fern	E
Schefflera actinophylla	Araliaceae	Octopus Tree	Tree	A
Schizachyrium condensatum	Poaceae	Beardgrass	Herb	A
Scleria testacea	Cyperaceae	Scleria	Herb	I
Spathoglottis plicata	Orchidaceae	Philippine Ground Orchid	Herb	A
Sphenomeris chinensis	Lindseaceae	Palaʻa fern	Fern	I
Spermacoce assurgens	Rubiaceae	Spermacoce	Herb	A
Stachytarpheta jamaicensis	Verbenaceae	Jamaican Vervain	Shrub	A
Syzygium cumini	Myrtaceae	Java Plum	Tree	A
Themeda villosa	Poaceae	Lyon's Grass	Herb	A
Trema orientalis	Ulmaceae	Trema	Tree	A
Urochloa mutica	Poaceae	California Grass	Herb	A

A=Alien PI=Polynesian Introduction E=Endemic I=Indigenous END= Listed Endangered (none)