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FILE COPY
OCT 08 2018

JOBIE M. K. MASAGATANI
CHAIRMAN
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879
HONOLULU, HAWAII 96805

September 25, 2018

MEMORANDUM

TO: Scott Glenn, Director
Office of Environmental Quality Control

FROM: Jobie M. K. Masagatani, Chairman
Hawaiian Homes Commission

SUBJECT: Final Environmental Assessment and Finding of No Significant Impact for the Project Kamoleao Master Plan, Panaewa, South Hilo, Hawaii Island TMK: (3)-2-2-047:075

The Department of Hawaiian Home Lands (DHHL) hereby transmits the final environmental assessment and finding of no significant impact (FEA-FONSI) for the Project Kamoleao Master Plan situated at TMK (3)-2-2-047:075, in Panaewa, South Hilo on the island of Hawaii for publication in the next available edition of the Environmental Notice.

Enclosed is a completed OEQC Publication Form, two copies of the FEA-FONSI, 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 Andrew H. Choy, DHHL Planner, at 808-620-9279.

Enclosures

19-104

APPLICANT
PUBLICATION FORM

Project Name:	Project Kamoleao Community-Based Master Plan
Project Short Name:	Project Kamoleao
HRS §343-5 Trigger(s):	Use of State or County Lands and/or Funds
Island(s):	Hawaii
Judicial District(s):	South Hilo
TMK(s):	(3) 2-2-047:075
Permit(s)/Approval(s):	Plan Approval, DWS Water Commitment, Fire Response Plan, NPDES Permit, Individual Wastewater System Permit(s), Grading/Demolition/Drainage/Building Permits, Noise Permit, Modification of Median approval, Walkway Modifications and DCAB approval, other plan reviews including FAA Form 7460-1
Approving Agency:	Department of Hawaiian Home Lands
Contact Name, Email, Telephone, Address	Andrew Choy 91-5420 Kapolei Parkway Kapolei, HI 96707 Phone: (808) 620-9279 Fax: (808) 620-9559
Applicant:	Pana'ewa Hawaiian Home Lands Community Association / Pana'ewa Community Alliance
Contact Name, Email, Telephone, Address	William "Bill" Brown, President Pana'ewa Hawaiian Home Lands Community Association P.O. Box 4788 Hilo, HI 96720
Consultant:	PBR Hawaii & Associates, Inc.
Contact Name, Email, Telephone, Address	Ann Bouslog PBR Hawaii & Associates, Inc. 1001 Bishop Street, Suite 650 Honolulu, Hawaii 96813 Email: ProjectKamoleao@gmail.com Telephone: (808) 521-5631

Status (select one)	**Submittal Requirements**
_____ DEA-AFNSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
__X__ FEA-FONSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
____ FEA-EISPN	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the approving agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a

19-104 [redacted]

	searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
___ FEIS Acceptance Determination	The approving agency simultaneously transmits to both the OEQC and the applicant a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
____ FEIS Statutory Acceptance	The approving agency simultaneously transmits to both the OEQC and the applicant a notice that it did not make a timely determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and therefore the applicant's FEIS is deemed accepted as a matter of law.
____ Supplemental EIS Determination	The approving agency simultaneously transmits its notice to both the applicant 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 or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____,Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

Project Summary
Provide a description of the proposed action and purpose and need in 200 words or less.

Project Kamoleao is a manifestation of the Pana'ewa Homestead community's long-standing vision for the economic, social, health and cultural well-being of native Hawaiians in Pana'ewa Homestead and neighboring communities. Through a license agreement between the Pana'ewa Hawaiian Home Lands Community Association/Pana'ewa Community Alliance and the DHHL, an approximately 12.77-acre site was earmarked for community development for the benefit of the Pana'ewa Homestead community. The site is defined as Tax Map Key (3) 2-2-047:075, located on the corner of Pūainako Street and Railroad Avenue. This site is known as Kamoleao, and together with the enterprises to be undertaken there, is referred to as Project Kamoleao.

Today's Project Kamoleao adapts previous plans, with updates to better address community needs in a comprehensive master plan and EA. While planning for the entire site, Project Kamoleao focuses on Phase 1 and its Community Center and Certified Kitchen, which would cater first to Pana'ewa Homestead community members. Two commercial projects, the 'Ohu'ohu Street Shops and a Light Industrial area are also proposed in Phase 1 for economic support. Phase 2 would incorporate a Health & Wellness Complex with related street modifications, while Phase 3 conceptualizes potential further sites for future community and/or commerical developments.

19-104

[redacted]

PROJECT KAMOLEAO

COMMUNITY-BASED MASTER PLAN

FINAL ENVIRONMENTAL ASSESSMENT

FINDING OF NO SIGNIFICANT IMPACT

WAIĀKEA, SOUTH HILO, ISLAND OF HAWAIʻI

APPLICANT

PANAʻEWA HAWAIIAN HOME LANDS COMMUNITY ASSOCIATION

PANAʻEWA COMMUNITY ALLIANCE

APPROVING AGENCY

DEPARTMENT OF HAWAIIAN HOME LANDS

OCTOBER 2018

PBR HAWAII
& ASSOCIATES, INC.

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PROJECT KAMOLEAO

Community-Based Master Plan

Waiākea, South Hilo, Island of Hawai‘i

Tax Map Key (3) 2-2-047:075

Final Environmental Assessment
Finding of No Significant Impact

Applicant:

Pana‘ewa Hawaiian Home Lands Community Association / Pana‘ewa Community Alliance

Approving Agency:
Department of Hawaiian Home Lands

Prepared by:

PBR HAWAII
& ASSOCIATES, INC.

October 2018

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SUMMARY

Project Name:	Project Kamoleao
Location:	Waiākea, South Hilo, Island and County of Hawaiʻi (Appendix A: Figure 1)
Judicial District:	South Hilo
Tax Map Key (TMK):	(3) 2-2-047:075 (Appendix A: Figure 3)
Land Area:	12.77 acres (also referred to as "the Project Site")
Applicant:	Panaʻewa Hawaiian Home Lands Community Association / Panaʻewa Community Alliance (PHHLCA/PCA)
Approving Agency:	Department of Hawaiian Home Lands (DHHL)
Landowner:	Department of Hawaiian Home Lands (DHHL)
Existing Use:	Vacant land
Proposed Action:	The Project Kamoleao Community-Based Master Plan (also referred to as the "Master Plan") provides for a variety of land uses and facilities desired by PHHLCA/PCA to support community needs, such as a Community Center, Certified Kitchen, Health & Wellness Complex, office space, indoor/outdoor recreational and learning spaces *puʻuhonua* (place for rest and refuge) and other facilities to support the community facilities by generating income and commercial benefits (see Conceptual Master Plan on next page; also presented in Appendix A as Figure 5). It is anticipated that the Applicant (PHHLCA/PCA) or its future designee, may act as master developer for Project Kamoleao, obtaining key entitlements, establishing the overall land use and infrastructure plans, and engaging or partnering with third party sub-developers who would construct facilities.

Figure 5: Conceptual Master Plan, Preferred Alternative

Source: PBR HAWAII & Associates, Inc., 2018 (see also Appendix A, Figure 5 for copy at larger scale)

Current Land Use Designations:	*State Land Use:* Urban (Appendix A: Figure 7) *County General Plan LUPAG:* High Density Urban (Appendix A: Figure 9) *County Zoning*: Limited Industrial (ML-20) (Appendix A: Figure 10) *Special Management Area (SMA)*: Not in SMA (Appendix A: Figure 11)
Alternatives Considered:	Besides the proposed action, three alternatives were considered: 1. No action 2. Alternative #2: A 1.5-acre "KLCRC" plan as previously developed between 2007 and 2009 (Section 6.2)

3. Alternative #3: "Draft Conceptual Plan B" (2017), which proposed key elements in four buildings with direct street access (Section 6.3)

Potential Impacts and Mitigation Measures:

Project Kamoleao is a manifestation of the Pana'ewa Homestead community's vision for its future, with emphasis on supporting the economic, social, health and cultural well-being of native Hawaiians in the community and residents of its neighboring areas. While the Project is not expected to generate any significant impacts, any potential adverse impacts would be mitigated as follows:

(1) Design measures– as applicable, the Applicant's design plans and/or agreements it executes with third parties will be directed to address the following:

a. 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, as appropriate.

b. To mitigate *erosion and sedimentation* impacts during construction, grading plans will specify some or all of the following best management practices:

i. Early construction of drainage control features;

ii. Construction of temporary sediment basins to trap silt;

iii. Use of temporary berms and cut-off ditches where needed; and

iv. Use of temporary silt fences or straw bale barriers to trap silt.

c. To mitigate potential impact to seabirds, including the *Hawaiian petrel, Band-rumped storm petral* and the threatened *Newell's shearwater* the design will specify shielded outdoor lights in conformance with County Code outdoor lighting requirements (Chapter 14, Article 9, HCC).

d. To mitigate potential impacts to the endangered *Hawaiian hoary bat*, barbed wire will not be used for fencing.

e. The *Individual Wastewater System* permit approved by DOH will ensure the septic tank and leach field system has adequate capacity.

Potential Impacts and Mitigation Measures (continued):

(2) Construction measures – as applicable, the Applicant's construction documents and/or development agreements it executes with third parties will specify that construction documents should include the following mitigation measures:

a. To mitigate construction *noise and dust*: standard measures such as ensuring mufflers are in proper operating condition, limiting construction hours, and wetting down exposed surfaces.

b. To mitigate potential impact to the endangered *Hawaiian hawk*: requirements to (1) retain a qualified ornithologist to check for nests if trees must be grubbed between March 1 and September 30; (2) prevent clearing of vegetation or construction activities within 1,600 feet of any active Hawaiian hawk nest during the breeding season until the young have fledged; and (3) prevent trimming or cutting of any trees containing a hawk nest.

c. To mitigate potential impact to seabirds*:* nighttime construction not be permitted between September 15 and December 15*.*

d. To mitigate potential impact to the endangered *Hawaiian hoary bat*: no removal or trimming of woody plants greater than 15 feet in height during the bats' breeding season (June 1 to September 15).

e. To mitigate against potential spread of *Rapid ʻŌhiʻa Death*, construction documents or development agreements will specify that a search for infected *ʻōhiʻa* trees should be conducted within two weeks prior to any tree cutting, and guidance sought from the Pacific Islands Fish and Wildlife Office of the U.S. Fish and Wildlife Service if any such are determined.

f. 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

Potential Impacts and Mitigation Measures (continued):	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.
Required Permits & Approvals	Site Drainage Plan (DPW); Plan Approval (Department of Planning); DWS Water Commitment approval (DWS); Fire Response Plan approval (Fire Department); National Pollutant Discharge Elimination System (NPDES) Permit (DOH, Clean Water Branch); Individual Wastewater System Permit (DOH); Grading Permit (DPW); Demolition (if applicable) and Building Permits (DPW); Noise Permit (DOH); Modification of Median approval (DPW); Walkway modification and building plan approvals (DOH, Disability and Communication Access Board).[1]
Determination:	Finding of No Significant Impact (FONSI)

[1] Although not a permit per se, due to the Project's location within five miles of an airport, the State DOT Airports Division (DOT-A) will require that Federal Aviation Administration (FAA) Form 7460-1 be submitted for structures more than 200 feet above ground level. Additionally, the Applicant acknowledges the guidance presented in the State of Hawaii Office of Planning Technical Assistance Memorandum 2016-1, and FAA Advisory Circular 150/5200-33B.

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LIST OF ACRONYMS

AA	Archaeological Assessment
AIS	Archeological inventory survey
ALISH	Agricultural Lands of Importance to the State of Hawaiʻi
BLNR	Board of Land and Natural Resources
BMP	Best Management Practices
CIA	Cultural Impact Assessment
CDP	Census Designated Place
CSH	Cultural Surveys Hawaii, Inc.
CZM	Coastal Zone Management
DBEDT	Department of Business, Economic Development, and Tourism, State of Hawaiʻi
DHHL	Department of Hawaiian Home Lands, State of Hawaiʻi
DLNR	Department of Land and Natural Resources, State of Hawaiʻi
DOE	Department of Education, State of Hawaiʻi
DOH	Department of Health, State of Hawaiʻi
DOT	Department of Transportation, State of Hawaiʻi
DOT-A	Department of Transportation – Airports Division, State of Hawaiʻi
DPW	Department of Public Works, County of Hawaiʻi
DWS	Department of Water Supply, County of Hawaiʻi
EA	Environmental Assessment
EO	Executive Order
FAA	Federal Aviation Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
gpd	Gallons per day
HAR	Hawaiʻi Administrative Rules
HCC	Hawaiʻi County Code
HDOA	State of Hawaiʻi Department of Agriculture
HELCO	Hawaiʻi Electric Light Company, Inc.
HMC	Hilo Medical Center
HRS	Hawaiʻi Revised Statutes
ITO	Hilo International Airport
IWS	Individual Wastewater System
LID	Low Impact Development
LSB	Land Study Bureau, University of Hawaiʻi
LUC	State of Hawaiʻi Land Use Commission
LUPAG	County of Hawaiʻi General Plan Land Use Pattern Allocation Guide
MGD	Million gallons per day

mph	Miles per hour
MUTCD	Manual of Uniform Traffic Control Devices
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
OP	State of Hawaiʻi, Office of Planning
PHHLCA/ PCA	Panaʻewa Hawaiian Home Lands Community Association / Panaʻewa Community Alliance
SHPD	State of Hawaiʻi Historic Preservation Division
SMA	Special Management Area
TA	Transportation Assessment
TMK	Tax map key
TSS	Total suspended solids
UHERO	University of Hawaiʻi Economic Research Organization
UIC	Underground Injection Control
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

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1 INTRODUCTION

Through a license agreement between the Panaʻewa Hawaiian Home Lands Community Association/Panaʻewa Community Alliance (PHHLCA/PCA) and the Department of Hawaiian Home Lands (DHHL), an approximately 12.77-acre site in Panaʻewa has been earmarked for community development and use for the benefit of the Panaʻewa Homestead community. The site is defined as Tax Map Key (3) 2-2-047:075 and is located on the corner of Pūainako Street and Railroad Avenue. This site is known as Kamoleao, and together with the enterprises to be undertaken there, the community refers to it as Project Kamoleao. The use of State or County land or funds triggers the requirement to assess the environmental impacts of the proposed action pursuant to Hawaiʻi Revised Statutes (HRS) Chapter 343.

1.1 LANDOWNER

The landowner is DHHL.

1.2 APPLICANT

PHHLCA/PCA is the Applicant.

Contact: Panaʻewa Hawaiian Home Lands Community Association
ATTN: William "Bill" Brown, President
P.O. Box 4788
Hilo, HI 96720

1.3 APPROVING AGENCY

DHHL will determine the significance of impacts pursuant to HRS Chapter 343-5(b).

Contact: Department of Hawaiian Home Lands
State of Hawaiʻi
ATTN: Andrew Choy
91-5420 Kapolei Parkway
Kapolei, HI 96707
Phone: (808) 620-9279
Fax: (808) 620-9559

1.4 ENVIRONMENTAL CONSULTANT

PBR HAWAII is the environmental planning consultant.

Contact: PBR HAWAII & Associates, Inc.
ATTN: Ann Bouslog
1001 Bishop Street, Suite 650
Honolulu, HI 96813
Telephone: (808) 521-5631

1.5 COMPLIANCE WITH STATE OF HAWAIʻI ENVIRONMENTAL LAW

Preparation of an Environmental Assessment (EA) is being undertaken to meet the applicable requirements of Chapter 343, Hawaiʻi Revised Statutes (HRS) and Title 11, Chapter 200, Hawaiʻi Administrative Rules (HAR). Section 343-5, HRS establishes nine "triggers" that require the completion of an EA. The Project involves the use of State or County lands and/or funds, which is one of the triggers listed under §343-5(a)(1); therefore, this EA has been prepared to consider the impacts of the proposed action on the human and natural environment.

1.6 STUDIES CONTRIBUTING TO THIS EA

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

- Preliminary Civil Engineering Report
- Transportation Assessment
- Archeological Assessment

2 PROJECT DESCRIPTION

2.1 BACKGROUND INFORMATION

Location and Property Description

Project Kamoleao is located towards the northern end of Panaʻewa Homesteads, Waiākea *ahupuaʻa*, South Hilo District, Island and County of Hawaiʻi (Appendix A: Figure 1). As shown on Appendix A: Figure 2, the subject site is comprised of 12.77 acres identified as Tax Map Key (3) 2-2-047:075 ("the Project Site" or "Kamoleao").

Existing Land Use Designations

Current land use designations for Kamoleao are:

- *State Land Use*: Urban (Appendix A: Figure 7);
- *County General Plan LUPAG*: High Density Urban (Appendix A: Figure 9);
- *County Zoning*: Limited Industrial (ML-20) (Appendix A: Figure 10);
- *Special Management Area (SMA)*: Not in SMA (Appendix A: Figure 11).

Surrounding Land Uses

The Project Site is bordered by ʻOhuʻohu Street to the west, Pūainako to the south, Railroad Avenue to the east, and The Home Depot and auxiliary parking for Prince Kūhiō Mall to the north (Appendix A: Figure 2). The Panaʻewa Homestead lots are located further south and east across from Pūainako Street. The Panaʻewa Commercial/Industrial lots surround Kamoleao to the west, north and further east. Prince Kūhiō Mall is the largest commercial leasehold interest in the Panaʻewa Commercial/Industrial area, occupying 36 acres and representing the largest indoor shopping complex on Hawaiʻi Island. Waiākea Center is on a 14-acre lot adjacent to the Prince Kūhiō Mall and includes Wal-Mart, McDonald's, Ross Dress for Less, Office Max and other retail shops. Target and Safeway are located immediately north of Home Depot along Makaʻala Street. Several car dealerships and light industrial tenants are located further west of Kamoleao, across Kanoelehua Avenue, at Kanoelehua Industrial Park.

Project Planning History

Community use in the Kamoleao area has been contemplated since 1986, when DHHL commissioned a master plan for 160 acres in the Panaʻewa Homestead tracts. A ±32-acre section of that land, referred to as the "Kamoleao Block" was planned for community use.

In 1994, a master plan for the (then ±25 acre) Kamoleao site was prepared. Services such as a one-stop Hawaiian services office complex, childcare center, amphitheater, guest accommodations, and a 10,000-square foot community hall were proposed to be offered. The 1994 master plan also identified a Hawaiian cultural preservation area and rainforest preserve.

In the same year, PHHLCA/PCA created Haola Inc. (Haola), a 501(c) 3 non-profit organization to receive and disburse community benefit funds negotiated with DHHL general lessees. The next year, in March 1995, DHHL granted PHHLCA/PCA and Haola a 30-year "License Agreement No. 365" for the development and management of a community center and supporting facilities at Kamoleao.

As part of a subsequent 2005 planning process, Haola invited the community to share their views on what role Kamoleao should play within the community. Haola's recommendations for Kamoleao shifted away from rainforest restoration to enhancing the quality of life of native Hawaiians. The community center's activities would focus on providing health care services, educational assistance, and social opportunities for youth. Kamoleao would also serve as a venue for Panaʻewa's farming community to produce, process, and sell their value-added products. A marketplace proposed to be located on ʻOhuʻohu Street allowed for a total of 88 vendor stalls and a stand-alone restroom facility within a 12,520 square foot area.

The 2005 Haola Plan was updated in 2007, at which time it was determined that the overall cost was prohibitive for the entities involved. The outcome of this effort was a vision and funding for a Phase 1 Plan on a 1.5-acre portion of site, the Kamoleao Laulima Community Resource Center (KLCRC), which was to be developed in partnership with Hawaiʻi Community College.

In 2009, a site plan was prepared for KLCRC, including a 10,500 square foot building with a commercial kitchen, classroom, and support facilities (i.e. parking, septic system) on about 0.5-acres, with the balance of approximately 1-acre proposed for community gardens. In 2010, a Final Environmental Assessment (FEA) for KLCRC was completed by PHHLCA/PCA and accepted by the Hawaiian Homes Commission with a Finding of No Significant Impact (FONSI). However, it was subsequently decided not to pursue the 1.5-acre plan, as described in the context of the 2016 Panaʻewa Regional Plan Update, below.

In March 2016, DHHL convened meetings for the Panaʻewa Regional Plan Update. During this planning process, PHHLCA/PCA considered two options regarding the implementation of the Phase 1 KLCRC development program described in the 2010 FEA. The first option was to implement the development described in the January 2010 FEA. Since a Master Plan to set the Phase 1 KLCRC plan within the context of the overall build-out of the 12.77-acre site was not completed, there were concerns that the Phase 1 development could lead to resource and cost inefficiencies. There was also concern about incremental development that might not integrate well in terms of overall function, access, and programming, and infrastructure development that might not anticipate the needs of subsequent phase(s). As a result, it was decided to pursue Option 2, which involved reassessing Phase 1 within the context of the entire site, understanding that characteristics of the Phase 1 development described in the January 2010 FEA could be altered. If so, a new master plan and EA would need to be developed. Therefore, it was decided that a new master plan and EA would be completed for the entire 12.77-acre parcel, with a focus on Phase 1. That is the genesis of the current EA.

2.2 PURPOSE AND NEED

Vision

The community vision for Kamoleao was born in 1994 under the guidance of kūpuna from the Panaʻewa and Keaukaha Homestead communities. The literal definition of Kamoleao is young shoots of the *kalo* (*mole*) nurtured by the bright sun (*ao*), a name that represents "growing from the foundation of the ancestors."

Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa.

A letter of vision and support for Project Kamoleao from Mr. Louis Hao, Supervisor of DHHL's East Hawaii District Office, Executive Director of Hui Mālama Ola Nā ʻŌiwi, a Hilo-based nonprofit organization with a mission of supporting the health of the people of Hawai'i, and a long-time supporter of the community's goals for Kamoleao, is attached as Appendix H.

Goals

The community set forth initial goals at project inception and refined these as the planning for Project Kamoleao evolved. The following goals seek to address the Panaʻewa Homestead community's needs and desires now and in the future, and were endorsed by PHHLCA/PCA.

(1) To support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by:

- Developing a gathering center and place of pride and identity for the community,
- Providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities,
- Enhancing traditional cultural vibrancy as well as modern learning opportunities, and
- Offering a *puʻuhonua* (place of refuge), and a place where traditional healing may be practiced.

(2) To address these goals in an environmentally and financially sustainable manner.

(3) To extend these values, and future choices, to seven generations.

2.3 PROJECT DESCRIPTION

A land use and preliminary building plan map, referred to herein as the "Conceptual Plan" shows the relationships and locations of the planned land uses (Appendix A: Figure 5). Prior to development, DHHL must declare the zoning for Kamoleao to the County of Hawaiʻi. The recommended zoning is Industrial-Commercial Mixed District (MCX). The Conceptual Plan includes the land uses and facilities described below.

Community Center

The Community Center is proposed as an approximately 11,000 square foot facility offering a great hall/*hālau* or multipurpose room, and space(s) for classes, special events, an office, and restrooms. It would incorporate indoor and gathering places that could be used jointly or separately. The indoor portion of the facility could adjoin a covered, open-air area for a combined space that could accommodate up to 1,500 people. It is intended that Panaʻewa Homestead community members would have preferred access to the Community Center for hosting social, community and civic gatherings such as large family parties and events, as well as classes and recreational activities; however, the facility would also be available for use when available by the broader community.

A billboard sign could be located at the corner of ʻOhuʻohu Street and Pūainako Street to create an entry feature and place for announcements of special events or opportunities coming up at the Community Center and in the greater Panaʻewa area.

Certified Kitchens

An approximately 2,200 square foot facility adjoining the Community Center is planned as a Certified Kitchen to support events at the Community Center. As shown plan, it is sized to accommodate six additional "incubator" commercial kitchen facilities for use by individuals or area businesses, with preference to Panaʻewa Homestead community members. The Certified Kitchen would be adjacent to complementary outdoor uses such as a certified *imu* (underground oven), certified smoker, and garden beds. The garden beds would also serve as an outdoor classroom and laboratory to supplement nutrition programs and cooking demonstrations that may occur at the Community Center or Certified Kitchen.

Health & Wellness Complex

A central ±2.2-acre site is proposed to be developed as a Health & Wellness Complex and is envisioned as an approximately 22,650 gross square foot, single-story building. This facility could house native Hawaiian as well as western medical, healing and wellness providers along with social services and native Hawaiian agency office headquarters.

Understanding that the Health & Wellness Complex may not be funded and developed until a future phase of Kamoleao, an interim plan might be to provide room(s) in the Community Center or at the ʻOhuʻohu Street Shops to accommodate some of the desired health and wellness services.

Open Space & Puʻuhonua

Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *puʻuhonua* and healing for Panaʻewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. These improvements would be dependent on

financing. Improvements in these areas could include development and/or restoration of certain trails to standards that are Americans with Disabilities Act (ADA)-compliant, limited initial clearing and removal of invasive species and planting of some native species, and installation of initial temporary irrigation systems.

A *hula pā* and lawn is proposed to serve as a more formal outdoor performance and ceremony area that could feature a raised grassed performance platform. The area surrounding the *hula pā* is envisioned to be framed by clusters of small to medium canopy trees and boulders.

ʻOhuʻohu Street Shops

The ʻOhuʻohu Street Shops, envisioned as a small retail complex with some five retail/service bays in a 9,600 square building, would be located in a ±0.7 acre area facing ʻOhuʻohu Street. This site would share street access with the Community Center and Certified Kitchen, but have its own dedicated parking. This facility is seen as an opportunity to generate operating income to support more community-serving facilities. Like the Community Center, the ʻOhuʻohu Street Shops might also offer a near-term venue for health and wellness related service providers, as tenants, before opening of the Health & Wellness Complex.

Light Industrial

Kamoleao's frontage on Railroad Avenue and alongside the service entrance to The Home Depot to its north suggests another opportunity for income-generating activities in an area that can be visually and functionally shielded from the rest of Project Kamoleao. Landscaping and parking along the southern edge of the proposed ±1.4-acre site would provide further buffer from the *puʻuhonua* and natural areas of Kamoleao. The Master Plan envisions this area as self-storage or warehouse facilities, reflecting its oblong shape. Based on analysis of parking, setback and access requirements, the potential gross building area on this site is estimated at about 27,950 square feet.

Future Community and/or Commercial Development

The Conceptual Plan identifies two future sites for potential additional community-serving and/or income-producing uses and offers such uses to be defined by others in the future. The two sites are a ±1.4-acre area at the corner of Railroad Avenue and Pūainako Street and a ±0.6-acre site that could be accessed from ʻOhuʻohu Street.

2.4 DEVELOPMENT TIMETABLE

PHHLCA/PCA and the Panaʻewa Homestead community have worked for many years to craft a vision and workable plan for a community center and those efforts have now culminated in this Master Plan for Project Kamoleao. Understanding that it serves the community's interests and desires to accelerate the realization of at least a Phase 1 of the master plan responsibly and efficiently, a Phasing Plan was developed based on the necessary next steps to implementation.

While the ability to raise necessary funds, establish agreements with third parties and to achieve other critical precursors to development on a timely basis cannot be assured, the timeline presented is considered reasonable based on the information currently available.

Conceptual plans for the key developments are organized in phases as shown on Appendix A: Figure 6 and described below. As used herein, "core" facilities are those that address the community's goals directly and are therefore mission-serving, while "commercial" facilities are those that provide economic support to the core facilities. Some facilities may serve both core and commercial purposes.

Phase 1: Community Center, Certified Kitchen, and Commercial

Initial efforts for Project Kamoleao are planned to address several core goals, and seek economic support for those goals in Phase 1. Phase 1 is separated into two sub-phases as follows:

- **Phase 1A: Community Center and Certified Kitchen (Core)** – Project Kamoleao is proposed to start with two key facilities targeted for Panaʻewa Homestead community member needs, but facilities that can also serve general area residents as available. These are the Community Center and Certified Kitchen.

  Phase 1A is planned to be accessed from a new entryway on ʻOhuʻohu Street, and is assumed to be developed and/or managed by PHHLCA/PCA[2]. The ±2.8-acre area is also envisioned to include a certified *imu* and smoker, vegetable garden beds, walking paths, a *hula pā*, and necessary parking and other infrastructure.

- **Phase 1B: Retail and Industrial (Commercial)** – Simultaneously or as soon as acceptable agreements with third party developer/owners may be established, two commercial projects are proposed in Phase 1, the ʻOhuʻohu Street Shops and Light Industrial.

Phase 2: Health & Wellness Complex

A central, ±2.2-acre portion of Kamoleao is proposed to be developed as a Health & Wellness Complex and is dependent on necessary funding and third-party development agreements. This key area is targeted for Phase 2 because it will require modifications on Pūainako Street, a public right-of-way owned by DHHL. Such modifications are subject to review by Project Kamoleao's traffic consultant and discussion with the County but are assumed to include altering the existing median strip to permit left and right turn entries to and exits from Kamoleao. The preliminary business plan envisions that certain providers and/or agencies (for instance, DHHL) would be offered preferential tenancy terms.

[2] References to PHHLCA/PCA in this section may indicate either one of these entities, or a new federally tax-exempt entity to be created or designated for purposes of developing and/or administering Project Kamoleao.

Phase 3: Future Community and/or Commercial Developments

The Conceptual Plan identifies two future sites for potential additional community-serving and/or income-producing uses and offers such uses to be defined by others in the future.

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

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

3.1 CLIMATE

Description and Discussion

Hawaiʻi 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 Hawaiʻi Data Book).

According to *The Rainfall Atlas of Hawaiʻi*, Kamoleao receives an average annual rainfall of approximately 132 inches (Giambelluca, et al., 2012). Hilo's windward rainfall pattern is due to the orographic influences of the mountains and trade winds.

Anthropogenic climate change may drive a number of environmental shifts in Hawaiʻi over the coming century, in particular changes in temperature, weather patterns, and sea level. Over the past century, Hawaiʻi has experienced an increase in air and ocean temperatures, a decrease in average precipitation, and sea level rise (U.S. Environmental Protection Agency, 2016). The sustained input of greenhouse gases is predicted to result in continued air and ocean warming, shifting precipitation patterns (amount and distribution), accelerating sea level rise, ocean acidification due to increased carbon dioxide, and exacerbated weather events (Hawaiʻi Conservation Alliance, 2014).

Potential Impacts and Mitigation Measures

It is anticipated that Project Kamoleao will cause no significant impacts to the climate. Built facilities on Kamoleao will be designed to shelter proposed uses from Hilo's high rainfall. The design of Project Kamoleao facilities will also likely include facilities for the collection of rainwater.

The Project Site is not anticipated to be impacted directly by sea level rise and changes to the marine environment, since it is located away from the coast at a significant elevation (Appendix A: Figure 1) and away from any special flood hazard zone (Appendix A: Figure 15). However,

altered storm activity and rainfall may occur in the region and should be considered. The U.S. Army Corps of Engineers (USACE) has developed strategies for adaptation and resilience for changes in sea level, which can be applied to projects based on specific types of risks anticipated from changes in sea level (USACE, 2014).

To address a potential decrease in rainfall, water efficiency and/or recycling measures may be considered which would help to mitigate impacts in the event of a shift toward undependable or irregular rainfall patterns, such as collecting and storing rainwater water for landscape irrigation.

In the long term, mitigation measures to address exacerbated storms could include reinforcing and/or relocating critical infrastructure or utilities, as feasible, and adhering to updated building codes and/or County, State, and Federal guidance. It is important to note that the 3.7-acre *pu'uhonua* and other open space in Project Kamoleao will contribute to climate change resilience through acceptance of storm water, carbon storage, and other benefits. Additionally, as an intended focal point for native Hawaiian community gatherings, educational success, economic self-sufficiency, *pu'uhonua*, and cultural regeneration, Project Kamoleao itself may stimulate awareness of the impacts of climate change on communities, and of native Hawaiian traditional knowledge and practices relevant to climate change.

B solutions to mitigate climate change on a global scale are beyond the scope of the Project and may best be handled through national and global policy changes to mitigate and adapt to climate change.

3.2 GEOLOGY AND TOPOGRAPHY

Description and Discussion

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. The entire island of Hawai'i is subject to geologic hazards, especially lava flows and earthquakes. The volcanic hazard zone map for Hawai'i Island divides the island into zones ranked from 1 through 9, with 1 being the area of greatest hazard and 9 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, Kamoleao is within Zone 3. Zone 3 areas have had 1 to 5 percent of their land area covered by lava or ash flows since the year 1800, but are at lower risk than Zone 2 areas because of their greater distance from recently active vents and/or because the local topography makes it less likely they will be covered by future flows.

Waiākea is located on the northeastern flank of Mauna Loa, the summit of which rises approximately 13,679-feet above mean sea level. Although Kamoleao is relatively flat and has an average slope of less than 5 percent, the site exhibits many bumps and dips with elevations ranging from 82 to 98 feet above mean sea level.

Potential Impacts and Mitigation Measures

Because Kamoleao lies outside of Volcanic Hazard Zones 1 and 2, it is eligible for Federal funding as available and applicable to the proposed development. To mitigate the potential hazard from earthquakes, any structural elements will need to be designed and built in accordance with applicable health and safety standards and practices. Design criteria to address the potential for damage due to geologic or volcanic events will be incorporated.

A geotechnical investigation and report is highly recommended prior to design and siting of any structures, so that lava tubes or other unique geological features may be identified and appropriately addressed in the building and infrastructure design processes. The geotechnical investigation should include:

- Test borings at proposed building locations;
- Percolation testing at any proposed leach field locations;
- Footing, foundation and retaining wall recommendations;
- Recommendations on suitability of onsite material for backfill; and
- Flexible and rigid pavement design recommendations.

With its relatively flat topography, the entire Site is considered developable. Any grading will be conducted in conformance with the Hawaiʻi County Grading Ordinance, and with 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 grassed or landscaped before commencement of grading the next phase, in compliance with Chapter 10 (Erosion and Sedimentation Control) of the Hawaiʻi County Code (HCC).

3.3 SOILS

Description and Discussion

Three soil suitability studies prepared for Hawaiʻi 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 Hawaiʻi Land Study Bureau (LSB) Detailed Land Classification; and 3) the State Department of Agriculture's Agricultural Lands of Importance to the State of Hawaiʻi (ALISH) system.

- ***NRCS Soil Survey -*** The soil at Kamoleao is classified by the NRCS as Papai extremely stony muck (rPAE) (Appendix A: Figure 12), which have characteristics such as:
    - well-drained, thin, extremely stony organic soil developed over fragmented *ʻaʻā* lava;

  - rapidly permeable with moderate runoff and slight erosion hazard; and
  - a capability classification IV, which typically includes soils used for pasture and woodlands.

- ***LSB Detailed Land Classification*** **-** The University of Hawaiʻi LSB Detailed Land Classification, Island of Hawaiʻi classifies soils based on a productivity rating with A representing the highest productivity and E the lowest. The soils of Kamoleao are not rated under the LSB Detailed Land Classification (Appendix A: Figure 13).
- ***Agricultural Lands of Importance to the State of Hawaiʻi*** **-** The ALISH system classifies agricultural lands as Prime, Unique, or Other Important Agricultural Land. The soils of Kamoleao are classified as "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 (Appendix A: Figure 14).

Potential Impacts and Mitigation Measures

Potential impacts and possible mitigation measures include:

- Agricultural Lands. Given Kamoleao's low agricultural productivity potential and the availability of more suitable lands elsewhere, Kamoleao is not considered suitable for agricultural activity. Therefore, construction of Project Kamoleao will not reduce the inventory of productive lands available for agricultural uses.
- Construction Impacts. Short-term impacts may include the potential for soil erosion and the generation of dust during grading and construction. Any grading will be in conformance with the Hawaiʻi County Grading Ordinance, and recommendations of the geotechnical engineer. Measures to control erosion during Kamoleao 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.

In summary, 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 Kamoleao.

3.4 HYDROLOGY AND DRAINAGE

Description and Discussion

According to *The Rain Atlas of Hawaiʻi*, Kamoleao receives an average annual rainfall of 150 inches (Giambelluca, et al., 2012). There are no perennial streams or surface water bodies and no known areas of local (non-stream related) flooding. According to the Federal Emergency Management Agency's Flood Insurance Rate Map (Appendix A: Figure 15), Kamoleao is in Flood Zone X, or an area determined to be outside the 0.2 percent annual chance (500-year) floodplain. No base flood depths are shown within this zone. Hawaiʻi County is a participant in the National Flood Insurance Program (NFIP) that establishes building requirements in areas subject to flood. However, due to its location in Flood Zone X, Kamoleao is not subject to such NFIP minimum standards; moreover, the County of Hawaiʻi has not adopted any other floodplain standards that would apply to projects developed in this zone.

There are no existing drainage structures such as drywells located at Kamoleao. Four catch basins are located in Pūainako Street and one catch basin is located in ʻOhuʻohu Street. These catch basins capture runoff generated from the paved roadways.

There are no observable surface waters located on or in the immediate vicinity of Kamoleao. The Project Site is approximately 1.9 miles inland from the nearest coastline. Nearshore marine waters off the coast of Hilo Bay are rated as class "A" by the State DOH (State of Hawaiʻi, 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

Because Kamoleao lies outside of the floodplain, no specific flood mitigation measures are warranted. Location outside of the floodplain also avoids restrictive measures when applying for

Federal funding as may be available and applicable to the proposed development.

Relevant comments received from the State of Hawaiʻi Department of Land and Natural Resources (DLNR), Engineering Division and Commission on Water Resource Management (CWRM) during pre-Assessment consultation concerned:

- Use of BMPs for stormwater management to minimize impact on area hydrology.
- The Project's projected water demands, both potable and non-potable, identification of proposed water source(s), needed permits or approvals and potential impacts on water resources.
- Consistency of the project with the Hawaiʻi Water Plan in the DEA; coordinate with County DWS and State DLNR Engineering to incorporate water needs into their plans.
- Use of water efficient fixtures and practices to reduce increased demands on freshwater resources.
- Utilize alterative water sources wherever practicable.
- Landscape irrigation conservation BMPs endorsed by the Landscape Industry Council of Hawaiʻi.

Construction of Project Kamoleao will result in an increase in the amount of impervious surface on Kamoleao. The Project Kamoleao storm drainage system, utilizing drywells, retention ponds, or other storm drainage structures will be designed to comply with the latest County of *Storm Drainage Standards and Standard Details for Public Works Construction*. Project Kamoleao will be designed to maintain post-development peak runoff rate and average volume at levels that are similar to pre-development levels, as per County standards.

All NPDES permit requirements will be implemented. In accordance with these requirements, Project Kamoleao will utilize several best management practice (BMP) 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 new development runoff management, and such measures are reflected in the State Office of Planning (OP), Coastal Zone Management's publication, Hawaiʻi Watershed Guidance.

OP has also 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 guide can be applied to water runoff strategies to prevent damage to coastal ecosystems. Based on Kamoleao 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.

Project Kamoleao does not involve work in, over, or under waters of the United States and thus would not require permits issued by the U.S. Army Corps of Engineers. However, pursuant to Federal Water Pollution Control Act, (commonly known as the "Clean Water Act"), Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) from the State of Hawaiʻi Department of Health, Clean Water Branch, will be required if it is determined that Project Kamoleao may result in any discharge into navigable waters or as otherwise triggered. Direct discharges of storm water runoff into marine waters are not expected to occur due to: 1) the implementation of BMPs, to reduce airborne dust and waterborne silt during construction; and 2) the distance from the shoreline. Any discharges related to the construction and operation of Project Kamoleao will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

Project Kamoleao is not anticipated to result in direct discharge of storm water runoff into marine waters due to its inland location. Similarly, due to the site's distance from existing streams, it is highly unlikely that storm runoff from Kamoleao will impact surface water resources.

3.5 NATURAL HAZARDS

Hawaiʻi Island is susceptible to potential natural hazards, such as flooding, tsunamis, hurricanes, earthquakes, volcanic hazards, and wildfires. This section provides an analysis of Kamoleao's vulnerability to such hazards.

The State of Hawaiʻi Department of Defense, Office of Civil Defense operates a system of civil defense sirens throughout the State to alert the public of natural and man-caused emergencies , particularly tsunamis and hurricanes. The closest siren to Kamoleao is the South Hilo Baseyard Siren (HA106) located approximately 0.7 miles to the northwest of Kamoleao.

Flooding

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, Kamoleao 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 (Appendix A: Figure 15). No base flood depths are shown within this zone. Hawaiʻi County is a participant in the National Flood Insurance Program (NFIP) that establishes building requirements in areas subject to flood. However, due to its location in Flood Zone X, Kamoleao is not subject to such NFIP minimum standards; moreover, the County of Hawaiʻi has not adopted any other floodplain standards that would apply to projects developed in this zone.

Tsunamis

Twenty-five of the tsunamis recorded in Hawaiʻi since 1812 have had an adverse impact on the Island of Hawaiʻi; seven caused major damage, and three were generated locally. The most recent tsunami to impact Hawaiʻi Island occurred on March 11, 2011, causing property damage at several locations on the Kona coast. Kamoleao is well outside of the tsunami evacuation zone (Appendix A: Figure 16).

Hurricanes

Since 1980, two hurricanes have had a devastating effect on Hawaiʻi, particularly on the islands of Oʻahu and Kauaʻi. These were Hurricane ʻIwa in 1982 and Hurricane ʻIniki in 1992. Although it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely. Several studies sponsored by the National Aeronautics and Space Administration (NASA) Office of Earth Science have developed new models for estimating the probability of hurricanes in the Pacific. While the Island of Hawaiʻi has not been hit by a hurricane since recordation began in 1950, it was threatened by Hurricane Flossie in 2007 and three times in 2016 (hurricanes Darby, Madeline and Lester) and models indicate that the island has a long-term hurricane hazard risk higher than any of the other islands.

Earthquakes

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

Since 1868, nine disastrous earthquakes have occurred on the island. The largest series occurred between March 27 and April 2, 1868 with an epicenter a few miles north of Pāhala in the district of Kaʻū. 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).

Volcanic Hazards

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

- **Lava Flows.** The volcanic hazard zone map for Hawaiʻi Island divides the island into zones ranked from 1 through 9, with 1 being the area of greatest hazard and 9 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, Kamoleao is within Zone 3, meaning only one to five percent of the area has been covered by lava since 1800 and 15 to 75 percent within the last 750 years (USGS, 1997). Lands in Zone 3 are at lower risk than Zone 2 areas because of their greater distance from recently active vents and/or because the local topography makes it less likely they will be covered by future flows. The Project Site is approximately 24 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. Halemaʻumaʻu, 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 such gases diminishes quickly as they mix with air and are carried by winds away from the source (USGS, 1997).

The Project Site is located 24 miles northeast of Kīlauea Volcano. The prevailing northeasterly trade wind flow tends to push vog and airborne particulates away from Kamoleao. However, the amount of vog and other airborne particulates can significantly increase during periods when the winds are from the southwest.

Wildfires

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

Potential Impacts and Mitigation Measures

To minimize the potential hazard from earthquakes and hurricanes, structural elements in Project Kamoleao will be designed in accordance with applicable health and safety standards and practices. Design criteria to address the potential for damage due to seismic and hurricane forces will be incorporated. Construction of Project Kamoleao 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 24 miles away from the nearest active volcano. Hazard and risk potential of shield volcanoes like those on Hawaiʻi Island can be pinpointed reasonably well, unlike some other types of natural disasters (earthquakes and hurricanes). Therefore, it is likely there would be sufficient warning of a potential volcanic threat to relocate equipment and personnel.

3.6 FLORA AND FAUNA

Description and Discussion

Flora. The Project Site represents a relatively small portion of the Panaʻewa Rainforest. The historic land cover in Panaʻewa was lowland rainforest dominated by *ʻōhiʻa* and *hala*. The presence of *moku lehua* and *ulu lehua* once provided the canopy grove of *ʻōhiʻa lehua* in

Panaʻewa. While no longer present, Panaʻewa was home to the rare *lama* tree. Today the most abundant plant in terms of density is the alien *waiawī*, with several hundred or even thousands of plants per acre. Other alien canopy trees/shrubs are also prominent, including *albizia*, Chinese banyan, and African tulip. Native plant species present at Kamoleao include *ʻōhiʻa*, *uluhe*, *kopiko*, *hala*, *kukui*, *hāpuʻu*, and *pōpolo*. In 1998, a Forest Stewardship Program was implemented at Kamoleao where native vegetation was reintroduced and alien vegetation removed. Although the program ended, evidence of the restoration efforts is still present with some of the introduced landscape consisting of *hala* along the adjacent Prince Kūhiō Mall auxiliary parking, *niu* and *kukui* along the ʻOhuʻohu Street frontage, and mix of *hau* and *milo* along Pūainako Street.

A botanical survey reported in the 2009 Final Environmental Assessment for the Kamoleao Laulima Community Resource Center (FEA for KLCRC) identified several native species but did not list rare, threatened or endangered plant species anywhere on the 12.77-acre Project Site. The FEA for KLCRC also reported no streams or wetlands present on the property.

Fauna. Analysis from the botanical survey for the 2009 FEA for KLCRC as well as consultation with the U.S. Fish & Wildlife Service provided the following information regarding fauna within the existing site.

- **Threatened and Endangered Species.** According to the U.S. Fish & Wildlife Service *(see USFWS letter in* Appendix F*)*, five federally listed species have the potential to either be in or to fly through the vicinity of Kamoleao: the endangered Hawaiian hawk (*Buteo solitariessolitarius*) and Hawaiian hoary bat (*Lasiurus cinereus semotus*), the Hawaiian petrel (*Pterodroma phaepygia sandwichensis*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), and the Band-rumped storm-petrel (*Oceanodroma castro*).
- **Other Birds.** Other common bird species that are presumed to transit Kamoleao or presumed to visit on-site include: the common myna (*Acridotheres tristis*), the zebra dove (*Geopelia striata*), spotted dove (*Streptopelia chinensis*), yellow-billed cardinal (*Proaria capitata*), common house finch (*Carpodacus mexicanus*), and Japanese white-eye (*Zosterops japonicus*).
- **Other Vertebrate Fauna.** Other mammals observed or expected to occur at Kamoleao include non-native mongoose (*Herpestes javanicus*), mice (*Mus musculus*), rats (*Rattus spp.*), and feral cats (*Felis catus*). None of these species are federally listed, and all are expected to occur in high abundance at this proximity. Reptiles and amphibians observed included the mourning gecko (*Lepidodactylus lugubris*), coqui frog (*Eleutherodactylus coqui*), and cane toad (*Rhinella marina*).
- **Invertebrates.** Invertebrates that are presumed to transit Kamoleao or have been seen include: carpenter bees (*Xylocopa sp.*), several fly species (Order: *Diptera*), mosquitoes (*Aedes spp.* and *Culex quinquefasciatus*), and several ant species (Family: *Formicidae*). None of the invertebrates observed are federally listed.

Potential Impacts and Mitigation Measures

Flora. The original 1994 Master Plan concept sought to protect the Panaʻewa Rainforest and its cultural nurturing attributes. Since then, the land allocated for the development of a community center at Kamoleao has been reduced by more than half. As such, the utilization scheme for Kamoleao should be reviewed prior to implementation to determine how best to use the site to accomplish community goals and objectives such as a *puʻuhonua* (refuge) within the Panaʻewa Rainforest, health and social services, and commercial uses for economic self-sufficiency. When analyzing these schemes, the flora and fauna survey as well as the topographic survey provide identification and location of native plant species. With the highest concentration of native plant species such as *ʻōhiʻa* located at the center of Kamoleao, this area was considered high priority for preservation and regeneration.

To mitigate against potential spread of Rapid ʻŌhiʻa Death, construction documents should also note that a search for infected *ʻōhiʻa* trees should be conducted within two weeks prior to any tree cutting, and guidance sought from the Pacific Islands Fish and Wildlife Office of the U.S. Fish and Wildlife Service if any such plants are found.

Fauna. Existing commercial activities near Kamoleao make it fairly unlikely that listed species of fauna would frequent the area. However, as part of the USFWS's Draft EA pre-Assessment consultation comments, avoidance and impact minimization measures were provided for each of five federally listed species that have the potential to either be in or to fly through the vicinity of Kamoleao:

- **Hawaiian hawk or *ʻio*.** To avoid negative impacts to Hawaiian hawks, it is recommended that the contractor avoid brush and tree clearing during their breeding season (March 1 through September 30). If Kamoleao must be cleared during Hawaiian hawk breeding season, the USFWS recommends a nest search of the area of the proposed construction site and surrounding area be conducted by a qualified ornithologist immediately prior to the start of construction activities. Pre-disturbance surveys should ensure that construction activity will not occur within 1,600 feet of any Hawaiian hawk nest. Additionally, trimming or cutting of any trees containing a hawk nest shall be prevented.
- **Hawaiian hoary bat or *ʻōpeʻapeʻa*.** 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), and barbed wire should not be used for fencing.
- **Seabirds.** It is recommended that Project Kamoleao avoid or minimize use of artificial lighting and that nighttime construction work be avoided if possible. If artificial illumination must be used, it is recommended that it 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.

The design of the project will not include any barbed wire. For any outdoor lighting, the design will specify shielded lights as required under the County's outdoor lighting ordinance (HCC section 14-52). To the extent applicable, the construction documents will instruct the contractor to follow the above recommendations. No adverse impacts to other vertebrate or invertebrate populations are expected as a result of development on this Project Site.

While no homesteads are proposed, Project Kamoleao will be within five miles of Hilo Airport facilities. Presently, no open water is being contemplated that would attract water birds. The Applicant acknowledges FAA Form 7460-1 regarding heights of structures, the State of Hawaii Office of Planning Technical Assistance Memorandum 2016-1, and FAA Advisory Circular 150/5200-33B. The Project Kamoleao master developer will comply with and require any facility developers to comply with any relevant such standards, as appropriate.

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 Project Kamoleao, and preliminary mitigation measures to minimize any impacts.

4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

Rechtman Consulting, LLC conducted an archeological inventory survey (AIS) on the 12.77-acre Project Site in December 2008, involving a 100% pedestrian survey. The AIS was conducted in compliance with Chapter 6E-8, HRS "Historic Preservation" to determine the presence/absence of archaeological sites. The AIS found that almost the entire Project Site had been altered, and no historic sites or features were identified. Due to the absence of sites, the findings were documented in an Archaeological Assessment dated January 2009, pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR (Appendix B). [3]

Historical Background

Kamoleao is in the *ahupuaʻa* of Waiākea, in the *moku* of Hilo. Waiākea is the largest *ahupuaʻa* within the South Hilo District, and according to Pukui et al. (1974) the name Waiākea literally translates as "broad waters", which is likely a reference to the bays and freshwater streams and rivers that water this land. Waiākea is also the name of a legendary high chief (Waiākea-nui-kumuhonua), whose sister was named Panaʻewa (Panaʻewa-nui-moku-lehua), and whose name is also synonymous with the forest area where Kamoleao is situated. The DHHL adopted the name Panaʻewa for the homestead community that surrounds and includes Project Kamoleao.

The Panaʻewa forest of Waiākea is known to have contained trails that connected Hilo with Puna as described in various *moʻolelo* including the Epic Saga of Hiʻiaka (Hoʻoulumāhiehie Awaiaulu Press, 2006), and The Heartstirring Story of Ka-Miki (Kihe, 1914-17). These ancient trail systems were used well into historic times, and have been described by missionaries and travelers during the nineteenth and early twentieth centuries.

During the *Māhele* of 1848, Waiākea was claimed and later relinquished by Kaunuohua to the Crown. These lands were administered by the Crown up until the 1893 overthrow of the Hawaiian Kingdom. After the overthrow, these lands were controlled by the territorial government and the Panaʻewa area was transferred to the DHHL in the early twentieth century.

[3] The document is titled "Request for SHPO Concurrence with a Determination of No Historic Properties Affected Pursuant to the National Environmental Policy Act and in Compliance with Section 106 of the National Historic Preservation Act", and is recognized as an Archeological Assessment by the State Historic Preservation Division of the DLNR, as evidenced in Appendix C.

Archaeological Assessment Findings

A 100% pedestrian survey of the entire 12.77-acre Project Site was conducted in 2008. There were no archaeological resources observed within the study area and given the nature of the substrate it was considered highly unlikely that any such resources are present in a subsurface context (Rechtman, 2009).

Potential Impacts and Mitigation Measures

On January 26, 2017, the State Historic Preservation Division (SHPD) wrote:

> *"Based on current information, SHPD concurs with the agency's HRS 6E-8 determination of* ***no historic properties affected*** *for the proposed project. No historic properties have been identified within or proximate to the proposed project area. Aerial photos confirm that the area has been significantly altered by previous grubbing and/or grading and, thus, it is unlikely that any historic properties are present."*

The County and its contractors will comply with all state and county laws and rules regarding the preservation of archaeological and historic sites. Relevant construction documents will be required to 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 SHPD, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

4.2 CULTURAL RESOURCES

Cultural Surveys Hawaii, Inc. (CSH) conducted a Cultural Impact Assessment (CIA) for Kamoleao in 2009, in accordance with the methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (Office of Environmental Quality Control, 1997). In addition to conducting background research into the traditional and historic importance of the project area in the context of Waiākea *Ahupuaʻa*, CSH also made an effort to consult with community members and organizations. A total of four native Hawaiian organizations were contacted for the purposes of the CIA; two responded.

PBR HAWAII attempted to recontact all interviewees of the 2009 CIA in January 2018, along with individuals or representatives of other native Hawaiian organizations that were thought have potential interest in or knowledge of cultural practices in the Panaʻewa area. Current contact information was not found for three individuals that had been contacted in the 2009 studies; however, new outreach along with updated information on Project Kamoleao and notice of the EA was provided via U.S. mail on January 12, 2018, to:

- DLNR Historic Preservation Division (Dr. Alan Downer)
- Office of Hawaiian Affairs (Dr. Kamanaʻopono Crabbe and Mr. Robert Lindsey, Jr.)
- Hawaiʻi Island Burial Council (Mr. Keikialoha Kekipi)
- Kalalau Ranch and Victory Gardens (Mr. Jeno Enocencio)
- Ka Haka ʻUla O Keʻelikolani, UH Hilo (Ms. Keiki Kawaiʻaeʻa)
- University of Hawaiʻi at Hilo, Nā Pua Noʻeau (Mr. Kinohi Gomes)
- Edith Kanakaʻole Foundation (Dr. Pualani Kanahele)
- Kamehameha Schools, Hawaiʻi Island (Ms. Kāhealani Naeʻole-Wong)
- Hawaiian Civic Club of Hilo (Ms. Toni Keahiolalo Mallow)
- Hui Mālama Ola Nā ʻŌiwi (Mr. Louis Hao)
- Liliʻuokalani Trust (Ms. LeeAnn Crabbe)

As of July 31, 2018, three of those to whom outreach was conducted had responded. None noted any ongoing cultural practices on or in the vicinity of the Project Site, or concerns regarding native Hawaiian cultural resources or practices related to the Project Kamoleao. Additionally, Mr. Raymond Busniewski, IT Specialist for Nā Pua Noʻeau at UH Hilo (responding for Mr. Gomes), also asked that Sig and Kuhao Zane also be contacted at Sig Zane Designs in Hilo. Accordingly, messages were left for Mr. Sig Zane via phone and email on February 7 and 15, 2018, respectively.

Other background research shows:

1. The State Historic Preservation Division (SHPD) has previously reviewed and approved an Archaeological Assessment (Corbin, 2006) which found no historic properties for this proposed site. Additionally, by letter dated January 26, 2017, SHPD concurred with the findings of the 2009 Archeological Assessment prepared by Rechtman Consulting, as described in section 4.1 above.

2. Waiākea, with its rich natural resources of the forests and the sea, has long been a center of habitation for Hawaiians and is often mentioned in Hawaiian folklore and legends. According to many legends, Waiākea has also been associated with Hawaiian royalty (*aliʻi*) since the 16th century and a gathering place for many ceremonies. The rich mountain resources of taro and sweet potato and the abundant marine resources particularly shrimp and fish made Waiākea very valuable to the Hawaiian people. At least three *heiau* (temple) of various sizes and class, stood within Waiākea. Many Hawaiian gods and goddesses frequented Waiākea including Pele, Hiʻiaka and Panaʻewa.

3. Previous archaeological research of Kamoleao project area did not identify any historic properties (Rechtman, 2009).

Potential Impacts and Mitigation Measures

There will be no impacts to archaeological or cultural resources as a result of Project Kamoleao. No past or ongoing cultural practices associated with Kamoleao lands were identified during the

2009 CIA study, nor subsequent updating and follow-up efforts. Based upon an evaluation of responses to inquiries, meeting discussions, and archival research, and in compliance with Act 50, it is reasonable to conclude that the exercise of Native Hawaiian rights, or those of any ethnic group, as related to gathering, access, or other customary activities will not be negatively affected by Project Kamoleao.

Rather, Project Kamoleao is seen as a means for native Hawaiian residents of the area to have enhanced opportunities to learn about and practice native Hawaiian culture such as within the planned natural area and *pu'uhonua*, or at the Health & Wellness and Community Center facilities planned.

4.3 ROADWAYS AND TRAFFIC

Traffic engineer Fehr & Peers prepared a Transportation Assessment (TA) for this Project in February 2018. The TA is included in this environmental assessment as Appendix E, and contains a full description of the assumptions and methods used to conduct the study, as well as a discussion of the results.

Nearby Traffic Infrastructure

The parcel is bounded on three sides by: Railroad Avenue to the east, Pūainako Street to the south, and 'Ohu'ohu Street to the west. All three roads are maintained by the County of Hawai'i.

- **Railroad Avenue** is currently a paved, two-lane road running north to south. The 70-foot wide right-of-way has unpaved shoulders and no sidewalks. There are no existing driveway aprons to the Project Site along Railroad Avenue.
- **Pūainako Street** begins at Railroad Avenue at a "T" intersection and extends westerly to Kaūmana Drive and Saddle Road. There are no traffic signals, and no existing striped crosswalks at this intersection.

  The portion of Pūainako Street adjacent to the Project Site is currently a paved, four-lane divided road. A landscaped, center median divides the 120-foot wide right-of-way. There are no breaks in the center median between Railroad Avenue and 'Ohu'ohu Street. There are existing concrete curbs, gutters and sidewalks along the northern side Pūainako Street adjacent to the parcel. There are no existing driveway aprons along this south side of the parcel.

  The intersection of Pūainako Street and 'Ohu'ohu Street is currently a four-way stop. There are striped crosswalks at each corner of the intersection.
- **'Ohu'ohu Street** is currently a paved two-lane road running north to south. The 60-foot wide right-of-way currently has concrete curbs, gutters and sidewalks along both the east and west sides of 'Ohu'ohu Street. The eastern sidewalk (adjacent to the parcel) also has

a planting strip between the curb and the sidewalk. There are no existing driveway aprons along this side of the Project Site.

The closest County bus stop is the Prince Kūhiō Plaza stop located on the opposite side of ʻOhuʻohu Street, approximately 400-feet north of Project Kamoleao. This stop serves seven (7) routes of the County's "Hele-On Bus" service.

No separate bicycle infrastructure is currently provided in direct proximity to the Project Site. However, there are bike lane/bike routes along Kanoelehua Avenue a block east of the site, and a proposed bike route on Railroad Avenue alongside the Project Site, extending from Leilani Street to Kaʻaʻahi Road.

Traffic Patterns

Fehr & Peers conducted field observations in the vicinity of the Project Site in August 2017 when all schools were in session and noted generally free flowing traffic with only minor vehicle queues at the Pūainako Street intersections adjacent to Kamoleao. Substantial vehicle queues and delays were observed a few blocks away in the AM and PM peak travel hours, on Kanoelehua Avenue at Pūainako and Makaʻala Street.

Fehr & Peers expects that traffic generated by the Community Center will tend to be concentrated in evenings and on weekends, or generally outside of peak travel periods. Other facilities are projected to generate up to 949 daily trips after buildout of the Master Plan. Trip generation for the proposed retail shops is considered conservative since the anticipated uses are expected to be lower intensity uses and will attract a higher number of customers already passing by the site than typical retail uses.

Potential Impacts and Mitigation Measures

Required motor vehicle access improvements will be largely dependent on the phasing of Project Kamoleao.

Phase 1A Community Center and Certified Kitchen. Vehicular access to the Phase 1A site will be from ʻOhuʻohu Street where a new driveway will be required. The driveway will match the existing street grade, requiring the curb, gutter and sidewalk in the area to be removed. ADA accessible curb ramps will be required to negotiate the grade change from the existing sidewalk to the pavement elevation. A stop bar, stop sign and crosswalk pavement markings will also be required.

Although the minimum width for a two-way vehicular access is 20 feet, the minimum width for a drive aisle in a parking area with 90-degree stalls is 24 feet. The access should be sized at a minimum of 24 feet due to the proximity of the parking stalls to the entry.

Off-street parking will be provided, and the minimum number of parking stalls shall be based on the building use and floor area as determined during design of this Phase of Project Kamoleao.

The number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 1A are determined. The accessible stalls and access aisles shall be located closest to the building's main entrance to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones are also based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

The curbs and pavement shall terminate at the work limits of Phase 1A. Future phases shall continue the curbing and pavement as necessary to add additional parking and on-site vehicular access.

All traffic signage and pavement markings in all phases of construction shall conform to the most current edition of the Manual of Uniform Traffic Control Devices (MUTCD).

Phase 1B Commercial (ʻOhuʻohu Street) and Light Industrial (Railroad Avenue). Access to the retail building (western portion of Phase 1B) will be from the same ʻOhuʻohu Street entrance constructed in Phase 1A. Additional pavement and curbs shall be added for vehicular access and parking nearest to the retail building.

Access to the proposed light industrial facility (eastern portion of Phase 1B) will be from Railroad Avenue, including a new driveway to match the existing street grade, and requiring the curb, gutter and sidewalk in the area to be removed. ADA accessible curb ramps will be required to negotiate the grade change from the existing sidewalk to the pavement elevation. A stop bar, stop sign and crosswalk pavement markings will also be required.

Off-street parking for both areas of Phase 1B (Commercial in the west and Light Industrial in the east) will be provided based on the building use and floor area as determined during design of this Phase of Project Kamoleao. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 1B is determined. The accessible stalls and access aisles for Phase 1B shall be located closest to the buildings' main entrances to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones for both areas of Phase 1B shall also be based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

Phase 2 Health & Wellness Complex. Access to the health and wellness center, shall be from a new Pūainako Street entrance. An existing landscaped median in Pūainako Street would be modified to provide a left turn storage and acceleration lane.

The new vehicular access to Phase 2 as shown in the master plan has 12-foot wide dedicated entry and exit lanes with a landscaped divider. The total width of the driveway is 34 feet. The existing curb, gutter and sidewalk along Pūainako Street will require modification at the entry location. ADA compliant curb ramps will also need to be installed.

Off-street parking will be provided for the Phase 2 based on the building use and floor area as determined during design of this Phase of Project Kamoleao. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 2 is determined. The accessible stalls and access aisles for Phase 2 shall be located closest to the Health & Wellness building's main entrance to ensure the shortest routes are provided. The passenger loading zone near the main entrance shall also be ADA compliant.

The prescribed number and sizes of loading zones for Phase 1B shall also be based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

The curbs and pavement shall terminate at the eastern work limits of Phase 2. Phase 3 shall continue the curbing and pavement as necessary to add additional parking and on-site vehicular access.

Phase 3 Future Commercial. Access to Phase 3 will be through parking areas and drive aisles established in Phase 1A and Phase 2. The curbs and pavement shall be extended to provide vehicular access and additional parking needed.

Off-street parking will be provided for the Phase 3 based on the building uses and floor areas as determined during design of this Phase of Project Kamoleao. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 3 is determined. The accessible stalls and access aisles shall be located closest to the Phase 3 building's main entrances to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones for Phase 3 shall also be based on the building uses and floor areas. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

The addition of project traffic to the intersections immediately adjacent to the site is not expected to result in any operational issues given the available capacity and limited extent and length of existing congestion. As noted under existing conditions, longer delays occur at the intersections along on Kanoelehua Avenue during the peak commute periods. While project traffic is expected to be added to some of those intersections, the volumes are expected to have a minimal or negligible impact based on the project's total trip generation, the anticipated distribution focused on the adjacent neighborhood, and the options for traffic to access the site (e.g., to use Railroad Avenue to travel north and south vs Kanoelehua Avenue. The site design will also encourage patrons to walk and bicycle to the site by providing multiple connections to fronting sidewalks, as well as bicycle parking at strategic locations close to the building entrances.

4.4 NOISE

Residents living closest to Kamoleao include those living on Railroad Avenue, as well as those living on Paipai Street. Existing background noise is produced primarily by traffic along Pūainako Street and Railroad Avenue.

Potential Impacts and Mitigation Measures

During construction of any given 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 periods. 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.

During operations, since most of the proposed uses will occur in buildings, the primary source of noise emission to the surrounding area is expected to be minimal, from cars visiting the site.

4.5 AIR QUALITY

Air quality in the Hilo area is generally considered good due to the prevailing northeasterly trade winds that tend to disperse pollutants toward the mountains. However, the level of particulates and other air pollutants can significantly increase 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

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 Kamoleao. 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 any unpaved roads within Kamoleao and areas of exposed soil surfaces. As soon as 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 Kamoleao 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.

4.6 VISUAL RESOURCES

The Project Site is generally flat and mostly covered with dense vegetation, except a landscaped strip along ʻOhuʻohu Street and thinner landscaped strip along Pūainako Street. The northern boundaries of Kamoleao border an overflow parking lot of Prince Kūhiō Plaza on the eastern side, and back-of-house access to The Home Depot on the western side of the site. Across Railroad Avenue are cultivated farmlands. South of Kamoleao is a landscaped median strip on Pūainako Street. Further south along the east-bound portion of Pūainako is a landscaped strip with tall vegetation that mostly hides homes along a portion of Paipai Street. West of Kamoleao is ʻOhuʻohu Street and the backside of the Longs Drugs Store building. Due to the flat topography and state of the vegetation, there are no notable visual resources either on or visible from the Project Site (Appendix A: Figure 4).

In addition, Kamoleao is not listed by the county as being in a scenic view plane or as a site of natural beauty listed in the General Plan, nor is it home to any of the exceptional trees listed in the County Code (HCC Chapter 14, Article 10, pursuant to HRS Chapter 58).

Potential Impacts and Mitigation Measures

Construction of Project Kamoleao will not block any identified scenic view planes or impact any areas of natural beauty. Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *pu'uhonua* and healing for Pana'ewa Homestead community members and other area residents and neighboring communities. A 3.7-acre central area is set aside for open space. Other uses, especially income-generating uses, were sited to preserve the character of this central area. Kamoleao's frontage on Railroad Avenue and alongside the service entrance to The Home Depot to its north provides an opportunity to develop additional income-generating facilities in an area that can be visually and functionally shielded from the rest of Project Kamoleao. Landscaping and parking along the southern edge of this proposed ±1.4-acre site would provide further buffer from the *pu'uhonua* and natural areas of Kamoleao.

Any structures that are part of Project Kamoleao will be designed and landscaped to be compatible with the character of the surrounding area.

In keeping with the plant palette that was once established at Kamoleao, a Hawaiian *'ōhi'a* rainforest theme is desired. This would support a cohesive and visually unified landscape throughout the site, minimizing the appearance of an "old" and "new" part of Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically adapted plant species. *'Ōhi'a*, *kopiko*, *kukui*, and *hala* are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs are known to grow in this forest or have potential to grow in the Kamoleao microclimate.

Additionally, due to the Project location within five miles of an airport, the State DOT Airports Division (DOT-A) will require that Federal Aviation Administration (FAA) Form 7460-1 be submitted for structures more than 200 feet above ground level. DOT-A is also concerned about the potential use of photovoltaic (PV) panels due to their glint and glare potential and possible radio frequency interference. The Project Kamoleao master developer will require any facility developers to comply with such standards as appropriate.

4.7 INFRASTRUCTURE AND UTILITIES

Water System

Within Railroad Avenue, an existing 12-inch water main is available for new domestic water service laterals and fire protection water lines. The existing water main is in the unpaved shoulder area on the eastern side of the right-of-way.

In Pūainako Street, an existing 18-inch water main is available for fire protection water lines. The existing water main is located near the middle of the right-of-way in the landscaped median.

In ʻOhuʻohu Street, an existing 8-inch water main is available for new domestic water service laterals and fire protection water lines. The existing water main is located on under the western edge of the asphalt pavement. Field survey identified existing water meter boxes along the ʻOhuʻohu Street frontage. The Department of Water Supply (DWS) indicated there is an empty meter box for this parcel that can receive a 5/8-inch domestic water meter.

The DWS also indicated that the current domestic water allocation for this parcel is 1-water unit, which is equivalent to 400 gallons per day (gpd). Additional water units are available and shall be based on the water demand calculations for the proposed improvements as required by the DWS.

The DWS further indicated that existing waterlines fronting the Project Site are adequate to provide the required 2,000 gallons per minute fire flow required by DWS' Water Systems Standards for commercial or industrial land use applications.

There is no non-potable waterline in this area for landscape irrigation purposes.

Potential Impacts and Mitigation Measures

In addition to comments received from DWS, those related to the water system received from the State of Hawaiʻi Department of Land and Natural Resources (DLNR), Engineering Division and Commission on Water Resource Management (CWRM) during pre-Assessment consultation concerned:

- The Project's projected water demands, both potable and non-potable, identification of proposed water source(s), needed permits or approvals and potential impacts on water resources.
- Consistency of the project with the Hawaiʻi Water Plan in the DEA; coordinate with County DWS and State DLNR Engineering to incorporate water needs into their plans.
- Use of water efficient fixtures and practices to reduce increased demands on freshwater resources.
- Utilize alternative water sources wherever practicable.
- Landscape irrigation conservation BMPs endorsed by the Landscape Industry Council of Hawaiʻi.

Estimated maximum daily water usage calculations for the Project will be prepared by a professional civil engineer licensed in the State of Hawaiʻi and provided to DWS and DLNR at the time of submittal of civil construction plans, as further described below. At this time, civil engineer Imata & Associates has prepared a preliminary analysis of the Project's civil engineering requirements, based on the conceptual master plan described previously. The notes below summarize the preliminary conclusions with respect to water needs. The full Preliminary Civil Engineering Report is provided as Appendix D.

Domestic water service for Project Kamoleao would be provided by tapping the existing 8-inch water main located in ʻOhuʻohu Street (opposite side of street). The existing water lateral and empty meter box located at the northwest corner of the Project Site may be used to house a new domestic water meter provided the water demand does not exceed the current capacity of the service lateral.

However, because of the proposed Certified Kitchen, and service to multiple buildings, it is likely that the water demand would exceed the capacity of the existing 1-inch water lateral. It is likely that a new appropriately sized water lateral, meter and meter box will be required. The new water meter box or boxes will be located in the ʻOhuʻohu Street right-of-way, at the edge of the property line, providing easy access for DWS meter reading and maintenance.

Within the Project Site, a new reduced pressure backflow preventer assembly will be required. The backflow assembly protects the County's water supply system from possible on-site contaminants. The backflow assembly is typically located within 5-feet of the water meter. If the assembly is located more than 5-feet from the water meter, concrete jacketing will be required around the waterline between the water meter and the backflow.

The domestic water line within the Project Site will be stubbed out for distribution to individual buildings. Stub outs for the community center, certified kitchen and the ʻOhuʻohu Street shops building (Phase 1B) will be provided. Sub-metering at each building is optional and would fall under the scope of the mechanical engineer during the design phase.

The domestic water line should be designed with future phases in mind. Therefore, the waterline in Phase 1A will be ended just beyond the limits of paving for Phase 1A. These stub outs shall provide a connection point for continuation of the domestic water line within the site for Phase 2 and Phase 3.

Although not expected due to ample rainfall, if irrigation water is required, it will be provided from the domestic water line. A separate backflow assembly would be required to isolate the irrigation system from the rest of the on-site domestic water system.

The domestic and fire protection waterline design and construction for all phases, shall conform to the requirements of "Water System Standards 2002", or other then-applicable standards, as published by the DWS.

The civil engineer will submit a copy of the civil construction plans (typically pre-final) to the DWS Engineering Division for review and approval. A water demand calculation shall also be provided to the DWS at the time of submittal. The water demand calculations shall be based on the anticipated building use information from the architect and fixture count from the mechanical engineer. The water demand calculation shall support the sizing of water laterals, meters and other connections to the County water system. All facilities charges due to DWS will be paid prior to receipt of water service. Water demands and calculations will also be provided to the DLNR Engineering Division for inclusion in the State Water Projects Plan Update.

Wastewater System

The nearest County sewer main is located in Makaʻala Street, located to the north of the parcel. The existing 8-inch sewer main is over 1,000-feet away from the Kamoleao parcel. Because of the distance, the Kamoleao parcel is not required to connect to the County sewer system. Connecting to the existing sewer system would also significantly increase construction cost. Therefore, it is recommended that on-site individual wastewater systems be considered for wastewater treatment and disposal.

Potential Impacts and Mitigation Measures

Wastewater would be handled by an Individual Wastewater System (IWS) for each Phase or other sub-area of the plan. These wastewater systems shall be sized to accommodate the wastewater generated from each phase or area.

A typical IWS will utilize septic tanks for primary wastewater treatment, and a leach field for effluent disposal. The waste stream from the certified kitchen will likely require an additional detention in a grease interceptor prior to being introduced into the septic tanks. The sizing of the grease interceptor for each IWS shall be determined by a mechanical engineer.

The location of the septic tank and grease interceptor shall allow for periodic maintenance such as pumping and cleaning. The location of the septic tanks and leach field should, if possible, be located to the southwest of buildings to be down-wind of the prevailing wind direction.

The design of all IWS in all phases shall conform to the most current version of Hawaiʻi Administrative Rules, Title 11, Chapter 62 Wastewater Systems. Prior to construction of each septic tank and leach field, the design civil engineer will prepare an Individual Wastewater System permit and submit it to DOH, Wastewater Branch.

Drainage System

There are no existing drainage structures such as drywells located within the Kamoleao parcel.

There are existing drainage structures in the Pūainako Street and ʻOhuʻohu Street rights-of-way. The Pūainako Street frontage, contains four catch basins (throat inlets, located along the curb and gutter line), while the ʻOhuʻohu Street frontage contains one catch basin.

These catch basins capture runoff produced from the paved roadways. It is unlikely that additional catch basins in the rights-of-ways will be required. However, should the project's improvements, such as new driveway locations interfere with existing drainage structures, the catch basins will need to be altered or replaced.

Potential Impacts and Mitigation Measures

Grading of each phase would establish surface runoff to flow away from buildings and direct them to new on-site drainage structures. Additionally, the grading design for each phase will account for ADA requirements for accessible routes around the buildings and in relation to parking and other common areas.

The drainage system for each phase shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation.

The grading design in all phases shall conform to the requirements of the most current version of the Hawaiʻi County Code, Chapter 10 – Erosion and Sediment Control. Additionally, the recommendations from geotechnical investigations shall be implemented in the design.

The drainage design for all phases shall meet the requirements of the most current version of the Hawaiʻi County Code, Chapter 25-2-72(3) and be designed based on the 1-hour, 10-year storm event in accordance with "Storm Drainage Standards," by the Department of Public Works, dated October 1970.

Solid & Hazardous Waste

The County of Hawaiʻi 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 approximately 1.4 miles away. The Department of Environmental Management has indicated that the Hilo Landfill will reach its maximum capacity in the fall of 2018. When at capacity, all commercial construction and demolition debris must be hauled to the West Hawaiʻi Sanitary Landfill.

Potential Impacts and Mitigation Measures

Waste generated by site preparation will primarily consist of green waste from grading, and solid waste during construction. Green waste may be taken to the East Hawaiʻi Organics Facility. 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, Project Kamoleao will generate solid waste related to daily use and operation. To minimize waste, recycling bins should be provided for at the various proposed facilities. Waste that cannot be recycled will be disposed of at the West Hawaiʻi Sanitary Landfill. The disposal of nonhazardous solid waste should conform to applicable provisions under Chapter 11-58.1, HAR ("Solid Waste Management Control") and the burning of such waste on- or off-site shall be prohibited.

Utilities

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

Telecommunication services are provided by Hawaiian Telcom via overhead lines.

Potential Impacts and Mitigation Measures

No significant impacts are anticipated to the operations of HELCO or Hawaiian Telcom. Project subdevelopers will coordinate with these entities as design plans evolve.

4.8 SOCIO-ECONOMIC CHARACTERISTICS

Hawaiʻi County has exhibited rapid and sustained population growth for decades, increasing 23.6 percent between the US Census counts in 1990 and 2000, and another 24.5 percent between 2000 and 2010. By comparison, the State's population increased only 9.3 percent and 12.3 percent respectively, over the two past decades. As of 2017, Hawaiʻi County's population was estimated at 204,027 persons, according to the data firm Esri. This is 10 percent more than the 185,079 enumerated at the 2010 Census, for an average annual increase of 1.4 percent.

The following table presents a recent demographic profile of the County, and of Kamoleao's surrounding areas: the Hilo Census Designated Place (CDP), and the larger South Hilo Judicial District. The Hilo CDP is estimated to house 23 percent of County's residents, while the balance of the South Hilo Judicial District outside of the Hilo CDP, although geographically large, houses only about 4 percent of County population.

Table 4.1 - Demographic Profile of Surrounding Areas (estimates as of July 1, 2017)

2017 Demographic Data	South Hilo Judicial District	As percent of County	Hilo CDP, HI	As percent of County	Hawai'i County
Total Population	54,281	27%	46,280	23%	204,027
Median Age	42.3	n/a	41.8	n/a	42.2
Total Households	18,957	26%	16,371	22%	73,122
Average Household Size	2.73	n/a	2.72	n/a	2.74
Unemployment Rate	3.1%	81.6%	3.0%	78.9%	3.8%
Median Household Income	$54,646	97.4%	$55,676	99.3%	$56,090
Rate of Households with Income less than $25,000	27%	27%	26%	23%	26%
Rate of Households with Income Over $100,000	24%	26%	25%	23%	24%
Total Housing Units	20,737	23%	17,884	20%	88,766
Owner Occupied Housing Units	11,954	25%	10,145	21%	48,059
Renter Occupied Housing Units	7,003	28%	6,227	25%	25,063
Vacant Housing Units	1,780	11%	1,513	10%	15,644

Source: Esri, January 2018.

The Hilo CDP 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.

According to the University of Hawai'i Economic Research Organization (UHERO), Hawai'i County's unemployment rate averaged 2.4 percent in the fourth quarter 2017, compared to the state's overall rate of 2.1 percent for the same period. Hawai'i County's unemployment has declined almost steadily since second quarter 2011, when it stood at 10.3%. The Statewide unemployment rate has likewise been on decline since late 2011 (U.S. Bureau of Labor Statistics, 2014).

Potential Impacts and Mitigation Measures

No significant impact. Short-term employment benefits will be generated throughout the construction period, and long-term employment benefits will be generated in the operations of the community, commercial, and industrial facilities proposed. These 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.

Project Kamoleao will not include housing and is not expected to affect area population or create strain on other area facilities.

4.9 PUBLIC SERVICES AND FACILITIES

Schools and Child Care Facilities

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

No significant impact. Project Kamoleao 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 Project Kamoleao will temporarily generate noise and may generate dust, the closest public school, Waiākea Elementary School, is located nearly one mile away. In addition, Waiākea Elementary School is upwind of Kamoleao during predominant trade wind conditions, so even if airborne dust were generated during construction periods, it would be unlikely to impact children at Waiākea Elementary School. During the DEA public review period, the State of Hawaiʻi Department of Human Services wrote that it had no comment on the DEA at the time.

Police, Fire and Medical Services

Police Protection. The Project Site is located in South Hilo, Patrol District 1, which is the Hawaiʻi Police Department's largest staffed division. The district extends from Hakalau in the north, to the mid-point of Kanoelehua Avenue between Hilo and Keaʻau in the south, to the Saddle Road in the west. The district includes the main police station, located at 349 Kapiʻolani Street, approximately 2 miles from Kamoleao.

Fire Protection. The Hawaiʻi County Fire Department Haihai Fire Station provides fire protection and suppression services for Kamoleao.

The existing fire protection system consists of existing fire hydrants located within the adjacent rights-of-ways. The Railroad Avenue frontage contains one existing fire hydrant. The Pūainako Street frontage contains two existing fire hydrants. The ʻOhuʻohu Street frontage does not contain a fire hydrant; however, one existing fire hydrant is located on opposite side of ʻOhuʻohu Street (about 200-feet north of Pūainako Street).

Medical Services. Hilo Medical Center (HMC) is the primary health care facility serving the South Hilo district. HMC is located approximately 4.8 miles from Kamoleao at 1190 Waiānuenue Avenue. Ambulance service in Hilo is provided by the Hawaiʻi Fire Department, which can serve

Kamoleao area (during construction) from the Haihai Fire Station in 9 minutes. The Haihai Fire Station has trained Emergency Medical Service personnel on site.

Potential Impacts and Mitigation Measures

It is acknowledged that there may be an occasional and unavoidable demand for police, fire and emergency medical services at Project Kamoleao as at any other facility. Of these services, only fire protection requires physical improvements to Kamoleao.

Fire protection would be provided by tapping the existing 18-inch water line in Pūainako Street and adding an 8-inch detector check meter as well as backflow preventer. The fire protection water line would be sized to accommodate the fire flow as prescribed by DWS and Hawaiʻi Fire Department Standards.

Fire hydrants would be placed within the limits of Phase 1A to provide coverage to the exteriors of the buildings including to the ʻOhuʻohu Street Shops in Phase 1B. If the buildings are to be sprinkled, connections from this fire protection water line to fire sprinkler risers at the building can be provided.

As with the domestic water line, the fire protection water lines would also provide stub outs near the limits of the Phase 1A improvements. Future Phases 2 and 3 (northwest portion) will be able to expose these fire protection water line stub outs and continue to add to the line in order to serve future buildings and additional fire hydrants.

The Fire Department must approve Project Kamoleao's design to ensure compliance with the National Fire Protection Association (NFPA) 1, Hawaiʻi State Fire Code, as amended by the County of Hawaiʻi (Hawaiʻi County Code Chapter 26), and also approve Project Kamoleao's fire response plan.

In addition, during the DEA public review period, the Hawaiʻi Police Department wrote that upon review of the DEA, the department did not anticipate significant impacts to traffic and/or public safety concerns.

Recreational Facilities

The entire South Hilo District contains over 50 parks and recreational centers with a total of over 740 acres. The nearest recreational facilities to Kamoleao are Panaʻewa Park and Lōkahi Park. Other recreational facilities, parks, and open spaces in the Hilo area include Hilo Municipal Golf Course, ʻĀinaola Park, Ahualani Park, Malama Park, Waiākea Uka Park, Kūhiō-Kalanianaʻole Park, Honoliʻi Beach Park, Liliʻuokalani Gardens, Reeds Bay, Onekahakaha Beach Park, Kealoha Beach Park, Carlsmith Beach Park and Richardson Ocean Park.

Potential Impacts and Mitigation Measures

No significant impact. Project Kamoleao is not a direct generator of new residents requiring recreational facilities. No significant impacts to recreational facilities are anticipated as a result of Project Kamoleao, and therefore no mitigation measures are proposed.

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5 LAND USE CONFORMANCE

State of Hawai‘i and Hawai‘i County land use plans, policies, and ordinances relevant to Project Kamoleao are described below.

5.1 STATE OF HAWAI‘I

Chapter 343, Hawai‘i Revised Statutes

Compliance with Chapter 343, HRS is required as described in Section 1.

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 Project Site is located within the State Urban District (Appendix A: Figure 7). According to HRS §205-2, land uses and activities in Urban districts are governed by County ordinance or regulation.

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

The U.S. Congress enacted the CZM Act to assist states in better managing coastal and estuarine environments. The act provides grants to states that develop and implement federally-approved CZM plans. The State of Hawai‘i’s CZM Act Program was enacted pursuant to Chapter 205A, HRS. The program outlines management objectives centered around ten areas: 1) Recreational Resources; 2) Historic Resources; 3) Scenic and Open Space Resources; 4) Coastal Ecosystems; 5) Economic Uses; 6) Coastal Hazards; 7) Managing Development; 8) Public Participation in Coastal Management; 9) Beach Protection; and 10) Marine Resources. All lands within the State of Hawai‘i fall within the CZM area.

Table 5.1 - Hawai‘i Coastal Zone Management Program, Chapter 205A, HRS

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
RECREATIONAL RESOURCES			
Objective: Provide coastal recreational opportunities accessible to the public.			
Policies:			
(A) Improve coordination and funding of coastal recreational planning and management; and			X
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			X
(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			X
(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when			X

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		**S**	**N/S**	**N/A**
	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;			X
(iv)	Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			X
(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;			X
(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;	X		
(vii)	Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			X
(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.			X
Discussion: The Project is not located along the coast and will not provide or hinder coastal recreational opportunities accessible to the public. Nevertheless, construction and operation of Project Kamoleao will adopt water quality standards and avoid point and nonpoint sources of pollution, while the Project will enhance recreational and social opportunities for its community.				
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;	X		
(B)	Maximize information retention through preservation of remains and artifacts or salvage operations; and	X		
(C)	Support state goals for protection, restoration, interpretation, and display of historic resources.	X		
Discussion: Rechtman Consulting, LLC conducted an Archaeological Assessment (AA) for Kamoleao (Appendix B). The AA was conducted in compliance with Section 6E-8, HRS "Historic Preservation" to determine the presence/absence of archaeological sites. The AA found that almost the entire Project Site had been altered previously, and that no sites or features are present in Kamoleao. Due to the absence of sites, Kamoleao was documented in an AA pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR. In a letter dated January 26, 2017, SHPD concurred with the determination of "no historic properties affected" by the Project (Appendix C).				

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
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;			X
(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;			X
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and			X
(D) Encourage those developments that are not coastal dependent to locate in inland areas.	X		
Discussion: Project Kamoleao is not coastal dependent and is not located in open spaces along the coastline or shoreline.			
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;			X
(B) Improve the technical basis for natural resource management;			X
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;			X
(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			X
(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.	X		
Discussion: Project Kamoleao does not directly impact marine and coastal resources, such as mining, fishing, etc. Project Kamoleao will also minimize disruption or degradation of coastal water ecosystems by not involving stream diversions, channelization, or similar land or water uses. Additionally, Project Kamoleao will utilize several best management practice (BMP) 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			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
to achieve the new development runoff management, and such measures are reflected in the State Office of Planning (OP), Coastal Zone Management's publication, Hawai'i Watershed Guidance.			
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;			X
(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			X
(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:			X
(i) Use of presently designated locations is not feasible;			X
(ii) Adverse environmental effects are minimized; and			X
(iii) The development is important to the State's economy.			X
Discussion: Project Kamoleao is not coastal dependent.			
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 nonpoint source pollution hazards;	X		
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;			X
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and	X		
(D) Prevent coastal flooding from inland projects.	X		
Discussion: The Project Site is not subject to hazards to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution, nor would it cause coastal flooding. This EA includes information about tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards.			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
MANAGING DEVELOPMENT			
Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
Policies:			
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;			X
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			X
(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.	X		
Discussion: Project Kamoleao is not coastal dependent; however, this EA discloses early information about potential short and long-term impacts of the development of Kamoleao, facilitating public participation in the planning and review process.			
PUBLIC PARTICIPATION			
Objective: Stimulate public awareness, education, and participation in coastal management.			
Policies:			
(A) Promote public involvement in coastal zone management processes;			X
(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	X		
(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.			X
Discussion: Project Kamoleao is not coastal dependent; however, this EA includes information about potential short and long-term impacts that may or may not indirectly affect the Coastal Zone Management Area.			
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;			X
(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			X

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.			X
(D) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and			X
(E) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.			X
Discussion: The Project Site is not located on a beach used for public use or recreation.			
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;			X
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			X
(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;			X
(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			X
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			X
Discussion: Project Kamoleao does not involve the use or development of marine and coastal resources.			

Hawai'i State Plan

The Hawai'i State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 State Functional Plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawai'i State Plan. The State has organized these functional plans in three parts, and the applicability of each component to Project Kamoleao, along with each plan's applicable objectives, policies, and actions, are discussed in the matrix below.

Table 5.2 - Hawai'i State Plan, Chapter 226, HRS

HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-1: Findings and Purpose			
HRS § 226-2: Definitions			
HRS § 226-3: Overall Theme			
HRS § 226-4: State Goals. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve: (1) A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawai'i's present and future generations.	**X**		
(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.	**X**		
(3) Physical, social and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring and of participation in community life.	**X**		
***Discussion**:* Project Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, pu'uhonua, and cultural regeneration in Pana'ewa.			
HRS § 226-5: Objectives and policies for population.			
Objective: It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.			
Policies:			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
1) Manage population growth statewide in a manner that provides increased opportunities for Hawaiʻi's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each County.			**X**
2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.	**X**		
3) Promote increased opportunities for Hawaiʻi's people to pursue their socio-economic aspirations throughout the islands.	**X**		
4) Encourage research activities and public awareness programs to foster an understanding of Hawaiʻi's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaiʻi's population.			**X**
5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			**X**
6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			**X**
7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.			**X**
Discussion: Project Kamoleao does not influence population growth patterns, but will provide the appropriate space and resources to allow Kamoleao to be a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa.			
HRS § 226-6: Objectives and policies for the economy in general.			
Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaiʻi's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.	**X**		
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.	**X**		
Policies:			
1) Promote and encourage entrepreneurship within Hawaiʻi by residents and nonresidents of the State.	**X**		

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
2) Expand Hawaiʻi's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.			**X**
3) Promote Hawaiʻi as an attractive market for environmentally and socially sound investment activities that benefit Hawaiʻi's people.			**X**
4) Transform and maintain Hawaiʻi as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.	**X**		
5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaiʻi	**X**		
6) Seek broader outlets for new or expanded Hawaiʻi business investments.	**X**		
7) Expand existing markets and penetrate new markets for Hawaiʻi's products and services.	**X**		
8) Assure that the basic economic needs of Hawaiʻi's people are maintained in the event of disruptions in overseas transportation.			**X**
9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	**X**		
10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaiʻi's small-scale producers, manufacturers, and distributors.	**X**		
11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			**X**
12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaiʻi.	**X**		
13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaiʻi's employment and economic growth opportunities.	**X**		
14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.	**X**		
15) Maintain acceptable working conditions and standards for Hawaiʻi's workers.			**X**
16) Provide equal employment opportunities for all segments of Hawaiʻi's population through affirmative action and nondiscrimination measures.			**X**
17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
18) Encourage businesses that have favorable financial multiplier effects within Hawaiʻi's economy, particularly with respect to emerging industries in science and technology.			**X**
19) Promote and protect intangible resources in Hawaiʻi, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.			**X**
20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.	**X**		
21) Foster a business climate in Hawaiʻi--including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			**X**
***Discussion**:* Project Kamoleao will generate short-term employment and other economic benefits during its development; in the longer term, it is envisioned to assist both farmers and entrepreneurs by offering commercial kitchen(s) in which to produce and market value-added crops and other innovative products. Project Kamoleao is also envisioned to offer classes and training aimed at promoting the economic, social and cultural well-being of this neighbor island community.			
HRS § 226-7: Objectives and policies for the economy - agriculture			
Objectives: Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:			
1) Viability of Hawaiʻi's sugar and pineapple industries.			**X**
2) Growth and development of diversified agriculture throughout the State.	**X**		
3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaiʻi's strategic, economic, and social well-being.	**X**		
Policies:			
1) Establish a clear direction for Hawaiʻi's agriculture through stakeholder commitment and advocacy.			**X**
2) Encourage agriculture by making best use of natural resources.			**X**
3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.			**X**
4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaiʻi's economy.	**X**		
6) Seek the enactment and retention of federal and state legislation that benefits Hawaiʻi's agricultural industries.			**X**
7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaiʻi's producers and consumer markets locally, on the continental United States, and internationally.	**X**		
8) Support research and development activities that provide greater efficiency and economic productivity in agriculture.			**X**
9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.	**X**		
10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			**X**
11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			**X**
12) Expand Hawaiʻi's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			**X**
13) Promote economically competitive activities that increase Hawaiʻi's agricultural self-sufficiency.			**X**
14) Promote and assist in the establishment of sound financial programs for diversified agriculture.	**X**		
15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			**X**
16) Facilitate the transition of agricultural lands in economically non-feasible agricultural production to economically viable agricultural uses.			**X**
17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko iʻa, māla, and irrigated loʻi, and growth of traditional Hawaiian crops, such as kalo, ʻuala, and ʻulu.	**X**		
18) Increase and develop small-scale farms.			**X**
***Discussion**:* Project Kamoleao will generate short-term employment and other economic benefits during its development; in the longer term, it is envisioned to assist both farmers and entrepreneurs by offering commercial kitchen(s) in which to produce and market value-added crops and other innovative products. In addition, a Hawaiian *ʻōhiʻa* rainforest theme is desired. This will help to assure a cohesive and visually unified landscape theme throughout the Project Site, helping to minimize the appearance of an "old" and "new" part of Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
adapted plant species. *ʻŌhiʻa*, *kopiko*, *kukui*, and hala are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs may grow in this forest or have potential to grow in the Kamoleao microclimate.			
HRS § 226-8: Objectives and policies for the economy – visitor industry			
Objectives: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaiʻi's economy.			
Policies:			
1) Support and assist in the promotion of Hawaiʻi's visitor attractions and facilities.			**X**
2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaiʻi's people.			**X**
3) Improve the quality of existing visitor destination areas.			**X**
4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			**X**
5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaiʻi's people.			**X**
6) Provide opportunities for Hawaiʻi's people to obtain job training and education that will allow for upward mobility within the visitor industry.			**X**
7) Foster a recognition of the contribution of the visitor industry to Hawaiʻi's economy and the need to perpetuate the aloha spirit.			**X**
8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaiʻi's cultures and values.			**X**
Discussion*:* As envisioned, Project Kamoleao has no direct relationship to the visitor industry.			
HRS § 226-9: Objective and policies for the economy – federal expenditures			
Objective: Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaiʻi's economy.			
Policies:			
1) Encourage the sustained flow of federal expenditures in Hawaiʻi that generates long-term government civilian employment.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
2) Promote Hawaiʻi's supportive role in national defense.			**X**
3) Promote the development of federally supported activities in Hawaiʻi that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaiʻi's environment.	**X**		
4) Increase opportunities for entry and advancement of Hawaiʻi's people into federal government service.			**X**
5) Promote federal use of local commodities, services, and facilities available in Hawaiʻi.			**X**
6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaiʻi.			**X**
7) Pursue the return of federally controlled lands in Hawaiʻi that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			**X**
***Discussion**:* Project Kamoleao does not relate to national defense, Federal government service or other national concerns noted above. However, the Master Plan for Project Kamoleao (1) assumes that PHHLCA/PCA will seek various public and private sources of funding and that it will have an appropriate federally tax-exempt entity available on a timely basis to carry out this conceptual plan, and (2) includes incubator kitchen facilities at the Community Center that are proposed to encourage small businesses enterprises, and a Health & Wellness Center targeting needs of the native Hawaiian community, thereby supporting community needs and respecting the statewide concern of supporting economic self-sufficiency and wellness of its neighbor island populations.			
HRS § 226-10: Objectives and policies for the economy – potential growth and innovative activities.			
Objective: Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth activities that serve to increase and diversify Hawaiʻi's economic base.			
Policies:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaiʻi's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.	**X**		
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaiʻi through the export of services or products or substitution of imported services or products;			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.	**X**		
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.	**X**		
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus;			**X**
(6) Expand Hawaiʻi's capacity to attract and service international programs and activities that generate employment for Hawaiʻi's people.			**X**
(7) Enhance and promote Hawaiʻi's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.			**X**
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste.			**X**
(9) Promote Hawaiʻi's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State.			**X**
(10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawaiʻi's social, economic, physical, and environmental objectives.			**X**
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.			**X**
(12) Develop, promote, and support research and educational and training programs that will enhance Hawaiʻi's ability to attract and develop economic activities of benefit to Hawaii.			**X**
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaiʻi.			**X**
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaiʻi's social, economic, physical, and environmental objectives.			**X**
(15) Increase research and development of businesses and services in the telecommunications and information industries.			**X**
(16) Foster the research and development of non-fossil fuel and energy efficient modes of transportation.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(17) Recognize and promote health care and health care information technology as growth industries.	**X**		
***Discussion**:* Project Kamoleao is envisioned to assist both farmers and entrepreneurs by offering commercial kitchen(s) in which to produce and market value-added crops and other innovative products. It also includes a Health & Wellness Center to promote health care and related services for the benefit of community members.			
HRS § 226-10.5: Objectives and policies for the economy – information industry			
Objective: Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaiʻi as a leader in broadband and wireless communications and applications in the Pacific Region.			
Policies:			
(1) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaiʻi to accommodate future growth in the information industry;			**X**
(2) Facilitate the development of new business and service ventures in the information industry which will provide employment opportunities for the people of Hawaiʻi;			**X**
(3) Encourage greater cooperation between the public and private sectors in developing and maintaining a well- designed information industry;			**X**
(4) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaiʻi's people;			**X**
(5) Provide opportunities for Hawaiʻi's people to obtain job training and education that will allow for upward mobility within the information industry;			**X**
(6) Foster a recognition of the contribution of the information industry to Hawaiʻi's economy; and			**X**
(7) Assist in the promotion of Hawaiʻi as a broker, creator, and processor of information in the Pacific.			**X**
***Discussion**:* As envisioned, Project Kamoleao has no direct relationship to the information industry.			
HRS § 226-11: Objectives and policies for the physical environment – land-based, shoreline, and marine resources.			
Objectives: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaiʻi's scenic assets, natural beauty, and multi-cultural/historical resources.			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(1) Prudent use of Hawaiʻi's land-based, shoreline, and marine resources.			**X**
(2) Effective protection of Hawaiʻi's unique and fragile environmental resources.			**X**
Policies:			
(1) Exercise an overall conservation ethic in the use of Hawaiʻi's natural resources.			**X**
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.			**X**
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	**X**		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	**X**		
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			**X**
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaiʻi.			**X**
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			**X**
(8) Pursue compatible relationships among activities, facilities, and natural resources.	**X**		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.			**X**

Discussion*:* Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *puʻuhonua* and healing for Panaʻewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. Given this feature, other uses, especially income-generating uses, were sited to preserve the character of the central area. Kamoleao's frontage on Railroad Avenue and alongside the service entrance to The Home Depot to its north provides an opportunity to develop additional income-generating facilities in an area that can be visually and functionally shielded from the rest of Project Kamoleao. Landscaping and parking along the southern edge of the proposed ±1.4 acre site would provide further buffer from the *puʻuhonua* and natural areas of Kamoleao.

Any structures that are part of Project Kamoleao will be designed and landscaped to be compatible with the character of the surrounding area.

In addition, a Hawaiian *ʻōhiʻa* rainforest theme is desired. This will help to assure a cohesive and visually unified landscape theme throughout the Project Site, helping to minimize the appearance of an "old" and "new" part of Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically adapted plant species. *ʻŌhiʻa*, *kopiko*, *kukui*, and *hala* are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs may grow in this forest or have potential to grow in the Kamoleao microclimate.

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-12: Objectives and policies for the physical environment – scenic, natural beauty, and historic resources.			
Objective: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaiʻi's scenic assets, natural beauty, and multi-cultural/historical resources.			
Policies:			
(1) Promote the preservation and restoration of significant natural and historic resources.			**X**
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			**X**
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.			**X**
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaiʻi's ethnic and cultural heritage.			**X**
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	**X**		
Discussion*:* Any structures that are part of Project Kamoleao will be designed and landscaped to be compatible with the character of the surrounding area. Project Kamoleao is envisioned to include the restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces to provide places of refuge, *puʻuhonua* and healing for Panaʻewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space.			
HRS § 226-13: Objectives and policies for the physical environment – land, air, and water quality.			
Objectives: Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:			
(1) Maintenance and pursuit of improved quality in Hawaiʻi's land, air, and water resources.	**X**		
(2) Greater public awareness and appreciation of Hawaiʻi's environmental resources.	**X**		
Policies:			
(1) Foster educational activities that promote a better understanding of Hawaiʻi's limited environmental resources.	**X**		
(2) Promote the proper management of Hawaiʻi's land and water resources.	**X**		
(3) Promote effective measures to achieve desired quality in Hawaiʻi's surface, ground, and coastal waters.	**X**		

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaiʻi's people.	**X**		
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			**X**
(6) Encourage design and construction practices that enhance the physical qualities of Hawaiʻi's communities.	**X**		
(7) Encourage urban developments in close proximity to existing services and facilities.	**X**		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaiʻi's people, their cultures and visitors.	**X**		
***Discussion**:* Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *puʻuhonua* and healing for Panaʻewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. Given this feature, other uses, especially income-generating uses, were sited to preserve the character of the central area. Kamoleao's frontage on Railroad Avenue and alongside the service entrance to The Home Depot to its north provides an opportunity to develop additional income-generating facilities in an area that can be visually and functionally shielded from the rest of Project Kamoleao. Landscaping and parking along the southern edge of the proposed ±1.4 acre site would provide further buffer from the *puʻuhonua* and natural areas of Kamoleao. Any structures that are part of Project Kamoleao will be designed and landscaped to be compatible with the character of the surrounding area. All non-traditional structures will be designed to meet the requirements of the International Building Code. In addition, a Hawaiian *ʻōhiʻa* rainforest theme is desired. This will help to assure a cohesive and visually unified landscape theme throughout the Project Site, helping to minimize the appearance of an "old" and "new" part of Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically adapted plant species. *ʻŌhiʻa*, *kopiko*, *kukui*, and *hala* are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs may grow in this forest or have potential to grow in the Kamoleao microclimate			
HRS § 226-14: Objective and policies for facility systems – in general			
Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.			
Policies:			
(1) Accommodate the needs of Hawaiʻi's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			**X**
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			**X**
(F) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			**X**
***Discussion**:* While Project Kamoleao will not have a direct impact on improving major State facilities, it will entail improvements to on-site infrastructure.			
HRS § 226-15: Objectives and policies for facility systems – solid and liquid wastes.			
Objectives: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	**X**		
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.	**X**		
Policies:			
(a) Encourage the adequate development of sewerage facilities that complement planned growth.			**X**
(b) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.	**X**		
(c) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			**X**
***Discussion**:* Wastewater would be handled by an Individual Wastewater System (IWS) for each Phase or other sub-area of the plan. These wastewater systems shall be sized to accommodate the wastewater generated from each phase or area. 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, Project Kamoleao will generate solid waste related to daily use and operation. To minimize waste, recycling bins should be provided for at the various proposed facilities. Waste that cannot be recycled will be disposed of at the South Hilo Sanitary Landfill. The disposal of nonhazardous solid waste should conform to applicable provisions under Chapter 11-58.1, HAR ("Solid Waste Management Control") and the burning of such waste on- or off-site shall be prohibited.			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-16: Objectives and policies for facility systems – water.			
Objective: Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.			
Policies:			
(1) Coordinate development of land use activities with existing and potential water supply.	**X**		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			**X**
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			**X**
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			**X**
(5) Support water supply services to areas experiencing critical water problems.			**X**
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			**X**
Discussion*:* Project Kamoleao will not affect existing water facility systems, however, Project Kamoleao will include coordination with the State Department of Land and Natural Resources Division of Water and Land Management and the Hawaiʻi County Department of Water Supply.			
HRS § 226-17: Objectives and policies for facility systems – transportation.			
Objective: 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:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.			**X**
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			**X**
Policies:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;			**X**
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;			**X**
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			**X**
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;			**X**
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;			**X**
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;			**X**
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			**X**
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;			**X**
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaiʻi's natural environment;			**X**
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;			**X**
(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			**X**
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			**X**
***Discussion**:* Project Kamoleao will not affect the State's objectives and policies regarding transportation.			
HRS § 226-18: Objectives and policies for facility systems – energy.			
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:			
1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			**X**
2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
3) Greater energy security in the face of threats to Hawaiʻi's energy supplies and systems; and			**X**
4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.			**X**
Policies:			
1) Support research and development as well as promote the use of renewable energy sources;			**X**
2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			**X**
3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;			**X**
4) Promote all cost-effective conservation of power and fuel supplies through measures including:			**X**
(A) Development of cost-effective demand-side management programs;			**X**
(B) Education; and			**X**
(C) Adoption of energy-efficient practices and technologies.	**X**		
(D) Increasing energy efficiency and decreasing energy use in public infrastructure.			**X**
5) Ensure to the extent that new supply-side resources are needed, the development or expansion of energy systems utilizes the least-cost energy supply option and maximizes efficient technologies;			**X**
6) Support research, development, and demonstration of energy efficiency, load management, and other demand-side management programs, practices, and technologies;			**X**
7) Promote alternate fuels and energy efficiency by encouraging diversification of transportation modes and infrastructure;			**X**
8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications;			**X**
9) Support actions that reduce, avoid, or sequester Hawaiʻi's greenhouse gas emissions through agriculture and forestry initiatives;			**X**
10) Provide priority handling and processing for all state and county permits required for renewable energy projects;			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and			**X**
12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaiʻi.			**X**
***Discussion**:* Project Kamoleao has no relationship to energy development, although energy-efficient design will be encouraged to promote environmental benefits and reduce operational costs.			
HRS § 226-18.5: Objectives and policies for facility systems—telecommunications.			
Objective: Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.			
Policies:			
(1) Facilitate research and development of telecommunications systems and resources;			**X**
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			**X**
(3) Promote efficient management and use of existing telecommunications systems and services; and			**X**
(4) Facilitate the development of education and training of telecommunications personnel.			**X**
***Discussion**:* Project Kamoleao will have no impact on telecommunications.			
HRS § 226-19: Objectives and policies for socio-cultural advancement – housing.			
Objectives: Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
(1) Greater opportunities for Hawaiʻi's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaiʻi's population.			**X**
(2) The orderly development of residential areas sensitive to community needs and other land uses.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaiʻi's people.			**X**
Policies:			
(1) Effectively accommodate the housing needs of Hawaiʻi's people.			**X**
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			**X**
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			**X**
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			**X**
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			**X**
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			**X**
(7) Foster a variety of lifestyles traditional to Hawaiʻi through the design and maintenance of neighborhoods that reflect the culture and values of the community.			**X**
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaiʻi.			**X**
Discussion: Project Kamoleao does not include and is not expected to directly impact housing.			
HRS § 226-20: Objectives and policies for socio-cultural advancement – health			
Objectives: Planning for the Site's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.	**X**		
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaiʻi's communities.			**X**
Policies:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.	**X**		
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.	**X**		

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.	**X**		
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.	**X**		
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.	**X**		
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			**X**
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.	**X**		
***Discussion**:* Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa, with services and facilities also made available to the community at large, as available.			
HRS § 226-21: Objectives and policies for socio-cultural advancement – education.			
Objectives: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.			
Policies:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	**X**		
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.	**X**		
(3) Provide appropriate educational opportunities for groups with special needs.	**X**		
(4) Promote educational programs which enhance understanding of Hawaiʻi's cultural heritage.	**X**		
(5) Provide higher educational opportunities that enable Hawaiʻi's people to adapt to changing employment demands.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.	**X**		
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			**X**
(8) Emphasize quality educational programs in Hawaiʻi's institutions to promote academic excellence.			**X**
(9) Support research programs and activities that enhance the education programs of the State.			**X**
***Discussion**:* Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, **educational success**, economic self-sufficiency, and cultural regeneration in Panaʻewa. A community center that is prioritized for the benefit of the Panaʻewa Homestead community has always been a driving force for interest in Kamoleao. It should provide a permanent office space for PHHLCA/PCA for administrative meetings, and a meaningful gathering place to **educate**, support, and nurture the Panaʻewa Homestead community, also benefiting its neighboring communities as possible. This facility is identified as high priority and has always been targeted as an initial or first phase development. The community center has been envisioned as a multi-use space where a variety of community events, **educational classes**, health services, cultural activities, and private celebrations or gatherings could take place.			
HRS § 226-22: Objective and policies for socio-cultural advancement – social services			
Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.			
Policies:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			**X**
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.	**X**		
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaiʻi's communities.			**X**
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.	**X**		

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			**X**
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			**X**
***Discussion**:* Project Kamoleao has no direct relationship to the social services described above, however, Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa.			
HRS § 226-23: Objectives and policies for socio-cultural advancement – leisure.			
Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.			
Policies:			
(1) Foster and preserve Hawaiʻi's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.	**X**		
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			**X**
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.	**X**		
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.			**X**
(5) Ensure opportunities for everyone to use and enjoy Hawaiʻi's recreational resources.			**X**
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.	**X**		
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaiʻi's people.	**X**		
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			**X**
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaiʻi's population to participate in the creative arts.			**X**
(10) Assure adequate access to significant natural and cultural resources in public ownership.			**X**
***Discussion**:* Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa. A central ±2.2 acre site is			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
proposed to be developed as a Health & Wellness Complex. The Health & Wellness Complex is envisioned as an approximately 22,650 gross square foot, single-story building housing both traditional native as well as western medical, healing and wellness providers along with social services and native Hawaiian agency office headquarters, combining office space and health and wellness concepts expressed in the Planning Framework. Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *puʻuhonua* and healing for Panaʻewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. A *hula pā* and lawn is envisioned to serve as a more formal outdoor performance and ceremony area that could feature a raised grassed performance platform. The area surrounding the *hula pā* is seen to be framed by clusters of small to medium canopy trees and boulders.			
HRS § 226-24: Objective and policies for socio-cultural advancement – individual rights and personal well-being.			
Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.			
Policies:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			**X**
(2) Uphold and protect the national and state constitutional rights of every individual.			**X**
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			**X**
(4) Ensure equal opportunities for individual participation in society.			**X**
Discussion*:* Project Kamoleao has no direct relationship to the objective and policies for socio-cultural advancement – individual rights and personal well-being described above.			
HRS § 226-25: Objectives and policies for socio-cultural advancement – culture.			
Objective: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaiʻi's people.			
Policies:			
(1) Foster increased knowledge and understanding of Hawaiʻi's ethnic and cultural heritages and the history of Hawaiʻi.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaiʻi's people and which are sensitive and responsive to family and community needs.	**X**		
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaiʻi.			**X**
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaiʻi's people and visitors.			**X**
Discussion: Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa. Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *puʻuhonua* and healing for Panaʻewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. A *hula pā* and lawn is envisioned to serve as a more formal outdoor performance and ceremony area that could feature a raised grassed performance platform. The area surrounding the *hula pā* is seen to be framed by clusters of small to medium canopy trees and boulders.			
HRS § 226-26: Objectives and policies for socio-cultural advancement – public safety.			
Objectives: Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.			**X**
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			**X**
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaiʻi's people.			**X**
Policies related to public safety:			
(1) Ensure that public safety programs are effective and responsive to community needs.			**X**
(2) Encourage increased community awareness and participation in public safety programs.			**X**
Policies related to criminal justice:			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			**X**
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			**X**
Policies related to emergency management:			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.			**X**
(2) Enhance the coordination between emergency management programs throughout the State.			**X**
***Discussion**:* Project Kamoleao has no direct relationship to the objective and policies for socio-cultural advancement, criminal justice administration or public safety as described above.			
HRS § 226-27: Objectives and policies for socio-cultural advancement – government.			
Objectives: Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.			**X**
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			**X**
Policies:			
(1) Provide for necessary public goods and services not assumed by the private sector.			**X**
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			**X**
(3) Minimize the size of government to that necessary to be effective.			**X**
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.			**X**
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			**X**
(6) Provide for a balanced fiscal budget.			**X**
(7) Improve the fiscal budgeting and management system of the State.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			**X**
***Discussion**:* Project Kamoleao has no direct relationship to the objective and policies for socio-cultural advancement – government described above.			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART II. FUNCTIONAL PLANS **(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)**		**S**	**N/S**	**N/A**
Agriculture Functional Plan				
Objective A:	Achievement of increased agricultural production and growth through cultural and management practices.			X
Objective B:	Achievement of an orderly agricultural marketing system through product promotion and industry organization.			X
Objective C:	Achievement of increased consumption of and demand for Hawaiʻi's agricultural products through consumer education and product quality.	X		
Objective D:	Achievement of optimal contribution by agriculture to the State's economy.	X		
Objective E:	Achievement of adequate capital, and knowledge of its proper management, for agricultural development.			X
Objective F:	Achievement of increased agricultural production and growth through pest and disease controls.			X
Objective G:	Achievement of effective protection and improved quality of Hawaiʻi's land, water, and air.			X
Objective H:	Achievement of productive agricultural use of lands most suitable and needed for agriculture.			X
Objective I:	Achievement of efficient and equitable provision of adequate water for agricultural use.			X
Objective J:	Achievement of maximum degree of public understanding and support of agriculture in Hawaiʻi.			X
Objective K:	Achievement of adequate supply of properly trained labor for agricultural needs.			X

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART II. FUNCTIONAL PLANS **(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)**		**S**	**N/S**	**N/A**
Objective L:	Achievement of adequate transportation services and facilities to meet agricultural needs.			X
Objective M:	Achievement of adequate support services and infrastructure to meet agricultural needs.			X
Discussion: Although Project Kamoleao is in an urbanized area and has been designated for urban use by both State and County land classifications, its offering of commercial kitchens could support agricultural ventures and their contributions to the State's economy by providing additional facilities for value-added production, such as the proposed commercial kitchens in the Community Center. In other respects, the objectives of the Agriculture Functional Plan are not directly applicable to Project Kamoleao. The Applicant also notes that in its July 5, 2018 comment letter on the Draft EA for Project Kamoleao (see Appendix G), the Keaukaha Panaʻewa Farmers Association expressed its full support for Project Kamoleao as the first focused mixed-use project initiated by and for its community.				
Conservation Lands Functional Plan				
Objective IA:	Establishment of data bases for inventories of existing lands and resources.			X
Objective IB:	Establishment of criteria for management of land and natural resources.			X
Objective IIA:	Establishment of plans for natural resources and land management.	X		
Objective IIB:	Protection of fragile or rare natural resources.			X
Objective IIC:	Enhancement of natural resources.			X
Objective IID:	Appropriate development of natural resources.			X
Objective IIE:	Promotion and marketing of appropriate natural resources designated for commercial development.			X
Objective IIF:	Increase enforcement of land and natural resource use laws and regulations.			X
Objective IIIA:	Develop and implement conservation education programs for the general public and visitors.			X
Objective IIIB:	Increase access to land and natural resource data by the public and increase cooperation between agencies by making access to land and natural resource information more efficient.			X
Discussion: The objectives of the Conservation Lands Functional Plan are not applicable as the property is not within the Conservation District and is zoned for urban use. However, the Project Kamoleao plan proposes to improve a natural *puʻuhonua* area at the center of the Project Site.				

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART II. FUNCTIONAL PLANS **(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)**	**S**	**N/S**	**N/A**
Education Functional Plan			
Objective A (1): **Academic Excellence.** Emphasize quality educational programs in Hawaiʻi's institutions to promote academic excellence.			X
Objective A (2): **Basic Skills.** Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning. Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.			X
Objective A (3): **Education Workforce.** Initiate efforts to improve the quality of education by improving the capabilities of the education workforce.			X
Objective A (4): **Services and Facilities.** Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.	X		
Objective B (1): **Alternatives for Funding and Delivery.** Explore alternatives for funding and delivery of educational services to improve the overall quality of education.			X
Objective B (2): **Autonomy and flexibility.** Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			X
Objective B (3): **Increased Use of Technology.** Increase and improve the use information technology in education and encourage programs which increase the public's awareness and understanding of the impact of information technologies on our lives.			X
Objective B (4): **Personal Development.** Support education programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	X		
Objective B (5): **Students with Special Needs.** Provide appropriate educational opportunities for groups with special needs.			X
Objective C (1): **Early Childhood Education.** Develop resources and programs for early childhood education.			X
Objective C (2): **Hawaiʻi's Cultural Heritage.** Promote educational programs which enhance understanding of Hawaiʻi's cultural heritage.	X		
Objective C (3): **Research Programs and [Communication] Activities.** Support research programs and activities that enhance the education programs of the State.			X
Discussion: As stated in Section 2.2, a key goal of Project Kamoleao is to support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by (1) developing a gathering center and place of pride and identity for the community, (2)			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART II. FUNCTIONAL PLANS **(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)**		**S**	**N/S**	**N/A**
providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities, (3) enhancing traditional cultural vibrancy as well as modern learning opportunities, and (4) offering a *puʻuhonua* (place of refuge), and a place where traditional healing may be practiced. These goals are envisioned to be served by education and training programs that may be established at the planned Community Center, Health & Wellness Complex, and/or within the *puʻuhonua.* While the primary intent of this community association-initiated project is to serve its native Hawaiian community, such facilities will also be available to the general community.				
Employment Functional Plan				
Objective A:	Improve the qualifications of entry-level workers and their transition to employment.	X		
Objective B:	Develop and deliver education, training and related services to ensure and maintain a quality and competitive workforce.	X		
Objective C:	Improve labor exchange.			X
Objective D:	Improve the quality of life for workers and families.	X		
Objective E:	Improve planning of economic development, employment and training activities.	X		
Discussion: As stated in Section 2.2, a key goal of Project Kamoleao is to support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by (1) developing a gathering center and place of pride and identity for the community, (2) providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities, (3) enhancing traditional cultural vibrancy as well as modern learning opportunities, and (4) offering a *puʻuhonua* (place of refuge), and a place where traditional healing may be practiced. Project Kamoleao envisions that the planned Community Center and/or Health & Wellness Complex will include employment- and workforce development-related programs for the benefit of the community. While the primary intent of this community association-initiated project is to serve its native Hawaiian community, facilities will also be available to the general community.				
Energy Functional Plan				
Objective A:	Moderate the growth in energy demand through conservation and energy efficiency.	X		
Objective B:	Displace oil and fossil fuels through alternate and renewable energy resources.			X
Objective C:	Promote energy education and legislation.			X
Objective D:	Support and develop an integrated approach to energy development and management.			X
Objective E:	Ensure State's abilities to implement energy emergency actions immediately in event of fuel supply disruptions. Ensure essential public services are maintained and provisions are made to alleviate economic and personal hardships which may arise.			X

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Discussion: While most of the objectives of the Energy Functional Plan are not directly applicable, Project Kamoleao will meet State and County requirements for energy efficiency and conservation, and address BMPs in these areas where feasible.				
Health Functional Plan				
Objective 1:	Health promotion and disease prevention. Reduction in the incidence, morbidity and mortality associated with preventable and controllable conditions.	X		
Objective 2:	Prevention and control of communicable diseases. Reduction in the incidence, morbidity, and mortality associated with infectious and communicable diseases.	X		
Objective 3:	Health needs of special populations with impaired access to health care. Increased availability and accessibility of health services for groups with impaired access to health care programs.	X		
Objective 4:	Community hospitals system. Development of a community hospital system which is innovative, responsive and supplies high quality care to the constituencies it serves.			X
Objective 5:	Environmental programs to protect and enhance the environment. Continued development of new environmental protection and health services programs to protect, monitor, and enhance the quality of life in Hawaiʻi.	X		
Objective 6:	DOH leadership. To improve the Department of Health's ability to meet the public health need of the State of Hawaiʻi in the most appropriate, beneficial and economical way possible.			X
Discussion: As stated in Section 2.2, a key goal of Project Kamoleao is to support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by (1) developing a gathering center and place of pride and identity for the community, (2) providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities, (3) enhancing traditional cultural vibrancy as well as modern learning opportunities, and (4) offering a *puʻuhonua* (place of refuge), and a place where traditional healing may be practiced. In these respects, the proposed developments at Project Kamoleao, particularly its planned Community Center and its Health & Wellness Complex, are intended to promote community health and diminish the incidences of disease, particularly for the native Hawaiian community, where health outcomes are demonstrably less successful than for other special populations of the State. While the primary intent of this community association-initiated project is to serve its native Hawaiian community, facilities will also be available to the general community.				

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Higher Education Functional Plan				
Objective A:	A number and variety of postsecondary education institutions sufficient to provide the diverse range of programs required to satisfy individual and societal needs and interests.			X
Objective B:	The highest level of quality, commensurate with its mission and objectives, of each educational, research, and public service program offered in Hawaiʻi by an institution of higher education.			X
Objective C:	Provide appropriate educational opportunities for all who are willing and able to benefit from postsecondary education.	X		
Objective D:	Provide financing for postsecondary education programs sufficient to ensure adequate diversity, high quality, and wide accessibility.			X
Objective E:	Increase program effectiveness and efficiency through better coordination of educational resources.			X
Discussion: Most of the objectives of the Higher Education Functional Plan are not directly applicable to Project Kamoleao. However, the location and community educational focus of Project Kamoleao will likely present future opportunities for training and/or educational collaboration with the University of Hawaiʻi at Hilo and/or Hawaiʻi Community College. In fact, a previous version of the current plan for this site, known as the Kamoleao Laulima Community Resource Center (KLCRC), was to have been developed in partnership with Hawaiʻi Community College. This previous plan is described further in Section 6.2.				
Historic Preservation Functional Plan				
Objective A:	Identification of historic properties.			X
Objective B:	Protection of historic properties.			X
Objective C:	Management and treatment of historic properties.			X
Objective D:	Provision of adequate facilities to preserve historic resources.			X
Objective E:	The establishment of programs to collect and conserve historic records, artifacts, and oral histories and to document and perpetuate traditional arts, skills, and culture.			X
Objective F:	Provision of better access to historic information.			X
Objective G:	Enhancement of skills and knowledge needed to preserve historical resources.			X
Discussion: As presented in Section 4.1 (Archeological and Historic Resources), an archeological inventory survey (AIS) of the 12.7-acre Project Site was conducted in December 2008 Kamoleao in compliance with Chapter 6E-8, HRS "Historic Preservation," to determine the presence/absence of archaeological sites. The AIS found that almost the entire Project Site had been altered, and no historic sites or features were identified. Due to the absence of sites, the findings were documented in an Archaeological Assessment dated January 2009,				

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pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR (Appendix B). Therefore, the objectives of the Historic Preservation Functional Plan are not seen to be applicable to Project Kamoleao.				
Housing Functional Plan				
Objective A:	Increase and sustain the supply of permanent rental housing that is affordable and accessible to Hawaii residents, particularly those with incomes at or below 80% AMI. Attain the legislative goal of 22,500 rental housing units by 2026.			X
Objective B:	Increase the homeownership rate.			X
Objective C:	Address barriers to residential development.			X
Objective D:	Maintain a statewide housing data system for use by public and private agencies engaged in the provision of housing.			X
Discussion: Project Kamoleao does not include any housing and therefore the objectives of the Housing Functional Plan are not directly applicable.				
Human Services Functional Plan				
Objective A:	To sustain and improve current elder abuse and neglect services.			X
Objective B:	To increase cost-effective, high quality home and community-based services.	X		
Objective C:	To increase home-based services to keep children in their homes and to increase placement resources for those children who must be temporarily or permanently removed from their homes, due to abuse or neglect.			X
Objective D:	To address factors that contribute to child abuse and other forms of family violence.			X
Objective E:	To provide affordable, accessible, and quality child care.	X		
Objective G:	To provide AFDC recipients with a viable opportunity to become independent of the welfare system.			X
Objective H:	To facilitate client access to human services.	X		
Objective I:	To eliminate organizational barriers which limit client access to human services.	X		

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Discussion: As stated in Section 2.2, a key goal of Project Kamoleao is to support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by (1) developing a gathering center and place of pride and identity for the community, (2) providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities, (3) enhancing traditional cultural vibrancy as well as modern learning opportunities, and (4) offering a *puʻuhonua* (place of refuge), and a place where traditional healing may be practiced. The project elements as proposed are intended to directly serve the objectives of many of the Human Services Functional Plan, including increasing cost-effective, high quality community-based services, and improving access to human services and eliminating organizational barriers that limit such access. Services to be provided in the planned Community Center and/or Health & Wellness Complex may also include programs addressing abuse and neglect, child placement services, family violence and dependence on the welfare system. Such programming will be determined as each phase is developed in the future. While the primary intent of this community association-initiated project is to serve its native Hawaiian community, facilities will also be available to the general community.				
Recreation Functional Plan				
Objective I.A:	Address the problem of saturation of the capacity of beach parks and nearshore waters.			X
Objective I.B:	Reduce the incidence of ocean recreation accidents.			X
Objective I.C:	Resolve conflicts between different activities at heavily used ocean recreation areas.			X
Objective I.D:	Provide adequate boating facilities. Balance the demand for boating facilities against the need to protect the marine environment from potential adverse impacts.			X
Objective II.A:	Plan, develop, and promote recreational activities and facilities in mauka and other areas to provide a wide range of alternatives.	X		
Objective II.B:	Meet special recreation needs of the elderly, the disabled, woman, single-parent families, immigrants, and other groups.	X		
Objective II.C:	Improve and expand the provision of recreation facilities in urban areas and local communities.	X		
Objective III.A:	Prevent the loss of access to shoreline and upland recreation areas due to new developments.			X
Objective III.B:	Resolve the problem of landowner liability that seriously hampers public access over private lands.			X
Objective III.C:	Increase access to State Forest Reserve lands over federal property, leased State lands, and other government lands.			X
Objective III.D:	Acquire, develop, and manage additional public access ways.			X
Objective IV.A:	Promote a conservation ethic in the use of Hawaiʻi's recreational resources.	X		

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Objective IV.B:	Prevent degradation of the marine environment.	X		
Objective IV.C:	Improve the State's enforcement capabilities.			X
Objective IV.D:	Mitigate adverse impacts of tour helicopters on the quality of recreational experiences in wilderness areas.			X
Objective V.A:	Properly maintain existing parks and recreation areas.			X
Objective V.B:	Promote interagency coordination and cooperation to facilitate sharing of resources, joint development efforts, clarification of responsibilities and jurisdictions, and improvements in enforcement capabilities.			X
Objective V.C:	Assure adequate support for priority outdoor recreation programs and facilities.			X
Objective VI.A:	Increase recreational access and opportunities in Hawaiʻi's wetlands.			X
Objective VI.B:	Develop an adequate information base to assist the County planning departments and other regulatory agencies in make decisions regarding wetlands.			X
Objective VI.C:	Assure the protection of the most valuable wetlands in the state.			X
Discussion: Project Kamoleao's Community Center, *puʻuhonua*, paths, trails and open spaces will provide access to recreational activities for residents in this urban environment of South Hilo, including the elderly, the disabled, woman, single-parent families, immigrants, and other groups. While the Project Site is not close to the shoreline and does not include wetlands, it will be designed and built in compliance with all applicable Federal, State, and County regulations pertaining to storm water management, grading ordinances, water quality rules, erosion and sediment control, and LID requirements, and the DOH NPDES permit program to protect downstream marine waters. Development of Project Kamoleao will also implement BMPs during construction and low impact development (LID) design where feasible.				
Tourism Functional Plan				
Objective I.A:	Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry.			X
Objective II.A:	Development and maintenance of well-designed visitor facilities and related developments which are sensitive to the environment, sensitive to neighboring communities and activities, and adequately serviced by infrastructure and support services.			X
Objective III.A:	Enhancement of respect and regard for the fragile resources which comprise Hawaiʻi's natural and cultural environment. Increased preservation and maintenance efforts.			X

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Objective IV.A:	Support of Hawaiʻi's diverse range of lifestyles and natural environment.			X
Objective IV.B:	Achievement of mutual appreciation among residents, visitors, and the visitor industry.			X
Objective V.A:	Development of a productive workforce to maintain a high-quality visitor industry.			X
Objective V.B:	Enhancement of career and employment opportunities in the visitor industry.			X
Objective VI.A:	Maintenance of a high customer awareness of Hawaiʻi as a visitor destination in specific desired market segments.			X
Discussion: The objectives of the Tourism Functional Plan are not directly applicable to Project Kamoleao; however, future workforce programs, if established at Project Kamoleao, could enhance career and employment opportunities in the visitor industry, and support Hawaiʻi's diverse range of lifestyles and natural environments.				
Transportation Functional Plan				
Objective I.A:	Expansion of the transportation system.			X
Objective I.B:	Reduction of travel demand through zoning and decentralization initiatives.			X
Objective I.C:	Management of existing transportation systems through a program of transportation systems management (TSM).			X
Objective I.D:	Identification and reservation of lands and rights-of-way required for future transportation improvements.			X
Objective I.E:	Planning and designing State highways to enhance inter-regional mobility.			X
Objective I.F:	Improving and enhancing transportation safety.	X		
Objective I.G:	Improved transportation maintenance programs.			X
Objective I.H:	Ensure that transportation facilities are accessible to people with disabilities.	X		
Objective II.A:	Development of a transportation infrastructure that supports economic development initiatives.	X		
Objective III.B:	Expansion of revenue bases for transportation improvements.			X
Objective IV.A:	Providing educational programs.			X
Discussion: Project Kamoleao is conveniently located in an urbanized area, and bordered on three sides by existing streets and sidewalks (accessible by motorized vehicles, bicycles and pedestrians). The conceptual plans for Project Kamoleao include improvements to Pūainako Street, and enhancement of multimodal movement				

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opportunities onsite as well as in the immediate vicinity. The location of community and recreational facilities within a residential community are intended to reduce stress, allow more family and recreation time, lessen pollution, and improve overall quality of life for Panaʻewa area residents and others nearby, by reducing the need for regional vehicular travel. A transportation assessment (TA) prepared by Fehr & Peers (see Appendix E) acknowledges that the projected afternoon peak hour volumes generated by Project Kamoleao are likely to exceed the County of Hawaiʻi guidelines for preparation of a Traffic Impact Analysis Report (TIAR). Since Project Kamoleao is expected to be developed by third party ground lessee(s), such TIAR(s) will be prepared when the specific elements of each phase are defined. This will occur well in advance of any development. Where appropriate, such TIAR(s) will evaluate the development's cumulative effects on intersections such as Kanoelehua Avenue and Pūainako Street, and shall be presented to the State of Hawaiʻi, DOT for review.				
Water Resources Development Functional Plan				
Objective A:	Enunciate State water policy and improve management framework.			X
Objective B:	Maintain the long-term availability of freshwater supplies, giving consideration to the accommodation of important environmental values.	X		
Objective C:	Improve management of floodplains.			X
Objective D:	Assure adequate municipal water supplies for planned urban growth.	X		
Objective E:	Assure the availability of adequate water for agriculture.			X
Objective F:	Encourage and coordinate with other water programs the development of self-supplied industrial water and the production of water-based energy.			X
Objective G:	Provide for the protection and enhancement of Hawaiʻi's freshwater and estuarine environment.			X
Objective H:	Improve State grant and loan procedures for water program and projects.			X
Objective I:	Pursue water resources data collection and research to meet changing needs.			X
Discussion: As discussed in Sections 3.4(Hydrology and Drainage) and 3.5 (Natural Hazards), the Project Site includes no perennial streams or surface water bodies and no known areas of local (non-stream related) flooding. According to the Federal Emergency Management Agency's Flood Insurance Rate Map, Kamoleao is in Flood Zone X, an area determined to be outside the 0.2 percent annual chance (500-year) floodplain. No base flood depths are shown within this zone. Also, as discussed in Section 4.7 (Infrastructure and Utilities), initial consultation with Department of Water Supply (DWS) indicated there is an empty meter box for this parcel that can receive a 5/8-inch domestic water meter. The DWS also indicated that the current domestic water allocation for this parcel is 1-water unit, which is equivalent to 400 gpd. Additional water units are available and shall be based on the water demand calculations for the proposed improvements as required by DWS. The Applicant or future sub-developers will coordinate with DWS and the State DLNR Engineering to incorporate Project Kamoleao's water needs into their plans, will use				

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water efficient fixtures and practices to reduce increased demands on freshwater resources, utilize alternative water sources where practicable, and implement landscape irrigation conservation BMPs endorsed by the Landscape Industry Council of Hawaiʻi.			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	**S**	**N/S**	**N/A**
HRS § 226-101: Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
HRS § 226-102: Overall direction. The State shall strive to improve the quality of life for Hawaiʻi's present and future present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, and quality education.			
HRS § 226-103: Economic priority guidelines. Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaiʻi's people and achieve a stable and diversified economy:			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			**X**
(A) Encourage investments which:			**X**
(i) Reflect long term commitments to the State;			**X**
(ii) Rely on economic linkages within the local economy;	**X**		
(iii) Diversify the economy;	**X**		
(iv) Reinvest in the local economy;	**X**		
(v) Are sensitive to community needs and priorities; and	**X**		
(vi) Demonstrate a commitment to provide management opportunities to Hawaiʻi residents.			**X**
(B) Encourage investments in innovative activities that have a nexus to the State, such as:			**X**
(i) Present or former residents acting as entrepreneurs or principals;			**X**
(ii) Academic support from an institution of higher education in Hawaiʻi;			**X**
(iii) Investment interest from Hawaiʻi residents;			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(iv) Resources unique to Hawaiʻi that are required for innovative activity; and			X
(v) Complementary or supportive industries or government programs or projects.			X
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			X
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			X
(5) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety and welfare would not be adversely affected.			X
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaiʻi's small-scale producers, manufacturers, and distributors.			X
(7) Continue to seek legislation to protect Hawaiʻi from transportation interruptions between Hawaiʻi and the continental United States.			X
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			X
(A) An industry that can take advantage of Hawaiʻi's unique location and available physical and human resources.			X
(B) A clean industry that would have minimal adverse effects on Hawaiʻi's environment.			X
(C) An industry that is willing to hire and train Hawaiʻi's people to meet the industry's labor needs at all levels of employment.			X
(D) An industry that would provide reasonable income and steady employment.			X
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaiʻi business.			X
(10) Enhance the quality of Hawaiʻi's labor force and develop and maintain career opportunities for Hawaiʻi's people through the following actions:			X

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			X
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			X
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			X
(D) Promote career opportunities in all industries for Hawaiʻi's people by encouraging firms doing business in the State to hire residents.			X
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on- the-job training opportunities.			X
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			X
Priority guidelines to promote the economic health and quality of the visitor industry:			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaiʻi's residents and visitors.			X
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.			X
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			X
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaiʻi's significant natural, scenic, historic, and cultural resources.			X
(5) Develop and maintain career opportunities in the visitor industry for Hawaiʻi's people, with emphasis on managerial positions.			X
(6) Support and coordinate tourism promotion abroad to enhance Hawaiʻi's share of existing and potential visitor markets.			X
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			X
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			X
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			X
Priority guidelines to promote the continued viability of the sugar and pineapple industries:			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			X
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaiʻi.			X
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X
Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			X
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			X
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			X
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			X
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaiʻi's agricultural community.			X
(6) Seek favorable freight rates for Hawaiʻi's agricultural products from interisland and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			X
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			X
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(10) Support the continuation of land currently in use for diversified agriculture.			X
(11) Encourage residents and visitors to support Hawaiʻi's farmers by purchasing locally grown food and food products.			X
Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			X
(2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.			X

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(3) Increase the support for research and development of economically feasible alternative water sources.			X
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			X
Priority guidelines for energy use and development:			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			X
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			X
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			X
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			X
Priority guidelines to promote the development of the information industry:			
(1) Establish an information network that will serve as the catalyst for establishing a viable information industry in Hawaiʻi.			X
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			X
(3) Encourage the development of small businesses in the information field such as software development, the development of new information systems and peripherals, data conversion and data entry services, and home or cottage services such as computer programming, secretarial, and accounting services.			X
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			X
(5) Encourage research activities, including legal research in the information and telecommunications fields.			X
(6) Support promotional activities to market Hawaiʻi's information industry services.			X
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health safety, and welfare would not be adversely affected.			X
***Discussion**:* Project Kamoleao is envisioned to assist both farmers and entrepreneurs by offering commercial kitchen(s) in which to produce and market value-added crops and other innovative products. Project Kamoleao is also envisioned to offer classes and training aimed at promoting the economic, social and cultural well-being of this neighbor island community. This component of Project Kamoleao would supportive of the following State Economic Priority Guidelines:			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
-"Rely on economic linkages within the local economy;" -"Diversify the economy;" -"Reinvest in the local economy;" - "Are sensitive to community needs and priorities…"			
HRS § 226-104: Population growth and land resources priority guidelines.			
Priority guidelines to effect desired statewide growth and distribution:			
1) Encourage planning and resource management to ensure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaiʻi's people.			**X**
2) Manage a growth rate for Hawaiʻi's economy that will parallel future employment needs for Hawaiʻi's people.			**X**
3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			**X**
4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.	**X**		
5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			**X**
6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			**X**
7) Support the development of high technology parks on the neighbor islands.			**X**
Priority guidelines for regional growth distribution and land resource utilization:			
• Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.	**X**		
• Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			**X**
• Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			**X**
• Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
• In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.	X		
• Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.	X		
• Pursue rehabilitation of appropriate urban areas.			X
• Support the redevelopment of Kakaʻako into a viable residential, industrial, and commercial community.			X
• Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			X
• Identify critical environmental areas in Hawaiʻi to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			X
• Identify all areas where priority should be given to preserving rural character and lifestyle.			X
• Utilize Hawaiʻi's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.	X		
• Protect and enhance Hawaiʻi's shoreline, open spaces, and scenic resources.			X

***Discussion**:* Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa. It is hoped that Project Kamoleao will attract State and Federal investments, as it would represent the promotion of economic development and private investment to one of the neighbor islands, the island of Hawaiʻi.

The Project Site is located within an existing urban area where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.

If Project Kamoleao is funded with State capital-improvement funds, it would be consistent with the State's policy to encourage location of urban development within existing urban areas.

Project Kamoleao is also anticipated to seek participation from the private sector.

Project Kamoleao also represents using Hawaiʻi's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
HRS § 226-105: Crime and criminal justice.			
Priority guidelines in the area of crime and criminal justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			**X**
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			**X**
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			**X**
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			**X**
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			**X**
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			**X**
***Discussion**:* Project Kamoleao has no direct relationship to the priority guidelines described above on crime and criminal justice.			
HRS § 226-106: Affordable housing.			
Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.			**X**
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			**X**
(3) Improve information and analysis relative to land availability and suitability for housing.			**X**
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaiʻi's low- and moderate-income households, gap-group households, and residents with special needs.			**X**
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaiʻi's people for the purchase of initial owner-occupied housing.			**X**
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			**X**

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			X
(8) Give higher priority to the provision of quality housing that is affordable for Hawaiʻi's residents and less priority to development of housing intended primarily for individuals outside of Hawaiʻi.			X
***Discussion**:* Project Kamoleao has no direct relationship to the priority guidelines described above on affordable housing.			
HRS § 226-107: Quality education.			
Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;			X
(2) Continue emphasis on general education core requirements to provide common background to students and essential support to other university programs;			X
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force;			X
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities;			X
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for:			X
(A) The electronic exchange of information;			X
(B) Statewide electronic mail; and			X
(C) Access to the Internet.			X
Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;			X
(6) Pursue the establishment of Hawaiʻi's public and private universities and colleges as research and training centers of the Pacific;			X
(7) Develop resources and programs for early childhood education;			X
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			X
(9) Strengthen and expand educational programs and services for students with special needs.			X
***Discussion**:* Project Kamoleao has no direct relationship to the priority guidelines described above on quality education.			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
HRS § 226-108: Sustainability.			
Priority guidelines and principles to promote sustainability shall include:			
(1) Encouraging balanced economic, social, community, and environmental priorities;	**X**		
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;			**X**
(3) Promoting a diversified and dynamic economy;	**X**		
(4) Encouraging respect for the host culture;	**X**		
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations	**X**		
(6) Considering the principles of the ahupuaʻa system; and			**X**
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaiʻi.			**X**
Discussion: Project Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Panaʻewa. To achieve the vision for Kamoleao, the community set forth goals at project inception, and refined these overtime as the community's involvement with Project Kamoleao evolved. The following goals seek to address the Panaʻewa Homestead community's needs and desires now and in the future. o To support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by: • Developing a gathering center and place of pride and identity for the community • Providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities. • Enhancing traditional cultural vibrancy as well as modern learning opportunities. • Offering a *puʻuhonua* (place of refuge), and one where traditional healing may be practiced. o To address these goals in an environmentally and financially sustainable manner. To extend these values, and future choices, to seven generations.			
HRS § 226-109: Climate change adaptation priority guidelines.			
Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:			

HAWAIʻI STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(1) Ensure that Hawaiʻi's people are educated, informed, and aware of the impacts climate change may have on their communities;	X		
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;			X
(3) Invest in continued monitoring and research of Hawaiʻi's climate and the impacts of climate change on the State;			X
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;	X		
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;	X		
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;			X
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;	X		
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;			X
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.	X		
Discussion: The Project is not anticipated to have any significant impact regarding climate. The Project Site would not be impacted directly by sea level rise and changes to the marine environment, since it is located away from the coast at a significant elevation (Appendix A: Figure 1) and away from any special flood hazard zone (Appendix A: Figure 15). However altered storm activity and rainfall may occur in the region could occur as a result of climate change and should be considered, as discussed further in Section 3.1 (Climate), However, steps for future mitigation should be considered for improving the longevity of water utilities and in anticipation of potentially more severe or unforeseen effects of sea level rise and climate change. The U.S. Army Corps of Engineers (USACE) has developed strategies for adaptation and resilience for changes in sea level, which can be applied to projects based on specific types of risks anticipated from changes in sea level (USACE, 2014). Additionally, as an intended focal point for native Hawaiian community gatherings, educational success, *puʻuhonua*, and cultural regeneration, Project Kamoleao itself may stimulate awareness of the impacts of climate change on communities, and of native Hawaiian traditional knowledge and practices relevant to climate change.			

HRS Chapter 344 Environmental Policy

The State Environmental Policy provides guidelines for agencies to create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai‘i. The environmental Guidelines (§344-4, HRS) suggest that insofar as practical, the development of programs consider: population; land, water, mineral, visual, air, and other natural resources; flora and fauna; parks, recreation, and open space; economic development; transportation; energy; community life and housing; education and culture; and, citizen participation.

Table 5.3 - Hawai‘i State Environmental Policy and Guidelines, Chapter 344-3 and 344-4, HRS

State Environmental Policy, Chapter 344, Hawai‘i Revised Statutes (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
STATE ENVIRONMENTAL POLICY			
§344-3 Environmental policy. It shall be the policy of the State, through its programs, authorities, and resources to:			
(1) Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai‘i.	**X**		
(2) Enhance the quality of life by:			
(A) Setting population limits so that the interaction between the natural and artificial environments and the population is mutually beneficial;			**X**
(B) Creating opportunities for the residents of Hawai‘i to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments;	**X**		
(C) Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian; and	**X**		
(D) Establishing a commitment on the part of each person to protect and enhance Hawai‘i's environment and reduce the drain on nonrenewable resources.			**X**
Discussion: Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Pana‘ewa. It is hoped that Project Kamoleao will attract State and Federal investments, as it would represent the promotion of economic development and private investment to one of the neighbor islands, the island of Hawai‘i.			

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
GUIDELINES			
§344-4 Guidelines. In pursuance of the state policy to conserve the natural resources and enhance the quality of life, all agencies, in the development of programs, shall, insofar as practicable, consider the following guidelines:			
(1) Population.			
(A) Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation;			X
(B) Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.			X
Discussion: Project Kamoleao has no direct relationship to State Environmental Guidelines for population growth.			
(2) Land, water, mineral, visual, air, and other natural resources.			
(A) Encourage management practices which conserve and fully utilize all natural resources;			**X**
(B) Promote irrigation and waste water management practices which conserve and fully utilize vital water resources;			**X**
(C) Promote the recycling of waste water;			**X**
(D) Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas;			**X**
(E) Establish and maintain natural area preserves, wildlife preserves, forest reserves, marine preserves, and unique ecological preserves;			**X**
(F) Maintain an integrated system of state land use planning which coordinates the state and county general plans;			**X**
(G) Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.			**X**
Discussion: Project Kamoleao has no direct relationship to State Environmental Guidelines for land, water, mineral, visual, air, and other natural resources.			

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) Flora and fauna.			
(A) Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard; and	**X**		
(B) Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.	**X**		
Discussion: In keeping with the plant palette that was once established at Kamoleao, a Hawaiian *'ōhi'a* rainforest theme is desired. This will help to assure a cohesive and visually unified landscape theme throughout the Project Site, helping to minimize the appearance of an "old" and "new" part of Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically adapted plant species. *'Ōhi'a*, *kopiko*, *kukui*, and *hala* are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs are known to grow in this forest or have potential to grow in the Kamoleao microclimate. In addition, while not observed on the Project Site, due to their potential to be in or to overfly the vicinity, the Project would promote several design, construction and operational measures to mitigate any potential impacts to seabirds, and to the endangered Hawaiian hoary bat and Hawaiian hawk; and additional measures to mitigate against potential spread of Rapid 'Ōhi'a Death. Such measures will be confirmed with the USFWS prior to construction, as described further in the Summary Section and Section 3.6 of this EA			
(4) Parks, recreation, and open space.			
(A) Establish, preserve and maintain scenic, historic, cultural, park and recreation areas, including the shorelines, for public recreational, educational, and scientific uses;	**X**		
(B) Protect the shorelines of the State from encroachment of artificial improvements, structures, and activities; and			**X**
(C) Promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for its people.	**X**		
Discussion: Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *pu'uhonua* and healing for Pana'ewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. These improvements would be dependent on financing. Improvements in these areas are assumed to include development and/or restoration of certain trails to standards that are Americans with Disabilities Act (ADA)-compliant, limited initial clearing and removal of invasive species, and limited planting of some native species. A *hula pā* and lawn serves as a more formal outdoor performance and ceremony area that could feature a raised grassed performance platform. The area surrounding the *hula pā* will be framed by clusters of small to medium canopy trees and boulders.			

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(5) Economic development.			
(A) Encourage industries in Hawai'i which would be in harmony with our environment;	**X**		
(B) Promote and foster the agricultural industry of the State; and preserve and conserve productive agricultural lands;	**X**		
(C) Encourage federal activities in Hawai'i to protect the environment;			**X**
(D) Encourage all industries including the fishing, aquaculture, oceanography, recreation, and forest products industries to protect the environment;			**X**
(E) Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms;			**X**
(F) Promote and foster the aquaculture industry of the State; and preserve and conserve productive aquacultural lands.			**X**
Discussion: Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Pana'ewa. Project Kamoleao will assist both farmers and entrepreneurs by including commercial kitchens to produce, market and sell value-added crops and other innovative products.			
(6) Transportation.			
(A) Encourage transportation systems in harmony with the lifestyle of the people and environment of the State;			X
(B) Adopt guidelines to alleviate environmental degradation caused by motor vehicles;			X
(C) Encourage public and private vehicles and transportation systems to conserve energy, reduce pollution emission, including noise, and provide safe and convenient accommodations for their users.			X
Discussion: Project Kamoleao has no direct relationship to State Environmental Guidelines for transportation.			
(7) Energy.			
(A) Encourage the efficient use of energy resources.	**X**		
Discussion: Project Kamoleao will include energy-efficient design to reduce operational costs.			

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(8) Community life and housing.			
(A) Foster lifestyles compatible with the environment; preserve the variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods which reflect the culture and mores of the community;	**X**		
(B) Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation;	**X**		
(C) Encourage the reduction of environmental pollution which may degrade a community;			**X**
(D) Foster safe, sanitary, and decent homes;			**X**
(E) Recognize community appearances as major economic and aesthetic assets of the counties and the State; encourage green belts, plantings, and landscape plans and designs in urban areas; and preserve and promote mountain-to-ocean vistas.	**X**		
Discussion: While Project Kamoleao does not involve housing or creating a new residential community, Kamoleao is envisioned as a focal point for native Hawaiian health services, community gatherings, educational success, economic self-sufficiency, and cultural regeneration in Pana'ewa.			
(9) Education and culture.			
(A) Foster culture and the arts and promote their linkage to the enhancement of the environment;	**X**		
(B) Encourage both formal and informal environmental education to all age groups.	**X**		
Discussion: Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *pu'uhonua* and healing for Pana'ewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. Given this key feature of land plan, other uses, especially income-generating uses, were sited to preserve the character of the central area. Any structures that are part of Project Kamoleao will be designed and landscaped to be compatible with the character of the surrounding area. In keeping with the plant palette that was once established at Kamoleao, a Hawaiian *'ōhi'a* rainforest theme is desired. This will help to assure a cohesive and visually unified landscape theme throughout the site, helping to minimize the appearance of an "old" and "new" part of Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically adapted plant species. *'Ōhi'a*, *kopiko*, *kukui*, and *hala* are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs are known to grow in this forest or have potential to grow in the Kamoleao microclimate.			

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(10) Citizen participation.			
(A) Encourage all individuals in the State to adopt a moral ethic to respect the natural environment; to reduce waste and excessive consumption; and to fulfill the responsibility as trustees of the environment for the present and succeeding generations; and			**X**
(B) Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.	**X**		
Discussion: Gaining well-organized input and support is an integral part of any planning process. The current Master Plan has been developed based on input from "talk story" sessions with the Pana'ewa Homestead community, as well as the previous plans and work that went into envisioning Kamoleao. Additionally, in 2017, PBR HAWAII supported PHHLCA/PCA in implementing a new member survey regarding preferences. Initiated in June 2017, the Planning Team (PHHLCA/PCA, PBR HAWAII, and DHHL) reached out to Pana'ewa lessees, key stakeholders, and community organizations to identify desires, issues, and opportunities at a Design Workshop. Based on input received at the Design Workshop, the Planning Team developed two draft conceptual plans for review and input at an Open House held in July 2017 at Kamoleao. At the Open House, the Pana'ewa Homestead community identified desired elements from both plans and shared ideas to further define specific uses and spaces. A Preferred Plan that combines elements from both draft conceptual plans was developed. After receiving approval from PHHLCA/PCA members on September 19, 2017 regarding the Conceptual Master Plan, the Planning Team presented the overall findings and action items for the Conceptual Master Plan to the Hawaiian Homes Commission on October 17, 2017 and received positive feedback. This Draft EA includes information about potential short- and long-term impacts of the development of Kamoleao, and will include a public review period for the Draft EA.			

Department of Hawaiian Home Lands (DHHL) Hawai'i Island Plan and Pana'ewa Regional Plan

Community use in the Kamoleao area has been contemplated since 1986, when DHHL commissioned a master plan for 160 acres in the Pana'ewa Homestead tracts. A ±32-acre section of that land, referred to as the "Kamoleao Block" was planned for community use.

In 1994, a master plan for (a then ±25 acre) Kamoleao site was prepared. Services such as a one-stop Hawaiian services office complex, childcare center, amphitheater, guest accommodations, and a 10,000-square foot community hall were proposed to be offered. The 1994 master plan also identified a Hawaiian cultural preservation area and rainforest preserve.

In the same year, PHHLCA/PCA created Haola Inc. (Haola), a 501(c) 3 non-profit organization for the purpose of receiving and disbursing community benefit funds negotiated with DHHL general lessees. The next year, in March 1995, DHHL granted PHHLCA/PCA and Haola a 30-year "License Agreement No. 365" for the development and management of a community center and supporting facilities at Kamoleao.

As part of a subsequent 2005 planning process, Haola invited the community to share their views on what role Kamoleao should play within the community. Haola's recommendations for Kamoleao shifted away from rainforest restoration to enhancing the quality of life of native Hawaiians. The community center's activities would focus on providing health care services, educational assistance, and social opportunities for youth. Kamoleao would also serve as a venue for Panaʻewa's farming community to produce, process, and sell their value-added products. A marketplace proposed to be located on ʻOhuʻohu Street allowed for a total of 88 vendor stalls and a stand-alone restroom facility within a 12,520 square foot area.

The 2005 Haola Plan was updated in 2007, at which time it was determined that the overall cost was prohibitive for the entities involved. The outcome of this effort was a vision and funding for a Phase 1 Plan on a 1.5-acre portion of site, the Kamoleao Laulima Community Resource Center (KLCRC), which was to be developed in partnership with Hawaiʻi Community College.

In 2009, a site plan was prepared for KLCRC, including a 10,500 square foot building with a commercial kitchen, classroom, and support facilities (i.e. parking, septic system) on about 0.5-acres, with the balance of approximately 1-acre proposed for community gardens. In 2010, a Final Environmental Assessment (FEA) for KLCRC was completed by PHHLCA/PCA and accepted by the Hawaiian Homes Commission with a Finding of No Significant Impact (FONSI). However, it was subsequently decided not to pursue the 1.5-acre plan, as described in the context of the 2016 Panaʻewa Regional Plan Update, below.

In March 2016, DHHL convened meetings for the Panaʻewa Regional Plan Update. During this planning process, PHHLCA/PCA were faced with two options regarding the implementation of the Phase 1 KLCRC development program described in the 2010 FEA. The first option was to implement the development described in the January 2010 FEA. Since a Master Plan to set the Phase 1 KLCRC plan within the context of the overall build-out of the 12.77-acre site was not completed, there were concerns that the Phase 1 development could lead to cost inefficiencies. There was also concern about incremental development that might not integrate well in terms of overall function, access, and programming, and infrastructure development that might not anticipate the needs of subsequent phase(s). As a result, it was decided to pursue Option 2, which involved reassessing Phase 1 within the context of the entire site, understanding that characteristics of the Phase 1 development described in the January 2010 FEA could be altered. If so, a new master plan and EA would need to be developed. Therefore, it was decided that a new master plan and EA would be completed for the entire 12.77 acre parcel, with a focus on Phase 1.

5.2 COUNTY OF HAWAIʻI

County-specific land use plans and ordinances pertaining to the Project include the General Plan and the zoning code.

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 next update to the General Plan is currently underway and due for council vote in 2018.

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 Project Site is designated as "High Density Urban" (Appendix A: Figure 9).

Specific General Plan goals, policies, and courses of action most applicable to Project Kamoleao are discussed below.

<u>Flooding and Other Natural Hazards</u>

Section 5.2 GOALS

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

Section 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, Kamoleao 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 (Appendix A: Figure 15). There are no floodplains defined by FEMA on or near Kamoleao.

<u>Historic Sites</u>

Section 6.2 GOALS

h. *Protect, restore, and enhance the Project Sites, buildings, and objects of significant historical and cultural importance to Hawai'i.*

Section 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:

Rechtman Consulting, LLC conducted an archeological inventory survey (AIS) on the 12.77-acre Project Site in December 2008, involving a 100% pedestrian survey. Results were reported in their Archaeological Assessment (AA) for Kamoleao in 2009 (Rechtman, 2009). The AA was conducted in compliance with Section 6E-8, HRS "Historic Preservation" to determine the presence/absence of archaeological sites. The AA found that almost the entire Project Site had been altered, and no historic sites or features were identified. Due to the absence of sites, Kamoleao was documented in the AA pursuant to Title 13, Subtitle 13, Chapter 284-5(5A), HAR.

<u>Natural Beauty</u>

Section 7.2 GOALS

a. *Protect scenic vistas and view planes from becoming obstructed.*
b. *Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.*

Section 7.3 POLICIES

i. *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:

Restoration of certain native forest characteristics of Kamoleao and conservation of other open spaces are proposed to provide places of refuge, *pu'uhonua* and healing for Pana'ewa Homestead community members and other area residents. Improvements would occur within a 3.7-acre central area that is set aside for open space. Given this key feature of land plan, other uses, especially income-generating uses, were sited to preserve the character of the central area. Kamoleao's frontage on Railroad Avenue and alongside the service entrance to The Home Depot to its north provides an opportunity to develop additional income-generating facilities in an area that can be visually and functionally shielded from the rest of Project Kamoleao. Landscaping and parking along the southern edge of the proposed ±1.4 acre potential income-producing site would provide further buffer from the *pu'uhonua* and natural areas of Kamoleao.

Any structures that are part of Project Kamoleao will be designed and landscaped to be compatible with the character of the surrounding area.

In keeping with the plant palette that was once established at Kamoleao, a Hawaiian *'ōhi'a* rainforest theme is desired. This will help to assure a cohesive and visually unified landscape theme throughout the site, helping to minimize the appearance of an "old" and "new" part of

Kamoleao. The landscape theme could continue the previous forest restoration efforts comprised of native and climatically adapted plant species. *ʻŌhiʻa*, *kopiko*, *kukui*, and *hala* are among the different variety of tree species which provide resources for cultural artifacts and *hula* apparel. In addition, ferns, and other medicinal herbs are known to grow in this forest or have potential to grow in the Kamoleao microclimate.

Public Facilities

Section 10.1.2 GOALS

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: Project Kamoleao envisions a variety of desired uses and facilities to support the community vision and needs, such as a Community Center, Certified Kitchen, Health & Wellness Complex, office space, indoor/outdoor recreational and learning spaces, and other facilities to generate income and commercial benefits. The Master Plan also suggests that the Health & Wellness offer facilities to a variety of native Hawaiian-serving agencies, service providers and other enterprises, so as to promote more functional and effective delivery of services to communities in need.

Land Use – Agriculture

Section 14.2.2 GOALS

a. *Identify, protect, and maintain important agricultural lands on the island of Hawaiʻi.*

Section 14.2.3 POLICIES

j. *Ensure that development of important agricultural land be primarily for agricultural use.*
l. *Assist in the development of agriculture.*

Discussion: As mentioned in Section 3.3 above, the soils of Kamoleao are (1) classified as “extremely stony muck” by the NRCS, (2) unclassified by the University of Hawaiʻi LSB Detailed Land Classification, and (3) rated "Other Agricultural Lands of Importance to the State of Hawaiʻi," by the State. The latter 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. It is thus not considered "Prime Important Agricultural Land." Given Kamoleao’s low productivity potential and need for high inputs, it is not suitable for agricultural activity. Therefore, construction of Project Kamoleao will not reduce the inventory of productive lands available for agricultural uses.

Also pertaining to agriculture, an approximately 2,200 square foot facility adjoining the Community Center is planned as a Certified Kitchen to support events at the Community Center. It is also sized to accommodate six incubator commercial kitchen facilities for use by individuals

or area businesses, with preference to community members. Such a facility will help farmers develop and promote value-added products from the crops or animals they cultivate.

Special Management Area

The Project Site is not located within the Special Management Area (SMA) (see Appendix A: Figure 11).

5.3 APPROVALS AND PERMITS

A listing of anticipated permits and approvals required for Project Kamoleao is presented below:

Table 5.4 - Anticipated Approvals and Permits[4]

Permit/Approval	Responsible Agency
Plan Approval	Hawaiʻi County Department of Planning
DWS Water Commitment	Hawaiʻi County Department of Water Supply
Fire Response Plan	Hawaiʻi County Fire Department
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Individual Wastewater System Permit	State Department of Health
Grading/Demolition/Drainage/Building Permits	Hawaiʻi County Department of Public Works
Noise Permit	State Department of Health
Modification of Median	Hawaiʻi County Department of Public Works, Traffic Branch
Walkway Modifications and other plan reviews	State Department of Health, Disability and Communication Access Board
Form 7460-1	Federal Aviation Administration[5]

[4] The preliminary engineering report for the Project utilizes "shallow" type drywells that will not require an underground injection control (UIC) permit. However, should final designs for construction elect to use "deep" drainage drywells, a UIC permit will be required from the State DOH before building permit applications are submitted. A single UIC application may be used to register multiple new drywells.

[5] Although not a permit per se, due to the Project's location within five miles of an airport, the State DOT Airports Division (DOT-A) will require that Federal Aviation Administration (FAA) Form 7460-1 be submitted for structures more than 200 feet above ground level. Additionally, Applicant acknowledges the guidance presented in the State of Hawaii Office of Planning Technical Assistance Memorandum 2016-1, and FAA Advisory Circular 150/5200-33B.

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6 ALTERNATIVES

In compliance with the provisions of Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-17(f), *the "known feasible" alternatives to the proposed project are limited to those that would allow the objectives of the proposed project to be met, while minimizing potential adverse environmental impacts*." To review, the goals and objectives of Project Kamoleao are to:

- To support the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities, by:
  - Developing a gathering center and place of pride and identity for the community
  - Providing a convenient place of access to multiple native Hawaiian-related agencies and opportunities.
  - Enhancing traditional cultural vibrancy as well as modern learning opportunities.
  - Offering a *puʻuhonua* (place of refuge), and one where traditional healing may be practiced.
- To address these goals in an environmentally and financially sustainable manner.
- To extend these values, and future choices, to seven generations.

6.1 ALTERNATIVE #1: NO ACTION

Since none of the previous plans for Kamoleao have been implemented, including those developed in 1986, 1994, 2005, 2007, in a sense, to date the no action alternative has been implemented. However, it is clear that while specific target uses have varied from plan to plan, the community's goals and objectives for the project remain largely consistent, and wholly unsatisfied.

Without this Project, the desired support for the economic, social, health and cultural well-being of native Hawaiians in the Panaʻewa Homestead community and neighboring communities would not be provided. As a result, the "no action alternative" was rejected.

6.2 ALTERNATIVE #2: KLCRC "PHASE 1" PLAN (2007-09)

Between 2007 and 2009, the Panaʻewa Homestead community developed a vision for a Phase 1 Plan on a 1.5-acre portion of site, calling this the Kamoleao Laulima Community Resource Center (KLCRC). KLCRC was to have been developed in partnership with Hawaiʻi Community College.

Plans for KLCRC included a 10,500-square foot building with a commercial kitchen, classroom, and support facilities (i.e. parking, septic system) on about 0.5-acres, with the balance of approximately 1-acre proposed for community gardens. In 2010, a Final Environmental Assessment (FEA) for KLCRC was completed by PHHLCA/PCA and accepted by the Hawaiian

Homes Commission with a Finding of No Significant Impact (FONSI). However, it was subsequently decided not to pursue the KLCRC plan, because of:

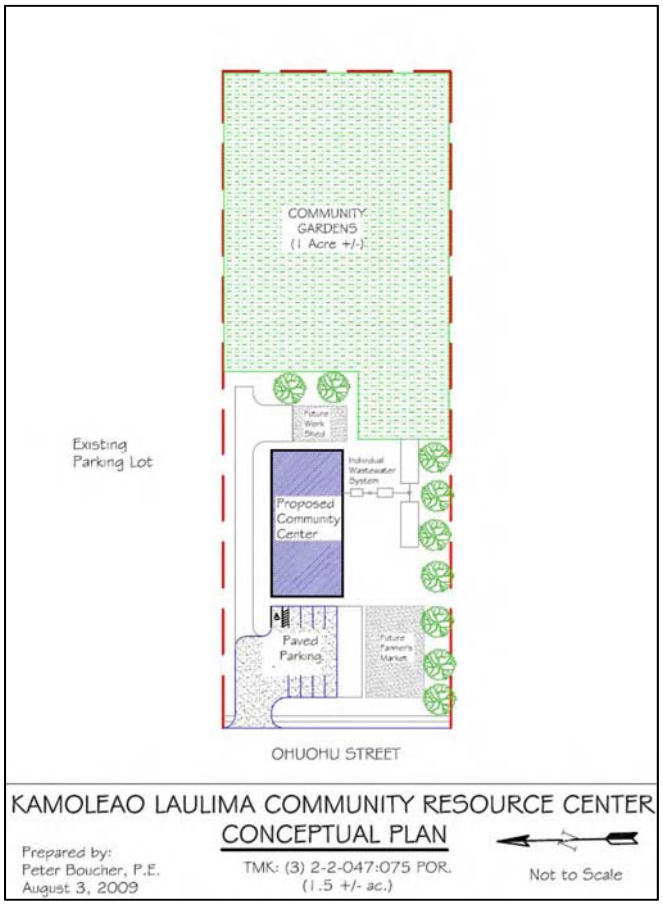
(11) Its lack of consideration of the context of the overall build-out of the 12.77-acre site;

(12) Concerns that given the lack of an overall vision, this Phase 1 development could lead to cost inefficiencies; and

(13) Concerns that incremental development might not ultimately integrate well in terms of overall function, access, and programming, including anticipating infrastructure needs of subsequent phase(s).

In consideration of the above, the Pana'ewa Homestead community decided in 2016 to not pursue the KLCRC plan, but rather to pursue a new master plan for the entire 12.77 acre parcel, with a focus on Phase 1. A draft conceptual plan that was initially developed in 2017 is presented below as another alternative.

Alternative #2: KLCRC "Phase 1" Plan (2007-09)



Source: Geometrician Associates LLC , Final Environmental Assessment Kamoleao Laulima Community Resource Center, December 2009

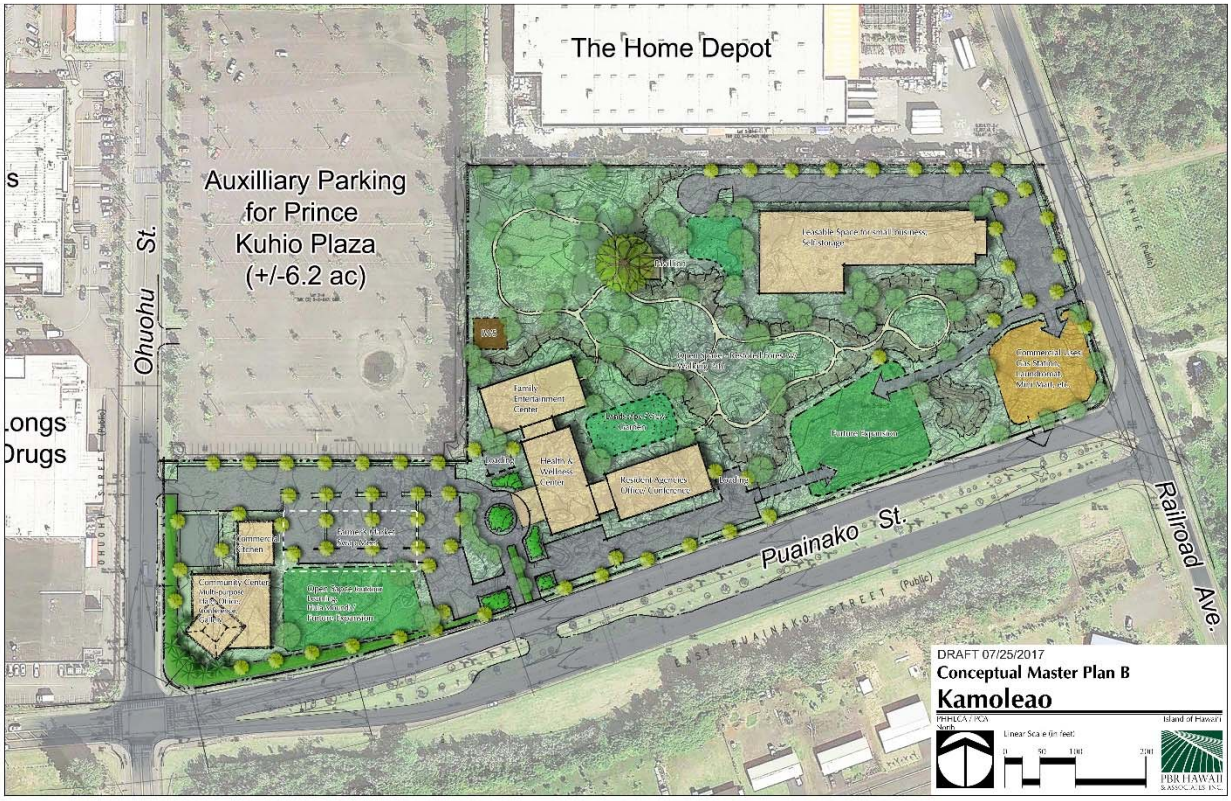
6.3 ALTERNATIVE #3: DRAFT CONCEPTUAL PLAN B (2017)

Draft Conceptual Plan B, which was developed based on comments provided by community members in 2017, groups key elements into four buildings.

The Phase 1 plan for Draft Conceptual Plan B includes the community center and commercial kitchen at the west end of Kamoleao in detached buildings. While the impervious surface area dominates Kamoleao, adequate parking is provided within the Phase 1 development and access is direct to the site. This parking area may include space for food truck parking to generate revenue.

The community interests in accommodating resident agencies/offices, a health and wellness center, and a family entertainment center are addressed in one building with multiple wings. The leasable warehouse/self-storage space is located to the back of Kamoleao along the border with Home Depot.

Alternative #3: Draft Conceptual Plan B (2017)



Source: PBR HAWAII & Associates, Inc., 2017

6.4 COMPARISON OF ACTION ALTERNATIVES

The two development alternatives were evaluated against the established planning criteria. Based on discussions with PHHLCA/PCA and the Panaʻewa Homestead community, as well as the analysis above, the KLCRC Phase 1 plan was rejected, while the current Conceptual Master Plan was developed as a preferred alternative, incorporating elements of Draft Conceptual Plan B.

Table 6.1 - Comparison of Action Alternatives

	KLCRC "Phase 1" (2007-09)	**Draft Plan B (2017)**
Total gross building footprint	+/- 10,500 square feet (on 0.5 acres)	+/-77,500 square feet
Proposed parking	92 spaces	275 spaces (282 square feet/stall)
Future expansion	+/- 11.27 acres (balance of site not planned)	+/-0.6 acres
Phase 1	Commercial kitchen; classroom and support facilities; community gardens	Community center; certified kitchen; park / open space; food truck area; +/-1.5 ac parking
Performance to Project Kamoleao Goals	• Offers place for gathering and community identity, but unknown or minor contributions to goals of *puʻuhonua* and access to multiple native Hawaiian-related agencies; • May be inefficient use of land and financial resources due to lack of overall planning; arbitrary rectangular site area does not consider environmental values of site; • Reserves buildout planning for future generations, but some choices may be compromised by incremental infrastructure and site planning approach	• Meets objectives related to goal to support economic, social, health and cultural well-being; • Commercial use contributing to financial viability integrated with Health & Wellness Center; • Reserves two areas (+/- 0.6 acres) for future generations to extend their values and choices.

The current Conceptual Plan for Kamoleao was developed as a Preferred Plan that combined elements and community feedback/lessons learned from Draft Conceptual Plan B. It includes modifications based on discussions and analysis that surfaced during the evaluation process. In addition, the Preferred Plan has been further informed by civil engineering analyses.

Figure 5: Conceptual Master Plan, Preferred Alternative

Source: PBR HAWAII & Associates, Inc., 2018

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7 FINDINGS AND DETERMINATION

To determine whether development of Project Kamoleao could be expected to have a significant impact on the physical and human environment, all phases and expected consequences of Project Kamoleao have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts. Based on this evaluation, the Approving Agency has determined 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 HAR 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: Project Kamoleao is not anticipated to involve any activity that may lead to a loss or destruction of any natural or cultural resource. The Project Site has been the subject of biological, archaeological, and cultural studies, and those studies have revealed the absence of any significant natural or cultural resources.

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

Discussion: Implementation of Project Kamoleao will not curtail the range of beneficial uses of the environment, but instead promote beneficial uses of the environment, by providing a long-planned community center and other socially beneficial uses.

(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 Project is not in conflict with the long-term environmental policies, goals, and guidelines of the State of Hawaiʻi as discussed in Section 5.1 above.

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

Discussion: The Community Center and Certified Kitchen components of Project Kamoleao are seen to target the estimated 2,100 Panaʻewa Homestead residents on a preferential basis, but are expected to have capacity to also support and benefit from use by other area beneficiaries and residents. In the case of the Certified Kitchen, targeted users could also include start-up or small food-service related businesses from throughout the East Hawaiʻi area that may utilize the six incubator-style kitchens that are proposed. These commercial facilities would benefit from Kamoleao's proximity to the Hilo airport, harbor and diversity of food product sources. In these

respects, Project Kamoleao is seen to promote the economic and social welfare of the community, and thereby a portion of the State.

(5) Substantially affects public health;

Discussion: There will be temporary impacts to noise and air quality levels during construction phases of the Project; however, these potential impacts will be short-term and are not expected to substantially affect public health. It should be noted the current zoning allows for industrial use, and the Proposed Action would likely present lesser long-term impacts to air and noise quality, compared to a plan that might be dominated by industrial uses. All construction activities will comply with applicable regulations and will implement appropriate mitigation measures. Rather, the various attributes of Project Kamoleao are envisioned to enhance the public health of the Panaʻewa Homestead community and neighboring communities.

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

Discussion: Project Kamoleao 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 Project Kamoleao 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, development of Project Kamoleao 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: Although the implementation of Project Kamoleao has the potential to provide significant community and social benefits, it will have a cumulative impact on traffic (§4.3). Project Kamoleao will not contribute to nonpoint source pollution (§3.4 above). The Project 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 Kamoleao that could be adversely affected by the construction and operation of Project Kamoleao. However, according to the USFWS, it is possible that several endangered species may use or overfly Kamoleao. Mitigation measures will be specified and incorporated into the construction documents.

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

Discussion: Construction activities for development of Project Kamoleao could potentially impact noise and air and water quality levels on Kamoleao. 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 compared to Kamoleao's current vacant state; however, any increase in runoff will be accommodated by proposed drainage improvements and will not detrimentally affect water quality. Operational noise levels would be similar to ambient noise levels.

(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 Project is located outside a FIRM-designated flood plain and inland from the coast. Project Kamoleao will be constructed in compliance with County of Hawaiʻi 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: Project Kamoleao 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.

(13) Requires substantial energy consumption.

Discussion: Construction and operation of Project Kamoleao will not require substantial increases in energy consumption.

7.2 DETERMINATION

Pursuant to Chapter 343, HRS, the Approving Agency, DHHL, has determined a Finding of No Significant Impact (FONSI) for this environmental assessment. This finding is based on impacts and mitigation measures examined in this document, and public comments received during the pre-assessment consultation and public comment phases, as analyzed under the above criteria.

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8 CONSULTATION

8.1 EARLY CONSULTATION

A pre-assessment consultation was conducted from December 2017 through February 2018 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 that might be affected by Project Kamoleao. 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 underwent 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 F.

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 Education
- Department of Hawaiian Home Lands
- *Department of Health - Environmental Planning Office*
- Department of Health
- *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 (DOT)*
- Office of Environmental Quality Control
- Office of Hawaiian Affairs
- State Senator Kaiali‘i Kahele
- State Representative Mark Nakashima
- State Representative Richard Onishi
- State Representative Chris Todd

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

County of Hawaiʻi

- *Department of Environmental Management*
- Department of Parks & Recreation
- *Department of Public Works*
- Department of Research & Development
- *Department of Water Supply*
- Fire Department
- Office of Housing and Community Development
- Planning Department
- *Police Department*
- Mass Transit Agency
- Office of the Mayor
- County Councilmember Aaron Chung
- County Councilmember Susan Lee Loy

Utility Companies

- Hawaiian Electric Light Co.
- Hawaiian Telecom
- Spectrum

Private Organizations & Individuals

- Keaukaha-Panaʻewa Farmers' Association
- Keaukaha Community Association
- Panaʻewa Hawaiian Home Lands Community Association
- Hui Mālama Ola Nā ʻŌiwi
- Liliʻuokalani Trust
- Hilo Farmers' Market
- *UH Hilo*
- Alu Like

8.2 DRAFT EA CONSULTATION

The Draft EA (DEA) was published in the June 8th, 2018 edition of OEQC's *The Environmental Notice (TEN)*. The DEA was also sent to the agencies and organizations who were involved in the pre-consultation process for Project Kamoleao as well as other entities with potential knowledge of the subject property. The 30-day public comment period for the DEA began on June 8, 2018 and ended on July 9, 2018.

As part of the DEA process, the following agencies, organizations and individuals were sent either a copy of the DEA or a letter with a link to the DEA publication in the OEQC *TEN*. Those that provided timely written comments (either by hardcopy or email) are so indicated by the date of their response, as noted in the table below. Copies of the written comments and responses are reproduced in Appendix G.

Table 8.1 DEA Consulted Parties

Consulted Parties	***Comment Date***
STATE OF HAWAI'I	
Department of Accounting and General Services	
Department of Agriculture	
Department of Business, Economic Development, & Tourism (DBEDT)	
DBEDT, Hawaii State Energy Office	
DEBEDT, Office of Planning	7/2/2018
Department of Defense, Engineering Office	
Department of Education	
Department of Hawaiian Home Lands	
Department of Health (DOH)	
DOH, Environmental Planning Office	
Department of Human Services	6/19/2018
Department of Labor and Industrial Relations	
Department of Land and Natural Resources (DLNR)	7/6/2018
DLNR, Historic Preservation Division	
Department of Transportation	

Consulted Parties	***Comment Date***
Hawai‘i Housing Finance and Development Corporation	
Office of Hawaiian Affairs	
FEDERAL	
U.S. Army Corps of Engineers, Honolulu District	
U.S. Fish and Wildlife Service	
U.S. Geological Survey – Hawaiian Volcano Observatory	
Federal Emergency Management Agency	6/20/2018
COUNTY OF HAWAI‘I	
Department of Environmental Management	
Department of Parks and Recreation	
Department of Public Works	
Department of Research and Development	
Department of Water Supply	6/28/2018
Fire Department	6/25/2018
Mass Transit Agency	
Office of Housing and Community Development	
Office of the Mayor	
Planning Department	7/6/2018
Police Department	6/12/2018
ELECTED OFFICIALS	
The Honorable Kaiali‘i Kahele, State Senator	
The Honorable Mark Nakashima, State Representative	
The Honorable Chris Todd, State Representative	
The Honorable Richard Onishi, State Representative	
County Councilmember Aaron Chung	
County Councilmember Susan Lee Loy	

Consulted Parties	***Comment Date***
UTILITIES	
Hawaii Electric Light Company	
Hawaiian Telcom	
Spectrum	
LIBRARIES	
Hilo Public Library	
Hawaiʻi State Library, Hawaiʻi Documents Center	
ORGANIZATIONS/INDIVIDUALS	
Keaukaha-Panaʻewa Farmers' Association	7/5/2018
Keaukaha Community Association	
Panaʻewa Hawaiian Home Lands Community Association	
Hui Malama Ola Na Oiwi	
Liliʻuokalani Trust	
Hilo Farmers' Market	
UH Hilo	
Alu Like	
NEWS MEDIA	
Honolulu Star Advertiser	
Hawaii Tribune Herald	
West Hawaii Today	

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APPENDICES

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APPENDIX A

Figures

Figure 1: Regional Location

Figure 2: Surrounding Land Uses (Aerial Photo)

Figure 3: TMK

Figure 4: Site Photos

Figure 5: Conceptual Master Plan

Figure 6: Phasing Plan

Figure 7: State Land Use Districts

Figure 8: DHHL Hawaiʻi Island Plan

Figure 9: County of Hawaiʻi General Plan, LUPAG

Figure 10: County of Hawaiʻi Zoning

Figure 11: Special Management Area

Figure 12: NRCS Soil Survey

Figure 13: LSB Detailed Land Classification

Figure 14: Agricultural Lands of Importance

Figure 15: Flood Insurance Rate map

Figure 16: Tsunami Evacuation Map

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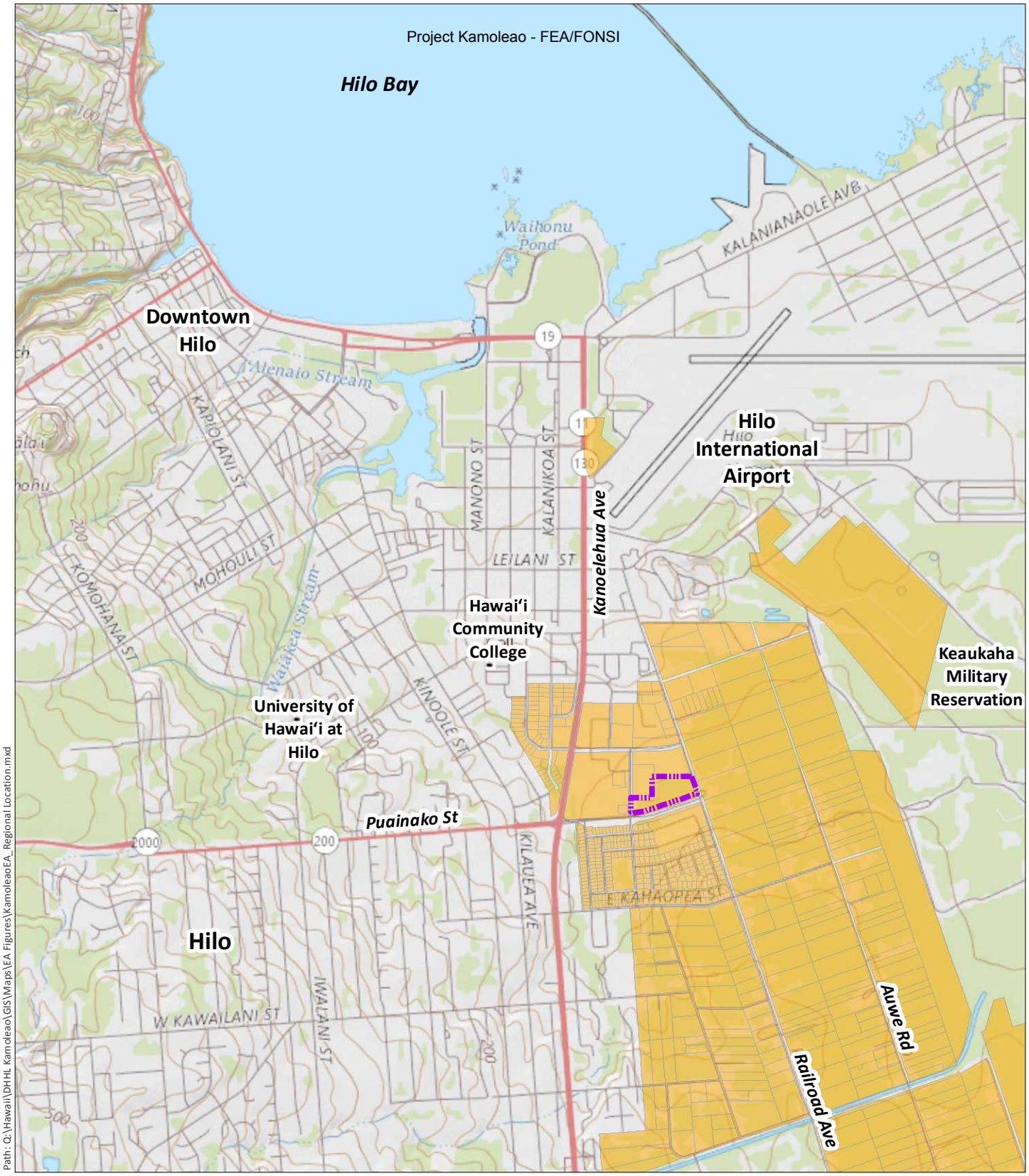

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DATE: 12/29/2017

LEGEND

- Kamoleao
- Pana'ewa Homestead Community

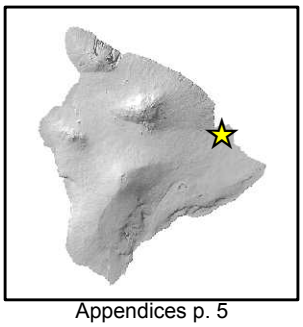


Figure 1:
Regional Location Map

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

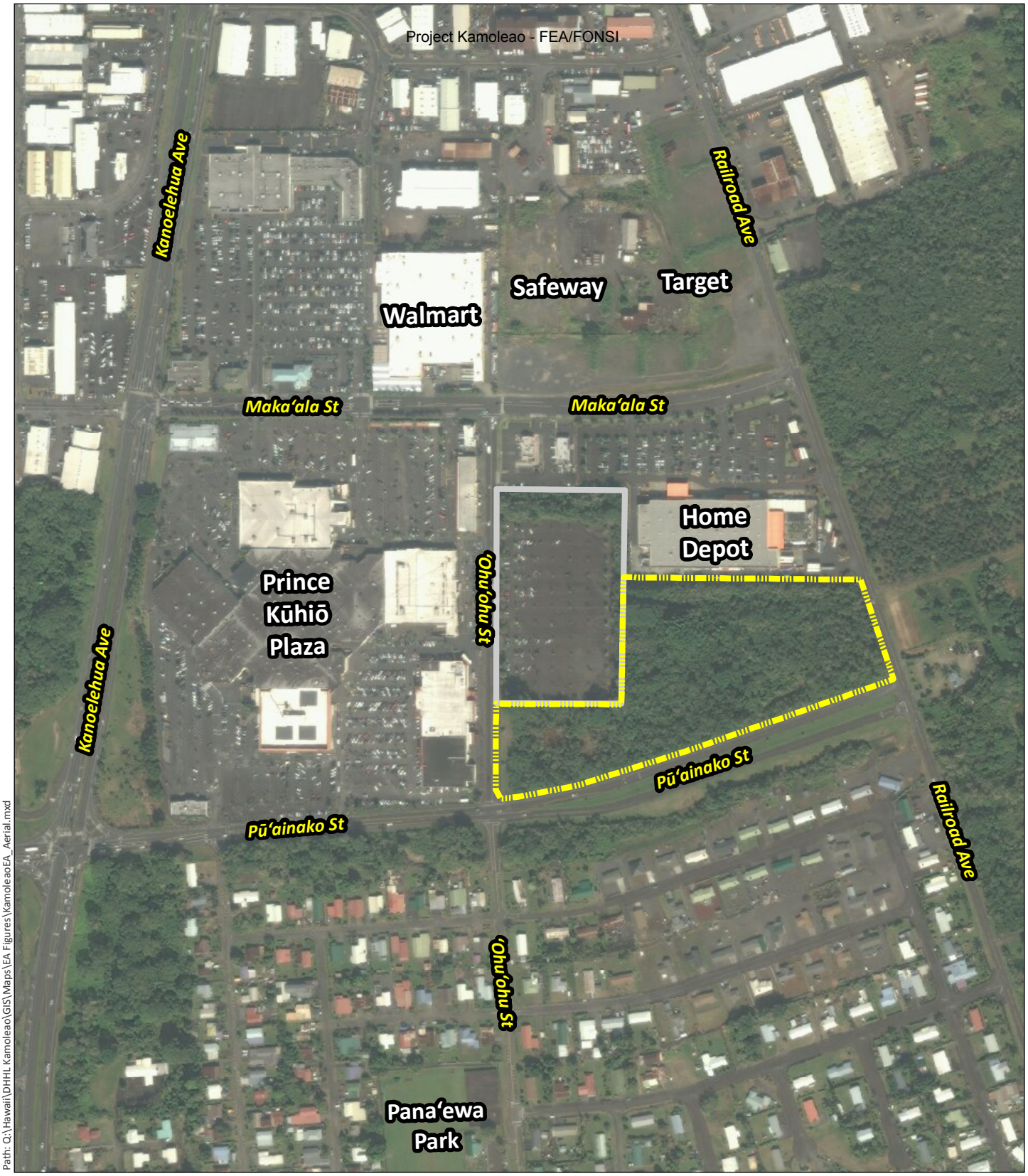
North

Linear Scale (feet)
0 750 1,500 3,000

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI. United States Geological Survey, 2017. County of Hawai'i, 2017.

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: 1/15/2018

LEGEND

- Kamoleao
- Prince Kūhiō Plaza Parking

Figure 2:
Surrounding Land Uses

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

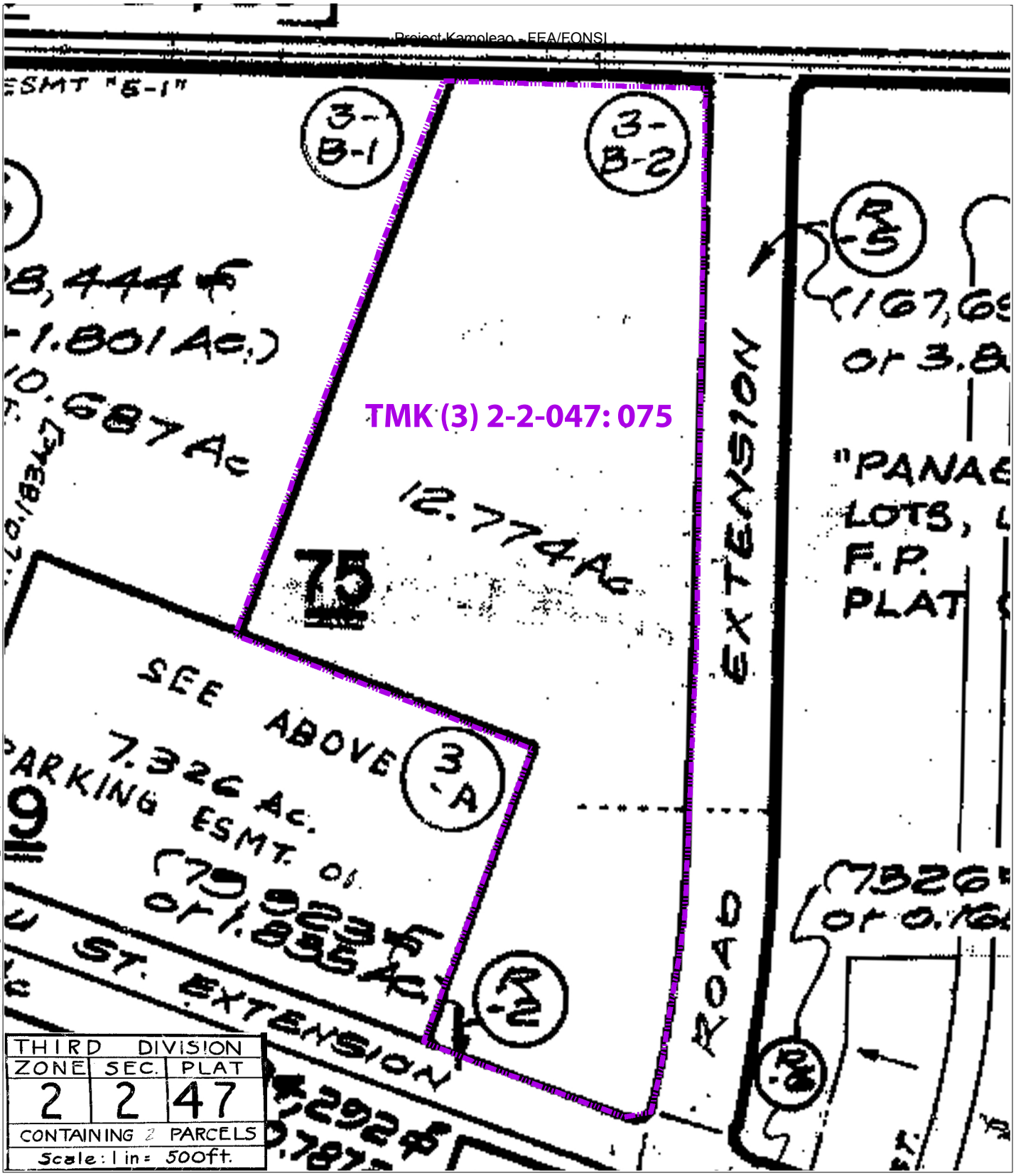
North

Linear Scale (feet)
0 125 250 500

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Online Basemaps.

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: 12/29/2017

LEGEND

Kamoleao

Figure 3:
Tax Map Key

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

North

Linear Scale (feet)
0 50 100 200

PBR HAWAII & ASSOCIATES, INC.

Source: County of Hawai'i.

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

1. View of the site from the south east corner of the adjacent auxilary parking lot

2. Vegetation and existing pathway within the site

3. Vegetation and remnants of homeless encampments within the site

4. South-facing view of the eastern site boundary along 'Ohu'ohu Street

5. East facing view of the site from 'Ohu'ohu street

6. View of the southern site boundary along Pūainako street from the south east corner of the project site

7. West facing view of the northern site boundary adjacent to Home Depot

8. South facing view of the eastern site boundary along Railroad Avenue

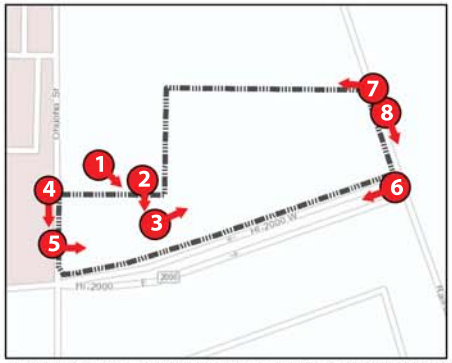

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FIGURE 4:

Site Photos

KAMOLEAO

PH/HLCA/PCA

Island of Hawai'i

Photos taken: May 19, 2017
Prepared: January 4, 2018

PBR HAWAII & ASSOCIATES, INC.

Figure 5:
Conceptual Master Plan
Kamoleao

02/15/2018

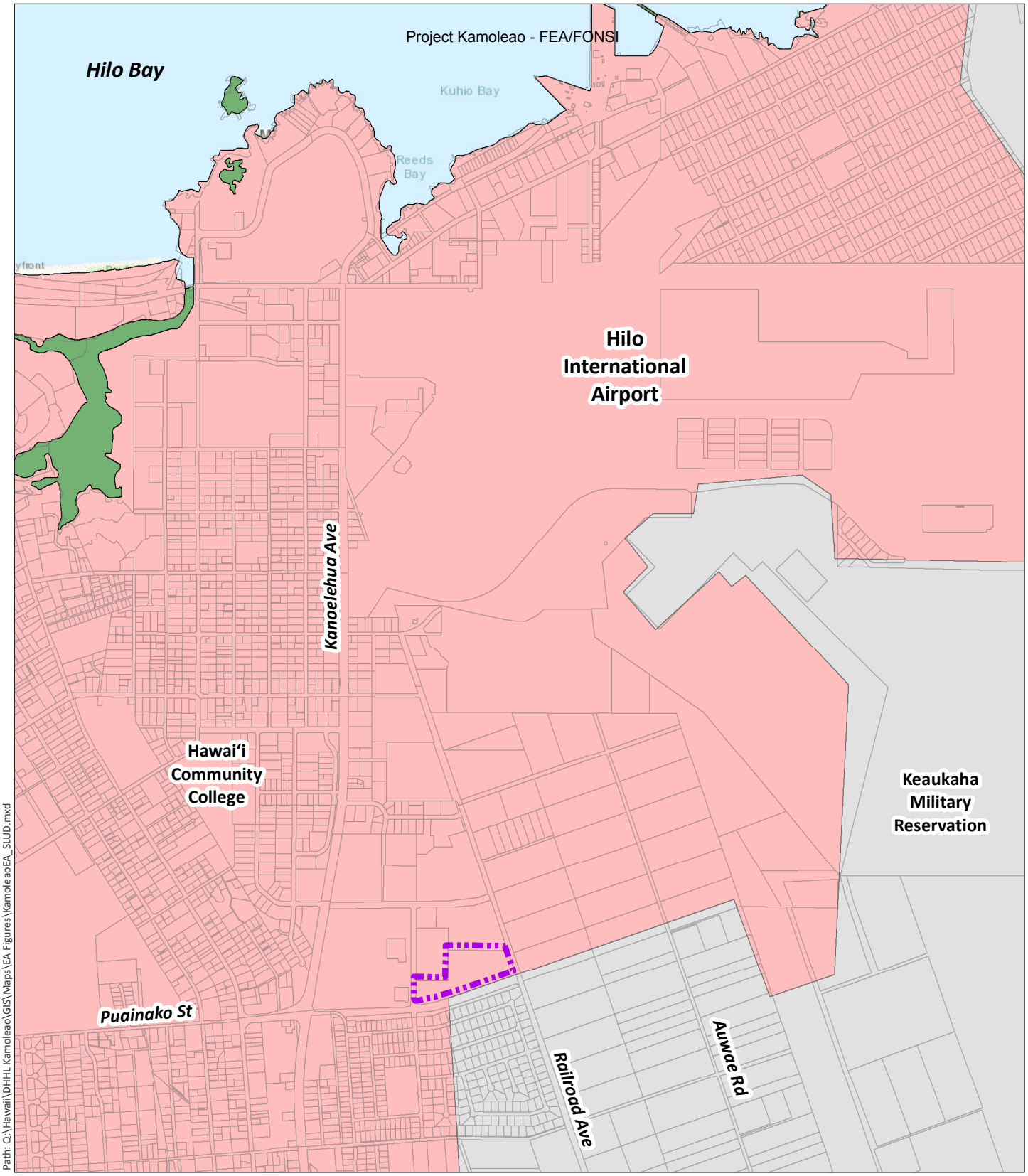
PHHLCA / PCA
North

Linear Scale (in feet)
0 50 100 200

Island of Hawai'i

PBR HAWAII & ASSOCIATES, INC.

Railroad Ave.
Phase 1B
Light Industrial
(+/-1.4ac)
Phase 3
Future
(+/-1.4ac)
Pua'inako St.
The Home Depot
Pushonua/
Natural Trail
Phase 2
Health & Wellness
Complex
(+/-2.2ac)
Phase 2
(Road Modification)
Phase 3
Future
(+/-0.6ac)
Phase 1A
Community Center
& Certified Kitchen
(+/-2.8ac)
Auxiliary Parking
for Prince
Kuhio Plaza
(+/-6.2 ac)
Phase 1B
'Ohu'ohu St.
Shops
(+/-0.7ac)
'Ohu'ohu St.
Figure 6:
Preferred Phasing Plan
Kamoleao
DRAFT 09/19/2017
Island of Hawai'i
PHHLCA / PCA
North
Linear Scale (in feet)
0
50
100
200
PBR HAWAII
& ASSOCIATES, INC.



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DATE: 1/15/2018

LEGEND

Kamoleao

Tax Map Key Parcels

State Land Use Districts

A - Agricultural

C - Conservation

U - Urban

Figure 7:
State Land Use Districts

KAMOLEAO

Department of Hawaiian Home Lands

Island of Hawai'i

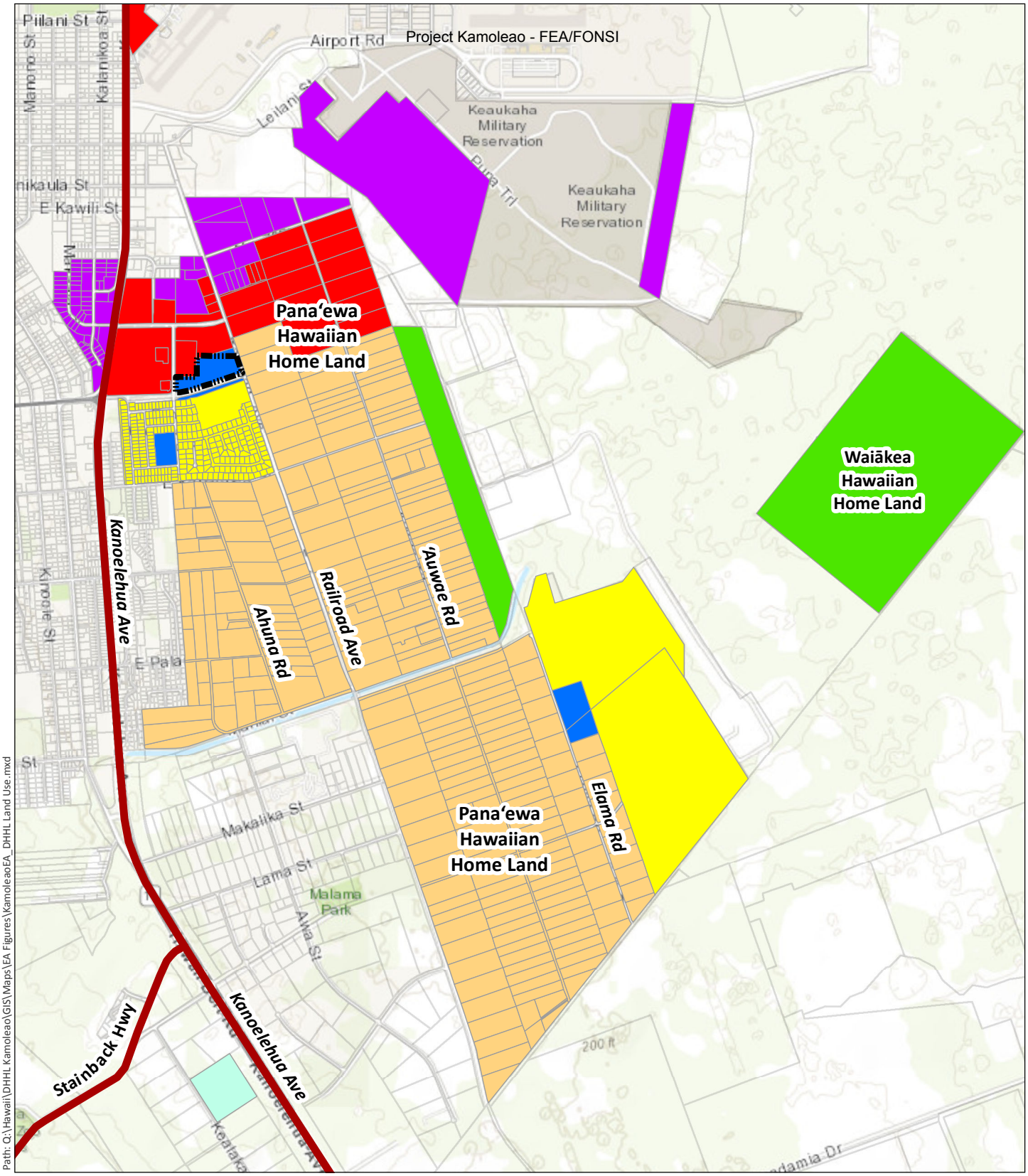
North

Linear Scale (feet)
0 500 1,000 2,000

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Basemaps; County of Hawai'i, 2017; Hawai'i State Land Use Commission, 2016.

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: 1/2/2018

LEGEND

- Kamoleao
- Major Streets
- Tax Map Key Parcels

DHHL Island Plan Designations

- Residential
- Subsistence Agriculture
- Supplemental Agriculture
- Community Use
- Commercial
- Industrial
- General Agriculture

Figure 8:
DHHL Hawai'i Island Plan

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

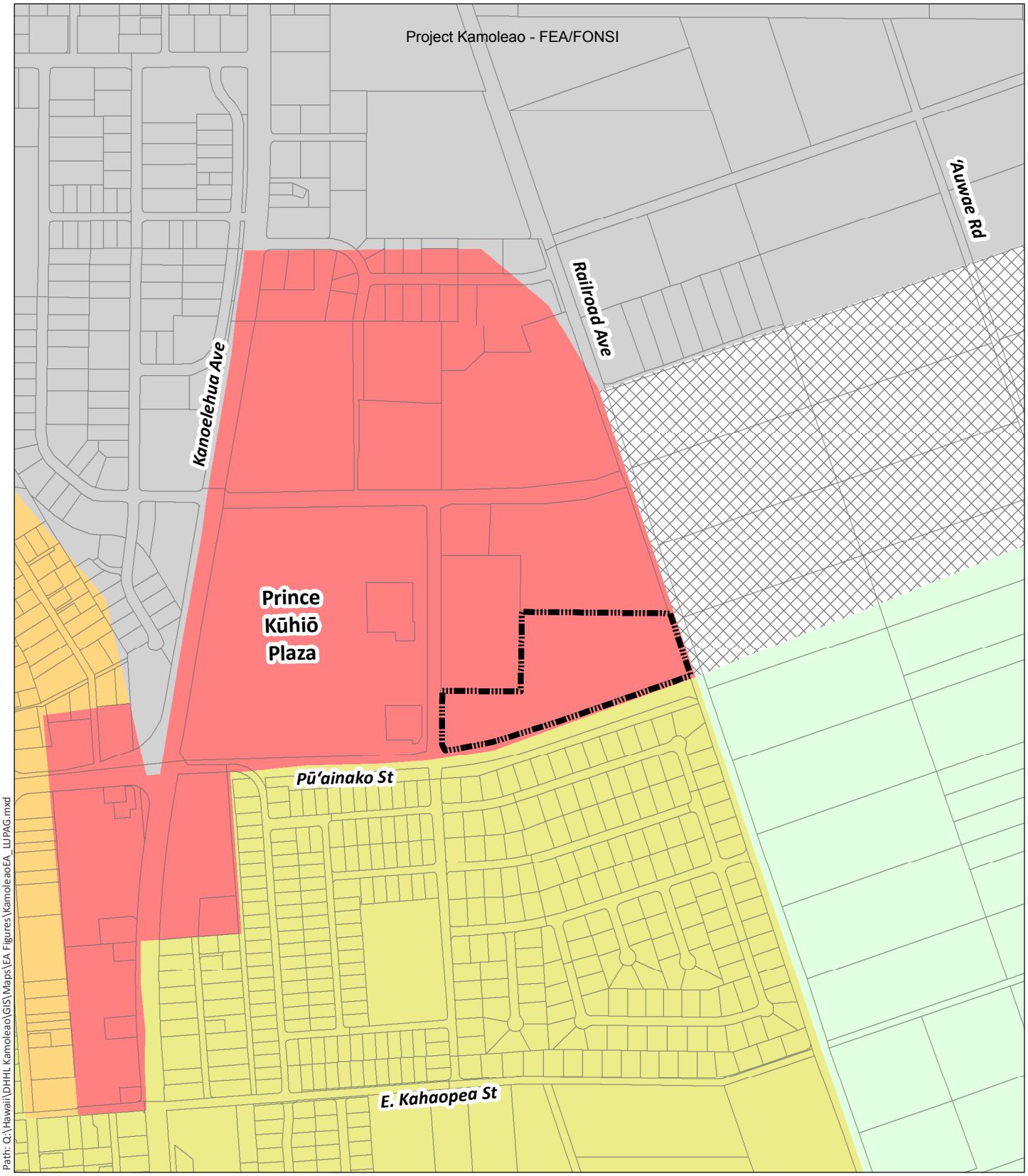
North

Linear Scale (feet): 0 750 1,500 3,000

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Basemaps; Department of Hawaiian Home Lands, 2002. County of Hawai'i, 2003 & 2017.

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: 1/2/2018

LEGEND

- Kamoleao
- Tax Map Key Parcels
- High Density Urban
- Important Ag. Lands
- Industrial
- Low Density Urban
- Medium Density Urban
- Urban Expansion

Figure 9:
County of Hawai'i General Plan
Land Use Pattern Allocation Guide

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

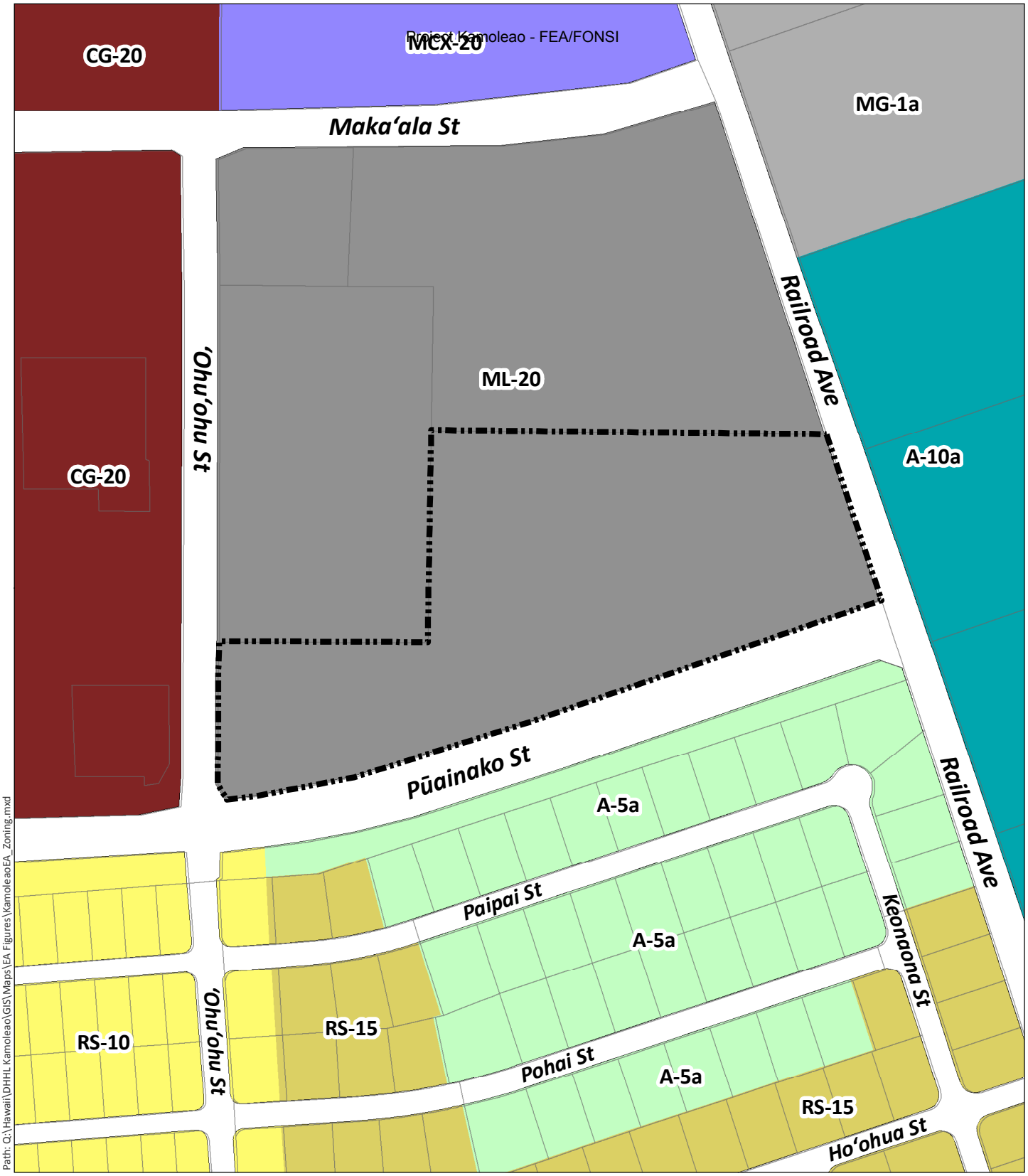
North

Linear Scale (feet)
0 200 400 800

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Basemaps; County of Hawai'i, 2015 & 2017.

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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LEGEND

- Tax Map Key Parcels
- Kamoleao

County of Hawai'i Zoning

- (road)
- A-10a
- A-5a
- CG-20
- MCX-20
- MG-1a
- ML-20
- RS-10
- RS-15

Figure 10:
County of Hawai'i Zoning

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

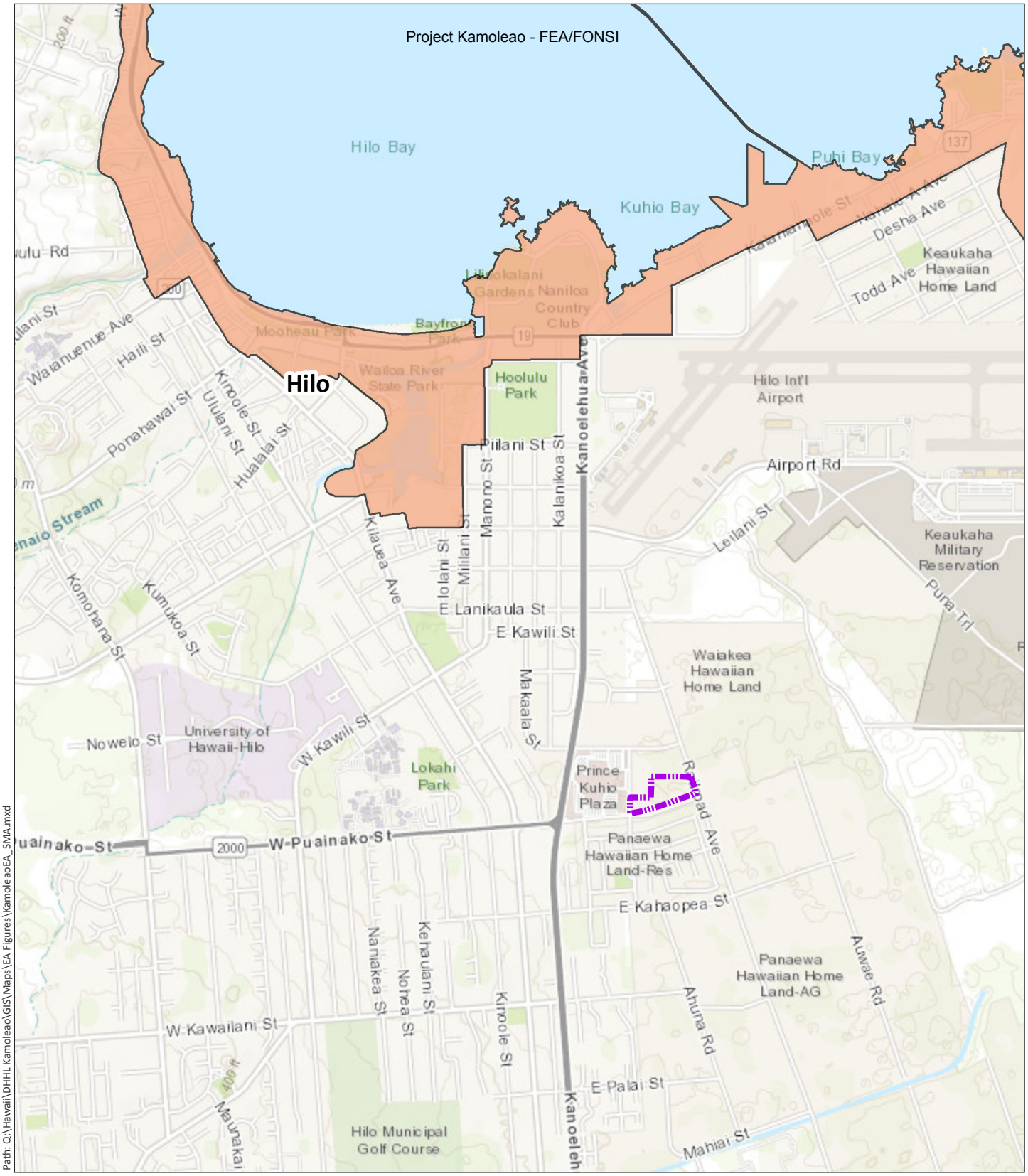
North

Linear Scale (feet)
0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: County of Hawai'i, 2017.

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: 1/15/2018

LEGEND

- Kamoleao
- Special Management Area

Figure 11:
Special Management Area

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

North

Linear Scale (feet)
0 750 1,500 3,000

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Basemaps; County of Hawai'i, 2013.

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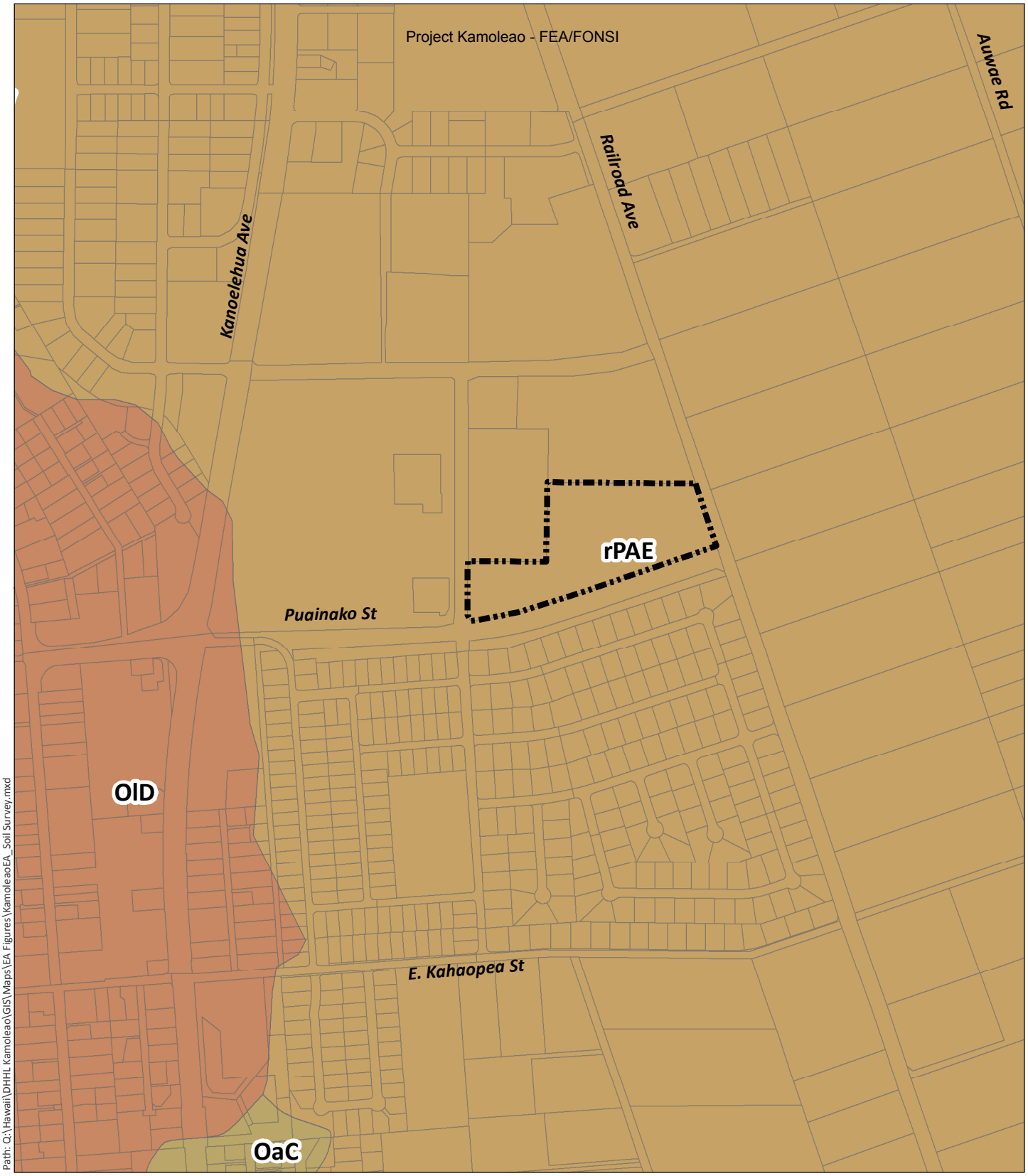

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DATE: 1/15/2018

LEGEND

- Tax Map Key Parcels
- Kamoleao

Soils

- OaC: Olaa silty clay loam, 0 to 10 percent slopes
- OlD: Olaa extremely stony silty clay loam, 0 to 20 percent slopes
- rPAE: Papai extremely stony muck, 3 to 25 percent slopes

Figure 12:
Natural Resources Conservation Service Soil Survey

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

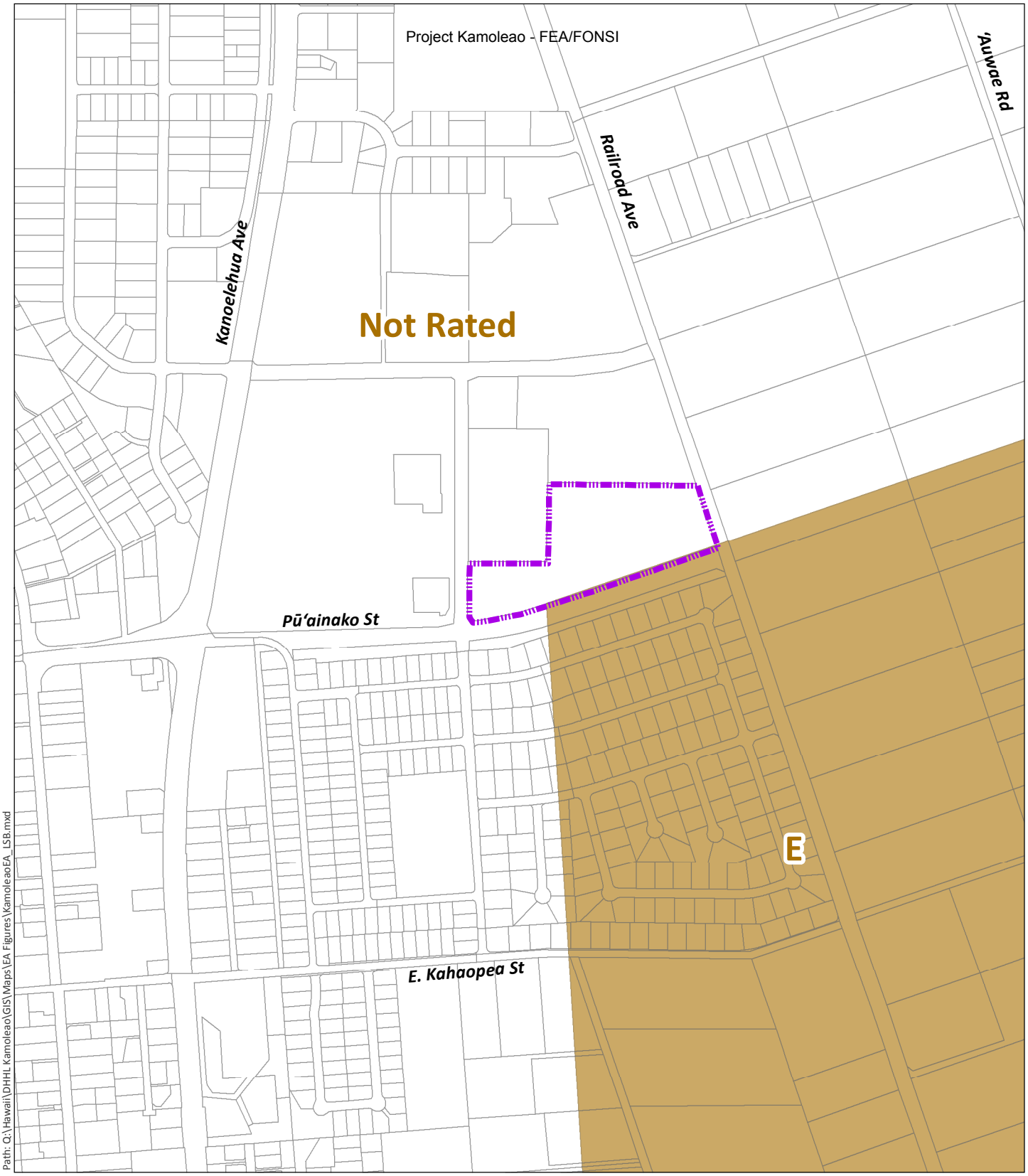
North

Linear Scale (feet)
0 200 400 800

PBR HAWAII & ASSOCIATES, INC.

Source: County of Hawai'i, 2017.

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: 1/2/2018

LEGEND

- Kamoleao
- Tax Map Key Parcels
- E: Very Poor

Figure 13:
Land Study Bureau
Detailed Land Classification

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

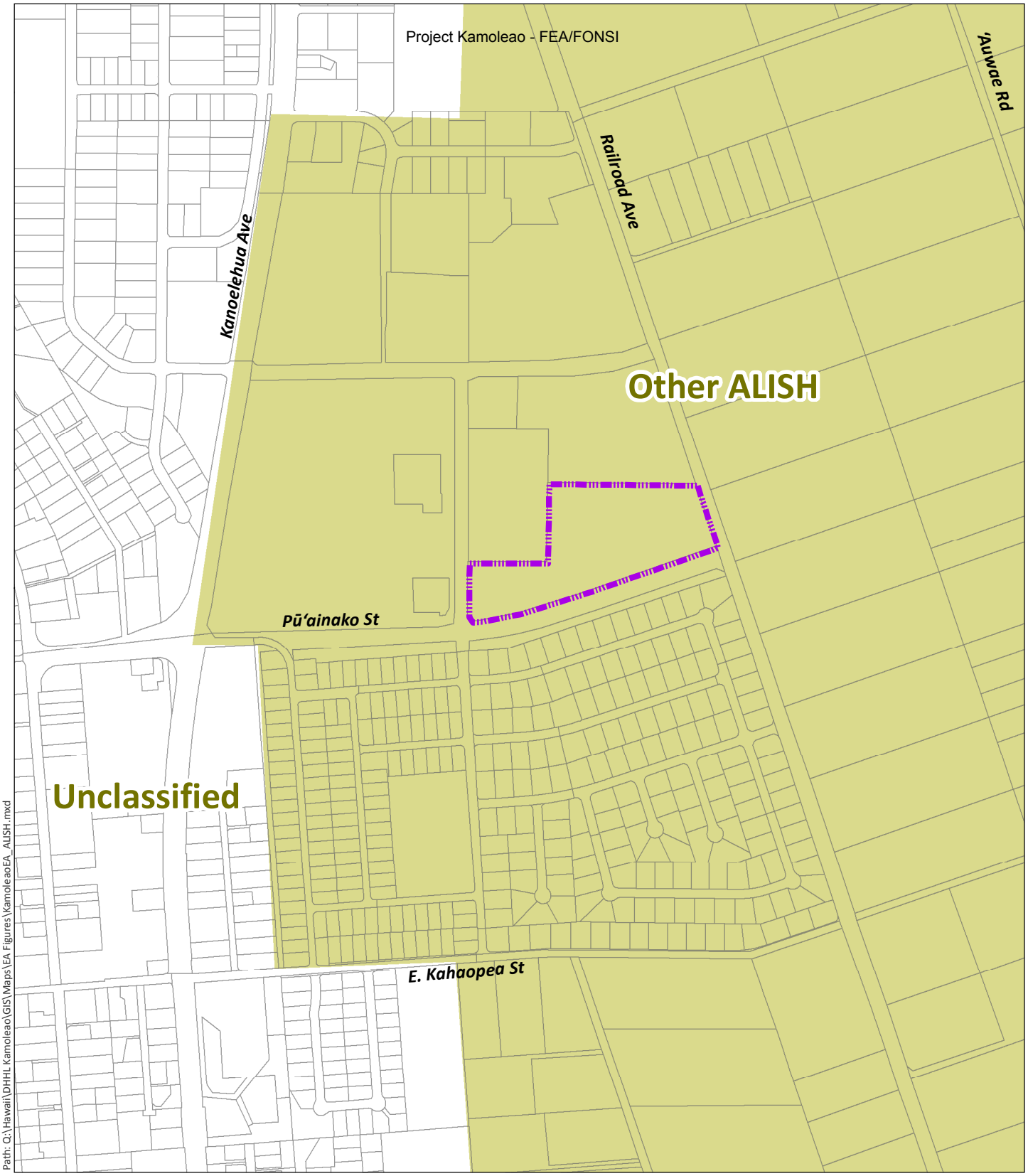
North

Linear Scale (feet)
0 200 400 800

PBR HAWAII & ASSOCIATES, INC.

Source: University of Hawai'i Land Study Bureau, 1965; County of Hawai'i, 2017.

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: 1/15/2018

LEGEND

- Kamoleao
- Tax Map Key Parcels
- Other ALISH

Figure 14:
Agricultural Lands of Importance to the State of Hawai'i (ALISH)

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

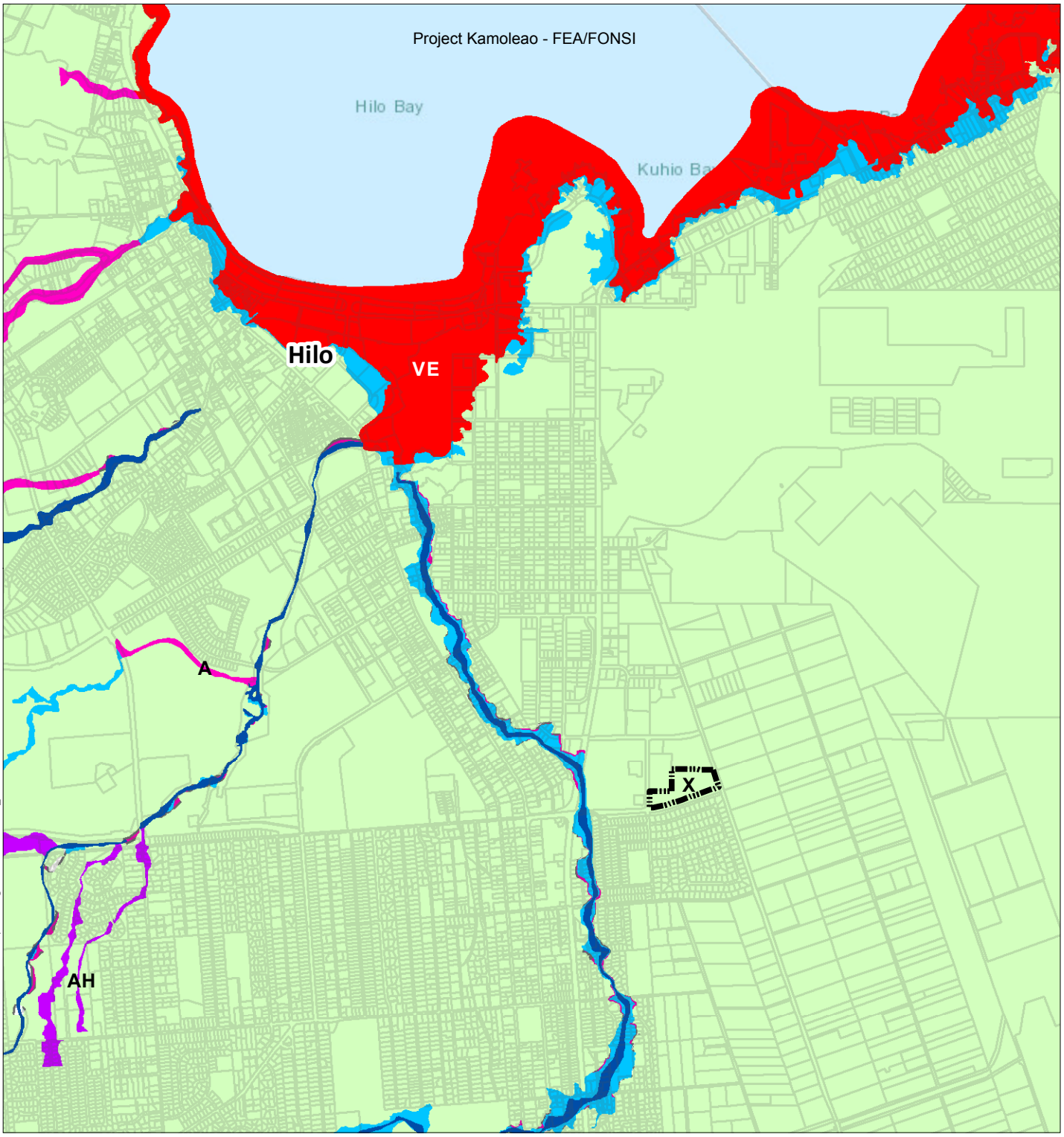
North

Linear Scale (feet)
0 200 400 800

PBR HAWAII & ASSOCIATES, INC.

Source: University of Hawai'i Land Study Bureau, 1965; County of Hawai'i, 2017.

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: 7/11/2018

LEGEND

- Kamoleao
- Tax Map Key Parcels

Flood Zones

- A: 1% annual chance flood, no Base Flood Elevation (BFE)
- AE: 1% annual chance flood, with BFE
- AH: 1% annual chance flood, flood depths of 1-3ft, with BFE
- VE: 1% annual chance coastal flood, with BFE
- Floodway areas in Zone AE
- X: Minimal flood areas

Figure 15:
Flood Insurance Rate Map

KAMOLEAO

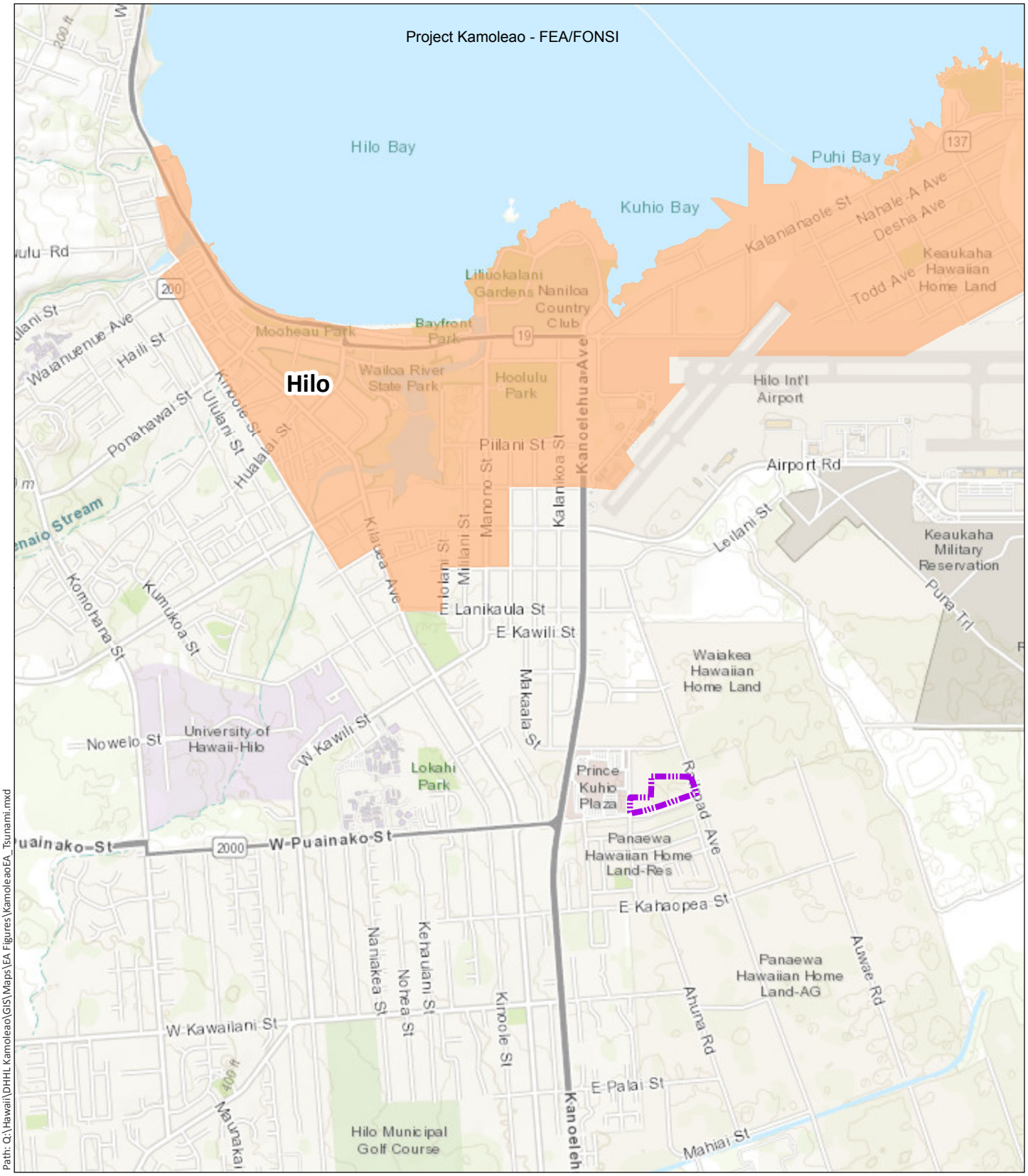
Department of Hawaiian Home Lands — Island of Hawai'i

North

Linear Scale (feet)
0 750 1,500 3,000

PBR HAWAII & ASSOCIATES, INC.

Source: Federal Emergency Management Agency, October 2017; County of Hawai'i, 2017: 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.



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DATE: 12/29/2017

LEGEND

Kamoleao

Tsunami Evacuation Zone

Figure 16:
Tsunami Evacuation Zone

KAMOLEAO

Department of Hawaiian Home Lands — Island of Hawai'i

North

Linear Scale (feet)
0 750 1,500 3,000

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Basemaps; Pacific Disaster Center, 1998.

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APPENDIX B

Archaeological Assessment

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RC-0607

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

Kamoleao Laulima Community Resource Center

(TMK:3-2-2-47:075)

Waiākea Ahupuaʻa
South Hilo District
Island of Hawaiʻi

PREPARED BY:

Robert B. Rechtman, Ph.D.

PREPARED FOR:

Ron Terry, Ph.D.
Geometrician Associates, LLC
P. O. Box 396
Hilo, HI 96721

January 2009

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phone: (808) 969-6066 fax: (808) 443-0065
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ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

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

Kamoleao Laulima Community Resource Center
(TMK:3-2-2-47:075)

Waiākea Ahupuaʻa
South Hilo District
Island of Hawaiʻi

RECHTMAN CONSULTING

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THE AREA OF POTENTIAL EFFECTS AND
THE IDENTIFICATION OF HISTORIC PROPERTIES.....9
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INTRODUCTION

At the request of Ron Terry, Ph.D. of Geometrician Associates, LLC, on behalf of his clients (Hawai‘i Community College, Pana‘ewa Hawaiian Home Lands Community Association, and Haola Inc.), Rechtman Consulting, LLC conducted an assessment of potential effects to historic properties that might result from the proposed development of the Kamoleao Laulima Community Resource Center on approximately 1.5 acres of a 12.77 acre parcel (TMK:3-2-2-47:075) in Waiākea Ahupua‘a, South Hilo District, Island of Hawai‘i (Figure 1). Initial funding for this project is being provided by the Alaskan Native/Native Hawaiian Institutions Assisting Communities Grant Program through the Department of Housing and Urban Development (HUD). This project is thus considered a Federal undertaking, and is subject to (among other regulations) the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act. Section 106 provides for coordination of efforts (36 CFR §800.3(b)) with respect to these authorities. However, while it is possible under 36 CFR §800.8 for the NEPA process to subsume (and replace) the Section 106 process, the current study is being prepared in compliance with Section 106 in coordination with NEPA with respect to the consultation and public involvement. As the property is State of Hawai‘i land (DHHL), environmental documentation is also being prepared in compliance with Chapter 343 Hawai‘i Revised Statues and the rules of the County of Hawai‘i Planning Department, which will include the preparation of separate cultural impact assessment.

For this project, the area of potential effects is the entire Tax Map parcel; which is located within the Pana‘ewa section of Hilo town, east of ‘Ohu‘ohu Street along the northern side of Pū‘āinakō Street (Figure 2). The eastern boundary of the parcel is Railroad Avenue and the northern boundary is formed by two developed parcels, one (Parcel 64) containing The Home Depot and the other (Parcel 69) containing a parking lot for the Prince Kuhio Plaza (see Figure 2).

The project area is located approximately 90 feet (27.5 meters) above sea level. The soil in the study area is classified as Papai extremely stony muck (rPAE), a well-drained, thin, extremely stony organic soil formed over fragmented *‘a‘ā*. The permeability of these soils is rapid, runoff moderate, and erosion hazard slight; the Capability Subclass is IV, and the soils of this type are mainly used for pasture and woodland (Sato et al. 1973). These soils have formed over Mauna Loa lava flows that that are approximately 750-1,500 years old (Wolfe and Morris 1996). Vegetation in the study area is dense and extremely varied (Figures 3 and 4). A recent survey of vegetation identified 72 alien and 14 indigenous species within a disturbed forest setting (Geometrician Associates, LLC unpublished data). The existing vegetation pattern indicates that portions of the study property have undergone mechanical alteration in the past.

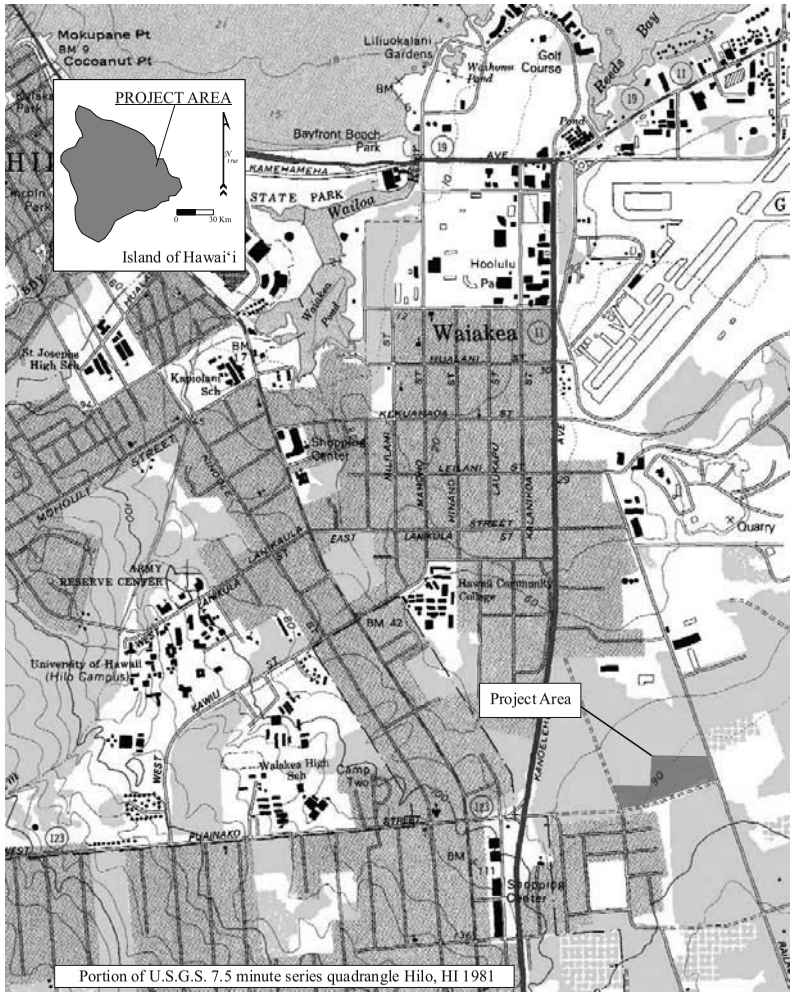

Figure 1. Project area location.

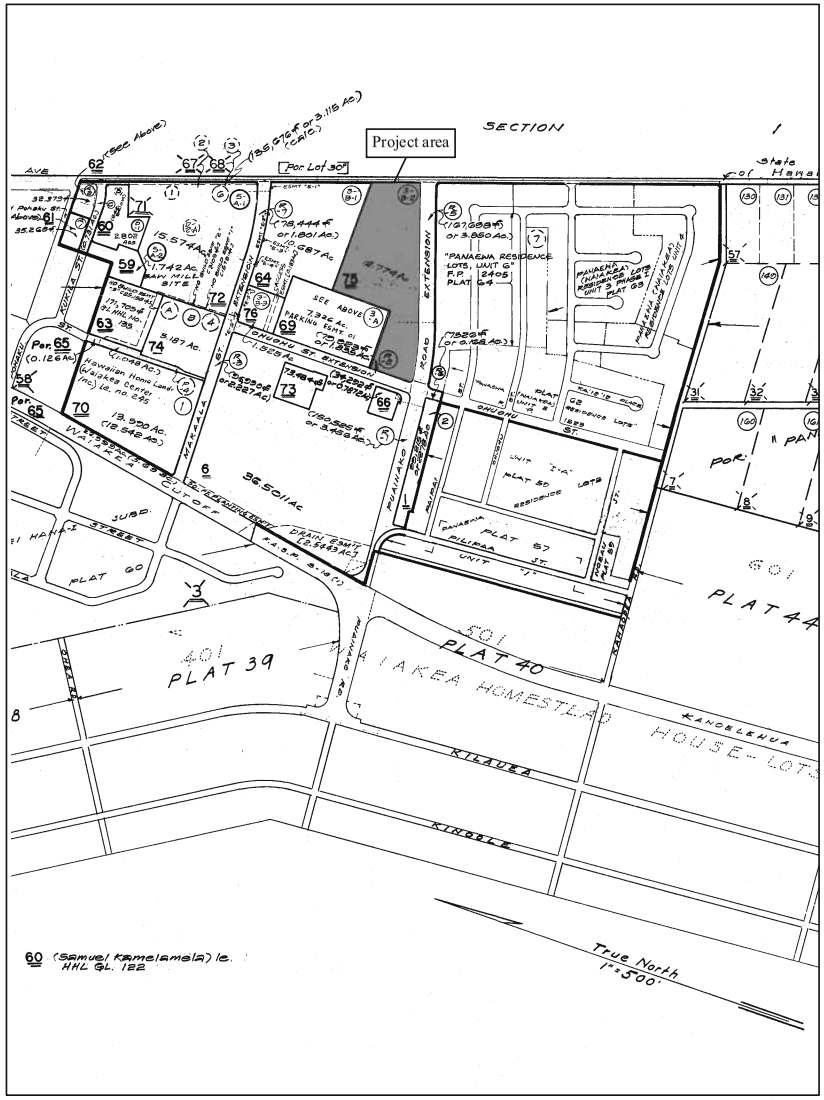

Figure 2. Tax Map Key (TMK) 3-2-2-47 showing project area (parcel 075).

Figure 3. Typical vegetation in the southwestern portion of the project area.

Figure 4. Mixed canopy vegetation in the northern portion of the project area.

BACKGROUND STUDIES

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

Previous Archaeology

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

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

More recent archaeological studies in Waiākea Ahupua‘a (Borthwick et al. 1993; Carson 1999, Devereux et al. 1997; Escott 2004; Hunt and McDermott 1993; Maly et al.1994;Rechtman 2008; Rechtman and Henry 1998; M. Rosendahl 1988a; M. Rosendahl 1988b; M. Rosendahl and Talea 1988; and Spear 1995) have produced negative results or have identified, almost exclusively, historic archaeological remains associated with either U.S. Military activity or the Waiākea Sugar Plantation, which operated in Waiākea Ahupua‘a between 1879 and 1947 (Rechtman and Henry 1998). One additional study (Wolforth 2004) addressed possible ancient fishpond sites along the Waiākea shoreline. Each of the aforementioned studies is discussed in detail below.

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

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

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

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

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

PHRI conducted three small studies (M. Rosendahl 1988a; 1988b; M. Rosendahl and Talea 1988) in elevationally lower portions of Waiākea and found no archaeological resources. Likewise, a study of 176 acres conducted in the Panaʻewa section of Waiākea (Carson 1999) to the east, and a 15 acre study area (Rechtman 2008) to the northwest of the current study area both resulted is no archaeological sites identified.

Devereux et al. (1997) preformed a reconnaissance survey for the Keaukaha Military Reservation, a 503.6 acre parcel located to the northeast of the current study area south of the Hilo International Airport. In addition to Historic-era military structures, they identified the location of a traditional trail and two associated shelter/habitation areas. It was concluded that these latter sites could be of Precontact origin.

Culture-Historical Background

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

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

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

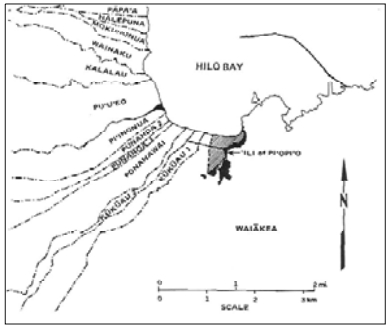

Figure 5. Hilo Bay showing *ahupuaʻa* (from Kelly et al. 1981).

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

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

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

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

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

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

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

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

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

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

Established in 1879, the Waiākea Mill Company started with about 350 acres of cultivated lands they had acquired from Lyman. In 1888 the company acquired a 30-year lease that increased their land holdings in Waiākea Ahupuaʻa. When the lease ran out in 1918 the acreage under cultivation had increased to nearly 7,000;

but without a lease the *ahupua‘a* fell under the homesteading laws, which required the government to lease the land to individual growers. Waiākea Mill Company was expected to grind the crop for the independent growers under a contract that gave the company 40% of the proceeds from the sale of the refined sugar. Contractual and legal problems combined with a declining sugar market and the devastating *tsunami* of 1946 led the Waiākea Mill Company to cease operation in 1947. During the 68 years of its operation, the Waiākea Mill Company was a major force in shaping the economic and social growth of Hilo, and certainly left its mark on both the cultural and physical landscapes of the area.

The current project area appears to have remained undeveloped until 1994 when the Pana‘ewa Hawaiian Home Lands Community Association obtained a 30-year license from DHHL to develop a community center. Then, in 1998 the Pana‘ewa Hawaiian Home Lands Community Association and Haola, Inc. received a grant form DLNR to undertake a forest stewardship project on the property. As part of that project, roadways were bulldozed, walking trails were created, alien vegetation was removed and native vegetation reintroduced. With the exception of a current squatter living in a make-shift residence (Figure 6) in the south central portion of the parcel, no further activity has taken place on the property since that time.

Figure 6. Make-shift residence in south central portion of the project area.

CURRENT PROJECT EXPECTATIONS

Based on soil substrate and distance from the shoreline (greater than 1 mile), the current project area falls within the Upland Agricultural Zone (Zone II) as defined by McEldowney (1979). The archaeological expectations for this zone include Precontact agricultural features and habitation sites. However, based on the results of prior archaeological studies in the vicinity of the project area, and the specific history of twentieth century land use, the expectations for discovering archaeological features is considered to be low.

THE AREA OF POTENTIAL EFFECTS AND THE IDENTIFICATION OF HISTORIC PROPERTIES

Given the nature of the proposed project, it was determined that an appropriate Area of Potential Effects (APE) would be the entire Tax Map Parcel (12.77 acres). Records on file at the Department of Land and Natural Resources-State Historic Preservation Division indicate that the subject parcel has never been surveyed for historic properties, and given the results of archaeological studies in other portions of Waiākea Ahupua‘a (Borthwick et al. 1993; Escott 2004; Hunt and McDermott 1993; Maly et al. 1994; Rechtman 2008; Rechtman and Henry 1998; and Spear 1995) the possibility, although remote, exists that historic properties could be present on the study parcel. With the possibility that the undertaking might affect historic properties, the process of identifying historic properties was initiated pursuant to 36 CFR§800.4 and included an examination of past studies (archaeological, archival, and oral-historical) conducted in the general project area, limited consultation with community members, and an archaeological survey of the entire APE.

Study Results

On December 16, 2008 Robert B. Rechtman, Ph.D., Matthew R. Clark, B.A., Ashton K. Dircks, B.A., with the assistance of Iwikau Joaquin (a student at Hawaii Community College in the Kahu Ku‘una program), and Russell Pakani (a Pana‘ewa community member), conducted an intensive pedestrian survey of the entire project area. Field surveyors walked east/west transects with a ten meter spacing interval. Physical evidence of the late 1990s land use was observed in the form of graded roadways (Figure 7) and prepared foot trails (Figure 8). There were no archaeological resources observed within the study area and given the nature of the substrate it is highly unlikely that any such resources are present in a subsurface context.

DETERMINATION OF EFFECTS

As no archaeological resources were identified within the APE during the current investigation, our determination is that no historic properties will be affected as a result of the proposed undertaking. These findings, as documented in this report, will be made available to any consulted parties and the public as part of the Environmental Assessment documentation prepared in compliance with the National Environmental Policy Act. It is requested that the Hawai‘i SHPO provide concurrence with the no historic properties affected determination within thirty days of receipt of this document as specified in 36 CFR Part 800.4(d)(1)(i).

Figure 7. Graded roadway near the center of the study area.

Figure 8. Rock-lined pathway of late twentieth century origin.

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LINDA LINGLE
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FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 25, 2009

Robert B. Rechtman, Ph.D.
Rechtman Consulting, LLC
507-A E. Lanikaula Street
Hilo, Hawaii 96720

LOG NO: 2009.0976
DOC NO: 0902MD45
Archaeology

Dear Dr. Rechtman:

SUBJECT: National Historic Preservation Act (NHPA) Section 106 Review – Request for Concurrence for Development of the Kamoleao Laulima Community Resource Center Waiakea Ahupua'a, South Hilo District, Island of Hawai'i TMK: (3) 2-2-047:075

Thank you for the opportunity to review the aforementioned undertaking, which we received on February 18, 2009. We concur that **no historic properties will be affected** by this undertaking because:

- ☐ Intensive cultivation has altered the land
- ☐ Residential development/urbanization has altered the land
- ☒ Previous grubbing/grading has altered the land
- ☐ An accepted archaeological inventory survey (AIS) found no historic properties
- ☐ SHPD previously reviewed this project and mitigation has been completed
- ☒ Other: *We have reviewed the letter report you submitted to us (Rechtman 2008, RC-0607) which documents a pedestrian survey conducted on December 16, 2008 in which no historic properties were found; we concur with this recommendation.*

In the event that historic resources, including human skeletal remains, cultural materials, lava tubes, and lava blisters/bubbles are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Hawaii Island Section, needs to be contacted immediately at (808) 933-7653.

If you have any questions about this letter, please contact Morgan Davis of our Hawaii Island Section at (808) 933-7650.

Aloha,

Nancy A. McMahon
Deputy State Historic Preservation Officer

APPENDIX C

State Historic Preservation Division Concurrence Letter

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DAVID Y. IGE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
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SUZANNE D. CASE
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COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

January 26, 2017

Andrew H. Choy
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

LOG NO: 2016.02815
DOC NO: 1701SN10
Archaeology

Dear Mr. Choy:

SUBJECT: **Chapter 6E-8 Historic Preservation Review–**
Request for a Hawaii Revised Statutes (HRS) Chapter 6E-8 Concurrence of "No Historic Properties Affected"
Kamoleao Laulima Community Resource Center
Waiākea Ahupuaʻa, South Hilo District, Island of Hawaiʻi
TMK: (3) 2-2-047:075

Thank you for the opportunity to comment on your submittal titled *Request for HRS Chapter 6E Review and Concurrence with "No Historic Properties Affected" Determination for the Development of the Department of Hawaiian Home Lands (DHHL) Kamoleao Laulima Community Resource Center, TMK: (3) 2-2-047:075, Waiākea Ahupuaʻa, South Hilo District, Island of Hawaii*. SHPD received this request on December 2, 2016, from Robert B. Rechtman, Ph.D. of ASM Affiliates, on behalf of the project proponents, the Hawaiʻi Community College and the Panaʻewa Hawaiian Home Land Community Association. The proposed facility will comprise a 1.5-acre portion of the 12.77-acre parcel.

The project was previously eligible for the Alaskan Native/Native Hawaiian Institutions Assisting Communities Grant Program through the Department of Housing and Urban Development (HUD), the project may also utilize HUD Native American Housing Assistance and Self-Determination Act (NAHASDA) funding in the future. Both of these federal funding sources are a federal undertaking as defined in 36 CFR 800.16(y) and thus the project would be subject to the National Historic Preservation Act (NHPA) Section 106 process. The proposed undertaking is also subject to historic preservation review under Hawaii Revised Statutes (HRS) Chapter 6E-8.

Our records indicate that an archaeological inventory survey (AIS) conducted on the subject parcel involved a 100% pedestrian survey (Rechtman 2009, RC-0607); no subsurface testing was conducted. No historic properties were identified and the negative findings were reported as an archaeological assessment (AA).

The SHPD reviewed the AA and draft Environmental Assessment and, pursuant to NHPA Section 106, the SHPO concurred that "**no historic properties will be affected**" because previous grubbing/grading has altered the land and because the survey identified no historic properties (February 25, 2009, Log No. 2009.0976, Doc. No. 0902MD45; and November 6, 2009, Log No. 2009.4032, Doc. No. 0911TD10).

Based on current information, SHPD concurs with the agency's HRS 6E-8 determination of **no historic properties affected** for the proposed project. No historic properties have been identified within or proximate to the proposed project area. Aerial photos confirm that the area has been significantly altered by previous grubbing and/or grading and, thus, it is unlikely that any historic properties are present.

Please contact Sean Nāleimaile at (808) 933-7653 or at Sean.P.Naleimaile@hawaii.gov for any questions or concerns regarding this letter.

Aloha,

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc. Dr. Bob Rechtman, ASM Affiliates (brechtman@asmaffiliates.com)

APPENDIX D

Preliminary Civil Engineering Report

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KAMOLEAO
DRAFT MASTER PLAN

PRELIMINARY CIVIL ENGINEERING REPORT

PREPARED FOR:
PBR HAWAII AND ASSOCIATES, INC
1001 BISHOP STREET, SUITE 650
HONOLULU, HI 96813

PREPARED BY:
Imata & associates, Inc.
171 KAPIOLANI STREET
HILO, HI 96720

November 2017
v1.2

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1. INTRODUCTION

1.1 PROJECT SUMMARY

The goal of this preliminary engineering report is to provide support and coordination with the Draft Conceptual Master Plan as provided by PBR Hawaii and Associates, Inc.

1.2 LOCATION

The subject parcel is located in the Waiakea area of the Hilo district, on the Island of Hawaii. The 12.744-Acre lot identified by Tax Map Key (TMK): 3rd Division, 2-2-047:075. The address of the parcel is:

19 Ohuohu Street
Hilo, HI 96720

The parcel is bound by a retailer (Home Depot) and auxiliary parking for the Prince Kuhio Plaza to the north, Railroad Avenue to East, Puainako Avenue to the South and Ohuohu Street to the West. See Figure 1 and Figure 2.

1.3 COUNTY ZONING AND SURROUNDING LAND USES

The subject parcel has a zoning designation of ML-20, referring to a Limited Industrial District having a minimum of 20,000 square feet of land area per building site. The more information on this zoning designation can be found in the Hawaii County Code Section 25-5-138, Division 14.

Neighboring parcels to the north (Home Depot and auxiliary parking for Prince Kuhio Plaza) have a similar zoning designation of ML-20 and are utilized by retail business. Parcels to the east, across Rail Road Avenue have a zoning designation of A-10a and are utilized for agricultural practices. Parcels to the south, across Puainako Avenue, have zoning designations of RS-10 and A-5a and are part of a residential subdivision. The parcel to the west is the Prince Kuhio Plaza, which contains various retail businesses and has a zoning designation of CG-20. See Figure 3.

1.4 LAND OWNERSHIP

The subject parcel and all surrounding parcels are owned by the State of Hawaii, Department of Hawaiian Home Lands. The 3 roads that bound the parcel are also owned by the State of Hawaii, Department of Hawaiian Home Lands but are currently maintained by the County of Hawaii.

2. PROJECT DESCRIPTION

2.1 PROPERTY DESCRIPTION

The property is located in close proximity to the Prince Kuhio Plaza and other national retailers such as Home Depot, Target, Safeway and Walmart. However, unlike the developed retail parcels, this property is undeveloped with a majority of the parcel covered with dense vegetation. No buildings, structures or other hard surfaces such as driveways currently exist on the parcel.

2.2 DESCRIPTION OF PROPOSED IMPROVEMENTS

The draft conceptual master plan (dated 08/18/2017) provided by PBR Hawaii and Associates, Inc. depicts four major new buildings on the site:

1. A Community Center with a certified kitchen
2. A Retail Building with the potential for two restaurants (new vehicular access from Ohuohu Street)
3. A Light Industrial Building (new vehicular access from Railroad Avenue)
4. A Health and Wellness complex (new vehicular access from Puainako Street)

A paved parking lot and onsite driveways are shown to connect the Community Center, Retail Building and Health and Wellness complex. A separate parking area is shown to serve the Light Industrial building with access from Railroad Avenue. Future development of site may include extending the interior driveways. This possible future expansion may allow all buildings on the site to be connected allowing vehicles to access the parcel from one street entrance and exit onto any of the other streets.

A walking trail system is shown in the draft conceptual master plan. The walking trail traverses the parcel and stretches from Railroad Avenue to the southwest corner of the property near the Puainako/Ohuohu intersection.

The draft conceptual mater plan also indicates 2 areas for potential future community/commercial development. One location is near the Railroad/Puainako intersection and the other is near the northern corner where the adjacent Home Depot and Auxiliary Parking parcels meet.

2.3 PROJECT PHASING

The Proposed Phasing Plan (dated 08/18/2017) provided by PBR Hawaii and Associates, Inc., depicts 4 phases for the design and construction of this project:

1. Phase 1A – Community Center with a certified kitchen
2. Phase 1B – Retail Building near Ohuohu Street and Light Industrial Building near Railroad Avenue
3. Phase 2 – Health and Wellness complex and road modifications to Puainako Street
4. Phase 3 – Potential development of 2 community/commercial areas

3. DESCRIPTION OF THE NATURAL ENVIRONMENT

3.1 CLIMATE

Hilo's climate is classified as Humid Tropical, receiving an average of 126.9 inches of rainfall annually with humidity typically ranging between 58% and 94%. Average temperatures in the Hilo area range from 65°F in December to 88°F in July.

3.2 GEOLOGY

A geotechnical investigation and report for this project is highly recommended prior to design of the site and buildings. The geotechnical investigation and report should include:

- Test borings at proposed building locations
- Percolation testing at proposed leach field locations
- Footing, foundation and retaining wall recommendations
- Recommendations on suitability of onsite material for backfill
- Flexible and Rigid pavement design recommendations

During the construction process, probing and grouting in the structural areas may reveal the presence of lava tubes.

3.3 SOILS

In lieu of having a geotechnical report at this stage of planning, general information on the existing soil and geology were obtained from the National Resources Conservation Service (NRCS) website and the Soil Survey of Island of Hawaii, State of Hawaii by the US Department of Agriculture, Soil Conservation Service (December 1973).

Two main types of soil are identified on the parcel by the NRCS:

628- Papai (rPAE) extremely cobbly highly decomposed plant material, 2 to10 percent slopes

637 – Papai (rPAE)-Urban land complex, 2 to 10 percent slopes

The Papai soil series exhibit the following characteristics:

- Slopes: 2-10 percent
- Depth to Lithic Bedrock: 40-60 inches
- Depth to Water Table: More than 80 inches
- Estimated Permeability: 6.3 to 20 inches per hour
- Shrink-Swell potential: High

The extent of the different soil types within the parcel are shown in Figure 4.

3.4 HYDROLOGY

There are no observable surface waters located on or in the immediate vicinity of the property. The closest downstream marine water body appears to be Hilo Bay.

A geotechnical investigation will reveal if ground water is encountered on the site and at what depths it is located.

3.5 NATURAL HAZARDS

The parcel wholly is located within Flood Zone X; which is determined to be outside the 0.2% annual chance flood plain, see Figure 5. There should be no restrictions on grading design, requirements for a flood study, or need for elevation certificates for the proposed building.

The parcel is located outside of the Tsunami Evacuation Zone.

The portion of the Hilo district that lies to the south of the Wailuku River, including this parcel, is located in Lava Hazard Zone 3 of Mauna Loa, see Figure 6.

3.6 TOPOGRAPHY

The project site, although relatively flat, does exhibit many bumps and dips as is the nature of lava. See Figure 8 - Topographic Survey showing existing site conditions.

4. DESCRIPTION OF THE EXISTING HUMAN ENVIRONMENT

4.1 ARCHEOLOGICAL AND HISTORIC RESOURCES

The Department of Hawaiian Home Lands (owner) may have access to previous archeological reports and studies since much of the surrounding parcels are also owned by DHHL and have been developed for commercial and residential uses. If none exist, it is recommended that the services of a licensed archeologist be retained to contact the State Historic Preservation Division (SHPD) to determine the need and extent of archeological surveys for this project. Recommendations from SHPD should be shared with the design team.

4.2 TRANSPORTATION - EXISTING ROADS

The parcel is bound on three sides by Railroad Avenue to the east, Puainako Street to the South and Ohuohu Street to the West. All 3 roads are owned by the DHHL are maintained by the County of Hawaii.

Adjacent to the parcel, Railroad Avenue is currently a paved, 2-lane road and runs north to south. The 70-foot wide right-of-way has unpaved shoulders and no sidewalks. There are no existing driveway aprons to the site along Railroad Avenue.

Puainako Street terminates at Railroad Avenue at a 'tee' intersection. There are no traffic signals, and no existing striped crosswalks at this intersection.

The portion of Puainako Street, adjacent to the parcel is currently a paved, 4-lane divided road. A landscaped, center median divides the 120-foot wide right-of-way. There are no breaks in the center median between Railroad Avenue and Ohuohu Street. There are existing concrete curbs, gutters and sidewalks along the northern side Puainako Street (adjacent to the parcel). There are no existing driveway aprons along this south side of the parcel.

The intersection of Puainako Street and Ohuohu Street is currently a 4-way stop. There are striped crosswalks at each corner of the intersection.

Ohuohu Street is currently a paved 2-lane road and runs north to south. The 60-foot wide right-of-way currently has concrete curbs, gutters and sidewalks along both the east and west sides of Ohuohu Street. The eastern sidewalk (adjacent to the parcel) also has a planting buffer between the curb and the sidewalk. There are no existing driveway aprons along this side of the parcel.

A public bus stop is located on Ohuohu Street. The bus stop is located approximately 825-feet north of Puainako Street and is located on the western half of the Ohuohu right-of-way nearest to the Macy's entrance.

4.3 INFRASTRUCTURE - EXISTING UTILITIES

4.3.1 EXISTING WATER SYSTEM

Within Railroad Avenue, an existing 12-inch water main is available for new domestic water service laterals and fire protection water lines. The existing water main is located in the unpaved shoulder area on the eastern side of the right-of-way.

In Puainako Street, an existing 18-inch water main is available for fire protection water lines. The existing water main is located near the middle of the right-of-way in the landscaped median.

In Ohuohu Street there is an existing 8-inch water main is available for new domestic water service laterals and fire protection water lines. The existing water main is located on under the western edge of the asphalt pavement. The field survey identified existing water meter boxes along the Ohuohu street frontage. The Department of Water Supply (DWS) indicated one empty meter box is for this parcel and can receive a 5/8-inch domestic water meter.

The DWS also indicated that the current domestic water allocation for this parcel is 1-water unit, which is equivalent to 400 gallons per day (gpd). Additional water units are available and shall be based on the water demand calculations for the proposed improvements as required by the DWS.

There is no non-potable waterline in this area for landscape irrigation purposes.

4.3.2 EXISTING FIRE PROTECTION SYSTEM

The existing fire protection system consists of existing fire hydrants located within the adjacent right-of-ways.

The Railroad Avenue frontage contains one existing fire hydrant. The Puainako Street frontage contains 2 existing fire hydrants. The Ohuohu Street frontage does not contain a fire hydrant; however, one existing fire hydrant is located on opposite side of Ohuohu Street (about 200-feet north of Puainako Street).

4.3.3 EXISTING WASTEWATER SYSTEM

The nearest County sewer main is located in Makaala Street, located to the north of the parcel. The Existing 8-inch sewer main is over 1,000-feet away from the Kamoleao parcel. Because of the proximity, the Kamoleao parcel is not required to connect to the County Sewer system.

Connecting to the existing sewer system will also significantly increase construction cost. It is therefore recommended that on-site individual wastewater systems be considered for wastewater treatment and disposal.

4.3.4 EXISTING DRAINAGE SYSTEM

There are no existing drainage structures such as drywells located within the Kamoleao parcel.

There are existing drainage structures in the Puainako Street and Ohuohu Street right-of-ways. The Puainako Street frontage, contains 4 catch basins (throat inlet, located along the curb and gutter line), while the Ohuohu Street frontage contains 1 catch basin.

These catch basins capture runoff produced from the paved roadways. It is unlikely that additional catch basins in the right-of-ways will be required. However, should the project's improvements, such as new driveway locations interfere with existing drainage structures, the catch basins will need to be altered or replaced.

4.3.5 EXISTING ELECTRICAL AND TELECOMMUNICATION SYSTEMS

An electrical engineer should be consulted to comment on the existing electrical and telecommunication lines and systems.

4.3.6 EXISTING SOLID WASTE SYSTEM

Because the parcel is undeveloped, there are no solid waste disposal systems on the parcel.

5. DRAFT MASTER PLAN - ENGINEERING DESIGN CONSIDERATIONS

The proposed improvements at the Kamoleao site will be designed and built in phases. Figure 9 depicts the anticipated construction phasing limits. Figures 10 through 13 highlight the proposed improvements for each individual phase of work while also showing the progressive development within the site. Phasing limits and proposed improvements are based on the Draft Master Plan provided by PBR Hawaii & Associates, Inc.

The following engineering design considerations and recommendations are also based on the Draft Master Plan, and information available at the time of this report. Changes and updates to key elements of the project such as site layout, building uses, building sizes, access points, etc. will impact the civil engineering design. Therefore recommendations provided herein are provided as a guide and should be revaluated as more information becomes available.

5.1 PHASE 1A – COMMUNITY CENTER AND CERTIFIED KITCHEN

5.1.1 VEHICLE ACCESS, PARKING AND LOADING ZONES

Vehicular access to the Phase 1A site will be from Ohuohu Street where a new driveway will be required. The driveway will match the existing street grade, requiring the curb, gutter and sidewalk in the area to be removed. ADA accessible curb ramps will be required to negotiate the grade change from the existing sidewalk to the pavement elevation. A stop bar, stop sign and crosswalk pavement markings will be required.

Although the minimum width for a two-way vehicular access is 20 ft., the minimum width for a drive aisle in a parking area with 90-degree stalls is 24 feet. The access should be sized at a minimum of 24 feet due to the proximity of the parking stalls to the entry.

Off-street parking will be provided and the minimum number of parking stalls shall be based on the building use and floor area as provided by the architect. The number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 1A are determined. The accessible stalls and access aisles shall be located closest to the building's main entrance to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones are also based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

The curbs and pavement shall terminate at the work limits of Phase 1A. Future phases shall continue the curbing and pavement as necessary in order to add additional parking and on-site vehicular access.

All traffic signage and pavement markings in all phases of construction shall conform with the most current edition of the Manual of Uniform Traffic Control Devices (MUTCD).

5.1.2 DOMESTIC WATER

Domestic water service would be provided by tapping the existing 8-inch water main located in Ohuohu Street (opposite side of street). The existing water lateral and empty meter box located at the northwest corner of the project site may be used to house a new domestic water meter provided the water demand does not exceed the current capacity of the service lateral.

However, because of the proposed certified kitchen, and service to multiple buildings, it is likely that the water demand would exceed the capacity of the existing 1-inch water lateral. It is likely that a new appropriately sized water lateral, meter and meter box will be required. The new water meter box or boxes will be located in the Ohuohu Street right-of-way, at the edge of the property line, providing easy access for DWS meter reading and maintenance.

Within the site, a new reduced pressure backflow preventer assembly will be required. The backflow assembly protects the County's water supply system from possible on-site contaminants. The backflow assembly is typically located within 5-feet of the water meter. If the assembly is located more than 5-feet from the water meter, concrete jacketing will be required around the waterline between the water meter and the backflow.

The domestic water line within the site will be stubbed out for distribution to individual buildings. Stub outs for the community center, certified kitchen and the Ohuohu Street shops building (phase 1B) will be provided. Sub-metering at each building is optional and would fall under the scope of the mechanical engineer.

The domestic water line should be designed with future phases in mind. Therefore the waterline in Phase 1A will be ended just beyond the limits of paving for phase 1A. These stub outs shall provide a connection point for continuation of the domestic water line within the site for phase 2 and phase 3.

Although not expected due to ample rainfall, if irrigation water is required, it will be provided from the domestic water line. A separate backflow assembly would be required to isolate the irrigation system from the rest of the on-site domestic water system.

The domestic and fire protection waterline design and construction for all phases, shall conform to the requirements of "Water System Standards 2002" by the Department of Water Supply.

5.1.3 FIRE PROTECTION

Fire protection would be provided by tapping the existing 18-inch water line in Puainako Street and adding an 8" detector check meter as well as backflow preventer. The fire protection water line would be sized to accommodate the fire flow as prescribed by DWS and Hawaii Fire Department Standards.

Fire hydrants would be placed within the limits of phase 1A to provide coverage to the exteriors of the buildings including to the Ohuohu Street shops building in Phase 1B. If the buildings are to be sprinkled, connections from this fire protection water line to fire sprinkler risers at the building can be provided.

As with the domestic water line, the fire protection water lines would also provide stub outs near the limits of the phase 1A improvements. Future phases 2 and 3 (northwest portion) will be able to expose these fire protection water line stub outs and continue to add to the line in order to serve future buildings and additional fire hydrants.

The fire protection design for all phases shall conform to the most recent revision of the Hawaii County Code, Chapter 26 Fire.

5.1.4 WASTEWATER

Wastewater would be handled by an Individual Wastewater System (IWS). The wastewater system shall be sized to accommodate the wastewater generated from Phase 1A.

A typical IWS will utilize septic tanks for primary wastewater treatment, and a leach field for effluent disposal. The waste stream from the certified kitchen will likely require an additional detention in a grease interceptor prior to being introduced into the septic tanks. The sizing of the grease interceptor shall be determined by the mechanical engineer.

The location of the septic tank and grease interceptor shall allow for periodic maintenance such as pumping and cleaning. The location of the septic tanks and leach field should, if possible, be located to the southwest of buildings to be down-wind of the prevailing wind direction.

The design of all IWS in all phases shall conform with the most current version of Hawaii Administrative Rules, Title 11, Chapter 62 Wastewater Systems.

5.1.5 GRADING AND DRAINAGE

Grading of the Phase 1A project site would establish surface runoff to flow away from buildings and direct them to new on-site drainage structures. Additionally, the grading design will account for ADA requirements for accessible routes around the buildings and in relation to parking and other common areas.

The drainage system for Phase 1A shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation.

The grading design in all phases shall conform to the requirements of the most current version of the Hawaii County Code, Chapter 10 – Erosion and Sediment Control. Additionally, the recommendations from geotechnical investigations shall be implemented in the design.

The drainage design for all phases shall meet the requirements of the most current version of the Hawaii County Code, Chapter 25-2-72(3) and be designed based on the 1-hour, 10-year storm event in accordance with "Storm Drainage Standards," by the Department of Public Works, dated October 1970.

5.2 PHASE 1B – OHUOHU STREET SHOPS

5.2.1 VEHICLE ACCESS, PARKING AND LOADING ZONES

Access to the retail building (western portion of Phase 1B) will be from the same Ohuohu Street entrance constructed in Phase 1A. Additional pavement and curbs shall be added for vehicular access and parking nearest to the retail building.

Off-street parking will be provided for the retail building based on the building use and floor area as provided by the architect. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 1B (retail building) is determined. The accessible stalls and access aisles for Phase 1B shall be located closest to the retail building's main entrance to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones for Phase 1B shall also be based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

5.2.2 DOMESTIC WATER

Domestic water service would be provided connecting to the on-site stub out provided during Phase 1A. Additional waterline shall be installed as needed to provide a connection to the retail building.

Sub-metering at the building is optional and would fall under the scope of the mechanical engineer.

5.2.3 FIRE PROTECTION

Fire hydrants installed during phase 1A should be designed to provide coverage to the exterior of the Phase 1B retail building. If the retail building is to be sprinkled, the stub-out provided during Phase 1A shall be extended to the fire sprinkler riser location.

5.2.4 WASTEWATER

Wastewater would be handled by a new IWS designed specifically for Phase 1B (retail building).

Should the retail shops include restaurants; the waste stream from the kitchens will likely require an additional detention in a grease interceptor prior to being introduced into the septic tanks. The sizing of the grease interceptors shall be determined by the mechanical engineer.

The preliminary conceptual sizing of the IWS for Phase 1B is based on serving two restaurants and a common restroom. Due to the high wastewater generation rates at restaurants, the Phase 1B IWS is similar in size and capacity to the IWS in Phase 1A.

The location of the septic tank and grease interceptor shall allow for periodic maintenance such as pumping and cleaning. The location of the septic tanks and leach field should, if possible, be located to the southwest of buildings to be down-wind of the prevailing wind direction.

5.2.5 GRADING AND DRAINAGE

Grading of the Phase 1B would establish surface runoff to flow away from retail building and direct them to new on-site drainage structures. Additionally, the grading design will account for ADA requirements for accessible routes around the building and in relation to parking and other common areas.

The drainage system for Phase 1B shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation.

5.3 PHASE 1B – LIGHT INDUSTRIAL BUILDING (RAILROAD AVENUE)

5.3.1 VEHICLE ACCESS, PARKING AND LOADING ZONES

Access to the light industrial building near the northeastern property corner, shall be from a new Railroad Avenue entrance. The new driveway entrance will match the existing street grade

The Department of Public Works has indicated that the Railroad Avenue right-of-way will not require improvements to add curb, gutters and sidewalks. Therefore the driveway will be an asphalt only connection and will not be required to provide ADA curb ramps, or crosswalk striping. A stop bar, and stop sign will be required.

The new vehicular access does not conflict with parking stalls and may therefore be a minimum of 20-feet wide.

The Department of Public Works has indicated that the Railroad Avenue right-of-way will not require improvements to add curb, gutters and sidewalks.

Off-street parking will be provided for the light industrial building based on the building use and floor area as provided by the architect. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 1B (light industrial building) is determined. The accessible stalls and access aisles for Phase 1B shall be located closest to the light industrial building main entrance to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones for Phase 1B shall also be based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

5.3.2 DOMESTIC WATER

Domestic water service would be provided by tapping the existing 12-inch water main located in Railroad Avenue (opposite side of street). A new domestic water service lateral, meter and meter box are required. The service lateral and meter shall be sized to accommodate the water demand from the light industrial building.

The new water meter box will be located in the Railroad Avenue right-of-way, at the edge of the property line, providing easy access for DWS meter reading and maintenance.

Within the site, a new reduced pressure backflow preventer assembly will be required. If the assembly is located more than 5-feet from the water meter, concrete jacketing will be required around the waterline between the water meter and the backflow.

The domestic water line within the site will be connected to the light industrial building. A stub out for future Phase 3 (southeast portion) shall be provided.

Although not expected due to ample rainfall, if irrigation water is required, it will be provided from the domestic water line. A separate backflow assembly would be required to isolate the irrigation system from the rest of the on-site domestic water system.

5.3.3 FIRE PROTECTION

Fire protection would be provided by tapping the existing 12-inch water line in Railroad Avenue and adding a 6" detector check meter as well as a backflow preventer near the entry. The fire protection water line would be sized to accommodate the fire flow as prescribed by DWS and Hawaii Fire Department Standards.

Fire hydrants would be placed within the limits of phase 1B to provide coverage to the exterior of the light industrial. If the building is to be sprinkled, connections from this fire protection water line to fire sprinkler riser at the building can be provided.

A stub out for future Phase 3 (southeast portion) shall be provided.

5.3.4 WASTEWATER

Wastewater would be handled by an IWS. The wastewater system shall be sized to accommodate the wastewater generated from the light industrial building.

A typical IWS will utilize septic tanks for primary wastewater treatment, and a leach field for effluent disposal.

The location of the septic tank shall allow for periodic maintenance such as pumping and cleaning. The location of the septic tanks and leach field should, if possible, be located to the south west of buildings to be down-wind of the prevailing wind direction.

5.3.5 GRADING AND DRAINAGE

Grading of the Phase 1B project site would establish surface runoff to flow away from the light industrial building and direct them to new on-site drainage structures. Additionally, the grading design will account for ADA requirements for accessible routes around the buildings and in relation to parking and other common areas.

The drainage system for Phase 1B shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation

5.4 PHASE 2 – HEALTH AND WELLNESS COMPLEX

5.4.1 VEHICLE ACCESS, PARKING AND LOADING ZONES

Access to the health and wellness center, shall be from a new Puainako Street entrance. An existing landscaped median in Puainako Street would be modified to provide a left turn storage and acceleration lane.

The new vehicular access to Phase 2 as shown in the master plan has 12-foot wide dedicated entry and exit lanes with a landscaped divider. The total width of the driveway is 34-feet. The existing curb, gutter and sidewalk along Puainako Street will require modification at the entry location. ADA compliant curb ramps will be installed.

Off-street parking will be provided for the Phase 2 based on the building use and floor area as provided by the architect. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 2 is determined. The accessible stalls and access aisles for Phase 2 shall be located closest to the Health and Wellness building's main entrance to ensure the shortest routes are provided. The passenger loading zone near the main entrance shall also be ADA compliant.

The prescribed number and sizes of loading zones for Phase 1B shall also be based on the building use and floor area. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

The curbs and pavement shall terminate at the eastern work limits of Phase 2. Phase 3 shall continue the curbing and pavement as necessary in order to add additional parking and on-site vehicular access.

5.4.2 DOMESTIC WATER

Domestic water service would be provided by connecting to the on-site stub out provided during Phase 1A. Additional domestic waterline shall be installed as needed to provide a connection to the Health and Wellness building.

The domestic water line should be designed with Phase 3 in mind. Therefore the waterline will be ended just beyond the limits of paving for phase 2. A stub outs shall provide a connection point for continuation of the domestic water line for Phase 3.

Sub-metering at the building is optional and would fall under the scope of the mechanical engineer.

5.4.3 FIRE PROTECTION

The fire protection water line installed during phase 1A should be extended into Phase 2. A new fire hydrant(s) shall be installed to provide fire protection to the exterior of the Phase 2 building. If the Health and Wellness building is to be sprinkled, a connection to the fire protection waterline shall be provided.

5.4.4 WASTEWATER

Wastewater would be handled by an IWS. The wastewater system shall be sized to accommodate the wastewater generated from the Health and Wellness building.

A typical IWS will utilize septic tanks for primary wastewater treatment, and a leach field for effluent disposal. The architect and mechanical engineer shall notify the civil engineer if there will be any specialized waste streams. The mechanical engineer shall size any specialized tanks such as grease interceptors or acid neutralization tanks.

The location of the septic tank shall allow for periodic maintenance such as pumping and cleaning.

5.4.5 GRADING AND DRAINAGE

Grading of the Phase 2 project site would establish surface runoff to flow away from the Health and Wellness building and direct them to new on-site drainage structures. Additionally, the grading design will

account for ADA requirements for accessible routes around the buildings and in relation to parking and other common areas.

The drainage system for Phase 2 shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation.

5.5 PHASE 3 – FUTURE COMMERCIAL

5.5.1 VEHICLE ACCESS, PARKING AND LOADING ZONES

Access to Phase 3 will be through parking areas and drive aisles established in Phase 1A and Phase 2. The curbs and pavement shall be extended to provide vehicular access and additional parking as needed.

Off-street parking will be provided for the Phase 3 based on the building uses and floor areas as provided by the architect. The required number of accessible parking stalls and access aisles shall be determined after the total number of parking stalls for Phase 3 is determined. The accessible stalls and access aisles shall be located closest to the Phase 3 building's main entrances to ensure the shortest routes are provided.

The prescribed number and sizes of loading zones for Phase 3 shall also be based on the building uses and floor areas. The loading zones shall be placed in areas that do not obstruct on-site traffic flow or vehicle movements.

5.5.2 DOMESTIC WATER

Domestic water service for the northwest portion of Phase 3 shall be provided by connecting to the on-site stub out provided during Phase 1A. Domestic water service for the southeast portion of Phase 3 shall be provided by connection to the on-site stub out provided during the Phase 1B.

Sub-metering at the Phase 3 buildings is optional and would fall under the scope of the mechanical engineer.

The domestic water lines shall not be interconnected, and shall not be looped within the site.

5.5.3 FIRE PROTECTION

The fire protection water line stub out installed during Phase 1A should be connected to and extended into the northwest portion of Phase 3. The fire protection water line stub out installed during Phase 1B should be connected to and extended into the southeast portion of Phase 3.

New fire hydrant(s) shall be installed to provide fire protection to the buildings in Phase 3. If the Phase 3 buildings are to be sprinkled, connections from the respective fire protection lines shall be provided.

The fire protection water lines shall not be interconnected, and shall not be looped within the site.

5.5.4 WASTEWATER

Wastewater would be handled by at least two IWS, one for Phase 3 buildings in the northwest corner of the property and one at the southeast corner of the property. Each wastewater system shall be sized to accommodate the wastewater generated from the Phase 3 buildings.

A typical IWS will utilize septic tanks for primary wastewater treatment, and a leach field for effluent disposal. The architect and mechanical engineer shall notify the civil engineer if there will be any specialized waste streams. The mechanical engineer shall size any specialized tanks such as grease interceptors or acid neutralization tanks.

The location of the septic tank shall allow for periodic maintenance such as pumping and cleaning. The location of the septic tanks and leach field should, if possible, be located to the south west of buildings to be down-wind of the prevailing wind direction.

5.4.5 GRADING AND DRAINAGE

Grading of the Phase 3 project areas would establish surface runoff to flow away from the buildings and direct them to new on-site drainage structures. Additionally, the grading design will account for ADA requirements for accessible routes around the buildings and in relation to parking and other common areas.

The drainage system for Phase 2 shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation.

5.6 WALKING PATH

A walking path through the entire site is depicted on the master plan. The walking path extends from the Ohuohu and Puainako intersection east to the Railroad avenue entrance. The meandering path should account for ADA requirements for running and cross slopes as well as providing an appropriate surface material.

5.7 PRELIMINARY COST ESTIMATES

Preliminary cost estimates for civil related site work improvements are provided at the end of this report for planning purposes. The cost estimates are separated by phase and correspond to the conceptual improvements shown in Figures 10 through 12. No cost estimate is provided for Phase 3 because of the limited amount of information regarding this future phase. The estimates are based on the available material and construction labor cost for civil site work improvements at the time of this report. Material and labor costs for other engineering disciplines, such as electrical and mechanical work shall be provided by professionals in their respective fields.

A subtotal for each phase is provided, along with a total cost for each phase which includes a typical contractor mark-up consisting of overhead, profit, bonding and excise tax. A summary of the preliminary cost estimates is provided in Table 1 below.

Table 1 – Preliminary Cost Estimate Summary

	[1]Site Subtotal	[2]Construction Total	[3]DWS Total	[4]Total Cost
Phase 1A	$1,252,107.25	$1,594,009.62	$88,000.00	**$1,682,009**
Phase 1B (retail)	$415,014.31	$528,338.77	$60,500.00	**$588,838**
Phase 1B (light industrial)	$759,247.33	$966,568.60	$33,000.00	**$999,568**
Phase 2 (health & wellness)	$645,288.64	$821,492.17	$11,000.00	**$832,492**
Phase 2 (Puainako St. median)	$116,419.61	$148,209.33	$0.00	**$148,209**
Total:	**$3,188,077.14**	**$4,058,618.49**	**$192,500.00**	**$4,251,116**

[1]Includes material and labor costs only.
[2]Includes typical contractor costs consisting of 10% overhead, 10% profit, 1% bond and 4.17% excise tax applied to the Site Subtotal.
[3]Includes projected Dept. of Water Supply facility charges based on estimated water units and new domestic meter fees. Typical contractor costs are not associated with the DWS charges.
[4]Total Cost is the sum of Construction Cost and the DWS Total

It should also be noted, that the cost estimates do not include engineering design costs, specialized services cost such as archeological monitoring, governmental application and permitting fees, advertising costs nor any governmental charges that might be associated with the final design. Many of the excluded costs will depend on more detailed information which is unavailable at the master planning stage.

6. GOVERNMENTAL APPROVALS AND THE PERMITTING PROCESS

The following relates to the necessary approvals and requirements for the civil engineering discipline only. The professionals from other engineering and architectural disciplines should comment on the approval and permitting process for their respective areas of expertise.

6.1 DRAINAGE REPORT

A site drainage plan/report approved by the County of Hawaii Director of Public Works is required for this project. The drainage plan shall include a storm water disposal system to contain runoff caused by the proposed development, within the site boundaries, up to the expected 1-hour, 10-year storm event. The method for calculating storm water runoff shall be calculated according to the Department of Public Works "Storm Drainage Standards," dated October 1970.

The approved drainage report is a prerequisite of the Plan Approval application. Therefore, the drainage report should be submitted for review and approval as soon as the site layout is complete. Typical review times for the drainage report are on the order of 3-6 weeks.

6.2 PLAN APPROVAL APPLICATION

The Plan Approval application is submitted for review to the County of Hawaii Planning Department. The purpose of the application is to review the site plans for conformance with the subdivision and zoning codes. The application is typically submitted at or before the preliminary design stage, well ahead of applying for a building permit.

The Plan Approval application form requires original signatures from the applicant (typically the architect of record), the land owner and an authorized agent (typically the architect). The application form also lists the specific plan sheets needed the application. Unlike the full construction plan set required for a building permit, only specifically selected sheets are required for the Plan Approval application. The Plan Approval application requires the following:

- A Site Plan or plans drawn to scale and fully dimensioned with the following information:
  - The location & dimensions of the parcel (entire legal lot of record) with the TMK number
  - The location, size and use of all existing and proposed structures
  - All yards and open spaces (building setback lines) and distance of buildings from property lines
  - Location, height and material of all fences and walls
  - Location number and dimensions of all on-site parking and loading spaces, ADA parking and access aisles, pavement for parking and accessway surfaces, drainage control facilities, waste collection enclosures, and vehicle circulation plan including points of street access
  - The location, general nature and type of all exterior lighting, including shielding devices
  - All proposed landscaping and planning meeting requirements of Planning Rule 17
  - All proposed street dedication and improvements if any
- Building Floor Plans and elevations (Front, rear and side views), drawing to scale of all existing and proposed above-ground structures, indicating height above finished grade
- A site drainage plan previously approved by the Director of Public Works in accordance with Section 25-2-72(3) of the Zoning Code based on the improvements proposed in the application

- A certification of clearance from the Director of Finance that the real property taxes and all other fees relating to the subject parcel have been paid and that there are no outstanding delinquencies

Typical review times for the Plan Approval application are on the order of 4-8 weeks.

6.3 GRADING DESIGN AND WORK WITHIN THE COUNTY RIGHT-OF-WAY

The civil engineer will submit a copy of the civil construction plans (typically pre-final) to the Department of Public Works (DPW) engineering division for review and approval. This typically occurs well before the Building Permit application is submitted. The civil engineering plans shall be at a stage to show all of the proposed site improvements, including the proposed grading design, drainage improvements, and work in and/or on County right-of-ways. The plans shall also include estimated quantities of excavation and embankment and also identify the area to be graded.

When all DPW review comments are addressed, the approval of the civil plans will be certified with an approval signature from the Director of DPW on one of the civil sheets. The DPW approval is valid for a period of 3-years unless substantial plan revisions are made after the approval is granted.

6.4 WATER SYSTEM DESIGN AND WATER DEMAND CALCULATION

The civil engineer will submit a copy of the civil construction plans (typically pre-final) to the Department of Water Supply (DWS) engineering division for review and approval. This typically occurs well before the Building Permit application is submitted. The civil engineering plans shall be at a stage to show all of the proposed site improvements, including the proposed locations and size of domestic water service laterals water meter sizes, fire protection connections, fire protection water meter sizes and all other improvements and connections to the County's water system.

A water demand calculation shall also be provided to the DWS at the time of submittal. The water demand calculations shall be based on the anticipated building use information from the architect and fixture count from the mechanical engineer. The water demand calculation shall support the sizing of water laterals, meters and other connections to the County water system.

Facilities charges based on the water demand calculations and the corresponding civil design, for new meters and additional water units shall be determined by the DWS and be paid for by the owner.

When all DWS review comments are addressed, the approval of the civil plans will be certified with an approval signature from the Manager-Chief Engineer of DWS on one of the civil sheets. The DWS approval is valid for a period of 1-year.

6.5 INDIVIDUAL WASTEWATER SYSTEM (IWS) APPLICATIONS

The civil engineer shall submit an individual wastewater system (IWS) application to State Department of Health Wastewater Branch for review and approval for each IWS on the site. This typically occurs well before the Building Permit application is submitted. The IWS application shall include selected civil plan sheets pertaining to the IWS, including notes, site plans, profiles, and details sheets. A copy of the geotechnical investigation's percolation test results are also typically provided as it supports the design of the waste disposal field.

Each IWS application form requires an original signature from the land owner and each application has a $100.00 filing fee. The civil engineer typically pays for the application fee(s) at the time of submittal, but shall require reimbursement from the architect.

Once the IWS application is approved, the DOH will provide the owner with an approval-to-construct (ATC) letter. The ATC letter will indicate that the civil engineer is required to perform a final inspection of the IWS prior to being used.

At the time of the final inspection, the contractor shall have all components of the IWS exposed for inspection. The engineer will conduct a visual inspection of the IWS and perform any necessary testing. Upon completion of the inspection, and at the satisfaction of the engineer the contractor may backfill the IWS components.

The engineer shall submit the IWS final inspection report to the DOH. The DOH shall then issue the owner an approval-for-use letter allowing the system to be used.

6.6 UNDERGROUND INJECTION CONTROL (UIC) APPLICATIONS

The preliminary drainage design presented in this report utilizes 'shallow' type drywells that do not require an underground injection control (UIC) permit.

The civil engineer may elect to use 'deep' drainage drywells in the actual project design, and if so, a UIC permit will be required. A typical or 'deep' drainage drywell, is one in which the excavation is deeper than it is wide. A single UIC application may be used to register multiple new drywells.

The civil engineer shall submit an UIC application to State Department of Health Safe Drinking Water Branch for review and approval of new drainage drywells on the site. This application is prepared and submitted before the Building Permit application is submitted. The UIC application shall include selected civil plan sheets pertaining to the drainage drywells, including notes, grading and drainage plans, profiles, and details sheets.

Each UIC application form requires an original signature from the land owner and each application has a $100.00 filing fee. The civil engineer typically pays for the application fee(s) at the time of submittal, but shall require reimbursement from the architect. The initial review time for UIC permits has been 4-12 weeks.

Each UIC application also requires a public notice be published in the Hawaii Tribune Herald (local newspaper). Upon publishing the notice, the public will have a period of 30-days to submit comments to the DOH. After the comment period ends the DOH shall determine if a public hearing on the matter is warranted. If no significant public comments are received, the DOH may grant the owner an ATC letter. The civil engineer typically pays for the public notice, but shall require reimbursement from the architect.

The ATC letter will include the details of a final inspection report for the new drywells. Although the UIC final inspection report requires as-built information for all new drywells, the inspection report typically identifies specific drywells for testing. It is the DOH policy that 1/3 of all new drainage drywells be included for testing.

The technical specifications provided by the civil engineer shall indicate that the contractor shall retain the services of a licensed geologist and pay for percolation testing of the indicated drainage drywells. The contractors shall provide the design engineer with a report from the geologist and the testing results.

The design engineer shall review the provided report and test results and make necessary adjustments to the drainage design as necessary. The engineer shall then submit the final inspection report to the DOH. The DOH shall then issue the owner an approval-to-operate letter.

6.7 NPDES APPLICATIONS

A National Pollutant Discharge Elimination System (NPDES) permit application will be required for construction activities. This permit is required when construction activities will disturb land areas greater than 1.0 acre. An NPDES application may cover multiple phases of construction. However, the number of NPDES applications for this project will be considered during the design phase and shall be based on the best available phasing, and funding data at that time.

The civil engineer shall submit NPDES applications to State Department of Health Clean Water Branch for review and approval. This application is prepared and submitted before the Building Permit application is submitted. The NPDES application will likely include selected civil plan sheets pertaining to the erosion control measures, BMPs and general site design. Civil sheets within the application may include notes, phasing plans, erosion control plans, demolition plans, layout plans, grading plans and detail sheets.

Each NPDES application requires an original signature from the land owner and the owner's authorized representative. The owner's authorized representative shall have the authority to implement and modify the permit once it has been granted. The owners authorized representative shall also be responsible to notify the DOH when construction is complete, and to ceases coverage under the NPDES permit.

NPDES permit fees vary based on the type selected; there are 2 types of NPDES permits. The first type of application applies for coverage under the State of Hawaii's general permit for construction activities. This permit is registered with the EPA and can cover multiple construction sites around the State. The second type is individual permit coverage, specific to one construction site. The civil engineer shall determine the NPDES type based on best available information during the design phase. The application fee for general permit coverage is currently $500.00. The application fee for individual permit coverage is currently $1,000.00.

Additionally, individual NPDES permit coverage also requires a public notice be published in the Hawaii Tribune Herald (local newspaper). Upon publishing the notice, the public will have a period of 30-days to submit comments to the DOH. After the comment period ends the DOH shall determine if a public hearing on the matter is warranted. If no significant public comments are received, the DOH may grant the individual permit coverage and the owner may begin construction. The civil engineer typically pays for the public notice, but shall require reimbursement from the architect.

The review and approval times for NPDES permits vary depending on the permit type. The application for general permit coverage typically takes 4-12 weeks for a review and approval. The application for individual permit coverage typically takes about 26 weeks (180 days) for a review and approval (including publication and public comment time).

Coverage under the State's general NPDES permit shall expire on in December of 2018. The State is already in the process of renewing the general permit with the Environmental Protection Agency (EPA) but any NPDES permits under the State's general permit, and who's construction is ongoing, shall be required to file an extension of their NPDES permits. A $500.00 extension filing fee shall be required.

Individual NPDES permits expire 5-years from date when they are granted.

6.8 DEMOLITION AND BUILDING PERMIT APPLICATIONS

The demolition and building permit application are submitted for review with the Department of Public Works building division. The submittal shall require submission of complete construction plan drawings in the following formats:

- 1 Full size set of drawings bearing original 'wet' signatures from all design consultants.
- 2 Half size sets of drawings (copied signatures are acceptable).

At the time of the building permit submittal, the civil engineering drawings should have obtained approval of the civil design from:

- Department of Public Works Engineering – Grading, drainage and work in county right-of-ways
- Department of Water Supply – Water system connections, meter sizing and locations
- Department of Health Wastewater Branch – Individual wastewater systems

Other disciplines shall provide the following items at the time of building permit submittal:

- Architect – A copy of the Plan Approval acceptance letter from the Planning Department
- Architect – A copy of the DCAB review letter or Building Accessibility form (from DPW)
- Architect & Civil – A Solid Waste Demolition and Disposal Plan (if existing structures and/or existing site improvements will be demolished)
- Architect and/or Structural Engineer – Special Inspection form (for structural inspections)
- Structural Engineer – Structural design calculations for the buildings
- Mechanical Engineer – Approved Form 1 (DOH item)
- Electrical Engineer – A stamp on the first sheet of electrical drawings or equivalent letter stating that the electrical design meets the County's building energy efficiency standards.

The building permit review usually takes 3-4 months depending on the number of review comments and revision time need by the design team.

Upon approval of the demolition and building permits, the selected contractor typically obtains and pays for the permits at the Department of Public Works.

7. LIST OF ATTACHED FIGURES AND ATTACHMENTS

Figure 1 - Island Map

Figure 2 – Vicinity Map

Figure 3 – Zoning Designations

Figure 4 – Soil Map

Figure 5 – Flood Hazard Map

Figure 6 – Lava Hazard Map

Figure 7 – Satellite View

Figure 8 – Topographic Survey (11x17)

Figure 9 – Phasing Plan (11x17)

Figure 10 – Phase 1A Site Plan (11x17)

Figure 11 – Phase 1B Site Plan (11x17)

Figure 12 – Phase 2 Site Plan (11x17)

Figure 13 – Phase 3 Site Plan (11x17)

Kamoleao Phase 1A – Community Center – 0% Civil Site Work Cost Estimate

Kamoleao Phase 1B – Ohuohu St. Shops – 0% Civil Site Work Cost Estimate

Kamoleao Phase 1B – Light Industrial Bldg. – 0% Civil Site Work Cost Estimate

Kamoleao Phase 2 – Health & Wellness Complex – 0% Civil Site Work Cost Estimate

Kamoleao Phase 3 – Puainako Street Median – 0% Civil Site Work Cost Estimate

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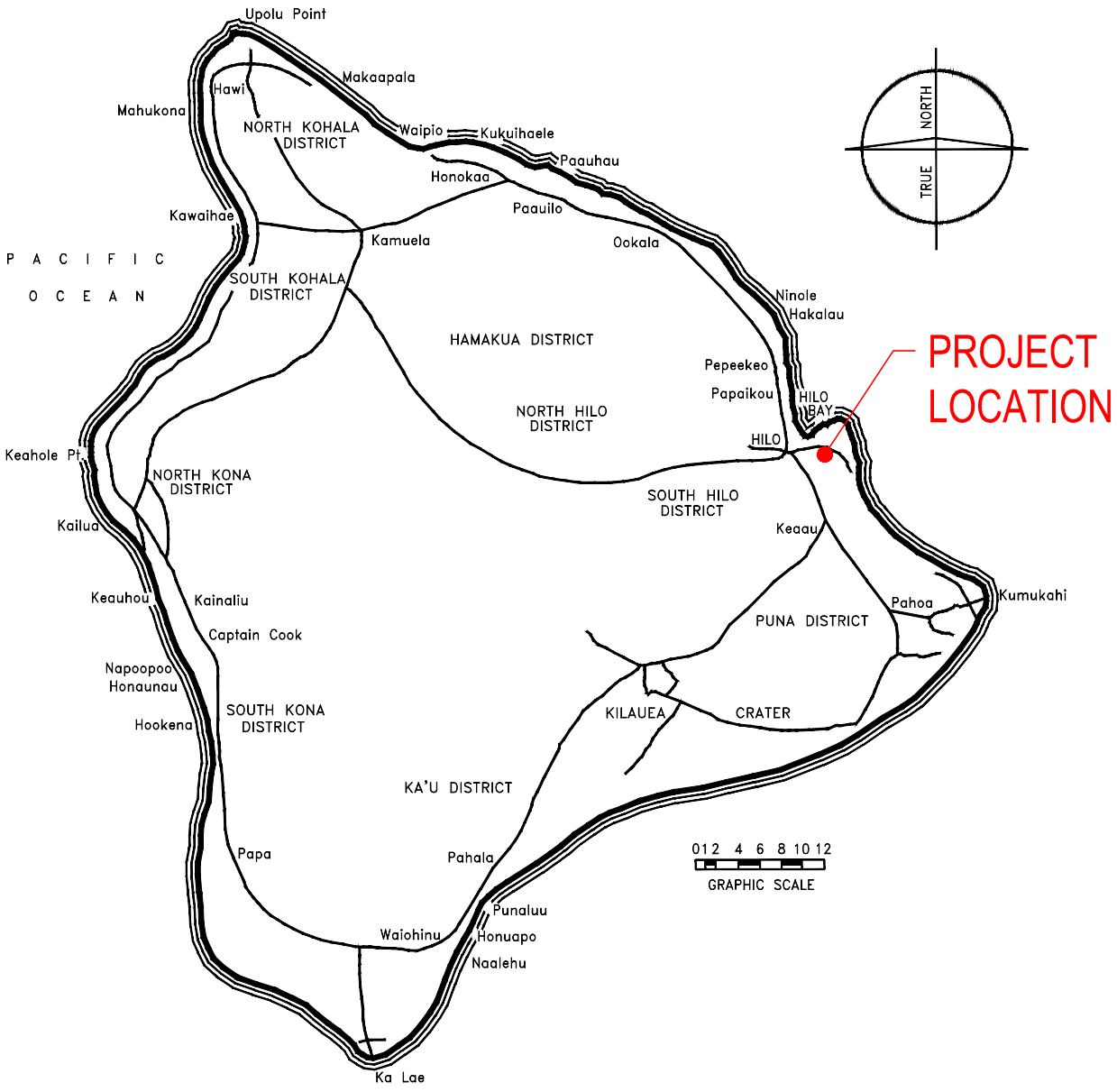


FIGURE 1 - ISLAND MAP

NOT TO SCALE

PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: ISLAND MAP

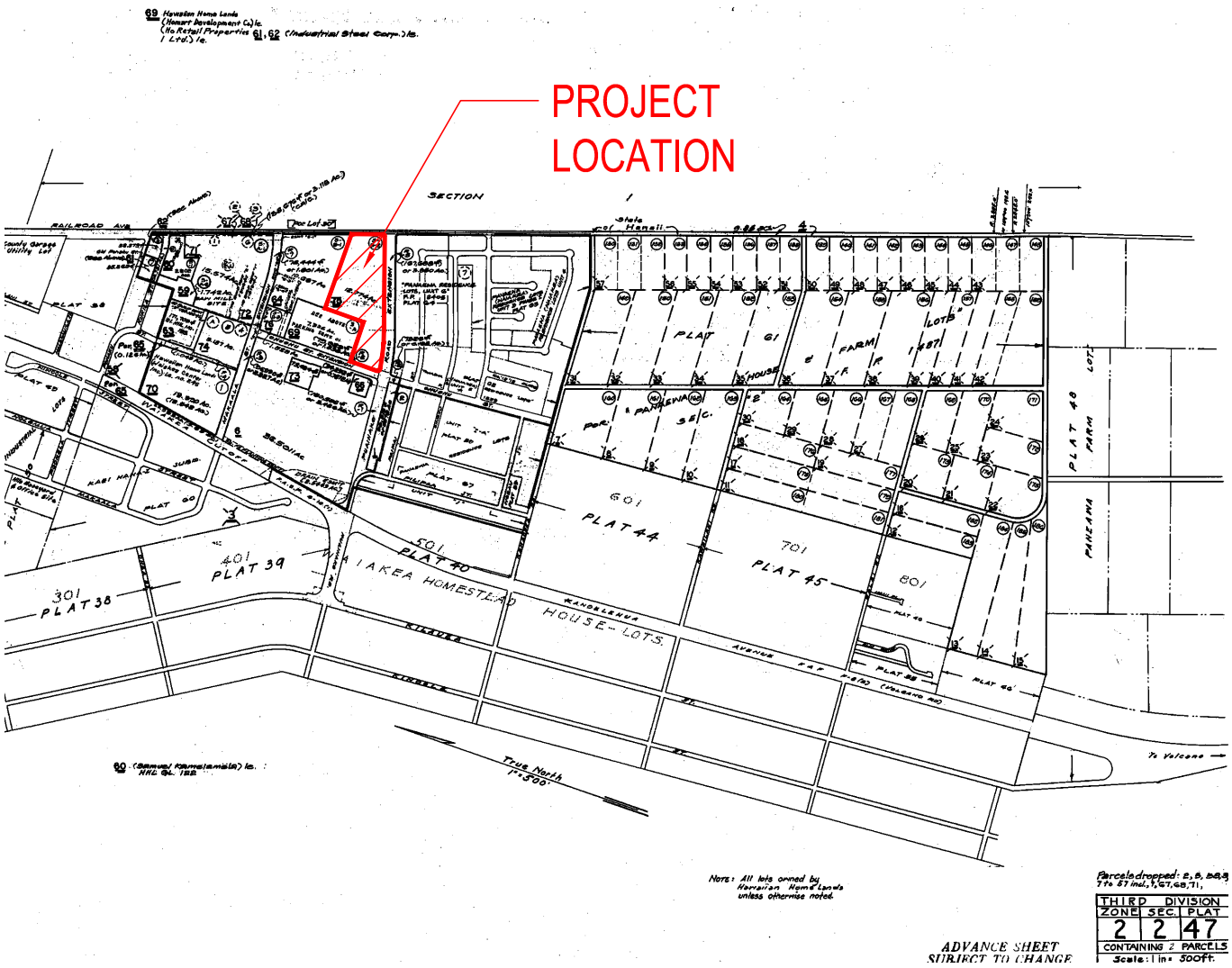


FIGURE 2 - VICINITY MAP

NOT TO SCALE

PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: TMK MAP

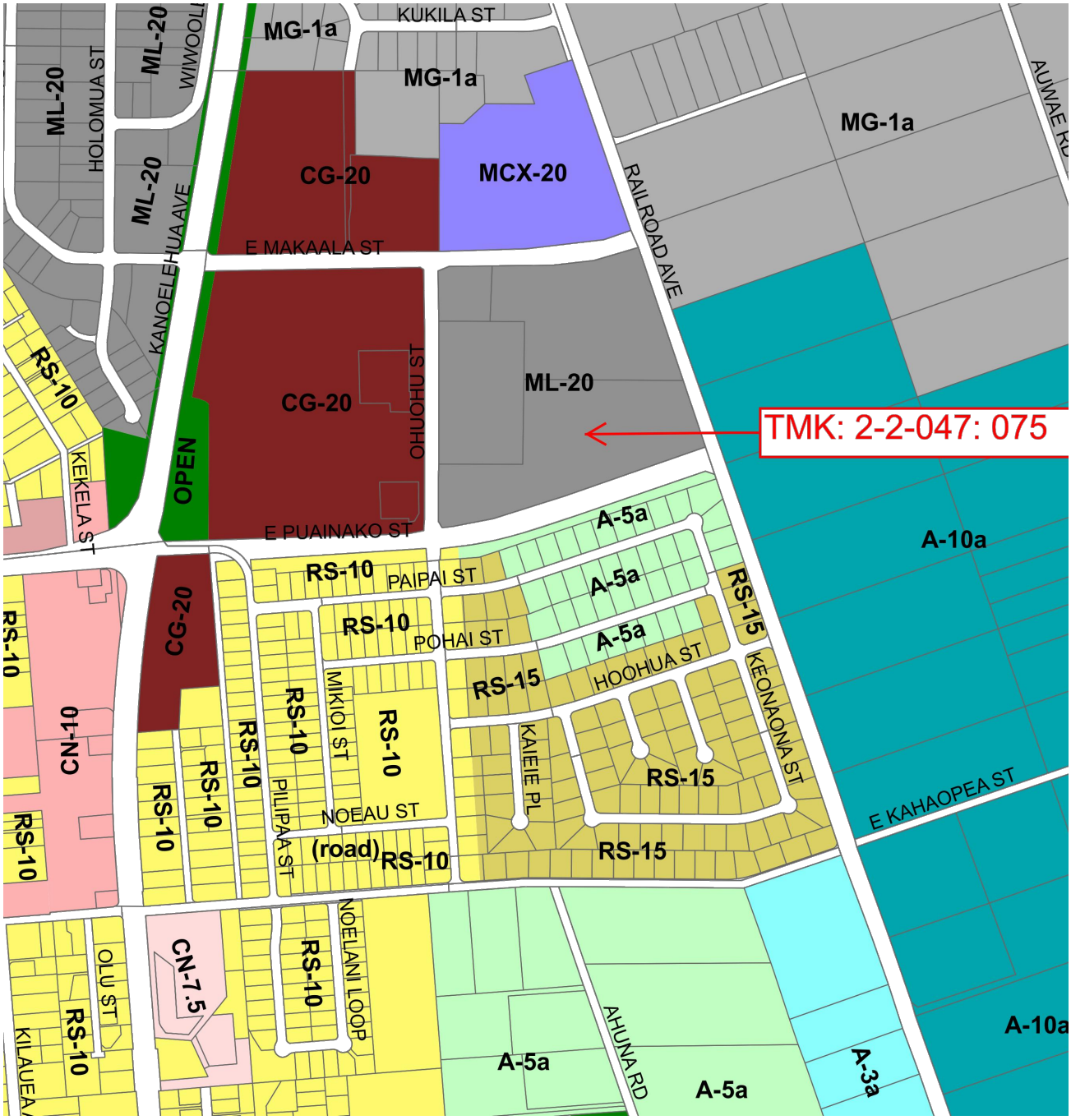


FIGURE 3 - ZONING DESIGNATIONS

NOT TO SCALE

PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: ZONING DESIGNATIONS Appendices p. 75

Custom Soil Resource Report
Soil Map

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
628	Papai extremely cobbly highly decomposed plant material, 2 to 10 percent slopes	10.8	85.0%
637	Papai-Urban land complex, 2 to 10 percent slopes	1.9	15.0%
Totals for Area of Interest		**12.7**	**100.0%**

FIGURE 4 - SOIL MAP

NOT TO SCALE

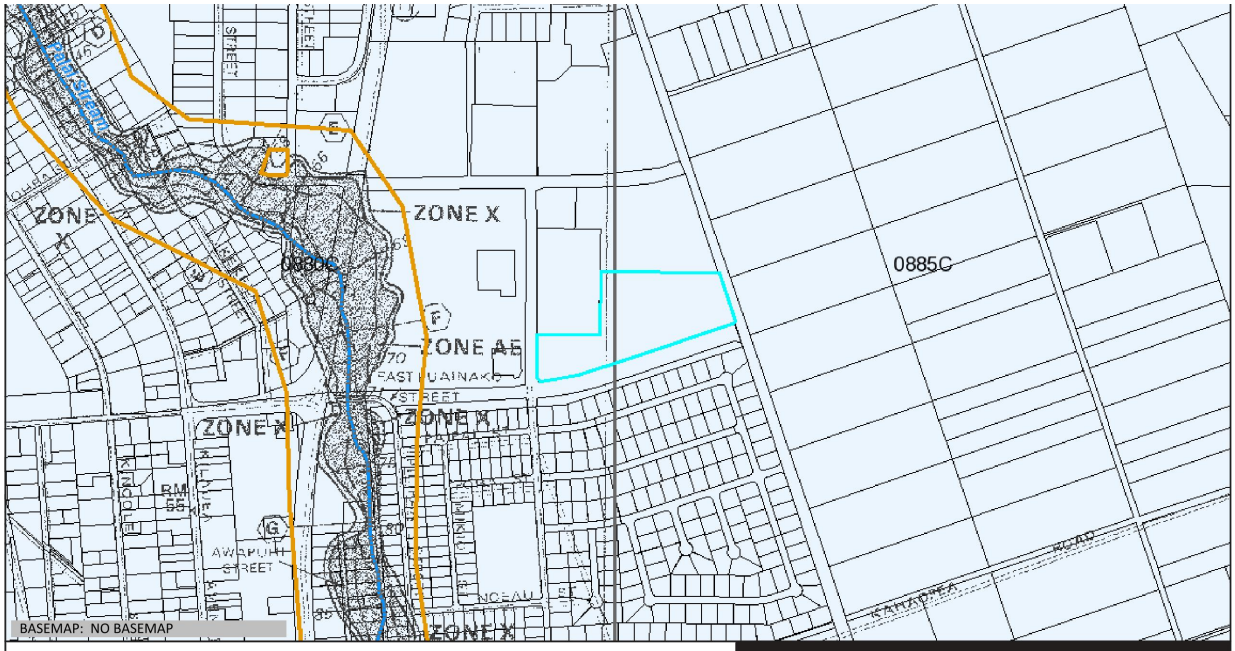
PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: NRCS SOIL MAP



Flood Hazard Assessment Report

www.hawaiinfip.org

Kamoleao

Property Information

COUNTY:	HAWAII
TMK NO:	(3) 2-2-047:075
WATERSHED:	WAILOA
PARCEL ADDRESS:	19 OHUOHU STREET HILO, HI 96720

Notes:

Flood Hazard Information

FIRM INDEX DATE:	APRIL 02, 2004
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL - EFFECTIVE DATE:	1551660880C - SEPTEMBER 16, 1988 1551660885C - SEPTEMBER 16, 1988

THIS PROPERTY IS WITHIN A TSUNAMI EVACUTION ZONE: NO
FOR MORE INFO, VISIT: http://www.scd.hawaii.gov/

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO
FOR MORE INFO, VISIT: http://dlnreng.hawaii.gov/dam/

0 600 1,200 ft

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

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

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND
(Note: legend does not correspond with NFHL)

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - The 1% annual chance flood (100-year), also know as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs 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 apply, but coverage is available in participating communities.

FIGURE 5 - FLOOD HAZARD MAP

NOT TO SCALE

PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: DLNR FLOOD HAZARD ASSESSMENT REPORT

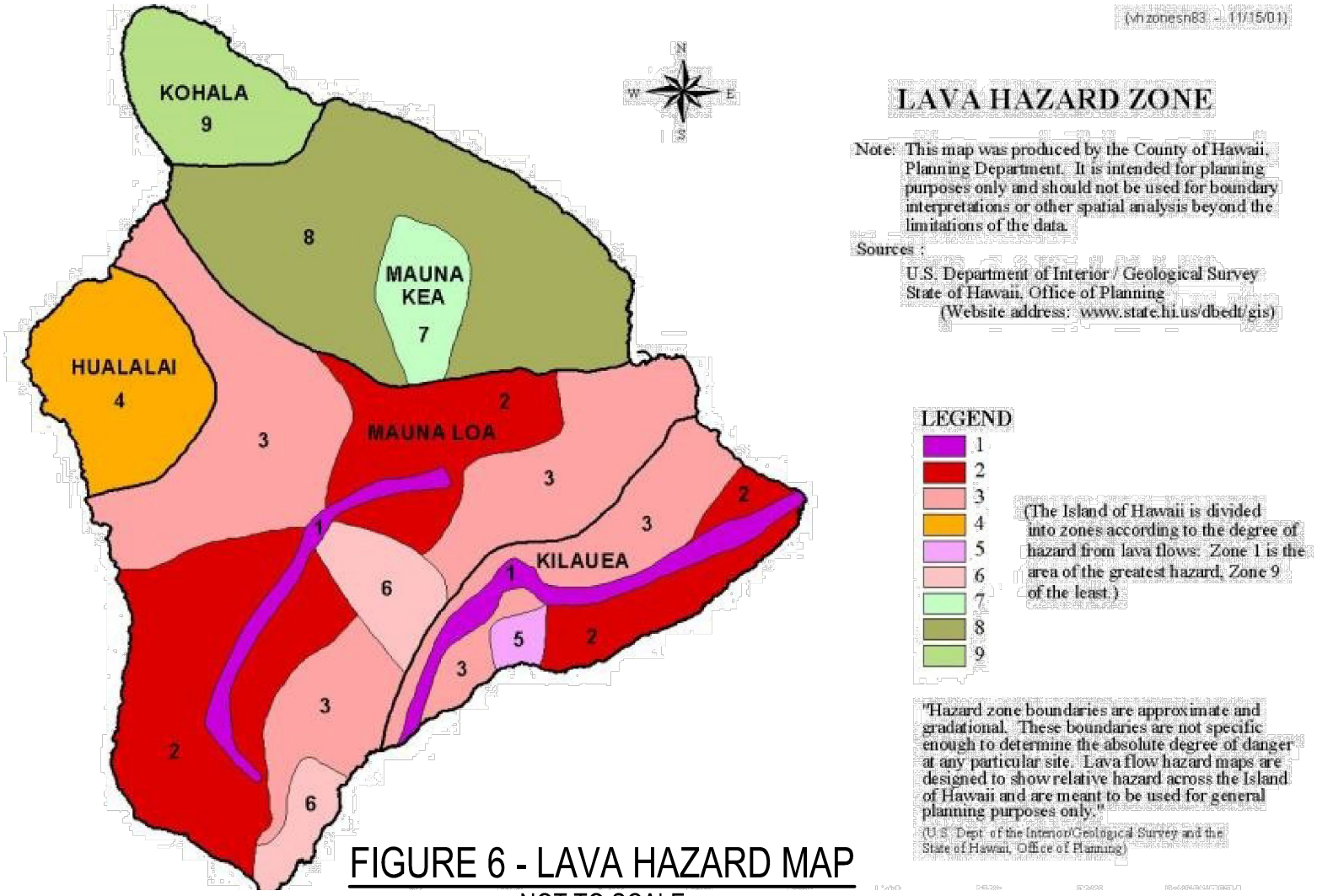


FIGURE 6 - LAVA HAZARD MAP

NOT TO SCALE

PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: DLNR FLOOD HAZARD ASSESSMENT REPORT

FIGURE 6 - SATELLITE VIEW

NOT TO SCALE

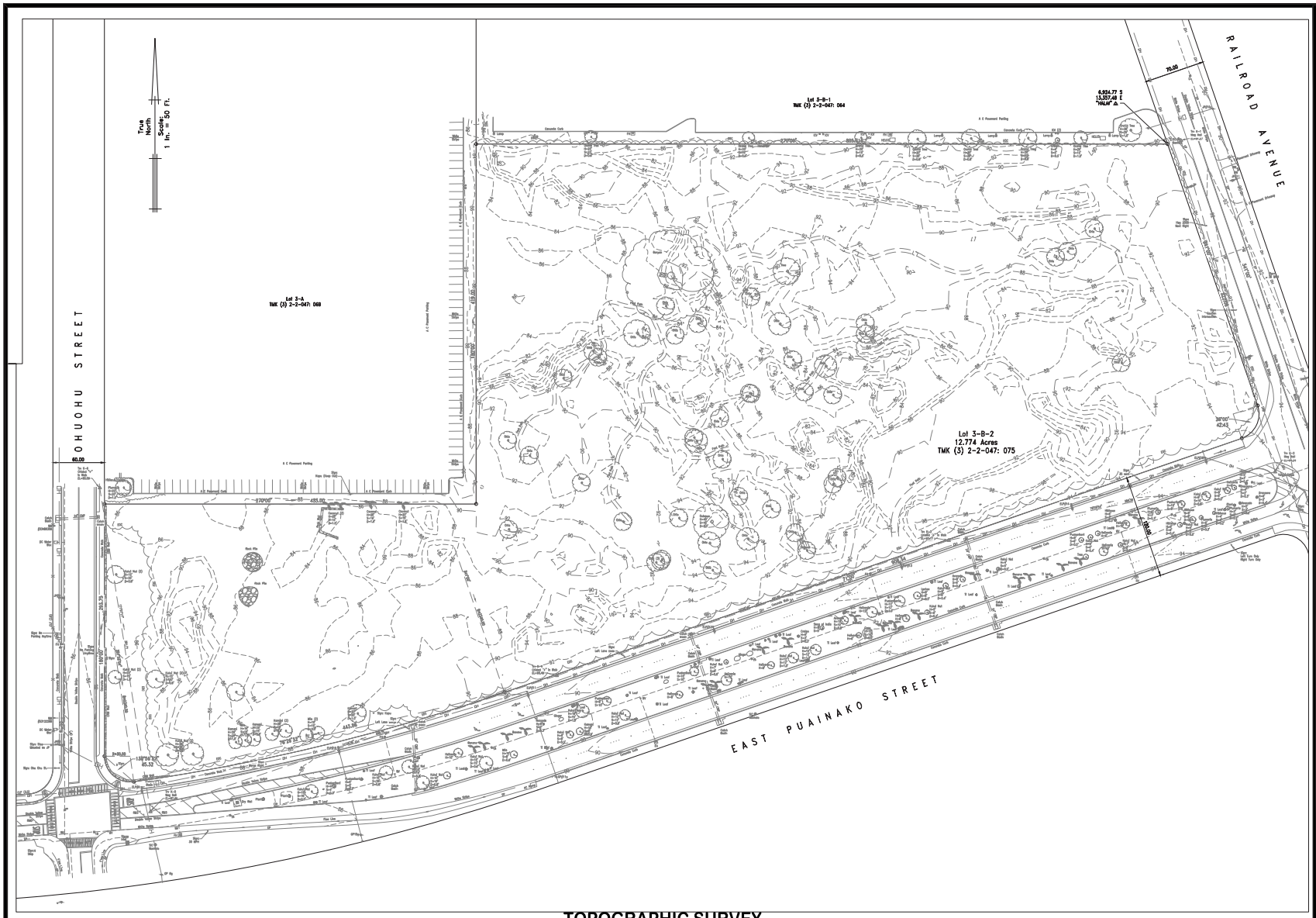
PROJECT: KAMOLEAO

DATE: OCTOBER 2017

LOCATION: 19 OHUOHU STREET
HILO, HI 96720

TMK: (3) 2-2-047: 075

REFERENCE MAP: GOOGLE EARTH SATELLITE VIEW (01/21/2013)



TOPOGRAPHIC SURVEY

SCALE: 1 IN. = 50 FT.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 feet

inoata & associates, inc.
CIVIL ENGINEERS • LAND SURVEYORS
171 KAPIOLANI STREET
HILO, HAWAII 96720

DAVID T. IWATA
LICENSED PROFESSIONAL ENGINEER
No. 5105-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXP. 4/30/18

REVISION • DATE • DESCRIPTION

DEPARTMENT OF HAWAIIAN HOME LANDS

KAMOLEAO IMPROVEMENTS

WAIAKEA, SOUTH HILO, HAWAII, HAWAII

TMK: 3RD DIV. 2-2-047: 075

SHEET TITLE

TOPOGRAPHIC SURVEY

JOB NO. 16-51

DRAWN BY DTI/BJM

CHECKED BY DTI

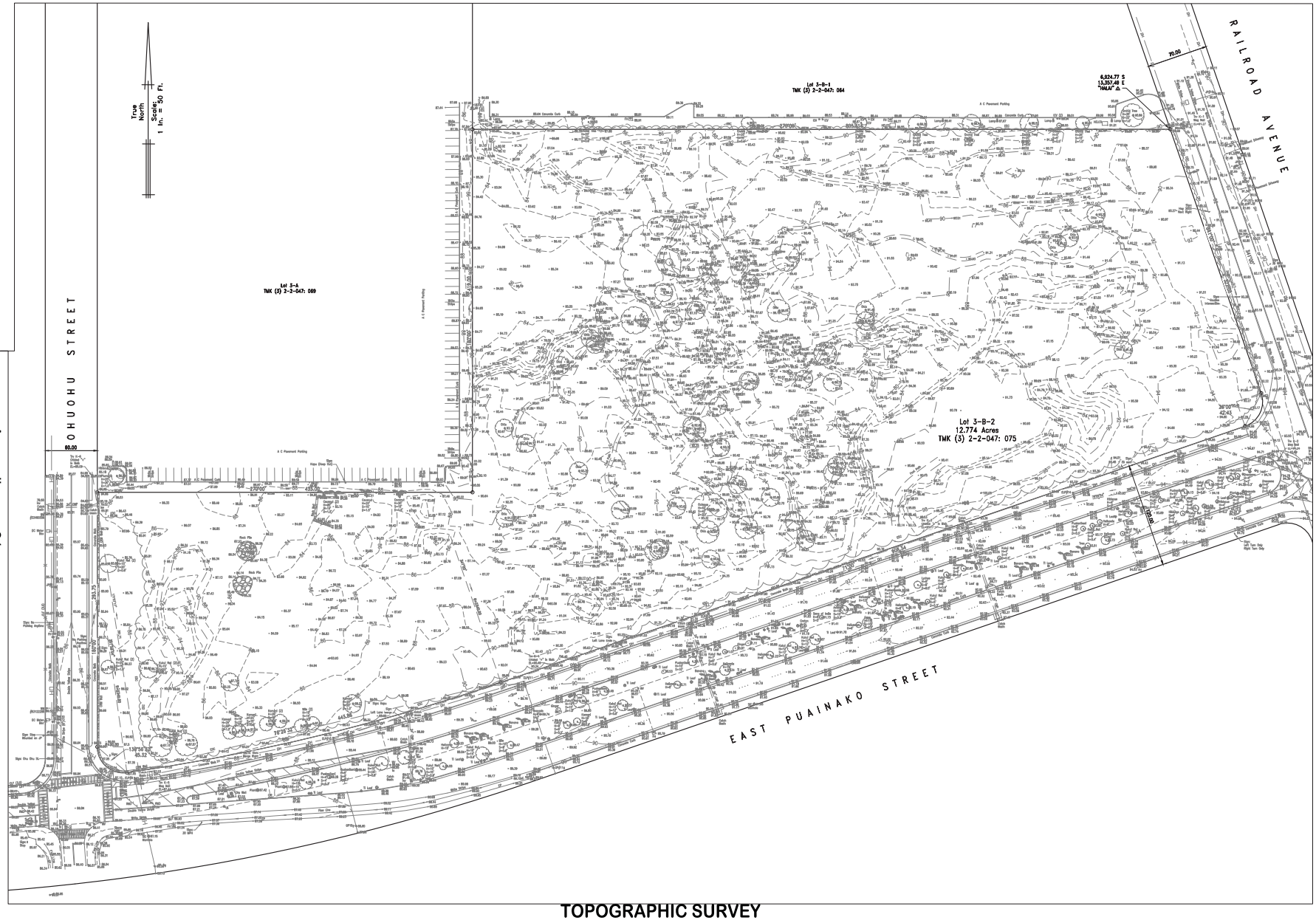
DATE OCT. 2017

DRAWING NUMBER

FIGURE 8

SHEET . OF .

Project Kamoleao FEA/FONSI



TOPOGRAPHIC SURVEY

SCALE: 1 IN. = 50 FT.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 feet

imata & associates, inc.
CIVIL ENGINEERS • LAND SURVEYORS
171 KAPIOLANI STREET
HILO, HAWAII 96720

DAVID T. IMATA
LICENSED PROFESSIONAL ENGINEER
No. 5105-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
EXP. 4/30/18

Project Kamoleao - FEA/FONSI

REVISION • DATE • DESCRIPTION

DEPARTMENT OF HAWAIIAN HOME LANDS

KAMOLEAO IMPROVEMENTS

WAIAKEA, SOUTH HILO, HAWAII, HAWAII
TMK: 3RD DIV. 2-2-047: 075

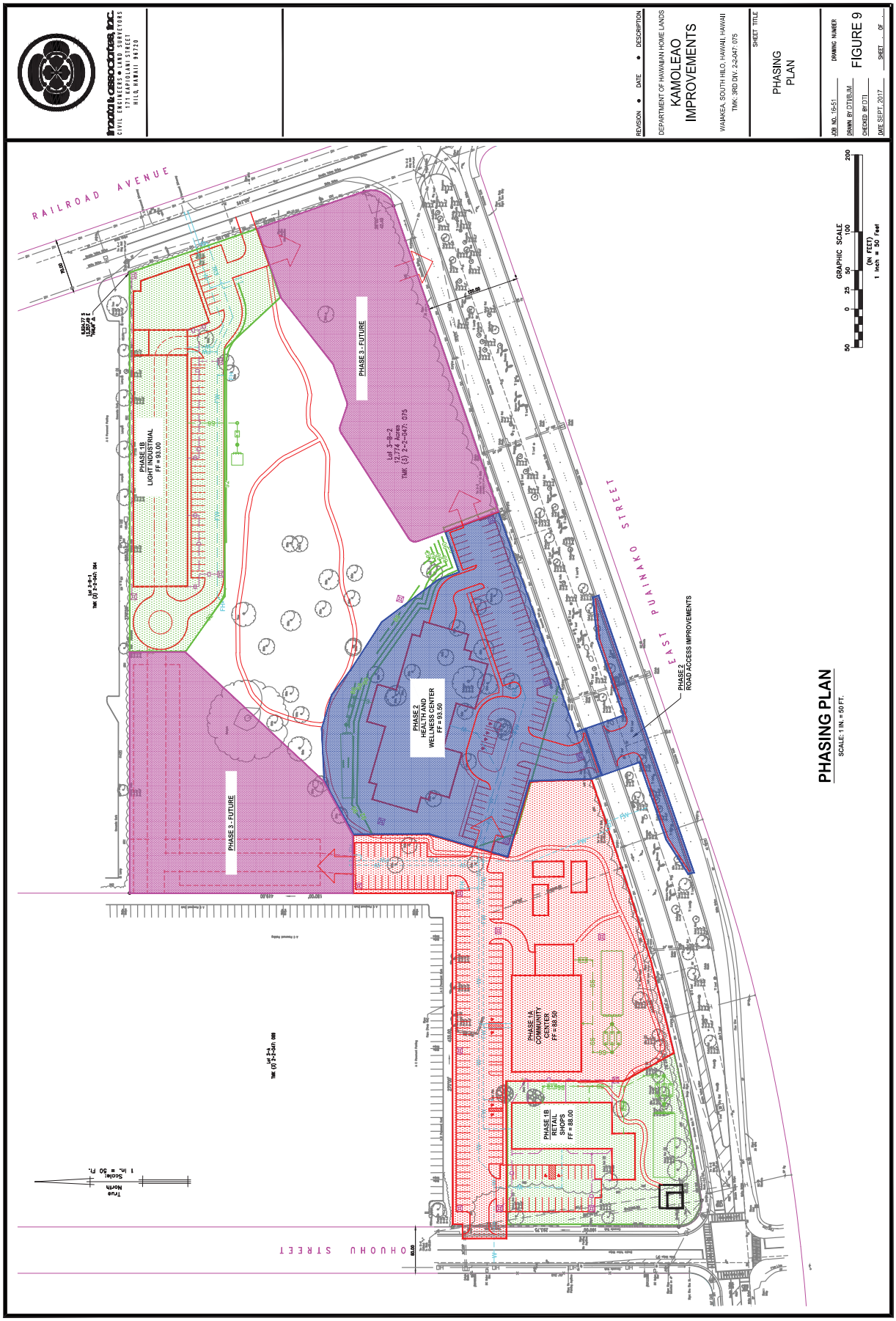
SHEET TITLE

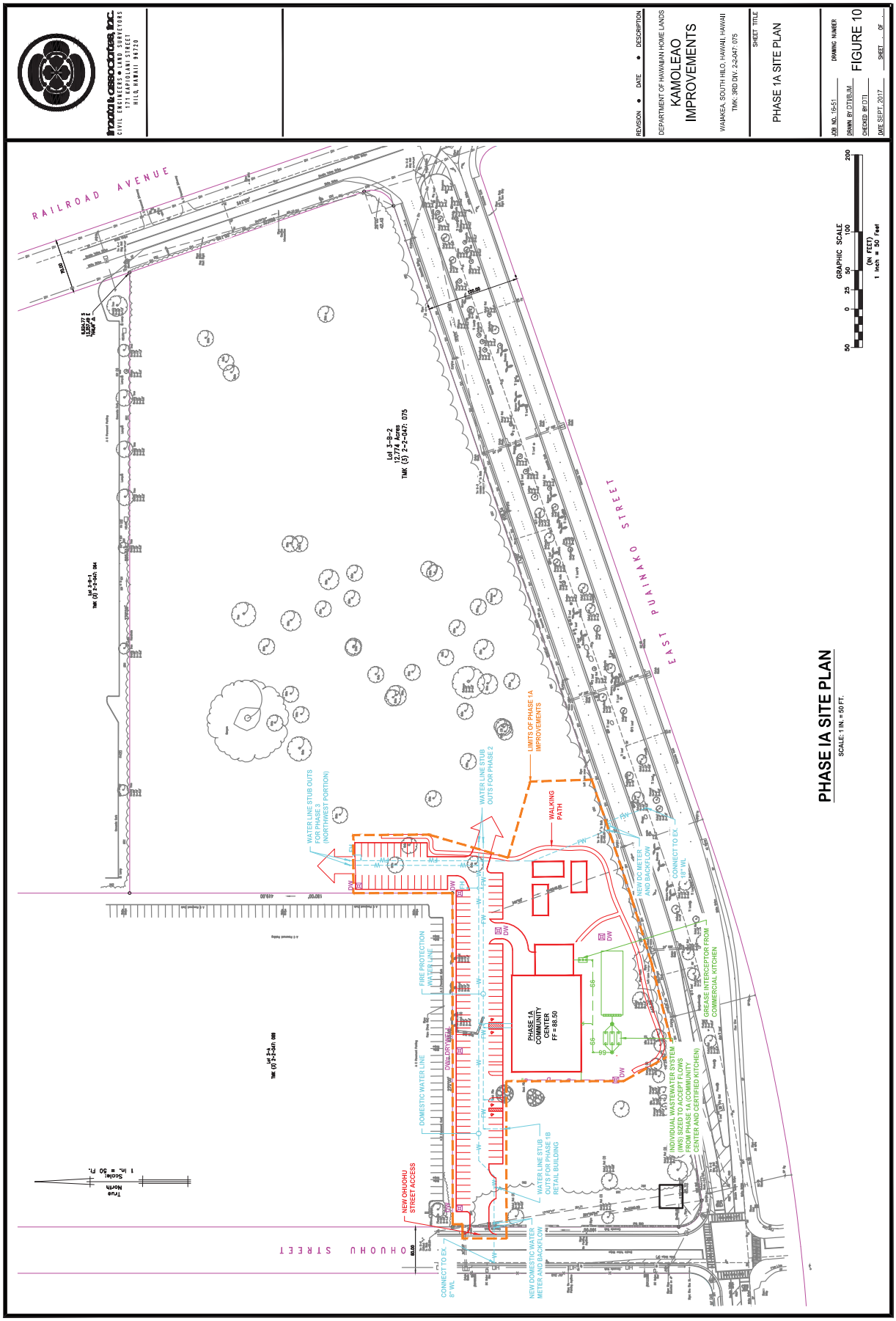
TOPOGRAPHIC SURVEY

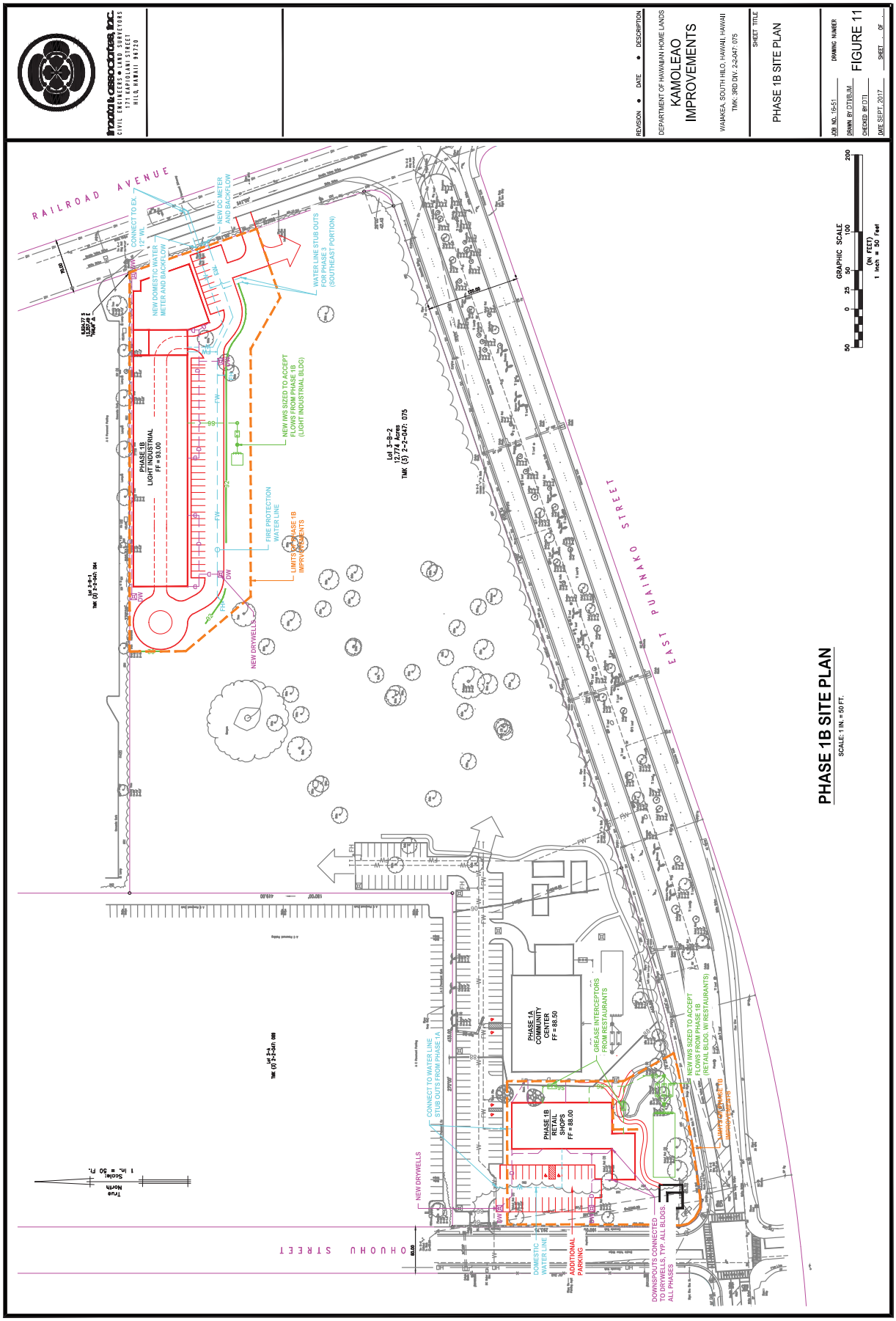
JOB NO. 16-51
DRAWN BY DTI/BJM
CHECKED BY DTI
DATE OCT. 2017

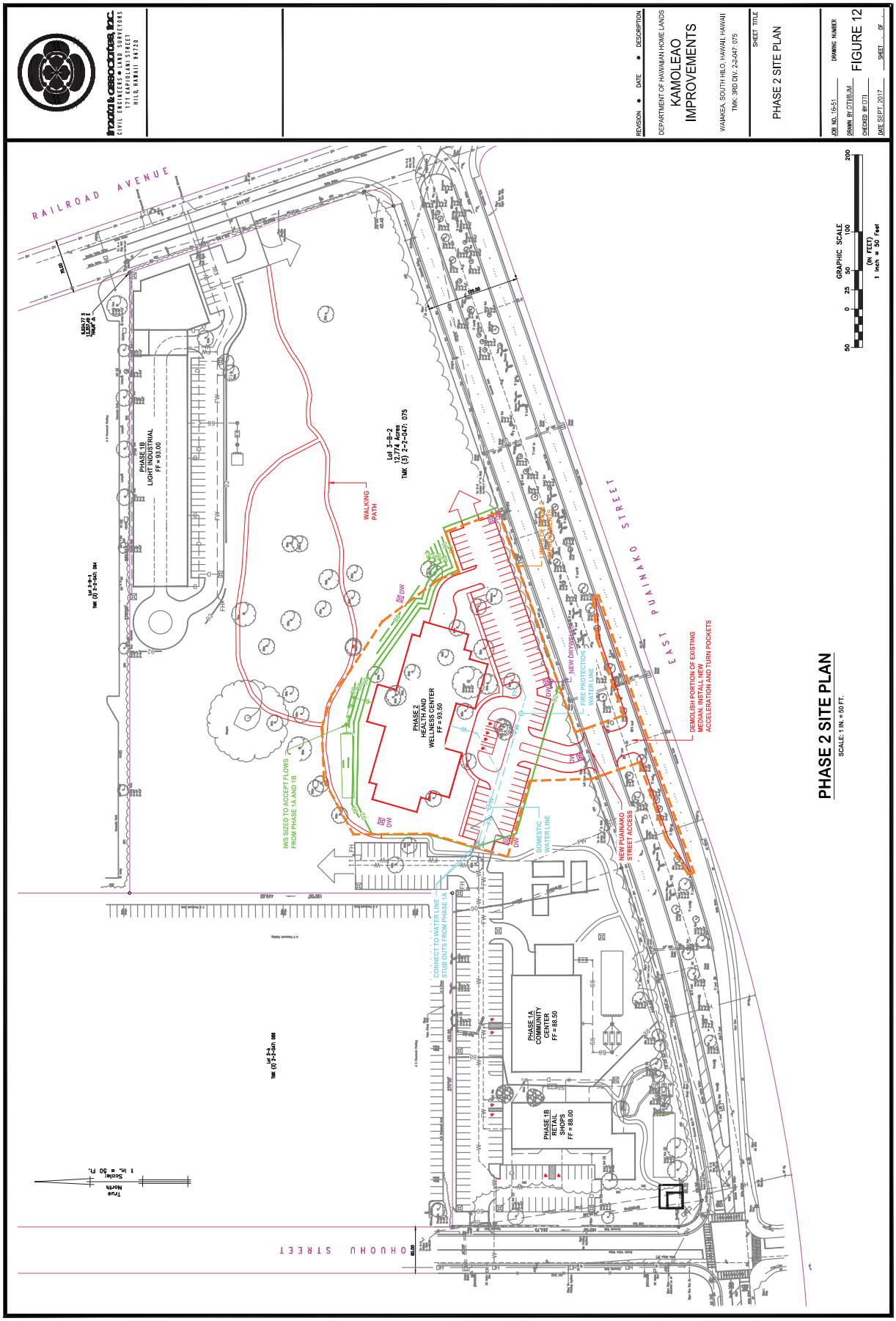
DRAWING NUMBER
FIGURE 8

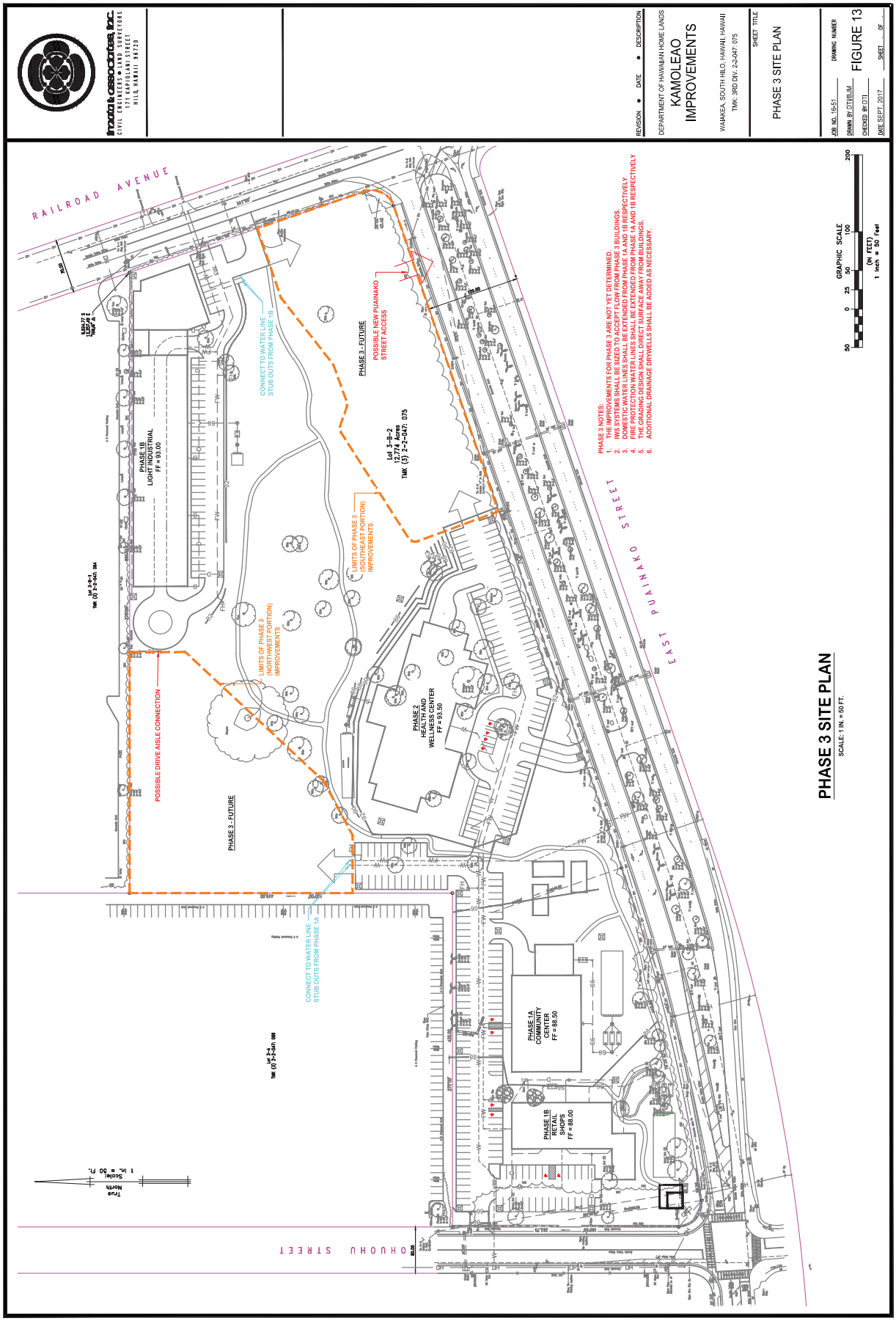
SHEET . OF .


Innovative Associates, Inc.
CIVIL ENGINEERS • LAND SURVEYORS
777 KAMOKU STREET
HILO, HAWAII 96720
REVISION • DATE • DESCRIPTION
DEPARTMENT OF HAWAIIAN HOME LANDS
KAMOLEAO
IMPROVEMENTS
WAIAKEA, SOUTH HILO, HAWAII, HAWAII
TMK: 3RD DIV. 2-2-047: 075
SHEET TITLE
PHASING
PLAN
JOB NO. 15-51
DRAWN BY DTUB,JM
CHECKED BY DTI
DATE SEPT. 2017
DRAWING NUMBER
FIGURE 9
SHEET OF
RAILROAD AVENUE
EAST PUAINAKO STREET
OHUOHU STREET
PHASE 1B
LIGHT INDUSTRIAL
FF = 93.00
PHASE 3 - FUTURE
Lot 3-8-2
(12.774 Acres
TMK (3) 2-2-047: 075
PHASE 2
HEALTH AND
WELLNESS CENTER
FF = 93.50
PHASE 2
ROAD ACCESS IMPROVEMENTS
PHASE 1A
COMMUNITY
CENTER
(FF = 88.50)
PHASE 1B
RETAIL
SHOPS
FF = 88.00
Lot 3-8-1
TMK (3) 2-2-047: 084
Lot 3-8
TMK (3) 2-2-047: 069
True
North
Scale:
1 in. = 50 ft.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 feet
PHASING PLAN
SCALE: 1 IN. = 50 FT.


innovative associates, inc.
CIVIL ENGINEERS • LAND SURVEYORS
111 W. KAWILI STREET
HILO, HAWAII 96720
REVISION • DATE • DESCRIPTION
DEPARTMENT OF HAWAIIAN HOME LANDS
KAMOLEAO
IMPROVEMENTS
WAIAKEA, SOUTH HILO, HAWAII, HAWAII
TMK: 3RD DIV. 2-2-047: 075
SHEET TITLE
PHASE 1A SITE PLAN
JOB NO. 15-51
DRAWN BY DTUB/JM
CHECKED BY DTI
DATE SEPT. 2017
DRAWING NUMBER
FIGURE 10
SHEET OF
RAILROAD AVENUE
EAST PUAINAKO STREET
OHUOHU STREET
Lot 3-9-2
12.774 Acres
TMK: (3) 2-2-047: 075
Lot 3-9-1
TMK: (3) 2-2-047: 084
Lot 2-4
TMK: (3) 2-2-047: 089
PHASE 1A
COMMUNITY
CENTER
FF = 88.50
WALKING
PATH
LIMITS OF PHASE 1A
IMPROVEMENTS
WATER LINE STUB OUTS
FOR PHASE 3
(NORTHWEST PORTION)
WATER LINE STUB
OUTS FOR PHASE 2
WATER LINE STUB
OUTS FOR PHASE 1B
RETAIL BUILDING
NEW OHUOHU
STREET ACCESS
DOMESTIC WATER LINE
FIRE PROTECTION
WATER LINE
DRIVEWAY
CONNECT TO EX.
8" WL
NEW DOMESTIC WATER
METER AND BACKFLOW
NEW DC METER
AND BACKFLOW
CONNECT TO EX.
8" WL
GREASE INTERCEPTOR FROM
COMMERCIAL KITCHEN
INDIVIDUAL WASTEWATER SYSTEM
(IWS) SIZED TO ACCEPT FLOWS
FROM PHASE 1A (COMMUNITY
CENTER AND CERTIFIED KITCHEN)
True
North
Scale:
1 in. = 50 ft.
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 feet
PHASE IA SITE PLAN
SCALE: 1 IN. = 50 FT.


Innovative Associates, Inc.
CIVIL ENGINEERS • LAND SURVEYORS
777 KAMEHAMEHA AVENUE
HILO, HAWAII 96720
REVISION • DATE • DESCRIPTION
DEPARTMENT OF HAWAIIAN HOME LANDS
KAMOLEAO IMPROVEMENTS
WAIAKEA, SOUTH HILO, HAWAII, HAWAII
TMK: 3RD DIV. 2-2-047: 075
SHEET TITLE
PHASE 1B SITE PLAN
JOB NO. 15-51
DRAWN BY DTUB,MM
CHECKED BY DTI
DATE SEPT. 2017
DRAWING NUMBER
FIGURE 11
SHEET OF
GRAPHIC SCALE
1 inch = 50 feet
(IN FEET)
PHASE 1B SITE PLAN
SCALE: 1 IN. = 50 FT.
RAILROAD AVENUE
EAST PUAINAKO STREET
OHUOHU STREET
PHASE 1B LIGHT INDUSTRIAL FF = 88.00
PHASE 1A COMMUNITY CENTER FF = 88.50
PHASE 1B RETAIL SHOPS FF = 88.00
Lot 3-9-2 12.774 Acres TMK: (3) 2-2-047: 075
NEW DOMESTIC WATER METER AND BACKFLOW
WATER LINE STUB OUTS FOR PHASE 3 (SOUTHEAST PORTION)
NEW IWS SIZED TO ACCEPT FLOWS FROM PHASE 1B (LIGHT INDUSTRIAL BLDG)
FIRE PROTECTION WATER LINE
LIMITS OF PHASE 1B IMPROVEMENTS
NEW DRYWELLS
CONNECT TO WATER LINE STUB OUTS FROM PHASE 1A
GREASE INTERCEPTORS FROM RESTAURANTS
NEW IWS SIZED TO ACCEPT FLOWS FROM PHASE 1B (RETAIL BLDG. W/ RESTAURANTS)
DOMESTIC WATER LINE
ADDITIONAL PARKING
DOWNSPOUTS CONNECTED TO DRYWELLS, TYP. ALL BLDGS ALL PHASES
True North
Scale: 1 in. = 50 ft.


Innovative Associates, Inc.
CIVIL ENGINEERS • LAND SURVEYORS
111 E. KAWILI STREET
HILO, HAWAII 96720
REVISION • DATE • DESCRIPTION
DEPARTMENT OF HAWAIIAN HOME LANDS
KAMOLEAO
IMPROVEMENTS
WAIAKEA, SOUTH HILO, HAWAII, HAWAII
TMK: 3RD DIV. 2-2-047: 075
SHEET TITLE
PHASE 2 SITE PLAN
JOB NO. 16-51
DRAWN BY DTUB,MM
CHECKED BY DTI
DATE SEPT. 2017
DRAWING NUMBER
FIGURE 12
SHEET OF
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 feet
PHASE 2 SITE PLAN
SCALE: 1 IN. = 50 FT.
RAILROAD AVENUE
EAST PUAINAKO STREET
OHUOHU STREET
PHASE 1B
LIGHT INDUSTRIAL
FF = 93.00
Lot 3-9-2
12.774 Acres
TMK: (3) 2-2-047: 075
WALKING PATH
PHASE 2
HEALTH AND
WELLNESS CENTER
FF = 93.50
IWS SIZED TO ACCEPT FLOWS
FROM PHASE 1A AND 1B
CONNECT TO WATER LINE
STUBOUTS FROM PHASE 1A
DOMESTIC
WATER LINE
FIRE PROTECTION
WATER LINE
NEW DRYWELL
NEW PUAINAKO
STREET ACCESS
DEMOLISH PORTION OF EXISTING
MEDIAN. INSTALL NEW
ACCELERATION AND TURN POCKETS
PHASE 1A
COMMUNITY
CENTER
FF = 88.50
PHASE 1B
RETAIL
SHOPS
FF = 88.00
Lot 3-9-4
TMK: (3) 2-2-047: 069
Lot 3-9-1
TMK: (3) 2-2-047: 084
True
North
Scale:
1 in. = 50 ft.


PHASE 3 SITE PLAN
SCALE: 1 IN. = ±50 FT.
RAILROAD AVENUE
EAST PUAINAKO STREET
OHUOHU STREET
PHASE 1B
LIGHT INDUSTRIAL
FF = 93.00
PHASE 3 - FUTURE
POSSIBLE NEW PUAINAKO STREET ACCESS
CONNECT TO WATER LINE STUB OUTS FROM PHASE 1B
Lot 3-B-2
12.774 Acres
TMK: (3) 2-2-047: 075
LIMITS OF PHASE 3 (SOUTHEAST PORTION) IMPROVEMENTS
LIMITS OF PHASE 3 (NORTHWEST PORTION) IMPROVEMENTS
PHASE 2
HEALTH AND WELLNESS CENTER
FF = 93.50
POSSIBLE DRIVE AISLE CONNECTION
PHASE 3 - FUTURE
CONNECT TO WATER LINE STUB OUTS FROM PHASE 1A
PHASE 1A
COMMUNITY CENTER
FF = 88.50
PHASE 1B
RETAIL SHOPS
FF = 88.00
Lot 2-A
TMK: (3) 2-2-047: 073
Lot 3-A
TMK: (3) 2-2-047: 084
EASM 77 & TMK: (3) 2-2-047: 084
True North
Scale: 1 in. = 50 ft.
PHASE 3 NOTES:
1. THE IMPROVEMENTS FOR PHASE 3 ARE NOT YET DETERMINED.
2. IWS SYSTEMS SHALL BE SIZED TO ACCEPT FLOW FROM PHASE 3 BUILDINGS.
3. DOMESTIC WATER LINES SHALL BE EXTENDED FROM PHASE 1A AND 1B RESPECTIVELY
4. FIRE PROTECTION WATER LINES SHALL BE EXTENDED FROM PHASE 1A AND 1B RESPECTIVELY
5. TWO POINTS OF CONNECTION TO PUBLIC STREET SHALL BE PROVIDED.
6. ADDITIONAL DRAINAGE DRYWELLS SHALL BE ADDED AS NECESSARY.
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 feet
REVISION • DATE • DESCRIPTION
DEPARTMENT OF HAWAIIAN HOME LANDS
KAMOLEAO IMPROVEMENTS
WAIAKEA, SOUTH HILO, HAWAII, HAWAII
TMK: 3RD DIV. 2-2-047: 075
SHEET TITLE
PHASE 3 SITE PLAN
JOB NO. 16-51
DRAWN BY: DT/JB/JM
CHECKED BY: DT
DATE: SEPT. 2017
DRAWING NUMBER
FIGURE 13
SHEET OF
Innovative Associates, Inc.
CIVIL ENGINEERS • LAND SURVEYORS
111 E. KAWILI STREET
HILO, HAWAII 96720

KAMOLEAO PHASE 1A - COMMUNITY CENTER
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
DEMOLITION & EROSION CONTROL							
Dust Screen	2200.00	LF	$0.00	$0.00	$0.00	$50.60	$111,320.00
Polypropylene Sand Bags	2200.00	LF	$0.00	$0.00	$0.00	$6.75	$14,851.10
Grated Inlet Protection bags	7.00	EA	$115.00	$0.00	$0.00	$115.00	$805.00
Crushed Rock Ingress/Egress	1.00	EA	$0.00	$0.00	$0.00	$2,349.45	$2,349.45
Sidewalk removal, 4" concrete, mesh reinf.	50.00	SY	$0.00	$13.49	$4.77	$18.26	$912.99
Saw cutting reinf.concrete slabs 4" deep	35.00	LF	$0.33	$1.88	$1.09	$3.30	$115.64
Concrete curb un-reinforced	35.00	LF	$0.00	$5.61	$1.99	$7.60	$266.17
Asphalt up to 3" demolition	15.00	SY	$0.00	$5.08	$3.58	$8.66	$129.91
Saw cutting Asphalt up to 3" deep	130.00	LF	$0.22	$1.43	$0.82	$2.46	$320.23
Clearing, Grubbing & Tree Removal							
Clear & grub brush incl. stumps up to 12". Medium density.	4.00	Acre	$0.00	$3,910.00	$7,575.63	$11,485.63	$45,942.50
						Demolition Subtotal =	**$177,012.99**
DRAINAGE IMPROVEMENTS							
Drainage Trenching							
Trenching DL (4'W x 6'D x 1/2 C.Y. bucket)	280.00	LF	$0.00	$21.51	$8.07	$29.58	$8,282.16
Trenching DL (2'W x 6'D x 3/8 C.Y. bucket)	200.00	LF	$0.00	$7.99	$2.56	$10.56	$2,111.01
PVC Pipe SDR 35							
4" solid body, B&S , 20' lengths	200.00	LF	$3.03	$5.49	$0.00	$8.52	$1,704.76
8" solid body, B&S, 13' lengths	160.00	LF	$11.53	$6.16	$0.00	$17.69	$2,830.84
12" perforated	120.00	LF	$10.46	$13.39	$2.46	$26.31	$3,157.72
PVC bends, elbows, tees, wyes, clean-outs							
4" wyes	8.00	EA	$31.67	$100.68	$0.00	$132.35	$1,058.83
Drainage Structures and Catchments							
Shallow drywell 8' dia rings, w/cover and grate	7.00	EA	$0.00	$0.00	$0.00	$16,243.75	$113,706.25
New pipe penetration into EX drywell rings	0.00	EA	$0.00	$0.00	$0.00	$1,500.00	$0.00
Existing drywell top re-setting	1.00	EA	$0.00	$0.00	$0.00	$10,000.00	$10,000.00
Area Drain - dome or flat grate	2.00	EA	$0.00	$0.00	$0.00	$1,000.00	$2,000.00
						Drainage Subtotal =	**$144,851.57**
WATERLINE IMPROVEMENTS							
Waterline Trenching							
Trenching WL (4'W x 4'D x 1/2 C.Y. bucket)	815.00	LF	$0.00	$13.39	$4.95	$18.34	$14,945.39
Trenching WL (2'W x 4'D x 3/8 C.Y. bucket)	815.00	LF	$0.00	$7.98	$2.56	$10.54	$8,588.02
Tapping, Crosses & Sleeves							
Drill & tap 8" main 1" to 2" service lateral	1.00	EA	$0.00	$635.38	$0.00	$635.38	$635.38
18"x12" tapping sleeve, valve, gaskets	1.00	EA	$19,745.50	$250.24	$26.98	$20,022.72	$20,022.72
Ductile Iron Main's and Fittings							
6" ductile iron waterline (MJ)	90.00	LF	$51.81	$24.14	$5.32	$81.27	$7,314.24
8" ductile iron waterline (MJ)	575.00	LF	$87.00	$29.03	$6.39	$122.42	$70,392.71
12" ductile iron waterline (MJ)	240.00	LF	$154.45	$36.75	$8.09	$199.29	$47,830.25
90 degree bend 6" ductile iron (MJ)	1.00	EA	$447.70	$234.60	$0.00	$682.30	$682.30
90 degree bend 8" ductile iron (MJ)	1.00	EA	$879.75	$281.52	$0.00	$1,161.27	$1,161.27
Wye or tee 8" ductile iron (MJ)	4.00	EA	$1,749.73	$422.28	$0.00	$2,172.01	$8,688.02
Wye or tee 12" ductile iron (MJ)	1.00	EA	$3,323.50	$551.31	$121.21	$3,996.02	$3,996.02
45 degree bend 12" ductile iron (MJ)	1.00	EA	$1,427.15	$367.54	$81.13	$1,875.82	$1,875.82
Decreaser 12" x 8"	3.00	EA	$1,075.25	$304.98	$67.45	$1,447.68	$4,343.03
8" ductile iron cap	3.00	EA	$338.22	$140.76	$0.00	$478.98	$1,436.93
Valves							
2.0" gate valve (threaded, w/box, class 150)	4.00	EA	$467.25	$87.98	$0.00	$555.22	$2,220.88
6" gate valve (cast iron, mech joint, w/box)	3.00	EA	$24,926.25	$336.26	$119.26	$25,381.77	$76,145.30

KAMOLEAO PHASE 1A - COMMUNITY CENTER
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
8" gate valve (cast iron, mech joint, w/box)	2.00	EA	$4,301.00	$336.26	$119.26	$4,756.52	$9,513.03
12" gate valve (cast iron, mech joint, w/box)	3.00	EA	$10,459.25	$336.26	$119.26	$10,914.77	$32,744.30
Commercial Meters, Backflow Preventers, Hydrants and Thrust Blocks							
Detector Check Meter 8"	1.00	EA	$33,235.00	$1,290.30	$0.00	$34,525.30	$34,525.30
Utility box (DC Meter Box 6' x 6' x 4') precast	1.00	EA	$4,936.38	$1,446.70	$512.21	$6,895.29	$6,895.29
8" RP Backflow Preventer, flanged, iron valves outside screw & yolk	1.00	EA	$15,933.25	$1,348.95	$0.00	$17,282.20	$17,282.20
Fire hydrant (5 1/4" valve, 6' depth)	3.00	EA	$4,545.38	$355.81	$38.51	$4,939.70	$14,819.10
Thrust block 6" tee or deadend	3.00	EA	$44.97	$17.50	$9.64	$72.10	$216.30
Thrust block 8" tee or deadend	5.00	EA	$65.49	$29.13	$16.03	$110.65	$553.27
Thrust block 12" tee or deadend	4.00	EA	$136.85	$61.58	$33.72	$232.16	$928.63
Thrust Beams	6.00	EA	$0.00	$0.00	$0.00	$2,400.00	$14,400.00
Copper Water Lines, Domestic Meters and Backflow Preventers							
2" type K, copper tubing	725.00	LF	$37.44	$7.57	$0.00	$45.00	$32,627.97
2" Copper tee, reducing on the outlet	2.00	EA	$98.73	$121.21	$0.00	$219.94	$439.88
1.5" Water meter, bronze, threaded/falanged	1.00	EA	$664.70	$121.21	$0.00	$785.91	$785.91
1.5" RP Backflow Preventer, bronze, threaded, ball valves	1.00	EA	$1,260.98	$96.77	$0.00	$1,357.75	$1,357.75
Chlorination	1.00	LS	$0.00	$0.00	$0.00	$4,000.00	$4,000.00
						Water Line Subtotal =	**$441,367.16**
SEWER / SEPTIC IMPROVEMENTS							
Sewer Trenching							
Trenching SL (2'W x 6'D x 3/8 C.Y. bucket)	350.00	LF	$0.00	$10.36	$3.26	$13.63	$4,769.22
PVC Pipe SDR 35							
6" solid body, B&S , 20' lengths	350.00	LF	$6.41	$5.88	$0.00	$12.30	$4,303.93
PVC bends, elbows, tees, wyes, clean-outs							
6" fittings, bends, elbows	4.00	EA	$57.67	$67.45	$0.00	$125.12	$500.48
6" tees	6.00	EA	$84.07	$100.68	$0.00	$184.75	$1,108.49
6" wyes	7.00	EA	$85.04	$100.68	$0.00	$185.73	$1,300.08
Clean Out cast Iron. B&S, w/ Countersunk Plug 6"	2.00	EA	$1,564.00	$347.99	$0.00	$1,911.99	$3,823.98
Septic Tanks, manholes							
Sewer manhole - 8' deep, precast 4' I.D.,	2.00	EA	$3,812.25	$1,358.73	$203.32	$5,374.30	$10,748.59
Frame and cover, heavy traffic, 24" dia	2.00	EA	$508.30	$260.02	$90.91	$859.22	$1,718.45
Rungs - polyethylene, standard size	16.00	EA	$61.58	$18.67	$0.00	$80.25	$1,284.04
Inverts, triple channel, concrete	2.00	EA	$306.94	$451.61	$0.00	$758.54	$1,517.08
Septic Tanks, Grease Interceptors manholes							
Precast conc. 2500 gal (JZ2500)	3.00	EA	$16,800.00	$0.00	$0.00	$16,800.00	$50,400.00
Precast conc. Grease 500 gal (HJ500)	1.00	EA	$7,600.00	$0.00	$0.00	$7,600.00	$7,600.00
On-site Disposal							
Sewer Infiltrator chamber	88.00	EA	$114.44	$0.00	$0.00	$114.44	$10,070.41
Sewer Infiltrator Caps	16.00	EA	$18.46	$0.00	$0.00	$18.46	$295.32
Cinder 3/8 minus (1.27 Tons/CY)	260.00	CY	$40.83	$0.00	$0.00	$40.83	$10,614.50
Geotextile, over leach bed, polypropylene	260.00	SY	$2.99	$0.76	$0.00	$3.75	$975.94
						Sewer / Septic Subtotal =	**$111,030.50**

KAMOLEAO PHASE 1A - COMMUNITY CENTER
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
SITE IMPROVEMENTS							
Grading Work							
Mobilization	1.00	LS	$0.00	$0.00	$0.00	$65,000.00	$65,000.00
Excavation	485.00	CY	$0.00	$0.00	$0.00	$12.00	$5,820.00
Embankment	5235.00	CY	$0.00	$0.00	$0.00	$18.00	$94,230.00
Paving, Walkways, Curbs and Gutters							
Asphalt paving (2" AC, 6" base)	3740.00	SY	$34.50	$0.00	$0.00	$34.50	$129,030.00
Subbase Course (1.5 minus, 6" thick)	252.00	SY	$12.32	$1.09	$1.72	$15.13	$3,813.19
4" Concrete walkway - slab on grade (3000 psi), unreinforced, broom finish,	2270.00	SF	$2.99	$1.67	$0.02	$4.68	$10,615.34
Welded wire fabric (6 x 6 - W1.4 x W1.4)	22.70	CFS	$28.25	$48.88	$0.00	$77.12	$1,750.73
Concrete Curb - 6"x18" forms & conc. straight	1710.00	LF	$12.61	$8.91	$0.00	$21.52	$36,806.98
Walking Path - 6" compacted basecourse	1410.00	SY	$12.32	$1.09	$1.72	$15.13	$21,335.70
Parking, Striping and Signage							
Traffic signage 24"x24", alum. reflectorized	3.00	EA	$172.04	$39.10	$20.14	$231.28	$693.83
Galvanized steel sign posts 10' upright	3.00	EA	$63.54	$13.69	$6.59	$83.81	$251.43
Layout of parking pavement markings	2000.00	LF	$0.00	$0.08	$0.02	$0.10	$195.50
Lines on pmvt, parking stall, thermoplastic 4" wide	112.00	Stall	$27.37	$10.56	$8.72	$46.65	$5,224.39
Handicap Symbol	4.00	EA	$63.54	$32.65	$0.00	$96.19	$384.74
Handicap parking sign 12"x18" and post	6.00	EA	$254.15	$159.33	$35.39	$448.87	$2,693.21
						Site Improvement Subtotal =	**$377,845.03**
						SITE SUBTOTAL =	**$1,252,107.25**
						10% Overhead	$125,210.72
						10% Profit	$137,731.80
						1% Bond	$15,150.50
						4.17% Tax	$63,809.35
						Construction Total	**$1,594,009.62**
Estimated Dept. Water Supply Facility Charge for 1.5" domestic meter	1.00	EA	$0.00	$0.00	$0.00	$27,500.00	$27,500.00
Estimated Dept. Water Supply Charge for water units	11.00	EA	$0.00	$0.00	$0.00	$5,500.00	$60,500.00
						Dept of Water Supply Total	**$88,000.00**
						Total	**$1,682,009.62**

Note:
1. This cost estimate is based on the Draft Master Plan and is for planning purposes only.
2. Actual construction costs may vary based on the design plans and economic environment at the time.
3. Landscaping improvements, including grassing and top soil are not included in this estimate.
4. Hazardous soil testing and abatement are not included in this estimate.
5. Archeological monitoring of site work activities is not included in this estimate.

KAMOLEAO PHASE 1B - OHUOHU ST. SHOPS
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
DEMOLITION & EROSION CONTROL							
Dust Screen	695.00	LF	$0.00	$0.00	$0.00	$50.60	$35,167.00
Polypropylene Sand Bags	695.00	LF	$0.00	$0.00	$0.00	$6.75	$4,691.60
Grated Inlet Protection bags	5.00	EA	$115.00	$0.00	$0.00	$115.00	$575.00
Crushed Rock Ingress/Egress	1.00	EA	$0.00	$0.00	$0.00	$2,349.45	$2,349.45
Clearing, Grubbing & Tree Removal							
Clear & grub brush incl. stumps up to 12". Medium density.	0.60	Acre	$0.00	$3,910.00	$7,575.63	$11,485.63	$6,891.38
						Demolition Subtotal =	**$49,674.42**
DRAINAGE IMPROVEMENTS							
Drainage Trenching							
Trenching DL (4'W x 6'D x 1/2 C.Y. bucket)	145.00	LF	$0.00	$21.51	$8.07	$29.58	$4,288.98
Trenching DL (2'W x 6'D x 3/8 C.Y. bucket)	260.00	LF	$0.00	$7.99	$2.56	$10.56	$2,744.31
PVC Pipe SDR 35							
4" solid body, B&S , 20' lengths	260.00	LF	$3.03	$5.49	$0.00	$8.52	$2,216.19
8" solid body, B&S, 13' lengths	145.00	LF	$11.53	$6.16	$0.00	$17.69	$2,565.45
PVC bends, elbows, tees, wyes, clean-outs							
4" wyes	3.00	EA	$31.67	$100.68	$0.00	$132.35	$397.06
8" elbow, 45 degree	1.00	EA	$94.82	$80.16	$0.00	$174.97	$174.97
8" tee	3.00	EA	$138.81	$124.14	$0.00	$262.95	$788.84
12" tee or wye	3.00	EA	$762.45	$230.69	$0.00	$993.14	$2,979.42
Clean Out cast Iron. B&S, w/ Countersunk Plug 4"	1.00	EA	$578.68	$293.25	$0.00	$871.93	$871.93
Drainage Structures and Catchments							
Shallow drywell 8' dia rings, w/cover and grate	2.00	EA	$0.00	$0.00	$0.00	$16,243.75	$32,487.50
						Drainage Subtotal =	**$49,514.65**
WATERLINE IMPROVEMENTS							
Waterline Trenching							
Trenching WL (4'W x 4'D x 1/2 C.Y. bucket)	40.00	LF	$0.00	$13.39	$4.95	$18.34	$733.52
Trenching WL (2'W x 4'D x 3/8 C.Y. bucket)	140.00	LF	$0.00	$7.98	$2.56	$10.54	$1,475.24
Ductile Iron Main's and Fittings							
8" ductile iron waterline (MJ)	40.00	LF	$87.00	$29.03	$6.39	$122.42	$4,896.88
Copper Water Lines, Domestic Meters and Backflow Preventers							
2" type K, copper tubing	140.00	LF	$37.44	$7.57	$0.00	$45.00	$6,300.57
2" Copper tee, reducing on the outlet	2.00	EA	$98.73	$121.21	$0.00	$219.94	$439.88
2" Water meter, bronze, threaded/flanged	1.00	EA	$909.08	$161.29	$0.00	$1,070.36	$1,070.36
Chlorination	1.00	LS	$0.00	$0.00	$0.00	$4,000.00	$4,000.00
						Water Line Subtotal =	**$18,916.45**
SEWER / SEPTIC IMPROVEMENTS							
Sewer Trenching							
Trenching SL (2'W x 6'D x 3/8 C.Y. bucket)	425.00	LF	$0.00	$10.36	$3.26	$13.63	$5,791.20
PVC Pipe SDR 35							
6" solid body, B&S , 20' lengths	425.00	LF	$6.41	$5.88	$0.00	$12.30	$5,226.20
PVC bends, elbows, tees, wyes, clean-outs							
6" fittings, bends, elbows	4.00	EA	$57.67	$67.45	$0.00	$125.12	$500.48
6" tees	6.00	EA	$84.07	$100.68	$0.00	$184.75	$1,108.49
6" wyes	4.00	EA	$85.04	$100.68	$0.00	$185.73	$742.90
Septic Tanks, manholes							
Sewer manhole - 8' deep, precast 4' I.D.,	2.00	EA	$3,812.25	$1,358.73	$203.32	$5,374.30	$10,748.59
Frame and cover, heavy traffic, 24" dia	2.00	EA	$508.30	$260.02	$90.91	$859.22	$1,718.45
Rungs - polyethylene, standard size	16.00	EA	$61.58	$18.67	$0.00	$80.25	$1,284.04
Inverts, triple channel, concrete	2.00	EA	$306.94	$451.61	$0.00	$758.54	$1,517.08

KAMOLEAO PHASE 1B - OHUOHU ST. SHOPS
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
Septic Tanks, Grease Interceptors manholes							
Precast conc. 2500 gal (JZ2500)	3.00	EA	$16,800.00	$0.00	$0.00	$16,800.00	$50,400.00
Precast conc. Grease 500 gal (HJ500)	2.00	EA	$7,600.00	$0.00	$0.00	$7,600.00	$15,200.00
On-site Disposal							
Sewer Infiltrator chamber	88.00	EA	$114.44	$0.00	$0.00	$114.44	$10,070.41
Sewer Infiltrator Caps	16.00	EA	$18.46	$0.00	$0.00	$18.46	$295.32
Cinder 3/8 minus (1.27 Tons/CY)	260.00	CY	$40.83	$0.00	$0.00	$40.83	$10,614.50
Geotextile, over leach bed, polypropylene	260.00	SY	$2.99	$0.76	$0.00	$3.75	$975.94
						Sewer / Septic Subtotal =	**$116,193.59**
SITE IMPROVEMENTS							
Grading Work							
Mobilization	1.00	LS	$0.00	$0.00	$0.00	$65,000.00	$65,000.00
Excavation	1630.00	CY	$0.00	$0.00	$0.00	$12.00	$19,560.00
Embankment	1641.00	CY	$0.00	$0.00	$0.00	$18.00	$29,538.00
Paving, Walkways, Curbs and Gutters							
Asphalt paving (2" AC, 6" base)	905.00	SY	$34.50	$0.00	$0.00	$34.50	$31,222.50
Subbase Course (1.5 minus, 6" thick)	370.00	SY	$12.32	$1.09	$1.72	$15.13	$5,598.73
4" Concrete walkway - slab on grade (3000 psi), unreinforced, broom finish,	3300.00	SF	$2.99	$1.67	$0.02	$4.68	$15,431.99
Welded wire fabric (6 x 6 - W1.4 x W1.4)	33.00	CFS	$28.25	$48.88	$0.00	$77.12	$2,545.12
Concrete Curb - 6"x18" forms & conc. straight	400.00	LF	$12.61	$8.91	$0.00	$21.52	$8,609.82
Parking, Striping and Signage							
Traffic signage 24"x24", alum. reflectorized	1.00	EA	$172.04	$39.10	$20.14	$231.28	$231.28
Galvanized steel sign posts 10' upright	1.00	EA	$63.54	$13.69	$6.59	$83.81	$83.81
Layout of parking pavement markings	500.00	LF	$0.00	$0.08	$0.02	$0.10	$48.88
Lines on pmvt, parking stall, thermoplastic 4" wide	28.00	Stall	$27.37	$10.56	$8.72	$46.65	$1,306.10
Handicap Symbol	2.00	EA	$63.54	$32.65	$0.00	$96.19	$192.37
Handicap parking sign 12"x18" and post	3.00	EA	$254.15	$159.33	$35.39	$448.87	$1,346.60
						Site Improvement Subtotal =	**$180,715.19**
						SITE SUBTOTAL =	**$415,014.31**
						10% Overhead	$41,501.43
						10% Profit	$45,651.57
						1% Bond	$5,021.67
						4.17% Tax	$21,149.78
						Construction Total	**$528,338.77**
Estimated Dept. Water Supply Facility Charge for 1.5" domestic meter	0.00	EA	$0.00	$0.00	$0.00	$27,500.00	$0.00
Estimated Dept. Water Supply Charge for water units	11.00	EA	$0.00	$0.00	$0.00	$5,500.00	$60,500.00
						Dept of Water Supply Total	**$60,500.00**
						Total	**$588,838.77**

Note:
1. This cost estimate is based on the Draft Master Plan and is for planning purposes only.
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3. Landscaping improvements, including grassing and top soil are not included in this estimate.
4. Hazardous soil testing and abatement are not included in this estimate.
5. Archeological monitoring of site work activities is not included in this estimate.

KAMOLEAO PHASE 1B - LIGHT INDUSTRIAL BLDG.
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
DEMOLITION & EROSION CONTROL							
Dust Screen	1300.00	LF	$0.00	$0.00	$0.00	$50.60	$65,780.00
Polypropylene Sand Bags	1300.00	LF	$0.00	$0.00	$0.00	$6.75	$8,775.65
Grated Inlet Protection bags	4.00	EA	$115.00	$0.00	$0.00	$115.00	$460.00
Crushed Rock Ingress/Egress	1.00	EA	$0.00	$0.00	$0.00	$2,349.45	$2,349.45
Clearing, Grubbing & Tree Removal							
Clear & grub brush incl. stumps up to 12". Medium density.	1.87	Acre	$0.00	$3,910.00	$7,575.63	$11,485.63	$21,478.12
						Demolition Subtotal =	**$98,843.22**
DRAINAGE IMPROVEMENTS							
Drainage Trenching							
Trenching DL (4'W x 6'D x 1/2 C.Y. bucket)	635.00	LF	$0.00	$21.51	$8.07	$29.58	$18,782.76
Trenching DL (2'W x 6'D x 3/8 C.Y. bucket)	190.00	LF	$0.00	$7.99	$2.56	$10.56	$2,005.46
PVC Pipe SDR 35							
4" solid body, B&S , 20' lengths	190.00	LF	$3.03	$5.49	$0.00	$8.52	$1,619.52
12" solid body, B&S, 13' lengths	635.00	LF	$23.85	$7.80	$0.84	$32.49	$20,632.48
PVC bends, elbows, tees, wyes, clean-outs							
4" fittings, bends, elbows	3.00	EA	$19.16	$67.45	$0.00	$86.61	$259.82
4" wyes	6.00	EA	$31.67	$100.68	$0.00	$132.35	$794.12
12" tee or wye	2.00	EA	$762.45	$230.69	$0.00	$993.14	$1,986.28
Drainage Structures and Catchments							
Shallow drywell 8' dia rings, w/cover and grate	4.00	EA	$0.00	$0.00	$0.00	$16,243.75	$64,975.00
Area Drain - dome or flat grate	2.00	EA	$0.00	$0.00	$0.00	$1,000.00	$2,000.00
						Drainage Subtotal =	**$113,055.44**
WATERLINE IMPROVEMENTS							
Waterline Trenching							
Trenching WL (4'W x 4'D x 1/2 C.Y. bucket)	560.00	LF	$0.00	$13.39	$4.95	$18.34	$10,269.22
Trenching WL (2'W x 4'D x 3/8 C.Y. bucket)	315.00	LF	$0.00	$7.98	$2.56	$10.54	$3,319.30
Tapping, Crosses & Sleeves							
Drill & tap 12" main 1" to 2" service lateral	1.00	EA	$0.00	$635.38	$0.00	$635.38	$635.38
12"x8" tapping sleeve, valve, gaskets	1.00	EA	$6,989.13	$138.81	$14.96	$7,142.89	$7,142.89
Ductile Iron Main's and Fittings							
6" ductile iron waterline (MJ)	50.00	LF	$51.81	$24.14	$5.32	$81.27	$4,063.47
8" ductile iron waterline (MJ)	560.00	LF	$87.00	$29.03	$6.39	$122.42	$68,556.38
Wye or tee 6" ductile iron (MJ)	1.00	EA	$1,104.58	$351.90	$0.00	$1,456.48	$1,456.48
Wye or tee 8" ductile iron (MJ)	3.00	EA	$1,749.73	$422.28	$0.00	$2,172.01	$6,516.02
45 degree bend 6" ductile iron (MJ)	1.00	EA	$389.05	$234.60	$0.00	$623.65	$623.65
45 degree bend 8" ductile iron (MJ)	2.00	EA	$568.91	$281.52	$0.00	$850.43	$1,700.85
Decreaser 8" x 6"	1.00	EA	$606.05	$258.06	$0.00	$864.11	$864.11
8" ductile iron cap	1.00	EA	$338.22	$140.76	$0.00	$478.98	$478.98
Valves							
2.0" gate valve (threaded, w/box, class 150)	2.00	EA	$467.25	$87.98	$0.00	$555.22	$1,110.44
6" gate valve (cast iron, mech joint, w/box)	2.00	EA	$24,926.25	$336.26	$119.26	$25,381.77	$50,763.53
8" gate valve (cast iron, mech joint, w/box)	2.00	EA	$4,301.00	$336.26	$119.26	$4,756.52	$9,513.03
Commercial Meters, Backflow Preventers, Hydrants and Thrust Blocks							
Detector Check Meter 6"	1.00	EA	$22,482.50	$1,036.15	$0.00	$23,518.65	$23,518.65
6" RP Backflow Preventer, flanged, iron valves outside screw & yolk	1.00	EA	$9,726.13	$899.30	$0.00	$10,625.43	$10,625.43

KAMOLEAO PHASE 1B - LIGHT INDUSTRIAL BLDG. RS Means 2017 Edition
0% Civil Site Work Cost Estimate Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
Fire hydrant (5 1/4" valve, 6' depth)	2.00	EA	$4,545.38	$355.81	$38.51	$4,939.70	$9,879.40
Thrust block 6" tee or deadend	3.00	EA	$44.97	$17.50	$9.64	$72.10	$216.30
Thrust block 8" tee or deadend	5.00	EA	$65.49	$29.13	$16.03	$110.65	$553.27
Thrust Beam	2.00	EA	$0.00	$0.00	$0.00	$2,400.00	$4,800.00
Copper Water Lines, Domestic Meters and Backflow Preventers							
2" type K, copper tubing	265.00	LF	$37.44	$7.57	$0.00	$45.00	$11,926.09
2" Copper tee, reducing on the outlet	2.00	EA	$98.73	$121.21	$0.00	$219.94	$439.88
1.5" Water meter, bronze, threaded/falanged	1.00	EA	$664.70	$121.21	$0.00	$785.91	$785.91
1.5" RP Backflow Preventer, bronze, threaded, ball valves	1.00	EA	$1,260.98	$96.77	$0.00	$1,357.75	$1,357.75
Chlorination	1.00	LS	$0.00	$0.00	$0.00	$4,000.00	$4,000.00
						Water Line Subtotal =	**$235,116.35**
SEWER / SEPTIC IMPROVEMENTS							
Sewer Trenching							
Trenching SL (2'W x 6'D x 3/8 C.Y. bucket)	100.00	LF	$0.00	$10.36	$3.26	$13.63	$1,362.64
PVC Pipe SDR 35							
4" solid body, B&S , 20' lengths	100.00	LF	$3.03	$5.49	$0.00	$8.52	$852.38
Septic Tanks, manholes							
Sewer manhole - 8' deep, precast 4' I.D.,	2.00	EA	$3,812.25	$1,358.73	$203.32	$5,374.30	$10,748.59
Frame and cover, heavy traffic, 24" dia	2.00	EA	$508.30	$260.02	$90.91	$859.22	$1,718.45
Rungs - polyethylene, standard size	16.00	EA	$61.58	$18.67	$0.00	$80.25	$1,284.04
Inverts, triple channel, concrete	2.00	EA	$306.94	$451.61	$0.00	$758.54	$1,517.08
Septic Tanks, Grease Interceptors manholes							
Precast conc. 1000 gal (JP1000)	1.00	EA	$6,650.00	$0.00	$0.00	$6,650.00	$6,650.00
On-site Disposal							
Sewer Infiltrator chamber	12.00	EA	$114.44	$0.00	$0.00	$114.44	$1,373.24
Sewer Infiltrator Caps	8.00	EA	$18.46	$0.00	$0.00	$18.46	$147.66
Cinder 3/8 minus (1.27 Tons/CY)	25.00	CY	$40.83	$0.00	$0.00	$40.83	$1,020.63
Geotextile, over leach bed, polypropylene	25.00	SY	$2.99	$0.76	$0.00	$3.75	$93.84
						Sewer / Septic Subtotal =	**$26,768.54**
SITE IMPROVEMENTS							
Grading Work							
Mobilization	1.00	LS	$0.00	$0.00	$0.00	$65,000.00	$65,000.00
Excavation	1145.00	CY	$0.00	$0.00	$0.00	$12.00	$13,740.00
Embankment	3100.00	CY	$0.00	$0.00	$0.00	$18.00	$55,800.00
Paving, Walkways, Curbs and Gutters							
Asphalt paving (2" AC, 6" base)	2800.00	SY	$34.50	$0.00	$0.00	$34.50	$96,600.00
Subbase Course (1.5 minus, 6" thick)	280.00	SY	$12.32	$1.09	$1.72	$15.13	$4,236.88
4" Concrete walkway - slab on grade (3000 psi), unreinforced, broom finish,	2500.00	SF	$2.99	$1.67	$0.02	$4.68	$11,690.90
Welded wire fabric (6 x 6 - W1.4 x W1.4)	25.00	CFS	$28.25	$48.88	$0.00	$77.12	$1,928.12
Concrete Curb - 6"x18" forms & conc. straight	1500.00	LF	$12.61	$8.91	$0.00	$21.52	$32,286.83

KAMOLEAO PHASE 1B - LIGHT INDUSTRIAL BLDG. RS Means 2017 Edition
0% Civil Site Work Cost Estimate Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
Parking, Striping and Signage							
Traffic signage 24"x24", alum. reflectorized	1.00	EA	$172.04	$39.10	$20.14	$231.28	$231.28
Galvanized steel sign posts 10' upright	1.00	EA	$63.54	$13.69	$6.59	$83.81	$83.81
Layout of parking pavement markings	900.00	LF	$0.00	$0.08	$0.02	$0.10	$87.98
Lines on pmvt, parking stall, thermoplastic 4" wide	48.00	Stall	$27.37	$10.56	$8.72	$46.65	$2,239.02
Handicap Symbol	2.00	EA	$63.54	$32.65	$0.00	$96.19	$192.37
Handicap parking sign 12"x18" and post	3.00	EA	$254.15	$159.33	$35.39	$448.87	$1,346.60
						Site Improvement Subtotal =	**$285,463.78**
						SITE SUBTOTAL =	**$759,247.33**
						10% Overhead	$75,924.73
						10% Profit	$83,517.21
						1% Bond	$9,186.89
						4.17% Tax	$38,692.44
						Construction Total	**$966,568.60**
Estimated Dept. Water Supply Facility Charge for 1.5" domestic meter	1.00	EA	$0.00	$0.00	$0.00	$27,500.00	$27,500.00
Estimated Dept. Water Supply Charge for water units	1.00	EA	$0.00	$0.00	$0.00	$5,500.00	$5,500.00
						Dept of Water Supply Total	**$33,000.00**
						Total	**$999,568.60**

Note:
1. This cost estimate is based on the Draft Master Plan and is for planning purposes only.
2. Actual construction costs may vary based on the design plans and economic environment at the time.
3. Landscaping improvements, including grassing and top soil are not included in this estimate.
4. Hazardous soil testing and abatement are not included in this estimate.
5. Archeological monitoring of site work activities is not included in this estimate.

KAMOLEAO PHASE 2 - HEALTH & WELLNESS COMPLEX RS Means 2017 Edition
0% Civil Site Work Cost Estimate Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
DEMOLITION & EROSION CONTROL							
Dust Screen	1325.00	LF	$0.00	$0.00	$0.00	$50.60	$67,045.00
Polypropylene Sand Bags	1325.00	LF	$0.00	$0.00	$0.00	$6.75	$8,944.41
Grated Inlet Protection bags	6.00	EA	$115.00	$0.00	$0.00	$115.00	$690.00
Crushed Rock Ingress/Egress	1.00	EA	$0.00	$0.00	$0.00	$2,349.45	$2,349.45
Sidewalk removal, 4" concrete, mesh reinf.	80.00	SY	$0.00	$13.49	$4.77	$18.26	$1,460.78
Saw cutting reinf.concrete slabs 4" deep	20.00	LF	$0.33	$1.88	$1.09	$3.30	$66.08
Clearing, Grubbing & Tree Removal							
Clear & grub brush incl. stumps up to 12". Medium density.	2.15	Acre	$0.00	$3,910.00	$7,575.63	$11,485.63	$24,694.09
						Demolition Subtotal =	**$105,249.81**
DRAINAGE IMPROVEMENTS							
Shallow drywell 8' dia rings, w/cover and grate	5.00	EA	$0.00	$0.00	$0.00	$16,243.75	$81,218.75
						Drainage Subtotal =	**$81,218.75**
WATERLINE IMPROVEMENTS							
Waterline Trenching							
Trenching WL (4'W x 4'D x 1/2 C.Y. bucket)	200.00	LF	$0.00	$13.39	$4.95	$18.34	$3,667.58
Trenching WL (2'W x 4'D x 3/8 C.Y. bucket)	205.00	LF	$0.00	$7.98	$2.56	$10.54	$2,160.18
Ductile Iron Main's and Fittings							
6" ductile iron waterline (MJ)	25.00	LF	$51.81	$24.14	$5.32	$81.27	$2,031.73
8" ductile iron waterline (MJ)	200.00	LF	$87.00	$29.03	$6.39	$122.42	$24,484.42
90 degree bend 6" ductile iron (MJ)	1.00	EA	$447.70	$234.60	$0.00	$682.30	$682.30
Wye or tee 6" ductile iron (MJ)	1.00	EA	$1,104.58	$351.90	$0.00	$1,456.48	$1,456.48
Decreaser 8" x 6"	1.00	EA	$606.05	$258.06	$0.00	$864.11	$864.11
Valves							
1.5" gate valve (threaded, w/ box, class 150)	1.00	EA	$347.99	$74.29	$0.00	$422.28	$422.28
6" gate valve (cast iron, mech joint, w/box)	1.00	EA	$24,926.25	$336.26	$119.26	$25,381.77	$25,381.77
Commercial Meters, Backflow Preventers, Hydrants and Thrust Blocks							
Fire hydrant (5 1/4" valve, 6' depth)	1.00	EA	$4,545.38	$355.81	$38.51	$4,939.70	$4,939.70
Thrust block 6" tee or deadend	3.00	EA	$44.97	$17.50	$9.64	$72.10	$216.30
Thrust Beam	1.00	EA	$0.00	$0.00	$0.00	$2,400.00	$2,400.00
Copper Water Lines, Domestic Meters and Backflow Preventers							
2" type K, copper tubing	180.00	LF	$37.44	$7.57	$0.00	$45.00	$8,100.74
Chlorination	1.00	LS	$0.00	$0.00	$0.00	$4,000.00	$4,000.00
						Water Line Subtotal =	**$80,807.57**
SEWER / SEPTIC IMPROVEMENTS							
Sewer Trenching							
Trenching SL (2'W x 6'D x 3/8 C.Y. bucket)	75.00	LF	$0.00	$10.36	$3.26	$13.63	$1,021.98
PVC Pipe SDR 35							
6" solid body, B&S , 20' lengths	75.00	LF	$6.41	$5.88	$0.00	$12.30	$922.27
Septic Tanks, manholes							
Sewer manhole - 8' deep, precast 4' I.D.,	2.00	EA	$3,812.25	$1,358.73	$203.32	$5,374.30	$10,748.59
Frame and cover, heavy traffic, 24" dia	2.00	EA	$508.30	$260.02	$90.91	$859.22	$1,718.45
Rungs - polyethylene, standard size	16.00	EA	$61.58	$18.67	$0.00	$80.25	$1,284.04
Inverts, triple channel, concrete	2.00	EA	$306.94	$451.61	$0.00	$758.54	$1,517.08
Septic Tanks, Grease Interceptors manholes							
Precast conc. 2000 gal (JZ2000)	1.00	EA	$15,200.00	$0.00	$0.00	$15,200.00	$15,200.00
On-site Disposal							
Sewer Infiltrator chamber	55.00	EA	$114.44	$0.00	$0.00	$114.44	$6,294.01
Sewer Infiltrator Caps	8.00	EA	$18.46	$0.00	$0.00	$18.46	$147.66
Cinder 3/8 minus (1.27 Tons/CY)	140.00	CY	$40.83	$0.00	$0.00	$40.83	$5,715.50
Geotextile, over leach bed, polypropylene	140.00	SY	$2.99	$0.76	$0.00	$3.75	$525.50
						Sewer / Septic Subtotal =	**$45,095.08**

KAMOLEAO PHASE 2 - HEALTH & WELLNESS COMPLEX RS Means 2017 Edition
0% Civil Site Work Cost Estimate Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
SITE IMPROVEMENTS							
Grading Work							
Mobilization	1.00	LS	$0.00	$0.00	$0.00	$65,000.00	$65,000.00
Excavation	390.00	CY	$0.00	$0.00	$0.00	$12.00	$4,680.00
Embankment	3950.00	CY	$0.00	$0.00	$0.00	$18.00	$71,100.00
Paving, Walkways, Curbs and Gutters							
Asphalt paving (2" AC, 6" base)	3543.00	SY	$34.50	$0.00	$0.00	$34.50	$122,233.50
Subbase Course (1.5 minus, 6" thick)	394.00	SY	$12.32	$1.09	$1.72	$15.13	$5,961.89
4" Concrete walkway - slab on grade (3000 psi), unreinforced, broom finish,	3550.00	SF	$2.99	$1.67	$0.02	$4.68	$16,601.08
Welded wire fabric (6 x 6 - W1.4 x W1.4)	35.50	CFS	$28.25	$48.88	$0.00	$77.12	$2,737.93
Concrete Curb - 6"x18" forms & conc. straight	1750.00	LF	$12.61	$8.91	$0.00	$21.52	$37,667.96
Parking, Striping and Signage							
Traffic signage 24"x24", alum. reflectorized	1.00	EA	$172.04	$39.10	$20.14	$231.28	$231.28
Galvanized steel sign posts 10' upright	1.00	EA	$63.54	$13.69	$6.59	$83.81	$83.81
Layout of parking pavement markings	1400.00	LF	$0.00	$0.08	$0.02	$0.10	$136.85
Lines on pmvt, parking stall, thermoplastic 4" wide	73.00	Stall	$27.37	$10.56	$8.72	$46.65	$3,405.18
Handicap Symbol	4.00	EA	$63.54	$32.65	$0.00	$96.19	$384.74
Handicap parking sign 12"x18" and post	6.00	EA	$254.15	$159.33	$35.39	$448.87	$2,693.21
						Site Improvement Subtotal =	**$332,917.43**
						SITE SUBTOTAL =	**$645,288.64**
						10% Overhead	$64,528.86
						10% Profit	$70,981.75
						1% Bond	$7,807.99
						4.17% Tax	$32,884.92
						Construction Total	**$821,492.17**
Estimated Dept. Water Supply Facility Charge for 1.5" domestic meter	0.00	EA	$0.00	$0.00	$0.00	$27,500.00	$0.00
Estimated Dept. Water Supply Charge for water units	2.00	EA	$0.00	$0.00	$0.00	$5,500.00	$11,000.00
						Dept of Water Supply Total	**$11,000.00**
						Total	**$832,492.17**

Note:
1. This cost estimate is based on the Draft Master Plan and is for planning purposes only.
2. Actual construction costs may vary based on the design plans and economic environment at the time.
3. Landscaping improvements, including grassing and top soil are not included in this estimate.
4. Hazardous soil testing and abatement are not included in this estimate.
5. Archeological monitoring of site work activities is not included in this estimate.

KAMOLEAO PHASE 2 - PUAINAKO STREET MEDIAN
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
DEMOLITION & EROSION CONTROL							
Polypropylene Sand Bags	300.00	LF	$0.00	$0.00	$0.00	$6.75	$2,025.15
Straw Wattle	30.00	LF	$2.30	$0.00	$0.00	$2.30	$69.00
Crushed Rock Ingress/Egress	1.00	EA	$0.00	$0.00	$0.00	$2,349.45	$2,349.45
Sidewalk removal, 4" concrete, mesh reinf.	80.00	SY	$0.00	$13.49	$4.77	$18.26	$1,460.78
Saw cutting reinf.concrete slabs 4" deep	20.00	LF	$0.33	$1.88	$1.09	$3.30	$66.08
Asphalt up to 3" demolition	100.00	SY	$0.00	$5.08	$3.58	$8.66	$866.07
catch basin	1.00	EA	$0.00	$1.96	$0.00	$2,500.00	$2,500.00
						Demolition Subtotal =	**$9,336.52**
DRAINAGE IMPROVEMENTS							
Drainage Trenching							
Trenching DL (6'W x 6'D x 5/8 C.Y. bucket)	15.00	LF	$0.00	$32.06	$16.91	$48.97	$734.59
HDPE Pipe - Corrugated Type S	0.00						
18" HDPE Type S	15.00	LF	$23.95	$9.07	$0.98	$34.00	$509.96
Drainage Structures and Catchments							
Catch Basin / Grated Inlet , cast in place, 4' deep	1.00	EA	$5,083.00	$2,688.13	$0.00	$7,771.13	$7,771.13
						Drainage Subtotal =	**$9,015.68**
WATERLINE IMPROVEMENTS							
6" gate valve (cast iron, mech joint, w/box)	1.00	EA	$24,926.25	$336.26	$119.26	$25,381.77	$25,381.77
						Water Line Subtotal =	**$25,381.77**
SITE IMPROVEMENTS							
Grading Work							
Mobilization	0.00	LS	$0.00	$0.00	$0.00	$65,000.00	$0.00
Excavation	35.00	CY	$0.00	$0.00	$0.00	$12.00	$420.00
Embankment	0.00	CY	$0.00	$0.00	$0.00	$18.00	$0.00
Paving, Walkways, Curbs and Gutters							
Asphalt paving (2" AC, 6" base)	675.00	SY	$34.50	$0.00	$0.00	$34.50	$23,287.50
Base Course / Structural Fill (3/4 minus, 6" thick)	675.00	SY	$9.87	$0.78	$1.60	$12.26	$8,274.05
6" Concrete parking, unreinforced, fixed forms, joints, finishing, curing,	200.00	SY	$43.99	$2.52	$2.03	$48.54	$9,708.53
Concrete Curb - 6"x18" forms & conc. straight	430.00	LF	$12.61	$8.91	$0.00	$21.52	$9,255.56
Parking, Striping and Signage							
Traffic signage 24"x24", alum. reflectorized	3.00	EA	$172.04	$39.10	$20.14	$231.28	$693.83
Galvanized steel sign posts 10' upright	3.00	EA	$63.54	$13.69	$6.59	$83.81	$251.43
Thermoplastic arrows	2.00	SF	$1.11	$4.81	$3.97	$9.89	$19.78
Layout of parking pavement markings	40.00	LF	$0.00	$0.08	$0.02	$0.10	$3.91
Lines on pmvt, parking stall, thermoplastic 12" wide	40.00	LF	$14.37	$3.19	$1.72	$19.28	$771.05
Traffic Control	20.00	Days	$0.00	$0.00	$0.00	$1,000.00	$20,000.00
						Site Improvement Subtotal =	**$72,685.64**
						SITE SUBTOTAL =	**$116,419.61**
						10% Overhead	$11,641.96
						10% Profit	$12,806.16
						1% Bond	$1,408.68
						4.17% Tax	$5,932.93
						Construction Total	**$148,209.33**

KAMOLEAO PHASE 2 - PUAINAKO STREET MEDIAN
0% Civil Site Work Cost Estimate

RS Means 2017 Edition
Date: November 8, 2017

DESCRIPTION	QUANTITY	UNIT	MAT.	LABOR	EQUIP.	Unit Cost	Total
Estimated Dept. Water Supply Facility Charge for 1.5" domestic meter	0.00	EA	$0.00	$0.00	$0.00	$27,500.00	$0.00
Estimated Dept. Water Supply Charge for water units	0.00	EA	$0.00	$0.00	$0.00	$5,500.00	$0.00
						Dept of Water Supply Total	**$0.00**
						Total	**$148,209.33**

Note:
1. This cost estimate is based on the Draft Master Plan and is for planning purposes only.
2. Actual construction costs may vary based on the design plans and economic environment at the time.
3. Landscaping improvements, including grassing and top soil are not included in this estimate.
4. Hazardous soil testing and abatement are not included in this estimate.
5. Archeological monitoring of site work activities is not included in this estimate.

APPENDIX E

Transportation Assessment

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FEHR PEERS

MEMORANDUM

Date: March 7, 2018

To: Ann Bouslog, PBR Hawaii

From: Sohrab Rashid

Subject: ***Transportation Assessment for the Proposed Kamoleao Development in Hilo, Hawaii***

SD17-0238

Fehr & Peers has completed a transportation assessment of the proposed Kamoleao Community-Based Master Plan in Hilo on the island of Hawai'i. The project site is located in the Pana'ewa Hawaiian Homelands area. The site is currently vacant and is bound by 'Ohu'ohu Street on the mauka side, Puainako Street on the south side, Railroad Avenue on the makai side, and an existing parking lot and The Home Depot on the north side. The project will develop a new 11,000 square-foot (s.f.) Community Center with an adjoining Certified Kitchen building, a 22,650 s.f. Health & Wellness Complex, 9,600 s.f. of retail uses, and 27,950 s.f. of light industrial space. This memorandum includes our review of existing transportation facilities surrounding the project site, the proposed project's trip generation, and potential key circulation issues and impacts of the proposed project.

EXISTING CONDITIONS

ROADWAYS

The key roadways providing access to or in the vicinity of the site are described below. **Figure 1** illustrates the proposed project site location and the surrounding roadway system. Descriptions of these roadways are presented below.

- *Puainako Street* begins at Railroad Avenue and extends westerly to Kaumana Drive and Saddle Road. Immediately adjacent to the project site, Puainako Street includes four travel lanes and is separated by a landscaped median. The roadway starts at four lanes at

Railroad Avenue at the makai end, then tapers to two-lanes (one in each direction) approximately 400 feet mauka of 'Ohu'ohu Street. Between 'Ohu'ohu Street and Pilipaa Street, Puainako Street is a two lane divided roadway, and then widens to four lanes from Pilipaa to Kilauea Avenue. West of Kilauea Avenue, the roadway is an undivided two-lane road and is fronted by residential units on the south side and school campuses on the north side. In the future, Puainako Street is planned to be widened to four lanes from the Waiakea Intermediate School to east of Kilauea Avenue, near Kekela Street. Within the study area, Puainako Street has a posted speed limit of 30 miles per hour (mph). Puainako Street mauka of the highway adjacent to the project site is owned by Department of Hawaiian Homelands (DHHL) but operated and maintained by the County of Hawaii. The section mauka of the highway is under the control of the State of Hawaii Department of Transportation (HDOT).

- *Railroad Avenue* is under the jurisdiction of the State of Hawaii and is a north-south facility that includes one lane in each direction and excludes separate turn lanes. This street provides access to base yards and facilities, commercial sites, residential areas and to agricultural and undeveloped land south of Kahaopea Street. The posted speed limit in the study area is 35 mph. The northern section of Railroad Avenue terminates at the T-intersection with Leilani Street.

- *'Ohu'ohu Street* is a two-lane undivided County roadway that connects Makaala Street in the north to Kahaopea Street in the south. Between Makaala Street and Puainako Street, the roadway provides direct access to the Prince Kuhio Plaza shopping center, and south of Puainako Street, the roadway is fronted by single-family residences and Pana'ewa Park and includes several speed humps to regulate vehicle speeds. Within the study area, the posted speed limit is 25 mph. Similar to part of Puainako Street, 'Ohu'ohu Street is owned by Department of Hawaiian Homelands (DHHL) but operated and maintained by the County.

- *Kanoelehua Avenue* is a divided, north-south major arterial that connects the Keaau and Hilo communities. Kanoelehua Avenue is located mauka of the project site and generally contains five lanes (three southbound and two northbound) between Pohaku Street and Kahaopea Street with a posted speed limit of 35 mph. The roadway widens at intersections to provide separate turn lanes. Kanoelehua Avenue is operated and maintained by the State of Hawaii Department of Transportation (HDOT).

- *Makaala Street* is a four-lane mauka-makai undivided County roadway within the study area. Makaala Street connects E Kawilii Street to Railroad Avenue. Between Kanoelehua Avenue and Railroad Avenue, Makaala Street provides direct access to retail on both sides of the roadway. Mauka of Kanoelehua Avenue, Makaala Street is generally a north-south two-lane undivided roadway that is fronted by light industrial buildings. Within the study area, the posted speed limit is 30 mph and no parking is allowed on either side of the roadway.

PEDESTRIAN FACILITIES

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. Sidewalks along the project frontage currently exist on Puainako Street (only adjacent to the project site, but no sidewalk is provided on the south side of the roadway) and on both sides of 'Ohu'ohu Street; alternatively, no formal sidewalks are currently provided on Railroad Avenue. Therefore, pedestrians on Railroad Avenue use the grass shoulders to reach their destination.

Striped crosswalks are provided on all legs of the Puainako Street/'Ohu'ohu Street intersection. The following three (3) adjacent intersections to the project site also provide striped crosswalks on at least two legs of the intersection:

- Puainako Street/Pilipaa Street – unsignalized intersection that provides striped crosswalks on all intersection legs, except the makai leg across Puainako Street.
- Puainako Street/Kanoelehua Avenue – signalized intersection that provides striped crosswalks and pedestrian signals on all intersection legs, except the south leg across Kanoelehua Avenue
- Makaala Street/'Ohu'ohu Street – signalized intersection that provides striped crosswalks and pedestrian signals on the makai leg across Makaala Street and on the south leg across 'Ohu'ohu Street.

Additionally, a mid-block pedestrian signal with a striped crosswalk currently exists on 'Ohu'ohu Street (between Puinako Street and Makaala Street) that connects the parking lot to the Prince Kuhio Plaza and Hele-On Bus stop. **Figure 2** shows the existing pedestrian crosswalks within the study area.

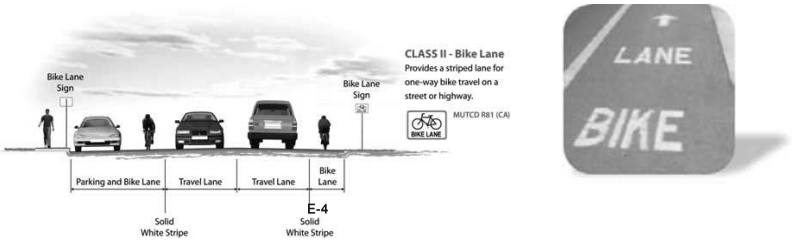
BICYCLE FACILITIES

Bicycle facilities generally consist of three types of facilities, which are outlined below:

- *Bike Only or Shared Use Paths* provide a completely separate right-of-way and is designated for the exclusive use of bicycles only or bicycles and pedestrians with vehicle and pedestrian cross-flow minimized. Generally, the recommended pavement width for a two-directional shared use path is ten (10) feet.

- *Protected Bike Lane* uses a physical barrier to separate bike lanes from the vehicle travel lane and sidewalk. The barrier is typically a raised curb, vertical delineator or similar device.

- *Bike Lanes* provide a restricted right-of-way and are designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally a minimum of five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.



- *Bike Route or Signed Shared Roadways* provide for a right-of-way designated by signs or shared lane pavement markings, or "sharrows," for shared use with pedestrians or motor vehicles.

No separate bicycle infrastructure is currently provided within the direct proximity of the project site; thus, bicyclists are required to share the roadway with vehicles. The nearest bicycle facility is located on Kanoelehua Avenue with a southbound bike lane provided between Kamehameha Avenue and Puainako Street; then the lane transitions into a bike route south of Puainako Street to Makalika Street. According to the *Bike Plan Hawaii*, there are two proposed bicycle facilities in the greater study area:

- Future bike route on Railroad Avenue between Leilani Street to Kaaahi Road/end of Railroad Avenue
- Future bike lane on W. Puainako Street between Komohana Street to Kinoole Street

Figure 2 illustrates the existing and proposed bicycle facilities within the study area.

TRANSIT

"Hele-On Bus" is the County of Hawaii's primary form of public transit that offers fixed-route transit services in the Hilo and Kona districts. The closest bus stop to the project site is the Prince Kuhio Plaza stop located on 'Ohu'ohu Street, approximately 400 feet north of the project site. This bus stop serves the following seven (7) routes:

- Intra-Hilo Waiakea-Uka
- Intra-Hilo Keaukaha
- Intra-Hilo Kaumana

- Ka'u-Volcano-Hilo
- Pohoiki-Pahoa-Hilo
- Hilo to Honokaa (mornings only)
- Kona-Hilo (mornings only)

Figure 3 shows the existing transit routes and bus stops serving the study area.

FIELD OBSERVATIONS

Field observations were conducted in late August 2017 when weather conditions were normal and all schools were in session. Traffic was observed to flow relatively freely in the project study area, and all three roadways along the project frontage (i.e. Puainako Street, 'Ohu'ohu Street, Railroad Avenue) had negligible vehicle delay with ample capacity. Minor vehicle queues (i.e. less than seven vehicles) were observed at the two Puainako Street intersections at 'Ohu'ohu Street and Railroad Avenue.

Most of the congestion within the study area occurred at the two Kanoelehua Avenue intersections at Makaala Street and Puainako Street. The mauka bound queues on Makaala Street were observed to extend from Kanoelehua Avenue to the second Prince Kuhio Plaza driveway, which made it difficult for vehicles to turn out of the Waiakea Center or Prince Kuhio Plaza driveways. However, no substantial congestion was observed at the Makaala Street/ 'Ohu'ohu Street intersection.

Substantial vehicle queues and delays were also observed at the Kanoelehua Avenue/Puainako Street intersection during the AM and PM peak hours. The makai bound approach on Puainako Street and the northbound and southbound approaches had long vehicle queues with approximately 15 vehicles queued in each travel lane. The mauka bound approach on Puainako Street did not have as long of a vehicle queue or delay compared to the other intersection approaches; queues were observed to extend to the Pilipaa Street intersection.

Negligible pedestrian and bicycle activity was observed near the project site. Most of the pedestrian activity occurred on Makaala Street near the retail centers, and pedestrians were well-served by the existing sidewalks.

PROJECT TRIP GENERATION

The amount of traffic anticipated to be added to the surrounding roadway system by the proposed project was estimated based on data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual (10th Edition, September 2017)*. The approach to the trip estimates for each use are described below.

The proposed project will be developed in three (3) phases and will include a new 11,000 square-foot (s.f.) Community Center plus an adjoining Certified Kitchen building, a 22,650 s.f. Health & Wellness Complex, 9,600 s.f. of retail uses, and 27,950 s.f. of light industrial space. The Community Center, the 'Ohu'Ohu Street Shops, and Light Industrial building will be constructed in Phase 1, the Health & Wellness Complex will be constructed in Phase 2, and Phase 3 will consist of two sites for future additional community amenities or commercial use. The size and details of uses on these future sites have not yet been determined.

The Community Center is intended to primarily serve the Pana'ewa Homestead community members, as well as other residents in the area when there is availability. The Community Center space will generally consist of meeting/banquet hall space with supporting office and storage areas. These facilities are anticipated to be primarily used on weekends and during weekday evenings when the center and kitchen may be used as a venue for large family gatherings, parties, and events. A few employees will work at the Community Center each day, but the center is likely to experience its highest public use outside of the AM and PM peak periods according to the project sponsor. The majority of vehicle trips generated by the Community Center would be during the evening or weekends and a negligible amount of vehicle trips would be generated during the AM and PM peak periods. Therefore, given the limited peak hour trips generated and the infrequent use of the Community Center and Certified Kitchen, the trips associated with these two uses were excluded from the project's trip generation calculation.

For the 'Ohu'Ohu Street Shops, the average rates for "Shopping Center" (ITE Land Use Code 820) were used for the Daily and AM peak hour, and the fitted curve equation was used to develop the PM peak trip estimates per the *Trip Generation Manual* guidance. Based on discussions that you have had with DHHL staff, we understand that the retail uses in the Street Shops are not expected to be destination-type uses, but instead will serve community center users already on the site are expected to draw a higher proportion of trips made by vehicles already passing by the site (i.e.,

pass-by trips) or by pedestrian shoppers already in the area. A maximum pass-by rate of 30% allowed by County guidelines was applied to the Street Shops uses to account for existing customers in vehicles. The resulting trip generation for these uses is still considered conservative for the reasons noted above.

The light industrial trip estimates were based on the average trip rates (ITE Land Use Code 151) for "Mini Warehouse" based on direction from the team that this building is envisioned to be a self-storage facility or a similar low-intensity, light industrial use.

For the Health & Complex Wellness Center, the average rates for "Recreational Community Center" (ITE Land Use Code 495) were used to develop the Daily, AM and PM peak hour estimates. The Wellness Center will combine an office space with a health and wellness concept, and will include healing and wellness providers along with social services and native Hawaiian agency office headquarters. The community center trip rate was used instead of the ITE Health and Fitness Center rate because the latter typically includes much more intensive amenities (e.g., pools, courts, large weight rooms), which are not expected to be part of this project.

As summarized in **Table 1**, the project is forecast to generate 949 daily trips, with 49 trips (32 inbound/17 outbound) during the AM peak hour and 125 trips (59 inbound/66 outbound) during the PM peak hour. It should be noted that the PM peak hour total volume exceeds the 50 peak hour trip threshold for requiring preparation of a full transportation impact analysis according to County of Hawaii guidelines.

TABLE 1: PROJECT TRIP GENERATION

Land Use	ITE Land Use Type	Quantity	Daily Total Trips[1]	Peak Hour Trips[1]					
				AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
'Ohu'Ohu Street Shops	Shopping Center[2]	9.6 ksf	362	6	3	9	46	50	96
	Pass-by Trips (30%)		-108	-2	-1	-3	-14	-15	-29
Light Industrial	Mini-Warehouse[3]	27.95 ksf	42	2	1	3	2	3	5
Health & Complex Wellness Center	Recreational Community Center[4]	22.65 ksf	653	26	14	40	25	28	53

TOTAL TRIPS	**949**	**32**	**17**	**49**	**59**	**66**	**125[5]**

Notes:

1. Trip rates from Trip Generation Manual, 10th Edition – September 2017 (Institute of Transportation Engineers)
2. Shopping Center Trip Rates: Daily (Average Rate) = 37.75; AM (Average Rate) = 0.94; PM (Fitted Curve Equation) = Ln(T) = 0.74*Ln(X)+2.89
3. Mini-Warehouse Trip Rates: Daily (Average Rate) = 1.51; AM (Average Rate) = 0.10; PM (Average Rate) = 0.17
4. Recreational Community Center: Daily (Average Rate) = 28.82; AM (Average Rate) = 1.76; PM (Average Rate) = 2.31
5. Total exceeds 50 peak hour trip threshold for requiring preparation of a full transportation impact analysis according to County of Hawaii guidelines.

Fehr & Peers, 2018

POTENTIAL OFF-SITE TRAFFIC IMPACTS

Based on the number of peak hour vehicle trips estimated to be generated by the proposed project and lack of peak hour congestion and delays at the immediately adjacent intersections, the proposed project is not expected to result in any *significant* negative impacts to vehicle circulation on roadways or intersections located along the project site frontage. As noted under the *Field Observations* section, the surrounding transportation facilities adjacent to the site have ample capacity to accommodate the vehicle traffic associated with the future development of the project site.

Based on the general area of the Pana'ewa Hawaiian Homelands community and corresponding land uses, the project trips are typically expected to be generated primarily from areas east of Kanoelehua Avenue and to the south. Hence, a substantial amount of project-generated traffic is expected to use Railroad Avenue to access the site, especially during the weekday peak periods when congestion on the highway is greater.

While the more highly congested conditions at the Kanoelehua Avenue intersections at Makaala Street and at Puainako Street may be exacerbated by the addition of project trips, operations are not anticipated to be significantly worsened by the project given that a substantial volume of traffic would use Railroad Avenue. As noted above, the project is estimated to generate 125 vehicle trips in the PM peak hour, which would add an average total of roughly two cars per minute to the adjacent roadway system.

To provide a worst-case scenario for this assessment, the amount of project traffic added to each individual turning movement at the Kanoelehua Avenue/Puainako Street intersection is estimated

to range between seven (7) to 10 vehicles per lane for each applicable turning movement. While the addition of this volume to each movement is not expected to significantly affect a single turning movement, the cumulative effect of this traffic can only be determined through a detailed intersection analysis of this location. Typically, DOT defines an impact where any addition of traffic to already congested location (i.e., Level of Service E or F) is considered significant. Given the relatively high volumes at this location, the contribution of project-generated traffic as a proportion of the total volume is expected to be very low.

ON-SITE CIRCULATION, SITE ACCESS, AND PARKING

The project site plan prepared by PBR Hawaii is shown on **Figure 4.** The project would be served by three driveways – one on each of the fronting roadways.

The project driveway on 'Ohu'Ohu Street would be located approximately 300 feet north of Puainako Street and would provide full access (i.e., allow all turns) to primarily serve the retail shops and the community center and certified kitchen. This driveway intersection is anticipated to be unsignalized with stop sign control on the project driveway approach only, and the 'Ohu'Ohu Street movements would be uncontrolled. For vehicles entering from 'Ohu'Ohu Street, they could either turn immediately right to park in a space adjacent to the retail shops, continue makai-bound to park in a stall near the Community Center, or travel through the site towards the Health & Wellness Complex. Given the relatively low traffic volumes that the retail and Community Center are estimated to generate during the AM and PM peak periods, and the ample capacity on 'Ohu'Ohu Street, it is anticipated that vehicle queues in the driveway at this intersection would be minimal during the peak hours. In addition, the throat depth at this location appears adequate such that parking maneuvers are not expected to cause any operational issues at the driveway.

The second driveway is proposed to be located on Puainako Street and would also provide full access to and from the site. This driveway will be located approximately 650 feet makai of the 'Ohu'Ohu Street intersection and will provide direct access to the Health & Wellness Complex. It is anticipated to be unsignalized with the project driveway as stop controlled and Puainako Street as uncontrolled. The site plan shows that the project would reconfigure the existing landscaped median on Puainako Street to construct a separate makai-bound left-turn lane into the project site, as well as a makai-bound receiving lane on Puainako Street for southbound vehicles turning left out of the project site. These improvements would help maintain traffic flow and maintain vehicle

throughput on Puainako Street. Additionally, the makai-bound receiving lane on Puainako Street would minimize delays at the project driveway as it would allow vehicles turning left out of the project driveway to only have to wait for gaps in one direction of traffic at a time. Lastly, the driveway throat at this location is approximately 75 to 100 feet long and eliminates the potential for on-site parking activity to affect driveway intersection operations.

The third driveway is on the makai side of the site on Railroad Avenue that would provide direct access to the light industrial/self-storage building. Similar to the other two project driveways, this driveway would be unsignalized with the project driveway approach as stop controlled and the Railroad Avenue movements as uncontrolled. For vehicles entering this driveway, drivers could either park in a stall adjacent to the building, or they could travel through the building in the mauka-bound direction and use the roundabout at the end of the roadway to circulate around and continue makai-bound to exit the site. Given the relatively low peak hour demand of the light industrial building use and the ample capacity on Railroad Avenue, the vehicle queues at the project driveway are anticipated to be minimal. Overall, the three project driveways are more than adequate to serve the project site demand, and no major operational issues are anticipated at any the site driveways.

The project will provide a minimum total of 253 right-angle parking spaces for Phases 1 & 2 of the project. As currently configured, all spaces are standard sized and the addition of compact spaces would increase the total supply. The number of parking spaces per use are as generally identified as follows (but sharing will be possible due to proximity of spaces):

- Community Center and Certified Kitchen – 80 spaces
- Retail shops – 29 spaces
- Light Industrial – 42 spaces
- Health & Wellness Complex – 102 spaces

The internal roadways would allow for two-way travel, except the roadway that transverses through the light industrial building, which would one-way in the mauka-bound direction. As shown in **Figure 4**, parking lots A and C each show dead end roadways and parking provided on both sides of the roadway. This parking configuration does not allow vehicles to easily circulate if parking spaces are not available. However, both dead-end aisles are not excessively long, and should not cause a substantive circulation problem. To ensure space availability for at least a few vehicles in Lot A in front of the retail shops, it is recommended that several of the spaces include a posted

time limit of 20 to 30 minutes. This will encourage turnover, increase space availability, and reduce re-circulation through the lot.

MULTIMODAL FACILITIES AND IMPACTS

The site plan shows a pedestrian walking path network across the site and providing linkages to sidewalks on the streets fronting the proposed development. At all locations where a walkway crosses an internal roadway with vehicle traffic, it is recommended that the crossing be enhanced with signage and a high visibility crosswalk or varied treatment to inform drivers of potential interaction with pedestrians and bicyclists. Overall, the pedestrian network is considered adequate to serve the development and provides reasonable and direct access to the various pedestrian trip generators on the site.

For bicycle travel, it is recommended that secured bicycle parking be provided on site to encourage visitors to bike to and from the site in lieu of driving. Bicycle racks for visitors and customers should be placed in visible locations and close to building entrances. More secure and separate facilities including gated areas could be provided for site employees whose bicycles would be stored for extended periods of time on a regular basis.

The project is not expected to affect existing or planned transit service and facilities. Patrons using the transit stop on Ohu'ohu Street will be able to cross the street using the existing signalized crosswalk and travel to and from the site. Once on the site, the pedestrian connections and crossing points are expected to provide sufficient walk access and will help to encourage the use of transit service.

Overall, the project is not expected to result in any significant impacts to the surrounding pedestrian, bicycle, and transit facilities. While the number of multimodal users in the area are expected to increase with the project, the existing and planned bicycle, pedestrian and transit infrastructure would provide sufficient capacity to accommodate the anticipated demand.

Figure 1

Project Site

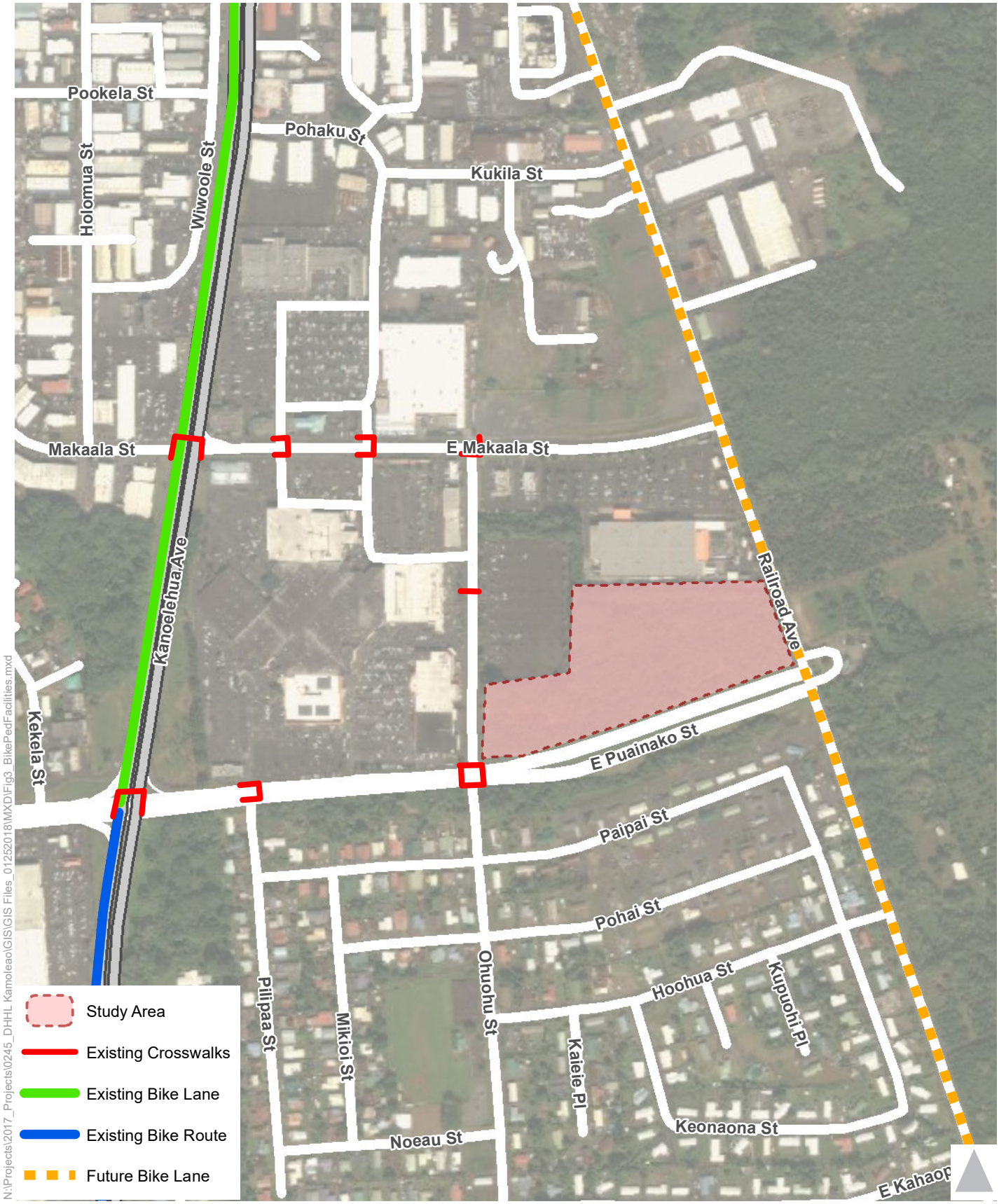


Figure 2

Bicycle and Pedestrian Facilities

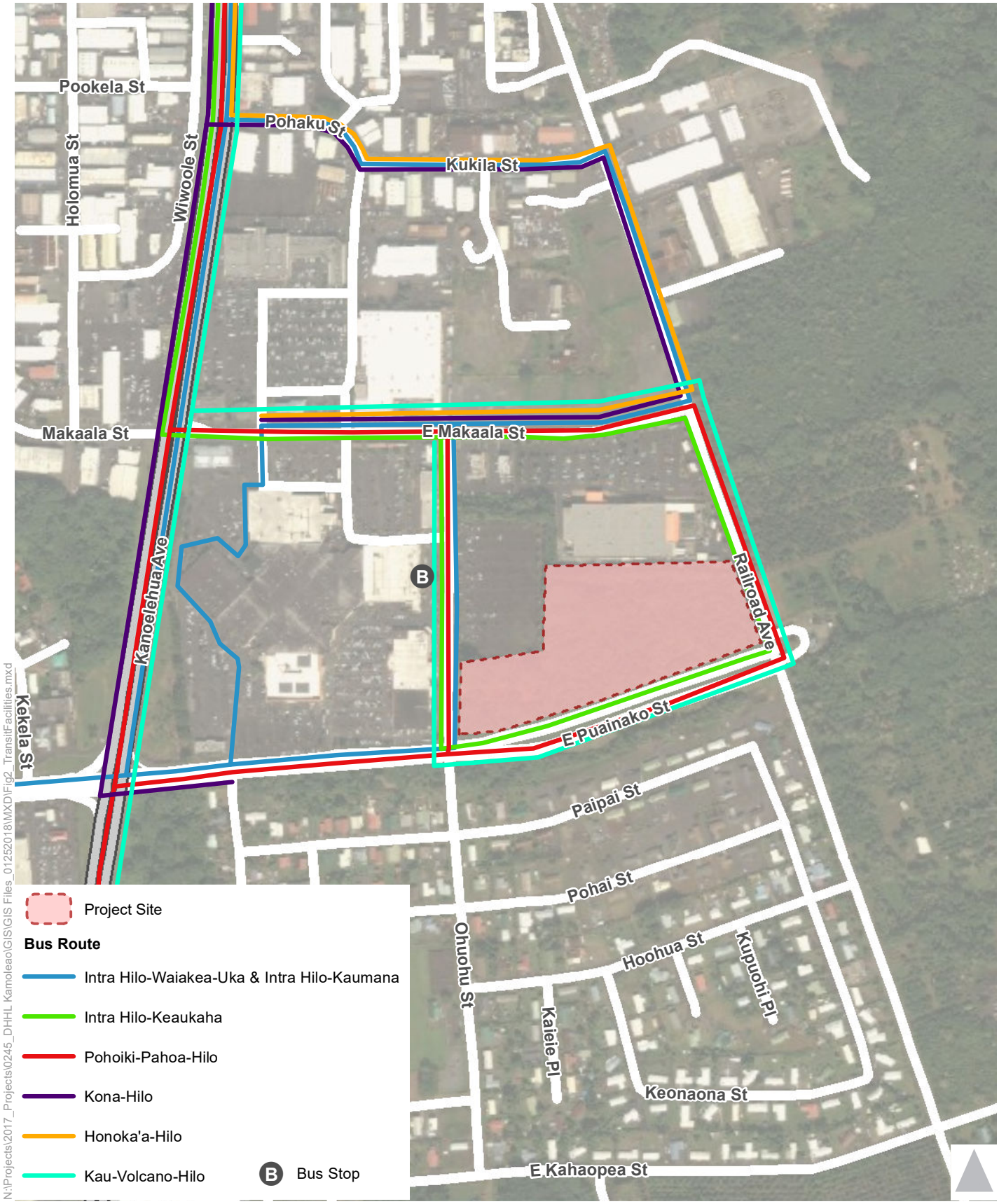


Figure 3

Existing Bus Transit Routes

Figure 4

Site Plan

APPENDIX F

Early Consultation Comments & Responses

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Agencies/Organizations/Individuals	Salutation	First	Last	Title	Jurisdiction	Pre-Consult. Solicitation	Pre-Consult. Comment (Date)
OEQC	Mr.	Scott	Glenn	Director	State of Hawai'i	12/13/2017	
STATE							
Department of Accounting and General Services	Mr.	Roderick	Becker	Comptroller	State of Hawai'i	12/13/2017	12/28/2017
Department of Agriculture	Mr.	Scott	Enright	Chairperson	State of Hawai'i	12/13/2017	
Department of Business, Economic Development & Tourism	Mr.	Luis	Salaveria	Director	State of Hawai'i	12/13/2017	
DBEDT - Hawaii State Energy Office	Ms.	Carilyn	Shon	Administrator	State of Hawai'i	12/13/2017	
DBEDT - Office of Planning	Mr.	Leo	Asuncion	Director	State of Hawai'i	12/13/2017	
Department of Defense - Engineering Office	Col	Neal	Mitsuyoshi	Chief Engineering Office	State of Hawai'i	12/13/2017	12/20/2017
Department of Education	Dr.	Christina	Kishimoto	Superintendent	State of Hawai'i	12/13/2017	
Department of Hawaiian Home Lands	Ms.	Jobie	Masagatani	Chairperson	State of Hawai'i	12/13/2017	
Department of Health	Dr.	Virginia	Pressler	Director	State of Hawai'i	12/13/2017	
Department of Health - Environmental Planning Office	Ms.	Laura	McIntyre	Program Manager	State of Hawai'i	12/13/2017	1/18/2018
Department of Human Services	Mr.	Pankaj	Bhanot	Director	State of Hawai'i	12/13/2017	1/12/2018
	Mr.	Scott	Nakasone	Assistant Division Administrator			
Department of Labor and Industrial Relations	Mr.	Leonard	Hoshijo	Deputy Director	State of Hawai'i	12/13/2017	
Department of Land and Natural Resources	Ms.	Suzanne	Case	Chairperson	State of Hawai'i	12/13/2017	1/22/2018
	Mr.	Russell Y.	Tsuji	Land Administrator			
DLNR - Historic Preservation Division	Mr.	Alan	Downer	Administrator	State of Hawai'i	12/13/2017	
Department of Transportation	Mr.	Jade	Butay	Interim Director	State of Hawai'i	12/13/2017	2/9/2018
Hawai'i Housing Finance and Development Corporation	Mr.	Craig	Hirai	Executive Director	State of Hawai'i	12/13/2017	
Office of Hawaiian Affairs	Dr.	Kamana'opono	Crabbe	Chief Executive Officer	State of Hawai'i	12/13/2017	
FEDERAL							
U.S. Army Corps of Engineers, Honolulu District	Mr.	Tunis W.	McElwain	Regulatory Branch Chie		12/13/2017	
U.S. Fish and Wildlife Service	Ms.	Robyn	Thorson	Regional Director		12/13/2017	1/8/2018
	Ms.	Michelle	Bogardus	Island Team Leader - Maui Nui and Hawaii Island			
U.S. Geological Survey - Hawaiian Volcano Observatory						12/13/2017	
Federal Emergency Management Agency	Mr.	Robert	Fenton, Jr.	Regional Administrator		12/13/2017	
COUNTY OF HAWAII							
Department of Environmental Management	Mr.	William	Kucharski	Director	County of Hawai'i	12/13/2017	1/18/2018
Mass Transit Agency	Ms.	Tiffany	Kai	Administrator	County of Hawai'i	12/13/2017	
Department of Parks and Recreation	Ms.	Roxcie	Waltjen	Interim Director	County of Hawai'i	12/13/2017	
Department of Public Works	Mr.	Allan	Simeon, P.E.	Deputy Director	County of Hawai'i	12/13/2017	1/22/2018
Department of Research and Development	Ms.	Diane	Ley	Director	County of Hawai'i	12/13/2017	
Department of Water Supply	Mr.	Keith	Okamoto	Manager-Chief Enginee	County of Hawai'i	12/13/2017	2/1/2018
Fire Department	Chief	Darren	Rosario	Fire Chief	County of Hawai'i	12/13/2017	
Office of Housing and Community Development	Mr.	Neil	Gyotoku	Administrator	County of Hawai'i	12/13/2017	
Planning Department	Mr.	Michael	Yee	Director	County of Hawai'i	12/13/2017	
Police Department	Chief	Paul	Ferreira	Police Chief	County of Hawai'i	12/13/2017	1/2/2018
	Mr.	Mitchell K.	Kanehailua, Jr.	Assistant Police Chief			
Office of the Mayor	Mr.	Roy	Takemoto	Executive Assistant	County of Hawai'i	12/13/2017	
ELECTED OFFICIALS							
State Senator	The Honorable	Kaialii	Kahele		Senate District 1	12/13/2017	
State Representative	Representative	Mark	Nakashima		House District 1	12/13/2017	

Agencies/Organizations/Individuals	Salutation	First	Last	Title	Jurisdiction	Pre-Consult. Solicitation	Pre-Consult. Comment (Date)
State Representative	Representative	Chris	Todd		House District 2	12/13/2017	
State Representative	Representative	Richard	Onishi		House District 3	12/13/2017	
County Council Member	Councilmember	Aaron	Chung		District 2	12/13/2017	
County Council Member	Councilmember	Susan	Lee Loy		District 3	12/13/2017	
UTILITIES							
Hawaii Electric Light Company	Mr.	Jay	Ignacio	President and CEO		12/13/2017	
Hawaiian Telcom	Ms.	Gina	Uyema	Sr. Manager - Network Development		12/13/2017	
Spectrum	Mr.	Bob	Barlow	President		12/13/2017	
CITIZEN GROUPS/INDIVIDUALS, CONSULTED PARTIES							
Keaukaha-Pana'ewa Farmers' Association	Ms.	Maile	Luuwai	President		12/13/2017	
Keaukaha Community Association	Mr.	Patrick	Kahawaiolaa	President		12/13/2017	
Pana'ewa Hawaiian Home Lands Community Association	Mr.	Bill	Brown			12/13/2017	
Hui Malama Ola Na Oiwi	Mr.	Louis	Hao	CEO		12/13/2017	
Lili'uokalani Trust	Ms.	LeeAnn	Crabbe	Vice President		12/13/2017	
Hilo Farmers' Market	Mr.	Keith	De La Cruz	President		12/13/2017	
UH Hilo	Ms.	Marcia	Sakai	Chancellor		12/15/2017	1/29/2018
	Ms.	Kalei	Rapoza	Interim Vice Chancellor for Administrative Affairs			
Alu Like						12/15/2017	

Harry Kim
Mayor

Wilfred M. Okabe
Managing Director

William A. Kucharski
Director

Diane A. Noda
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekūanāo'a Street, Suite 41 · Hilo, Hawai'i 96720
Ph: (808) 961-8083 · Fax: (808) 961-8086
cohdem@co.hawaii.hi.us
http://www.hawaiicounty.gov/environmental-management/

January 18, 2018

PBR Hawai'i & Associates, Inc.
Attn: Ann Bouslog, Project Director
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484

Re: Pre-Assessment Consultation for Project Kamoleao, Pana'ewa Homesteads, Waiākea, South Hilo, Hawai'i, TMK (3) 2-2-047:075

Dear Ms. Bouslog:

Pursuant to your December 13, 2017, letter requesting our input on the above project, the Department of Environmental Management, County of Hawai'i, does not at this time believe that the proposed project will have an impact on any of our existing or proposed projects, plans, policies or programs that should be considered when preparing the EA.

Sincerely,

William A. Kucharski
Director

WK:mef

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& ASSOCIATES, INC.

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MARC SHIMATSU, ASLA
Senior Associate

DACHENG DONG, LEED® AP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

May 25, 2018

Mr. William Kucharski
Director
County of Hawai'i
Department of Environmental Management
345 Kekuanaoa Street, Suite 14
Hilo HI 96720

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Kucharski,

Thank you for your Department's letter dated January 18, 2018, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the Department of Environmental Management for the County of Hawai'i does not believe the Project to impact the Department's existing or proposed projects, plans, policies, or programs as should need to be considered in this EA.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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Acting Director

Merrick H. Nishimoto
Acting Deputy Director

County of Hawai'i
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public_works@hawaiicounty.gov

JANUARY 22, 2018

ANN BOUSLOG
PROJECT DIRECTOR
PBR HAWAII & ASSOCIATES, INC.
1001 BISHOP STREET, SUITE 650
HONOLULU, HAWAII 96813-3484
(via email to sysadmin@pbrhawaii.com)

SUBJECT: PRE-ASSESSMENT CONSULATION FOR PROJECT KAMOLEAO, PANA`EWA HOMESTEADS, WAIAKEA, SOUTH HILO, HAWAII
TMK: (3) 2-2-047:075

We received the subject dated December 13, 2017 and have the following comments:

The subject parcels are in an area designated as Zone X on the Flood Insurance Rate Map (FIRM) by the Federal Emergency Management Agency (FEMA). Zone X is an area determined to be outside the 500-year floodplain.

All activities shall comply with the requirements of Hawaii County Code, Chapter 10, Erosion and Sedimentary Control.

Should there be any questions concerning this matter, please contact Ms. Robyn Matsumoto in our Engineering Division at (808) 961-8924.

BEN ISHII, Division Chief
Engineering Division

RM

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

PBR HAWAII
& ASSOCIATES, INC.

May 25, 2018

Mr. Ben Ishii, Division Chief
Engineering Division
County of Hawai'i
Department of Public Works
101 Pauahi Street, Suite 7
Hilo HI 96720-4224

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Ishii,

Thank you for your Department's letter dated January 22, 2018, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response.

We are aware that the Project parcels are located within Zone X of the FEMA Flood Insurance Rate Map (FIRM), an area determined to be outside of the 500-year floodplain. We also acknowledge that any Project activities must comply with Chapter 10 of the Hawaii County Code, Erosion and Sedimentary Control, as will be discussed in the EA.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Mr. Allen Simeon, Deputy Director

O:\JOB16\1684.86 DHHL Kamoleao Master Plan and EA\EA\Pre-Consultation\PBR Responses\Co DPW - Response ab.docx

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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 1, 2018

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

Dear Ms. Bouslog:

Subject: Pre-Environmental Assessment Consultation
Project Kamoleao
Pana'ewa Homesteads, Waiākea, South Hilo, Hawai'i
Tax Map Key (3) 2-2-047:075

This is in response to your Pre-Environmental Assessment Consultation letter of December 13, 2017.

Please be informed that there is an existing service lateral installed to the parcel capable of accommodating a 5/8-inch meter, which is limited to an average daily usage of 400 gallons. There are existing 8-inch, 12-inch and 18-inch waterlines along Ohuohu Street, Railroad Avenue and East Puainako Street, respectively, fronting the subject parcel.

The Department would request estimated maximum daily water usage calculations prepared by a professional engineer, licensed in the State of Hawai'i, for review. After review of the calculations, the Department will determine if additional water is available, a water commitment can be issued, the water commitment deposit amount, facilities charges due, water system improvements, and other conditions for final approval.

Please also be informed that any meter(s) serving the proposed project will require the installation of a reduced principle type backflow prevention assembly within five (5) feet of the meter on private property. The Department must inspect and approve the installation prior to commencement of water service.

Please also be informed that the existing waterlines fronting the parcel are adequate to provide the required 2,000 gallons per minute fire flow, as per the Department's Water System Standards for commercial or industrial land use applications.

Should there be any questions, please contact Mr. Ryan Quitoriano of our Water Resources and Planning Branch at 961-8070, extension 256.

Sincerely yours,

Keith K. Okamoto, P.E.
Manager-Chief Engineer

RQ:dfg

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

The Department of Water Supply is an Equal Opportunity provider and employer.

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& ASSOCIATES, INC.

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Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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May 25, 2018

Mr. Keith K. Okamoto, P.E.
Manager-Chief Engineer
County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo HI 96720

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Okamoto,

Thank you for your Department's letter dated February 1, 2018, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response.

We acknowledge the information provided regarding existing water service to the Project site and corresponding infrastructure. We also acknowledge that the existing water lines fronting the parcel are adequate to provide the required 2,000 gallons per minute fire flow per the Department's Water Systems Standards for commercial or industrial land use applications.

Estimated maximum daily water usage calculations for the Project prepared by a professional civil engineer, licensed in the State of Hawai'i, will be provided at the time of submittal of the civil construction plans for review and final approval by the Department of Water Supply (DWS). The water demand calculations shall be based on the anticipated building use information from the architect and fixture count from the mechanical engineer. Water demands and calculations will also be provided to the DLNR Engineering Division for inclusion in the State Water Projects Plan Update.

As it is anticipated the Project will exceed the existing water usage capacity of 400 gallons per day, it is likely that new installation of a water lateral, meter and meter box will be required, along with the installation of a reduced principle type backflow prevention assembly within five (5) feet of the meter on private property. However, the water demand calculations shall ultimately inform and support the sizing of water laterals, meters and other connections to the County water system. We acknowledge that DWS shall inspect and approve the installation of such before water service can commence. The Draft EA will include discussion regarding access to domestic water service for the proposed Project.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

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Harry Kim
Mayor

Paul K. Ferreira
Police Chief

Kenneth Bugado Jr.
Deputy Police Chief

County of Hawai`i
POLICE DEPARTMENT
349 Kapiolani Street • Hilo, Hawai'i 96720-3998
(808) 935-3311 • Fax (808) 961-8865

January 2, 2018

PBR Hawai'i & Associates, Inc.
Attention: Ann Bouslog
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

Dear Ms. Bouslog

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANAEWA HOMESTEADS, WAIAKEA, SOUTH HILO, HAWAII, TMK: (3) 2-2-047:075

Staff, upon reviewing the proposed project, 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 Gregory Esteban, S. Hilo District, at 961-2214.

Sincerely,

MITCHELL K. KANEHAILUA, JR.
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

GE:lli/171175

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

PBR HAWAII
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Principal

KIMI MIKAMI YUEN, LEED® AP BD+C
Principal

W. FRANK BRANDT, FASLA
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ANN MIKIKO BOUSLOG, PhD
Project Director

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MICAH McMILLEN, ASLA, LEED® AP
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NATHALIE RAZO
Associate

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Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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May 25, 2018

Chief Paul Ferreira
Police Chief
County of Hawai'i
Police Department
349 Kapi'olani Street
Hilo HI 96720-3998

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Chief Ferreira,

Thank you for your Department's letter dated January 2, 2018, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the County of Hawai'i Police Department does not anticipate any significant impact to traffic and/or public safety concerns as it relates to the proposed Project.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Mr. Mitchell K. Kanehailua, Jr., Assistant Police Chief

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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, Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2018-TA-0118

JAN 0 9 2018

Ms. Ann Bouslog
PBR Hawaii and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96913-384

Subject: Technical Assistance for Project Kamoleao, Panaewa Homesteads, Waiakea, South Hilo, Island and County of Hawaii

Dear Ms. Bouslog:

The U.S. Fish and Wildlife Service (Service) received your correspondence on December 18, 2017, requesting technical assistance for Project Kamoleao in Panaewa Homesteads in Waiakea, South Hilo, Hawaii, TMK: (3) 2-2-047:075. Project Kamoleao Community-Based Master Plan provides for a variety of desired uses and facilities to support the community vision, such as a community center, certified kitchen, health and wellness complex, office space, indoor/outdoor recreational and learning spaces, and other facilities to generate income and commercial benefits.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, five listed species that have the potential to either be in or fly through the vicinity of the project area: the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) and Hawaiian hawk (*Buteo solitarius*), Hawaiian petrel (*Pterodroma sandwichensis*), Band-rumped storm-petrel (*Oceanodroma castro*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*).

The Service offers the following comments to assist you in your planning process so that impacts to trust resources can be avoided through site preparation, construction, and operation. Our comments are provided under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

Avoidance and Minimization Measures

Hawaiian hoary bat
The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Additionally, Hawaiian

hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.
To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend you incorporate the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian hawk
The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the Island of Hawaii. 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 and minimize impacts to Hawaiian hawks we recommend you incorporate the following applicable measures into your project description:

- If work must be conducted during the March 1 through September 30 Hawaiian hawk breeding season, have a biologist familiar with the species conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities.
    - Pre-disturbance surveys for Hawaiian hawks are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, conduct another survey.
- No clearing of vegetation or construction activities within 1,600 feet of any active Hawaiian hawk nest during the breeding season until the young have fledged.
- Regardless of the time of year, no trimming or cutting trees containing a hawk nest, as nests may be re-used during consecutive breeding seasons.

Hawaiian petrel, Band-rumped storm-petrel, and Newell's shearwater
Hawaiian seabirds may traverse the project area at night during the breeding season (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.

- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Minimize Spread of Rapid Ohia Death
Rapid Ohia Death (ROD), a newly identified disease, has killed large numbers of mature ohia trees (*Metrosideros polymorpha*) in forests and residential areas of Hawaii Island. The disease is caused by a vascular wilt fungus (*Ceratocystis fimbriata*). Crowns of an affected tree turn yellowish or brown within days to weeks and dead leaves typically remain on branches for some time. All ages of ohia trees can be affected and can have symptoms of browning of branches or leaves. As of early 2017 the disease has been confirmed in all districts except North and South Kohala. Additional information on ROD can be found at:

http://www2.ctahr.hawaii.edu/forestry/downloads/ROD-trifold-03.2016.pdf and
http://www2.ctahr.hawaii.edu/forestry/disease/ohia_wilt.html.

The following avoidance and minimization measures should be followed for projects working in ohia forests or at sites with ohia trees on Hawaii Island:

1) A survey of the proposed project site should be conducted within two weeks prior to any tree cutting to determine if there are any infected ohia trees. If infected ohia are suspected at the site, the following agencies should be contacted for further guidance.
   a. Service – please contact the name at the bottom of this letter.
   b. Dr. J.B. Friday, University of Hawaii Cooperative Extension Service, 808-969-8254 or jbfriday@hawaii.edu
   c. Dr. Flint Hughes, USDA Forest Service, 808-854-2617, fhughes@fs.fed.us
   d. Dr. Lisa Keith, USDA Agriculture Research Service, 808-959-4357, Lisa.Keith@ars.usda.gov

2) Both prior to cutting ohia and after the project is complete:
   a. Tools used for cutting infected ohia trees should be cleaned with a 70 percent rubbing alcohol solution. A freshly prepared 10 percent solution of chlorine bleach and water can be used as long as tools are oiled afterwards, as chlorine bleach will corrode metal tools. Chainsaw blades should be brushed clean, sprayed with cleaning solution, and run briefly to lubricate the chain.
   b. Vehicles used off-road in infected forest areas should be thoroughly cleaned. The tires and undercarriage of the vehicle should be cleaned with detergent if they have travelled from an area with ROD or travelled off-road. Use a pressure washer with soap to clean all soil off of the tires and vehicle undercarriage.
   c. Shoes and clothing used in infected forests should also be cleaned. Shoes should be decontaminated by dipping the soles in 70 percent rubbing alcohol to kill the ROD fungus. Other gear can be sprayed with the same cleaning solutions. Clothing can be washed in hot water and detergent.
   d. Wood of affected ohia trees should not be transported to other areas of Hawaii Island or interisland. All cut wood should be left on-site to avoid spreading the disease. The pathogen may remain viable for over a year in dead wood. The Hawaii Department of Agriculture has passed a quarantine rule that prohibits interisland movement, except by permit, of all ohia plant or plant parts.

If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats, and defines measures to minimize and mitigate those adverse effects.

Thank you for participating with us in the protection of our endangered species. If you have any further questions or concerns, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-284-0037, e-mail: eldridge_naboa@fws.gov. When referring to this project, please include this reference number: ***01EPIF00-2018-TA-0118***.

Sincerely,

Michelle Bogardus
Island Team Leader
Maui Nui and Hawaii Island

PBR HAWAII
& ASSOCIATES, INC.

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Project Director

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MICAH McMILLEN, ASLA, LEED® AP
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NATHALIE RAZO
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Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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May 25, 2018

Ms. Robyn Thorson
Regional Director
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard, Room 50088
Honolulu HI 96850

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANAʻEWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAIʻI, TMK (3) 2-2-047:075

Dear Ms. Thorson,

Thank you for your agency's letter dated January 8, 2018 (Reference Number: 0IEPIF00-2018-TA-0118), regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Panaʻewa Hawaiian Home Lands Community Association (PHHLCA) and the Panaʻewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response.

We acknowledge your identification of five (5) listed species that have the potential to be located within or fly through the project area, including the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) and Hawaiian hawk (*Buteo solitarius*), Hawaiian petrel (*Pterodroma sandwichensis*), Band-rumped storm-petrel (*Oceanodroma castro*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*). We also acknowledge your comments regarding avoidance and minimization measures for the above listed species as well as for the minimization of spread of Rapid Ohia Death. These points will be incorporated in the EA regarding mitigation of potential impacts during site preparation, construction, and operation.

Although it is not anticipated, should it be determined that the Project may affect federally listed species, further consultation will be sought with your agency as early as possible in the planning process.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Ms. Michelle Bogardus, Island Team Leader, Maui Nui and Hawaii Island

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DAVID Y. IGE
GOVERNOR

RODERICK K. BECKER
Comptroller

AUDREY HIDANO
Deputy Comptroller

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

DEC 28 2017

(P)1391.7

Ms. Ann Bouslog, Project Director
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

Dear Ms. Bouslog:

Subject: Pre-Assessment Consultation for the
Project Kamoleao, Panaewa Homesteads, Waiakea
South Hilo, Hawaii
TMK: (3) 2-2-047:075

Thank you for the opportunity to comment on 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 you have any questions, your staff may contact Ms. Dora Choy of the Public Works Division at 586-0488.

Sincerely,

RODERICK K. BECKER
Comptroller

c: Mr. Cory Kaizuka, DAGS-HDO

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& ASSOCIATES, INC.

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ANN MIKIKO BOUSLOG, PhD
Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

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Senior Associate

DACHENG DONG, LEED® AP
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SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

May 25, 2018

Mr. Roderick Becker
Comptroller
State of Hawai‘i
Department of Accounting & General Services
Kalanimoku Building
1151 Punchbowl Street
Honolulu HI 96813

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Mr. Becker,

Thank you for your Department’s letter dated December 28, 2017 (Reference Number: (P)1391.7), regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that your Department has no comments concerning the Project at this time.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

DAVID Y. IGE
GOVERNOR

PANKAJ BHANOT
DIRECTOR

CATHY BETTS
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment and Support Services Division
1010 Richards Street, Suite 512
Honolulu, Hawai‘i 96813

January 12, 2018

Re: 17-0584

PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484
Attn: Ann Bouslog

Dear Ms. Bouslog:

SUBJECT: Pre-Assessment Consultation for Project Kamoleao, Pana‘ewa Homesteads, Waiakea, South Hilo, Hawaii, TMK (3) 2-2-047:075

This is in response to your letter dated December 13, 2017 requesting the Department of Human Services (DHS) review and comment on the above named project.

The DHS has reviewed the map of the proposed area for the Project Kamoleao. A check on DHS’ internal data system and Google Maps did not find any child care facilities that would be affected by this project.

If you should have any question regarding this matter, please contact Ms. Lisa Galino, Child Care Program Specialist at (808) 586-5712.

Sincerely,

Scott Nakasone
Assistant Division Administrator

c: Pankaj Bhanot, Director

AN EQUAL OPPORTUNITY AGENCY

PBR HAWAII
& ASSOCIATES, INC.

May 25, 2018

Mr. Pankaj Bhanot
Director
State of Hawai‘i
Department of Human Services
P O BOX 339
Honolulu HI 96809

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Mr. Bhanot,

Thank you for your Department’s letter dated January 12, 2018 (Reference Number: 17-0584), regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the Department of Human Services did not locate any childcare facilities that would be affected by the proposed Project.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Mr. Scott Nakasone, Assistant Division Administrator

THOMAS S. WITTEN, FASLA
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R. STAN DUNCAN, ASLA
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Project Director

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DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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

January 22, 2018

PBR Hawaii & Associates, Inc.
Attention: Ms. Ann Bouslog, Project Director
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

via email: abouslog@pbrhawaii.com

Dear Ms. Bouslog:

SUBJECT: Pre-Assessment Consultation for **Project Kamoleao** located at Waiakea, S. Hilo, Island of Hawaii; TMK: (3) 2-2-047:075

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 (a) Engineering Division, (b) Commission on Water Resource Management, and (c) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

'17 DEC 20 AM 11:49 ENGINEERING

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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

December 20, 2017

MEMORANDUM

RECEIVED LAND DIVISION 2010 JAN -3 PM 12:15 DEPT. OF LAND AND NATURAL RESOURCES STATE OF HAWAII

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__ Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FROM

TO

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for **Project Kamoleao**
LOCATION: Waiakea, S. Hilo, Island of Hawaii; TMK: (3) 2-2-047:075
APPLICANT: Department of Hawaiian Home Lands

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments by **January 18, 2018**

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 Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: _____

Print Name: Carty S. Chang, Chief Engineer
Date: 1/2/18

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Pre-Assessment Consultation for Project Kamoleao, Waiakea, S. Hilo, Island of Hawaii; TMK: (3) 2-2-047:075

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4846.

The applicant should include water demands and infrastructure required to meet project needs. Please note that the projects within State lands requiring water service from their local Department/Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

The applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update projections.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 1/2/18

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
COMMISSION ON WATER RESOURCE MANAGEMENT
2017 DEC 20 AM 11: 18

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2018 JAN 18 AM 11: 02
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

December 20, 2017

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__ Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FR:

TO:

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for **Project Kamoleao**
LOCATION: Waiakea, S. Hilo, Island of Hawaii; TMK: (3) 2-2-047:075
APPLICANT: Department of Hawaiian Home Lands

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments by **January 18, 2018**

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 Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(x) Comments are attached.

Signed: /s/ Jefffrey T. Pearson, P.E.

Print Name: Deputy Director
Date: January 16, 2018

cc: Central Files

FILE ID: RFD.4752.8
DOC ID: 19233 ✓

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON

WILLIAM D. BALFOUR, JR.
KAMANA BEAMER, PH.D.
MICHAEL G. BUCK
NEIL J. HANNAHS
PAUL J. MEYER
VIRGINIA PRESSLER, M.D.

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

January 16, 2018

REF: RFD.4752.8

TO: Mr. Russell Tsuji, Administrator
Land Division

FROM: Jeffrey T. Pearson, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Pre-Assessment Consultation for Project Kamoleao

FILE NO.: RFD.4752.8
TMK NO.: (3) 2-2-047:075

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://dlnr.hawaii.gov/cwrm.

Our comments related to water resources are checked off below.

[X] 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

[X] 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

[X] 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.

[X] 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/

[X] 6. We recommend the use of alternative water sources, wherever practicable.

[ ] 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/green-business-program.

[X] 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf.

- [ ] 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- [ ] 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.
- [ ] 11. A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.
- [ ] 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
- [ ] 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
- [ ] 14. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- [ ] 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.
- [ ] 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.
- [ ] 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- [X] 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

[X] OTHER: The DEA should discuss the projected water demands for the project, both potable and non-potable, and provide the calculations used to estimate demands. The DEA should identify the proposed water source(s) to support the project, any needed permits or approvals, and should include a discussion of the potential impacts on water resources, other public trust uses of water, and describe any proposed mitigation measures. Water conservation and efficiency measures to be implemented should also be discussed. The DEA should discuss the consistency of the project with the Hawaii Water Plan.

If you have any questions, please contact Lenore Ohye of the Commission staff at 587-0216.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

2017 DEC 26 A 11:23

RECEIVED
LAND DIVISION
HILO, HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 20, 2017

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__ Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

RECEIVED
LAND DIVISION
2018 JAN -8 AM 10:57
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for **Project Kamoleao**
LOCATION: Waiakea, S. Hilo, Island of Hawaii; TMK: (3) 2-2-047:075
APPLICANT: Department of Hawaiian Home Lands

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments by **January 18, 2018**

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 Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: [signature]

Print Name: GORDON C. HEIT
Date: 1/4/18

cc: Central Files

PBR HAWAII
& ASSOCIATES, INC.

May 25, 2018

Ms. Suzanne Case
Chairperson
State of Hawai‘i
Department of Land and Natural Resources
Kalanimoku Building
1151 Punchbowl Street
Honolulu HI 96813

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Ms. Case,

Thank you for your Department’s letter dated January 22, 2018, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response, organized below by department.

Engineering Division
We appreciate the information provided regarding the National Flood Insurance Program (NFIP) rules and regulations as well as available resources concerning the FEMA Flood Hazard Designation and local flood ordinances. This information will be incorporated in the EA.

In addition, we acknowledge your comments pertaining to water service. The civil engineer for the Project will submit a copy of the civil construction plans to the Department of Water Supply (DWS) Engineering Division for review and approval. A water demand calculation shall also be provided to the DWS at the time of this submittal. The water demand calculations shall be based on the anticipated building use information from the architect and fixture count from the mechanical engineer. The water demand calculation shall support the sizing of water laterals, meters and other connections to the County water system.. Water demands and calculations will also be provided to the DLNR Engineering Division for inclusion in the State Water Projects Plan Update.

Commission on Water Resource Management
We appreciate your comments and recommendations pertaining to water use, consultation, and design recommendations, including:

- Coordination with the Planning Department and/or Department of Water Supply, and the DLNR Engineering Division for incorporation in the county’s Water Use and Development Plan as well as the State Water Projects Plan;

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

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

KIMI MIKAMI YUEN, LEED® AP BD+C
Principal

W. FRANK BRANDT, FASLA
Chairman Emeritus

ANN MIKIKO BOUSLOG, PhD
Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

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Senior Associate

CATIE CULLISON, AICP
Senior Associate

MARC SHIMATSU, ASLA
Senior Associate

DACHENG DONG, LEED® AP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

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Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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- Use of water efficient fixtures and practices to reduce demand on fresh water resources, as well as information provided regarding LEED qualifications and applicable EPA resources;
- Incorporating BMPs for stormwater management;
- Use of alternative water sources, where practical;
- Adoption of BMPs for landscape irrigation conservation as endorsed by the Landscape Industry Council of Hawaii;
- Identification of the Project’s water source for identifying the necessary permits or petitions, as well as the potential impact to water resources;
- Discussion of the projected water demands (potable and nonpotable) in addition to discussions of any other required permits or approvals, potential impacts to water resources, mitigation measures, other public trust uses of water, water conservation and efficiency measures, and the Project’s consistency with the Hawaii Water Plan.

Your comments and recommendations will be addressed in the EA where applicable.

Land Division – Hawaii District
We acknowledge that the Land Division has no comments to offer on the proposed project.

We value your participation in the environmental review process. Your letter and the attached comments from the three Divisions noted above will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Mr. Russell Y. Tsuji, Land Administrator

DAVID Y. IGE
GOVERNOR

ARTHUR J. LOGAN
MAJOR GENERAL
ADJUTANT GENERAL

KENNETH S. HARA
BRIGADIER GENERAL
DEPUTY ADJUTANT GENERAL

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

December 20, 2017

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

Dear Ms. Bouslog:

Subject: Pre-Assessment Consultation for Project Kamoleao, Pana'ewa Homesteads, Waiakea, South Hilo, Hawai'i TMK (3) 2-2-047:075

Thank you for the opportunity to comment on the above project. The State of Hawaii Department of Defense has no comments to offer relative to the proposed project.

Should you have any questions or concerns, please have your staff contact Ms. Shao Yu Lee, our Land Manager on Oahu, at (808) 733-4222.

Sincerely,

NEAL S. MITSUYOSHI, P.E.
Colonel, Hawaii National Guard
Chief Engineering Officer

c: Ms. Havinne Okamura, HI-EMA
Mr. Albert Chong, HI-EMA
Mr. Karl Motoyama, Hawaii Army National Guard Environmental (HIARNG-ENV)
Maj Nhut Dao, 154th Civil Engineer Squadron (154th CES)

PBR HAWAII
& ASSOCIATES, INC.

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Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

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

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TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C
Principal

W. FRANK BRANDT, FASLA
Chairman Emeritus

ANN MIKIKO BOUSLOG, PhD
Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

RAYMOND T. HIGA, ASLA
Senior Associate

CATIE CULLISON, AICP
Senior Associate

MARC SHIMATSU, ASLA
Senior Associate

DACHENG DONG, LEED® AP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

May 25, 2018

Col. Neal Mitsuyoshi, P.E.
Colonel, Hawaii National Guard
Chief Engineering Officer
State of Hawai'i
Department of Defense
3949 Diamond Head Road
Honolulu HI 96816-4495

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Col. Mitsuyoshi,

Thank you for your Department's letter dated December 20, 2017, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that you have no comments concerning the Project.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

O:\JOB16\1684.86 DHHL Kamoleao Master Plan and EA\EA\Pre-Consultation\PBR Responses\State DOD - Response.docx

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DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
INTERIM DIRECTOR

Deputy Directors
ROY CATALANI
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 8.2313

February 9, 2018

Ms. Ann Bouslog
Project Director
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Bouslog:

Subject: Project Kamoleao, Panaewa Homesteads
Pre-Assessment Consultation
Waiakea, South Hilo, Hawaii
TMK: (3) 2-2-047: 075

The Department of Hawaiian Home Lands (DHHL) 12.77-acre master planned proposed project will provide a variety of uses and facilities such as: community center, certified kitchen, health & wellness complex, office space, indoor/outdoor recreational & learning spaces and other commercial & income producing facilities. The project is located approximately 5,400 linear feet from the end of Runway 3 at Hilo International Airport and is bordered by Puainako Street, Ohuohu Street and Railroad Avenue.

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

Airports Division (DOT-AIR)

1. Every proposed development within five miles from a state airport is subject to the State of Hawaii, Office of Planning, Technical Assistance Memorandum (TAM): http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports 08-01-2016.pdf.

2. A Federal Aviation Administration (FAA) Form 7460-1 is required for the construction of new buildings, erection of temporary facilities including cranes, lifts, etc., and installation of radio transmission towers or similar broadcast facilities. This form and criteria for submittal can be found at the following website: https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

3. The FAA and the Department of Transportation, Airports Division (DOT-AIR) are always concerned about developments that can potentially attract wildlife. The FAA Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, prohibits any development that can attract wildlife within five miles from the airport.

4. If the proposed development includes photovoltaic (PV) panels, a glint and glare analysis must be submitted for FAA review. The following website may assist you with preparation of a glint and glare analysis: www.sandia.gov/glare.

   PV system installations have also been known to emit radio frequency interference (RFI) to aviation-dedicated radio signals, disrupting the reliability of air-to-ground communications. The responsible PV system owner must ensure that the PV installation will not create any RFI with the aviation communication frequency.

Highways Division (DOT-HWY)

1. A Traffic Impact Analysis Report (TIAR) should be prepared and submitted to the Hawaii Department of Transportation for review and acceptance.

2. The TIAR analysis should include the Puainako Street and Kanoelehua Avenue intersection.

3. The TIAR should also reflect signal timing plans and other operational improvements DOT is developing for Kanoelehua Avenue.

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

Sincerely,

JADE T. BUTAY
Interim Director of Transportation

EKT:cc

bc: AIR-EP, HWY-P, STP (17-142)

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

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

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

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Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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May 25, 2018

Mr. Jade T. Butay
Interim Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu HI 96813-5097

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Butay,

Thank you for your Department's letter dated February 9, 2018 (Reference Number: STP 8.2313), regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your Airports' Division and Highways Division's comments about the project and provide the following response.

Airports Division (DOT-AIR)

Thank you for your referral to the State Office of Planning, Technical Assistance Memorandum (TAM): http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports_08-01-2016.pdf) regarding development within five miles of a state airport and to the Federal Aviation Administration (FAA) Form 7460-1 regarding construction of various facilities. We also acknowledge the FAA and DOT-AIR concerns about the attraction of wildlife within five miles of airports, and the FAA Advisory Circular 150/5200-33B on this topic. Additionally, we acknowledge the concerns for glint and glare and radio frequency interference that could result from installation of photovoltaic (PV) panels.

Highways Division (DOT-HWY)

In response to DOT-HWY comments, the Draft EA will include a Transportation Assessment (TA). The TA will address the Puainako Street and Kanoelehua Avenue intersection, signal timing plans and other operational improvements that DOT is developing for Kanoelehua Avenue.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

O:\JOB16\1684.86 DHHL Kamoleao Master Plan and EA\EA\Pre-Consultation\PBR Responses\State DOT - Response ab_acrev_vs 2.docx

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:
EPO 17-328

January 18, 2018

Ms. Ann Bouslog
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484
Email: sysadmin@pbrhawaii.com

Dear Ms. Bouslog:

SUBJECT: Pre-Assessment Consultation (PAC) for Project Kamoleao, Panaewa Homesteads, Waiakea, South Hilo, Hawaii
TMK: (3) 2-2-047:075

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PAC to our office on December 21, 2017.

We understand from the PAC that *"The Project Kamoleao Community-Based Master Plan provides for a variety of desired uses and facilities to support the community vision, such as a Community Center, Certified Kitchen, Health and Wellness Complex, office space, indoor/outdoor recreational and learning spaces, and other facilities."*

Hawaii's environmental review laws require Environmental Assessments (EAs) and Environmental Impact Statements (EISs) to consider health in the discussion and the mitigation measures to reduce negative impacts. In its definition of 'impacts,' §11-200-2, Hawaii Administrative Rules (HAR) includes health effects, whether primary (direct), secondary (indirect), or cumulative. Further, §11-200-12(b)(5), HAR, lists public health as one of the criteria for determining whether an action may have a significant impact on the environment.

We advocate that you consider health from a broad perspective; one that accounts for the social, economic, and environmental determinants of health and wellbeing. Community well-being can be impacted by access to physical activity, health care, feelings of social connectedness and safety. Design solutions that take these factors into consideration positively contribute to the social determinants of health in a community, improving the well-being of those who live there by influencing health promoting behaviors. Social determinants contribute to preventable chronic diseases such as asthma, diabetes, obesity, and cardiovascular disease.

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance. State standard comments to support sustainable healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments. If you haven't already, EPO recommends that you view the free, on-demand, six part Plan4Health webinar series available on the American Planning Association website at: https://www.planning.org/nationalcenters/health/planners4health

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site 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.

Please note that all wastewater plans must conform to applicable provisions (HAR, Chapter 11-62, "Wastewater Systems"). We reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please review online guidance at: http://health.hawaii.gov/wastewater and contact the Planning and Design Section of the Wastewater Branch (WWB) at (808) 586-4294.

Any waste generated by the project (that is not a hazardous waste as defined in state hazardous waste laws and regulations), needs to be disposed of at a solid waste management facility that complies with the applicable provisions (HAR, Chapter 11-58.1 "Solid Waste Management Control"). The open burning of any of these wastes, on or off site, is strictly prohibited. You may wish you review the Minimizing Construction & Demolition Waste Management Guide at: http://health.hawaii.gov/shwb/files/2016/05/constdem16.pdf Additional information is accessible at: http://health.hawaii.gov/shwb. For specific questions call (808) 586-4226.

The Hawaii Disability and Communication Access Board (DCAB) recommends the inclusion of access for persons with disabilities through all phases of design and construction. New construction and alteration work shall comply with all applicable accessibility requirements. Projects covered by §103-50, Hawaii Revised Statutes, and HAR Title 11 Chapter 216 shall seek advice and recommendations from DCAB on any construction plans prior to commencing with construction. If you have any questions please contact DCAB at (808) 586-8121 or dcab@doh.hawaii.gov.

You may also wish to review the draft Office of Environmental Quality Control (OEQC) viewer at: http://eha-web.doh.hawaii.gov/oeqc-viewer. This viewer geographically shows where some previous Hawaii Environmental Policy Act (HEPA) {Hawaii Revised Statutes, Chapter 343} documents have been prepared.

To better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed an environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We hope this information is helpful. If you have any questions please contact us at DOH.epo@doh.hawaii.gov or call us at (808) 586-4337. Thank you for the opportunity to comment.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office

LM:nn

Attachment 1: Office of Environmental Quality Control (OEQC) viewer (of some past EA's, EIS's in area)
Attachment 2: U.S. EPA EJSCREEN Report for Project Area

c: DOH: DHO HI, WWB, PHP {via email only}

Attachment 1: Office of Environmental Quality Control (OEQC) viewer (of some past EA's, EIS's in area)

Attachment 2: U.S. EPA EJSCREEN Report for Project Area

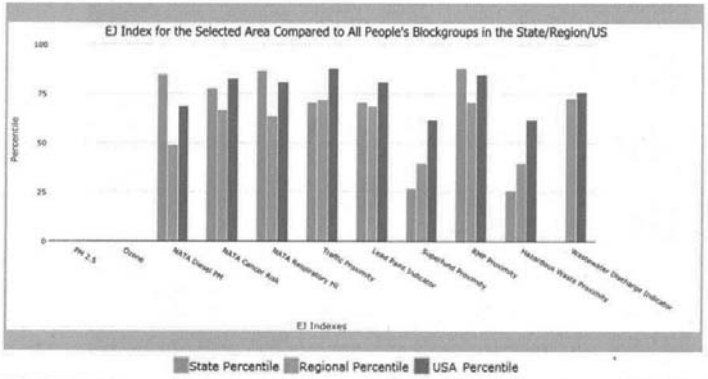
EJSCREEN Report (Version 2017)

1 mile Ring Centered at 19.696992,-155.058874, HAWAII, EPA Region 9

Approximate Population: 3,393

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	85	49	69
EJ Index for NATA* Air Toxics Cancer Risk	78	67	83
EJ Index for NATA* Respiratory Hazard Index	87	64	81
EJ Index for Traffic Proximity and Volume	71	72	88
EJ Index for Lead Paint Indicator	71	69	81
EJ Index for Superfund Proximity	27	40	62
EJ Index for RMP Proximity	88	71	85
EJ Index for Hazardous Waste Proximity	26	40	62
EJ Index for Wastewater Discharge Indicator	N/A	73	76



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2017)

1 mile Ring Centered at 19.696992,-155.058874, HAWAII, EPA Region 9

Approximate Population: 3,393

Input Area (sq. miles): 3.14

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EPA United States Environmental Protection Agency

EJSCREEN Report (Version 2017)

1 mile Ring Centered at 19.696992,-155.058874, HAWAII, EPA Region 9

Approximate Population: 3,393

Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	N/A	N/A	N/A	9.9	N/A	9.14	N/A
Ozone (ppb)	N/A	N/A	N/A	41.8	N/A	38.4	N/A
NATA* Diesel PM (µg/m³)	0.207	0.149	79	0.978	<50th	0.938	<50th
NATA* Cancer Risk (lifetime risk per million)	33	34	60	43	<50th	40	<50th
NATA* Respiratory Hazard Index	1.3	1	79	2	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	350	1000	60	1100	53	590	72
Lead Paint Indicator (% Pre-1960 Housing)	0.18	0.16	64	0.24	55	0.29	48
Superfund Proximity (site count/km distance)	0.0028	0.1	3	0.15	0	0.13	0
RMP Proximity (facility count/km distance)	0.67	0.39	84	0.98	59	0.73	67
Hazardous Waste Proximity (facility count/km distance)	0.0028	0.1	3	0.12	0	0.093	0
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0	0.04	N/A	13	59	30	40
Demographic Indicators							
Demographic Index	62%	51%	81	47%	71	36%	83
Minority Population	90%	77%	68	59%	82	38%	90
Low Income Population	34%	26%	73	36%	52	34%	55
Linguistically Isolated Population	4%	6%	58	9%	43	5%	69
Population With Less Than High School Education	11%	9%	72	17%	45	13%	53
Population Under 5 years of age	5%	6%	38	7%	37	6%	40
Population over 64 years of age	22%	16%	79	13%	86	14%	84

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

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May 25, 2018

Ms. Laura Leialoha Phillips McIntyre
Program Manager
State of Hawai'i
Environmental Planning Office
P.O. Box 3378
Honolulu HI 96801-3378

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Ms. McIntyre,

Thank you for your Office's letter dated January 18, 2018 (Reference Number: EPO 17-328), regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response.

We understand the need for regular review of State and Federal environmental health land use guide and acknowledge the resources for sustainable design through the Environmental Planning Office's website as well as the webinar series available through the American Planning Association website. We also acknowledge the resources available through the Hawaii Environmental Health Portal and additional links to various sources of state environmental data. The Draft EA will include any relevant information from the above mentioned sources.

We acknowledge that the project must conform to applicable provisions set forth in Chapter 11-62, HAR ("Wastewater Systems") and that the Department of Health (DOH) reserves the right to review detailed wastewater plans. We also acknowledge that the disposal of non-hazardous solid waste must conform to applicable provisions under Chapter 11-58.1, HAR ("Solid Waste Management Control") and that the burning of any such waste on- or off-site is strictly prohibited. The Draft EA will include further discussion of wastewater and solid waste management as they pertain to the Project.

Every effort will be made to provide access to persons with disabilities, where necessary, throughout all phases of design and construction, as recommended by the Hawaii Disability and Communication Access Board (DCAB). The Project will comply with all applicable accessibility requirements for new development and will seek further consultation with DCAB should it be necessary.

Ms. Laura McIntyre
SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075
5/25/18

We acknowledge the additional resources available including the Office of Environmental Quality Control's (OEQC) environmental document viewer as well as the U.S. Environmental Protection Agency (EPA) online EJSCREEN tool. The Draft EA will include any relevant information from these sources.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

UNIVERSITY of HAWAI'I
HILO

January 29, 2018

PBR HAWAII & Associates, Inc.
Attn: Ann Bouslog
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIAKEA, SOUTH HILO, HAWAI'I TMK (3) 2-2-047:075

Aloha,

The University of Hawai'i at Hilo has reviewed the map area for your Project Kamoleao, and finds that at this time there is no impact on any of our existing or proposed projects, plans, policies, or programs.

Sincerely,

Kalei Rapoza
Interim Vice Chancellor for Administrative Affairs

ADMINISTRATION *Administrative Affairs*
200 W. Kawili St. Hilo, HI 96720-4091 • Phone (808) 932-7650 • Fax: (808) 932-7338 • www.hilo.hawaii.edu
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May 25, 2018

Ms. Marcia Sakai
Chancellor
University of Hawai‘i, Hilo
200 W. Kawili Street
Hilo HI 96720

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Ms. Sakai,

Thank you for your organization’s letter dated January 29, 2018, regarding the pre-assessment consultation for Project Kamoleao Draft Environmental Assessment (EA).

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the University of Hawai‘i at Hilo finds the Project to have no impact on existing or proposed projects, plans, policies, or programs at this time.

We value your participation in the environmental review process. Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Ms. Kalei Rapoza, Interim Vice Chancellor for Administrative Affairs

O:\JOB16\1684.86 DHHL Kamoleao Master Plan and EA\EA\Pre-Consultation\PBR Responses\UH Hilo - Response.docx

APPENDIX G

DEA Comments & Responses

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U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

June 20, 2018

Ann Bouslog, Project Director
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Ms. Bouslog:

This is in response to your request for comments regarding a Draft Environmental Assessment (EA), - Project known as Kamoleao.

Please review the current effective countywide Flood Insurance Rate Maps (FIRMs) for the County of Hawaii (Community Number 155166), Maps revised September 29, 2017. Please note that the Hawaii County, Hawaii is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The Hawaii County floodplain manager can be reached by calling /Bryce Harada, Floodplain Administrator, at (808) 961-8042.

If you have any questions or concerns, please do not hesitate to call Sarah Owen of the Mitigation staff at (510) 627-7050.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Bryce Harada, Floodplain, Hawaii County
Carol Tyau-Beam, State NFIP Coordinator, Hawaii Department of Land & Natural Resources
Sarah Owen, NFIP Planner, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

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September 26, 2018

Mr. Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch
U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Blackburn,

Thank you for your agency's letter dated June 20, 2018, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao. PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response.

Thank you for noting that the current effective countywide Flood Insurance Rate Maps (FIRMs) for the County of Hawaii were revised in fall 2017. We have updated the sources used in Appendix A, Figure 15 and a new figure reflecting the updated information will be included in the Final EA. We also acknowledge that Hawaii County is a participant in the National Flood Insurance Program (NFIP) and that minimum NFIP floodplain management building requirements are set forth as you reference. Project Kamoleao is located in Flood Zone X as delineated on the FIRM, an area classified as having less than a 0.2 percent annual flood likelihood and thus not subject to the NFIP minimum building requirements cited in your letter.

Notwithstanding the above, we also acknowledge your comment that many NFIP participating communities have adopted floodplain management building requirements that may exceed the minimum federal standards. Therefore, as you requested, the project's civil engineer has consulted with Bryce Harada, Hawaii County Floodplain Administrator, and confirmed that there are no special local building requirements associated with this site attributable to its floodplain status and/or FIRM designation.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

DAVID Y. IGE
GOVERNOR

PANKAJ BHANOT
DIRECTOR

CATHY BETTS
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment and Support Services Division
1010 Richards Street, Suite 512
Honolulu, Hawai'i 96813

June 19, 2018

PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813
ATTN: Ann Bouslog, Project Director

Dear Ms. Bouslog:

SUBJECT: DHHL Project Kamoleao: Tax Map Key: (3) 2-2-047:075

This is in response to your letter dated June 7, 2018 requesting the Department of Human Services (DHS) review and comment on the above named project.

The DHS has reviewed the map of the proposed area for the Project Kamoleao and has no comment at this time.

If you should have any question regarding this matter, please contact Ms. Lisa Galino, Child Care Program Specialist at (808) 586-5712.

Sincerely,

Scott Nakasone
Assistant Division Administrator

C: Pankaj Bhanot, Director

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SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

September 26, 2018

Mr. Pankaj Bhanot
Director
State of Hawai‘i
Department of Human Services
P O BOX 339
Honolulu HI 96809

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Mr. Bhanot,

Thank you for your Department’s letter dated June 19, 2018, regarding Draft Environmental Assessment (Draft EA) for Project Kamoleao.

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the Department of Human Services has reviewed the map of the proposed area for Project Kamoleao and has no comment at this time.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

CC: Mr. Scott Nakasone, Assistant Division Administrator

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DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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

July 6, 2018

PBR Hawaii & Associates, Inc.
Attention: Ms. Ann Bouslog, Project Director
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

via email: abouslog@pbrhawaii.com

Dear Ms. Bouslog:

SUBJECT: Draft Environmental Assessment for Project Kamoleao located at Waiakea, South Hilo, Island of Hawaii; TMK: (3) 2-2-047:075

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 (a) Engineering Division and (b) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

for Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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

'18 JUN 12 PM 1:24 RECEIVED ENGINEERING LAND DIVISION

2018 JUN 29 AM 10:44 DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

June 12, 2018

MEMORANDUM

TO: FROM

DLNR Agencies:
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

TO

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for **Project Kamoleao**
LOCATION: Waiakea, South Hilo, Island of Hawaii; TMK: (3) 2-2-047:075
APPLICANT: PBR Hawaii & Associates, Inc. on behalf of Pana'ewa Hawaiian Home Lands Community Association / Pana'ewa Community Alliance

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **July 5, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

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 Darlene Nakamura at 587-0417. Thank you.

Attachments

( ) We have no objections.
(✓) We have no additional comments.
( ) Comments are attached.

Signed: [signature]

Print Name: Carty S. Chang, Chief Engineer

Date: 6/27/18

cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION
2018 JUN 21 AM 10: 55
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

SUZANNE D. CASE
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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

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2018 JUN 13 P 2: 56
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HILO, HAWAII

June 12, 2018

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for **Project Kamoleao**
LOCATION: Waiakea, South Hilo, Island of Hawaii; TMK: (3) 2-2-047:075
APPLICANT: PBR Hawaii & Associates, Inc. on behalf of Pana'ewa Hawaiian Home Lands Community Association / Pana'ewa Community Alliance

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **July 5, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

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 Darlene Nakamura at 587-0417. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____

Print Name: GORDON C. HEU

Date: 6/19/18

cc: Central Files

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Project Director

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Cultural Sustainability Planner

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MICAH McMILLEN, ASLA, LEED® AP
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NATHALIE RAZO
Associate

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Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

printed on recycled paper

September 26, 2018

Mr. Russell Y. Tsuji, Land Administrator
Land Division
State of Hawai‘i
Department of Land and Natural Resources
Kalanimoku Building
1151 Punchbowl Street
Honolulu HI 96813

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Mr. Tsuji,

Thank you for your Department’s letter dated July 6, 2018, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project, organized below by department.

Engineering Division - We acknowledge that the Engineering Division has no additional comments.

Land Division – Hawaii District - We acknowledge that the Land Division has no comments on the proposed project.

We value your participation in the environmental review process. Your letter and the attached comments from the two Divisions noted above will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

DTS201806291430NA

June 2, 2018

Ms. Ann Bouslog
Project Director
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Ms. Bouslog:

Subject: Draft Environmental Assessment for Project Kamoleao, Waiakea, South Hilo, Hawaii
TMK: (3) 2-6-0211-013: 007 (por.)

Thank you for the opportunity to provide comments for the Draft Environmental Assessment (Draft EA) on the Project Kamoleao Community-Based Master Plan (Project Kamoleao). The Draft EA review material was sent to our office by letter, dated June 7, 2018.

It is our understanding that by means of a license agreement with the Panaewa Hawaiian Home Lands Community Association/Panaewa Community Alliance and the Department of Hawaiian Home Lands, a site in South Hilo, Hawaii Island has been earmarked for community development for the Panaewa Homestead community.

Proposed activities for Project Kamoleao include a variety of land uses such as retail shops and light industrial ventures; the construction of facilities to support community needs, such as a community center, a certified kitchen, and a health and wellness complex; office space; indoor/outdoor recreational areas; and related commercial initiatives to support the economic needs of the Panaewa Homestead Community.

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

1. OP acknowledges that the Draft EA provides a satisfactory analysis on the following issues:

    a. <u>Soils</u>
    Section 3.3, pages 13-15 examine soils. Page 14 states: Short-term impacts may include the potential for soil erosion and the generation of dust during grading and construction. Any grading will be in conformance with the Hawaii County Grading Ordinance, and recommendations of the geotechnical engineer.

b. Hydrology and Drainage
Section 3.4, pages 15-17 examine Hydrology and Drainage. Pages 15-17 lists mitigation measures that will be used for this project. The Project Kamoleao storm drainage system, utilizing drywells, retention ponds, or other storm drainage structures will be designed to comply with the latest County of Hawaii Storm Drainage Standards and Standard Details for Public Works Construction. Project Kamoleao will be designed to maintain post-development peak runoff rate and average volume at levels that are similar to pre-development levels, as per County of Hawaii standards.

Mitigation measures and best management practices (BMPs) listed in this guide can be applied to water runoff strategies to prevent damage to coastal ecosystems. Based on Kamoleao 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.

c. Drainage Systems / Low Impact Development (LID) Measures
Section 4.7, pages 35-36 provides an examination of Drainage Systems. Mitigation Measures listed on page 36 include the following analysis:

Grading of each phase would establish surface runoff to flow away from buildings and direct them to new on-site drainage structures. The drainage system for each phase shall consist of grated inlets and drainage drywells to mitigate runoff increases due to the development of the site. It is recommended that the building downspouts be connected (underground) to the drainage system. Additionally, some drywells may be interconnected to more efficiently distribute storm water for mitigation.

d. Hawaii Coastal Zone Management (CZM) Program
Section 5.1, pages 41-46 examine the objectives and policies of the Hawaii CZM Program as listed in Hawaii Revised Statutes (HRS) § 205A-2.

e. Hawaii State Planning Act, Parts I and III
Table 5.2, pages 47-71 provides an adequate analysis, in tabular form, of the project's adherence to Part I – Goals, Objectives, and Policies of the Hawaii State Planning Act, HRS Chapter 226. Pages 71-82 of the Draft EA provides analysis for the project's consistency with Part III – Priority Guidelines of the Hawaii State Planning Act.

2. Hawaii State Planning Act, Part II - Planning Coordination and Implementation
The Draft EA does not contain analysis on the project's alignment with any State Functional Plans (Part II of the Hawaii State Planning Act). If the project aligns with any of State plans or initiatives, please include this in the Final Environmental Assessment (Final EA). If this project is in conflict with any State plans, projects, or initiatives, please provide analysis on how the project will reconcile these inconsistencies. If, however, State Functional Plans are not applicable, please indicate this in the Final EA.

We have no further comments on this matter. If you have any questions regarding this comment letter, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

Leo R. Asuncion
Director

PBR HAWAII
& ASSOCIATES, INC.

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ANN MIKIKO BOUSLOG, PhD
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Cultural Sustainability Planner

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Senior Associate

MARC SHIMATSU, ASLA
Senior Associate

DACHENG DONG, LEED® AP
Senior Associate

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MICAH McMILLEN, ASLA, LEED® AP
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NATHALIE RAZO
Associate

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Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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September 26, 2018

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

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Asuncion,

Thank you for your agency's letter dated July 2, 2018 (reference DTS201806291430NA), regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao.

PBR HAWAII was contracted by the Department of Hawaiian Homelands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we note that the Office of Planning has reviewed the DEA and acknowledges that it provides a satisfactory analysis on the issues of soils, hydrology and drainage, drainage systems and Low Impact Development (LID) measures, the Hawaii Coastal Zone Management (CZM) Program, and the Hawai'i State Planning Act, Parts I and III.

We also acknowledge your comment that the DEA does not contain analysis on the project's alignment with State Functional Plans (Part II of the Hawai'i State Planning Act.) To address this concern, we have developed an analysis of Project Kamoleao's alignment with State Functional Plans, projects or initiatives, and how it will reconcile inconsistencies, if any. This new section will be incorporated into the Final EA.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

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

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JUL 03 2018
PBR HAWAII

June 28, 2018

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

Dear Ms. Bouslog:

Subject: Draft-Environmental Assessment
Project Kamoleao
Pana'ewa Homesteads, Waiākea, South Hilo, Hawai'i
Tax Map Key (3) 2-2-047:075

We have reviewed the subject Draft Environmental Assessment and have the following comments.

The Department understands that the project will be constructed in phases and the proposed water service will be from one (1) meter. In order to allow one meter to serve all phases of the project, the water demand calculations will have to include the entire project's anticipated water demand. It would also be possible to meter each phase separately. Prior to granting water service, the total facilities charge for the entire project will need to be paid.

Should there be any questions, please contact Mr. Ryan Quitoriano of our Water Resources and Planning Branch at 961-8070, extension 256.

Sincerely yours,

Keith K. Okamoto, P.E.
Manager-Chief Engineer

RQ:dfg

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MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

September 26, 2018

Mr. Keith K. Okamoto, P.E.
Manager-Chief Engineer
County of Hawai‘i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo HI 96720

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Mr. Okamoto,

Thank you for your Department’s letter dated June 28, 2018, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao.

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments about the project and provide the following response.

Estimated water usage calculations for the Project prepared by a civil engineer, licensed in the State of Hawai‘i, will be provided at the time of submittal of the civil construction plans for review and final approval by the Department of Water Supply. We acknowledge your comment that it may be preferable to meter each phase of Project Kamoleao separately, rather than all with one meter, so that water demand calculations need not anticipate all demands to project buildout. We also understand that if the project is served by one meter only, the total facilities charge for the project will need to be paid prior to granting water service.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Mr. Ryan Quitoriano

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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Harry Kim
Mayor

Darren J. Rosario
Fire Chief

Renwick J. Victorino
Deputy Fire Chief

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

June 25, 2018

Ms. Ann Bouslog, Project Director
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813

Dear Ms Bouslog,

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR PROJECT KAMOLEAO TMK (3) 2-2-049:075

The Hawai'i Fire Department has no comments or issues with regards to the Draft Environmental Assessment (EA) as noted above.

DARREN J. ROSARIO
Fire Chief

KV:ds

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
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President / Principal

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ANN MIKIKO BOUSLOG, PhD
Project Director

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Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

September 26, 2018

Fire Chief Darren J. Rosario
County of Hawai‘i
Hawai‘i Fire Department
25 Aupuni Street, Suite 2501
Hilo HI 96720

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Chief Rosario,

Thank you for your Department’s letter dated June 25, 2018, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao.

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the County of Hawai‘i Fire Department has no comments or issues with regards to the Draft EA.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Deputy Fire Chief Kenwick J. Victorino

HONOLULU OFFICE
1001 Bishop Street, Suite 650
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Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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Harry Kim
Mayor

Michael Yee
Director

Daryn Arai
Deputy Director

West Hawai'i Office
74-5044 Ane Keohokalole Hwy
Kailua-Kona, Hawai'i 96740
Phone (808) 323-4770
Fax (808) 327-3563

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

July 6, 2018

PBR HAWAI'I & Associates, Inc.
ATTN: Ann Bouslog, Project Director
1001 Bishop Street, Suite 650
Honolulu, HI 96813

Dear Ms. Bouslog:

SUBJECT: Comments on Draft Environmental Assessment (EA) for Project Kamoleao
Applicant: Pana'ewa Hawaiian Home Lands Community Association/Pana'ewa Community Alliance
TMK: (3) 2-2-047:075, Waiākea, South Hilo, Island of Hawai'i

Thank you for the opportunity to review the Project Kamoleao. This mixed-use, community-based project is consistent and complimentary with adjacent land uses and future land use maps of the County of Hawai'i General Plan. The close distance between the residential community of Pana'ewa and the commercial node makes this a strategic area of opportunity for mixed-use development characterized by healthy and economically vibrant spaces.

However, it is noteworthy that the project parcel TMK (3) 2-2-047:075 was previously identified in a recent State of Hawai'i plan, Strategic Plan for Transit-Oriented Development 2017, as a proposed site for the Prince Kūhiō Plaza Affordable Housing project (proposed to house 80-100 low-income families). This State plan also identified the adjacent parcel, (3) 2-2-047:069 as the proposed Prince Kūhiō Plaza Public Transit Hub, which would be a Park and Ride facility able to accommodate approximately 125 cars. Both of those proposed projects would fill critical needs and would implement multiple planning objectives related to affordable housing and mass transit improvements. I would hope that this phase of Project Kamoleao would not foreclose on future alternatives for transit-oriented development such as affordable housing projects and transit hubs/park and ride facilities in this area.

For reference, the State of Hawai'i plan prepared for the Office of Housing can be found here: https://planning.hawaii.gov/wp-content/uploads/State-TOD-Strategic-Plan_December-2017.pdf

The Planning Department supports the Finding of No Significant Impact for Project Kamoleao. If you have any questions, please feel free to contact LeAna Gloor of this office at (808) 961-8308.

Sincerely,

MICHAEL YEE
Planning Director

LBG:ja
\\coh33\planning\public\wpwin60\LBG\Correspondence-Letters\2018-7-9-DEA-PROJECT_KAMOLEAO.doc

PBR HAWAII
& ASSOCIATES, INC.

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TOM SCHNELL, AICP
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KIMI MIKAMI YUEN, LEED® AP BD+C
Principal

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September 26, 2018

Mr. Michael Yee, Planning Director
County of Hawaii
Planning Department
101 Pauahi Street, Suite 3
Hilo, HI 96720

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA'EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI'I, TMK (3) 2-2-047:075

Dear Mr. Yee,

Thank you for your agency's letter dated July 6, 2018, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao. PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana'ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana'ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge your comments and provide the following response.

Thank you for noting that the State of Hawaii, Strategic Plan for Transit-Oriented Development (https://planning.hawaii.gov/wp-content/uploads/State-TOD-Strategic-Plan_December-2017.pdf), December 2017, proposes an affordable housing development and relocated transit hub in the vicinity of Project Kamoleao. We note, however, that both potential facilities were proposed on TMK (3) 2-2-047:069 (Parcel 69), the 7.3-acre parcel that adjoins the Project Kamoleao site (see Appendix A to the above-referenced report). Moreover, Parcel 69 is currently leased by DHHL to Prince Kuhio Plaza as an auxiliary parking area, which is necessary for the shopping center to meet the County's parking requirements.

DHHL also notes that it was not formally consulted about potential uses of Parcel 69 during the formulation of the State TOD Strategic Plan, and any future conversations regarding such uses should be directed toward DHHL and its beneficiary community and will need to be reviewed for consistency with the Hawaiian Homes Commission Act. Notwithstanding the above, Project Kamoleao is not seen to preclude potential opportunities for the adjacent Parcel 69 to be developed with affordable housing and a relocated transit hub.

Finally, we appreciate the Planning Department's support of a Finding of No Significant Impact for Project Kamoleao and value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Harry Kim
Mayor

Paul K. Ferreira
Police Chief

Kenneth Bugado Jr.
Deputy Police Chief

County of Hawai`i

POLICE DEPARTMENT
349 Kapiolani Street • Hilo, Hawai`i 96720-3998
(808) 935-3311 • Fax (808) 961-8865

June 12, 2018

PBR HAWAII & ASSOCIATES, INC.
1001 Bishop Street, Suite 650
Honolulu, HI 96813

ATTENTION: ANN BOUSLOG, PROJECT DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO; APPLICANT: PANA'EWA HAWAIIAN HOME LANDS COMMUNITY ASSOCIATION/PANA'EWA COMMUNITY ALLIANCE
TAX MAP KEY (3) 2-2-047:075

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

Thank you for allowing us the opportunity to comment.

If you have any questions, please contact Captain Gregory M. Esteban, South Hilo Patrol District Commander, at (808)961-2214 or via e-mail at gregory.esteban@hawaiicounty.gov.

M. Kanehailua

MITCHELL K. KANEHAILUA, JR.
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

GE:lli/171175

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

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

VINCENT SHIGEKUNI
Vice-President / Principal

GRANT T. MURAKAMI, AICP, LEED® AP BD+C
Vice-President / Principal

TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C
Principal

W. FRANK BRANDT, FASLA
Chairman Emeritus

ANN MIKIKO BOUSLOG, PhD
Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

RAYMOND T. HIGA, ASLA
Senior Associate

CATIE CULLISON, AICP
Senior Associate

MARC SHIMATSU, ASLA
Senior Associate

DACHENG DONG, LEED® AP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP
Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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September 26, 2018

Police Chief Paul K. Ferreira
County of Hawai‘i
Police Department
349 Kapi‘olani Street
Hilo HI 96720-3998

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANA‘EWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAI‘I, TMK (3) 2-2-047:075

Dear Police Chief Ferreira,

Thank you for your Department’s letter dated June 12, 2018, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao.

PBR HAWAII was contracted by the Department of Hawaiian Home Lands (DHHL) to assist the Pana‘ewa Hawaiian Home Lands Community Association (PHHLCA) and the Pana‘ewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that the County of Hawai‘i Police Department does not anticipate any significant impact to traffic and/or public safety concerns as it relates to the proposed Project.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

Cc: Mr. Mitchell K. Kanehailua, Jr., Assistant Police Chief

July 5, 2018

PBR HAWAII & Associates, Inc.
ATTN: Ann Bouslog, Project Director
1001 Bishop Street, Suite 650
Honolulu, HI 96816

RE: Project Kamoleao
Applicant- Panaʻewa Hawaiian Home Lands Community Association/
Panaʻewa Community Alliance

PBR HAWAII & Associates, Inc.:

We have reviewed the Draft Environmental Assessment (EA) for Project Kamoleao. We do not have any concerns with the EA.

The Keaukaha Panaʻewa Farmers Association fully supports Project Kamoleao. This will be the first focused mixed use project initiated by our community for our community.

We are looking forward to supporting the Panaʻewa Hawaiian Home Lands Community Association and the Panaʻewa Community Alliance on this exciting initiative.

Sincerely,

Maile Luʻuwai
President
Keaukaha Panaʻewa Farmers Association
P.O. Box 6844
Hilo, HI 96720
808.280.0083

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& ASSOCIATES, INC.

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Associate

MICAH McMILLEN, ASLA, LEED® AP
Associate

NATHALIE RAZO
Associate

September 26, 2018

Ms. Maile Luʻuwai
President
Keaukaha Panaʻewa Farmers Association
P.O. Box 6844
Hilo, HI 96720

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR PROJECT KAMOLEAO, PANAʻEWA HOMESTEADS, WAIĀKEA, SOUTH HILO, HAWAIʻI, TMK (3) 2-2-047:075

Dear Ms. Luʻuwai,

Thank you for your correspondence dated July 5, 2018 on behalf of the Keaukaha Panaʻewa Farmers Association, regarding the Draft Environmental Assessment (Draft EA) for Project Kamoleao.

PBR HAWAII was contracted by the Department of Hawaiian Homelands (DHHL) to assist the Panaʻewa Hawaiian Home Lands Community Association (PHHLCA) and the Panaʻewa Community Alliance (PCA) in the planning for and preparation of the EA for Project Kamoleao. As the planning consultant for PHHLCA/PCA and DHHL, we acknowledge that your organization has reviewed the Draft EA and do not have any concerns with it; moreover that the Keaukaha Panaʻewa Farmers Association fully supports Project Kamoleao as the first focused mixed-use project initiated by your community, for your community.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

PBR HAWAII

Ann Bouslog
Project Director

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Honolulu, Hawaiʻi 96813-3484
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APPENDIX H

Community Letter of Support

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Hui Mālama Ola Nā ʻŌiwi

Community Health Education Services

August 28, 2018

Ms. Ann M. Bouslog
PBR Hawaiʻi & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

RE: Project Kamoleao

Dear Ann,

I have had the opportunity to review the Project Kamoleao Pre-Final Environmental Assessment. I wholeheartedly support the vision and goals of Project Kamoleao. The project will support the economic, social, health, and cultural well-being of the Native Hawaiians in the Panaʻewa Homestead community and neighboring communities. Moreover, the project is a culmination of many years of culturally-sensitive, environmentally-responsible, and community-based planning.

If you have any questions, feel free to contact me at (808) 969-9220 or email louis@hmono.org.

Sincerely,

Louis Hao
Executive Director