

William P. Kenoi
Mayor



Tiffany Kai
Administrator
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**OFF. OF ENVIRONMENTAL
QUALITY CONTROL**

County of Hawai'i
Mass Transit Agency

25 Aupuni Street • Hilo, Hawai'i 96720 • (808) 961-8343 • Fax (808) 961-8745

April 7, 2015

Jessica Wooley, Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 S. Beretania Street, Room 702
Honolulu, Hawai'i 96813

FILE COPY

APR 23 2015

Dear Director Wooley:

With this letter, the County of Hawai'i Mass Transit Agency hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI) for the Base Yard and Maintenance Facility situated at TMK (3) 2-1-013:148 (portion), in the South Hilo District on the island of Hawai'i for publication in the next available edition of the Environmental Notice.

Enclosed is a completed OEQC Publication Form, two copies of the DEA-AFONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Tiffany Kai at (808) 961-8343.

Sincerely,

Tiffany Kai
Administrator

Enclosures:

- OEQC Publication Form
- DEA-AFONSI (2 copies)
- CD with an Adobe Acrobat PDF file of the DEA-AFONSI and a MS Word file of the publication form

AGENCY ACTIONS
SECTION 343-5(B), HRS
PUBLICATION FORM (FEBRUARY 2013 REVISION)

Project Name: County of Hawai'i Mass Transit Agency Base Yard and Maintenance Facility

Island: Hawai'i

District: South Hilo

TMK: (3) 2-1-013:0148 (portion)

Permits: Special Permit, Plan Approval, National Pollutant Discharge Elimination System Permit, Grading/Building Permits, Noise Permit

Proposing/Determination Agency:

County of Hawai'i Mass Transit Agency

Attn: Tiffany Kai

25 Aupuni Street

Hilo, HI 96720

(808) 961-8343

Accepting Authority:

N/A

Consultant:

PBR HAWAII & Associates, Inc.

Attn: Bethany Wylie

1001 Bishop St., Suite 650

Honolulu, HI 96813

(808) 521-5631

Status (check one only):

DEA-AFNSI

Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.

FEA-FONSI

Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

FEA-EISPN

Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.

Act 172-12 EISPN

Submit the proposing agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.

DEIS

The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.

FEIS

The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

___ Section 11-200-23
Determination

The accepting authority simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the proposing agency. No comment period ensues upon publication in the periodic bulletin.

___Section 11-200-27
Determination

The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

___Withdrawal (explain)

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

The County of Hawai'i Mass Transit Authority (MTA) is proposing to construct a base yard and maintenance facility for transit operations ("the Base Yard and Maintenance Facility"). The proposed base yard will be located on a five-acre portion of tax map key (TMK) (3) 2-1-013:148 on Pana'ewa Drag Strip Road in Waiākea, South Hilo, Island of Hawai'i ("the Project Site").

The purpose of the proposed Base Yard and Maintenance Facility is to better support the MTA's operations, which include providing island-wide public transportation, administrative support to the Hawai'i County Transportation Commission, and overseeing taxicab operators. The MTA has grown significantly over the years and is in need of its own facility to improve efficiency and the work environment. Currently, it is located in the Schultz Siding facility where it shares limited space with the Department of Public Works.

Development of the proposed Base Yard and Maintenance Facility will include construction of a 26,500 square foot building with 19,500 square feet of warehouse space for transit vehicle maintenance, washing, and repair. The building will also include office space for administrative staff who oversee daily transit operations as well as storage space.

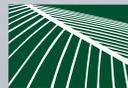
County of Hawai'i Mass Transit Agency Base Yard and Maintenance Facility

Draft Environmental Assessment
Anticipated Finding of No Significant Impacts (HRS 343)

Prepared for

County of Hawai'i Mass Transit Agency
and Mitsunaga and Associates, Inc.

Prepared by



PBR HAWAII
& ASSOCIATES, INC.

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NEOPLAN

April 2015

COUNTY OF HAWAII MASS TRANSIT AGENCY BASE YARD AND MAINTENANCE FACILITY

*Draft Environmental Assessment –
Anticipated Finding of No Significant Impacts
(HRS 343)*

Prepared for:

County of Hawai'i Mass Transit Agency
and Mitsunaga and Associates, Inc.

Prepared by:



April 2015

SUMMARY

Project Name:	Mass Transit Agency Base Yard and Maintenance Facility
Location:	Waiākea Homesteads, Waiākea, South Hilo, Island and County of Hawai'i
Judicial District:	South Hilo
Tax Map Key (TMK):	(3) 2-1-013:148 (portion)
Land Area:	5 acres
Proposing Agency:	County of Hawai'i Mass Transit Agency
Landowner:	State of Hawai'i
Existing Use:	Vacant land
Proposed Action:	Construction of a Base Yard and Maintenance Facility for County buses using state land and federal funds.
Current Land Use Designations:	<i>State Land Use:</i> Agriculture <i>County General Plan LUPAG:</i> Important Ag Lands and Extensive Agriculture <i>County Zoning:</i> Agriculture (A-20a) <i>Special Management Area (SMA):</i> Not in SMA
Alternatives Considered:	Besides the proposed action, three alternatives were considered: <ul style="list-style-type: none">• No action• Two other alternative sites
Potential Impacts and Mitigation Measures:	<p>The Project will have beneficial impacts by enhancing the county's mass transit service. Mass transit reduces reliance on automobiles and serves those who do not drive. As a secondary benefit to surrounding county facilities (e.g., Pana'ewa Drag Strip), the extension of water and power to the Project Site may allow for these facilities to connect at a shorter distance than existing conditions.</p> <p>Any potential adverse impacts would be mitigated as follows:</p>

COUNTY OF HAWAI'I MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

Potential Impacts and Mitigation Measures (cont.):

- Design measures:
 - To mitigate operational noise affecting existing or future residences to the west of the Project Site, the building will be enclosed and any noise emitted from openings in the building will be directed to the north.
 - To mitigate stormwater impacts, on-site drainage design will incorporate low impact development practices such as vegetated buffer/filter strips, open vegetated channels, and infiltration.
 - To mitigate erosion and sedimentation impacts during construction, the grading plans will specify some or all of the following best management practices:
 - Early construction of drainage control features;
 - Construction of temporary sediment basins to trap silt;
 - Use of temporary berms and cut-off ditches where needed; and
 - Use of temporary silt fences or straw bale barriers to trap silt.
 - To maintain any of the existing levee's possible drainage utility, the on-site berm will be preserved but will be moved outside of the Project Site. Relocation of the levee will be coordinated with the Four Mile Creek Drainage Improvement Project currently under study by the Army Corps of Engineers.
 - To mitigate potential impact to seabirds, the design will specify shielded outdoor lights in conformance with County Code outdoor lighting requirements (Chapter 14, Article 9, HCC).
 - To protect low-flying, foraging bats, barbed wire not be used for fencing.
 - The county will coordinate with the State Civil Defense to determine the need and responsibility for a warning siren to be installed on the Project

COUNTY OF HAWAI'I MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

Potential Impacts and Mitigation Measures (cont.):

- Site.
 - The Base Yard and Maintenance Facility will not include any reflective surfaces, including photovoltaic panels, which could impair pilots' vision unless coordinated with the Airports Division.
 - The Individual Wastewater System permit approved by DOH will ensure the septic tank and leach field system has adequate capacity.
 - To mitigate potential water quality impacts from petroleum products, the design will include catchment and isolation of petroleum products. Those products accumulated in catchment will be conveyed to oil-water separators.
 - If the Base Yard and Maintenance Facility requires an injection well, it will conform with the regulations in Title 11, Chapter 23, HAR, including obtaining a UIC Permit or Permit Exemption.
- Construction measures:
 - To mitigate construction noise and dust, the construction contract will include standard measures such as ensuring mufflers are in proper operating condition, limiting construction hours, and wetting down exposed surfaces.
 - To mitigate potential impact to the native hawk, the construction contract will include a requirement to retain a biologist to check for nests if grubbing trees during March through September.
 - If construction will occur during the Hawaiian hoary bat breeding season (June 1 to September 15), construction documents will specify that woody plants greater than 15 feet tall should not be removed or trimmed.
 - The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains

COUNTY OF HAWAI'I MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

Potential Impacts and
Mitigation Measures
(cont.):

such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected. The contractor will immediately contact State Historic Preservation Division, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

- Operational measures:
 - For hurricane events, county buses may play a critical role in evacuation and post-event recovery. MTA will have disaster preparedness procedures to protect the buses in the base yard from damage during the event, and to clear any debris that may block the access road post-event.

Determination: Anticipated Finding of No Significant Impact (FONSI)

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COUNTY OF HAWAI'I MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

ACRONYMS

AA	Archaeological Assessment
ALISH	Agricultural Lands of Importance to the State of Hawai'i
BLNR	Board of Land and Natural Resources
BMP	Best Management Practices
CZM	Coastal Zone Management
DBEDT	Department of Business, Economic Development, and Tourism, State of Hawai'i
DHHL	Department of Hawaiian Home Lands, State of Hawai'i
DLNR	Department of Land and Natural Resources, State of Hawai'i
DOE	Department of Education, State of Hawai'i
DOH	Department of Health, State of Hawai'i
DOT	Department of Transportation, State of Hawai'i
DWS	Department of Water Supply, County of Hawai'i
EA	Environmental Assessment
EPA	Environmental Protection Agency
EO	Executive Order
FAA	Federal Aviation Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
gpd	Gallons per day
HAR	Hawai'i Administrative Rules
HCC	Hawai'i County Code
HELCO	Hawai'i Electric Light Company, Inc.
HMC	Hilo Medical Center
HRS	Hawai'i Revised Statutes
IBC	International Building Code
LID	Low Impact Development
LSB	Land Study Bureau, University of Hawai'i
LUC	State of Hawai'i Land Use Commission
LUPAG	County of Hawai'i General Plan Land Use Pattern Allocation Guide
MGD	Million gallons per day
MTA	County of Hawai'i Mass Transit Agency
mph	Miles per hour
NASA	National Aeronautics and Space Administration
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NGPC	Notice of General Permit Coverage
NPDES	National Pollutant Discharge Elimination Systems
NRCS	Natural Resources Conservation Service, USDA
SHPD	State of Hawai'i Historic Preservation Division
SMA	Special Management Area
TMK	Tax map key
TSS	Total suspended solids
UIC	Underground Injection Control
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1 INTRODUCTION

The County of Hawai'i Mass Transit Agency (MTA) is proposing to construct a base yard and maintenance facility for transit operations ("the Base Yard and Maintenance Facility"). The proposed base yard will be located on a five-acre portion of tax map key (TMK) (3) 2-1-013: 148 on Pana'ewa Drag Strip Road in Waiākea, South Hilo, Island of Hawai'i ("the Project Site") (Figure 1 and Figure 2).

1.1 LANDOWNER

The State of Hawai'i is the landowner of record. The County of Hawai'i MTA has a right-of-entry to process the applicable entitlements related to the Base Yard and Maintenance Facility.

1.2 PROPOSING/DETERMINING AGENCY

The County of Hawai'i Mass Transit Agency is the proposing/determining agency.

Contact: County of Hawai'i Mass Transit Agency
ATTN: Tiffany Kai, Administrator
Hilo, Hawai'i 96720
Phone: (808) 981-8356
Fax: (808) 981-2037

1.3 ENVIRONMENTAL CONSULTANT

PBR HAWAII is the environmental planning consultant.

Contact: PBR HAWAII & Associates, Inc.
ATTN: Bethany Wylie
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813
Telephone: (808) 521-5631
Fax: (808) 523-1402

1.4 COMPLIANCE WITH STATE OF HAWAII ENVIRONMENTAL LAWS

Preparation of an Environmental Assessment (EA) is being undertaken to meet the applicable requirements of Chapter 343, Hawai'i Revised Statutes (HRS) and Title 11, Chapter 200, Hawai'i Administrative Rules (HAR). Section 343-5, HRS establishes nine "triggers" that require the completion of an EA. Because the Base Yard and Maintenance Facility involves state land and county funds, the trigger is §343-5(a)(1): "Propose the use of state or county lands or the use of state or county funds." Although very similar in

content, environmental compliance documents for federal funding are formatted differently and are being processed separately.

1.5 STUDIES CONTRIBUTING TO THIS EA

The information contained in this report has been developed from site visits, generally available information regarding the characteristics of the proposed Base Yard and Maintenance Facility site and surrounding areas, and technical studies. Technical studies are provided as appendices to this EA. These studies include:

- Archaeological Assessment
- Basis of Design

2 PROJECT DESCRIPTION

2.1 BACKGROUND INFORMATION

2.1.1 Location and Property Description

The Base Yard and Maintenance Facility is proposed to be located in Waiākea Homesteads, Waiākea *ahupua'a*, South Hilo District, Island and County of Hawai'i (Figure 1). The Project Site is identified as a five acre area in the northwest corner of the state-owned TMK (3) 2-1-013:148, which is 40 acres in total (Figure 2).

In 1964, the Board of Land and Natural Resources (BLNR) approved the issuance of Governor's Executive Order (EO) 1288 to set aside TMK (3) 2-1-013:148, consisting of 40 acres, for use as a County of Hawai'i quarry and borrow pit. In 2014, the County of Hawai'i requested withdrawal of a five-acre portion of TMK (3) 2-1-013:148 from EO 1288. The withdrawn area is to then be reset aside to the County for this proposed Mass Transit Agency Base Yard and Maintenance Facility. On September 12, 2014, the BLNR approved in concept the reset aside of the Project Site subject to several requirements, including compliance with Chapter 343, HRS and subdivision. The BLNR will grant final approval to the reset aside of the executive order upon publication of the Final EA and final subdivision approval.

Currently, the Project Site is vacant and not being used for quarry or borrow pit purposes. Access to the Project Site is over a 50-foot wide road that the County of Hawai'i maintains. The owner and constructor of this road are unknown. In addition to providing access to the Project Site, the road is also used to access other County of Hawai'i properties and facilities, including a quarry, borrow pits, landfill, drag strip, and sort station, in the area. The Project Site itself is bound on its west side by a 70-foot wide dirt road and has several four-wheel drive paths running through it. The road may have been used to access a flood control channel mauka of the Project Site.

According to the Archaeological Assessment performed by Haun and Associates for the Base Yard and Maintenance Facility (Appendix C), approximately 2.7 acres (54 percent) of the Project Site has been impacted by bulldozer disturbance. The remaining approximately 2.3 acres are relatively undisturbed and contain a mix of indigenous and introduced plant species. Figure 4 contains site photographs.

Elevations range from approximately 100 to 105 feet above mean sea level, with relatively flat slope.

2.1.2 Existing Land Use Designations

Current land use designations for the Base Yard and Maintenance Facility Project Site are:

- *State Land Use*: Agriculture (Figure 5);
- *County General Plan LUPAG*: Important Ag Lands and Extensive Agriculture (Figure 6);
- *County Zoning*: Agriculture (A-20a) (Figure 7);
- *Special Management Area (SMA)*: Not in SMA (Figure 8).

2.1.3 Surrounding Land Uses

A quarry run by the County of Hawai'i is directly north of the road that runs along the boundary of the Project Site. Beyond the quarry to the north is the county's South Hilo Sanitary Landfill. The Hilo International Airport is less than two miles due north of the Project Site. The National Guard's Keaukaha Military Reservation is less than one mile northeast of the Project Site.

Immediately to the east and south of the Project Site is the remainder of TMK (3) 2-1-013:148 adjacent to which is a state-owned property that is leased to the U.S. Department of Transportation, Federal Aviation Administration (FAA).

West of the Project Site is a large linear piece of undeveloped land owned by the Department of Hawaiian Home Lands (DHHL) designated in their island plan for future Subsistence Agricultural homestead leases. Beyond this parcel to the west is DHHL's Keaukaha-Pana'ewa Community, which is an existing agricultural subdivision.

Further south beyond the FAA property is another DHHL-owned property, which is identified as being part of the agency's Wai'akea Community. However, there is currently no development on this property. To the southwest is the Hilo Drag Strip, which is a drag racing facility.

2.2 PURPOSE AND NEED

The purpose of the proposed base yard and maintenance facility is to better support the MTA's operations. The MTA provides island-wide public transportation for the County of Hawai'i, administrative support to the Hawai'i County Transportation Commission, and oversees taxicab operators.

COUNTY OF HAWAI'I MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

The proposed base yard and maintenance facility is necessary because the MTA has grown significantly over the years and is in need of its own facility to improve efficiency and the work environment. Currently, it is located on Railroad Avenue in the Schultz Siding facility where it shares limited space with the Department of Public Works.

2.3 PROJECT DESCRIPTION

The site plan of the proposed Base Yard and Maintenance Facility includes construction of a 26,500 square foot building with 19,500 square feet of warehouse space for transit vehicle maintenance, washing, and repair. The building will also include office space for administrative staff who oversee daily transit operations as well as storage space. The building will be built to meet the Silver accreditation level of the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) standards. The buildings are oriented toward the Pana'ewa Drag Strip Road. Two driveways will provide access to the Pana'ewa Drag Strip Road (Figure 9).

The majority of the Project Site will be paved to provide for bus staging and parking. Fifty-six bus stalls and 11 passenger vehicle stalls will be provided. This will be sufficient to accommodate MTA's fleet and the base yard employees' personal vehicles.

2.4 PERMITS AND APPROVALS

A listing of anticipated permits and approvals required for Base Yard and Maintenance Facility is presented below:

Table 1: Anticipated Approvals and Permits

Permit/Approval	Responsible Agency
Chapter 343, HRS Compliance	County of Hawai'i Department of Public Works Office of Environmental Quality Control
Special Permit	Hawai'i County Planning Department
Plan Approval	Hawai'i County Planning Department
Subdivision	Hawai'i County Planning Department
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Individual Wastewater System Permit	Department of Health
Grading/Building Permits	Hawai'i Department of Public Works

COUNTY OF HAWAI'I MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

Permit/Approval	Responsible Agency
Noise Permit	State Department of Health

2.5 DEVELOPMENT TIMETABLE AND PRELIMINARY COSTS

The Base Yard and Maintenance Facility will be constructed in one phase. The preliminary cost for construction is estimated at \$8,965,490, 80% federal funding and 20% county funding.

3 DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This section describes existing conditions of the natural environment, potential impacts related to the Project and mitigation measures to minimize impacts.

3.1 CLIMATE

Hawai'i Island's geological features heavily influence its climate. Mauna Loa (13,679 foot summit elevation) and Mauna Kea (13,796 foot summit elevation) are the dominant ground-based atmospheric influences. Northeast trade winds typically occur during the day, while winds from the southwest typically occur during the night due to cold air drainage from the mountains. The mean annual wind speed at the airport is about 8 miles per hour (mph), and usually varies between about 4 and 12 mph during the day.

Average annual temperatures at the Hilo International Airport range from about 67 to 81 degrees Fahrenheit. The coolest month is generally February and the warmest is September (County of Hawai'i Data Book).

According to *The Rainfall Atlas of Hawai'i*, the Project receives an average annual rainfall of approximately 132 inches (Giambelluca, et al., 2012). Hilo's windward rainfall pattern is due to the climatic influences of Mauna Loa and the Kohala Mountains.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The construction of the Base Yard and Maintenance Facility will have no impact on the climate of the surrounding region; therefore no mitigation measures are planned or warranted.

3.2 GEOLOGY AND TOPOGRAPHY

Of the five volcanoes that formed the island of Hawai'i—Kohala, Hualālai, Mauna Kea, Mauna Loa, and Kīlauea—only Mauna Loa and Kīlauea are presently considered active; the other three are considered dormant.

Waiākea is located on the southeastern flank of Mauna Kea, the summit of which rises approximately 13,800 feet above mean sea level and provides the backdrop for Hilo town toward the west. The western slope of Mauna Kea is dry and unscathed by erosion; whereas the northeastern slope is exposed to the trade-wind rains creating canyons a few

hundred yards deep. Mauna Loa deposited the lava underlying the Project Site between 750 and 1,500 years ago.

Elevations across the Project Site range from approximately 100 to 105 feet above mean sea level. The Project Site is generally flat with an average slope of one percent in a *mauka* to *makai*, west to east direction. A seven foot high bulldozed berm of soil and stones is present along the northern boundary of the Project Site. Approximately 2.7 acres (54 percent) of the Project Site has been impacted by bulldozer disturbance. There is also a heavily vegetated linear berm, oriented in an east-northeast by west-southwest direction, in the east-central portion of the Project Site. The berm is approximately 330 feet long, 25 to 50 feet wide, and eight to nine feet above the ground surface. Approximately 70-feet of the berm has been bulldozed and flattened on the western side of the Project Site. The berm corresponds to a levee, which originates at a drainage canal southwest of the Project Site, depicted on a 1995 U.S. Geological Survey (USGS) quadrangle. The levee does not appear on a 2013 USGS quadrangle, suggesting it is no longer in use.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Project Site offers generally flat land that is optimal for development. Construction of the Base Yard and Maintenance Facility will fill the depression in the center of the Project Site. However, due to the Project Site's otherwise generally flat surface, minimal grading will be required. Any grading will be in conformance with the Hawai'i County Grading Ordinance and recommendations of the geotechnical engineer. On-site fill will be used wherever necessary and fill slopes will not exceed 2:1. To minimize potential impacts, grading will be segmented and exposed areas will be immediately grassed or landscaped before commencement of grading in the next phase, in compliance with Chapter 10 (Erosion and Sedimentation Control) of the Hawai'i County Code (HCC). Draft grading and erosion control plans are provided in Appendix D.

Although the levee on site does not appear to be in use, to maintain any of its possible drainage utility, the berm will be preserved but will be moved outside of the Project Site. Relocation of the levee will be coordinated with the Four Mile Creek Drainage Improvement Project currently under study by the Army Corps of Engineers.

3.3 SOILS

Three soil suitability studies prepared for Hawai'i describe the physical attributes of land and the relative productivity of different land types for agricultural production. The studies are: 1) the U.S. Department of Agriculture Natural Resource Conservation Services (NRCS) Soil Survey; 2) the University of Hawai'i Land Study Bureau (LSB) Detailed Land

Classification; and 3) the State Department of Agriculture's Agricultural Lands of Importance to the State of Hawai'i (ALISH) system.

In addition, Hirata and Associates prepared a geotechnical report in March 2015. They performed borings and found basalt from ground level until a depth of approximately six feet. Surface soils were found to be a mixture of grayish brown clinker (sand, gravel, and cobbles) and volcanic ash. The surface ash is highly compressible with poor workability characteristics.

3.3.1 NRCS Soil Survey

The soil of the Project Site is classified by the U.S. Department of Agriculture Natural Resources Conservation Service as Papai extremely stony muck, 3 to 25 percent slopes (rPAE) (Figure 10). The Project Site is also defined as potentially highly erodible land.

Papai soils consist of a very dark brown, eight-inch thick surface layer that is underlain by a'a lava. This well-drained soil is friable and slightly sticky, plastic, and acid. Runoff from Papai soils is slow while permeability is rapid. It has many roots and fine pores. In general Papai soils are used for woodland but some small areas are used for pasture, orchards, and truck crops (Soil Survey of the Island of Hawai'i, State of Hawai'i, 1973).

3.3.2 LSB Detailed Land Classification

The University of Hawai'i LSB Detailed Land Classification, Island of Hawai'i classifies soils based on a productivity rating. Letters indicate class of productivity with A representing the highest class and E the lowest. The soils of the Project Site are classified "E" or "not suitable" for agriculture (Figure 11).

3.3.3 Agricultural Lands of Importance to the State of Hawai'i

The ALISH system classifies agricultural lands as Prime, Unique, or Other Important Agricultural Land. The soils of the Project Site are classified "Other Important Agricultural Land," which is defined as an area that can be farmed satisfactorily by applying greater inputs of fertilizer, improving drainage, practicing erosion control, and protecting the land from flooding (Figure 11).

POTENTIAL IMPACTS AND MITIGATION MEASURES

Based on the geotechnical study, the soils are suitable for the proposed use. Given the Project Site's low productivity potential and need for high inputs, it is not suitable for

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agricultural activity. Therefore, construction of the Base Yard and Maintenance Facility will not reduce the inventory of productive lands available for agricultural uses.

As required for projects on land greater than one acre in size, a National Pollutant Discharge Elimination System (NPDES) Notice of General Permit Coverage (NGPC) for Storm Water Associated with Construction Activity will be necessary. Grading will follow Best Management Practices (BMPs) as prescribed in the NPDES Permit. The contractor will submit a site-specific construction BMP plan to the State of Hawai'i Department of Health (DOH) before grading commences. Further discussion on stormwater impacts and BMPs are provided in Section 3.4 of this environmental assessment.

Short term soil impacts may include the potential for soil erosion and the generation of dust during grading and construction. All construction activities will comply with all applicable federal, state, and county regulations and rules for erosion control.

Any grading will be in conformance with the Hawai'i County Grading Ordinance and recommendations of the geotechnical engineer. On-site fill will be used wherever possible (clinker and volcanic ash are not acceptable for compacter fill) and fill slopes will not exceed 2:1. To minimize potential impacts, grading will be segmented and exposed areas will be immediately grassed or landscaped before commencement of grading in the next phase, in compliance with Chapter 10 (Erosion and Sedimentation Control), HCC. Draft grading and erosion control plans are provided in Appendix D. Measures to control erosion during the site development period may include:

- Minimizing the time of construction;
- Retaining existing ground cover as long as possible;
- Constructing drainage control features early;
- Using temporary area sprinklers in non-active construction areas when ground cover is removed;
- Providing a water truck on-site during the construction period to provide for immediate sprinkling, as needed;
- Using temporary berms and cut-off ditches, where needed, for control of erosion;
- Watering graded areas when construction activity for each day has ceased;
- Grassing or planting all cut and fill slopes immediately after grading work has been completed; and
- Installing silt screens, where appropriate.

3.4 HYDROLOGY

The Project Site is located within the Hilo Watershed, which measures 470 square miles. Watersheds captures rainfall and atmospheric moisture from the air and allows the water to drip slowly into underground aquifers or enter stream channels and eventually to the

ocean. The Hilo watershed includes the combined eastern slopes of Mauna Kea and Mauna Loa reaching maximum elevations of 13,796 and 13,679 feet, respectively. The saddle between the two mountains drains mostly through Hilo into Hilo Bay. Within the Hilo Watershed are a number of sub-watersheds. Most of the Project Site is within the Wailoa sub-watershed, but a small portion also falls within the Ka'ahakini sub-watershed.

Surface Water

The Project Site is located about one third of a mile from a flood channel of the perennial Ka'ahakini Stream (Figure 12). The headwaters of this stream are located to the southwest of the Project Site. The flood channel is known as the Waiākea-Uka Flood Control Channel. A berm that runs through the Project Site corresponds to a levee, which originates at the Flood Control Channel, depicted on a 1995 USGS quadrangle. The location of the levee downslope from the Flood Control Channel suggests it served to define the boundaries of a ponding basin, which is used to contain flood waters during periods of excessive rainfall. The levee and Flood Control Channel were likely constructed between 1965 and 1981. The levee does not appear on a 2013 USGS quadrangle, suggesting it is no longer in use.

There are no wetlands or intermittent streams on the Project Site. The nearest wetland is a small freshwater pond approximately three-quarters of a mile southeast of the Project Site (Figure 12).

Ground Water

Due to the relatively young and porous geology of Hawai'i Island, most of the rainfall infiltrates to groundwater. Hawai'i has classified groundwater in the state under an aquifer coding system to identify and describe these aquifers. The Project Area overlies the Kea'au Aquifer System, a subset of the N.E. Mauna Loa Aquifer Sector. Groundwater within this aquifer exists primarily as basal groundwater followed by high level dike and perched water. Cap rock, although thick and extensive, does not play an important role in the coastal regions of the aquifer.

Sustainable yield is the amount of groundwater that can be pumped without depleting the source. The sustainable yield of the Hilo Aquifer System is 393 million gallons per day (MGD), and existing water use as of 2008 is 14.084 MGD (Wilson Okamoto Corporation, 2008). The Project Site is below the Underground Injection Control (UIC) line, which means that the underlying aquifer is not considered a drinking water source (Figure 13).

Marine Waters

The Site is approximately three miles inland from the nearest coastline. Near shore marine waters off the coast of Hilo Bay are classified as class "A" by the State DOH (2012). According to DOH Water Quality Standards, "It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters" (HAR §11-54-03).

POTENTIAL IMPACTS AND MITIGATION MEASURES

Construction of the Base Yard and Maintenance Facility is not anticipated to have significant adverse impact on groundwater or surface water resources.

Potable water will be supplied by the County Department of Water Supply's (DWS) Water System, which draws water from a series of surface water sources and groundwater wells. Section 4.8.1 (Water System) of this EA provides further information regarding anticipated water demands.

Construction of the Base Yard and Maintenance Facility will result in an increase in the amount of impervious surface on the Project Site. Direct discharge of storm water runoff into marine waters is not anticipated due to the inland location of the Site. Similarly, due to distance from existing streams, it is highly unlikely that any storm runoff from will impact surface water resources.

The Base Yard and Maintenance Facility storm drainage system will be designed to comply with the latest County of Hawai'i *Storm Drainage Standards and Standard Details for Public Works Construction*. To the extent practicable, the Base Yard and Maintenance Facility will be designed to maintain post-development peak runoff rate and average volume at levels that are similar to pre-development levels. Existing drainage patterns will be maintained as much as possible. Although the levee on site does not appear to be in use, to maintain any of its possible drainage utility, the berm will be preserved but will be moved outside of the Project Site. Relocation of the levee will be coordinated with the Four Mile Creek Drainage Improvement Project currently under study by the Army Corps of Engineers.

All NPDES permit requirements will be implemented. In accord with these requirements, the Base Yard and Maintenance Facility will utilize several best management practice categories, including infiltration practices, vegetated open channel practices, and filtering practices, defined in the Environmental Protection Agency's (EPA) guidance document entitled *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (November 2005, EPA-841-B-05-004). EPA has found these practices to be

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representative of the types of practices that can be applied successfully to achieve the new development runoff management measures specified in the Hawai'i Watershed Guidance.

In its Draft EA Early Consultation comments, the State Office of Planning requested that Low Impact Development (LID) be considered in the design of the Base Yard and Maintenance Facility. In particular, the State Office of Planning recommended examining Section 1.7 of the *Low Impact Development, A Practitioner's Guide*. Among the LID techniques that involve the utilization of natural features and source control for stormwater management listed, the Base Yard and Maintenance Facility will utilize at least three: Vegetated Buffer/Filter Strips, Open Vegetated Channels, and Infiltration.

The on-site drainage system will be designed for a ten-year recurrence interval and will consist of vegetated infiltration drainage swales along the perimeter of the Project Site. All stormwater will sheet flow to vegetated swales, which will store the flow until it percolates into the ground. The vegetated swales are intended to accomplish the following: (1) decrease the erosive potential of increased runoff volumes and velocities associated with development-induced changes in hydrology; (2) remove suspended solids and associated pollutants entrained in runoff that result from activities occurring during and after development; and (3) retain hydrological conditions to closely resemble those of the pre-disturbance condition.

The State Office of Planning has created the *Stormwater Impact Assessment* to identify and evaluate information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff occurrences. Mitigation measures and BMPs listed in this guidance can be applied to water runoff strategies to prevent damage to coastal ecosystems. As recommended by the State Office of Planning (in its Draft EA Early Consultation comments), the *Stormwater Impact Assessment* was examined. Appendix B of the *Stormwater Impact Assessment* includes a table of BMPs that address specific issues and include examples that, with foresight, can transition with a site through construction and into operation. Effectiveness of stormwater design and control techniques is dependent upon site conditions. The Base Yard and Maintenance Facility will be constructed, to the extent feasible, with BMPs from the *Stormwater Impact Assessment*.

Based on the Project Site conditions, relevant BMPs from the *Stormwater Impact Assessment* that may be implemented during construction include:

- Early construction of drainage control features;
- Construction of temporary sediment basins to trap silt;

- Use of temporary berms and cut-off ditches where needed; and
- Use of temporary silt fences or straw bale barriers to trap silt.

All grading operations will be conducted in compliance with dust and erosion control requirements of Chapter 10 (Erosion and Sedimentation Control), HCC and applicable provisions of Chapter 11-60.1, HAR, Section 11-60.1-33 regarding Fugitive Dust. A watering program will be implemented during construction to minimize soil loss through fugitive dust emission. Other pollution control measures include cleaning job-site construction equipment and establishing groundcover as quickly as possible after grading. Permanent landscaping will also help to retain soil throughout the Project Site.

3.5 NATURAL HAZARDS

Hawai'i Island is susceptible to potential natural hazards, such as flooding, hurricanes, volcanic hazards, earthquakes, and wildfires. This section provides an analysis of the Project Site's vulnerability to such hazards.

The State of Hawai'i Department of Defense, Office of Civil Defense operates a system of civil defense sirens throughout the State to alert the public of emergencies and natural hazards, particularly tsunamis and hurricanes. The closest siren to the Site is the South Hilo Baseyard Siren (HA106) located approximately 1.8 miles from the Project Site.

Impacts from natural hazards can be further mitigated by adherence to appropriate civil defense measures as determined by the state and County of Hawai'i civil defense agencies.

3.5.1 Flood

The Federal Emergency Management Agency publishes flood information in the form of Flood Insurance Rate Maps (FIRM) used by government and insurance agencies to determine the relative potential for damage during flood events. According to the FIRM, the Project Site is within Zone X, which is an area of minimal hazard that is higher than the elevation of the 0.2-percent-annual-chance flood (Figure 14). This information was confirmed by the State Department of Land and Natural Resources Engineering Division in their Draft EA Early Consultation comments: "The National Flood Insurance Program (NFIP) does not regulate developments within Zone X."

3.5.2 Tsunami

Twenty-five of the tsunamis recorded in Hawai'i since 1812 have had an adverse impact on the Island of Hawai'i; seven caused major damage and three were generated locally. The most recent tsunami to impact Hawai'i Island, which occurred on March 11, 2011, caused property damage at several locations on the Kona coast. The Project Site is well outside of the tsunami evacuation zone (Figure 15).

3.5.3 Hurricane

Since 1980, two hurricanes have had a devastating effect on Hawai'i: 'Iwa in 1982 and 'Iniki in 1992. While it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely, given historical events.

Several studies sponsored by the NASA Office of Earth Science have developed new models for estimating the probability of hurricanes in the Pacific. While the island of Hawai'i has not been in the direct path of a hurricane since recordation began in 1950, the models indicate that the island has a long-term hurricane hazard higher than any of the other islands.

3.5.4 Earthquake

In Hawai'i, most earthquakes are linked to volcanic activity, unlike in other places where a shift in tectonic plates is the cause of an earthquake. Each year, thousands of earthquakes occur in Hawai'i, the vast majority of which are so small they are detectable only with highly sensitive instruments. However, moderate and disastrous earthquakes have occurred in the islands, particularly on Hawai'i Island due to its geologically active nature.

Since 1868, nine disastrous earthquakes have occurred in Hawai'i County. The largest earthquake series occurred between March 27 and April 2, 1868 with an epicenter a few miles north of Pāhala in the district of Ka'ū. It is estimated that the magnitude of these earthquakes were 7.1 and 7.9. These earthquakes resulted in 77 deaths (46 from tsunami and 31 from landslides triggered by the earthquake). In 1929, an earthquake with an epicenter in Hualālai and a magnitude of 6.5 resulted in extensive damage. Another earthquake in 1951, with its epicenter in the Kona area and a magnitude of 6.9 also resulted in extensive damage. A series of earthquakes, with magnitudes of 6.7 and 6.0, occurred at Kīholo Bay on October 15, 2006. These earthquakes resulted in more than \$100 million in damages to the northwest area of the island (USGS, 2006).

3.5.5 Volcanic Hazards

Volcanic hazards include lava flows and emission of volcanic gases (vog).

Lava Flows. The volcanic hazard zone map for Hawai'i Island divides the island into zones ranked from one through nine, with one being the area of greatest hazard and nine being the area of least hazard. The zones are based chiefly on the location of active vents, frequency of past lava coverage, and topography. According to this map, the Project Site is within Zone 3, meaning only one to five percent of the area has been covered by lava since 1800 and 15-75 percent within the last 750 years (USGS, 1997). The Project Site is approximately 25 miles from Kīlauea, the nearest active vent.

Vog. Volcanic gases, which are visible as a fog known as vog, are emitted during all types of eruptions. Halema'uma'u, the crater located at the summit of Kīlauea is currently erupting large amounts of volcanic gas. Any hazard posed by volcanic gases is greatest immediately downwind from active vents; the concentration of the gases quickly diminishes as the gases mix with air and are carried by winds away from the source (USGS, 1997).

The Project Site is located 25 miles northeast of Kīlauea Volcano. The prevailing northeasterly trade wind flow tends to push vog and any airborne particulates away from the Project Site. However, the amount of vog and other airborne particulates can significantly increase during periods when the winds are from the southwest.

3.5.6 Wildfires

Approximately 70 to 80 wildfires occur annually in Hawai'i County. Humans are the number one cause of fires in Hawai'i.

POTENTIAL IMPACTS AND MITIGATION MEASURES

During the Draft EA Early Consultation process, the State Department of Defense recommended that the proposed Base Yard and Maintenance Facility be designed to mitigate the effects of seismic and high-wind events. To minimize the potential hazard from earthquakes and hurricanes, structural elements in the proposed Base Yard and Maintenance Facility will be designed in accordance with the 2006 International Building Code (IBC) as amended by State of Hawai'i Building Code. The 2006 IBC provides minimum design criteria to address the potential for damage due to seismic disturbances.

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For hurricane events, county buses may play a critical role in evacuation and post-event recovery. MTA will have disaster preparedness procedures to protect the buses in the base yard from damage during the event, and to clear any debris that may block the access road post-event.

Construction of the Base Yard and Maintenance Facility will not exacerbate any tsunami hazard conditions. The Project Site is not in a designated tsunami evacuation zone and is not expected to be adversely impacted by a tsunami.

The Project Site is approximately 25 miles away from the nearest active volcano. Hazard and risk potential of shield volcanoes like those on Hawai'i Island can be pinpointed reasonably well, unlike some other types of natural disasters (earthquakes and hurricanes). Therefore, it is unlikely that the Base Yard and Maintenance Facility will be impacted by or will exacerbate potential volcanic hazards.

During the Draft EA Early Consultation process, the State Department of Defense recommended the installation of one omni-directional siren. The Hawai'i Emergency Management Agency will work with MTA regarding the placement of the siren and technical requirements if it is deemed appropriate for the Project Site.

3.6 FLORA AND FAUNA

The Project Site has been heavily modified, possibly for quarrying and regional drainage purposes, but appears to be largely unused and is currently vacant.

3.6.1 Flora

The likely natural vegetation of the region around the Project Site is lowland mesic forest, which is dominated by 'ōhi'a (*Metrosideros polymorpha*). According to the Archaeological Assessment performed by Haun and Associates for the Base Yard and Maintenance Facility (Appendix C), approximately 2.7 acres (54 percent) of the Project Site has been impacted by bulldozer disturbance. The remaining approximately 2.3 acres are relatively undisturbed. Haun found that the vegetation in the 2.3 acres was a mix of indigenous and introduced plant species including the following:

- Uluhe (*Dicranopteris linearis*)
- Ōhi'a Lehua (*Metrosideros polymorpha*)
- Hala (*Pandanus tectorius*)
- Hala Pepe (*Pleomele spp*)
- Ti (*Cordyline fruticosa*)
- Trumpet Tree (*Cecropia obtusifolia*)
- Kauna'oa (*Cuscuta sandwicensis* or *Cassytha filiformis*)
- Bamboo Orchid (*Arundina graminifolia*)
- Octopus Tree (*Schefflera actinophylla*)

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- Albizia (*Paraserianthes falcataria*)
- Rattlepod (*Crotalaria spp*)
- Wedelia (*Wedelia trilobata*)
- Sleeping Grass (*Mimosa pudica*)
- Rose Myrtle (*Rhodomyrtus tomentosa*)
- Macaranga (*Macaranga spp*)
- Koster's Curse (*Clidemia hirta*)
- Koa haole (*Leucaena leucocephala*)
- Miconia (*Miconia calvescens*)
- Giant Reed (*Arundo donax*)
- Philippine Ground Orchid (*Spathoglottis plicata*)
- Guava (*Psidium guajava*)
- Lantana (*Lantana camara*)
- Java Plum (*Syzygium cumini*)
- Molasses Grass (*Melinis minutiflora*)

No listed, candidate, or proposed endangered or threatened plant species were found in Haun's Archaeological Assessment or a 2007 Yamada and Sons Quarry Expansion EA biological survey that surveyed a thin strip of the Project Site along the road (Geometrician Associates LLC, 2007).

3.6.2 Fauna

Given the non-native vegetation and disturbed nature of the Project Site, it is likely that only non-native mammals, such as feral cats and Pacific rats, would frequent the Project Site. The U.S. Fish and Wildlife Service (USFWS) provided Draft EA Early Consultation comments that stated, in part:

"Based on the information you provided and pertinent information in our files...there are five listed species in the vicinity of the project area: the endangered Hawaiian hawk (Buteo solitaires), Hawaiian hoary bat (Lasiurus cinereus semotus), Hawaiian petrel (Pterodroma phaepygia sandwichensis), and Blackburn's sphinx moth (Manduca blackburni), and the threatened Newell's shearwater (Puffinus auricularis newelli). There is no critical habitat in the vicinity of the project area."

POTENTIAL IMPACTS AND MITIGATION MEASURES

None of the vegetation on the Project Site is likely to be of biological importance. Landscaping will be done immediately after the construction phase.

The industrial activities near the Project Site make it fairly unlikely that the listed species would frequent the area. However, as part of the USFWS's Draft EA Early Consultation comments, they provided avoidance and impact minimization measures for each of the listed species:

Hawaiian hawk. To avoid impacts to Hawaiian hawks, it is recommended that the contractor avoid brush and tree clearing during their breeding season (March through September). If the Project Site must be cleared during Hawaiian hawk breeding season,

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we recommend a nest search of the area of the proposed construction site and surrounding area be conducted by a qualified ornithologist immediately prior to the advent of construction activities. Surveys should ensure that construction activity will not occur within 1,600 feet of any Hawaiian hawk nest.

Hawaiian hoary bat. It is recommended that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season (June 1 to September 15). It is further recommended that barbed wire not be used for fencing to protect low-flying, foraging bats.

Seabirds. It is recommended that the Base Yard and Maintenance Facility avoid or minimize use of artificial lighting and avoid night work if possible. If artificial illumination must be used, we recommend this be shielded so the bulb is not visible at or above bulb-height. If night work must be conducted, it should take place outside the sea bird fledging season (September 15 through December 15) and should utilize shielded lighting.

Blackburn's sphinx moth. It is recommended that a qualified biologist surveys areas of proposed construction activities for Blackburn's sphinx moth and its host plants prior to work initiation. The survey should take place during the wettest portion of the year and immediately prior to construction. The survey should include searches for eggs, larvae, and signs of larval feeding (chewed stems, grass, or leaf damage). Any host plants of Blackburn's sphinx moth identified should not be cut or disturbed.

To the extent feasible, the contractor will be instructed to follow the above recommendations. In particular, Section 14-52, HCC requires all outdoor lights to be shielded, and so the contractor will be required to follow the seabird protection recommendation. However, the USFWS also stated in their comments that "implementation of these measures does not ensure that impacts to listed species can be avoided, and further coordination with the [USFWS] on compliance with the [Endangered Species Act] may be required." Therefore, prior to starting work, the contractor should coordinate with the USFWS regarding protection of the listed species.

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4 DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This section describes the existing conditions of the human environment, preliminary potential impacts of Base Yard and Maintenance Facility, and preliminary mitigation measures to minimize any impacts.

4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

Haun and Associates conducted an Archaeological Assessment (AA) for the Project Site (Appendix C). The AA was conducted in compliance with Section 6E, HRS “Historic Preservation” to determine the presence/absence of archaeological sites and included test pits evaluating the soil horizons. The AA found that extensive bulldozer disturbance has impacted large portions of the Project Site, and that no sites or features are present in the Project Site. Due to the absence of sites, the Project Site was documented in an AA pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR.

Historical Background

The Project Site is located in the *ahupua'a* of Waiākea, Hilo Hanakāhi 'Okana, in the *moku-o-loko* (district) of Hilo. The *ahupua'a* of Waiākea is large, consists of roughly 95,000 acres, and was regarded as a region of abundant natural resources and numerous fishponds. Waiākea was also an early important political center, notably under chief Kulukulu'a. Kamehameha lived and often returned to his *'ili kūpono* (independent land division where all tributes were paid to the chief of the *'ili* and not the *ahupua'a*) lands of Pi'opi'o in the *ahupua'a* of Waiākea. The *'ili kūpono* lands and its royal fishpond were passed on to his son Liholiho after his death (Escott, 2014).

The Project Site is within Zone II “Upland Agricultural” according to McEldowney’s historic period land use zones (1979). Early inhabitants of this zone practiced swidden (slash and burn) agriculture, which eventually resulted in an open plain. However, in the 1800s, the Pana'ewa forest extended from the existing Pana'ewa Forest Reserve nearly to the ocean between Hilo and Kea'au. Therefore, it is unlikely that the Project Site was used for swidden agriculture. Clearings in the forest may have been used for small scale agriculture (McEldowney, 1979). There were also forest plantations (Handy & Handy, 1972).

Between 1845 and 1865, traditional land-use and settlement patterns underwent a change due to the regular use of Hilo Bay by foreign vessels, the whaling industry, the establishment of missions in the Hilo area, the introduction of the sandalwood trade, the

legalization of private land ownership (the Mahele), the introduction of cattle ranching, and the introduction of sugarcane cultivation. There were no kuleana claims in the immediate vicinity of the Project Site during the Mahele, but 26 claims were registered for lands in Waiākea. Most of Waiākea became Crown Lands (Geometrician Associates LLC, 2007).

Hilo became the center of population and traditional settlements along the shoreline in outlying regions declined or disappeared. While food was still grown for consumption, greater areas of land were continually given over to the specialized cultivation and processing of commercial foodstuffs for export (Escott, 2014). By the end of 1900, over 5,600 acres of sugar were cultivated in Waiākea. Sugarcane plantations and industrial facilities were established in areas that were once upland agricultural areas and coastal settlements, respectively (Escott, 2014). Waiākea Sugar Company operated in the Waiākea ahupua'a from 1879 to 1947 (Rechtman, 2009). Historic site types in the vicinity of the Project Site likely included plantation agriculture-related features and residences.

Archaeological Assessment Findings

As stated above, no archaeological sites or features were identified within the Project Site. The absence of sites is attributable to the extensive bulldozing that has occurred in the Project Site. In addition, the Project Site appears to have also been used as a dumping area for refuse. A depression that runs through the Project Site is a modern levee, which was constructed between 1965 and 1981 and used to contain flood waters during periods of excessive rainfall. Haun recommends no further archaeological work for the Project Site.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Project Site will not impact any surface archaeological resources, sites, or features.

Given the extensive bulldozing that has occurred in the Project Site, it is very unlikely that subsurface resources will be encountered. However, the Mass Transit Agency and its contractors will comply with all state and county laws and rules regarding the preservation of archaeological and historic sites. The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected. The contractor will immediately contact State Historic Preservation Division (SHPD), which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

4.2 CULTURAL RESOURCES

PBR HAWAII attempted to identify traditional customary practices within the Project Site and its vicinity. This cultural impact analysis was conducted in accordance with the Office of Environmental Quality Control Guidelines for Assessing Cultural Impacts. Findings of the analysis and other relevant information are summarized below.

Letters of inquiry were sent to organizations whose expertise would include the Project Site. Consultation was sought from Robert K. Lindsey, Jr., Office of Hawaiian Affairs Hawai'i Island Trustee; Kauanoe Hoomanawanui, SHPD Burial Sites Specialist; Kimo Lee, Jr. Chairman of the Hawai'i Island Burial Council; Rick Gmirkin, Ala Kahakai National Historic Trail, National Park Service Archaeologist; Keaukaha-Pana'ewa Farmers Association; and Pana'ewa Hawaiian Home Lands Community Association.

POTENTIAL IMPACTS AND MITIGATION MEASURES

No responses were received from the letters of inquiry. Based on the historical research and the lack of response from knowledgeable people and organizations, the Project Site appears to have not been used for traditional cultural purposes within recent times. It is reasonable to conclude that Hawaiian rights related to gathering, access or other customary activities within the Project Site will not be affected and there will be no direct adverse effect upon cultural practices or beliefs.

4.3 AIRPORT HAZARDS

In their Draft EA Early Consultation comments, the County of Hawai'i Planning Department stated the following:

"The subject parcel is located within the 5-mile airport radius of the Hilo International Airport. As such, please contact the Hawai'i Department of Transportation, Airport Division for their review and comments, and include a discussion of airport hazards that may be related to the proposed development."

The State of Hawai'i Department of Transportation was contacted as part of the Draft EA Early Consultation, but they did not have comments on the proximity of the airport.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Base Yard and Maintenance Facility is not anticipated to have an impact on the operations of the Hilo International Airport. The Base Yard and Maintenance Facility is not located within the Accident Potential Zone or Runway Protection Zone/Clear Zone. Because construction of the Base Yard and Maintenance Facility will remove vegetation

from the Project Site, the Project Site is likely to become less attractive to wildlife that could potentially be a hazard to planes. Finally, the Base Yard and Maintenance Facility will not include any reflective surfaces, including photovoltaic panels, that could impair pilots' vision unless coordinated with the Airports Division.

4.4 ROADWAYS AND TRAFFIC

The State of Hawai'i Department of Transportation's Early Consultation comments stated that the EA "should discuss and evaluate the project's contribution to the cumulative traffic impacts on State highways facilities in the area."

Roadways

Regional access to the Project Site is provided by Kaneoheh Avenue, while local access is provided by Pana'ewa Drag Strip via Leilani Street. The following describes the key roadways in the project vicinity:

Kaneoheh Avenue (State Route 11) is a major six-lane, divided arterial that bisects Hilo north to south and provides access to the Hilo International Airport, Port of Hilo, and major commercial areas. In the vicinity of the Project Site, the posted speed limit is 35 mph.

Leilani Street is a two-lane road that provides access from Kaneoheh Avenue to the Pana'ewa Drag Strip [Ho'olaulima]. The intersection of Leilani Street with Kaneoheh Avenue is controlled by a traffic light. Nearest the Project Site, the posted speed limit on Leilani Street is 25 mph.

Pana'ewa Drag Strip is a two-lane road that provides access to the Project Site. Beyond the Project Site to the east, a one-quarter mile stretch of the road is used for drag racing. The Drag Strip was opened in 1978 and is sanctioned by the International Hot Rod Association.

Auwae Road is a local road within the Keaukaha-Pana'ewa Community agricultural subdivision. It does not connect to any roads near the Project Site, but besides the Pana'ewa Drag Strip, it is the nearest road to the Project Site. Auwae Road is broken into two segments by the Wai'anae Uka Flood Control Channel. The posted speed limit on Auwae Road is 25 mph.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Based on the traffic assessment, the proposed Base Yard and Maintenance Facility is not expected to result in any significant traffic impacts to the adjacent roadway system. The regional access road (Kaneolehua Avenue/State Route 11) is the same for both the Project Site and the existing location of the MTA base yard. Because the proposed Base Yard and Maintenance Facility will not cause an increase in transit service, traffic conditions on Kaneolehua Avenue will not change. Traffic volume on Leilani Street and Pana'ewa Drag Strip is currently quite low as they only provide access to public recycling facilities, the South Hilo Sanitary Landfill, a quarry, and the Drag Strip. The Drag Strip is the only facility beyond the Project Site, but the times it is likely to be in use (weekends, holidays) will coincide with the lowest level of use of the proposed Base Yard and Maintenance Facility.

4.5 NOISE

The Project Site is located near several industrial uses, including a landfill, quarry, and the Pana'ewa Drag Strip, and is less than two miles from an international airport. DHHL's Keaukaha-Pana'ewa Community is also nearby, but the residences themselves are relatively far from the Project Site. Therefore, existing background noise sources generally consist of those generated by industrial activity, wind, vehicle traffic on the road that follows the Project Site boundary, and aircraft.

POTENTIAL IMPACTS AND MITIGATION MEASURES

During the operational phase, noise impacts will be generated during the general business of operating the Base Yard and Maintenance Facility. In particular, the Maintenance Facility portion of the site will create noises similar to those of an autobody repair shop. The buses will also add to the existing vehicular noises. To mitigate operational noise affecting existing or future residences to the west of the Project Site, the building will be enclosed and any noise emitted from openings in the building will be directed to the north. However, given the relatively noisy existing environment, significant noise impacts from the Base Yard and Maintenance Facility are not anticipated.

During the construction phase, there may be temporary noise impacts associated with the operation of heavy construction machinery, paving equipment, and material transport vehicles. Proper mitigation measures will be employed to minimize construction-related noise impacts and comply with all federal and state noise control regulations. Increased noise activity due to construction will be limited to daytime hours and persist only during the construction period. Noise from construction activities will be short-term and will comply with State DOH noise regulations (Chapter 11-46, Community Noise Control, HAR). When construction noise exceeds, or is expected to exceed, the DOH's allowable

limits, a permit must be obtained from the DOH. Specific permit restrictions for construction activities are:

- No permit shall allow any construction activities that emit noise in excess of the maximum permissible sound levels before 7:00 a.m. and after 6:00 p.m. of the same day, Monday through Friday;
- No permit shall allow any construction activities that emit noise in excess of the maximum permissible sound levels before 9:00 a.m. and after 6:00 p.m. on Saturday; and
- No permit shall allow any construction activities that would emit noise in excess of the maximum permissible sound levels on Sundays and holidays.

4.6 AIR QUALITY

Air quality in the Hilo area is generally considered to be good due to the prevailing northeasterly tradewinds that tend to disperse pollutants toward the mountains. However, the amount of particulates and other air pollutants can significantly increase during periods when the winds shift to a southwesterly direction. Air flow from this direction carrying vog can lead to an increase in pollution and a decrease in visibility.

DOH maintains a limited network of air monitoring stations around the state to gather data on certain regulated pollutants. Currently, no routine ambient air monitoring is conducted by DOH in the Hilo area. Historical monitoring during the 1970's and 1980's indicated very low pollutant levels in Hilo. The entire state has been an attainment area for the last several decades.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Long-term negative impacts related to air quality due to the Base Yard and Maintenance Facility are not expected. Because the proposed Base Yard and Maintenance Facility is in the same region as the existing transit facility, the regional air quality will not change. In addition, the proposed Project Site is more isolated than the existing facility, which is adjacent to a number of commercial businesses, and is in an existing industrial area. The remoteness of the Project Site will limit the potential for local air quality impacts on sensitive receptors and reduce the impacts over the existing condition. In addition, provision of public transportation in general improves air quality as it is a more energy-efficient and less pollution-producing mode of transportation for resort employees and other residents.

Construction activity will be the principal source of short-term air quality impact. Construction vehicle activity will temporarily increase automotive pollutant concentrations along the existing roadways as well as on the Project Site. Site preparation, earth moving, and building construction will create particulate emissions during the short term. Movement of construction vehicles on unpaved surfaces can also generate particulate emissions.

Although the potential for fugitive dust is low due to the wet climate and low wind speeds of Hilo, adequate dust control measures will be employed, particularly during construction during low-rainfall periods. Dust control will be accomplished by frequent watering of unpaved roads within the Project Site and areas of exposed soil surfaces. As soon as it is feasible, landscaping of completed areas will also be employed. Dust control measures will comply with applicable provisions of HAR section 11-60.1-33 and Chapter 10 (Erosion and Sedimentation Control), HCC. Measures to control dust during construction may include:

- Providing an adequate water source at the site prior to start-up construction activities;
- Irrigating the construction site during periods of drought or high winds and all dry conditions;
- Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Disturbing only the areas of construction that are in the immediate zone of construction to limit the amount of time that the areas will be subject to erosion;
- Providing adequate dust control measures during weekends, after hours, and before daily start-up of construction activities; and
- Installing silt screening in the areas of disturbance.

4.7 VISUAL RESOURCES

The Project Site is quite flat with fairly dense vegetation. There is also dense vegetation on all neighboring properties. Due to the flat topography and state of the vegetation, there are no notable visual resources either on or visible from the Project Site (Figure 4).

In addition, the Project Site is not listed by the county as being in a scenic view plane or as a site of natural beauty, nor is it home to any of the exceptional trees listed in the County of Hawai'i's General Plan.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Any structures that are part of the Base Yard and Maintenance Facility will be designed and landscaped to be compatible with the character of the surrounding area.

Construction of the proposed Base Yard and Maintenance Facility will not block any identified scenic view planes or impact any areas of natural beauty. Other than grass landscaping no mitigation measures are planned. The proposed Base Yard and Maintenance Facility will not be visible from Kaneohe Road or Auwae Road and will not change the appearance of the rural character of the area east of Kaneohe Road. The placement and height of the building will not obstruct any view planes towards any natural landmarks.

In accord with the USFWS's recommendations and in accord with Section 14-52, HCC, artificial illumination will be shielded so that the bulb is not visible at or above bulb-height to protect seabirds.

4.8 INFRASTRUCTURE AND UTILITIES

Mitsunaga and Associates prepared a civil, electrical, and mechanical basis of design (Appendix D).

4.8.1 Water System

According to the County DWS's Draft EA Early Consultation comments, the Project Site: "does not have an existing water service...[and] the parcel does not front upon a [DWS] waterlines and is, therefore, considered out-of-bounds."

POTENTIAL IMPACTS AND MITIGATION MEASURES

According to DWS's Draft EA Early Consultation comments, "parcels that are out-of-bounds are limited to just one (1) unit of water...[or] an average daily usage of 400 gallons served through a 5/8-inch meter." Therefore, before determining appropriate service lateral and meter size required, DWS requested estimated maximum daily water usage calculations prepared by a professional engineer licensed in the State of Hawai'i for review and approval.

According to the Base Yard and Maintenance Facility civil engineer, the future employees are expected to generate an average demand of 160 gallons per day (gpd) and maximum demand of 588 gpd. The potable water system will comply with the County Board of Water Supply's current *Water System Standards and Standard Details for Water System Construction*. An existing 12-inch water line that runs along Leilani Street up to the Hilo Transfer Station will be extended approximately one mile to the Project Site and will provide a potable water supply and fire protection for the Base Yard and Maintenance Facility. The new water meter and water line will provide domestic service to the building,

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and a new 6-inch water meter and 6-inch water line will provide water for the fire sprinklers. Potable water laterals will fulfill all mechanical requirements.

During the Draft EA Early Consultation process, Hawai'i County Councilmember Onishi wrote:

“Assuming water and electric will be installed, I request that we plan for additional power and water to help serve uses in the existing areas, for example, the Pana’ewa Drag Strip. This would overall improve the operations and efficiency of one of our most heavily utilized public facilities.”

The extended water line will terminate at the Project Site, but the extension will allow other users in the area to connect to a closer line.

One new fire hydrant will be located on the Project Site in order to meet the County Fire Department’s coverage requirement. DWS’s Draft EA Early Consultation comments state the standard for required fire flow at the Project Site’s frontage is 2,000 gallons per minute with a velocity of less than 10 feet per second. This standard will be met for the Base Yard and Maintenance Facility.

DWS’s Draft EA Early Consultation comments also noted that a reduced pressure type backflow prevention assembly will need to be installed on private property within five feet of any meter serving the Project Site. DWS must inspect and approve the installation before water service can be activated. A backflow prevention assembly will be installed on the Project Site.

4.8.2 Wastewater System

There is no existing municipal sewer service to the Project Site.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The future employees of the Base Yard and Maintenance Facility are expected to generate an estimated wastewater flow of 1,060 gpd. Treatment and disposal of wastewater from the proposed Base Yard and Maintenance Facility will be treated by a new, on-site septic tank and leach field. The approximate size of the septic tank is 2,000 gallons and the leach field is 371 square feet. Prior to construction of the septic tank and leach field, the civil engineer will prepare an Individual Wastewater System permit and submit it to DOH. The new sewer system will comply with Title 11, Chapter 62, HAR.

4.8.3 Drainage System

There is no existing municipal drainage system on or near the Project Site.

According to the FIRM, the Project Site is within Zone X, which is an area of minimal hazard that is higher than the elevation of the 0.2-percent-annual-chance flood (Figure 14).

POTENTIAL IMPACTS AND MITIGATION MEASURES

The proposed Base Yard and Maintenance Facility will involve paving of the majority of the five-acre Project Site, which will significantly increase the amount of impervious surface on the Project Site. The Base Yard and Maintenance Facility storm drainage system will be designed to comply with the latest County of Hawai'i *Storm Drainage Standards and Standard Details for Public Works Construction*. To the extent practicable, the Base Yard and Maintenance Facility will be designed to maintain post-development peak runoff rate and average volume at levels that are similar to pre-development levels. Existing drainage patterns will be maintained as much as possible. The on-site drainage system will be designed for a ten-year recurrence interval and will consist of vegetated infiltration drainage swales along the perimeter of the Project Site. All stormwater will sheet flow to vegetated swales, which will store the flow until it percolates into the ground. The finished floors of the building will be higher than the surrounding grades and runoff will be directed away from the building.

The vegetated swales are intended to accomplish the following: (1) decrease the erosive potential of increased runoff volumes and velocities associated with development-induced changes in hydrology; (2) remove suspended solids and associated pollutants entrained in runoff that result from activities occurring during and after development; and (3) retain hydrological conditions to closely resemble those of the pre-disturbance condition.

During the Draft EA Early Consultation process, the Hawai'i District Land Office of the State DLNR Land Division commented that the proposed Base Yard and Maintenance Facility may "...pose a potential risk of ground contamination from various petroleum products." The Base Yard and Maintenance Facility will include catchment and isolation of petroleum products. Those products accumulated in catchment will be conveyed to oil-water separators.

The Project Site is below the Underground Injection Control (UIC) line, which means that:

- Underlying aquifer not considered drinking water source
- Wider variety of wells allowed

- Injection wells need UIC Permit or Permit Exemption
- Permit limitations are imposed

If the Base Yard and Maintenance Facility requires an injection well, it will conform with the regulations in Title 11, Chapter 23, HAR, including obtaining a UIC Permit or Permit Exemption.

4.8.4 Solid Waste

The County of Hawai'i Solid Waste Division operates and maintains, either by county personnel or by contracted services, all solid waste collection and disposal facilities on the island. This includes two landfills, twenty-one transfer stations and island-wide hauling operations in accordance with local, state and federal guidelines and regulations.

The nearest solid waste facility to the Project Site is the South Hilo Sanitary Landfill, located less than a mile away. The county currently does not provide solid waste service to the Project Site. The Project Site appears to have also been used as an illegal dumping area for refuse.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Waste generated by site preparation will primarily consist of green waste from grading, and solid waste during construction. Soil and rocks displaced from grading and clearing will be used as fill within the site as needed. To reduce waste during construction, recycled materials and locally produced products will be used where possible.

After construction, the Base Yard and Maintenance Facility will generate solid waste related to daily use and operation. To minimize waste, recycling bins will be provided at the Base Yard and Maintenance Facility. Waste that cannot be recycled will be disposed of at the South Hilo Sanitary Landfill.

4.8.5 Utilities

The Hawai'i Electric Light Company, Inc. (HELCO), a privately-owned utility company regulated by the State Public Utilities Commission, provides electrical power to the island of Hawai'i. The HELCO network of power plants serving Hilo includes the Kanoehua Power Plant, Puna Power Plant, Wailuku Hydro Power Plant, Hilo Coast Power Plant, and Shipman Power Plant.

Telecommunication services are provided by Verizon Hawai'i via overhead lines.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Electrical and telephone services are currently sized, adequate, and available to supply the Project Site, but electrical work will include obtaining new, primary electrical service from HELCO.

The electrical components of the proposed Base Yard and Maintenance Facility shall meet or exceed AHRAE Standard 90.1 (2013) Energy Standard for Buildings Except Low-Rise Residential Buildings. All aspects of mechanical design will conform to 2009 International Energy Conservation Code and will incorporate all applicable recommendations as specified in the LEED V3.0.

Energy conservation measures, in addition to the minimum required by applicable Standards and Criteria, will include:

- CO2 sensor controlled outside air intake for all air handling units
- AHU thermostat with a 7-day unoccupied setback scheduling capability
- VAV damper with thermostat control
- Use of premium efficiency motors on mechanical equipment
- Use of high efficiency lighting fixtures
- Use of building envelope components that exceed the minimum required insulation values

During the Draft EA Early Consultation process, Hawai'i County Councilmember Onishi wrote:

“Assuming water and electric will be installed, I request that we plan for additional power and water to help serve uses in the existing areas, for example, the Pana’ewa Drag Strip. This would overall improve the operations and efficiency of one of our most heavily utilized public facilities.”

To provide service to the Base Yard and Maintenance Facility, the existing power line will be extended to a new pole near the Project Site. Although the MTA will not request additional power beyond the needs of the proposed Base Yard and Maintenance Facility, the extension will allow other users in the area to connect to a closer line should they need additional power.

4.9 SOCIO-ECONOMIC CHARACTERISTICS

The overall population of Hawai'i County has exhibited relatively stable growth over the past decade. The population of Hawai'i County was 190,821 people in 2013, a 28.3

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percent increase from the 2000 population of 148,677 people (State of Hawai'i Department of Business, Economic Development, and Tourism, 2013).

The South Hilo district had a population of 50,927 in 2010 which represented approximately 28 percent of the total population for Hawai'i Island (County of Hawai'i, Current). The City of Hilo contains the main offices of the county government and branch offices of federal and state agencies. The island's major deep draft harbor and international airport are also located in Hilo. In addition to industrial, commercial and social service activities, the University of Hawai'i at Hilo and Hawai'i Community College and affiliated research programs play an important role in Hilo's economy.

As of December 2014, Hawai'i County's unemployment rate was 4.7 percent, compared to the state's overall rate of 4.0 percent. This was a decrease of 1.2 percent from a year prior (U.S. Bureau of Labor Statistics, 2014).

In addition, the County of Hawai'i and its residents are faced with an imbalance between the location of jobs and housing. Affordable residential growth is fastest on the east side of the island, and jobs growth is faster on the west side. As a result, many residents must commute long distances from Hilo and Puna to the resorts in Kohala and North Kona. The County MTA provides a cost-efficient mode of transportation for resort employees and other residents.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The proposed Base Yard and Maintenance Facility will have a beneficial socioeconomic impact by improving public transportation service. Construction of the facility will not require the relocation of residents, as the Project Site is currently vacant. During the Draft EA Early Consultation process, the State Department of Human Services wrote: "...there are several DHS licensed family child care homes located in the near vicinity that may be impacted by the construction project." We contacted Ms. Jill Arizumi on March 25, 2015 to inquire about the locations of these homes and to determine the distances from the Project Site. The closest residential/agricultural lot to the Project Site is approximately 750 feet away and is separated by dense forest, thus, it is anticipated that noise from the construction of the Base Yard and Maintenance Facility will have minimal impact on the DHS licensed family child care homes in the near vicinity.

Short-term employment benefits will be generated throughout the construction period as well as long-term employment benefits, such as potentially hiring new drivers and mechanics. The benefits however will not be significant relative to the overall economy of

the island. No changes are expected to the overall economy and no mitigation measures are planned.

The proposed Base Yard and Maintenance Facility will not affect area population and will not create additional strain on other area facilities.

4.10 PUBLIC SERVICES AND FACILITIES

4.10.1 Schools

The closest State Department of Education (DOE) public schools are: Waiākeawaena Elementary School, Waiākea Elementary School, Waiākea Intermediate School, and Waiākea High School.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Base Yard and Maintenance Facility will not generate new residents or introduce new school-aged children to the area. Therefore, no additional demands will be placed on DOE facilities. While the construction of the proposed Base Yard and Maintenance Facility will generate noise and may generate dust, the closest public school, Waiākeawaena Elementary School, is located nearly two miles away. The distance will block construction noise. In addition, the Waiākeawaena Elementary School, is upwind of the proposed Project Site during predominant trade wind conditions, and so even if airborne dust was generated, it would be unlikely to impact children attending classes at Waiākeawaena Elementary School.

4.10.2 Police, Fire and Medical Services

Police Protection. The Project Site is located in South Hilo, Patrol District 1, which is the Hawai'i Police Department's largest staffed division. The district extends from Hakalau in the north, to the mid-point of Kanoiehua Avenue between Hilo and Kea'au in the south, to the Saddle Road in the west. The district includes the main police station, located at 349 Kapi'olani Street, approximately 3 miles from the Project Site. In fiscal year 2012-2013, police officers issued 13,474 traffic citations and responded to 2,328 reported thefts (an increase over 2011-2012), 370 burglaries, 80 cases of sexual assault, and 386 assaults (a nine percent decrease from 2011-2012).

Fire Protection. The Hawai'i County Fire Department Kawaihāni Fire Station provides fire protection and suppression services in Waiākea. The Kawaihāni Fire Station is an Engine Company with one engine, a 79-foot ladder truck, a tanker and a medic unit. Backup support is provided by 1) Central Fire Station, located 3.5 miles away in Hilo, with an

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Engine Company and an ALS medic unit; 2) Kaumana Fire Station, located 4.5 miles away, with an Engine Company and HAZMAT Response capabilities; and 3) Waiākea Fire Station, located 2.5 miles away in Keaukaha. In addition, a new fire station, Haihai, is being proposed less than three miles from the Project Site. Waiākea Fire Station is a Rescue Company providing firefighting response with an Engine, Light and Heavy Rescue, including helicopter response and ocean rescue response capabilities. At this time, no tanker vehicles are assigned to the Hilo area due to the adequate hydrant system and all of the Engines (also referred to as Pumpers) each carry 1,000 gallons of water. At any one time, there are five to six firefighters on duty at the Kawaihāni Fire Station.

Medical Services. Hilo Medical Center (HMC) is the primary health care facility serving the South Hilo district. HMC is located approximately five miles from the Project Site at 1190 Waiānūenuē Avenue. Ambulance service in Hilo is provided by the Hawai'i Fire Department, which can serve the Project Site area (during construction) from the Kawaihāni Fire Station in two minutes. When the new Haihai Fire Station is operational, the site will have 24 hour trained Emergency Medical Service personnel on site. As mentioned above, Central Fire Station also provides ALS medic response to the Hilo area.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The renovations to the Center are not expected to create an increased demand on existing fire or medical services. During the Draft EA Early Consultation process, the Police Department wrote: "Staff, upon reviewing the provided documents, does not anticipate any significant impact to traffic and/or public safety concerns."

The Base Yard and Maintenance Facility architect met with Battalion Chief Robert Perreira and Fire Inspector Kyle Vares of the County of Hawai'i Fire Department on March 26, 2015. The proposed maintenance facility will be designed to meet the National Fire Protection Association (NFPA) 1, Hawai'i State Fire Code, with County of Hawai'i amendments, as provided by the Hawai'i Fire Department in their Early Consultation comments for the Draft EA. One new fire hydrant will be located on the Project Site in order to meet the County Fire Department's coverage requirement. The building will be sprinkled as required by §903.2.8 of the International Building Code. A new 6-inch water meter and 6-inch water line will provide water for the fire sprinklers. DWS's Draft EA Early Consultation comments state the standard for required fire flow at the Project Site's frontage is 2,000 gallons per minute with a velocity of less than 10 feet per second. This standard will be met for the Base Yard and Maintenance Facility.

4.10.3 Recreational Facilities

The entire South Hilo District contains 54 parks totaling 590 acres. The nearest recreational facilities to the Project Site are Pana'ewa Park and Malama Park. Other recreational facilities, parks, and open spaces in the Hilo area include Hilo Municipal Golf Course, Ainaola Park, Ahualani Park, Lokahi Park, Waiākea Uka Park, Kūhiō-Kalaniana'ole Park, Honoli'i Beach Park, Lili'uokalani Gardens, Reeds Bay, Onekahakaha Beach Park, Kealoha Beach Park, Carlsmith Beach Park and Richardson Ocean Park.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Base Yard and Maintenance Facility itself is not a direct generator of new residents requiring recreational facilities. No significant impacts to recreational facilities are anticipated as a result of the Base Yard and Maintenance Facility, and therefore no mitigation measures are proposed.

5 LAND USE CONFORMANCE

State of Hawai'i and Hawai'i County land use plans, policies, and ordinances relevant to the proposed Base Yard and Maintenance Facility are described below.

5.1 STATE OF HAWAI'I

5.1.1 Chapter 343, Hawai'i Revised Statutes

Compliance with Chapter 343, HRS is required as described in Section 1.4.

5.1.2 State Land Use Law, Chapter 205, Hawai'i Revised Statutes

The State Land Use Law (Chapter 205, HRS), establishes the State Land Use Commission (LUC) and authorizes this body to designate all lands in the state into one of four Districts: Urban, Rural, Agricultural, or Conservation.

The proposed Base Yard and Maintenance Facility site is located within the State Agriculture District (Figure 5). According to §205-4.5(c), HRS "Within the agricultural district, all lands with soil classified by the land study bureau's detailed land classification as overall (master) productivity rating class C, D, E, or U shall be restricted to the uses permitted for agricultural districts as set forth in section 205-5(b)."

Section 205-5(b), HRS states that "Within agricultural districts, uses compatible to the activities described in section 205-2 as determined by the commission shall be permitted; provided that accessory agricultural uses and services described in sections 205-2 and 205-4.5 may be further defined by each county by zoning ordinance."

The proposed Base Yard and Maintenance Facility is not compatible with the uses listed in §205-5(b), HRS. Therefore, the County will submit a Special Permit to the County Planning Commission (as laid out in §205-6, HRS).

5.1.3 Coastal Zone Management Act, Chapter 205A, Hawai'i Revised Statutes

The entire state of Hawai'i is defined to be within the Coastal Zone Management (CZM) Area, pursuant to 205A-1, HRS (definition of "coastal zone management area"). As such, the proposed Base Yard and Maintenance Facility lies within the CZM Area.

As requested by the State Office of Planning, (in its Draft EA Early Consultation comments) a discussion of the proposed Base Yard and Maintenance Facility's ability to meet the objectives and policies set forth in HRS 205A-2, is provided below.

5.1.3.1 Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies

- (A) Improve coordination and funding of coastal recreational planning and management;
and
- (B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
 - (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
 - (ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
 - (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
 - (iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
 - (v) Ensuring public recreational uses of County, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;
 - (vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;
 - (vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing;
and
 - (viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and County authorities; and crediting such dedication against the requirements of section 46-6;

Discussion: The proposed Base Yard and Maintenance Facility is not a coastal development, is not located on the coastline, and is not in the SMA. Therefore, policies regarding shoreline recreation resources are not applicable. However, to protect marine resources for purposes including recreation, the State of Hawai'i has adopted water quality standards. Generally, these standards will require the submittal and adherence to a

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NPDES permit. As required for projects on land greater than one acre in size, a NPDES NGPC for Storm Water Associated with Construction Activity will be necessary for the Base Yard and Maintenance Facility. Construction will follow erosion control and water quality BMPs as prescribed in the NPDES Permit. The contractor will submit a site-specific construction BMP plan to the State of Hawai'i DOH.

5.1.3.2 Historic Resources

Objective Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies

- (A) Identify and analyze significant archaeological resources;
- (B) Maximize information retention through preservation of remains and artifacts or salvage operations; and
- (C) Support state goals for protection, restoration, interpretation, and display of historic resources;

Discussion: Haun and Associates conducted an AA for the Project Site (Appendix C). The AA was conducted in compliance with Section 6E, HRS "Historic Preservation" to determine the presence/absence of archaeological sites and included test pits evaluating the soil horizons. The AA found that extensive bulldozer disturbance has impacted large portions of the Project Site, and that no sites or features are present in the Project Site. Due to the absence of sites, the Project Site was documented in an AA pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR. The County of Hawai'i MTA and its contractors will comply with all state and county laws and rules regarding the preservation of archaeological and historic sites. The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected. The contractor will immediately contact the State Historic Preservation Division, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

5.1.3.3 Scenic and Open Space Resources

Objective Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies

- (A) Identify valued scenic resources in the coastal zone management area;

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- (B) *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
- (C) *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
- (D) *Encourage those developments that are not coastal dependent to locate in inland areas;*

Discussion: The proposed Base Yard and Maintenance Facility site will be located inland, away from the shoreline; therefore, it is anticipated that there will be no effect on the quality of the coastal scenic resources.

5.1.3.4 Coastal Ecosystems

Objective: *Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*

Policies

- (A) *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- (B) *Improve the technical basis for natural resource management;*
- (C) *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
- (D) *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- (E) *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

Discussion: The proposed Base Yard and Maintenance Facility will be located far inland from the coastline. Therefore, it is anticipated that there will be no effect on the quality of the coastal ecosystems. However, to protect coastal ecosystems from nonpoint source pollution, the State of Hawai'i has adopted water quality standards. Generally, these standards will require the submittal and adherence to a NPDES permit. As required for projects on land greater than one acre in size, a NPDES NGPC for Storm Water Associated with Construction Activity will be necessary for the Base Yard and Maintenance Facility. Construction will follow erosion control and water quality BMPs as prescribed in the NPDES Permit. The contractor will submit a site-specific construction BMP plan to the State of Hawai'i DOH.

5.1.3.5 Economic Uses

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies

- (A) Concentrate coastal dependent development in appropriate areas;
- (B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
- (C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
 - (i) Use of presently designated locations is not feasible;
 - (ii) Adverse environmental effects are minimized; and
 - (iii) The development is important to the State's economy.

Discussion: The proposed Base Yard and Maintenance Facility is not a coastal dependent development, is not located on the coastline, and is not in the SMA; therefore, these policies are not applicable.

5.1.3.6 Coastal Hazards

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies

- (A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;
- (B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;
- (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
- (D) Prevent coastal flooding from inland projects.

Discussion: The proposed Project Site is located far inland from the coastline and will not exacerbate any coastal hazards.

5.1.3.7 Managing Development

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

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Policies

- (A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;
- (B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and
- (C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Discussion: The proposed Base Yard and Maintenance Facility is not a coastal development, is not located on the coastline, and is not in the SMA; however, this EA, will provide opportunity for public input during the Draft EA Public Comment period.

Early consultation comments were obtained and are reproduced in Appendix B. In addition, this EA discusses potential impacts and mitigation measures of the proposed Base Yard and Maintenance Facility and will provide an opportunity for input during the Draft EA Public Comment period.

5.1.3.8 Public Participation

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies

- (A) Promote public involvement in coastal zone management processes;
- (B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and
- (C) Organize workshops, policy dialogues, and site- specific mediations to respond to coastal issues and conflicts.

Discussion: The proposed Base Yard and Maintenance Facility is not a coastal development, is not located on the coastline, and is not in the SMA; however, this EA, will provide opportunity for public input during the Draft EA Public Comment period.

Early consultation comments were obtained and are reproduced in Appendix B. In addition, this EA discusses potential impacts and mitigation measures of the proposed Base Yard and Maintenance Facility and will provide an opportunity for input during the Draft EA Public Comment period.

5.1.3.9 Beach Protection

Objective: Protect beaches for public use and recreation.

Policies

- (A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
- (B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and
- (C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Discussion: The proposed Base Yard and Maintenance Facility is not a coastal dependent development, is not located on the coastline, and is not in the SMA; therefore, these policies are not applicable.

5.1.3.10 Marine Resources

Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies

- (A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
- (B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
- (C) Assert and articulate the interests of the State as a partner with Federal agencies in the sound management of ocean resources within the United States exclusive economic zone;
- (D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and
- (E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion: The proposed Base Yard and Maintenance Facility is not a coastal development, is not located on the coastline, and is not in the SMA; therefore, policies regarding shoreline recreation resources are not applicable. However, to protect marine water quality, the State of Hawai'i has adopted water quality standards. Generally, these standards will require the submittal and adherence to a NPDES permit. As required for projects on land greater than one acre in size, a NPDES NGPC for Storm Water Associated with Construction Activity will be necessary for the Base Yard and Maintenance Facility. Construction will follow erosion control and water quality BMPs as prescribed in the NPDES Permit. The contractor will submit a site-specific construction

BMP plan to the State of Hawai'i DOH. In addition, the Base Yard and Maintenance Facility will be designed and built in compliance with all applicable federal, state, and county regulations pertaining to storm water management, including Chapter 10 (Erosion and Sedimentation Control).

5.1.4 Hawai'i State Plan

The Hawai'i State Plan (Chapter 226, HRS), establishes a set of goals, objectives and policies that serve as long-range guidelines for the growth and development of the state. As requested by the State Office of Planning, an analysis that addresses whether the proposed Base Yard and Maintenance Facility conforms to or is in conflict with relevant objectives, policies and priority guidelines of the Hawai'i State Plan follows:

OBJECTIVES AND POLICIES FOR FACILITY SYSTEMS—TRANSPORTATION (§226-17)

Objectives

Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:

- (1) *An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.*

Policies

- (1) *Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;*
- (2) *Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;*
- (5) *Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;*
- (6) *Encourage transportation systems that serve to accommodate present and future development needs of communities;*
- (10) *Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawai'i's natural environment;*
- (11) *Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;*
- (12) *Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and*
- (13) *Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.*

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Discussion: The County of Hawai'i and its residents are faced with an imbalance between the location of jobs and housing. Affordable residential growth is fastest on the east side of the island while job growth is faster on the west side. As a result, many residents must commute long distances from Hilo and Puna to the resorts in Kohala and North Kona. The County MTA provides a cost-efficient mode of transportation for resort employees and other residents.

OBJECTIVES AND POLICIES FOR FACILITY SYSTEMS—ENERGY (§226-18)

Objectives

Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:

- (4) *Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.*

Policies

- (7) *Promote alternate fuels and energy efficiency by encouraging diversification of transportation modes and infrastructure;*

Discussion: By providing island-wide bus service, including over long distances between East Hawai'i and West Hawai'i, the County MTA provides not only a more energy-efficient and less pollution-producing mode of transportation for resort employees and other residents, but also reduces the demand for gasoline used by personal vehicles.

5.1.5 Hawai'i Watershed Guidance

According to the State Office of Planning (in its Draft EA Early Consultation comments), the proposed Base Yard and Maintenance Facility lies within the Wailoa watershed.

"This watershed in South Hilo is subject annually to heavy rainfall and is exposed to a range of human activities from agriculture, urban development, and activity along the shoreline. The Draft EA should consider watershed protection and management.

The State Office of Planning has created the Hawai'i Watershed Guidance to provide direction on methods to safeguard Hawai'i's watersheds and implement watershed plans. This guidance provides a number of management measures that address polluted runoff from urban activities, and summary and links to management measures that may be implemented to minimize coastal nonpoint pollution impact. As requested by the State Office of Planning (in its Draft EA Early Consultation comments), the following sections of the Hawai'i Watershed Guidance were examined:

Urban Runoff – New Development Management Measure

1. *By design or performance:*
 - a. *construction has been completed and the site is permanently stabilized, reduce the average annual total suspended solid (TSS) loadings by 80%. For the purposes of this measure, an 80% TSS reduction is to be determined on an average annual basis,* or*
 - b. *Reduce the postdevelopment loadings of TSS so that the average annual TSS loadings are no greater than predevelopment loadings, and*
2. *To the extent practicable, maintain postdevelopment peak runoff rate and average volume at levels that are similar to predevelopment levels.*

Discussion: To the extent practicable, the Base Yard and Maintenance Facility will be designed to maintain post-development peak runoff rate and average volume at levels that are similar to pre-development levels. By adhering to the BMPs required under an NPDES permit, the Base Yard and Maintenance facility will ensure that it is meeting the TSS loading standards in this measure. In accord with the NPDES BMPs, the Base Yard and Maintenance Facility will utilize several practice categories, including infiltration practices, vegetated open channel practices, and filtering practices, defined in the Environmental Protection Agency's (EPA) guidance document entitled *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (November 2005, EPA-841-B-05-004). EPA has found these practices to be representative of the types of practices that can be applied successfully to achieve the above new development management measures.

Urban Runoff – Watershed Protection Management Measure

Develop a watershed protection program to:

1. *Avoid conversion, to the extent practicable, of areas that are particularly susceptible to erosion and sediment loss;*
2. *Preserve areas that provide important water quality benefits and/or are necessary to maintain riparian and aquatic biota; and*
3. *Site development, including roads, highways, and bridges, to protect to the extent practicable the natural integrity of waterbodies and natural drainage systems.*

Discussion: The proposed Project Site is not: 1) particularly susceptible to erosion and sediment loss; 2) an area that provides important water quality benefits and/or are necessary to maintain riparian vegetation and aquatic biota; 3) located in an area with natural water bodies or natural drainage systems.

Urban Runoff – Site Development Management Measure

Plan, design, and develop sites to:

- 1. Protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss;*
- 2. Limit increases of impervious areas, except where necessary;*
- 3. Limit land disturbance activities such as clearing and grading, and cut and fill to reduce erosion and sediment loss; and*
- 4. Limit disturbance of natural drainage features and vegetation.*

Discussion: The proposed Project Site is not located in an area that provides important water quality benefits and/or is particularly susceptible to erosion and sediment loss. The Base Yard and Maintenance Facility involves a transit base yard, which inherently requires a large open area for the MTA's buses to circulate, turnaround and park. However, the Base Yard and Maintenance Facility will be designed to minimize the impact of the impervious area. While the proposed Base Yard and Maintenance Facility requires a large paved yard, it is flat and has been previously altered, so clearing and grading will be less than other areas of Hilo. The Project Site is not located in an area with natural drainage features.

5.2 COUNTY OF HAWAI'I

County-specific land use plans and ordinances pertaining to the proposed Base Yard and Maintenance Facility include the General Plan of the County of Hawai'i and the HCC.

5.2.1 County of Hawai'i General Plan

The County of Hawai'i General Plan is the policy document for the long-range comprehensive development of the Island of Hawai'i. Among the purposes of the General Plan are to guide the pattern of development in Hawai'i County and to provide the framework for regulatory decisions and capital improvement projects. The General Plan undergoes a comprehensive review every ten years, with the last review being completed in 2005.

The policy land use map, referred to as the Land Use Pattern Allocation Guide (LUPAG) Map, is intended to guide the direction and quality of future developments in a coordinated and rational manner. The site for the proposed Base Yard and Maintenance Facility is designated as "Open Area" and "Low Density Urban" (Figure 6).

Specific General Plan goals, policies, and courses of action most applicable to the proposed Base Yard and Maintenance Facility are discussed below.

5.2.1.1 Flooding and Other Natural Hazards

5.2 GOALS

- (a) *Protect human life.*
- (b) *Prevent damage to man-made improvements.*

5.3 POLICIES

- (l) *Continue to promote public education programs on tsunami, hurricane, storm surge, and flood hazards.*
- (q) *Consider natural hazards in all land use planning and permitting.*

Discussion: According to the FIRM, the Project Site is within Zone X, which is an area of minimal hazard that is higher than the elevation of the 0.2-percent-annual-chance flood (Figure 14). There are no floodplains defined by FEMA on or near the Project Site.

5.2.1.2 Historic Sites

6.2 GOALS

- (a) *Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawai'i.*

6.3 POLICIES

- (a) *Agencies and organizations, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.*
- (c) *Require both public and private developers of land to provide historical and archaeological surveys and cultural assessments, where appropriate, prior to the clearing or development of land when there are indications that the land under consideration has historical significance.*
- (o) *Recognize the importance of certain natural features in Hawaiian culture by incorporating the concept of "cultural landscapes" in land use planning.*

Discussion: Haun and Associates conducted an AA for the Project Site (Appendix C). The AA was conducted in compliance with Section 6E, HRS "Historic Preservation" to determine the presence/absence of archaeological sites and included test pits evaluating the soil horizons. The AA found that extensive bulldozer disturbance has impacted large portions of the Project Site, and that no sites or features are present in the Project Site. Due to the absence of sites, the Project Site was documented in an AA pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR. The County of Hawai'i MTA and its contractors will comply with all state and county laws and rules regarding the preservation of archaeological and historic sites. The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected. The contractor will immediately contact

the State Historic Preservation Division, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

5.2.1.3 Natural Beauty

7.2 GOALS

(b) Protect scenic vistas and view planes from becoming obstructed.

(c) Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

7.3 POLICIES

(a) Increase public pedestrian access opportunities to scenic places and vistas.

(h) Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.

(i) Do not allow incompatible construction in areas of natural beauty.

Discussion: The proposed Base Yard and Maintenance Facility will not be visible from Kaneohe Road or Auwae Road and will not change the appearance of the rural character of the area east of Kaneohe Road. The placement and height of the building will not obstruct any view planes towards any natural landmarks.

5.2.1.4 Public Facilities

10.1.2 Goal

(a) Encourage the provision of public facilities that effectively service community and visitor needs and seek ways of improving public service through better and more functional facilities in keeping with the environmental and aesthetic concerns of the community.

Discussion: The County of Hawai'i and its residents are faced with an imbalance between the location of jobs and housing. Affordable residential growth is fastest on the east side of the island while job growth is faster on the west side. As a result, many residents must commute long distances from Hilo and Puna to the resorts in Kohala and North Kona. The County MTA provides a cost-efficient mode of transportation for resort employees and other residents.

5.2.2 County of Hawai'i Zoning

Similar to the State Land Use Districts, the HCC regulates the type and location of development permitted on the island. Hawai'i County zoning designations, Chapter 25 HCC, are more specific in terms of describing permitted land uses. The Base Yard and Maintenance Facility Project Site is zoned A-20a (Figure 7). According to Section 25-5-70, HCC:

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The A (agricultural) district provides for agricultural and very low density agriculturally-based residential use, encompassing rural areas of good to marginal agricultural and grazing land, forest land, game habitats, and areas where urbanization is not found to be appropriate.

Uses permitted in the Agricultural District include "Public Uses and Structures," such as the proposed Base Yard and Maintenance Facility, with a Special Permit.

The following uses may be permitted in the A district, provided that a special permit is obtained for such use if the building site is located within the State land use agricultural district:...Public uses and structures, other than those necessary for agricultural practices, as provided under section 25-4-11

According to Section 25-5-73 of the HCC, the height limit in the A district is 35 feet for any residential structure, including any single-family dwelling, or farm dwelling, and 45 feet for all other structures. According to the HCC, the minimum building site area in the A district shall be five acres, and each building site in the A district shall have a minimum average width of 200 feet for the first five acres of required area. According to Section 25-5-76 of the HCC, the minimum yards in the A district shall be thirty feet for front and rear yards, and twenty feet for side yards. The Base Yard and Maintenance Facility will meet all of these standards.

A Special Permit and a Plan Approval is required for the proposed Base Yard and Maintenance Facility.

5.2.3 Special Management Area

The Project Site is not located within the Special Management Area (SMA).

5.3 APPROVALS AND PERMITS

A listing of anticipated permits and approvals required for Base Yard and Maintenance Facility is presented below:

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Table 2: Anticipated Approvals and Permits

Permit/Approval	Responsible Agency
Chapter 343, HRS Compliance	County of Hawai'i Department of Public Works Office of Environmental Quality Control
Special Permit	Hawai'i County Planning Department
Plan Approval	Hawai'i County Planning Department
Subdivision	Hawai'i County Planning Department
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Individual Wastewater System Permit	Department of Health
Grading/Building Permits	Hawai'i Department of Public Works
Noise Permit	State Department of Health

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6 ALTERNATIVES

This section identifies and evaluates a range of alternatives that could meet the purpose and need and possibly avoid, reduce, or minimize adverse environmental effects. The reference point to compare alternatives is the “no action” alternative.

6.1 NO ACTION ALTERNATIVE

The primary purpose for the Base Yard and Maintenance Facility, as discussed in Section 2.2, is to better support the MTA’s operations. The MTA provides island-wide public transportation for the County of Hawai’i, administrative support to the Hawai’i County Transportation Commission, and oversees taxicab operators.

The proposed base yard and maintenance facility is necessary because the MTA has grown significantly over the years and is in need of its own facility to improve efficiency and the work environment. Currently, it is located on Railroad Avenue in the Schultz Siding facility where it shares limited space with the Department of Public Works.

With the “no action” alternative, the county’s need to accommodate the varied functions of their bus transit facility would not be met; therefore this alternative has been eliminated.

6.2 ALTERNATE SITES

Two alternate sites in Hilo for the Base Yard and Maintenance Facility were considered: one on Kino’ole Street and another on Kapiolani Street. The Kino’ole Street location is 3.70 acres and is the former site of the Hilo Lanes Bowling Alley. The surface roads in the area were not conducive to bus maneuvering. This alternate site is near a number of residences and retail businesses that would have been affected by the noise generated by the Base Yard and Maintenance Facility.

The second alternate site on Kapiolani Street is too small to accommodate the needed facilities. The future extension of Kapiolani Street may have also impacted the available area on the site.

The proposed Project Site better meets the needs of the MTA while also being isolated enough that noise will not be an issue for sensitive receptors. Under the “Alternate Sites” alternative, the Base Yard and Maintenance Facility would have greater impacts and not meet the MTA’s need for a larger space for its operations.

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7 FINDINGS AND ANTICIPATED DETERMINATION

To determine whether the construction of the Base Yard and Maintenance Facility may have a significant impact on the physical and human environment, all phases and expected consequences of the proposed Base Yard and Maintenance Facility have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts. Based on this evaluation, the Proposing Agency (County of Hawai'i MTA) anticipates issuing a Finding of No Significant Impact (FONSI). The supporting rationale for this finding is presented in this chapter.

7.1 SIGNIFICANCE CRITERIA

The discussion below evaluates the significance of the Project's impacts based upon the Significance Criteria set forth in Hawai'i Administrative Rules section 11-200-12. An action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

- (1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;

Discussion: The proposed Base Yard and Maintenance Facility is not anticipated to involve any construction activity that may lead to a loss or destruction of any natural or cultural resource. The Project Site has been the subject archaeological and cultural studies conducted in and around the Project Site. These studies have revealed the absence of any resource potentially subject to irrevocable loss as a result of construction.

- (2) Curtails the range of beneficial uses of the environment;

Discussion: The Project Site has been heavily modified, possibly for quarrying and regional drainage purposes, but appears to be largely unused. Less than 13% of TMK (3) 2-1-013:0148 will be relinquished by the development of the MTA Base Yard and Maintenance Facility on this parcel. The remainder of the TMK can be used for quarry and borrow pit activities, even after the Base Yard and Maintenance Facility is operational.

- (3) Conflicts with the State's long term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders;

Discussion: The proposed Base Yard and Maintenance Facility is not in conflict with the long-term environmental policies, goals, and guidelines of the State of Hawai'i. As

presented earlier in this EA, the Base Yard and Maintenance Facility's potential adverse impacts are associated only with the short-term construction-related activities, and such impacts can be mitigated through adherence to standard construction mitigation practices.

(4) Substantially affects the economic or social welfare of the community or State;

Discussion: The proposed Base Yard and Maintenance Facility will have no adverse effects on the economy or social welfare of Hilo town or the County of Hawai'i. The social welfare of the residents of Hilo and Puna (and the employers in West Hawai'i) could possibly benefit from the more efficient operations and siting of the Base Yard and Maintenance Facility, and its corresponding beneficial impacts on county bus service.

(5) Substantially affects public health;

Discussion: There will be temporary impacts to noise and air quality levels during the construction phase of the Base Yard and Maintenance Facility; however, these potential impacts will be short-term and are not expected to substantially affect public health, particularly because of the distance of the Project Site from the closest residences. All construction activities will comply with applicable regulations and will implement appropriate mitigation measures. After construction, the Base Yard and Maintenance Facility should have minimal impact on ambient noise levels or air and water quality, which may be offset by the beneficial impact of replacing motor vehicles with bus ridership.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

Discussion: The proposed development will serve the existing residents of Hilo and its visitors. It will not induce any increases or shifts in population, and will not have a significant effect on any other public facilities.

(7) Involves a substantial degradation of environmental quality;

Discussion: Construction activities associated with the proposed Base Yard and Maintenance Facility are anticipated to result in negligible short-term impacts to noise, air-quality, and traffic in the immediate vicinity. With the incorporation of the recommended mitigation measures during the construction period, the Base Yard and Maintenance Facility will not result in degradation of environmental quality. No long term negative impacts are expected from implementation.

- (8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;

Discussion: As documented throughout this EA, this Base Yard and Maintenance Facility will have no serious negative effects. It is a stand-alone project which does not involve a commitment for larger actions.

- (9) Substantially affects a rare, threatened or endangered species or its habitat;

Discussion: There are no known, threatened, or endangered species of flora, fauna, or associated habitats located on the Project Site that could be adversely affected by the construction and operation of the proposed Base Yard and Maintenance Facility. According to the USFWS, it is possible that several endangered species of use or overfly the Project Site. Prior to starting work, the contractor should coordinate with the USFWS regarding protection of the listed species.

- (10) Detrimentially affects air or water quality or ambient noise levels;

Discussion: Construction activities for development of the proposed Base Yard and Maintenance Facility could potentially impact noise and air and water quality levels on the Project Site. However, these impacts will be short-term and are not expected to be detrimental. All construction activities will comply with applicable regulations and will implement appropriate mitigation measures as necessary. After construction, the development is not expected to adversely impact ambient noise levels or water and air quality. There will be an increase in impervious surfaces over the Project Site's current vacant state; however, any increase in runoff will be accommodated by proposed drainage improvements and will not detrimentally affect water quality.

- (11) Affects or is likely to suffer damage by being located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

Discussion: The development will not affect any environmentally sensitive area. The Base Yard and Maintenance Facility is located outside a FIRM-designated flood plain and inland from the coast. The proposed Base Yard and Maintenance Facility will be constructed in compliance with County of Hawai'i building codes, and the drainage improvements will be designed to minimize any potential for localized flooding.

- (12) Substantially affects scenic vistas and view planes identified in County or State plans or studies; or,

Discussion: The proposed Base Yard and Maintenance Facility will not alter the visual setting of the area, nor will it block any scenic vistas. The area is not listed as a scenic view plane or area of natural beauty by the county, and is not visible from the major state highway facility in the area, Kanoelehua Avenue.

- (13) Requires substantial energy consumption.

Discussion: Construction and operation of the Base Yard and Maintenance Facility will not require substantial increases in energy consumption. The building will be built to meet the Silver accreditation level of the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) standards. In accord with these standards, the building will incorporate a number of energy saving techniques.

7.2 ANTICIPATED DETERMINATION

Pursuant to Chapter 343, HRS, the determining agency, the County of Hawai'i Mass Transit Agency anticipates a Finding of No Significant Impact (FONSI) for this environmental assessment. This finding will be based on the basis of impacts and mitigation measures examined in this document, public comments received during the pre-assessment consultation and public comment phases, and analyzed under the above criteria.

8 CONSULTATION

8.1 EARLY CONSULTATION

A pre-assessment consultation was conducted from January 14, 2014 through April 7, 2014 prior to preparation of the Draft EA. The purpose of the pre-assessment consultation was to consult with agencies, organizations and individuals with technical expertise, or an interest or will be affected by the proposed Base Yard and Maintenance Facility. This process is part of the scoping process for the Draft EA. Comments and input received during this period were used to identify environmental issues and concerns to be addressed in the Draft EA, which in turn will undergo a 30-day public comment period.

As part of the Early Consultation process, the following agencies, organizations and individuals were sent pre-assessment consultation letters. Those that provided written comments (either by hardcopy or email) are highlighted in *italics*. Copies of the written comments and responses are reproduced in Appendix B.

8.1.1.1 State of Hawai'i

- Department of Agriculture
- *Department of Accounting and General Services*
- Department of Business, Economic Development & Tourism (DBEDT)
- DBEDT – Energy Division
- DBEDT – Hawai'i Housing Finance and Development Corporation
- *DBEDT – Office of Planning*
- *Department of Defense*
- *Department of Hawaiian Homelands*
- *Department of Health - Environmental Planning Office*
- *Department of Health - Hawai'i District*
- *Department of Human Services*
- *Department of Labor and Industrial Relations*
- *Department of Land and Natural Resources (DLNR)*
- *DLNR - State Historic Preservation Division*
- *Department of Transportation*
- Office of Environmental Quality Control
- Office of Hawaiian Affairs
- University of Hawai'i Water Resources Research Center
- State Representative R. Onishi
- State Senator Kauhale

8.1.1.2 Federal

- U.S. Army Corps of Engineers – Regulatory Branch
- *U.S. Federal Emergency Management Agency*

- U.S. Fish and Wildlife Service
- U.S. Geological Survey – Hawaiian Volcano Observatory

8.1.1.3 County of Hawai'i

- *Department of Environmental Management*
- Department of Parks & Recreation
- Department of Research & Development
- *Department of Water Supply*
- Fire Department
- Office of Housing and Community Development
- *Planning Department*
- *Police Department*
- *County Councilmember D. Onishi*

Private Organizations & Individuals

- *Hawaiian Electric Light Co.*

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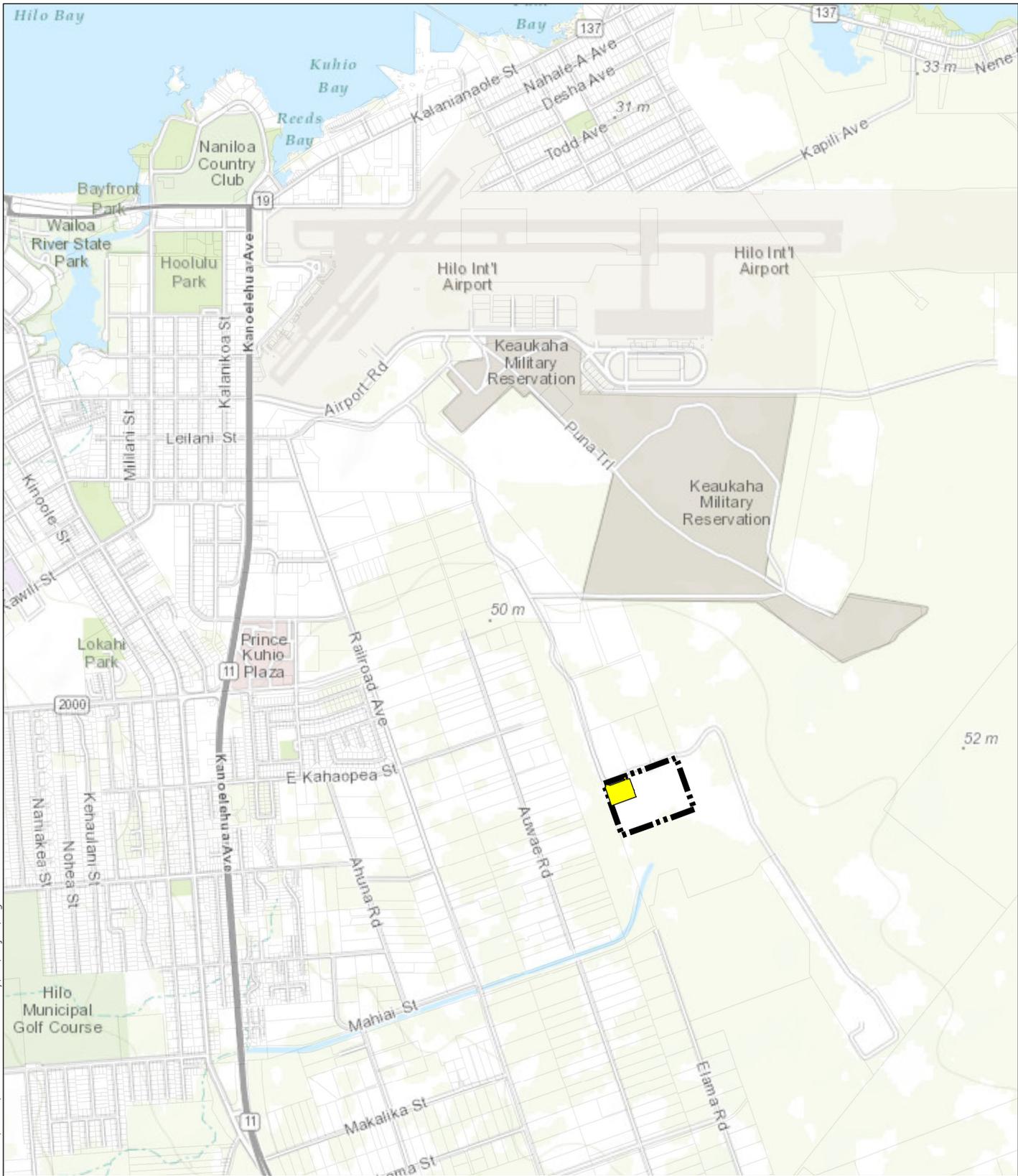
COUNTY OF HAWAII MASS TRANSIT AGENCY BASE YARD & MAINTENANCE FACILITY

Draft Environmental Assessment/Anticipated Finding of No Significant Impact

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Appendix **A**

FIGURES



PDF - C:\Hawaii\Hilo Mass Transit Facility\PDF\CIA Maps
 Path: C:\Hawaii\Hilo Mass Transit Facility\GIS\Project\Regional Location.mxd

DATE: 3/12/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels

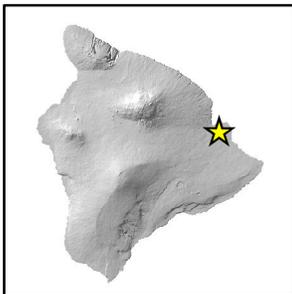


FIGURE 1 :
Regional Location

**MAS TRANSIT AGENCY
 BASE YARD FACILITY**

County of Hawaii's Mass Transit Agency Island of Hawaii

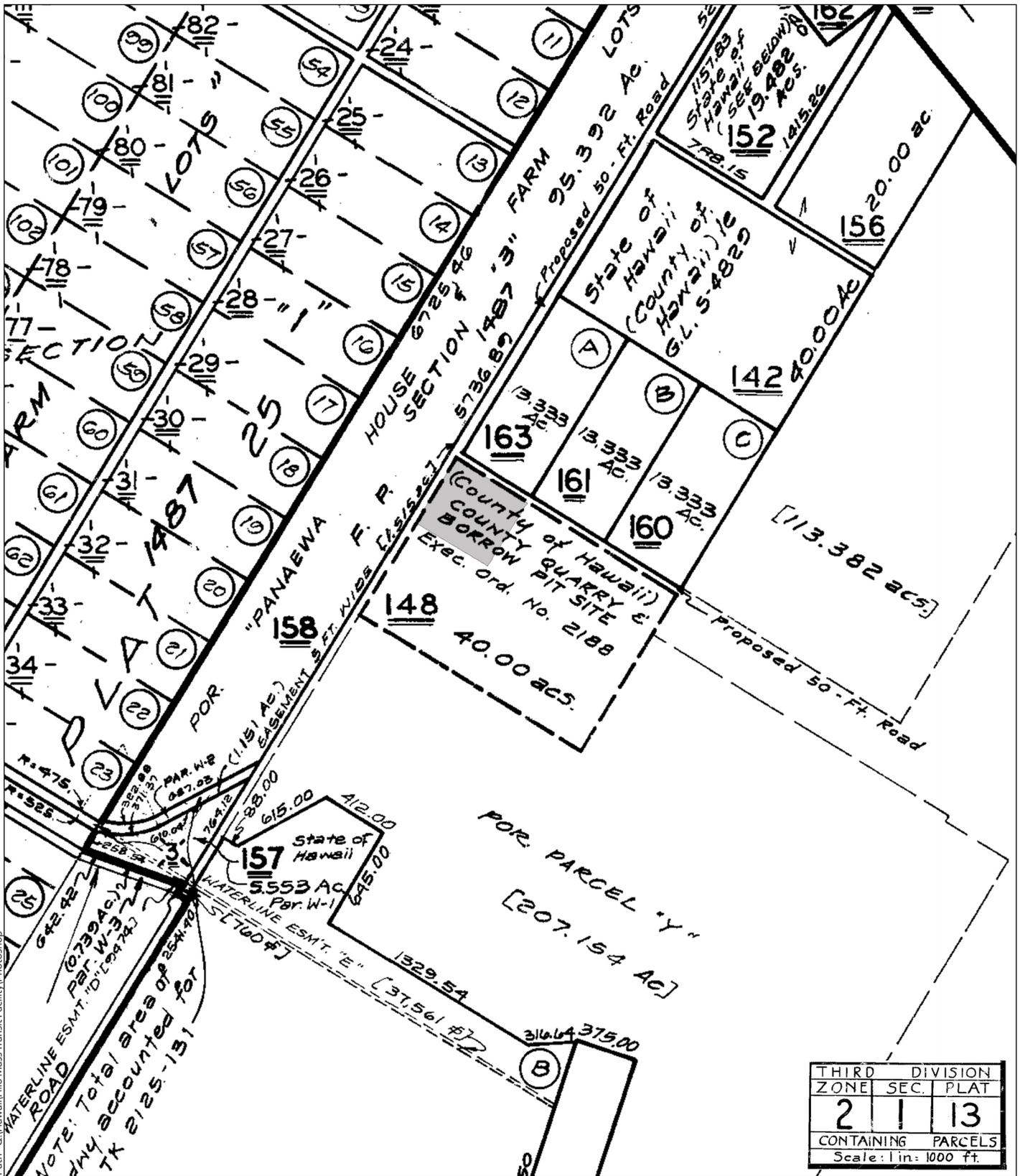
North



Linear Scale (feet)




Source: County of Hawaii, 2014. ESRI Basemaps. Mitsunaga and Associates, 2015.
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



THIRD DIVISION		
ZONE	SEC.	PLAT
2	1	13
CONTAINING PARCELS		
Scale: 1 in. = 1000 ft.		

DRAFT 3/12/2015

LEGEND

Proposed Base Yard Site

FIGURE 2 :
Tax Map Key

**MAS TRANSIT AGENCY
 BASEYARD FACILITY**

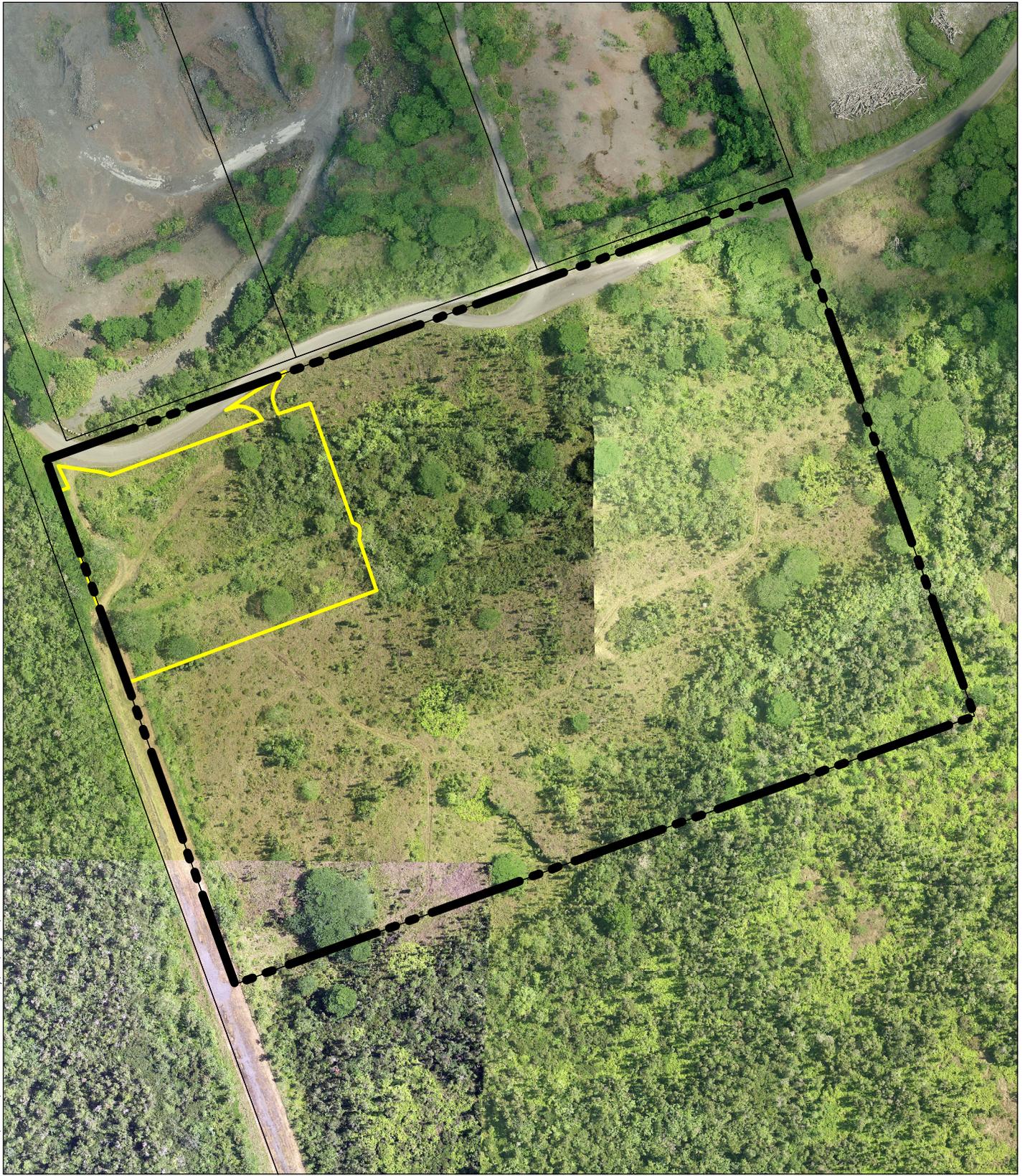
County of Hawaii's Mass Transit Agency North Island of Hawaii's

Linear Scale (in feet)

0 250 500 1,000

Source: City and County of Honolulu

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data.



DATE: 3/13/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels

FIGURE 3 :
Aerial Location

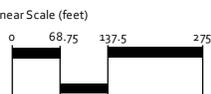
**MAS TRANSIT AGENCY
BASE YARD FACILITY**

County of Hawai'i Mass Transit Agency Island of Hawai'i

North



Linear Scale (feet)



Source: County of Hawai'i, 2014. Pictometry, 2012. Mitsunaga and Associates, 2015.
Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



1. Project Site from Pana'ewa Drag Strip



2. Vegetation on Project Site



3. View looking east near eastern border of Project Site



4. Berm running roughly east-west through the Project Site



5. View south from bulldozed area of Project Site



6. Debris found on Project Site



KEY MAP

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

FIGURE 4 :
Site Photos

**MASS TRANSIT AGENCY
BASE YARD FACILITY**

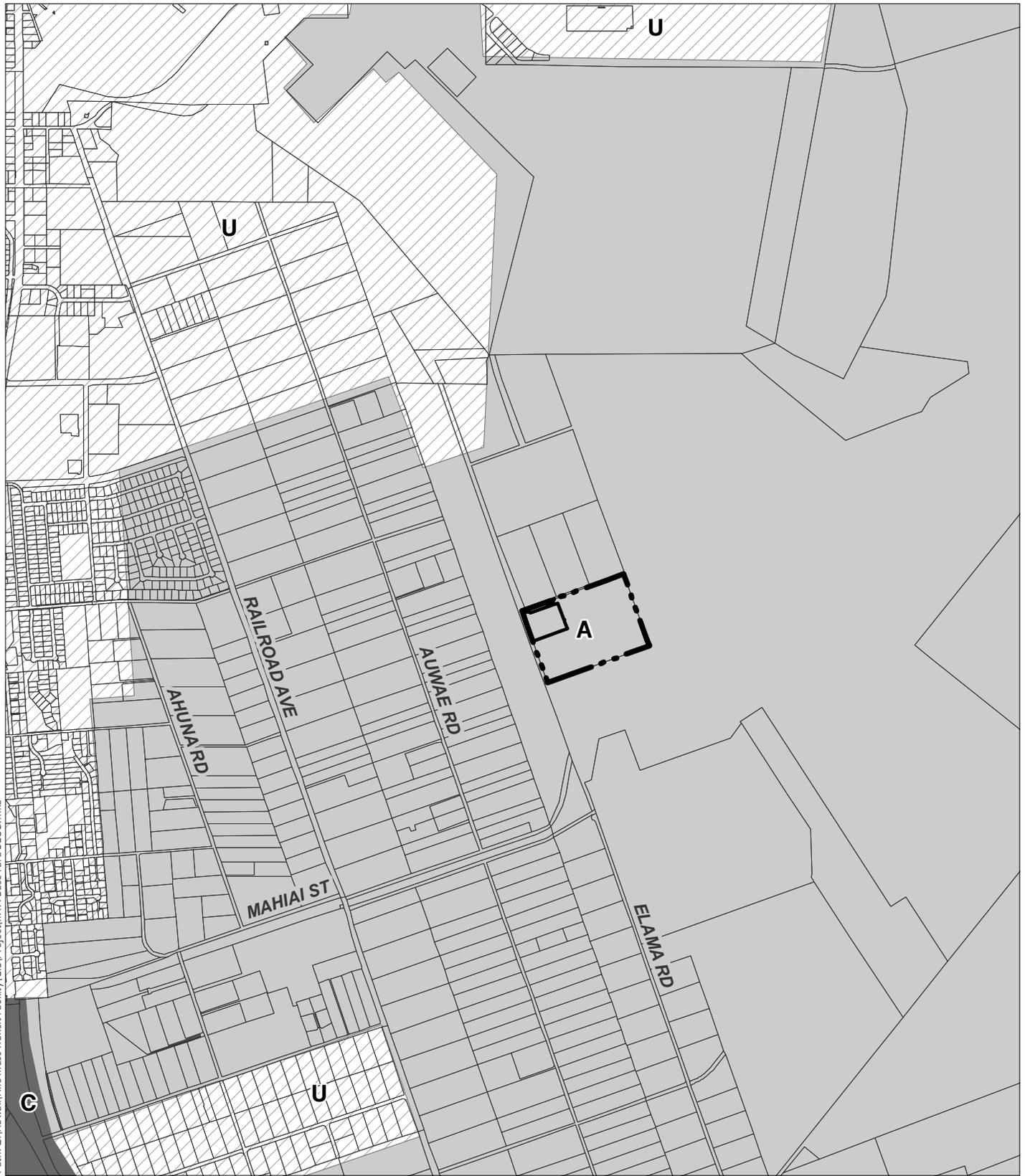
County of Hawaii's Mass Transit Agency Island of Hawaii

Photos taken: 4/1/2015
Date prepared: 4/13/2015



PBR HAWAII
& ASSOCIATES, INC.

PDF - O:\Hawaii\Hilo Mass Transit Facility\PD\PEA Figures
 Path: Q:\Hawaii\Hilo Mass Transit Facility\GIS\Project\MTA Base Yard SLUD.mxd



DATE: 3/27/2015

LEGEND

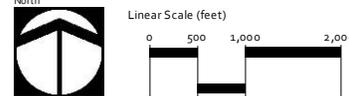
-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels
-  A - Agriculture
-  C - Conservation
-  R - Rural
-  U - Urban

FIGURE 5 :
State Land Use Districts

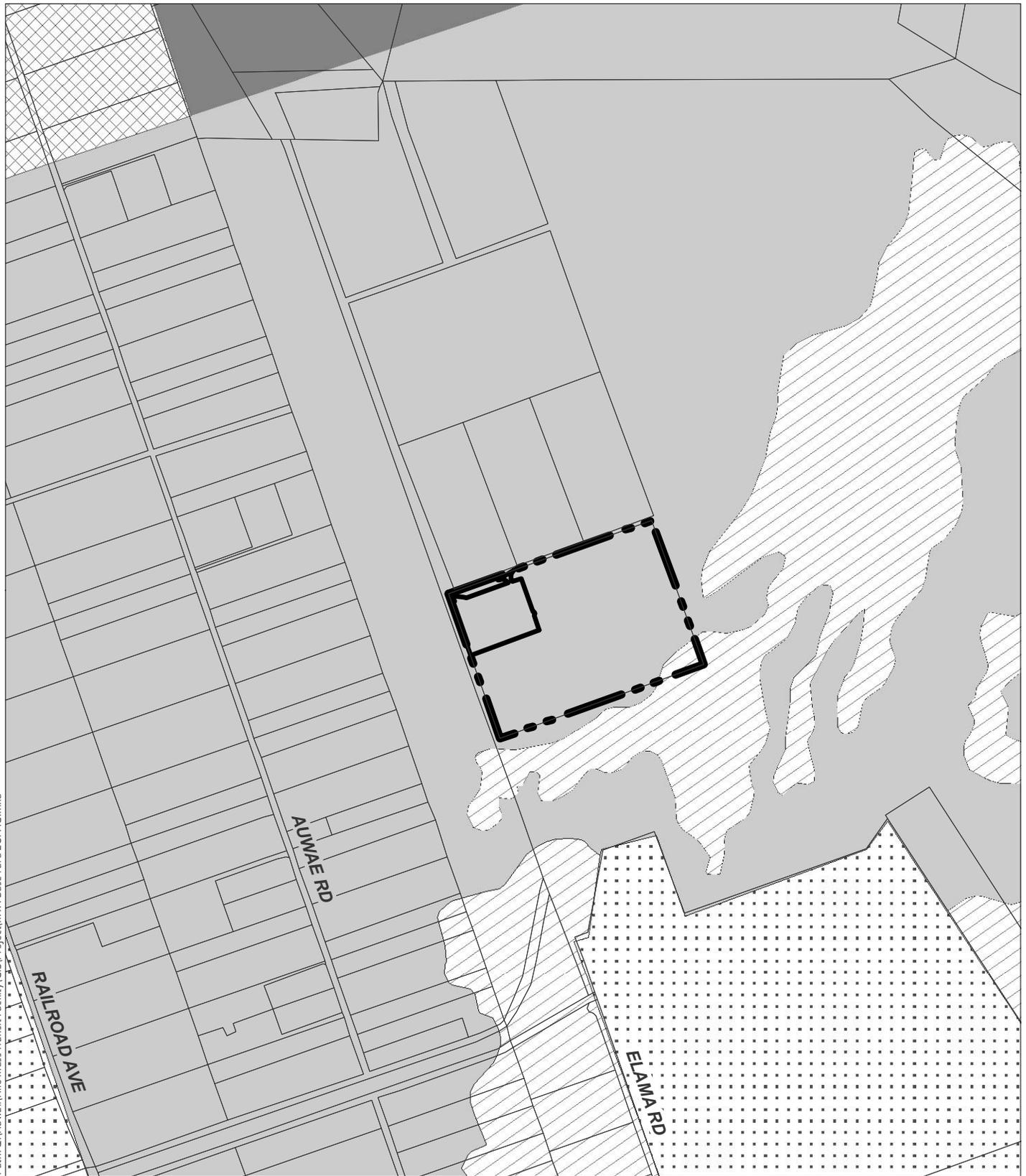
**MASSTransit AGENCY
 BASE YARD FACILITY**

County of Hawai'i Mass Transit Agency Island of Hawai'i

North




Source: County of Hawai'i, 2014. State Land Use Commission, 2014. Mitsunaga & Associates, 2015.
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



DATE: 3/27/2015

LEGEND

- | | | | |
|---|-------------------------|---|-----------------------|
|  | Proposed Base Yard Site | Land Use Pattern Allocation Guide | |
|  | TMK (3) 2-1-013:148 |  | Extensive Agriculture |
|  | Tax Map Key Parcels |  | Important Ag. Lands |
| | |  | Industrial |
| | |  | Low Density Urban |
| | |  | Urban Expansion |

FIGURE 6 :
County of Hawai'i General Plan
Land Use Pattern Allocation Guide
MASS TRANSIT AGENCY
BASE YARD FACILITY

County of Hawai'i Mass Transit Agency Island of Hawai'i

North

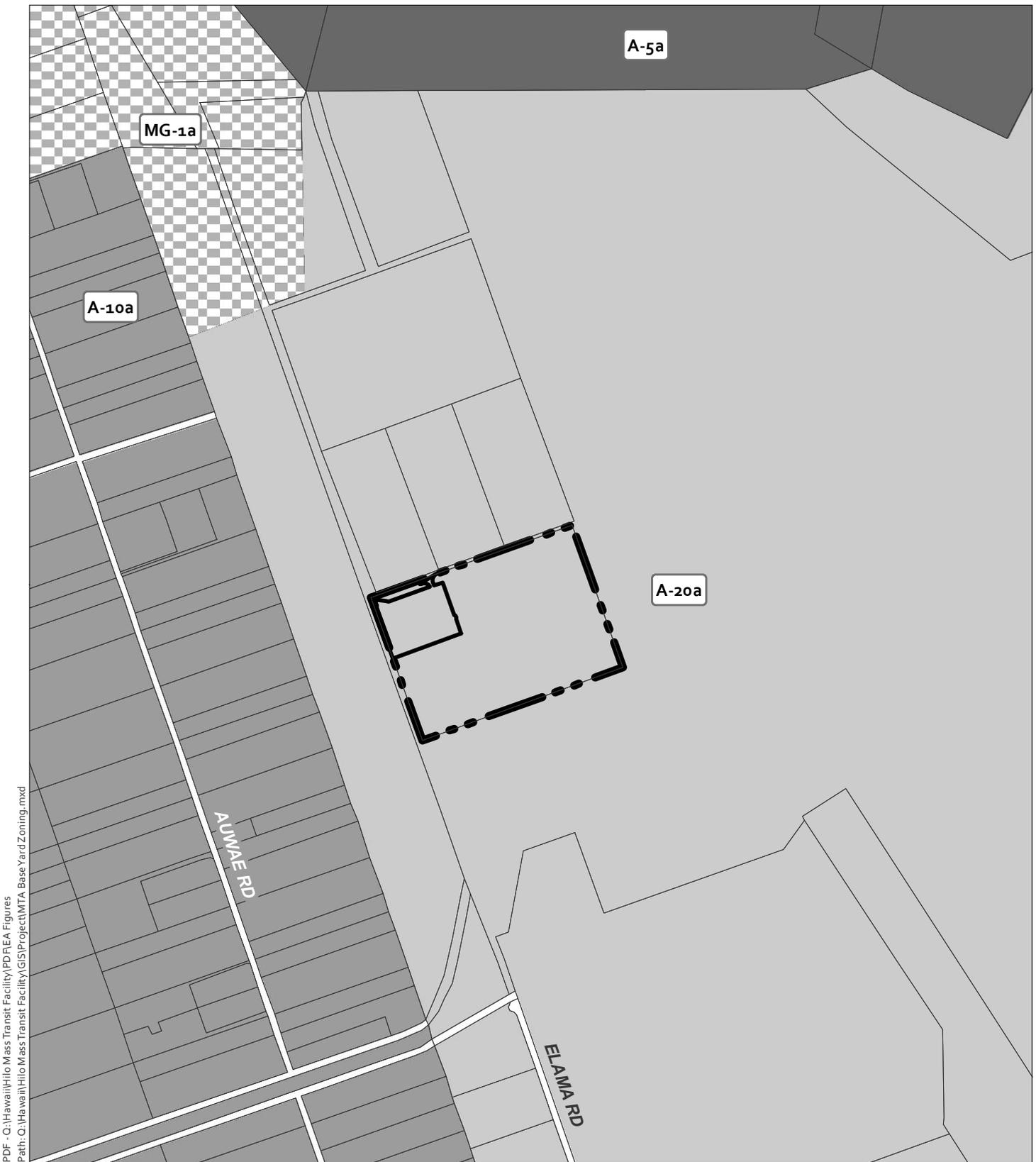
Linear Scale (feet)

0 250 500 1,000



Source: County of Hawai'i, 2014 (TMK) & 2012 (LUPAG). Mitsunaga & Associates, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



PDF - O:\Hawaii\Hilo Mass Transit Facility\PD\PEA Figures
 Path: Q:\Hawaii\Hilo Mass Transit Facility\GIS\Project\MTA Base Yard Zoning.mxd

DATE: 3/27/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels

County of Hawai'i Zoning

-  A-20a
-  A-10a
-  A-5a
-  MG-1a

FIGURE 7 :
County of Hawai'i Zoning

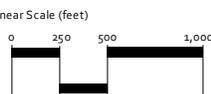
**MASS TRANSIT AGENCY
 BASE YARD FACILITY**

County of Hawai'i Mass Transit Agency Island of Hawai'i

North

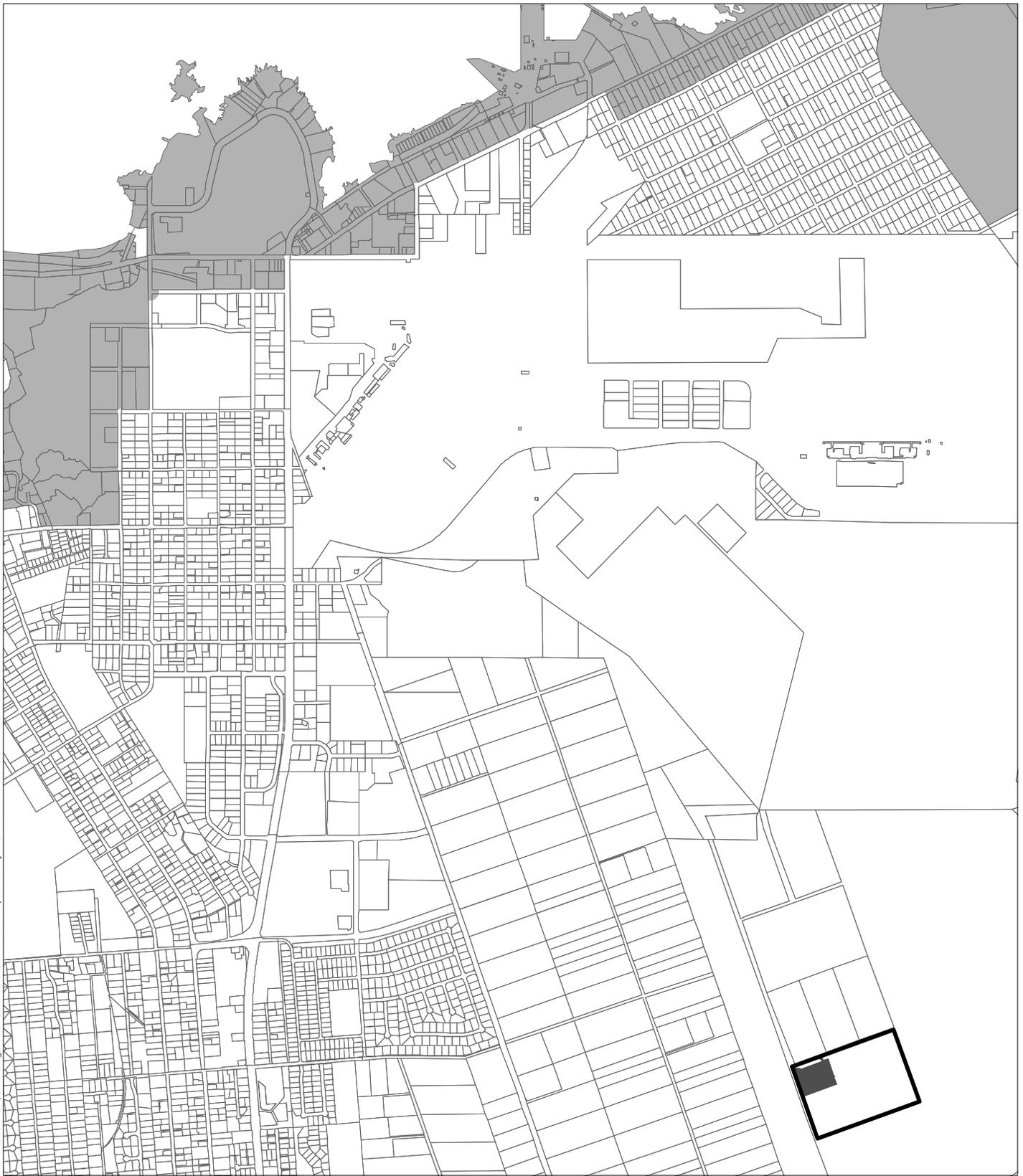


Linear Scale (feet)




Source: County of Hawai'i, 2014. Mitsunaga & Associates, 2015.
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

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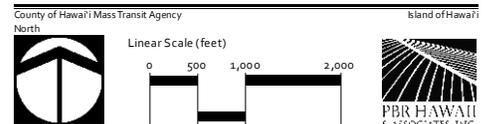
DATE: 4/13/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels
-  Special Management Area

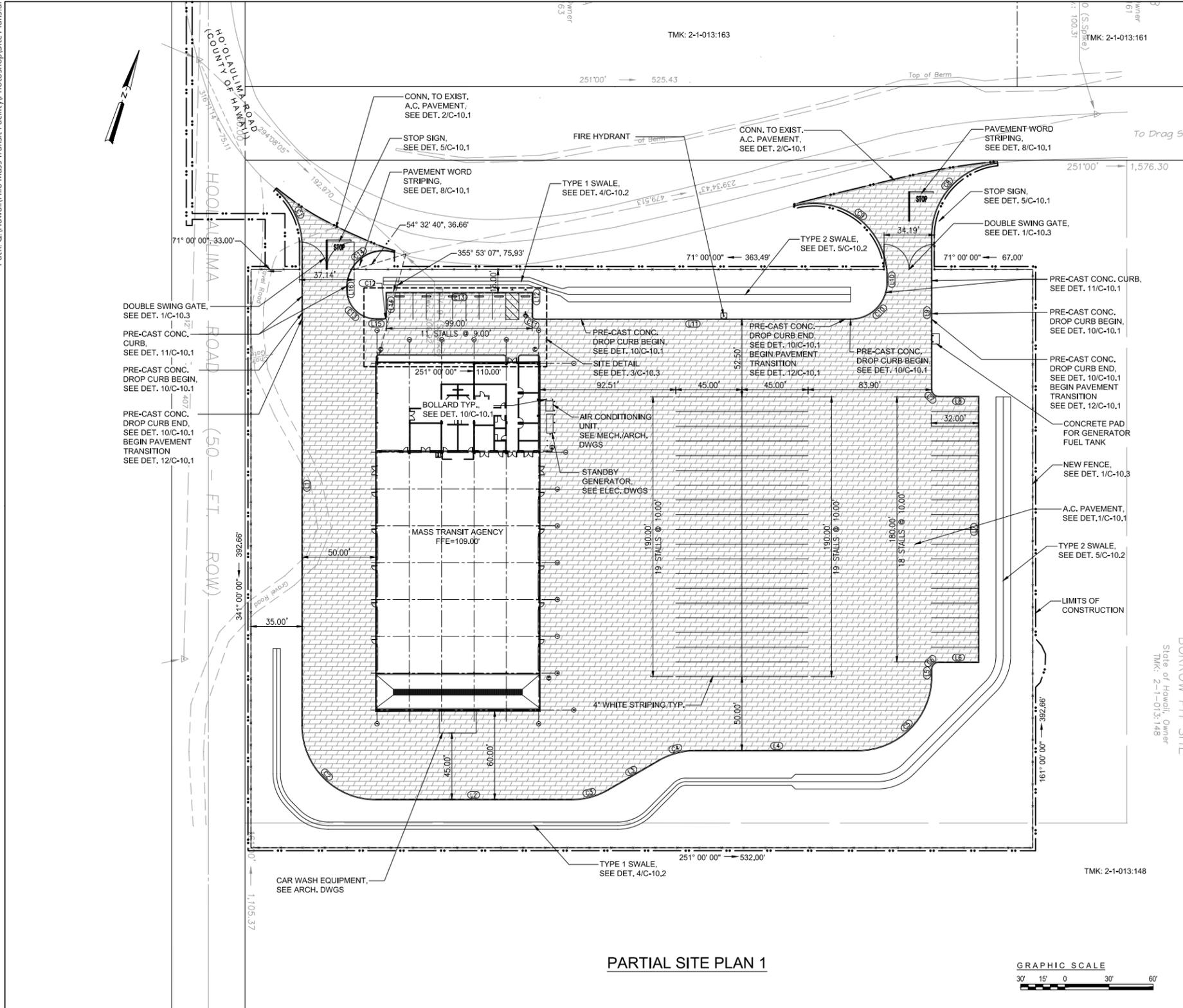
FIGURE 8 :
Special Management Area

**MAS TRANSIT AGENCY
BASE YARD FACILITY**



Source: County of Hawaii's, 2014 (TMK) & 2013 (SMA). Mitsunaga & Associates, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



Line Table: Alignments

Line #	Length	Direction
L1	325.69	341' 00' 00"
L2	133.04	250' 59' 45"
L3	39.78	221' 00' 00"
L4	110.51	251' 00' 00"
L5	5.00	161' 00' 00"
L6	27.00	251' 00' 00"
L7	180.00	161' 00' 00"
L8	27.00	71' 00' 00"
L9	104.14	161' 00' 00"
L10	4.07	341' 00' 00"
L11	214.78	71' 00' 00"
L12	16.00	161' 00' 00"
L13	99.00	71' 00' 00"
L14	15.91	341' 00' 00"
L15	5.12	71' 00' 00"
L16	1.77	161' 00' 00"

Curve Table: Alignments

Curve #	Δ	Δ/2	R	C	Lc	T
C1	50°38'44"	25°19'22"	50.00'	44.20'	42.77'	23.66'
C2	90°00'15"	45°00'08"	50.00'	78.54'	70.71'	50.00'
C3	29°59'45"	14°59'52"	50.00'	26.18'	25.88'	13.40'
C4	30°00'00"	15°00'00"	50.00'	26.18'	25.88'	13.40'
C5	90°00'00"	45°00'00"	50.00'	78.54'	70.71'	50.00'
C6	90°00'00"	45°00'00"	5.00'	7.85'	7.07'	5.00'
C7	90°00'00"	45°00'00"	5.00'	7.85'	7.07'	5.00'
C8	84°22'37"	42°11'19"	50.00'	73.63'	67.16'	45.32'
C9	105°53'20"	52°56'40"	50.00'	92.41'	79.81'	66.22'
C10	90°00'00"	45°00'00"	25.00'	39.27'	35.36'	25.00'
C11	90°00'00"	45°00'00"	2.00'	3.14'	2.83'	2.00'
C12	94°59'19"	47°29'39"	2.00'	3.32'	2.95'	2.18'
C13	90°00'00"	45°00'00"	20.00'	31.42'	28.28'	20.00'
C14	107°39'11"	53°49'36"	25.00'	46.97'	40.36'	34.19'

PARTIAL SITE PLAN 1



LEGEND

	PROPERTY CONSTRUCTION EASEMENT		CONC. WALKWAY/ PAVEMENT
	PROPERTY LINE RIGHT OF WAY		A.C. PAVEMENT
	LIMITS OF CONSTRUCTION		
	NEW FENCE		
	STRUCTURE FOOTPRINT		

Source: Mitsunaga & Associates, Inc., April 2015.
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

DATE: 4/13/2015

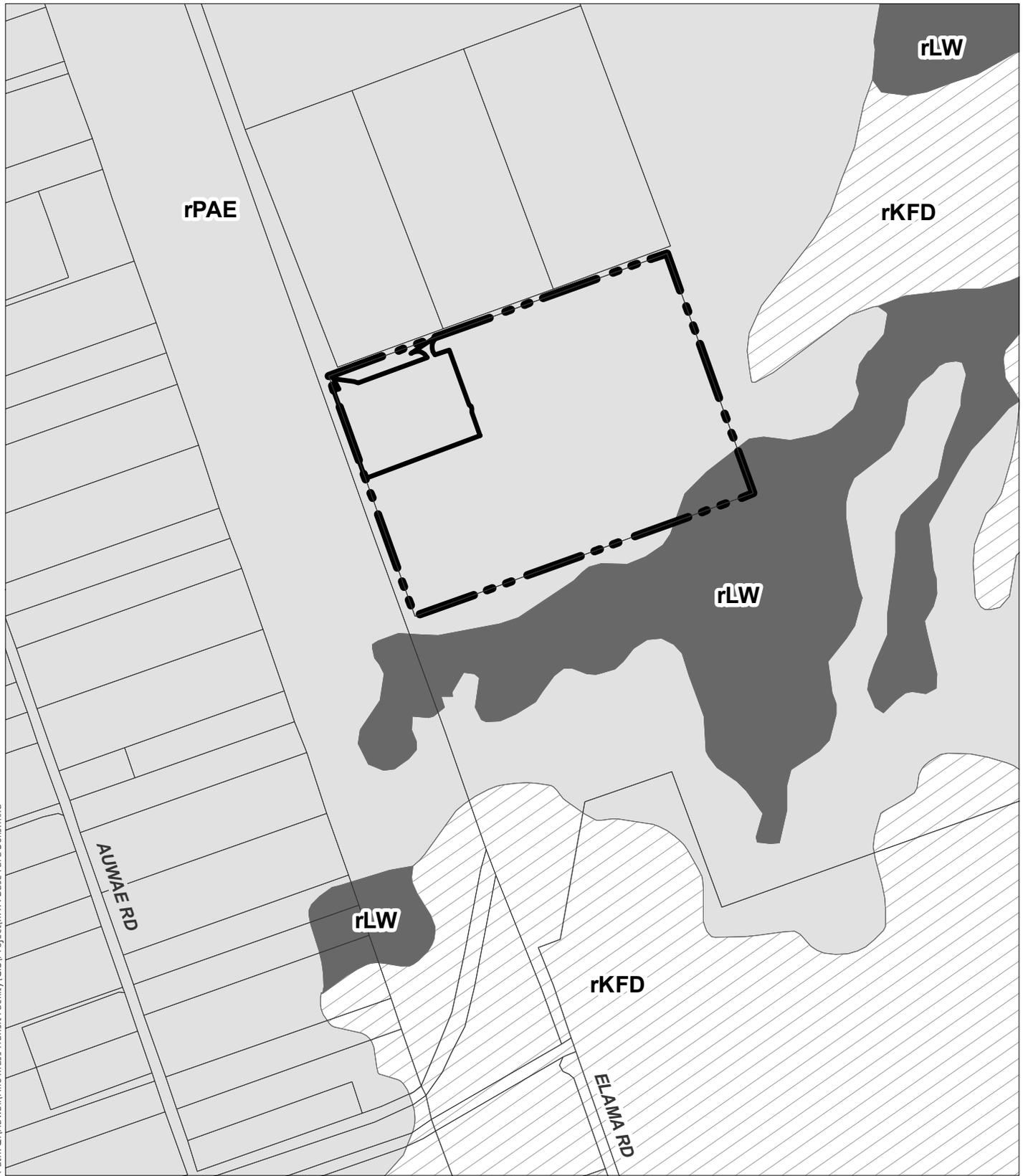
FIGURE 9B :
 Partial Site Plan

**MASS TRANSIT AGENCY
 BASE YARD FACILITY**

County of Hawaii's Mass Transit Agency
 North

Island of Hawaii
 PBR HAWAII & ASSOCIATES, INC.

PDF - O:\Hawaii\Hilo Mass Transit Facility\PD\PEA Figures
 Path: Q:\Hawaii\Hilo Mass Transit Facility\GIS\Project\MTA Base Yard Soils.mxd



DATE: 3/27/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels

- Soils**
-  rKFD - Keaukaha extremely rocky muck, 6 to 20 percent slopes
 -  rLW - Lava flows, pahoehoe
 -  rPAE - Papai extremely stony muck, 3 to 25 percent slopes

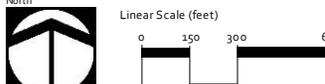
**FIGURE 10 :
Soils**

**MASS TRANSIT AGENCY
BASE YARD FACILITY**

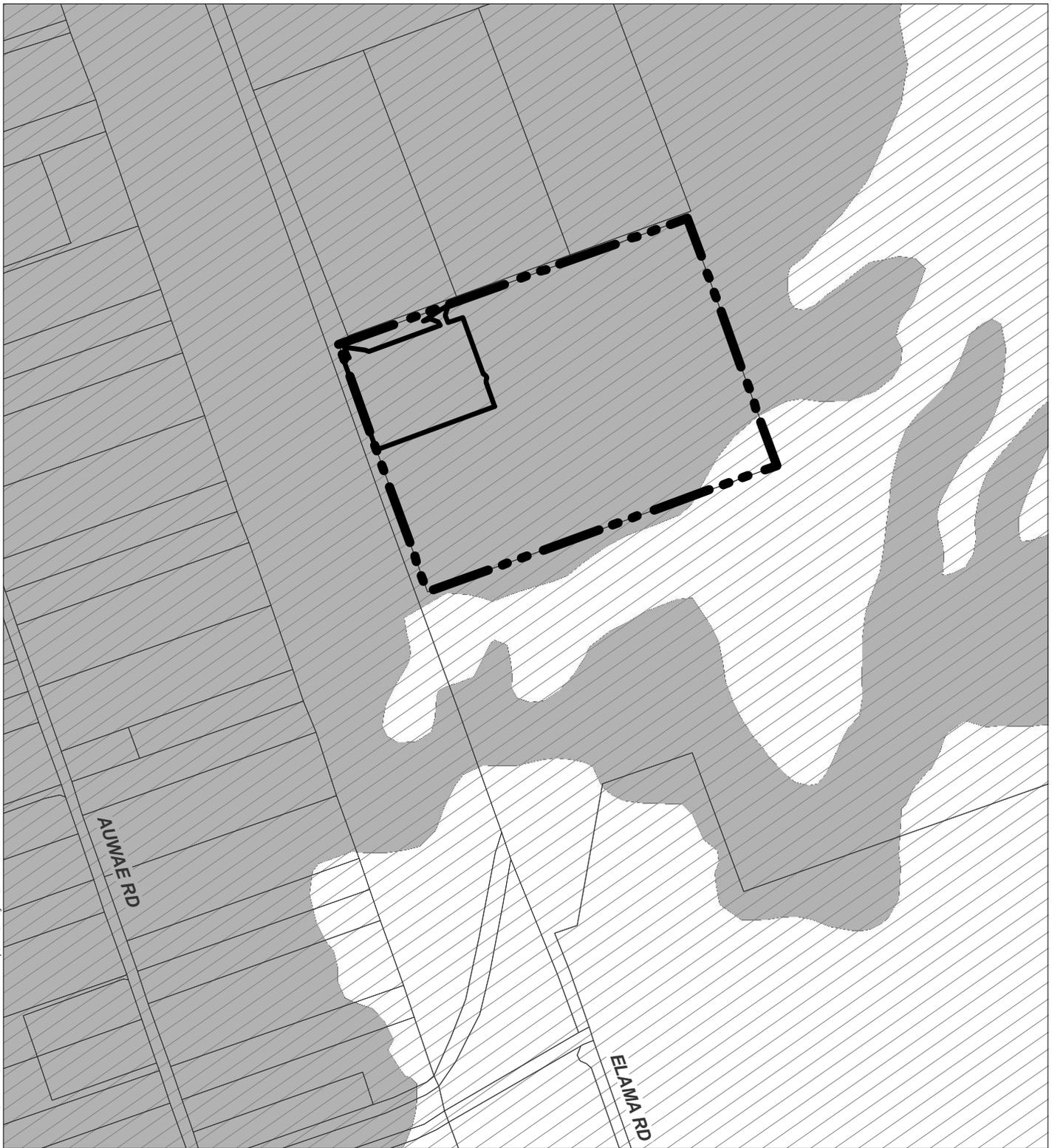
County of Hawai'i Mass Transit Agency Island of Hawai'i

North

Linear Scale (feet)




Source: County of Hawai'i, 2014. U.S. Department of Agriculture Natural Resources Conservation Service. Mitsunaga & Associates, 2015.
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



DATE: 3/27/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels

Agricultural Lands of Importance to the State of Hawai'i

-  Other ALISH
-  Unclassified

Land Study Bureau - Detailed Land Classification

-  E - Very Poor

FIGURE 11 :
Agricultural Land Classifications

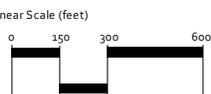
**MASS TRANSIT AGENCY
 BASE YARD FACILITY**

County of Hawai'i Mass Transit Agency Island of Hawai'i

North

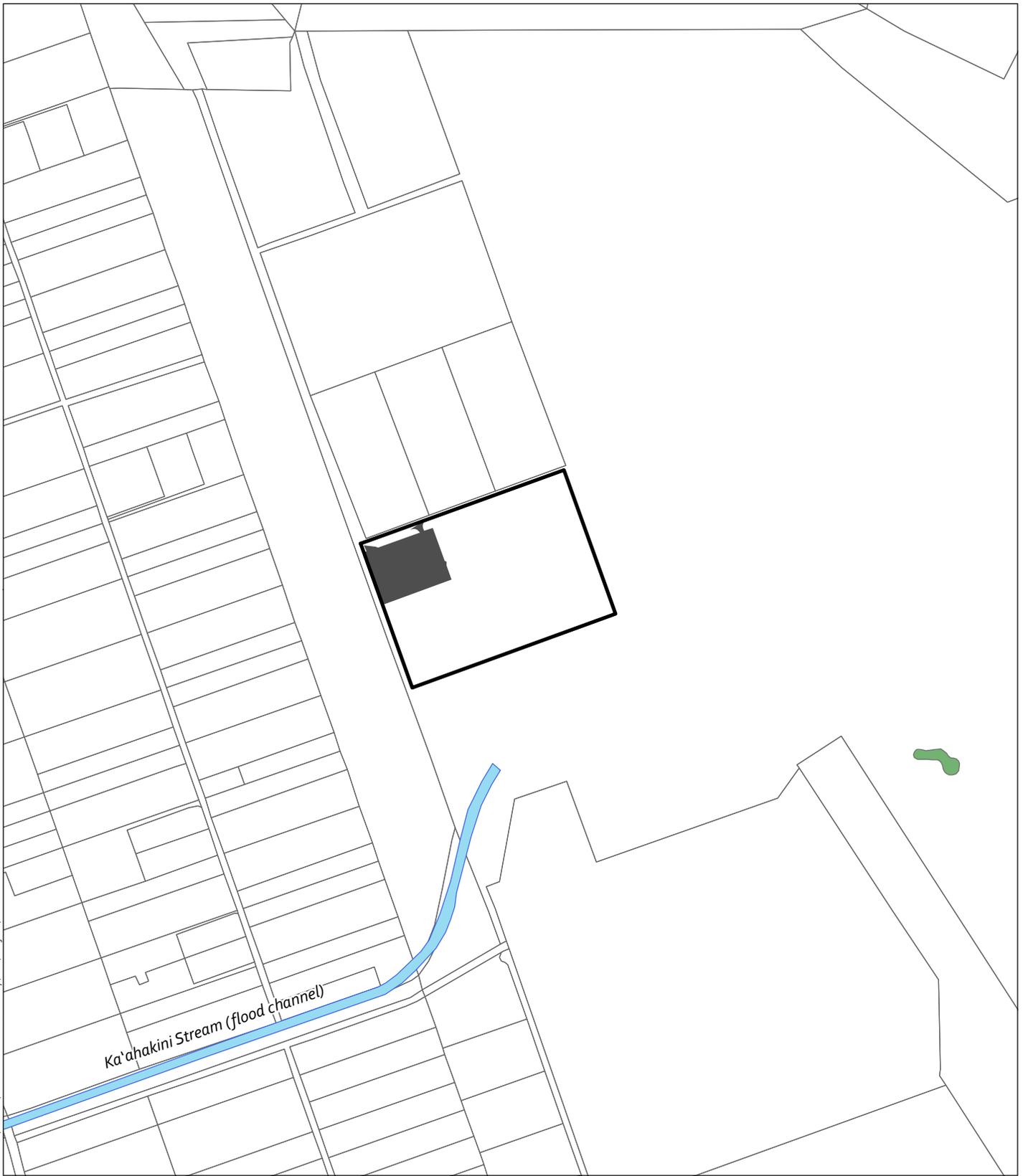


Linear Scale (feet)




Source: County of Hawai'i, 2014. University of Hawai'i, 1973. State of Hawai'i Department of Agriculture, 1977. Mitsunaga & Associates, 2015.
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PDF - O:\Hawaii\Hilo Mass Transit Facility\PDF\EA Figures
Path: O:\Hawaii\Hilo Mass Transit Facility\GIS\Project\MTA Base Yard Surface Water.mxd



DATE: 3/13/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels
-  Surface Water

Wetlands

-  Freshwater Pond

FIGURE 12 :
Surface Water & Wetlands

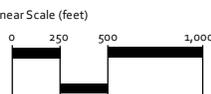
**MAS TRANSIT AGENCY
BASE YARD FACILITY**

County of Hawai'i Mass Transit Agency Island of Hawai'i

North

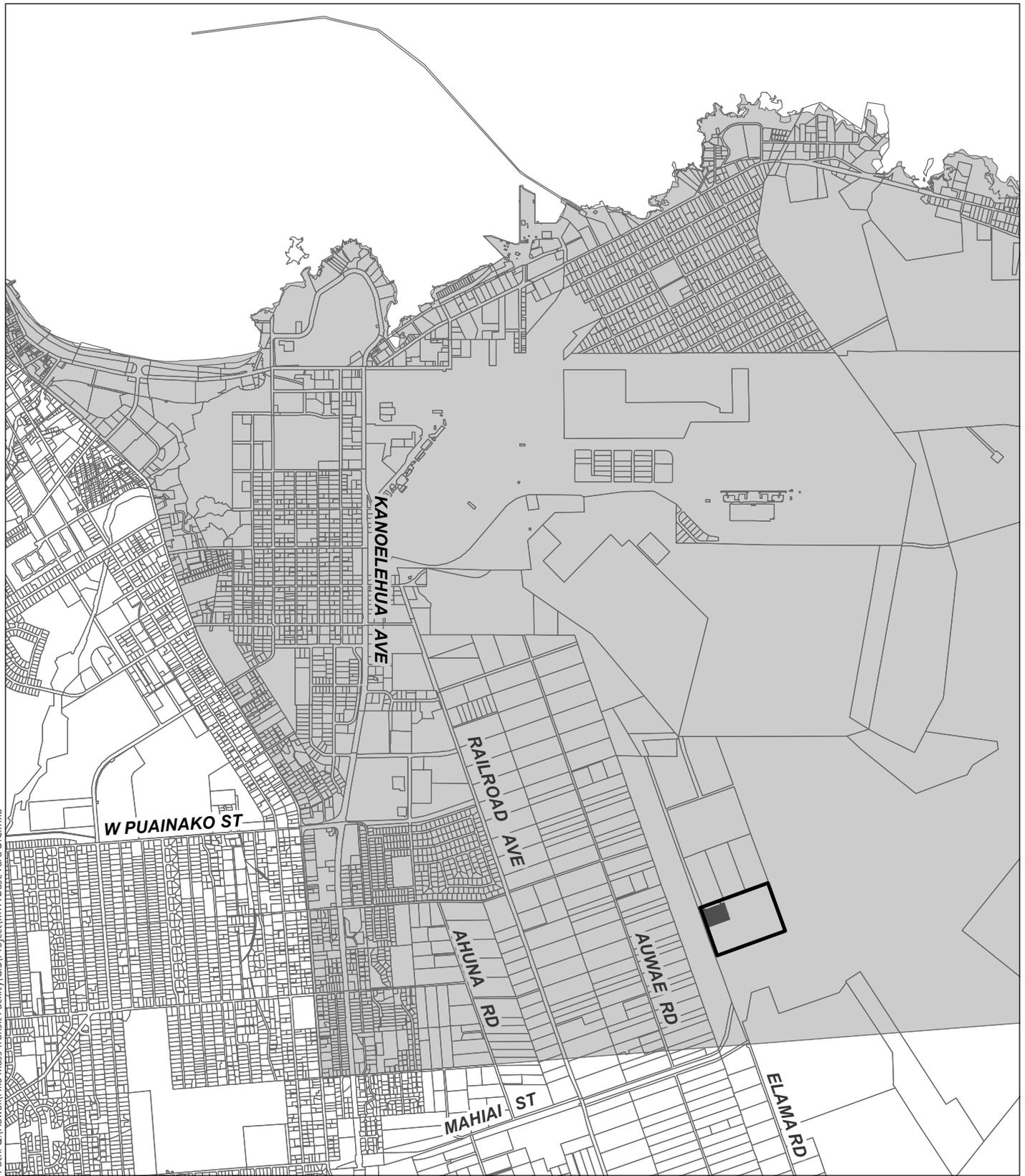


Linear Scale (feet)




Source: County of Hawai'i, 2014. State of Hawai'i Department of Land and Natural Resources. U.S. Fish and Wildlife Service National Wetlands Inventory. Mitsunaga & Associates, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



DATE: 3/27/2015

LEGEND

■ Proposed Base Yard Site

□ TMK (3) 2-1-013:148

□ Tax Map Key Parcels

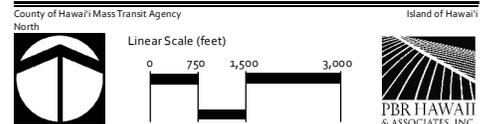
Underground Injection Control (UIC) Areas

■ Below (makai) UIC Line

□ Above (mauka) UIC Line

FIGURE 13 :
Underground Injection Control

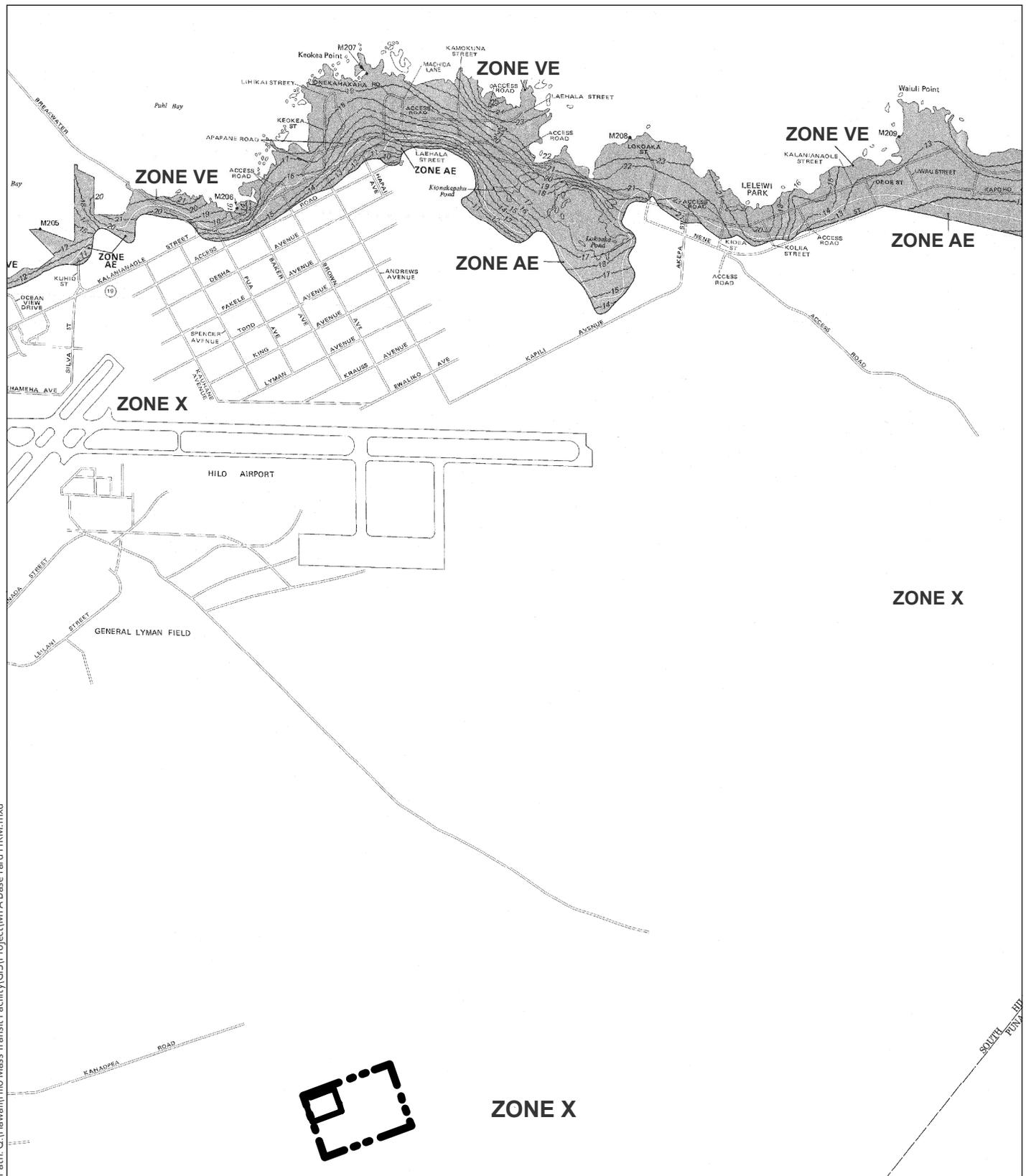
**MAS TRANSIT AGENCY
BASE YARD FACILITY**



Source: County of Hawai'i, 2014. State Department of Health Safe Drinking Water Branch, 2004.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

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DATE: 4/13/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148

Flood Zones

Zone X: Areas determined to be outside 0.2% annual change floodplain.

FIGURE 14 :
Flood Insurance Rate Map

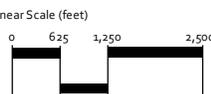
**MAS TRANSIT AGENCY
 BASE YARD FACILITY**

County of Hawaii's Mass Transit Agency Island of Hawaii

North

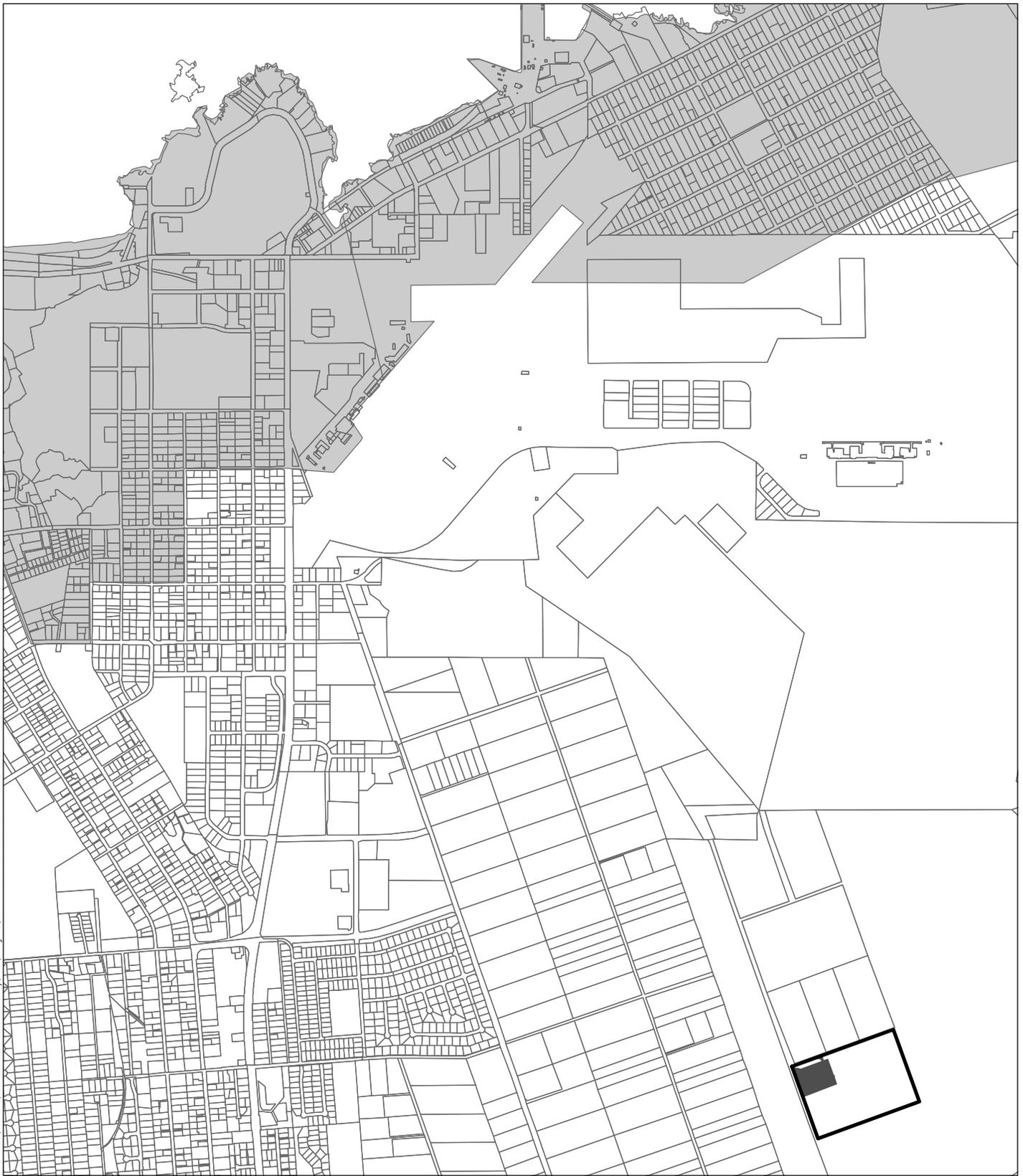


Linear Scale (feet)




Source: Federal Emergency Management Agency, Panel No. 155166 0885 C, 1988. Mitsunaga & Associates, 2015.
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

PDF - C:\Hawaii\Hilo Mass Transit Facility\PDF\IEA Figures
Path: C:\Hawaii\Hilo Mass Transit Facility\GIS\Project\MTA Base Yard\Tsunami.mxd



DATE: 3/13/2015

LEGEND

-  Proposed Base Yard Site
-  TMK (3) 2-1-013:148
-  Tax Map Key Parcels
-  Tsunami Evacuation Zone

FIGURE 15 :
Tsunami Evacuation Zone

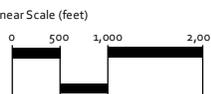
**MAS TRANSIT AGENCY
BASE YARD FACILITY**

County of Hawai'i Mass Transit Agency Island of Hawai'i

North



Linear Scale (feet)



0 500 1,000 2,000



Source: County of Hawai'i, 2014. State of Hawai'i Civil Defense, 2013. Mitsunaga & Associates, 2015.
Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Appendix **B**

PRE-ASSESSMENT CONSULTATION

DAVID Y. IGE
GOVERNOR



DOUGLAS MURDOCK
Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

FEB 23 2015

(P)1029.5

Ms. Bethany Wylie, Planner
PBR Hawaii & Assoc., Inc.
1001 Bishop Street, Suite 650
Honolulu, HI 96813

Dear Ms. Wylie:

Subject: Early Consultation
County of Hawaii Mass Transit Agency Base Yard Facility
Waiakea, South Hilo, Island of Hawaii
TMK: (3) 2-1-013:148 por.

This is in response to your letter dated February 12, 2015 regarding the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

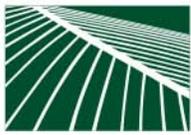
If there are any questions, please call me at 586-0400, or your staff may call Mr. David DePonte of the Public Works Division at 586-0492.

Sincerely,

A handwritten signature in blue ink, appearing to read "Douglas Murdock".

DOUGLAS MURDOCK
Comptroller

c: Mr. Jerry Watanabe, DAGS-Hawaii District Office



PBR HAWAII

& ASSOCIATES, INC.

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Chairman

R. STAN DUNCAN, ASLA
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Senior Associate

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Managing Director - Kapolei

ROY TAKEMOTO
Managing Director - Hilo

SCOTT MURAKAMI, ASLA, LEED®AP
Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

CATIE CULLISON, AICP
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KAPOLEI OFFICE
1001 Kamokila Boulevard
Kapolei Building, Suite 313
Kapolei, Hawai'i 96707-2005
Tel: (808) 521-5631
Fax: (808) 535-3163

HILO OFFICE
1719 Haleloke Street
Hilo, Hawai'i 96720-1553
Tel/Cel: (808) 315-6878

printed on recycled paper

April 10, 2015

Mr. Douglas Murdock
Comptroller
State of Hawaii
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawaii 96810-0119

Attn: Mr. David DePonte, Public Works Division

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear Mr. Murdock,

Thank you for your letter dated February 23, 2015 (your reference no. (P)1029.5) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We acknowledge that the proposed project does not impact any of the Department's projects or existing facilities, and that the Department has no comments to offer at this time.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

DAVID Y. IGE
GOVERNOR



RACHAEL WONG, DrPH
DIRECTOR

PANKAJ BHANOT
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment & Support Services Division
820 Mililani Street, Suite 606
Honolulu, Hawaii 96813

March 2, 2015

Re: 15-0083

PBR HAWAII & Associates, Inc.
Attn: Bethany Wylie, Planner
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Subject: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility, Waiakea, South Hilo, Hawaii (TMK (3) 2-1-013:-148 POR)

Dear Ms. Wylie:

This is in response to your letter dated February 12, 2015 requesting the Department of Human Services (DHS) comment on the proposed project for the County of Hawaii Mass Transit Agency Base Yard Facility in Waiakea, South Hilo, Hawaii.

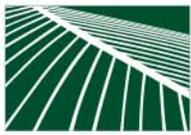
Please be advised that there are several DHS licensed family child care homes located in the near vicinity that may be impacted by the construction project.

If you have any questions or need further information, please contact Ms. Jill Arizumi, Child Care Program Specialist, at (808) 586-5240.

Sincerely,

Scott Nakasone
Assistant Division Administrator

c: Rachael Wong, DrPH, Director



PBR HAWAII

& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, ASLA
Chairman

R. STAN DUNCAN, ASLA
President

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C
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Senior Associate

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Senior Associate

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Managing Director - Kapolei

ROY TAKEMOTO
Managing Director - Hilo

SCOTT MURAKAMI, ASLA, LEED® AP
Associate

DACHENG DONG, LEED® AP
Associate

MARC SHIMATSU, ASLA
Associate

CATIE CULLISON, AICP
Associate

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Tel/Cel: (808) 315-6878

printed on recycled paper

April 10, 2015

Mr. Scott Nakasone
Assistant Division Administrator
State of Hawaii
Department of Human Services
Benefit, Employment & Support Services Division
820 Mililani Street, Suite 606
Honolulu, Hawaii 96813

Attn: Ms. Jill Arizumi, Child Care Program Specialist

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear Mr. Nakasone,

Thank you for your letter dated March 2, 2015 (your reference no. 15-0083) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We acknowledge the statement that "...there are several DHS licensed family child care homes located in the near vicinity that may be impacted by the construction project." We contacted Ms. Jill Arizumi to inquire about the locations of these homes and to determine the distances from the project. As of the sending of this letter, we have not received that information. As you know, the closest residential/agricultural lot to the project site is approximately 750 feet away and is separated from the site by dense forest.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

DAVID Y. IGE
GOVERNOR OF HAWAII



CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

March 12, 2015

PBR Hawaii & Associates, Inc.
Attn: Roy Takemoto
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

via email: rtakemoto@pbrhawaii.com

Dear Mr. Takemoto:

SUBJECT: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility, PBR Hawaii & Associates, Inc. for County of Hawaii Mass Transit Agency, Applicant, Waiakea, South Hilo, Hawaii; TMK: (3) 2-1-013:148

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (i) Engineering Division, and (ii) Hawaii District Land Office on the subject matter. Should you have any questions, please feel free to call Kevin Moore at 587-0426.

Sincerely,


Russell Y. Tsuji
Land Administrator

Enclosure(s)



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 18, 2015

MEMORANDUM

TO: FR:

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Hawaii District
- Historic Preservation

RECEIVED
 LAND DIVISION
 2015 MAR -6 AM 11:31
 DEPT. OF LAND &
 NATURAL RESOURCES
 STATE OF HAWAII

FROM: TO:

Russell Y. Tsuji, Land Administrator

SUBJECT: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility

LOCATION: Waiakea, South Hilo, Hawaii; TMK: (3) 2-1-013:148

APPLICANT: PBR Hawaii & Associates, Inc. for County of Hawaii Mass Transit Agency

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by March 11, 2015.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Kevin Moore at 587-0426. Thank you.

- We have no objections.
- We have no comments.
- Comments are attached.

Signed: Chris Johnson

Print name: in Carty S. Chang, Chief Engineer

Date: 3/6/15

cc: Central Files

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/ Russell Y. Tsuji

Ref.: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility, Waiakea Hawaii.014

COMMENTS

- () We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ____.
- (X) **Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X. The National Flood Insurance Program (NFIP) does not regulate developments within Zone X.**
- () Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ____.
- () Please note that the project site must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- () Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
 - () Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
 - () Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
 - () Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.
-
- () The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
 - () The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
 - () Additional Comments: _____
 - () Other: _____

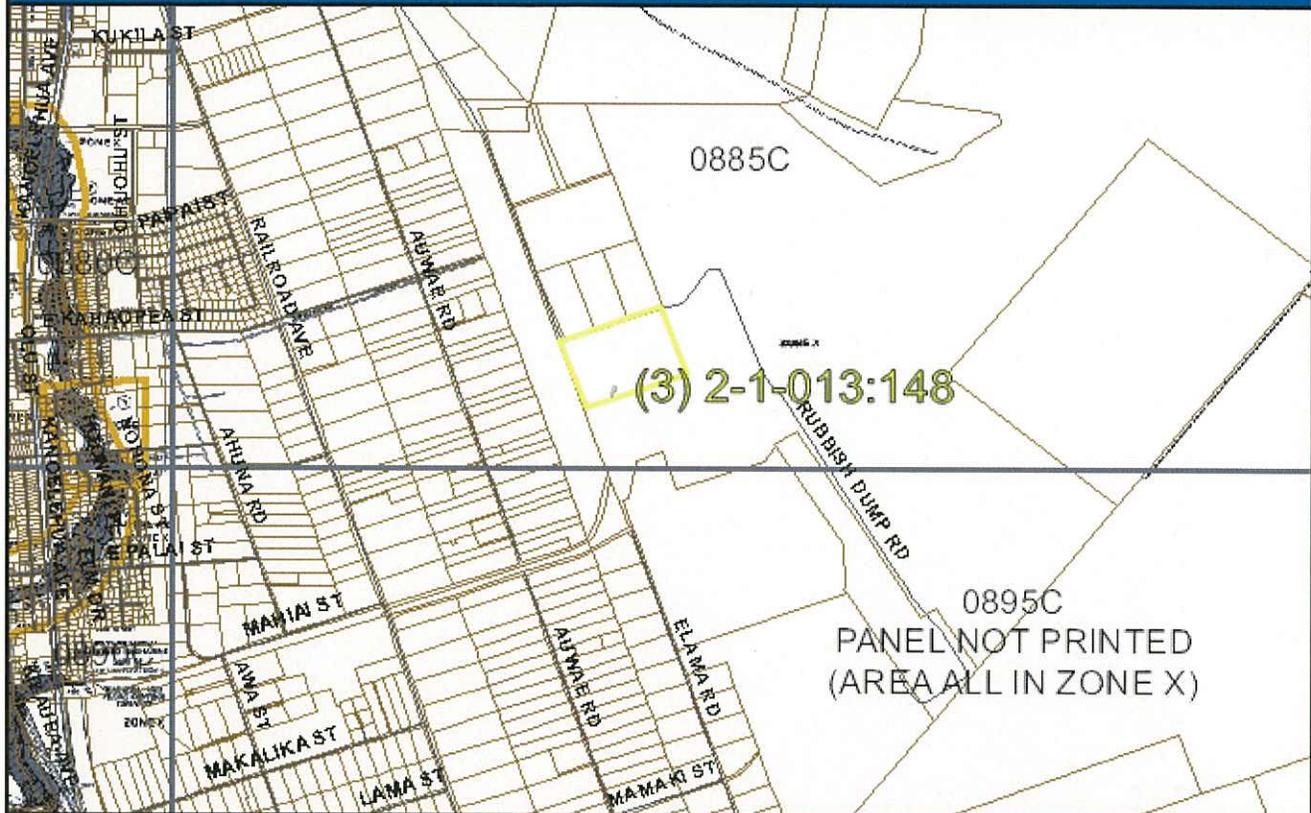
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: 
CARTY S. CHANG, CHIEF ENGINEER

Date:  3/6/15



FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- Zone A:** No BFE determined.
- Zone AE:** BFE determined.
- Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY: HAWAII
 TMK NO: (3) 2-1-013-148
 PARCEL ADDRESS:
 FIRM INDEX DATE: APRIL 02, 2004
 LETTER OF MAP CHANGE(S): NONE
 FEMA FIRM PANEL(S): 1551660885C
 PANEL EFFECTIVE DATE: SEPTEMBER 16, 1988

PARCEL DATA FROM: JUNE 2013
 IMAGERY DATA FROM: MAY 2005

IMPORTANT PHONE NUMBERS

County NFIP Coordinator
 County of Hawaii
 Frank DeMarco, CFM (808) 961-8042
State NFIP Coordinator
 Carol Tyau-Beam, P.E., CFM (808) 587-0267

Disclaimer: The Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR from any liability, which may arise from its use.

If this map has been identified as 'PRELIMINARY' or 'UNOFFICIAL', please note that it is being provided for informational purposes and is not to be used for official/legal decisions, regulatory compliance, or flood insurance rating. Contact your county NFIP coordinator for flood zone determinations to be used for compliance with local floodplain management regulations.

DAVID Y. IGE
GOVERNOR OF HAWAII



CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

2015 FEB 23 A 11:18

RECEIVED
LAND DIVISION
HILO, HAWAII

February 18, 2015

MEMORANDUM

TO:

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Hawaii District
- Historic Preservation

RECEIVED
LAND DIVISION
2015 MAR 11 AM 10:41
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility

LOCATION:

Waiakea, South Hilo, Hawaii; TMK: (3) 2-1-013:148

APPLICANT:

PBR Hawaii & Associates, Inc. for County of Hawaii Mass Transit Agency

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by March 11, 2015.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Kevin Moore at 587-0426. Thank you.

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:

Print name: GORDON C. CHEN

Date: 3/4/15

cc: Central Files

3/10/15 Fax: Land-Admin.

DAVID Y. IGE
GOVERNOR OF HAWAII



CARTY S. CHIANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

75 Aupuni Street, Room 204
Hilo, Hawaii 96720
PHONE: (808) 961-9590
FAX: (808) 961-9599

March 10, 2015

MEMORANDUM

TO: Russell Y. Tsuji, Land Administrator

FROM: Candace Martin, Land Agent, HDLO 

SUBJECT: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility, Waiakea, South Hilo, Hawaii, TMK: (3) 2-1-013:148.

In response to your early consultation request for comments dated February 18, 2015 on the above referenced subject matter, we offer the following:

The subject 40 acre parcel is designated Agricultural by the State Land Use Commission. County of Hawaii zoning maps show the parcel as zoned Agricultural with minimum parcel size of 20 acres. The parcel is also classified as Agricultural Lands of Importance to the State of Hawaii (ALISH) by the State Department of Agriculture and the Soil Conservation Service.

The proposed use of the land by the County of Hawaii is not a permitted use of Agricultural land, but would require a change of zoning to Industrial. The conversion of ALISH lands to Industrial use may not be in the best interests of the Public Trust.

A motorized public transportation garage and base yard for a fleet of 55 transit buses would pose the potential risk of ground contamination from various petroleum products. The access to the parcel is currently via a pot-holed dirt/gravel road which may not be suitable for the proposed traffic.

If you have any questions, please feel free to contact me at (808) 961-9590. Thank you.

DAVID Y. IGE
GOVERNOR OF HAWAII



CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

75 Aupuni Street, Room 204
Hilo, Hawaii 96720
PHONE: (808) 961-9590
FAX: (808) 961-9599

March 10, 2015

MEMORANDUM

TO: Russell Y. Tsuji, Land Administrator

FROM: Candace Martin, Land Agent, HDLO 

SUBJECT: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility, Waiakea, South Hilo, Hawaii, TMK: (3) 2-1-013:148.

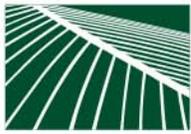
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The proposed use of the land by the County of Hawaii is not a permitted use of Agricultural land, but would require a change of zoning to Industrial. The conversion of ALISH lands to Industrial use may not be in the best interests of the Public Trust.

A motorized public transportation garage and base yard for a fleet of 55 transit buses would pose the potential risk of ground contamination from various petroleum products. The access to the parcel is currently via a pot-holed dirt/gravel road which may not be suitable for the proposed traffic.

If you have any questions, please feel free to contact me at (808) 961-9590. Thank you.



PBR HAWAII

& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, ASLA
Chairman

R. STAN DUNCAN, ASLA
President

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
Executive Vice-President

VINCENT SHIGEKUNI
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Chairman Emeritus

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MARC SHIMATSU, ASLA
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CATIE CULLISON, AICP
Associate

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HILO OFFICE
1719 Haleloke Street
Hilo, Hawai'i 96720-1553
Tel/Cel: (808) 315-6878

April 10, 2015

Mr. Russell Y. Tsuji
Land Administrator
State of Hawaii
Department of Land and Natural Resources, Land Division
Post Office Box 621
Honolulu, Hawaii 96809

Attn: Mr. Kevin Moore

SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA, SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR))

Dear Mr. Tsuji,

Thank you for your letter dated March 12, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We have reviewed the comment from the Engineering Division and the Hawaii District Land Office and offer the following comments:

1. We appreciate the flood insurance rate map and the information on the National Flood Insurance Program provided by the Engineering Division. We will include that information in the Draft Environmental Assessment (EA).
2. We appreciate the information provided by the Hawaii District Land Office on County zoning and had anticipated that a State Special Permit would need to be secured (and not a change of zoning).
3. We appreciate the opinion provided by the Hawaii District Land Office that the proposed project may "...pose a potential risk of ground contamination from various petroleum products." We will research the location of the project relative to the State Department of Health's Underground Injection Control (UIC) Line and address what measures may be incorporated into the design and construction of the base yard to reduce the potential for pollution.
4. We appreciate the assessment provided by the Hawaii District Land Office that access to the parcel is "a pot-holed dirt/gravel road." However, the road must have been recently repaved, because when one of our staff visited last week, a photograph taken shows a paved road that appears to be in very good condition.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

DAVID Y. IGE
GOVERNOR



ARTHUR J. LOGAN
BRIGADIER GENERAL
ADJUTANT GENERAL

KENNETH S. HARA
COLONEL
DEPUTY ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

February 27, 2015

Ms. Bethany Wylie, Planner
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Subject: Early Consultation for County of Hawai'i Mass Transit Agency Base Yard Facility,
Waiakea, South Hilo, Hawai'i, Tax Map Key (3) 2-1-013:148 (por.)

Dear Ms. Wylie:

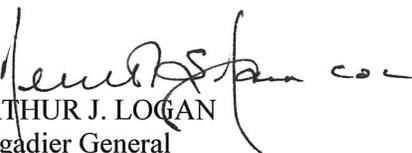
Thank you for the opportunity to comment on the above project.

The State of Hawai'i Department of Defense offers the following comments regarding the proposed development:

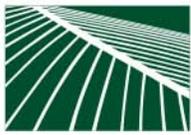
1. Recommend that one (1) 121 db(c) omni-directional siren be installed as there is inadequate to no siren coverage for the area. The Hawai'i Emergency Management Agency (HIEMA) will work with the Mass Transit Agency regarding the technical requirements and placement of the siren.
2. Recommend that the facilities be designed to mitigate the effects of seismic and high-wind events.
3. Due to the close proximity of the proposed facility to the Keaukaha Military Reservation, and access to the facility from Hawaii Belt Road to Leilani Street to Panaewa Dragstrip, please inform us of any proposed changes to the access routes.

If you have any questions or concerns, please have your staff contact Mr. Lloyd Maki, Assistant Chief Engineering Officer at (808) 733-8441.

Sincerely,

for 
ARTHUR J. LOGAN
Brigadier General
Hawaii National Guard
Adjutant General

c: Mr. Juan Williams, Director, Youth Challenge Academy
Mr. Havinne Okamura, Hawai'i Emergency Management Agency
Ms. Dawn Hegger, Hawai'i Army National Guard



PBR HAWAII

& ASSOCIATES, INC.

PRINCIPALS

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Chairman

R. STAN DUNCAN, ASLA
President

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Executive Vice-President

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Vice-President

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MARC SHIMATSU, ASLA
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CATIE CULLISON, AICP
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Tel: (808) 521-5631
Fax: (808) 535-3163

HILO OFFICE
1719 Haleloke Street
Hilo, Hawai'i 96720-1553
Tel/Cel: (808) 315-6878

April 10, 2015

Mr. Arthur J. Logan
Brigadier General
State of Hawaii
Department of Defense
Office of the Adjutant General
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

Attn: Mr. Lloyd Maki, Assistant Chief Engineering Officer

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear General Logan,

Thank you for your letter dated February 27, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We acknowledge the following:

1. The State Department of Defense (DOD) recommends the installation of one omnidirectional siren and that the Hawaii Emergency Management Agency will assist in the placement of the siren and provide the technical requirements.
2. DOD recommends that the facilities be designed to mitigate the effects of seismic and high-wind events. To minimize the potential hazard from earthquakes and hurricanes, structural elements in the proposed Base Yard and Maintenance Facility will be designed in accordance with the 2006 International Building Code as amended by State of Hawai'i Building Code.
3. Due to the proximity of the proposed base yard facility to the Keaukaha Military Reservation, DOD requests being informed of any changes to proposed access routes.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.



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

In reply, please refer to:
File:

02042PCTM.15

February 24, 2015

Mr. Roy Takemoto
PBR Hawaii
1719 Haleloke Street
Hilo, Hawaii 96720-1553

Dear Mr. Takemoto:

**SUBJECT: Comments on Early Consultation for
County of Hawaii Mass Transit Agency Base Yard Facility
Waiakea, Island of Hawaii, Hawaii**

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated February 12, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>

1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or

“CWB NOI Form”) through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the “Clean Water Act” (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for “[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters...” (emphasis added). The term “discharge” is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State’s Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.
5. It is the State’s position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
 - a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

- b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
- c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.
- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: <http://health.hawaii.gov/cwb/>, or contact the Engineering Section, CWB, at (808) 586-4309.

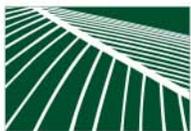
Sincerely,



ALEC WONG, P.E., CHIEF
Clean Water Branch

CTM:bk

c: DOH-EPO #15-034 [via e-mail only]



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& ASSOCIATES, INC.

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April 10, 2015

Mr. Alec Wong, P.E., Chief, Clean Water Branch
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR))**

Aloha Mr. Wong,

Thank you for your letter dated February 24, 2015 (your reference no. 02042PCTM.15) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We reviewed and understand the standard comments provided on your website. In addition, we have addressed your specific comments below.

1. The Draft EA will acknowledge that any potential impacts to State waters caused by the construction and/or operation of the proposed project will meet the provisions of the:

- a) Anti-degradation policy (Chapter 11-54-1.1, Hawaii Administrative Rules (HAR));
- b) Designated uses (Chapter 11-54-3, HAR); and
- c) Water quality criteria (Chapter 11.54-4 through 11-54-8, HAR).

However, direct discharges of stormwater runoff into marine waters are not expected to occur due to the project's distance from the coast.

2. A National Pollutant Discharge Elimination System (NPDES) permit for discharges of storm water runoff into State surface waters (Chapter 11-55, HAR) will be obtained as required. All NPDES permit requirements will be implemented.

3. It is not anticipated that the project will involve work in, over, or under the waters of the United States.

4. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR. In accordance with County standards, all runoff due to the proposed project will be detained on-site.

5. We acknowledge the State's position that all projects must reduce, reuse and recycle to protect, restore, and sustain water quality and beneficial uses of State waters.

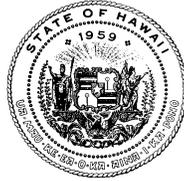
Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.



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

In reply, please refer to:
File:

EPO 15-034

February 24, 2015

Ms. Bethany Wylie, Planner
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484
Via email only: sysadmin@pbrhawaii.com

Dear Ms. Wylie:

**SUBJECT: Early Consultation (EC) for County of Hawai'i
Mass Transit Agency Base Yard Facility, Waiakea, South Hilo, Hawai'i
TMK: (3) 2-1-013:148 POR**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your EC to our office on February 12, 2015. Thank you for allowing us to review and comment on the proposed project. The EC was routed to relevant Offices and Branches. They will provide specific comments to you if necessary. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: <http://health.hawaii.gov/epo/home/landuse-planning-review-program/>. Projects are required to adhere to all applicable standard comments.

We encourage you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: <https://eha-cloud.doh.hawaii.gov>

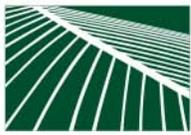
You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at: <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/>.

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

c: DHO Hawaii, CWB {via email only}



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MARC SHIMATSU, ASLA
Associate

CATIE CULLISON, AICP
Associate

April 10, 2015

Ms. Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Aloha Ms. McIntyre,

Thank you for your letter dated February 24, 2015 (your reference no. EPO 15-034) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We have checked the links you provided and will incorporate pertinent new information into the Draft EA.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

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DAVID Y. IGE
GOVERNOR



FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
STP 8.1767

March 6, 2015

Ms. Bethany Wylie
Planner
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Wylie:

Subject: Hawaii Mass Transit Agency Base Yard Facility
Early Consultation
Waiakea, South Hilo, Hawaii
TMK: (3) 2-1-013:148 (por.)

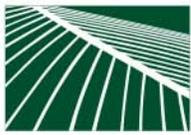
Our Department of Transportation's (DOT) comments on the subject project are as follows:

The Draft Environmental Assessment (DEA) should discuss and evaluate the project's contribution to the cumulative traffic impacts on State highways facilities in the area.

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,


FORD N. FUCHIGAMI
Director of Transportation



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April 10, 2015

Mr. Ford N. Fuchigami
Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Attn: Mr. Norren Kato, DOT Statewide Transportation Planning Office

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Aloha Mr. Fuchigami,

Thank you for your letter dated March 6, 2015 (your reference no. STP 8.1767) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We acknowledge that the DEA should discuss and evaluate the project's contribution to the cumulative traffic impacts on State highways facilities in the area.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

DENNIS "FRESH" ONISHI
Council Member
District 3



PHONE: (808) 961-8396
FAX: (808) 961-8912
EMAIL: donishi@co.hawaii.hi.us

HAWAI'I COUNTY COUNCIL

25 Aupuni Street, Hilo, Hawai'i 96720

March 9, 2015

Bethany Wylie, Planner
PBR HAWAII & Associates, INC.
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

RE: EARLY CONSULTATION FOR COUNTY OF HAWAI'I MASS TRANSIT
AGENCYBASE YARD FACILITY, WAI'AKEA, SOUTH HILO, HAWAI'I (TMK (3)
2-1-013:148 POR.)

Dear Ms. Wylie,

I am writing to you with comments in regards to the proposed construction of a transit base yard facility, located in South Hilo. I appreciate your hard work and on behalf of the residents of Hawai'i County, Council District 3, I thank you.

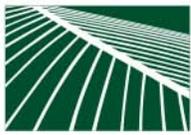
My only comments is in regards to infrastructure and power. Assuming water and electric will be installed, I request that we plan for additional power and water to help serve uses in the existing areas, for example, the Pana'ewa Drag Strip. This would overall improve the operations and efficiency of one of our most heavily utilized public facilities.

Thank you for the opportunity to provide comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Dennis Onishi".

Dennis "Fresh" Onishi
Hawai'i County Council Member



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Associate

CATIE CULLISON, AICP
Associate

April 10, 2015

Councilmember Dennis "Fresh" Onishi
Hawai'i County Council
25 Aupuni Street
Hilo, Hawai'i 96720

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAII (TMK: (3) 2-1-013:148 (POR))**

Dear Councilmember Onishi,

Thank you for your letter dated March 9, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard Facility. Your comment regarding planning for additional power and water to help serve uses in the existing area, such as the Panaewa Drag Strip has been forwarded to the MTA and the project designer, Mitsunaga & Associates, Inc.

Thank you for participating in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

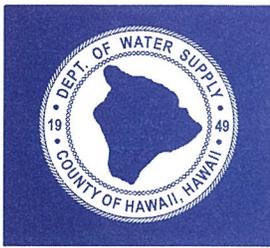
cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

February 25, 2015

Ms. Bethany Wylie, Planner
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

**EARLY CONSULTATION FOR COUNTY OF HAWAI'I MASS TRANSIT AGENCY
BASEYARD FACILITY
WAIĀKEA, SOUTH HILO, HAWAI'I
TAX MAP KEY 2-1-013:148**

We have reviewed the subject request and have the following comments.

The subject parcel does not have an existing water service with the Department. Please be informed that the parcel does not front upon a Department of Water Supply waterline and is, therefore, considered out-of-bounds. Parcels that are out-of-bounds are limited to just one (1) unit of water. One (1) unit of water allows for an average daily usage of 400 gallons served through a 5/8-inch meter and is suitable for one (1) single-family dwelling.

Therefore, the Department requests that the applicant submit estimated maximum daily water usage calculations for the proposed uses, prepared by a professional engineer licensed in the State of Hawai'i, for review and approval. The water usage calculations should include the estimated peak flow in gallons per minute and the total estimated maximum daily water usage in gallons per day. After review of the calculations, the Department will determine the appropriate service lateral and meter size required.

Based on the proposed land use, a reduced pressure type backflow prevention assembly would have to be installed on private property within five (5) feet of any meter serving the property. The installation must be inspected and approved by the Department before water service can be activated.

For your information, the Department's Standard for the required fire flow at the property's frontage is 2,000 gallons per minute with a velocity less than 10 feet per second. The fire-flow requirements for the buildings on the parcel are determined by the Fire Department.

Should there be any questions, please contact Mr. Troy Samura of our Water Resources and Planning Branch at 961-8070, extension 255.

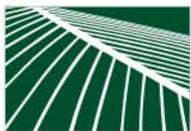
Sincerely yours,

Quirino Antonio, Jr., P.E.
Manager—Chief Engineer

TS:dfg

... Water, Our Most Precious Resource ... Ka Wai A Kāne ...

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Hilo, Hawai'i 96720-1553
Tel/Cel: (808) 315-6878

April 10, 2015

Mr. Quirino Antonio, Jr., P.E.
Manager-Chief Engineer
County of Hawai'i
Department of Water Supply
345 Kekūanaō'a Street, Suite 20
Hilo, HI 96720

Attn: Mr. Tony Samura

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAII (TMK: (3) 2-1-013:148 (POR)**

Dear Mr. Antonio,

Thank you for your letter dated February 25, 2015 regarding the early consultation for the proposed County of Hawai'i Mass Transit Authority (MTA) Base Yard Facility. As the planning consultant for the MTA, we are responding to your comments.

Thank you for confirming that the subject parcel does not have an existing water service with the Department of Water Supply. As requested, the estimated maximum daily water usage calculations for the proposed project will be submitted to the Department of Water Supply (DWS) for review and approval prior to receiving a water commitment. Before activating water service, a reduced pressure type backflow prevention assembly will be installed within five feet of the meter for inspection and approval by DWS.

We appreciate the information provided on the DWS' Standard for the required fire flow at the property's frontage and the fire flow requirements for any buildings on the project site will be determined by the Fire Department.

Thank you for participating in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

William P. Kenoi
Mayor



Darren J. Rosario
Fire Chief

Renwick J. Victorino
Deputy Fire Chief

County of Hawai'i
HAWAII FIRE DEPARTMENT
25 Aupuni Street • Room 2501 • Hilo, Hawai'i 96720
(808) 932-2900 • Fax (808) 932-2928

March 4, 2015

Ms. Bethany Wylie
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

SUBJECT: EARLY CONSULTATION FOR COUNTY OF HAWAII MASS TRANSIT
AGENCY BASE YARD FACILITY, WAIAKEA, SOUTH HILO HAWAII
TAX MAP KEY (3) 2-1-013:148 POR.

In regards to the above-mentioned project, the following shall be in accordance:

NFPA 1, UNIFORM FIRE CODE, 2006 EDITION

Note: NFPA 1, Hawai'i State Fire Code with County amendments. County amendments are identified with a preceding "C~" of the reference code.

Chapter 18 Fire Department Access and Water Supply

18.1 General. Fire department access and water supplies shall comply with this chapter.

For occupancies of an especially hazardous nature, or where special hazards exist in addition to the normal hazard of the occupancy, or where access for fire apparatus is unduly difficult, or areas where there is an inadequate fire flow, or inadequate fire hydrant spacing, and the AHJ may require additional safeguards including, but not limited to, additional fire appliance units, more than one type of appliance, or special systems suitable for the protection of the hazard involved.

18.1.1 Plans.

18.1.1.1 Fire Apparatus Access. Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.



18.1.1.2 Fire Hydrant Systems. Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

C~ 18.1.1.2.1 Fire Hydrant use and Restrictions. No unauthorized person shall use or operate any Fire hydrant unless such person first secures permission or a permit from the owner or representative of the department, or company that owns or governs that water supply or system. Exception: Fire Department personnel conducting firefighting operations, hydrant testing, and/or maintenance, and the flushing and acceptance of hydrants witnessed by Fire Prevention Bureau personnel.

18.2 Fire Department Access.

18.2.1 Fire department access and fire department access roads shall be provided and maintained in accordance with Section 18.2.

18.2.2* Access to Structures or Areas.

18.2.2.1 Access Box(es). The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security.

18.2.2.2 Access to Gated Subdivisions or Developments. The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system.

18.2.2.3 Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified in a manner that could prevent fire department access.

18.2.3 Fire Department Access Roads. (*may be referred as FDAR)

18.2.3.1 Required Access.

18.2.3.1.1 Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.

18.2.3.1.2 Fire Department access roads shall consist of roadways, fire lanes, parking lots lanes, or a combination thereof.

18.2.3.1.3* When not more than two one- and two-family dwellings or private garages, carports, sheds, agricultural buildings, and detached buildings or structures 400ft² (37 m²) or less are present, the requirements of 18.2.3.1 through 18.2.3.2.1 shall be permitted to be modified by the AHJ.

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

18.2.3.2 Access to Building.

18.2.3.2.1 A fire department access road shall extend to within in 50 ft (15 m) of at least one exterior door that can be opened from the outside that provides access to the interior of the building. Exception: 1 and 2 single-family dwellings.

18.2.3.2.1.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.1 shall be permitted to be increased to 300 feet.

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.

18.2.3.2.2.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).

18.2.3.3 Multiple Access Roads. More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other factors that could limit access.

18.2.3.4 Specifications.

18.2.3.4.1 Dimensions.

C~ 18.2.3.4.1.1 FDAR shall have an unobstructed width of not less than 20ft with an approved turn around area if the FDAR exceeds 150 feet. **Exception:** FDAR for one and two family dwellings shall have an unobstructed width of not less than 15 feet, with an area of not less than 20 feet wide within 150 feet of the structure being protected. An approved turn around area shall be provided if the FDAR exceeds 250 feet.

C~ 18.2.3.4.1.2 FDAR shall have an unobstructed vertical clearance of not less then 13ft 6 in.

C~ 18.2.3.4.1.2.1 Vertical clearances may be increased or reduced by the AHJ, provided such increase or reduction does not impair access by the fire apparatus, and approved signs are installed and maintained indicating such approved changes.

18.2.3.4.1.2.2 Vertical clearances shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

C~ 18.2.3.4.2 Surface. Fire department access roads and bridges shall be designed and maintained to support the imposed loads (25 Tons) of the fire apparatus. Such FDAR and shall be comprised of an all-weather driving surface.

18.2.3.4.3 Turning Radius.

C~ 18.2.3.4.3.1 Fire department access roads shall have a minimum inside turning radius of 30 feet, and a minimum outside turning radius of 60 feet.

18.2.3.4.3.2 Turns in fire department access road shall maintain the minimum road width.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

18.2.3.4.5 Bridges.

18.2.3.4.5.1 When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with county requirements.

18.2.3.4.5.2 The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

18.2.3.4.5.3 Vehicle load limits shall be posted at both entrances to bridges where required by the AHJ.

18.2.3.4.6 Grade.

C~ 18.2.3.4.6.1 The maximum gradient of a Fire department access road shall not exceed 12 percent for unpaved surfaces and 15 percent for paved surfaces. In areas of the FDAR where a Fire apparatus would connect to a Fire hydrant or Fire Department Connection, the maximum gradient of such area(s) shall not exceed 10 percent.

18.2.3.4.6.2* The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

18.2.3.4.6.3 Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved the AHJ.

18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof of both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

18.2.4* Obstruction and Control of Fire Department Access Road.

18.2.4.1 General.

18.2.4.1.1 The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.

18.2.4.1.2 Minimum required widths and clearances established under 18.2.3.4 shall be maintained at all times.

18.2.4.1.3* Facilities and structures shall be maintained in a manner that does not impair or impede accessibility for fire department operations.

18.2.4.1.4 Entrances to fire departments access roads that have been closed with gates and barriers in accordance with 18.2.4.2.1 shall not be obstructed by parked vehicles.

18.2.4.2 Closure of Accessways.

18.2.4.2.1 The AHJ shall be authorized to require the installation and maintenance of gates or other approved barricades across roads, trails, or other accessways not including public streets, alleys, or highways.

18.2.4.2.2 Where required, gates and barricades shall be secured in an approved manner.

18.2.4.2.3 Roads, trails, and other accessways that have been closed and obstructed in the manner prescribed by 18.2.4.2.1 shall not be trespassed upon or used unless authorized by the owner and the AHJ.

18.2.4.2.4 Public officers acting within their scope of duty shall be permitted to access restricted property identified in 18.2.4.2.1.

18.2.4.2.5 Locks, gates, doors, barricades, chains, enclosures, signs, tags, or seals that have been installed by the fire department or by its order or under its control shall not be removed, unlocked, destroyed, tampered with, or otherwise vandalized in any manner.

18.3 Water Supplies and Fire Hydrants

18.3.1* A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ. For on-site fire hydrant requirements see section 18.3.3.

EXCEPTIONS:

1. When facilities or buildings, or portions thereof, are completely protected with an approved automatic fire sprinkler system the provisions of section 18.3.1 may be modified by the AHJ.
2. When water supply requirements cannot be installed due to topography or other conditions, the AHJ may require additional fire protection as specified in section 18.3.2 as amended in the code.
3. When there are not more than two dwellings, or two private garage, carports, sheds and agricultural. Occupancies, the requirements of section 18.3.1 may be modified by AHJ.

18.3.2* Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.

18.3.3* The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on a fire apparatus access road on the site of the premises or both, in accordance with the appropriate county water requirements.

18.3.4 Fire Hydrants and connections to other approved water supplies shall be accessible to the fire department.

18.3.5 Private water supply systems shall be tested and maintained in accordance with NFPA 25 or county requirements as determined by the AHJ.

18.3.6 Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

18.3.7 The AHJ shall be notified whenever any fire hydrant is placed out of service or returned to service. Owners of private property required to have hydrants shall maintain hydrant records of approval, testing, and maintenance, in accordance with the respective county water requirements. Records shall be made available for review by the AHJ upon request.

C~ 18.3.8 Minimum water supply for buildings that do not meet the minimum County water standards:

Buildings up to 2000 square feet, shall have a minimum of 3,000 gallons of water available for Firefighting.

Buildings 2001- 3000 square feet, shall have a minimum of 6,000 gallons of water available for Firefighting.

Buildings, 3001- 6000 square feet, shall have a minimum of 12,000 gallons of water available for Firefighting.

Buildings, greater than 6000 square feet, shall meet the minimum County water and fire flow requirements.

Multiple story buildings shall multiply the square feet by the amount of stories when determining the minimum water supply.

Commercial buildings requiring a minimum fire flow of 2000gpm per the Department of Water standards shall double the minimum water supply reserved for firefighting.

Fire Department Connections (FDC) to alternative water supplies shall comply with 18.3.8 (1)-(6) of *this code*.

NOTE: In that water catchment systems are being used as a means of water supply for firefighting, such systems shall meet the following requirements:

(1) In that a single water tank is used for both domestic and firefighting water, the water for domestic use shall not be capable of being drawn from the water reserved for firefighting;

- (2) Minimum pipe diameter sizes from the water supply to the Fire Department Connection (FDC) shall be as follows:
 - (a) 4" for C900 PVC pipe;
 - (b) 4" for C906 PE pipe;
 - (c) 3" for ductile Iron;
 - (d) 3' for galvanized steel.
- (3) The Fire Department Connection (FDC) shall:
 - (a) be made of galvanized steel;
 - (b) have a gated valve with 2-1/2 inch, National Standard Thread male fitting and cap;
 - (c) be located between 8 ft and 16 ft from the Fire department access.
The location shall be approved by the AHJ;
 - (d) not be located less than 24 inches, and no higher than 36 inches from finish grade, as measured from the center of the FDC orifice;
 - (e) be secure and capable of withstanding drafting operations. Engineered stamped plans may be required;
 - (f) not be located more than 150 feet of the most remote part, but not less than 20 feet, of the structure being protected;
 - (g) also comply with section 13.1.3 and 18.2.3.4.6.1 of *this code*;
- (4) Commercial buildings requiring a fire flow of 2000gpm shall be provided with a second FDC. Each FDC shall be independent of each other, with each FDC being capable of flowing 500gpm by engineered design standards. The second FDC shall be located in an area approved by the AHJ with the idea of multiple Fire apparatus' conducting drafting operations at once, in mind.
- (5) Inspection and maintenance shall be in accordance to NFPA 25.
- (6) The owner or lessee of the property shall be responsible for maintaining the water level, quality, and appurtenances of the system.

EXCEPTIONS TO SECTION 18.3.8:

- (1) Agricultural buildings, storage sheds, and shade houses with no combustible or equipment storage.
- (2) Buildings less than 800 square feet in size that meets the minimum Fire Department Access Road requirements.
- (3) For one and two family dwellings, agricultural buildings, storage sheds, and detached garages 800 to 2000 square feet in size, and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 1000 feet.
- (4) For one and two family dwellings, agricultural buildings, and storage sheds

Bethany Wylie
March 4, 2015
Page 9

greater than 2000square feet, but less than 3000 square feet and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 500 feet.

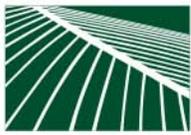
(5) For buildings with an approved automatic sprinkler system, the minimum water supply required may be modified.

If there are any questions regarding these requirements, please contact the Fire Prevention Bureau at (808) 932-2911.



DARREN J. ROSARIO
Fire Chief

RP/lc



PBR HAWAII

& ASSOCIATES, INC.

PRINCIPALS

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Chairman

R. STAN DUNCAN, ASLA
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Executive Vice-President

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April 10, 2015

Mr. Darren J. Rosario
Fire Chief
County of Hawaii
Hawaii Fire Department
25 Aupuni Street, Room 2501
Hilo, Hawai'i 96720

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear Chief Rosario,

Thank you for your letter dated March 4, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard Facility and the information of the NFPA Uniform Fire Code, 2006 Edition.

Thank you for your Department's participation in the environmental review process. Your letter and a citation to the Uniform Fire Code will be included in the Draft EA.

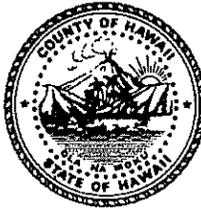
Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

William P. Kenoi
Mayor



Susan Akiyama
Housing Administrator

Anne M. Bailey
Assistant Housing Administrator

County of Hawai'i
Office of Housing and Community Development

50 Wailuku Drive • Hilo, Hawai'i 96720 • (808) 961-8379 • Fax (808) 961-8685
KONA: 74-5044 Ane Keohokalole Highway • Kailua-Kona, Hawai'i 96740
(808) 323-4305 • Fax (808) 323-4301

February 19, 2015

Bethany Wylie, Planner
PBR HAWAII & ASSOCIATES, INC.
1001 Bishop Street, Suite 650
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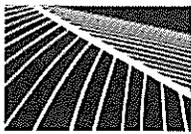
**SUBJECT: EARLY CONSULTATION FOR COUNTY OF HAWAII MASS TRANSIT
AGENCY BASE YARD FACILITY, WAIĀKEA, SOUTH HILO, HAWAII
(TMK: (3) 2-1-013:148 POR.)**

The Office of Housing and Community Development has no comments at this time.
Thank you for the opportunity to comment.

Susan K. Akiyama
Housing Administrator



EQUAL HOUSING OPPORTUNITY
"HAWAII COUNTY IS AN EQUAL OPPORTUNITY
PROVIDER AND EMPLOYER"



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- W. FRANK BRANDT, FASLA
Chairman Emeritus

February 12, 2015

Mr. Stephen Arnett, Administrator
County of Hawai'i
Office of Housing and Community Development
50 Wailuku Drive
Hilo, Hawai'i 96720

**SUBJECT: EARLY CONSULTATION FOR COUNTY OF HAWAII MASS
TRANSIT AGENCY BASE YARD FACILITY, WAIĀKEA, SOUTH
HILO, HAWAII (TMK (3) 2-1-013:148 POR.)**

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Associate
- DACHENG DONG, LEED® AP
Associate
- MARC SHIMATSU, ASLA
Associate
- CATIE CULLISON, AICP
Associate

Dear Mr. Arnett,

The County of Hawai'i Mass Transit Agency is proposing to construct a transit base yard facility on a five acre portion of TMK (3) 2-1-013:148 in Waiākea, South Hilo (see enclosed map). The property is owned by the State of Hawai'i and some of the funding will come from the Federal Transit Administration. Therefore, this project is being assessed under the provisions of Chapter 343, Hawai'i Revised Statutes; Title 11, Chapter 200, Hawai'i Administrative Rules; and the National Environmental Policy Act of 1969, as amended. This letter is to advise you and your staff of the conceptual plans and consult with you regarding the proposed project.

The Mass Transit Agency provides island-wide public transportation for the County of Hawai'i, administrative support to the Hawai'i County Transportation Commission, and oversees taxicab operators. Currently, the Mass Transit Agency is located on Railroad Avenue in the Schultz Siding facility where it shares limited space with the Department of Public Works. The Agency has grown significantly over the years and is in need of its own facility to improve efficiency and the work environment.

Development of the proposed transit base yard facility will include construction of office space for administrative staff who oversee daily transit operations and a garage for repair and maintenance of transit vehicles. The base yard will have space to accommodate parking for the fleet of 55 transit buses and for employees' personal vehicles. The proposed base yard site is not known to be located within designated floodplains, floodways, wetlands, or critical habitats.

With this letter, we seek your comments as to whether the proposed transit base yard may have an impact on any of your existing or proposed projects, plans, policies, or programs. If you have any information that you feel is relevant to share or comment on as it applies to this project, please submit a written response within 30 days. If you have any questions, do not hesitate to contact me at (808) 521-5631. Thank you for taking the time to review the information provided.

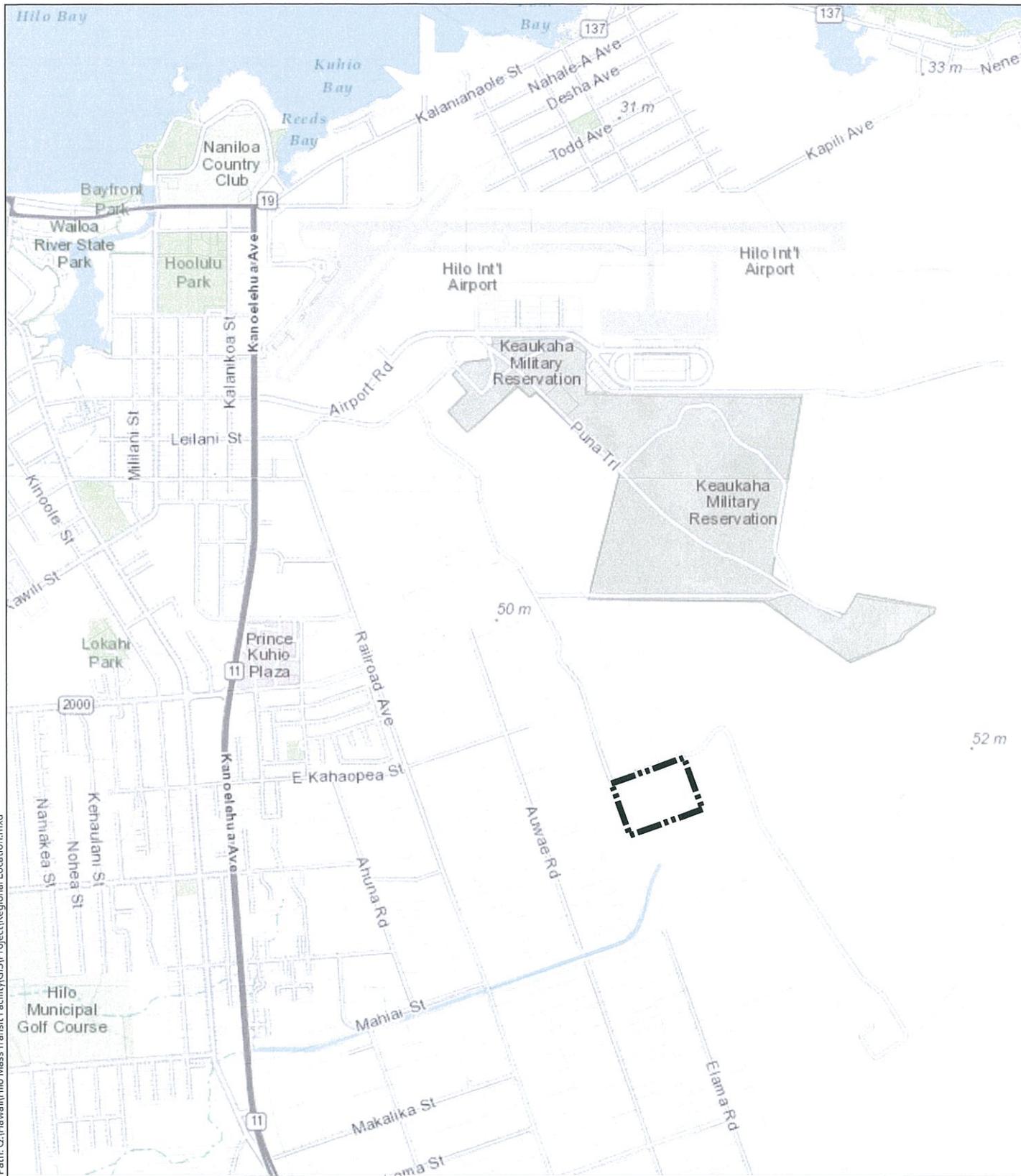
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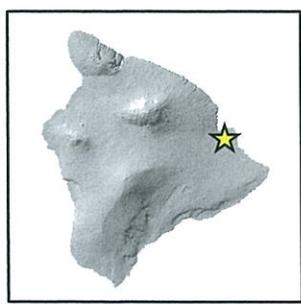


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DATE: 1/22/2015

LEGEND

-  Proposed 5-acre Base Yard within 40-acre TMK (3) 2-1-013:148
-  Tax Map Key Parcels



Regional Location

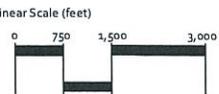
**MASS TRANSIT AGENCY
BASE YARD FACILITY**

County of Hawaii Dept. of Public Works Island of Hawaii

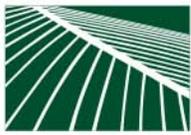
North



Linear Scale (feet)




Source: County of Hawaii, 2014. ESRI Basemaps.
Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



PBR HAWAII

& ASSOCIATES, INC.

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Associate

DACHENG DONG, LEED® AP
Associate

MARC SHIMATSU, ASLA
Associate

CATIE CULLISON, AICP
Associate

April 10, 2015

Ms. Susan K. Akiyama
Housing Administrator
County of Hawaii
Office of Housing and Community Development
50 Wailuku Drive
Hilo, Hawai'i 96720

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR))**

Dear Ms. Akiyama,

Thank you for your letter dated February 19, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard Facility noting that your Office does not have any comments at this time.

Thank you for your Office's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

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Mayor



Duane Kanuha
Director

Bobby Command
Deputy Director

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County of Hawai'i
PLANNING DEPARTMENT

East Hawai'i Office
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720
Phone (808) 961-8288
Fax (808) 961-8742

March 12, 2015

Ms. Bethany Wylie, Planner
PBR Hawai'i & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

Dear Ms. Wylie:

SUBJECT: Pre-Consultation for Draft Environmental Assessment
Project: County of Hawai'i Mass Transit Agency Base Yard Facility
TMK: (3) 2-1-013:148; Waiākea, South Hilo, Hawai'i

Thank you for your letter dated February 12, 2015, requesting comments from this office regarding the preparation of a Draft Environmental Assessment (DEA) for the subject project.

The County of Hawai'i is proposing to construct a transit base yard facility. Development of the proposed transit base yard facility will include construction of office space for administrative staff who oversee daily transit operations and a garage for repair and maintenance of transit vehicles. The base yard will have space to accommodate parking for the fleet of fifty-five (55) transit buses and for employees' personal vehicles.

The subject property is zoned Agricultural (A-20a) by the County. The property is situated within the State Land Use Agricultural District. In addition, the Hawai'i County General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the parcels as Important Agricultural Land and Extensive Agriculture. The subject parcel is not located within the Special Management Area.

The subject parcel is located within the 5-mile airport radius of the Hilo International Airport. As such, please contact the Hawai'i Department of Transportation, Airport Division for their review and comments, and include a discussion of airport hazards that may be related to the proposed development in the DEA.

Section 25-5-72 (c) (4) of the Hawai'i County Code (Zoning) states that community buildings, as permitted under section 25-4-11, may be permitted in the Agricultural district, provided that a special permit is obtained. In addition, Section 25-4-11 (c) states in part that plan approval is

Ms. Bethany Wylie, Planner
PBR Hawai'i & Associates, Inc.
March 12, 2015
Page 2

required for any public use, structures, and buildings and community buildings. Therefore, the transit base yard facility will require a special permit and plan approval.

We have no further comments to offer, at this time. However, please provide our department with a copy of the Draft Environmental Assessment for our review and comment.

If you have any questions, or if you need further assistance, please feel free to contact Bethany Morrison of this office at (808) 961-8138.

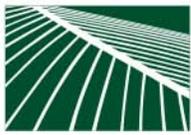
Sincerely,

A handwritten signature in black ink, appearing to read "Duane Kanuha", with a long horizontal flourish extending to the right.

DUANE KANUHA
Planning Director

BJM:cs

\\COH33\planning\public\wpwin60\Bethany\EA-EIS Review\preconsultdraft\ea Hawaii Mass Transit base yard.doc



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Chairman Emeritus

April 10, 2015

Mr. Duane Kanuha
Director
County of Hawai'i
Planning Department
101 Pauahi Street, Suite 3
Hilo, HI 96720

SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA, SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR))

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DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

CATIE CULLISON, AICP
Associate

Dear Mr. Kanuha,

Thank you for your letter dated March 12, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We can provide the following responses to your comments:

1. Since the proposed project is located with the State Agricultural Land Use District boundaries, a Special Permit will be sought from the County. A Plan Approval will also be sought from the County.
2. We acknowledge and appreciate confirmation of the parcel's LUPAG and SMA status.
3. We spoke with a representative of the the Hawai'i Department of Transportation, Airport Division on April 2, 2015. We will make the Draft EA available specifically to the Airports Division for comment. Additionally, the Draft EA will include a discussion of airport hazards that are related to the proposed facility.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

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Deputy Police Chief

County of Hawai`i

POLICE DEPARTMENT

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(808) 935-3311 • Fax (808) 961-2389

February 20, 2015

PBR Hawai`i & Associates, Inc.
Attention: Ms. Bethany Wylie, Planner
1719 Haleloke Street
Hilo, HI 96720-1553

Dear Ms. Wylie:

**SUBJECT: EARLY CONSULTATION FOR COUNTY OF HAWAI`I MASS TRANSIT
AGENCY BASE YARD FACILITY, WAIAKEA, SOUTH HILO, HAWAI`I
TMK: (3) 2-1-013:148 POR.**

Staff, upon reviewing the provided documents, does not anticipate any significant impact to traffic and/or public safety concerns.

Thank you for allowing us the opportunity to comment.

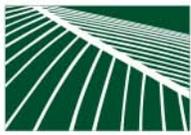
If you have any questions, please contact Captain Richard Sherlock, S. Hilo Patrol, at 961-2214.

Sincerely,



HENRY J. TAVARES, JR.
ASSISTANT POLICE CHIEF
AREA OPERATIONS

RS:lli
150108



PBR HAWAII

& ASSOCIATES, INC.

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April 10, 2015

Mr. Henry Tavares, Jr.
Assistant Police Chief
County of Hawaii
Police Department
349 Kapiolani Street
Hilo, Hawai'i 96720-3998

Attn: Captain Richard Sherlock, South Hilo Patrol

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear Chief Tavares,

Thank you for your letter dated February 20, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard Facility and your staff's determination that it does not anticipate any significant impact to traffic and/or public safety concerns.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

DAVID Y. IGE

GOVERNOR OF HAWAII



JESSICA E. WOOLEY

DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813
Telephone (808) 586-4185
Facsimile (808) 586-4186
Email: oeqchawaii@doh.hawaii.gov

File No.
OEQC 15-037
Hawaii –Base Yard Facility

March 3, 2015

PBR Hawaii
Attn: Bethany Wylie, Planner
1001 Bishop St., Suite 650
Honolulu, HI 96813-3484

Dear Ms. Wylie,

SUBJECT: Early Consultation Request for County of Hawaii Mass Transit Agency Base Yard Facility, Waiakea, South Hilo, Hawaii

The Office of Environmental Quality Control has reviewed the brief information contained in your February 12, 2015 letter about the subject project, and offers the following comments for your consideration.

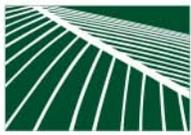
We acknowledge your present assessment of the subject project under the provisions of Chapter 343, Hawaii Revised Statutes and Chapter 11-200, Hawaii Administrative Rules. As an Agency Action by the County of Hawaii Mass Transit Agency, they would be considered the "Proposing and Determination agency" that initiates the environmental review process by making the determination on 1) whether the project qualifies for an exemption, 2) whether a Finding of No Significant Impact is anticipated and then prepares a Draft Environmental Assessment (EA) for public review and comment, or 3) based on their judgment and experience, whether to by-pass the EA step and proceed directly to the Environmental Impact Statement (EIS) Preparation Notice step if significant effects may or will occur.

In the event that the agency makes such a determination to prepare an EIS, either initially or after significant impacts are identified in the Final EA, then the County Mayor, as the "accepting authority," would determine the acceptability of the subsequent Final EIS.

Thank you for the opportunity to comment. If you have any questions as you navigate the environmental review process, please consult our website at <http://health.hawaii.gov/oeqc> (see in particular the link to the Environmental Assessment Preparation Toolkit on the right panel) or contact our office at (808) 586-4185.

Sincerely,

Jessica E. Wooley, Director
Office of Environmental Quality Control



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April 10, 2015

Ms. Jessica E. Wooley
Director
State of Hawaii
Office of Environmental Quality Control
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear Ms. Wooley,

Thank you for your letter dated March 3, 2015 (your reference no. OEQC 15-037 Hawaii – Base Yard Facility) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We appreciate the information provided and can confirm that the MTA anticipates a Finding of No Significant Impact and will be submitting a Draft Environmental Assessment for public review and comment.

Thank you for your Office's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

PHONE (808) 594-1888

FAX (808) 594-1938



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAII 96817

HRD15/7384

February 23, 2015

Ms. Bethany Wylie
Planner
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Re: Early Consultation for County of Hawaii Mass Transit Agency Base Yard Facility
Waiākea Ahupua'a, Hilo Moku, Hawaii
TMK: (3) 2-1-013:148, POR

Aloha Ms. Wylie:

The Office of Hawaiian Affairs (OHA) is in receipt of your letter of February 12, 2015 requesting early consultation for the construction of the County of Hawaii Mass Transit Agency Base Yard Facility. OHA has no comments or concerns for inclusion in the environmental assessment (EA) at this time but would like to be included in the review of the draft EA.

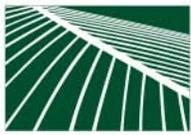
Mahalo for the opportunity to consult at this early stage of the project. Should you have any questions, please contact Jerry B. Norris at 594-0227 or by email at jerryn@oha.org.

‘O wau iho nō me ka ‘oia ‘i‘o,

A handwritten signature in black ink, appearing to read "Kamana'opono M. Crabbe".

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC:jbn



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April 10, 2015

Mr. Kamanaopono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer
State of Hawaii
Office of Hawaiian Affairs
560 N. Nimitz Hwy., Suite 200
Honolulu, Hawaii 96817

Attn: Mr. Jerry B. Norris

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Aloha Mr. Crabbe,

Thank you for your letter dated February 23, 2015 regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We acknowledge that OHA has no comments or concerns for inclusion in the Draft Environmental Assessment (DEA) but would like to be included in the DEA.

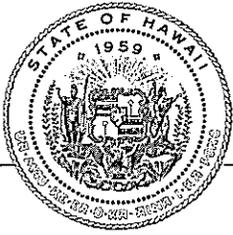
Thank you for your Department's participation in the environmental review process, and for responding to our subsequent request for assistance in identifying cultural practitioners who may be aware of cultural practices on the project site. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: OHA Trustee Robert K. Lindsey, Jr.
Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.



OFFICE OF PLANNING STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
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Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
OFFICE OF PLANNING

Ref. No. P-14655

February 19, 2015

Ms. Bethany Wylie, Planner
PBR Hawaii
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Wylie:

Subject: Early Consultation for County of Hawaii Mass Transit Agency Baseyard Facility, Waiakea, South Hilo, Hawaii TMK: 4-4-005:008 and 009

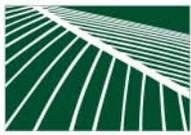
With regard to the proposed project, the Office of Planning offers the following comments:

1. Inadequate information regarding existing land use, zoning, and permitting was provided to allow any meaningful comments to be offered at this time. The proposed use is not permitted within the State Agricultural District.
2. If the source of the federal funding is from the Federal Transit Administration Federal Transit – Capital Improvement Grants program, Catalog of Federal Domestic Assistance (CFDA) number 20.500, then Coastal Zone Management (CZM) federal consistency review will be required. Please contact John Nakagawa of our Hawaii CZM Program at 587-2878 or jnakagaw@dbedt.hawaii.gov for information about the federal consistency review procedures and requirements.

Thank you for the opportunity to review this project.

Sincerely,

Leo R. Asuncion
Acting Director



PBR HAWAII

& ASSOCIATES, INC.

PRINCIPALS

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Chairman

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Chairman Emeritus

April 10, 2015

Mr. Leo Asuncion
Acting Director
State of Hawaii
Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR))**

ASSOCIATES

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Managing Director - Kapolei

ROY TAKEMOTO
Managing Director - Hilo

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DACHENG DONG, LEED® AP
Associate

MARC SHIMATSU, ASLA
Associate

CATIE CULLISON, AICP
Associate

Dear Mr. Asuncion,

Thank you for your letter dated February 19, 2015 (your reference no. P-14655) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We can provide the following responses to your comments:

1. Since the proposed project is located with the State Agricultural Land Use District boundaries, a Special Permit will be sought from the County.
2. It is acknowledged that CZM Federal Consistency Review will be required and coordinated with Mr. John Nakagawa.

Thank you for your Office's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

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OFFICE OF PLANNING STATE OF HAWAII

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GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
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Ref. No. P-14674

March 9, 2015

Ms. Bethany Wylie
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Wylie:

Subject: Pre-Assessment Consultation for County of Hawaii Mass Transit Agency
Baseyard Facility, Waiakea, South Hilo, Hawaii; TMK: (3) 2-1-013:148 (por)

Thank you for the opportunity to provide comments on the pre-consultation request for a Draft Environmental Assessment (Draft EA) on the Hawaii County Mass Transit Agency Baseyard Facility, transmitted to our office by letter, dated February 12, 2015.

It is our understanding that this project proposes to develop a transit base yard facility that can accommodate a fleet of 55 transit buses, the construction of office space for administrative support, and a garage for repair and maintenance of transit vehicles. This facility will replace the current transit facility which is limited in space and is shared with the County of Hawaii, Department of Public Works.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. OP provides technical assistance to state and county agencies in administering the statewide planning system in Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Plan. The Hawaii State Plan provides goals, objectives, priorities, and priority guidelines for growth, development, and the allocation of resources throughout the State. The Hawaii State Plan includes diverse policies and objectives of state interest including but not limited to the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and sustainability.

The Draft EA should include an analysis that addresses whether the proposed project conforms or is in conflict with the objectives, policies, and priority guidelines listed in the Hawaii State Plan.

2. The coastal zone management area is defined as “all lands of the State and the area extending seaward from the shoreline to the limit of the State’s police power and management authority, including the U.S. territorial sea” see HRS § 205A-1 (definition of "coastal zone management area").

HRS Chapter 205A requires all State and county agencies to enforce the coastal zone management (CZM) objectives and policies. The assessment on compliance with HRS Chapter 205A is an important component for satisfying the requirements of HRS Chapter 343. The Draft EA shall include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2. These objectives and policies include: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.

3. According to data sources available to OP, this parcel lies within the Wailoa watershed. This watershed in South Hilo is subject annually to heavy rainfall and is exposed to a range of human activities from agriculture, urban development, and activity along the shoreline. The Draft EA should consider watershed protection and management.

OP has created the Hawaii Watershed Guidance to provide direction on methods to safeguard Hawaii’s watersheds and implement watershed plans. This guidance provides a number of management measures that address polluted runoff from urban activities, and summary and links to management measures that may be implemented to minimize coastal nonpoint pollution impact. Although this parcel is zoned as Agriculture, the nonpoint pollution impacts from the proposed baseyard may affect the urbanized region of South Hilo. For more detail on urban polluted runoff control methods, please examine the management measures listed for Urban Runoff - Section B, pages 120-122. The document can be viewed or downloaded from the Office of Planning website at [http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI Watershed Guidance Final.pdf](http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI_Watershed_Guidance_Final.pdf).

4. OP has reviewed the maps of the proposed project site and compared them to known coastal resources in the area: the parcel is approximately three miles from the nearshore waters of Hilo Bay, and the parcel appears to be heavily vegetated with limited drainage infrastructure. The vision for this parcel is develop it into a heavy vehicle baseyard for transit vehicles. Development and land use activities can create erosion, increased stormwater runoff, and pollution that cause direct, secondary, and

cumulative impacts to Hawaii's natural resources. Therefore, a stormwater impact evaluation should be considered for inclusion in the Draft EA.

Please consider OP's Stormwater Impact Assessment in your stormwater impact evaluation for this project. This document can be used to identify and evaluate information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff occurrences. Mitigation measures and best management practices (BMP) listed in this guidance can be applied to water runoff strategies to prevent damage to coastal ecosystems. This document will assist in integrating stormwater impact assessment within the planning and environmental review process of a project. The document can be found at http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_impact/final_stormwater_impact_assessments_guidance.pdf.

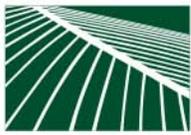
5. Because this proposal calls for new development, please consider Low-Impact Development (LID) design practices in the planning process. The use of LID design and BMP's will be an effective means to expedite the permitting process, reduce construction costs, and reduce operation and maintenance overhead. LID techniques promote a range of structural BMP's for stormwater control management and urban layout that minimizes negative impacts to the environment. LID techniques can be classified as: the preservation of natural features and conservation design, the reduction of impervious cover, and utilizing natural features and source control for stormwater management. OP has devised a guidance document where these design practices can be found: Low Impact Development, A Practitioners Guide. For a complete list of LID - Best Management Practices, please examine Section 1.7, pgs. 1-4 to 1-11. This guidance can be viewed or downloaded from the OP website at http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Josh Hekekoa of our office at 587-2845.

Sincerely,



Leo R. Asuncion
Acting Director



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& ASSOCIATES, INC.

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April 10, 2015

Mr. Leo Asuncion
Acting Director
State of Hawaii
Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR))**

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CATIE CULLISON, AICP
Associate

Dear Mr. Asuncion,

Thank you for your letter dated March 9, 2015 (your reference no. P-14674) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. We can provide the following responses to your comments:

1. The Draft EA will include an analysis that addresses whether the proposed project conforms to or is in conflict with relevant objectives, policies and priority guidelines of the Hawaii State Plan.
2. The Draft EA will also include an analysis that addresses whether the proposed project conforms to or is in conflict with relevant objectives and policies of the Coastal Zone Management.
3. As recommended, the Draft EA will address watershed protection, including the management measures listed for Urban Runoff – Section B, pages 120-122 of OP's Hawaii Watershed Guidance.
4. As recommended, the Draft EA will also include a stormwater impact evaluation based on OP's Stormwater Impact Assessment.
5. As recommended, the project civil engineer has been asked to consider Low-Impact Development (LID) design practices in the planning process, including those provided in OP's Low Impact Development, A Practitioner's Guide.

Thank you for your Office's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

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United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2015-TA-0163

MAR 16 2015

Ms. Bethany Wylie
PBR Hawaii
1719 Haleloke Street
Hilo, Hawaii 96720-1553

Subject: Technical Assistance for the Proposed County of Hawaii Mass Transit Agency
Base Yard Facility, Waiakea, South Hilo, Hawaii

Dear Ms. Wylie:

The U.S. Fish and Wildlife Service (Service) received your correspondence on February 13, 2015, requesting comments on the County of Hawaii Mass Transit Agency proposal to construct a transit base yard facility on a five acre portion of TMK (3) 2-1-013:148 in Waiakea, South Hilo, Hawaii. Development of the proposed transit base yard would include construction of office space for administrative staff who oversee daily transit operations and a garage for repair and maintenance of transit vehicles. The base yard will have space to accommodate parking for the fleet of 55 transit buses and for employees' personal vehicles.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, there are five listed species in the vicinity of the project area: the endangered Hawaiian hawk (*Buteo solitarius*), Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and Blackburn's sphinx moth (*Manduca blackburni*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*). There is no critical habitat in the vicinity of the project area.

To help you minimize potential impacts to listed species, the Service is providing you the following avoidance and minimization measures. Please note that implementation of these measures does not ensure that impacts to listed species can be avoided, and further coordination with the Service on compliance with the ESA may be required.

Hawaiian hawk

Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick



abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators. To avoid impacts to Hawaiian hawks we recommend avoiding brush and tree clearing during their breeding season (March through September). If you must clear the property during the Hawaiian hawk breeding season, we recommend a nest search of the area of the proposed construction site and surrounding area should be conducted by a qualified ornithologist immediately prior to the advent of construction activities. Surveys should ensure that construction activity will not occur within 1,600 feet of any Hawaiian hawk nest.

Hawaiian hoary bat

The Hawaiian hoary bat is known to occur across a broad range of habitats throughout the State of Hawaii. This bat roosts in both exotic and native woody vegetation and, while foraging, leaves young unattended in “nursery” trees and shrubs. If trees or shrubs suitable for bat roosting are cleared during the Hawaiian hoary bat breeding season (June 1 to September 15), there is a risk that young bats that cannot yet fly on their own could inadvertently be harmed or killed. As a result, the Service recommends that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground. When barbed wire is used in fencing, Hawaiian hoary bats can become entangled. The Service, therefore, recommends that barbed wire not be used for fencing as part of this proposed action.

Seabirds

Hawaiian petrels and Newell’s shearwaters (collectively known as seabirds) may transit over the project area when flying between the ocean and nesting sites in the mountains during their breeding season (March through November). Seabird fatalities resulting from collisions with artificial structures that extend above the surrounding vegetation have been documented in Hawaii where high densities of transiting seabirds occur. Additionally, artificial lighting such as flood lighting for construction work and site security, can adversely impact seabirds by causing disorientation which may result in collision with utility lines, buildings, fences and vehicles. Fledging seabirds are especially affected by artificial lighting and have a tendency to exhaust themselves while circling the light sources and become grounded. Too weak to fly, these birds become vulnerable to depredation by feral predators such as small Indian mongoose (*Herpestres auropunctatus*), cats (*Felis catus*), and dogs (*Canis familiaris*). We therefore recommend avoiding or minimizing use of artificial lighting and avoiding night work if possible. If artificial illumination must be used we recommend this be shielded so the bulb is not visible at or above bulb-height. If night work must be conducted this should take place outside the sea bird fledging season (September 15 through December 15) and should utilize shielded lighting.

Blackburn’s sphinx moth

The Blackburn’s sphinx moth could potentially be in the vicinity of the proposed project area. Adult moths feed on nectar from native plants, including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*); larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and native aiea (*Nothocestrum latifolium*). To pupate, the larvae burrow into the soil and can remain in a state of torpor for up to a year (or more) before emerging from the soil. Soil disturbance can result in death of the pupae. The Service recommends that a qualified biologist survey areas of proposed construction activities for Blackburn’s sphinx moth and its host plants prior to work initiation. We recommend these surveys be conducted during the wettest portion of the year (usually November-April or several weeks after a significant rain) and immediately prior to construction. Surveys should include

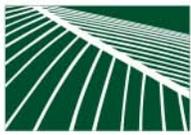
searches for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage). Any host plants of Blackburn's sphinx moth identified should not be cut or disturbed.

Thank you for your efforts to conserve listed species and native habitats. Please contact Fish and Wildlife Biologist Jay Nelson (808-792-9441) if you have any questions or for further guidance.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle Bogardus". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island



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April 10, 2015

Ms. Michelle Bogardus
Island Team Leader
U.S. Fish and Wildlife Service
Maui Nui and Hawaii Island
Milepost 6 Mokulele Highway
Kihei, Hawai'i 96793

Attn: Mr. Jay Wilson

**SUBJECT: EARLY CONSULTATION FOR THE PROPOSED COUNTY OF HAWAII
MASS TRANSIT AUTHORITY BASE YARD FACILITY, WAIAKEA,
SOUTH HILO DISTRICT, HAWAI'I (TMK: (3) 2-1-013:148 (POR)**

Dear Ms. Bogardus:

Thank you for your letter dated March 16, 2015 (your reference no. 01EPIF00-2015-TA-0163) regarding the proposed County of Hawaii Mass Transit Authority (MTA) Base Yard. As the planning consultant for the MTA, we are responding to your comments.

We appreciate your participation in the environmental review process and the avoidance and minimization measures you have provided regarding the five species protected by the Endangered Species Act (ESA) that may occur within, or transit through, the proposed area. We will implement these minimization measures and continue to coordinate with the U.S. Fish and Wildlife Service to ensure compliance with the ESA.

Thank you for your Department's participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Bethany Wylie, Planner

cc: Tiffany Kai, County of Hawai'i Mass Transit Authority
Chris Ball, P.E., Mitsunaga & Associates, Inc.

Appendix **C**

ARCHAEOLOGICAL ASSESSMENT

**ARCHAEOLOGICAL ASSESSMENT
MASS TRANSIT AGENCY BASEYARD**



WAIAKEA AHUPUA'A, SOUTH HILO DISTRICT

ISLAND OF HAWAI'I

TMK: [3] 2-1-13: PORTION 148

HAUN & ASSOCIATES

ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL RESOURCE MANAGEMENT SERVICES

73-1 168 KAHUNA A'O ROAD, KAILUA-KONA HI 96740

PHONE: 808-325-2402 FAX: 808-325-1520

**ARCHAEOLOGICAL ASSESSMENT
MASS TRANSIT AGENCY BASEYARD
WAIAKEA AHUPUA'A,
SOUTH HILO DISTRICT
ISLAND OF HAWAI'I
TMK: [3] 2-1-13: PORTION 148**

Prepared by:

Alan E. Haun, Ph.D.
and
Dave Henry, B.S.

Prepared for:

PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

April 2015

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MANAGEMENT SUMMARY

Haun & Associates has completed an Archaeological Assessment of an approximately 5.0 acre portion of the 40.0 acre TMK: (3) 2-1-13:148 located in Waiakea Ahupua'a, South Hilo District, Island of Hawai'i. The objective of the survey is to satisfy historic preservation regulatory review requirements of the National Historic Preservation Act Section 106 and the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) assessment survey requirements contained within Hawai'i Administrative Rules, Title 13, DLNR, Subtitle 13, State Historic Preservation Rules.

The survey revealed that extensive bulldozer disturbance has impacted large portions of the project area. No sites or features are present in the subject parcel and no further work is recommended.

Cover photo: Overview of project area, view to east-northeast

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INTRODUCTION

At the request of the PBR Hawaii & Associates, Inc., Haun & Associates has prepared an archaeological assessment for a five (5.0) acre portion of the 40 acre TMK: (3) 2-1-13:148, in Waiakea Ahupua'a, South Hilo District, Island of Hawai'i. (**Figure 1** and **Figure 2**). The assessment was conducted in conjunction with an Environmental Assessment for a Mass Transit Agency Base Yard and Maintenance Facility in Hilo. The objective of the survey is to satisfy historic preservation regulatory review requirements of the National Historic Preservation Act Section 106 and the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) assessment survey requirements contained within Hawai'i Administrative Rules, Title 13, DLNR, Subtitle 13, State Historic Preservation Rules.

No archaeological sites or features were identified during the survey, therefore the project is documented as an archaeological assessment pursuant to Chapter 13-284-5(5A). As required, this report contains a description of the project area, field methods and a brief background description.

PROJECT AREA DESCRIPTION

The project area is a roughly rectangular-shaped parcel located in the northwestern corner of Parcel 148 (**Figure 3**). The project area ranges in elevation from approximately 100 to 105 ft and is bordered along the north by the Panaewa Drag Strip Road. A 2.0 meter high bulldozed berm of soil and stones extends along the northern project boundary, south of the road. The area north of the road is an active quarry.

The examination of the project area indicates that approximately 2.7 acres (54%) of the project area has been impacted by bulldozer disturbance (**Figure 4**). This is evidenced by the mechanically leveled surface and push piles of soil stone and debris. The debris was likely dumped in the area by local residents. Examples of this disturbance are depicted in **Figure 5** and **Figure 6**. The tax map of the area (see **Figure 2**), indicates that Parcel 148 functioned as a County of Hawai'i quarry and borrow pit site.

The remaining 2.3 acres of the project area are relatively undisturbed. The vegetation in the parcel is a mix of indigenous and introduced plant species including *Uluhe (Dicranopteris linearis)*, *Ōhi'a Lehua (Metrosideros polymorpha)*, *Hala (Pandanus tectorius)*, *Hala Pepe (Pleomele spp)*, *Ti (Cordyline fruticosa)*, Trumpet Tree (*Cecropia obtusifolia*), *Kauna'oa (Cuscuta sandwicensis or Cassytha filiformis)*, Bamboo Orchid (*Arundina graminifolia*), Octopus Tree (*Schefflera actinophylla*), Albizia (*Paraserianthes falcataria*), Rattlepod (*Crotalaria spp*), Wedelia (*Wedelia trilobata*), Sleeping Grass (*Mimosa pudica*), Rose Myrtle (*Rhodomyrtus tomentosa*), Marcanga (*Macaranga spp*), Koster's Curse (*Clidemia hirta*), *Koa haole (Leucaena leucocephala)*, Miconia (*Miconia calvenscens*), Giant Reed (*Arundo donax*), Philippine Ground Orchid (*Spathoglottis plicata*), Guava (*Psidium guajava*), Lantana (*Lantana camara*), Java Plum (*Syzygium cumini*) and Molasses Grass (*Melinis minutiflora*). An example of the project area vegetation is presented in (**Figure 7**).

A heavily vegetated linear berm is located in the east-central portion of the parcel, oriented in an east-northeast by west-southwesterly direction (see **Figure 4**). The berm is approximately 100 meters long, 3.0 meters wide and 1.0 meters in height. An excavated depression parallels the berm on the north side, likely representing the source of the berm material (**Figure 8**). The area to the west of the berm has been impacted by bulldozer disturbance.

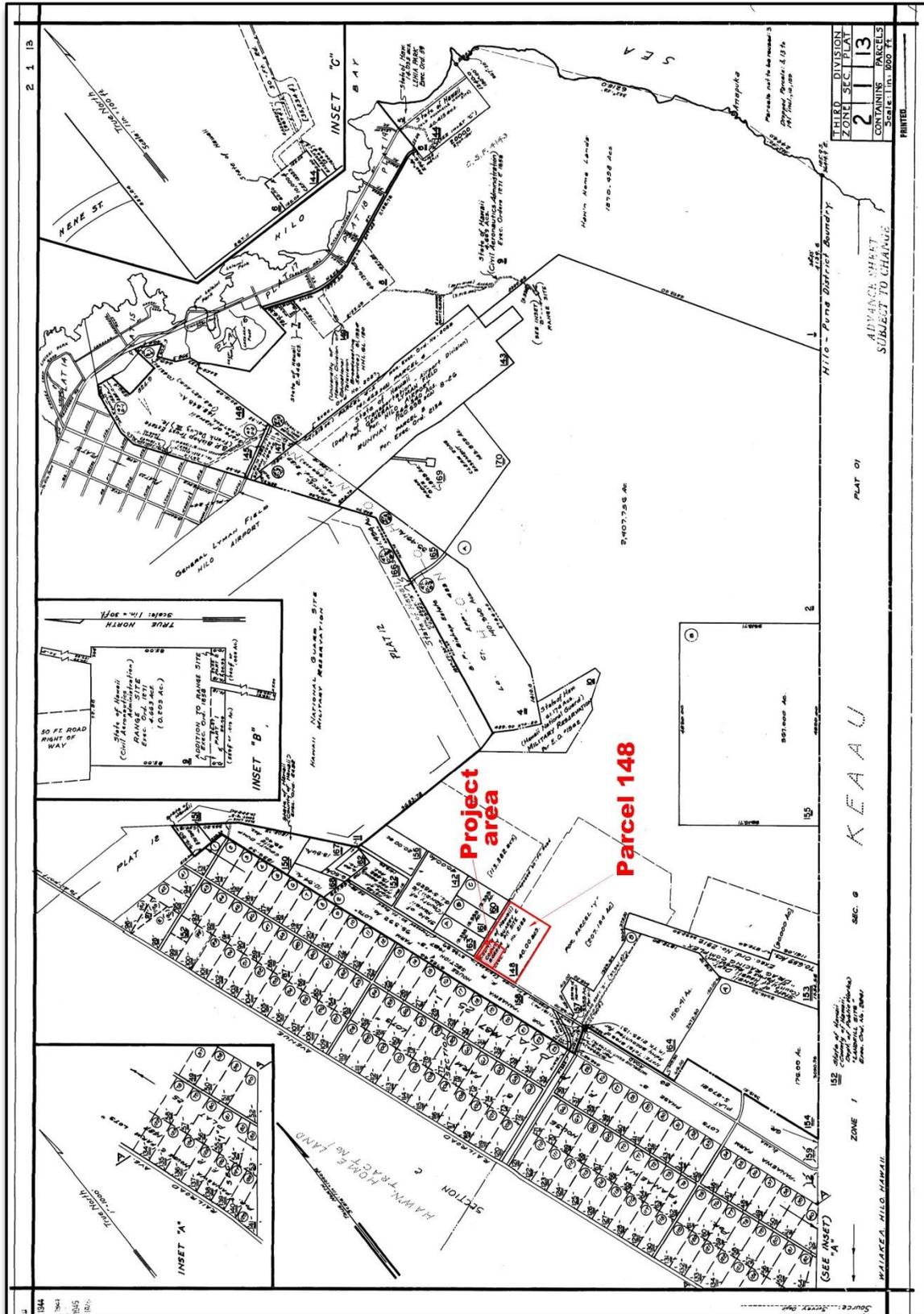


Figure 2. Tax Map Key 2-1-13 showing project area



Figure 3. January 21, 2013 aerial photograph of project area (from Google Earth)

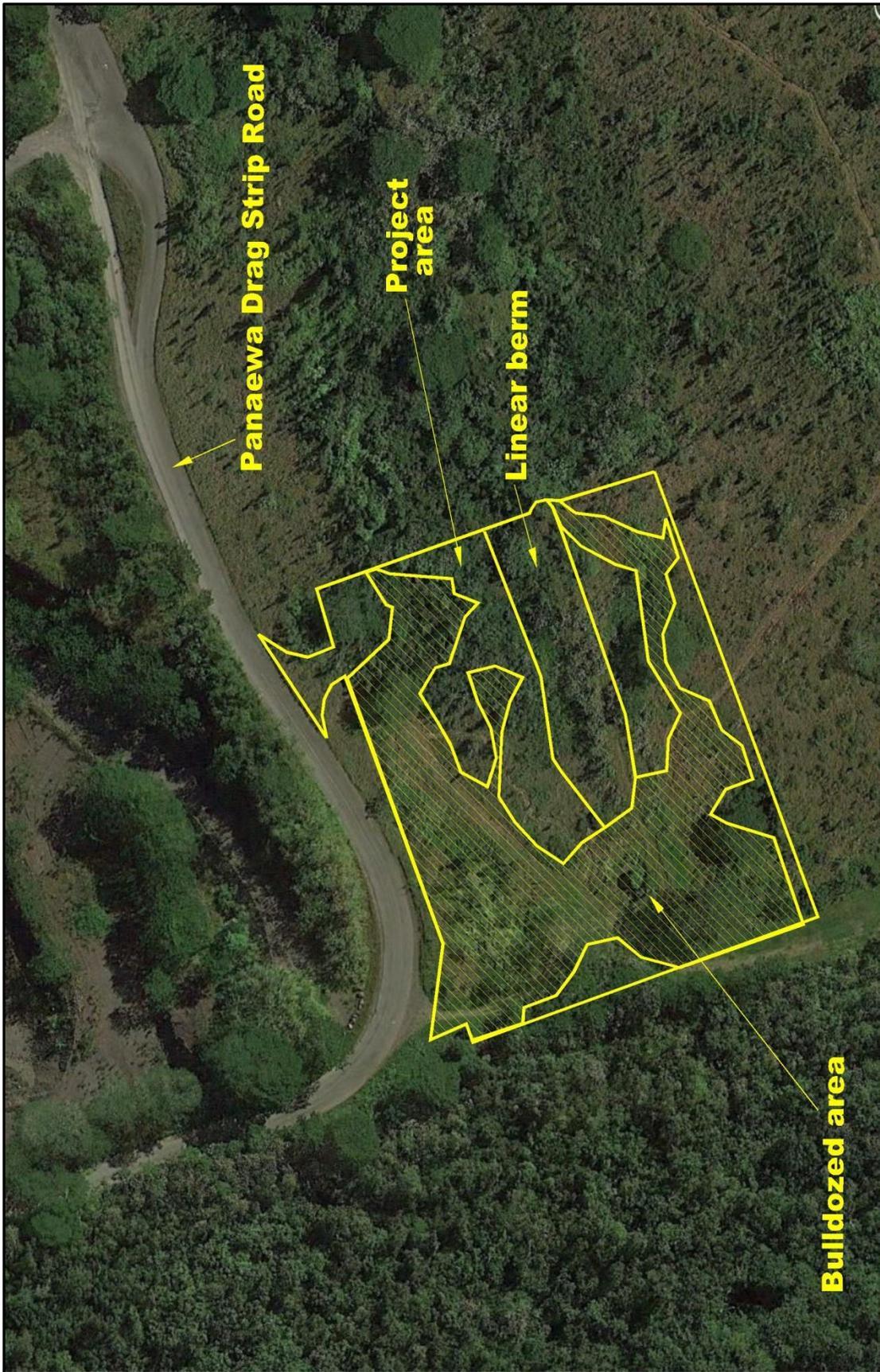


Figure 4. Aerial view of project area showing disturbance and berm



Figure 5. Bulldozed area (view to east)



Figure 6. Push pile of soil stones and debris (view to east-northeast)



Figure 7. Project area vegetation (view to east)



Figure 8. Linear berm (view to west)

This berm appears to correspond to a “Levee” depicted on the 1995 USGS quadrangle of the area (**Figure 9**). The levee originates at a drainage channel located to the south of the project area. The levee extends to the north-northwest from the channel for 560 meters, then angles to the northeast through the project area. The levee terminates 380 meters to the northeast of the project area. According to a map in a 1991 environmental assessment for the Panaewa Farm Lots (Barrett Consulting Group 1991), this canal is the Waiakea-Uka Flood Control Channel (**Figure 10**).

Figure 11 is a portion of the 1981 USGS Hilo quadrangle. This map also depicts the flood control channel and the levee, indicating it was in use at the time this map was created. **Figure 12** is a portion of the 1963 USGS Hilo quadrangle. The flood control channel and levee are not present on this map, although the quarry to the north of the project area is depicted. **Figure 13** is an aerial photograph of the Hilo taken on January 16, 1965 by the U.S. Geological Survey and obtained from the University of Hawaii at Manoa online library (<http://magis.manoa.hawaii.edu>). The flood control channel and levee are not present on this photograph.

The location of the levee downslope from the flood control channel, suggests it served to define the boundaries of a ponding basin, used to contain flood waters during periods of excessive rainfall. The absence of the levee and channel on **Figure 12** and **Figure 13** indicates they were constructed after 1965 and are therefore not historic properties. The 2013 USGS Hilo Quadrangle does not show the levee (see **Figure 1**), suggesting it is no longer in use.

The soil in the project area is Papai extremely stony muck on 3-25% slopes. This soil has an 8 inch thick surface layer of very dark brown extremely stony muck over a fragmental a’ā lava substrate (Sato et al. 1973:46). This soil has a rapid permeability, a slow runoff and a slight erosion hazard and is classified as suitable primarily for woodlands. The underlying lava was deposited 750 to 1,500 years ago from Mauna Loa Volcano (Wolfe and Morris 2001).

METHODS

The survey fieldwork was conducted on March 17, 2015 under the direction of Dr. Alan Haun. Approximately 4 labor-days were required to complete the fieldwork portion of the project. The archaeological survey of the project area consisted of a 100% surface examination with the surveyors walking transects at 10-meter intervals. Ground surface visibility throughout the project area was fair to excellent.

BACKGROUND

The project area is situated in the *ahupua’a* of Waiakea in South Hilo District. The *ahupua’a* is one of the largest in the district covering over 95,000 acres. The *ahupua’a* extends along the coast from the west side of Hilo Bay to the Puna District boundary and inland to approximately 6,000 ft elevation. Much of the following is summarized from *Hilo Bay: A Chronological History* (Kelly et al. 1981), an extensive and thorough compendium of historical information about Hilo including Waiakea.

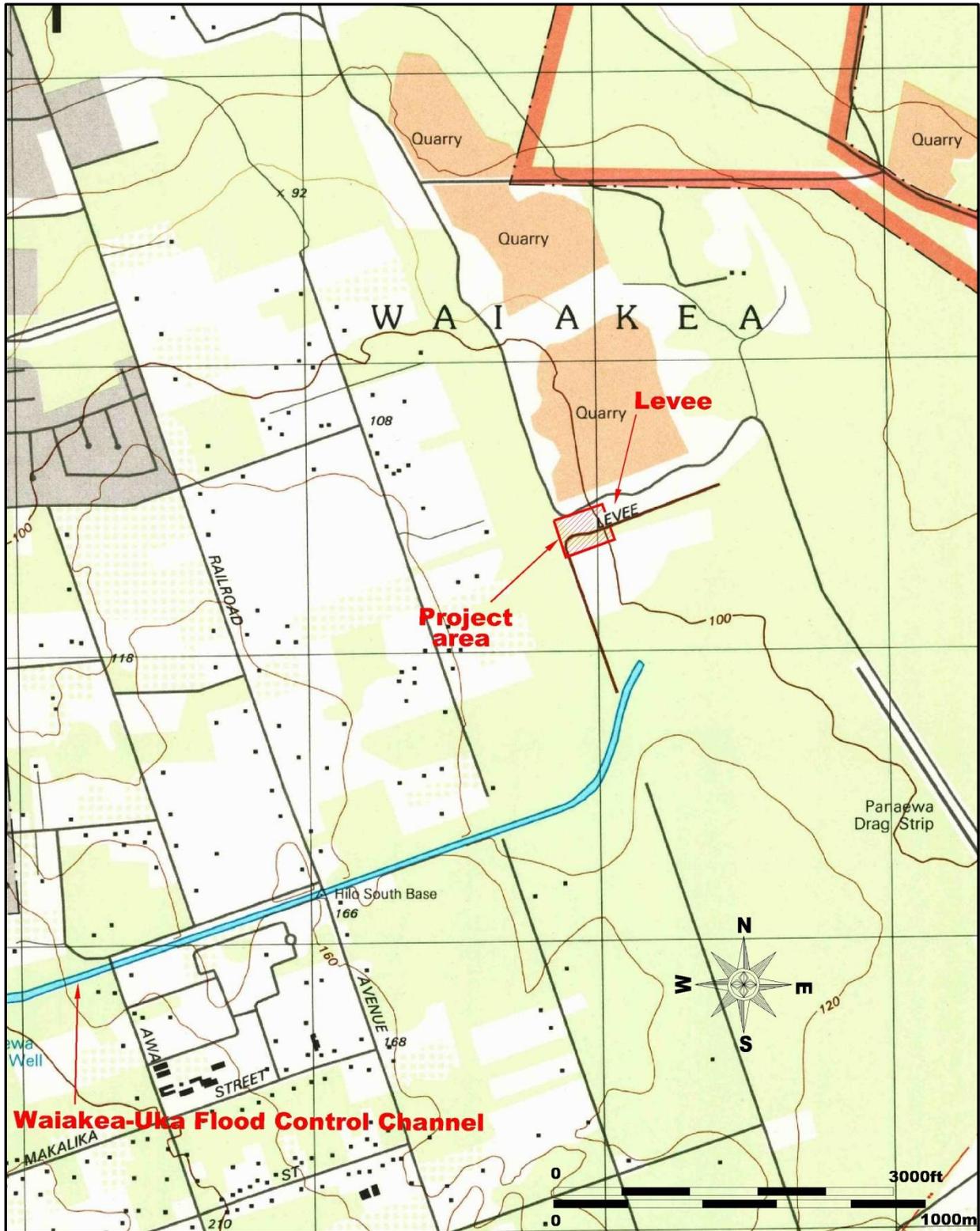


Figure 9. Portion of 1995 USGS 7.5' Hilo quadrangle showing project area

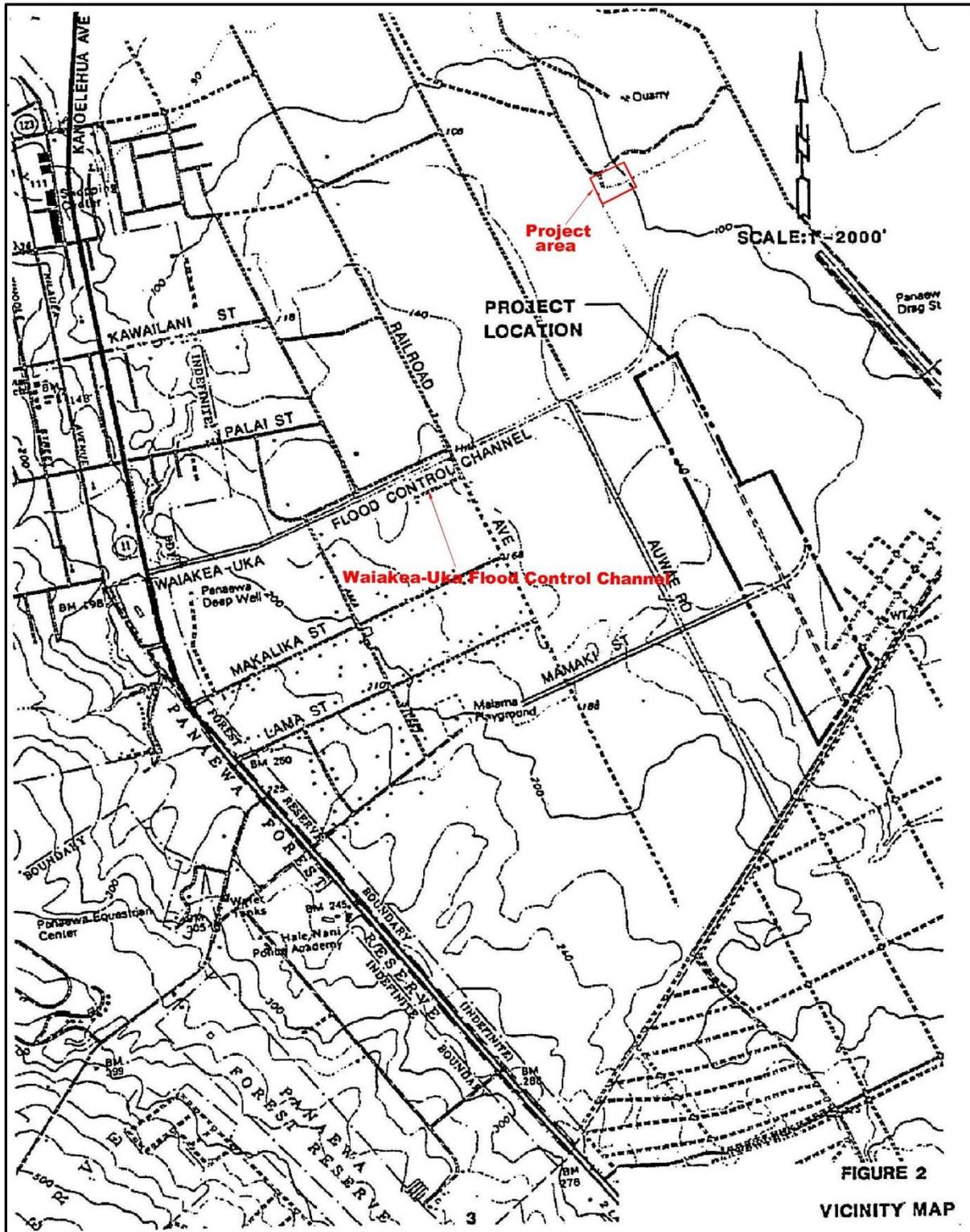


Figure 10. Map depicting Waiakea-Uka Flood Control Channel (from Barrett Consulting Group 1991:3)

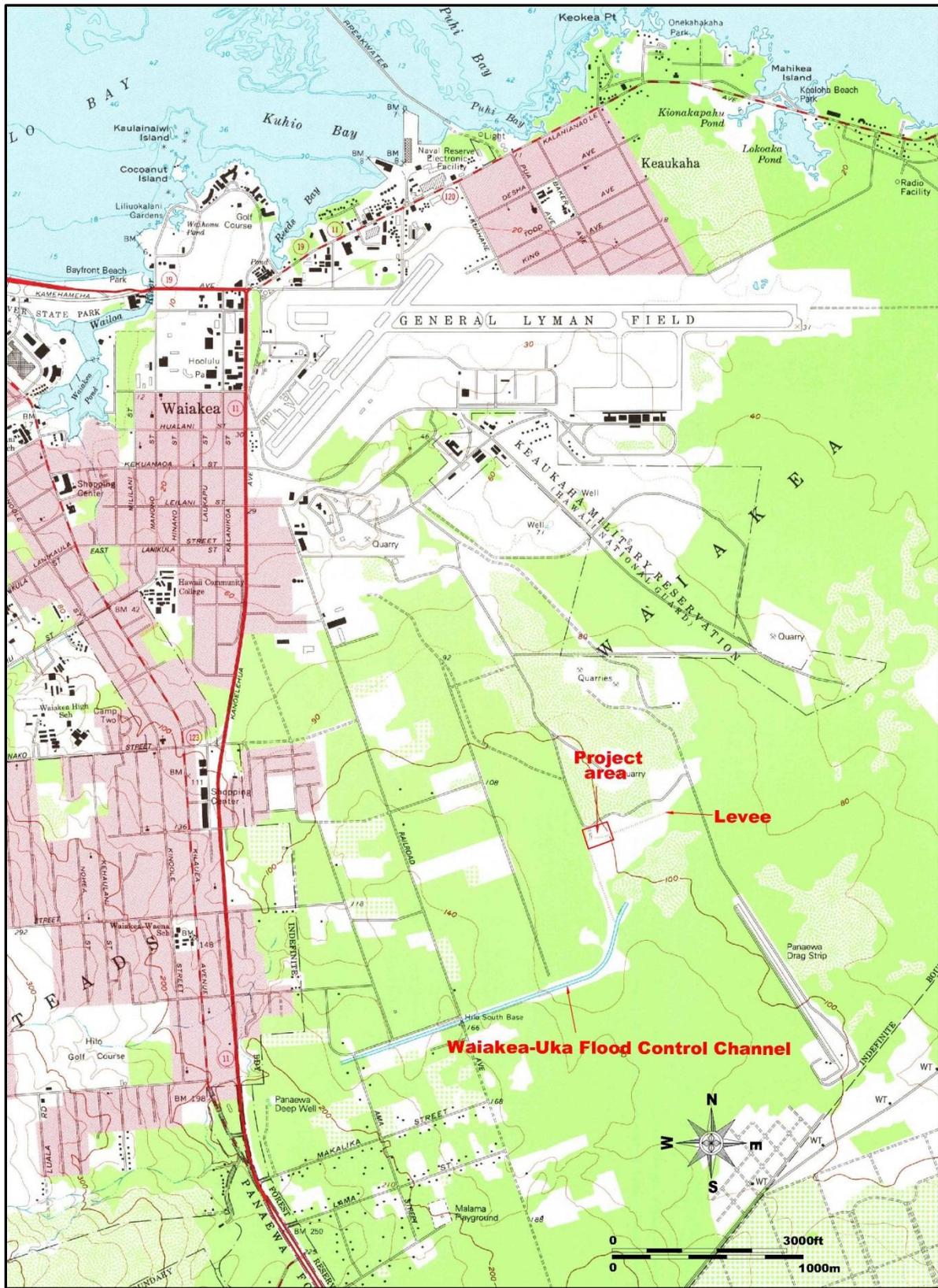


Figure 11. Portion of 1981 USGS 7.5' quadrangle showing project area, levee and flood control channel

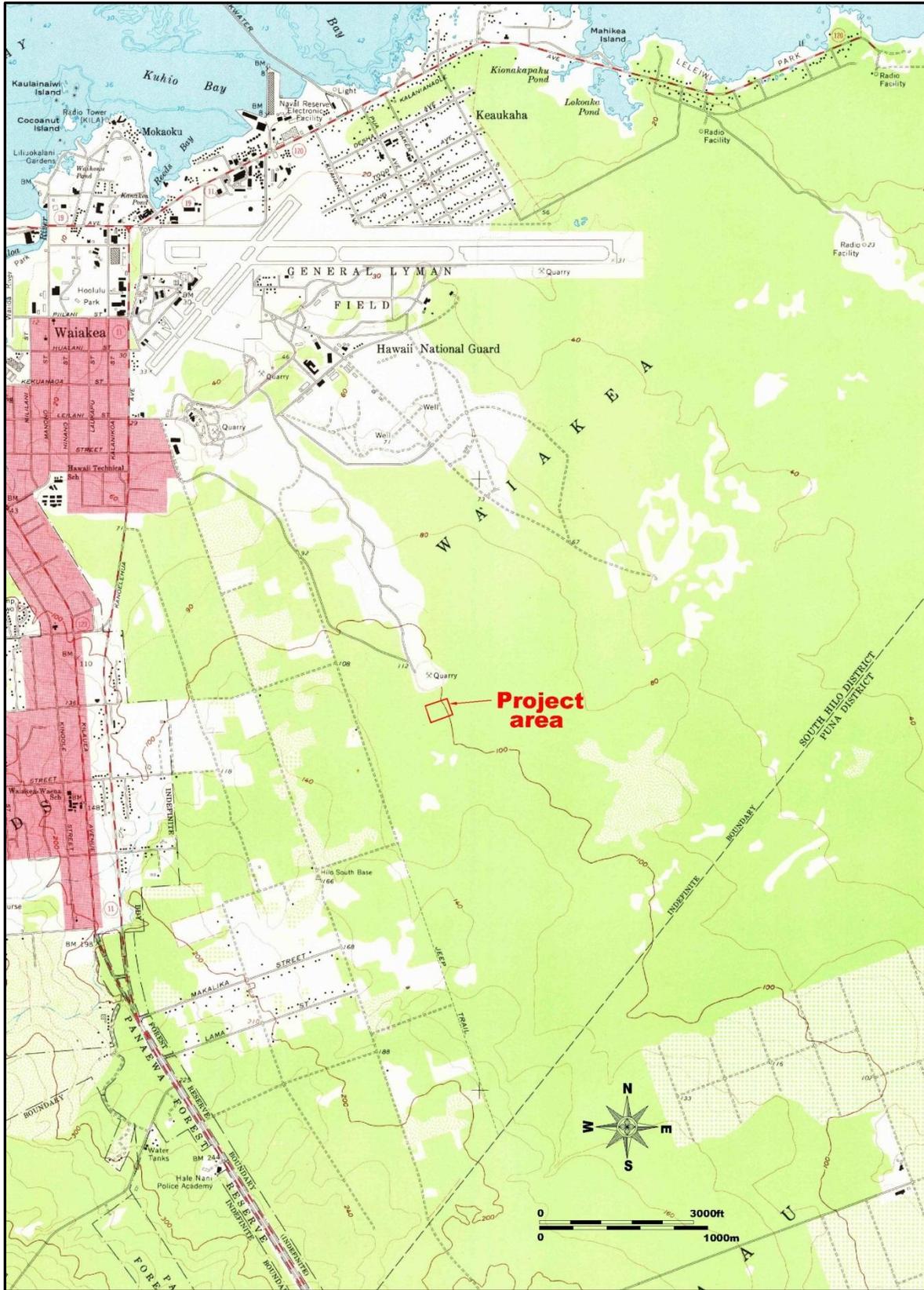


Figure 12. Portion of 1963 USGS 7.5' quadrangle showing project area



Figure 13. January 16, 1965 aerial view of project area

Hawaiian traditional and legendary accounts attest to the longstanding importance of Waiakea. The chief of the Hilo region, Kulukulu'a, who resided in Waiakea, was the first conquest of 'Umi-a-Liloa in his campaign to unify the districts of Hawaii Island. Hilo with its large bay, fishponds, wet taro fields, and abundant freshwater was a population center for commoners and royalty. Kamehameha I and his court resided in Hilo in the 1890s. In preparation for his planned invasion of Kauai in 1802, Kamehameha built a canoe fleet at Hilo, reportedly consisting of 800 vessels.

In 1824, a missionary station was established in Waiakea. Soon after, churches and schools were established. Whalers began stopping at Hilo in the mid-1820s. In the 1830s, a sawmill was built, and two stores were opened. By the end of the decade, a sugar cane plantation and mill were established on Ponahawai lands. By 1857, there were three sugar cane mills in the Hilo area. Large tracts of land were put in cane cultivation and sugar cane was also grown by individuals around their houses. A sugar mill was established in Waiakea at the inland end of Waiakea Fishpond in the late 1870s. By 1880, 1,400 acres of sugar cane were in cultivation and by the end of the decade over 5,600 acres were cultivated. In the 1900s, the population of Hilo grew dramatically with the expansion of sugar cane cultivation, pineapple production, the timber industry, and other commercial developments.

McEldowney (1979) used limited site inventory and historic documentary evidence to develop a traditional Hawaiian land use and settlement pattern model for the Hilo area. The model consists of five elevation-defined zones: Coastal Settlement, Upland Agricultural, Lower Forest, Rainforest, and Sub-Alpine or Montane. The Coastal Settlement Zone extended approximately 0.5 miles inland from the shoreline between sea level and 50 ft elevation. The zone was the most densely populated with both permanent and temporary habitations, high status chiefly residences, and *heiau*. Settlements were concentrated at Hilo Bay and sheltered bays and coves.

The Upland Agricultural Zone was situated between approximately 50 ft and 1,500 ft elevation. Settlement in the zone consisted of scattered residences among economically beneficial trees and agricultural plots of dryland taro and bananas. Lava tubes were utilized for shelter. A pattern of shifting cultivation is believed to have converted the original forest cover to parkland of grass and scattered groves of trees. Wetland cultivation of taro occurred along streams.

The Lower Forest Zone ranged from 1,500 ft to 2,500 ft elevation. Timber and other forest resources such as medicinal plants, *olona*, and birds were gathered from the zone. Site types consisted of temporary habitations, trails, shrines, and minor agricultural features in forest clearings and along streams. Sites in the Rainforest Zone (2,500-5,000 ft elevation) and Sub-alpine or Montane Zone (5,000-9,000 ft) were limited to trails and associated temporary habitations. These zones were used for intra-island travel and gathering of valued resources including hardwoods, birds, and stone for tool making.

The project area is situated within the lower portion of McEldowney's Upland Agricultural Zone where scattered residences and agricultural plots were situated in prehistoric to early historic times. Historic site types in the project area vicinity likely included plantation agriculture-related features and residences.

FINDINGS

No archaeological sites or features were identified within the project area. The absence of sites is potentially attributed to the extensive bulldozing that has occurred in the parcel. The tax map of the area (see **Figure 2**) indicates the parcel is used as a County of Hawai'i quarry and borrow pit area. The parcel appears to have also been used as a dumping area for refuse. The linear berm in the parcel, constructed between 1965 and 1981, is a modern levee used to control flood waters during periods of excessive rainfall. The 2013 USGS Hilo Quadrangle does not show the levee (see **Figure 1**), suggesting it is no longer in use. No further archaeological work is recommended for the property based on the survey results.

REFERENCES

Barrett Consulting Group

- 1991 State of Hawai'i, Department of Hawaiian Homelands, Environmental Assessment for the Improvements of Existing Road Right-of-ways for Panaewa Farm Lots, Phase 3, Waiakea, South Hilo, Island of Hawai'i, Hawai'i, TMK: 2-1-13:12 & 159. Homelots

DLNR (Department of Land and Natural Resources)

- 2003 Hawaii Administrative Rules, Title 13, Department of Land and Natural Resources, Subtitle 13, State Historic Preservation Division Rules.

ESRI website

- 2013 <http://www.esri.com/>

Kelly, M.

- 1983 Na Mala O Kona. A History of Land Use in Kona, Hawai'i. *Departmental Report Series 83-2*. Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for the Department of Transportation, State of Hawai'i.

McEldowney, H.

- 1979 Archaeological and Historical Literature Search and Research Design: Lava Flow Control Study, Hilo, Hawai'i. Prepared for the U.S. Army Engineer District, Honolulu. Department of Anthropology. Bishop Museum.

Sato, H.H., W. Ikeda, R. Paeth, R. Smythe, and M. Takehiro, Jr.

- 1973 *Soil Survey of the Island of Hawaii, State of Hawaii*. U.S. Department of Agriculture, Soil Conservation Service and University of Hawaii Agricultural Experiment Station. Washington, D.C.: Government Printing Office.

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- 2013 <http://magis.manoa.hawaii.edu>

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- 1996 Geologic Map of the Island of Hawaii. U.S. Department of the Interior, U.S. Geological Survey. Miscellaneous Investigations Series.

Appendix **D**

CIVIL, ELECTRICAL, & MECHANICAL BASIS OF DESIGN

Basis of Design
2.0 CIVIL DESIGN

A. Site Accessibility and Parking

The new Mass Transit Agency Baseyard and Maintenance Facility will be located in Hilo on the Island of Hawai'i (TMK: (3) 2-1-013: 148). The proposed facility has a project area of 5.0 acres. To access the site, continue along Leilani Street past the Hilo Transfer Station towards the Hilo Drag Strip. The State land use classification is agricultural and it is zoned A-20a, agricultural. The proposed project is currently owned by the State of Hawaii Department of Land and Natural Resources (DHHL) and will be transferred to the County of Hawai'i, Department of Public Works.



The project site is surrounded by the Panaewa Forest, there is a quarry to the north, the Hilo Drag Strip to the south and DHHL agricultural lots to the west. The existing site is undeveloped forest.

The new 26,500 square-foot maintenance building will include 19,500 square-feet of warehouse space for bus maintenance, washing and repair. In addition the building will provide administrative, office and storage space. A majority of the 5.0 acre site will be paved to provide bus staging and parking. A total of 56 bus parking stalls and eleven (11)

Basis of Design

passenger vehicle stalls are provided. There are no utilities available on site, a 12-inch water line will be extended from the Hilo Transfer Station and a septic system and leech field will be constructed on the property.

The project will comply with Americans with Disabilities (ADA) Guidelines. Final plans will be submitted to the Disability and Communication Access Board (DCAB) for ADA review and compliance.

B. Grading and Drainage

The grading of the 5.0-acre site will be in conformance with the Hawai'i County Grading Ordinance and the recommendations of the geotechnical engineer. On-site fill will be used wherever necessary, fill slopes will not exceed 2:1. Erosion and dust control will adhere to the Erosion Control Plan provided by the engineer and approved by the County of Hawai'i.

The grading will follow Best Management Practices (BMP) as prescribed in the Nationwide Pollution Discharge Elimination System (NPDES) Permit. The contractor will submit a site specific construction BMP Plan to the State of Hawai'i Department of Health before grading commences.

The project storm drainage system will be designed to comply with the latest County of Hawai'i *Storm Drainage Standards and Standard Details for Public Works Construction*. The on-site drainage system will be designed for a 10-year recurrence interval and will consist of infiltration drainage swales along the perimeter of the site. There is no existing municipal drainage system. Therefore, all storm drainage will sheet flow to swales, which will store the flow until it percolates into the ground.

Existing drainage patterns will be maintained as much as possible, runoff will sheet flow across the site to landscaped areas where the drainage swales are located. Building finished floors will be higher than the surrounding grades and runoff will be directed away from the buildings.

The project site is located in Zone X – Areas determined to be outside 500-year flood plain as determined by the Federal Emergency Management Agency (FIRM Map 1551660885C, dated September 16, 1988).

Basis of Design

C. Water System

The potable water system will comply with the current *Water System Standards and Standard Details for Water System Construction*, Board of Water Supply. An existing 12" water line that runs along Leilani Street up to the Hilo Transfer Station will be extended approximately one (1) mile to the site and will provide service for the new facility's potable water supply and fire protection. The new water meter and water line will provide domestic service to the building, and a new 6" water meter and 6" water line will provide water for the fire sprinklers. Potable water laterals will fulfill all mechanical requirements. New fire hydrants will be accessible on-site, in order to meet the Hawai'i County Fire Department's coverage requirement. The static water pressure at the Hilo Transfer Station is assumed to be 90 psi, as determined by the overflow elevation of the Puainako Tank at 290-feet. See mechanical design for the estimated potable design water demand for the proposed building.

The estimated water demand for the proposed project is 160 gallons per day (gpd) (see Appendix).

D. Sewer System

The sewer system design will comply with Hawai'i Administrative Rules (HAR) Title 11, Chapter 62.

There is no existing municipal sewer system. A new septic tank and leach field will be added on-site for treatment of the waste created by the occupants of the new facility. An Individual Wastewater System (IWS) permit will be prepared and processed with the State Department of Health. The approximate size of the septic tank is 2,000 gallons and the leach field is 371 square feet (See Appendix).

Basis of Design

E. Environmental Permits and Controls

Applicable Regulations

In order to provide for abatement and control of environmental pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, the work performed will be required to comply with the intent of the applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement, including, but not limited to the following regulations:

1. State of Hawai'i, Department of Health, Administrative Rules, Chapter 55, WATER POLLUTION CONTROL: Chapter 54, WATER QUALITY STANDARDS.
2. State of Hawai'i, Department of Health, Administrative Rules, Chapter 59, AMBIENT AIR QUALITY: Chapter 60, AIR POLLUTION CONTROL LAW.
3. State of Hawai'i, Department of Health, Administrative Rules, Chapter 44A, VEHICULAR NOISE CONTROL.
4. Erosion and Sedimentation Control Standards and Guidelines, Department of Public Works, County of Hawai'i.

Permits

The Contractor will be required to comply with the following conditions and requirements of the NPDES Permit for Discharges of Storm Water Associated with Construction Activity from the State Department of Health (Notice of Intent, NOI Form C) as needed and complete any information required therein to effectuate the permit:

- a. HAR Chapter 11-55, Chapter C, NPDES General Permit Authorizing Discharges of Storm Water Associated with Construction Activities;
- b. HAR Chapter 11-55, Appendix A, Department of Health Standard General Permit Conditions;
- c. HAR Chapter 11-55-34.04(a), 11-55-34.07, 11-55-34.11, 11-55-34.12, and any other applicable sections of HAR Chapter 11-55

Basis of Design

Best Management Practices (BMP) Plan

A BMP will be included and implemented as part of the NPDES requirements and consists of, but not be limited to, the application of the following mitigation and/or corrective measures by the Contractor:

- a. Properly controlling fugitive dust from entering State waters.
- b. Wash-out of concrete trucks will be done in such a way (preferably off-site) as to ensure that neither wastewater nor surplus concrete enters State Waters.
- c. Construction of berms, sandbags, filter fences, catchments, etc., as needed to contain/filter storm water runoff.
- d. If during construction, water quality parameters exceed respective State standards, all construction activities that were identified as contributing to water quality degradation shall be stopped immediately. The causes shall be established, and if related to construction activity, remedial action for the non-compliance should be taken to fix the problem prior to commencing work.
- e. Other measures as required to prevent pollution of State waters as recommended in the Best Management Practices Manual for Construction Sites.

Basis of Design

References:

1. *Water System Standards.* Board of Water Supply, Department of Water Supply, County of Hawaii, State of Hawaii, 2002.
2. *Design Standards of the Department of Wastewater Management, Volume I.* City and County of Honolulu, July 1993.
3. *Storm Drainage Standards.* Department of Public Works, County of Hawai'i, October 1970.
4. *Erosion and Sedimentation Control Standards and Guidelines,* Department of Public Works, County of Hawai'i.
5. *Hawai'i County Code.* Department of Public Works, County of Hawai'i, June 2005.

Water System Calculations

Light Industry (DWS Planning Criteria):

4,000 gallons / acre (Table 100-18)

Project Development Area = 5.0 acres

Average Daily Demand: $4,000 \text{ gpd/ac.} \times 5.0 \text{ ac.} = 20,000 \text{ gpd}$

Maximum Daily Demand: $1.5 \times 20,000 \text{ gpd} = 30,000 \text{ gpd}$ (Table 100-20)

Peak Hour Demand: $5.0 \times 20,000 \text{ gpd} = 100,000 \text{ gpd}$ (Table 100-20)

Fire Flow Requirement: 2000 gpm for 2 hour duration (Table 100-19)

Total Fire Flow: $2000 \text{ gpm} \times 2 \text{ hrs} \times 60 \text{ min/hr} = 240,000 \text{ gallons}$

Pipeline Sizing (Fire line): Provide required fire flow at a minimum of 20 psi residual pressure at fire hydrants.

Fire Hydrant Spacing: 300 feet maximum for Light Industry

Project Demand Requirements:

Total f/u count = 32.5 f/u

Total flow volume = 23 gpm = 800 gpd (Peak Demand)

Average Daily Demand: $800 \text{ gpd}/5 = \mathbf{160 \text{ gpd}}$

Maximum Daily Demand: $800 \text{ gpd}/1.5 = 533 \text{ gpd}$

References:

1. *Water System Standards*. Board of Water Supply, Department of Water Supply, County of Hawaii, State of Hawaii, 2002.

SEWER DESIGN CALCULATIONS

Mass Transit Agency Baseyard and Maintenance Facility
County of Hawaii
Waiakea, South Hilo, Island of Hawaii
TMK: 3rd Div. 2-1-013: 148 (Portion)

(Reference: Manual of Septic Tank Practice)

Estimated Design Flow:

- 1 employee (24-hrs.) @ 75 gallons per day = 75 gpd
- 14 employees @ 40 gallons per day per employee = 560 gpd
- 40 employees (field) @ 10 gallons per day per employee = 400 gpd
- 5 customers @ 5 gallons per day per customer = 25 gpd
- Total estimated flow = 1060 gpd

Equivalent Bedroom = (1060 gpd) / (200 gpd per bedroom) = 5.3 bedrooms

Calculate Volume (V) Required for Septic System:

$V = 1,125 + (0.75)Q \rightarrow$ (For flows greater than 1,500 gpd)

$V = 1.5 (Q) \rightarrow$ (For flows between 500 and 1,500 gpd)

$V = 1.5 (1060) = 1,590$ Gallons (minimum)

Septic Tank Selection:

- One – 2,000 Gallon Septic Tank

Leaching Field Calculation:

Percolation Rate: 0.2 minutes / inch

0.2 minutes/inch relates to an area of 70 square feet / bedroom

Area = (70 sf/bedroom) x (5.3 bedrooms) = 371 sf

Leaching Field (Absorption Bed) Area:

Area required = 371 sf (minimum)

Assume two distribution lines @ 6 ft. spacing w/ 3 ft. wall offset.

Bed width = 3+6+3 = 12 ft.

Bed Length = 371/12 = 30.9 ft.

Basis of Design

3.0 ELECTRICAL DESIGN

A. Design Criteria

Electrical work will be designed and provided in accordance with the requirements of the County of Hawaii and the following standards:

- A. NFPA 70, National Electrical Code, 2008 Edition
- B. ANSI C2, National Electrical Safety Code, 2007 Edition
- C. Electrical and Electronics (IEEE) C2
- D. NFPA 101, Life Safety Code, 2006 Edition
- E. Uniform Fire Code (NFPA 1), 2012 Edition
- F. Illuminating Engineering Society of North America (IESNA) Lighting Handbook, Ninth Edition, 2000
- G. International Energy Conservation Code, 2006

B. Electrical work will include, but not be limited to the following:

1. New primary electrical service from HELCO.
2. New electrical service equipment, including metering equipment, building disconnect and electrical panel.
3. “Super” T-8 lamps with low ballast factor electronic ballasts for all areas except high bay areas. LED Lighting for high bay areas. All areas except the utility rooms and high bay areas will utilize occupancy sensors to control the lights in each individual area.
4. General use receptacles and wiring at all structures.
5. Infrastructure for telecommunication system, including service, main cabinets, handholes, ductlines, backboards, empty raceways and outlet boxes.
6. Fire alarm system for building to monitor fire sprinkler risers.
7. Power wiring and connections for all HVAC equipment, bus washing equipment and paint spraying equipment.

HAWAII COUNTY CODE - CHAPTER 5 - BUILDING
2006 IECC & ORDINANCES 09-48 & 10-68
BUILDING ENERGY EFFICIENCY STANDARDS

I CERTIFY THAT THE DESIGN IS IN CONFORMANCE WITH THE BUILDING
ENERGY EFFICIENCY STANDARDS PERTAINING TO:

SECTION 506 ELECTRICAL POWER AND LIGHTING SYSTEMS



SIGNATURE: _____ DATE: _____
NAME: BRIAN T. ITOZAKI
TITLE: ELECTRICAL ENGINEER
LICENSE NO.: 9058-E

BUILDING ENERGY EFFICIENCY STANDARDS

EXTERIOR LIGHTING POWER ALLOWANCE 40,877 W INSTALLED 12,893 W

INTERIOR LIGHTING POWER ALLOWANCE 259,144 W INSTALLED 256,982 W

CALCULATIONS: SEPARATE X ON DRAWINGS
(CHECK ONE)

INTERIOR LIGHTING POWER ALLOWANCE

ILPA = ULPA x GLA
WHERE

ILPA = INTERIOR LIGHTING POWER ALLOWANCE (W)
ULPA = UNIT POWER LIGHTING ALLOWANCE (W/FT.²)
GLA = GROSS LIGHTED AREA (FT.²)

ILPA = 1.00 W/FT.² x 9,362² FT. = 11,844 W
INSTALLED = 3/48: (114 FIXT. x 86 WATTS/FIXT.) = 1,568 W
2/48: (28 FIXT. x 56 WATTS/FIXT.) = 9,804 W
2/13: (1 FIXT. x 30 WATTS/FIXT.) = 30 W
11,402 W

EXTERIOR LIGHTING POWER ALLOWANCE

ELPA = ELUPA X GLA
WHERE

ELPA = EXTERIOR LIGHTING POWER ALLOWANCE (W)
ELUPA = EXTERIOR UNIT LIGHTING POWER ALLOWANCE
GLA = GROSS LIGHTED AREA

	EULPA	GLA	ELPA	INSTALLED
PUBLIC PARKING LOT	0.10 W/ft.	159,600 ft ²	15,960 W	3,433 W
PUBLIC ROAD/WALKWAYS	0.15 W/ft.	12,849 ft ²	1,927 W	4,884 W
PRIVATE ROAD	0.10 W/ft.	10,200 ft ²	1,020 W	940 W
BUILDING EXTERIOR	0.25 W/ft.	840 ft ²	210 W	180 W
LIGHT TRAFFIC W/CANOPY	4 W/ft.	3,280 ft ²	13,120 W	1,897 W
			40,877 W	12,893 W

NOTES:

- SERVICE VOLTAGE 208Y/120V, 3 PHASE, 4W.
- LOAD DATA: CONNECTED: 404.8 KVA ESTIMATED DEMAND: 248.5 KVA.
- SERVICE CONDUCTORS: 2(4-500 MCM).
- METERING: HELCO METER STD. B-16, RATE SCHEDULE: "J".
- TYPE: UNDERGROUND
- BILLING INFORMATION:

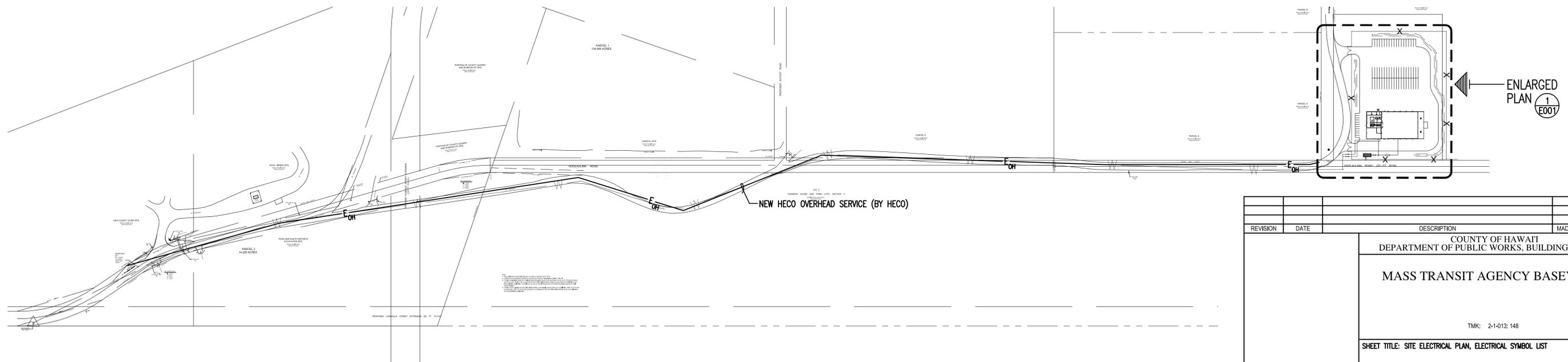
ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	LIGHT, FLUORESCENT, CEILING RECESSED MOUNTED.	[Symbol]	FIRE SPRINKLER PRESSURE SWITCH CONNECTION.
[Symbol]	LIGHT, FLUORESCENT, CEILING SURFACE MOUNTED.	[Symbol]	FIRE SPRINKLER SOLENOID VALVE CONNECTION.
[Symbol]	LIGHT, CEILING RECESSED MOUNTED.	[Symbol]	RACEWAY, CONCEALED ABOVE FINISH FLOOR, NUMBER OF HASHMARKS INDICATE NUMBER OF WIRES WITHIN.
[Symbol]	LIGHT, CEILING SURFACE MOUNTED.	[Symbol]	RACEWAY, CONCEALED BELOW FINISH FLOOR, NO HASHMARKS INDICATES TWO WIRES WITHIN.
[Symbol]	LIGHT, WALL MOUNTED.	[Symbol]	EXPOSED RACEWAY.
[Symbol]	NIGHT LIGHT, WALL MOUNTED.	[Symbol]	FLEXIBLE RACEWAY.
[Symbol]	LIGHT, FLUORESCENT, CEILING RECESSED MOUNTED, WITH EMERGENCY BALLAST.	[Symbol]	ARROW, HOMERUN TO PANEL OR CABINET.
[Symbol]	LIGHT, FLUORESCENT, CEILING SURFACE MOUNTED, WITH EMERGENCY BALLAST.	[Symbol]	RACEWAY, STUBBED AND CAPPED.
[Symbol]	ROADWAY LIGHT, POLE MOUNTED WITH BRACKET ARM.	[Symbol]	FIRE ALARM RACEWAY, CONCEALED.
[Symbol]	PARKING LOT LIGHT, POLE TOP MOUNTED.	[Symbol]	FIRE ALARM RACEWAY, EXPOSED.
[Symbol]	EXIT SIGN, SINGLE FACE, WALL SURFACE MOUNTED.	[Symbol]	TELECOM RACEWAY, CONCEALED.
[Symbol]	SWITCH, FLUSH TUMBLER, WALL MOUNTED.	[Symbol]	TELEVISION RACEWAY, CONCEALED.
[Symbol]	SWITCH, 3-WAY, WALL MOUNTED.	[Symbol]	ELECTRICAL NOTE INDICATOR.
[Symbol]	OCCUPANCY SENSOR SWITCH, WALL MOUNTED.	[Symbol]	DUCT SECTION INDICATOR.
[Symbol]	OCCUPANCY SENSOR, WALL/CEILING MOUNTED.	[Symbol]	FIXTURE INDICATOR UPPER HALF: FIXTURE TYPE, LOWER HALF: NO. OF LAMPS & WATTS OR LENGTH.
[Symbol]	OCCUPANCY SENSOR, CEILING MOUNTED.	[Symbol]	DETAIL INDICATOR UPPER HALF: DETAIL NUMBER, LOWER HALF: SHEET NUMBER, DETAIL LOCATION.
[Symbol]	"a" INDICATES FIXTURE OR DEVICE CONTROLLED BY SW. "a", OTHER LETTERS SIMILAR.	[Symbol]	WP INDICATES WEATHERPROOF.
[Symbol]	JUNCTION BOX, CEILING MOUNTED.	[Symbol]	NL INDICATES NIGHT LIGHT.
[Symbol]	JUNCTION BOX, WALL MOUNTED.		
[Symbol]	RECEPTACLE, DUPLEX, WALL MOUNTED, 20A, 125V, NEMA 5-20.		
[Symbol]	RECEPTACLE, DUPLEX, G.F.I. TYPE, WALL MTD., 20A, 125V, NEMA 5-20.		
[Symbol]	RECEPTACLE, SINGLE, CEILING MOUNTED, 15A, 125V, NEMA 5-15, LOCKING TYPE.		
[Symbol]	EQUIPMENT CONNECTION.		
[Symbol]	MOTOR CONNECTION.		
[Symbol]	FIRE SPRINKLER FLOW SWITCH CONNECTION.		
[Symbol]	FIRE SPRINKLER SUPERVISORY TAMPER SWITCH CONNECTION.		

MOUNTING HEIGHT SCHEDULE

DEVICE ON PLAN	MOUNTING HEIGHT	REFERENCE POINT				REMARKS
		FLOOR	CEILING	TO	TOP	
[Symbol]	45"	-				MOUNTING HEIGHT SHALL BE TO TOP OF OPERABLE PART.
[Symbol]	18" *	-			BOTTOM	MOUNTING HEIGHT SHALL BE TO BOTTOM OF PLATE.
[Symbol]	5'-6"	-				

* SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.



1 SITE ELECTRICAL PLAN
E000 SCALE: 1" = 200'

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
COUNTY OF HAWAII DEPARTMENT OF PUBLIC WORKS, BUILDING DIVISION MASS TRANSIT AGENCY BASEYARD TMK: 2-1-013: 148 SHEET TITLE: SITE ELECTRICAL PLAN, ELECTRICAL SYMBOL LIST				
REVIEWED:			DESIGN BY: BI	
			DRAWN BY: STAFF	
			CHECKED BY: SM	
			SHEET NO.	
			E000	
			OF X SHTS	
DIVISION CHIEF BUILDING DIVISION DEPARTMENT OF PUBLIC WORKS			DATE 2015 FEB XX	

Basis of Design

4.0 MECHANICAL DESIGN

A. References

- A. ASHRAE Standard 62 (2013) Ventilation For Acceptable Indoor Air Quality
- B. ASHRAE Standard 90.1 (2013) Energy Standard for Buildings Except Low Rise Residential Buildings
- C. ASHRAE Handbooks, Latest Editions
- D. International Building Code (2006)
- E. International Mechanical Code (2006)
- F. Uniform Plumbing Code (2006)
- G. International Fire Code (2006)
- H. Sheet Metal and Air Conditioning Contractors National Association (SMACNA), HVAC Duct Construction Standard (2005)
- I. National Fire Codes, National Fire Protection Association Standards including:
 - NFPA 90A Air-Conditioning and Ventilating Systems, 2013
 - NFPA 13 Standard for the Installation of Sprinkler Systems, 2013
- J. American Conference of Governmental Industrial Hygienists (AIGIH)
- L. County of Hawaii Ordinances

B. General Parameters

- 1. Water Supply pressure: The available pressure in the utility system may not be adequate for the domestic water service and fire protection (sprinkler) system for this project. A general service domestic cold water booster pumping and fire pump may be required. See civil design analysis for further discussion of the water distribution systems.
- 2. Planned sanitary sewer capacities: New septic tank and leaching field system is adequate to service this building. See civil design analysis for the sanitary sewer system. For exterior sewerage systems beyond 1.5 meter (5 feet) from the building, refer to civil drawings.

Basis of Design

3. Central cooling system: Central cooling system will be provided with direct expansion (DX) split air conditioning system with variable air volume (VAV) air distribution system. The DX split system consists of a single DX air cooled condensing unit (ACCU) and a DX air handling units (AHU).
4. Ventilation, and Air Conditioning System & Controls Description:

- 4.1 Ventilation Systems

The following ventilation systems will be provided:

Overhead tail pipe vehicle exhaust system

Janitor closet, public toilets, electrical room, mechanical room and kitchen range hoods.

Roof mounted gravity ridge vent will be provided for the repair bay exhaust system.

The overhead tail pipe exhaust systems will be provided for the vehicles in the repair bays. Each exhaust system consists of a utility type exhaust fan with an explosion proof motor and fan wheel, hose wheel assembly, minimum of 30 feet long flexible hose, support frame, ratchet mechanism, spring pack assembly, hose guide, drum and hose stop. The entire system will be constructed to withstand up to 600 degree F.

Air circulation by exhaust fans will be provided for the mechanical equipment and electrical rooms to limit the temperature rise in these spaces.

Janitor closet, public toilets and kitchen range hoods will be provided with exhaust fans to control temperature and control odor migration. Make-up air for these spaces will be provided via transfer (infiltration) from the spaces pressurized by the OA ventilation air.

- 4.1 Air Conditioning Systems for Administration Offices:

Central cooling system will be provided with direct expansion (DX) split air conditioning system with variable air volume (VAV) air distribution system. The DX split system consists of a single DX air cooled condensing unit (ACCU) and a DX air handling units (AHU).. The air handling unit will be a constant volume fan with a bypass

Basis of Design

damper to accommodate VAV air distribution system. VAV dampers and individual thermostat will be provided for the temperature control of occupying spaces. Fresh air intake will be controlled by a modulating damper utilizing CO2 sensor by measuring the CO2 level in the return air system.

5. Energy conservation:

Heat transfer U-values shall meet or exceed AHRAE Standard 90.1 (2013) Energy Standard for Buildings Except Low-Rise Residential Buildings. All aspects of mechanical design shall conform to 2009 International Energy Conservation Code (IECC) and shall incorporate all applicable recommendations as specified in the LEED V3.0.

Energy conservation measures in addition to the minimum required by applicable Standards and Criteria includes:

- CO2 Sensor controlled outside air intake for all air handling units.
- AHU thermostat with a 7-day unoccupied setback scheduling capability.
- VAV damper with thermostat control
- Use of premium efficiency motors on mechanical equipment
- Use of high efficiency lighting fixtures.
- Use of building envelope components that exceed the minimum required insulation values.

6. Standby heating and cooling and emergency environmental systems: Standby or back up heating cooling will not be provided.

7. Fire sprinkler system: Automatic, wet-pipe, fire sprinkler system will be provided for this facility in accordance with NFPA 13.

8. Plumbing Systems

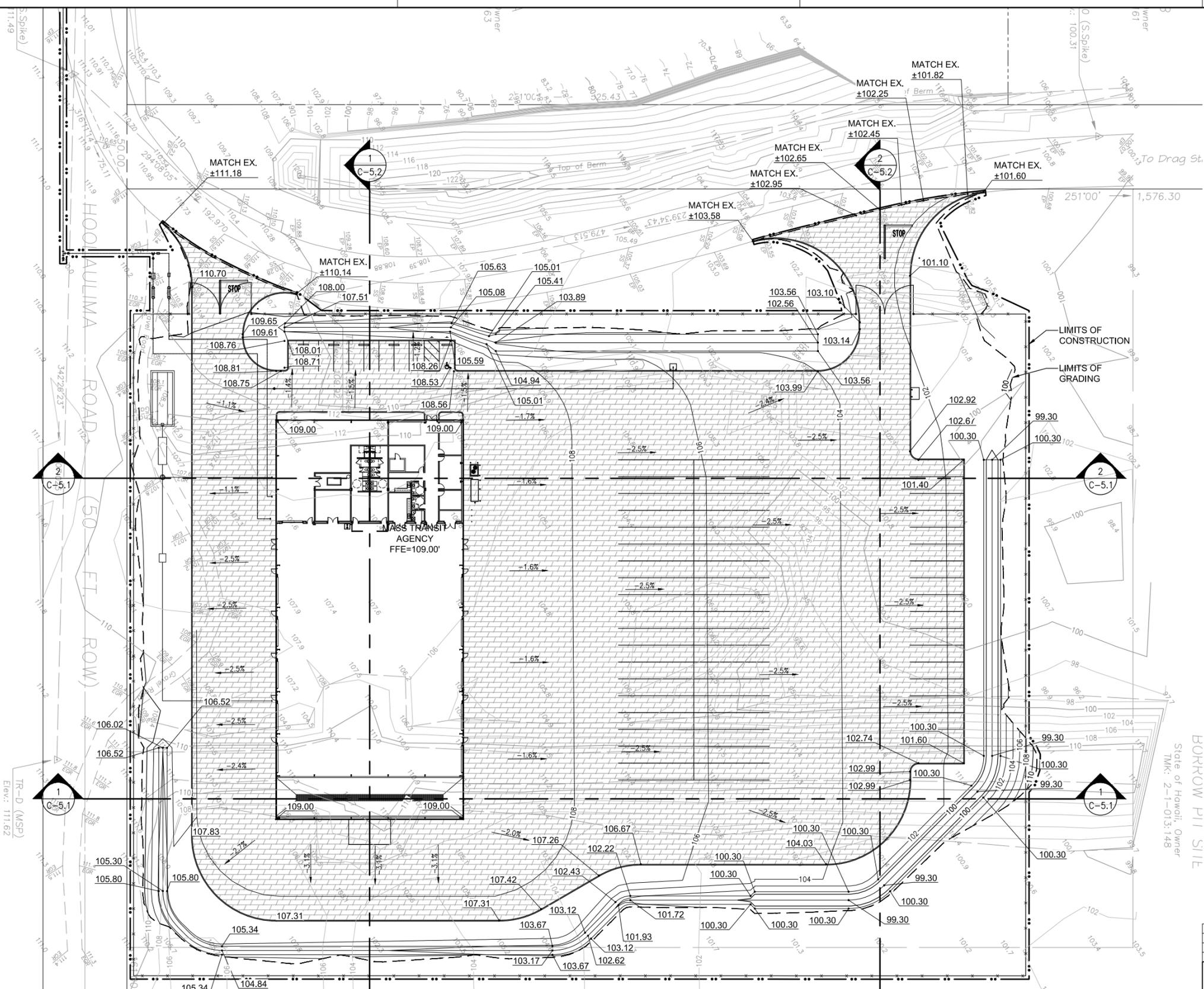
The plumbing systems will be provided for the new maintenance facility. The plumbing work includes:

- Domestic hot and cold water distribution system
- Sanitary waste and vent piping system
- Plumbing fixtures
- Trench drains around the repair bays
- Oil-Water separator
- Emergency shower/eyewash stations

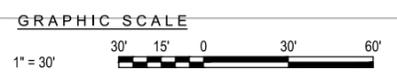
Basis of Design

- Compressed air system for tools and cleaning of equipment
 - A hose bibb at each compressed air station
- 8.1 Domestic Water Distribution: All water piping will be sized in accordance with methods outlined in UPC 2006 to limit water velocity in the pipe to 8 ft/sec unless a lower velocity is recommended by the plumbing fixture manufacturer. Domestic hot water will be supplied to all plumbing fixtures in the kitchen, showers, lavatories, break room sinks and utility sinks. A hot water re-circulation system will be provided for the domestic hot water system, and all hot water supply and return piping will be insulated. The heater will be high efficiency type electric heater since natural or propane gas is not available.
- 8.2 Sanitary waste and vent piping: A sanitary waste and vent system will serve all plumbing fixtures and equipment as required by the Uniform Plumbing Code. Sanitary waste will be piped to an exterior sewage discharge connection provided by the site utilities. Special pretreatment prior to discharging to the site sanitary sewer is required. An oil interceptor will be provided for the repair area drainage system.
- 8.3 Plumbing Fixtures: All plumbing fixtures will be of commercial grade, ultra low flow water-conserving type. ADAAG compliant fixtures will be provided as required for the disabled. Exterior hose bibs and interior hose bibs in restrooms will be provided. All hose bibbs will be provided with a vacuum breaker.
- 8.4 Piping Materials: Water piping will be type K, hard drawn copper tubing for underground installation and type L, hard drawn copper for aboveground areas. Fittings for copper tubing will be cast bronze or copper with soldered ends using tin-antimony solder since lead solder is not permitted. Drainage, waste and vent (DWV) piping will be PVC pipe and drainage fittings for underground installation, and no-hub cast iron with hubless fittings or PVC pipe with drainage fittings for aboveground installation. A gravity type oil interceptor will be provided for the maintenance area and trench drain to pre-treat the effluent.
- 8.5 Compressed Air System: 100 psi compressed air system will be provided for the tools and equipment cleaning. The system consists of rotary screw type compressors, ASME constructed air receiver tank, refrigerated air dryers and filters.

- LEGEND**
- PROPERTY CONSTRUCTION EASEMENT
 - PROPERTY LINE RIGHT OF WAY
 - LIMITS OF CONSTRUCTION
 - LIMITS OF GRADING AND DISTURBED AREA
 - 570 FINISH GRADE CONTOUR
 - DRAIN LINE
 - STRUCTURE FOOTPRINT
 - FLOW ARROW
 - DRAIN INLET



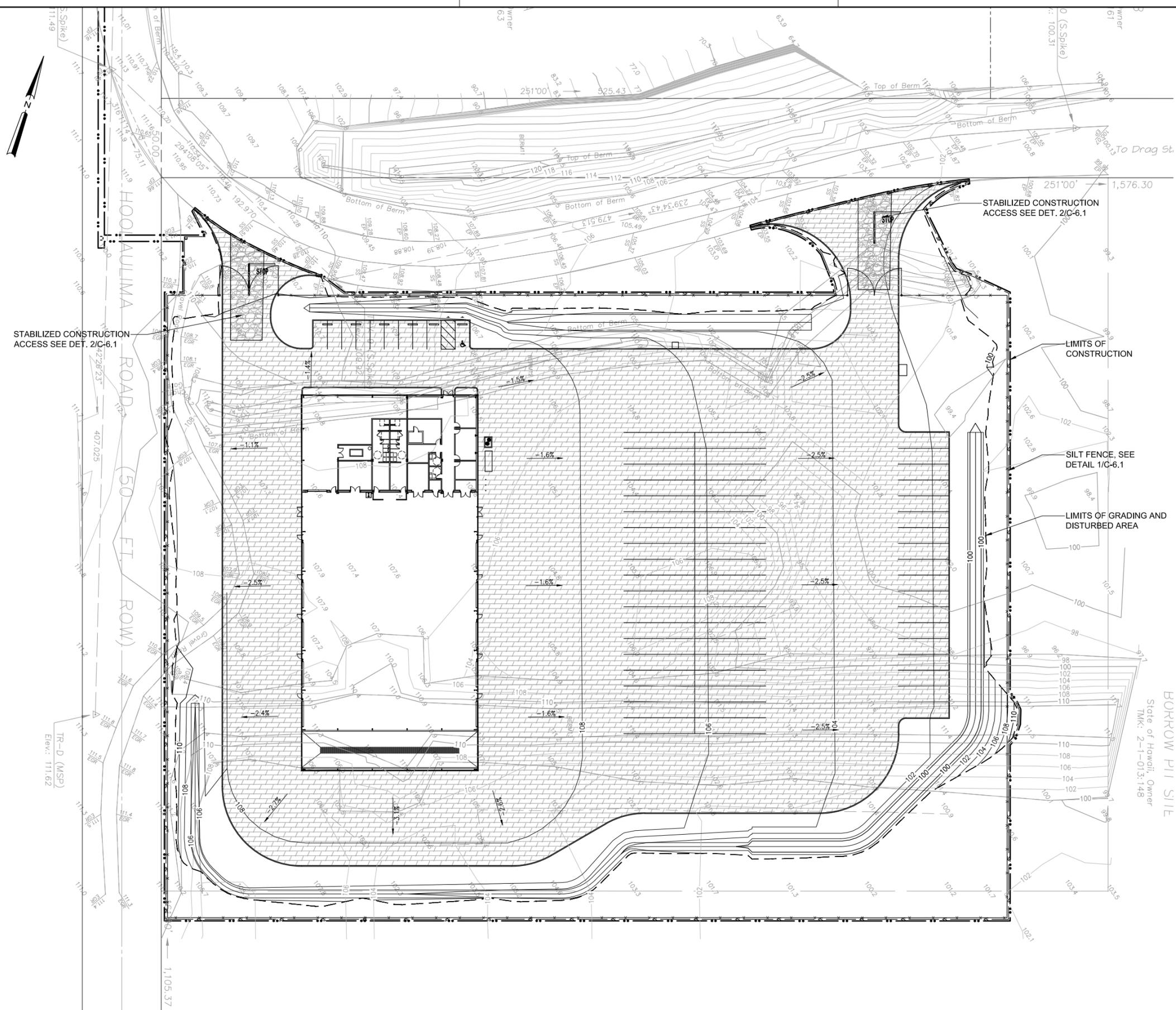
OVERALL GRADING PLAN
SCALE: 1" = 30'



REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
COUNTY OF HAWAII DEPARTMENT OF PUBLIC WORKS, BUILDING DIVISION MASS TRANSIT AGENCY BASEYARD X TMK: 2-1-013:148 SHEET TITLE: OVERALL GRADING PLAN				
REVIEWED:			DESIGN BY: CB	SHEET NO. C-4.0
			DRAWN BY: STAFF	
			CHECKED BY: CM	
DIVISION CHIEF BUILDING DIVISION DEPARTMENT OF PUBLIC WORKS			DATE 2015 FEB XX	13 OF X SHTS

LEGEND

- -- --- LIMITS OF CONSTRUCTION
- - - - - LIMITS OF GRADING AND DISTURBED AREA
- 570 FINISH GRADE CONTOUR
- SF — SF SILT FENCE SEE DETAIL 1/C-6.1
- ▭ STRUCTURE FOOTPRINT
- ▨ STABILIZED CONSTRUCTION ACCESS, SEE DETAIL 2/C-6.1
- FLOW ARROW



STABILIZED CONSTRUCTION ACCESS SEE DET. 2/C-6.1

STABILIZED CONSTRUCTION ACCESS SEE DET. 2/C-6.1

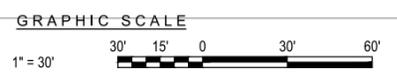
LIMITS OF CONSTRUCTION

SILT FENCE, SEE DETAIL 1/C-6.1

LIMITS OF GRADING AND DISTURBED AREA

BORROW P11 SITE
State of Hawaii, Owner
TMK: 2-1-013; 148

EROSION CONTROL PLAN
SCALE: 1" = 30'



REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
COUNTY OF HAWAII DEPARTMENT OF PUBLIC WORKS, BUILDING DIVISION MASS TRANSIT AGENCY BASEYARD X TMK: 2-1-013; 148 SHEET TITLE: EROSION CONTROL PLAN				
REVIEWED:			DESIGN BY: CB	DRAWN BY: STAFF
			CHECKED BY: CM	SHEET NO.
DIVISION CHIEF BUILDING DIVISION DEPARTMENT OF PUBLIC WORKS			DATE 2015 FEB XX	C-6.0 16 OF X SHTS