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SEP 8 2016

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

August 22, 2016

Mr. Scott Glenn  
Director, Office of Environmental Quality Control  
Department of Health, State of Hawaii  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Re: Draft Environmental Assessment and Anticipated Finding of No Significant Impact for the Proposed Kealakehe Elementary School New Classroom Building, Kailua-Kona, North Kona, Hawaii, TMK (3) 7-4-019:044 (por.)

Dear Mr. Glenn:

With this letter, the Hawaii State Department of Education hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the proposed Kealakehe Elementary School, New Classroom Building, situated on TMK parcel (3) 7-4-019:044 (por.), on the island of Hawaii, for publication in the next available edition of the Environmental Notice.

Attached is a completed OEQC Publication Form, one (1) copy of the Draft EA and AFONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

Should you have any questions, please contact Brent Sumida of Urban Works, Inc., at (808) 597-1155, or Greg Nakai of PBR HAWAII at (808) 521-5631, our authorized agents for this project.

Sincerely,

Duane Y. Kashiwai  
Public Works Administrator  
Facilities Development Branch

DYK:dw  
Attachments

c: Brent Sumida, Urban Works, Inc.  
Greg Nakai, PBR HAWAII & Associates, Inc.  
Facilities Development Branch

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OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

17-086

**AGENCY**  
**PUBLICATION FORM**

SEP 8 2016

Project Name:	Kealakehe Elementary School New Classroom Building
Project Short Name:	KES New Classroom Building
HRS §343-5 Trigger(s):	Use of State lands and funds
Island(s):	Hawai'i
Judicial District(s):	North Kona
TMK(s):	(3) 7-4-019:044 (por.)
Permit(s)/Approval(s):	ADA Compliance; National Pollutant Discharge Elimination System (NPDES) construction site stormwater discharge permit; Noise Permit; Plan Approval; Grubbing, Grading and Stockpiling Permit; Building Permits (including electrical, plumbing, and civil); Occupancy
Proposing/Determining Agency:	State of Hawai'i Department of Education
<i>Contact Name, Email, Telephone, Address</i>	ATTN: Duane Kashiwai, Public Works Administrator State of Hawai'i Department of Education Office of School Facilities and Support Services 3363 Wai'alaie Avenue Honolulu, HI 96816 Phone: (808) 784-5040 Fax: (808) 733-2100 Email: <a href="mailto:Duane_Kashiwai/FacilDev/HIDOE@notes.k12.hi.us">Duane_Kashiwai/FacilDev/HIDOE@notes.k12.hi.us</a>
Accepting Authority:	(for EIS submittals only)
<i>Contact Name, Email, Telephone, Address</i>	
Consultant:	PBR HAWAII & Associates, Inc.
<i>Contact Name, Email, Telephone, Address</i>	ATTN: Greg Nakai PBR HAWAII & Associates, Inc. 1001 Bishop Street, Suite 650 Honolulu, Hawai'i 96813 Phone: (808) 521-5631 Fax: (808) 523-1402 Email: <a href="mailto:gnakai@pbrhawaii.com">gnakai@pbrhawaii.com</a>

**Status (select one)** DEA-AFNSI**Submittal Requirements**

Submit 1) the proposing 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.

 FEA-FONSI

Submit 1) the proposing 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 proposing 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 proposing 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 accepting authority, 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 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 accepting authority, 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 accepting authority simultaneously transmits to both the OEQC and the proposing agency 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 Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.
- Supplemental EIS Determination The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is 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.

The Department of Education's Kealakehe Elementary School (KES) New Classroom Building is proposed to be located in the Kealakehe Ahupua'a, North Kona District of the Island of Hawai'i. The Project site is located on an approximately 5,500 square foot portion of TMK (3) 7-4-019:044. The entire parcel is 29.681 acres and is the location of the existing KES, as well as Kealakehe Intermediate School. The campus is a landscaped school with open lawns and mostly non-native trees and shrubs. The proposed classroom building would be located between the Cafeteria and Building G. Not only will the new classroom building provide additional classrooms to support the expected increase in student enrollment at Kealakehe, but it will also be able to improve access to 21<sup>st</sup> century technologies for elementary school students and will be designed to meet the Hawai'i Collaborative for High Performance Schools (HI-CHPS) Criteria for New Construction and Major Modernizations.

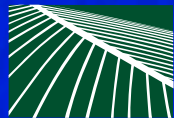
# Kealakehe Elementary School New Classroom Building

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

Prepared for:

State of Hawai'i, Department of Education

Prepared by:



**PBR HAWAII**  
& ASSOCIATES, INC.

August, 2016

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# **Kealakehe Elementary School New Classroom Building**

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

Prepared for:  
State of Hawai'i, Department of Education

Prepared by:



August 2016

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## SUMMARY

<b>Project Name:</b>	Kealakehe Elementary School (KES) New Classroom Building
<b>Location:</b>	The proposed Project is located within the Kailua-Kona community, Kealakehe Ahupua‘a, North Kona District of the Island of Hawai‘i
<b>Judicial District:</b>	North Kona
<b>Tax Map Key (TMK):</b>	(3) 7-4-019:044 (por.)
<b>Land Area Affected:</b>	Approximately 5,500 square feet of the 13.9-acre KES campus.
<b>Proposing Agency:</b>	State of Hawai‘i Department of Education
<b>Accepting Authority:</b>	State of Hawai‘i Department of Education
<b>Landowner:</b>	State of Hawai‘i
<b>Existing Use:</b>	Open space within a Public Elementary School
<b>Project:</b>	The Project will utilize State funds and lands to construct the proposed New Classroom Building on the site of the existing KES.
<b>Current Land Use Designations:</b>	<i>State Land Use:</i> Urban <i>County of Hawai‘i General Plan Land Use Pattern Allocation Guide:</i> Low Density Urban and Medium Density Urban <i>County of Hawai‘i Kona Community Development Plan Area:</i> within the Kona Urban Area <i>County Zoning:</i> A-1a (Agricultural District – minimum lot size of 1 acre) <i>Special Management Area:</i> Outside of SMA boundaries
<b>Alternatives Considered:</b>	No Action Four Alternative Sites within the Existing Campus
<b>Potential Impacts and Mitigation Measures:</b>	The Project will improve the existing facilities at KES and will have beneficial impacts on the student population by creating facilities capable of supporting 21 <sup>st</sup> century technologies.  The potential adverse impacts, while minimal, can be mitigated: <ul style="list-style-type: none"><li>• Typically, short-term construction impacts to air quality, noise, solid waste generation, storm water quality/quantity are associated with construction. The Project will address these impacts through compliance with County, State and Federal rules, regulations, permit and variance requirements regarding fugitive dust, community noise control, non-point source discharges. In addition, best</li></ul>

management practices that include structural and non-structural controls designed to inhibit run-off, erosion, and fugitive dust will be implemented. In addition, an increase in traffic may occur within the Kealakehe community during construction that will be mitigated through coordination with contractors and the creation of a plan designed to allow access while minimizing the inconvenience to motorists and lane closures.

- Long Term impacts to storm water quality/quantity and emergency access are anticipated if not addressed within the project design. To reduce such impacts the Project will include low impact development measures to ensure storm water quality/quantity is not increased or degraded. The Project is not anticipated to impact listed species or their habitat, wetlands or any known archaeological or cultural resources. The site is not located within agricultural lands or within flood or tsunami zones.

**Anticipated  
Determination:**

Finding of No Significant Impact

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

The following is a list of terms, abbreviations, and acronyms used in this document.

AAQS	Ambient Air Quality Standards
ACOE	U.S. Army Corps of Engineers
AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance to the State of Hawai‘i
AMSL	Above mean sea level
BMPs	Best Management Practices
CAB	State of Hawai‘i, Department of Health, Clean Air Branch
CO	Carbon Monoxide
CZM	Coastal Zone Management
dBA	A-weighted decibels
DBEDT	State of Hawai‘i, Department of Business, Economic Development, and Tourism
DEM	Department of Environmental Management (County of Hawai‘i)
DoD	Department of Defense
DOE	State of Hawai‘i, Department of Education
DOH	State of Hawai‘i, Department of Health
DWS	Department of Water Supply (County of Hawai‘i)
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
H <sub>2</sub> S	Hydrogen Sulfide
HAR	Hawai‘i Administrative Rules
HI-CHPS	Hawai‘i Collaborative for High Performance Schools
HRS	Hawai‘i Revised Statutes
KCDP	Kona Community Development Plan
KES	Kealakehe Elementary School
LID	Low Impact Development
LSB	Land Study Bureau
LUC	State of Hawai‘i, Land Use Commission
LUPAG	Land Use Pattern Allocation Guide (County of Hawai‘i General Plan)
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
PM <sub>2.5</sub>	Particulate matter that is 2.5 microns or less in aerodynamic diameter (“fine” particles)
PM <sub>10</sub>	Particulate matter that is 10 microns or less in aerodynamic diameter (“coarse” particles)
SF	square feet
SHPD	State of Hawai‘i, Department of Land and Natural Resources State Historic Preservation Division
SMA	Special Management Area
SO <sub>2</sub>	Sulfur Dioxide

Kealakehe Elementary School New Classroom Building  
*Draft Environmental Assessment- Anticipated Finding of No Significant Impact*

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SPED	Special Education
TMDL	Total Maximum Daily Load
TMK	Tax Map Key
TPD	Tons per Day
USFWS	U.S. Fish and Wildlife Service

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## 1 INTRODUCTION

This Environmental Assessment (EA) is prepared in accordance with Chapter 343, Hawai'i Revised Statutes (HRS) for the proposed Kealakehe Elementary School New Classroom Building (Project) in Kailua-Kona, Island of Hawai'i, State of Hawai'i.

### 1.1 LANDOWNER

The State of Hawai'i is the landowner.

**Contact:** State of Hawai'i Department of Education  
Office of School Facilities and Support Services  
Facilities Development Branch  
ATTN: Duane Kashiwai, Public Works Administrator  
3363 Wai'alae Avenue  
Honolulu, Hawai'i 96816  
Phone: (808) 784-5040  
Fax: (808) 733-2100

### 1.2 PROPOSING AGENCY AND ACCEPTING AUTHORITY

The State of Hawai'i Department of Education is the proposing agency and designated accepting authority.

**Contact:** State of Hawai'i Department of Education  
Office of School Facilities and Support Services  
Facilities Development Branch  
ATTN: Duane Kashiwai, Public Works Administrator  
3363 Wai'alae Avenue  
Honolulu, Hawai'i 96816  
Phone: (808) 784-5040  
Fax: (808) 733-2100

### 1.3 ENVIRONMENTAL CONSULTANT

The environmental planning consultant is PBR HAWAII & Associates, Inc.

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

#### **1.4 COMPLIANCE WITH STATE OF HAWAI'I ENVIRONMENTAL LAWS**

Preparation of this document is in accordance with the provisions of Chapter 343, HRS and Title 11, Chapter 200, Hawai'i Administrative Rules (HAR) pertaining to Environmental Impact Statements. Section 343-5, HRS established nine types of actions that “trigger” compliance. The use of State or County lands or funds is one of these “triggers.” Because the State of Hawai'i Department of Education will use both State funds and lands for the proposed KES New Classroom Building, compliance with HRS and HAR is required.

#### **1.5 STUDIES CONTRIBUTING TO THIS ENVIRONMENTAL ASSESSMENT**

The information contained in this report has been developed from site visits, and generally available information regarding the characteristics of the Site and surrounding areas.



## **2 PROJECT DESCRIPTION**

### **2.1 BACKGROUND INFORMATION**

#### **2.1.1 Location and Property Description**

The Kealakehe Elementary School (KES) New Classroom Building is proposed to be located in the Kailua-Kona community, Kealakehe Ahupua‘a, North Kona District of the Island of Hawai‘i (Figure 1. Regional Location). The Project site is located on an approximately 5,500 square foot portion of TMK (3) 7-4-019:044. The entire parcel is 29.681 acres and is the location of the existing KES (13.9 acres), as well as Kealakehe Intermediate School. The footprint of the proposed KES New Classroom Building is expected to occupy approximately 5,500 square feet of the campus (approximately 9,810 square feet of total program area). The Project site is located between the Cafeteria and Building G.

The campus is bounded to the east by Kealaka‘a Street and residences; to the north by Onipa‘a Street and residences; residences to the west; and undeveloped land to the south.

The campus is a landscaped school with open lawns and mostly non-native trees and shrubs (see photographs in Figure 5).

Current access to the KES Campus is from Kealaka‘a Street.

#### **2.1.2 Existing Land Use Designations**

Current land use designations for the Site are:

- *State Land Use:* Urban
- *County General Plan Land Use Pattern Allocation Guide (LUPAG):* Low- and Medium-Density Urban
- *County of Hawai‘i Kona Development Plan:* Kona Urban Area
- *County Zoning:* A-1a (Agricultural District, minimum lot size of 1 acre)
- *Special Management Area:* Not within SMA

#### **2.1.3 Surrounding Land Uses**

The existing settlement pattern in the North Kona District is agricultural and residential, with more densely populated areas closest to the ocean. According to the County of Hawai‘i’s General Plan LUPAG, the areas surrounding the Project site are designated as Important Agricultural and Medium Density Urban land use classifications.

KES is immediately surrounded on three sides (east, north, and west) by either single-family residences or residential streets, including the Kona Macadamia Acres subdivision to the east. The northern portion of TMK (3) 7-4-019:044 is Kealakehe Intermediate School. The southern

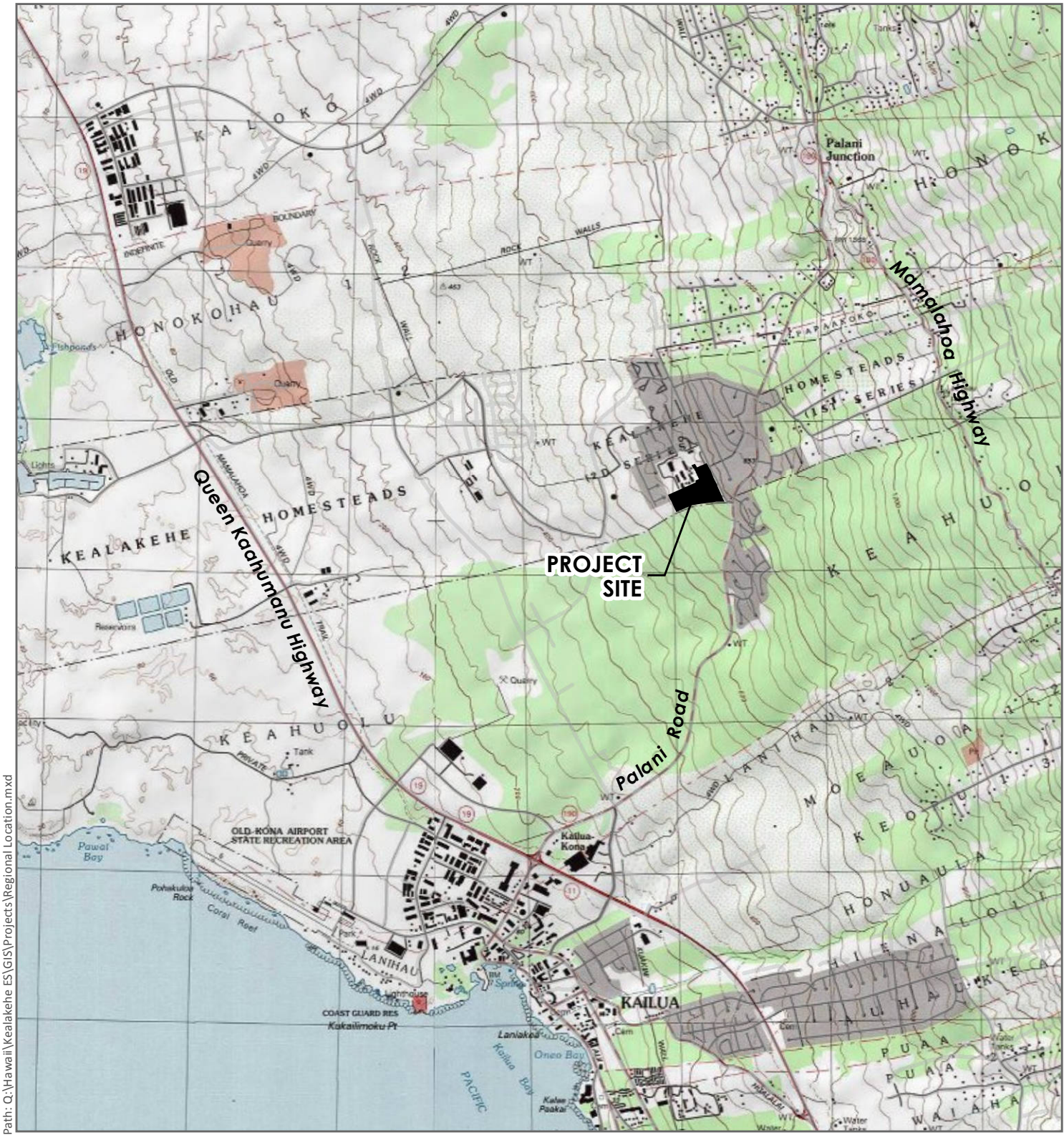
Kealakehe Elementary School New Classroom Building  
*Draft Environmental Assessment- Anticipated Finding of No Significant Impact*

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boundary of the property abuts undeveloped land. To the southeast is another residential subdivision, Queen Lili'uokalani Village. The Honua'ula Forest Reserve is located approximately 2.5 miles *mauka* of the Project site. Downtown Kailua-Kona is located about 2.5 miles *makai* of the Project site.

The surrounding land uses in the North Kona District involve activities that generally serve the tourist and agricultural industries. Currently, there are about 4,080 visitor units including hotels, resort condominiums, bed and breakfast operations, and other transient units. North Kona accounts for 45 percent of the total hotel rooms on the Island of Hawai'i.

Besides tourism, North Kona also has a significant agricultural industry with the production of Kona coffee, fruits, macadamia nuts, and vegetables, particularly tomatoes. Timber and fishing are small industries in Kona. The Kailua-Kona Wharf is considered a major center for big game fishing and annual international tournaments. Additionally, a small boat harbor at Honokōhau has been constructed just outside of Kailua Village to complement the big game fishing. The Old Kailua Industrial Area and Kaloko Industrial Area provide the largest concentration of industrial activities within West Hawai'i. Kona is considered the governmental, commercial, and industrial center of West Hawai'i.

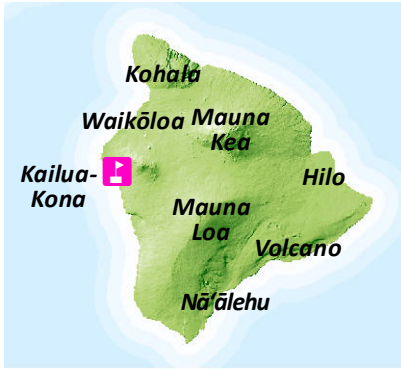


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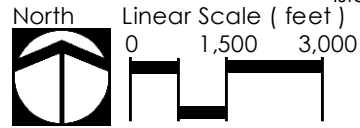
 Project Site



**Figure 1**  
**Regional Location Map**

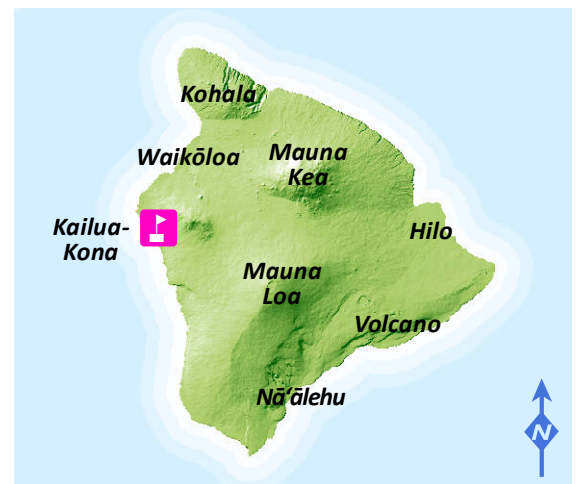
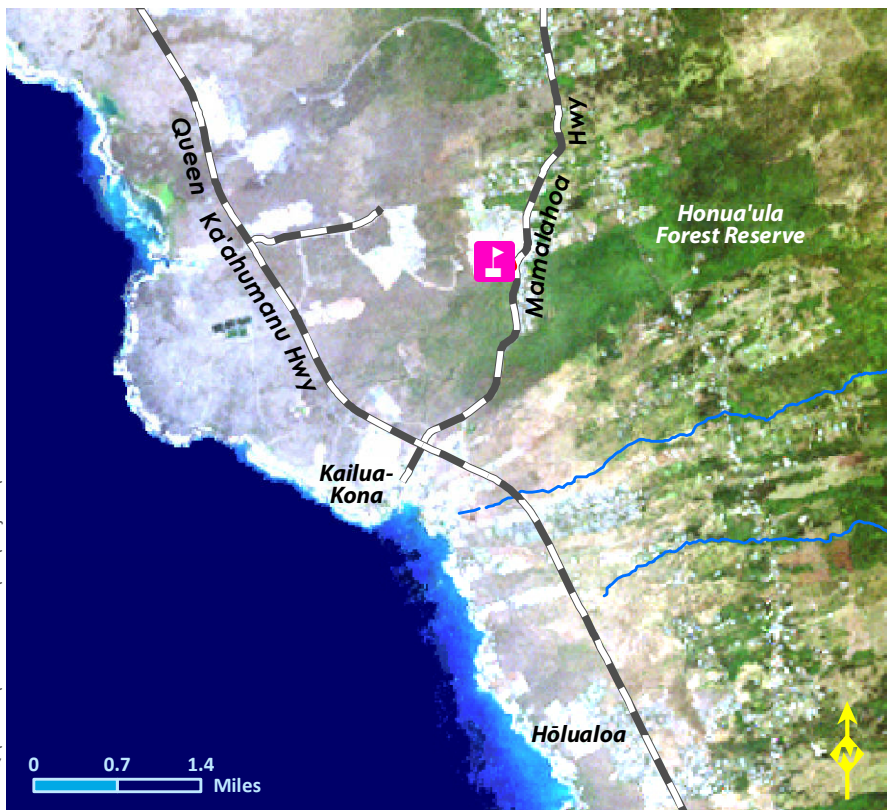
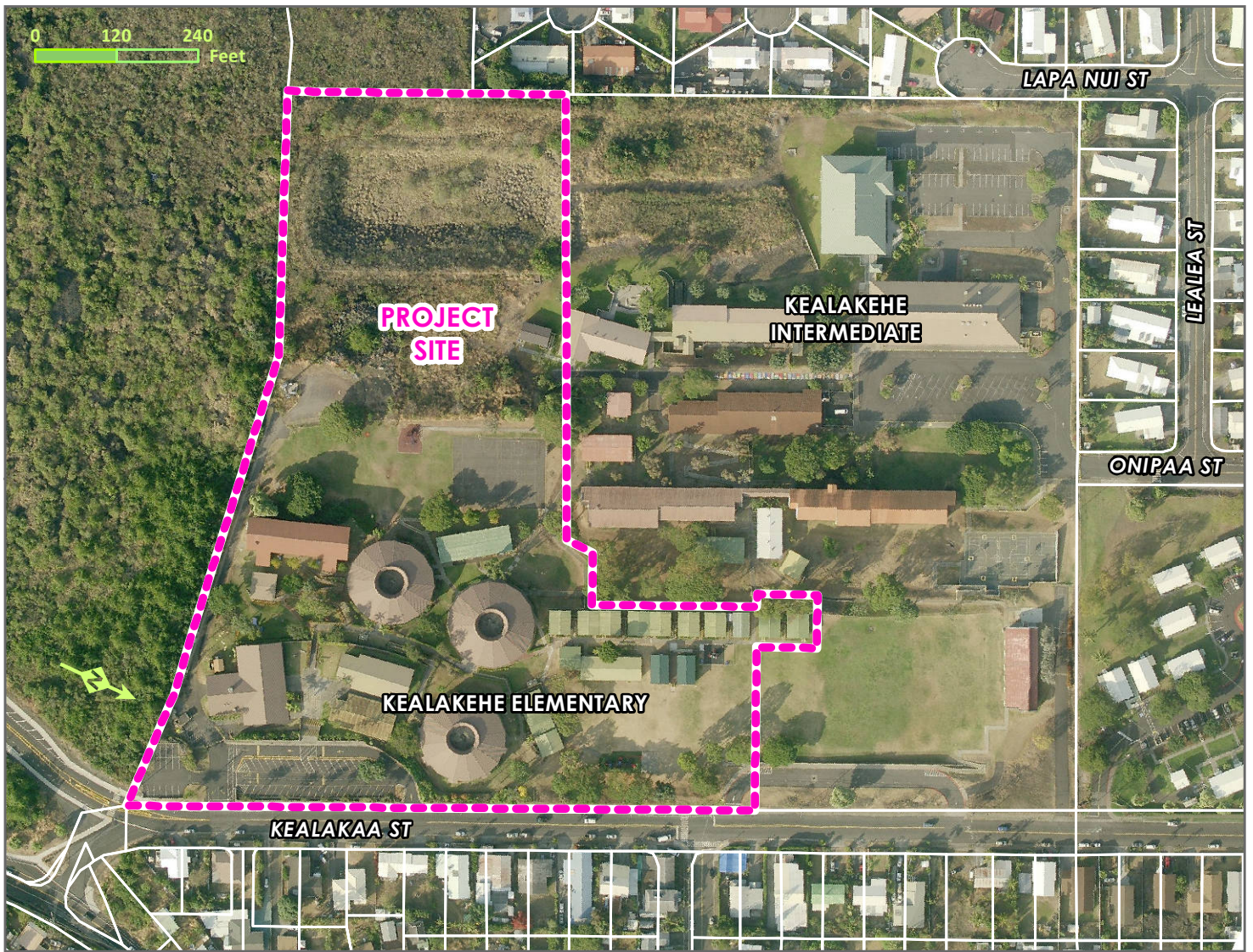
**Kealakehe Elementary School**  
**New Classroom Building**

Island of Hawaii



Source: ESRI Online Basemap. U.S. Geological Survey  
Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.





**Figure 2**  
**Aerial Location Map**  
**Kealahou Elementary School**  
**New Classroom Building**

Island of Hawai'i

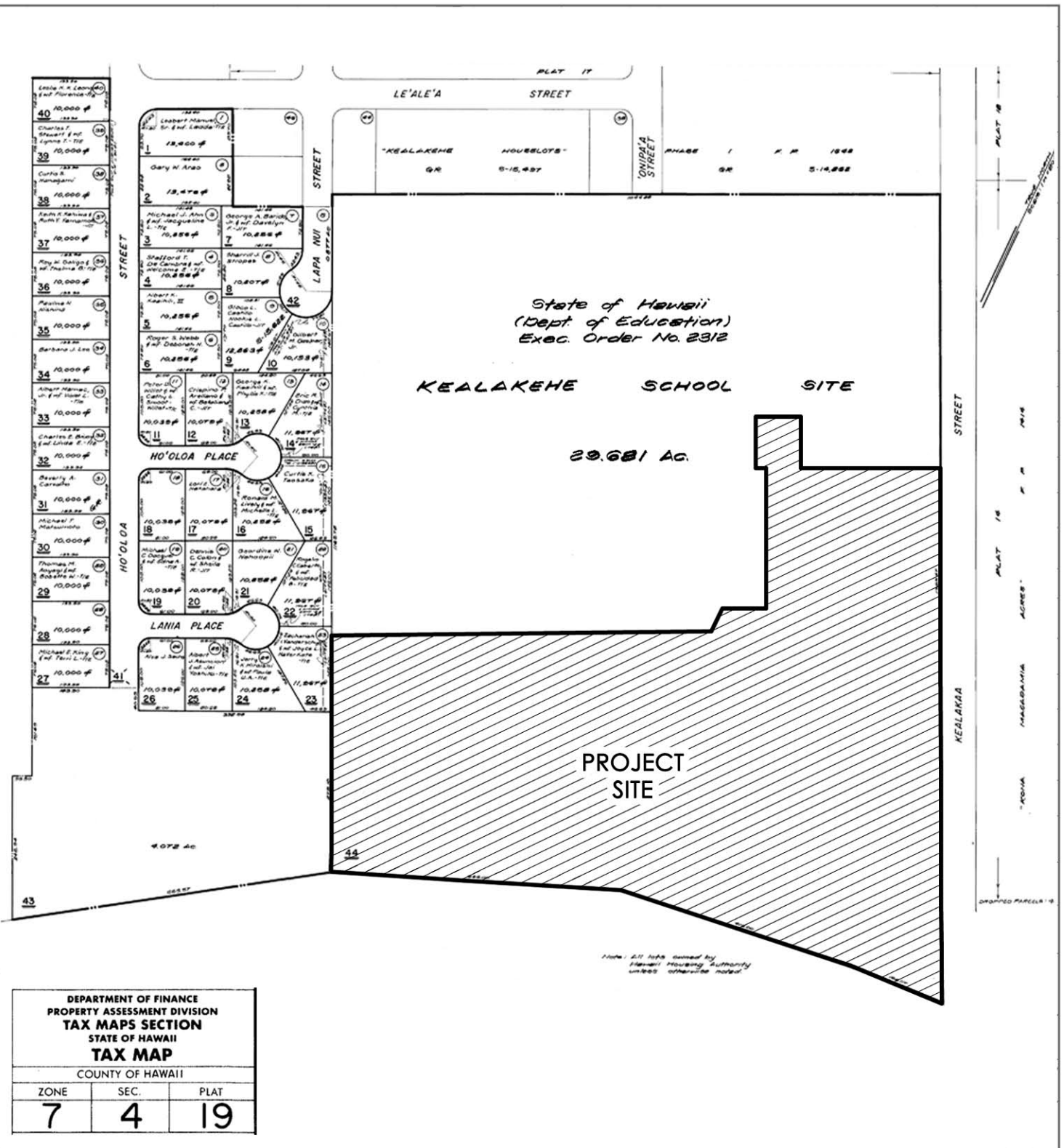


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Source: Pictometry Online (2012). Landsat 7 (ETM) Imagery (1999-2003). ESRI Online Basemap.  
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.





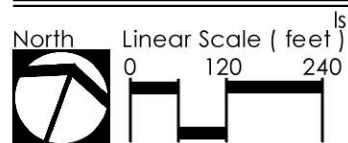
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**LEGEND**

 Project Site

**Figure 3  
Tax Map Key**

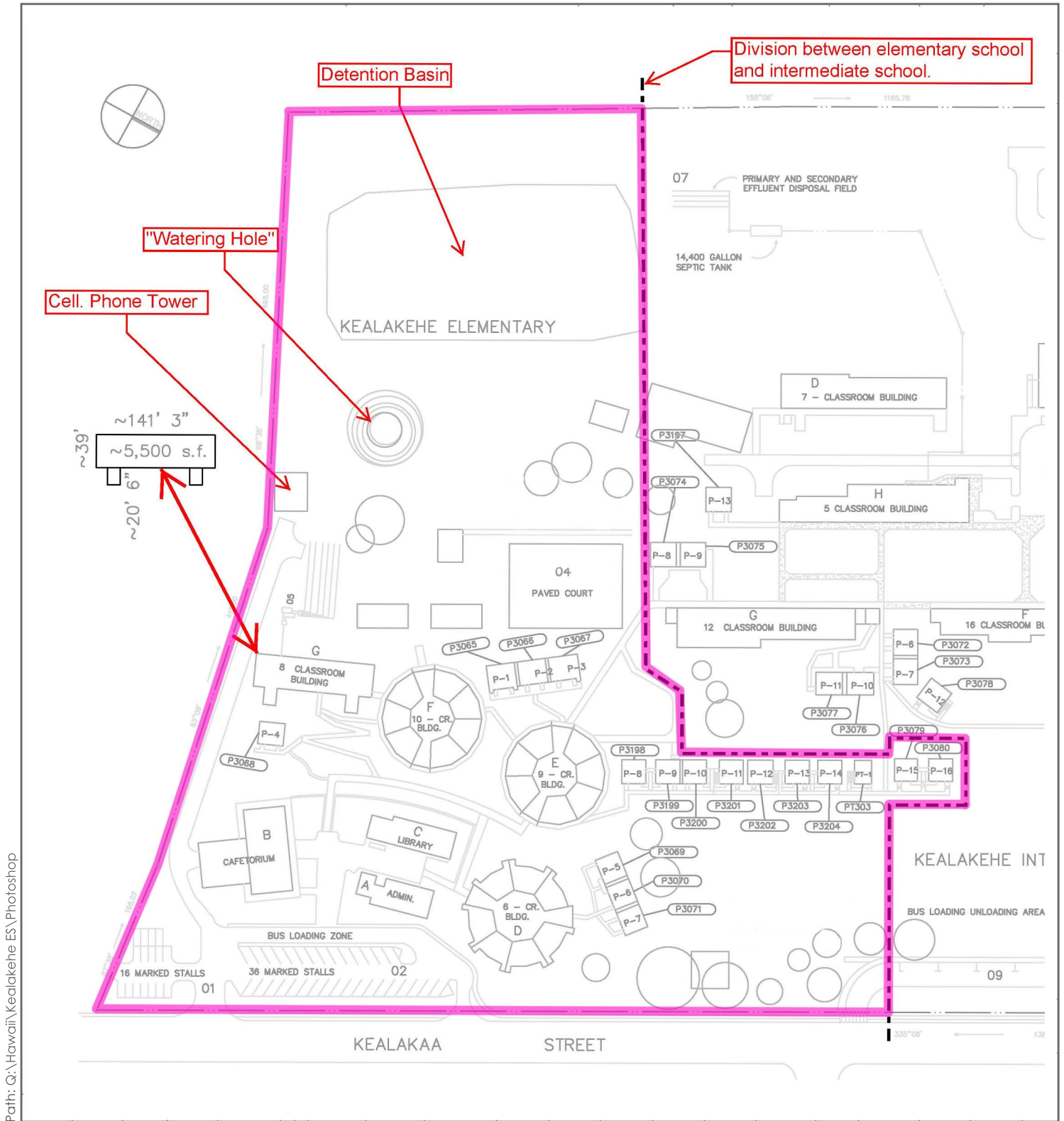
**Kealakehe Elementary School  
New Classroom Building**



Island of Hawaii







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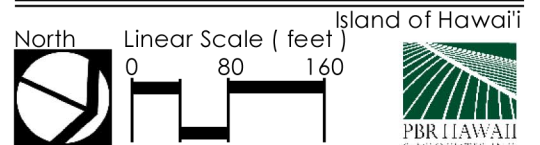
DATE: 8/23/2016

**LEGEND**

 Project Site

**Figure 4  
Site Plan**

**Kealakehe Elementary School  
New Classroom Building**



Source: State Department of Education.

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





1.



2.



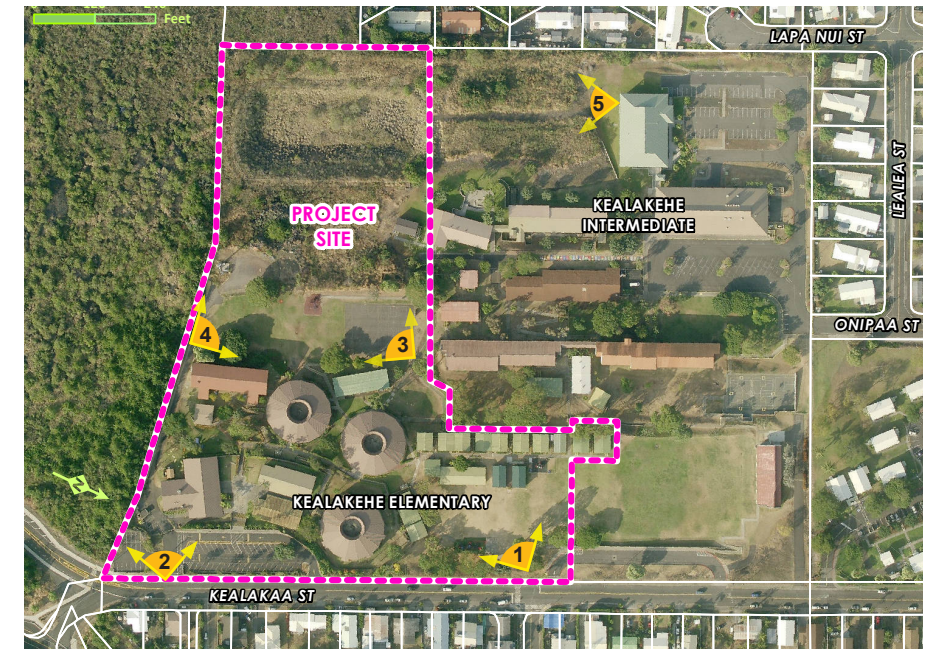
3.



4.



5.



Key Map

Figure 5  
Site Photographs

# Kealakehe Elementary School New Classroom Building

ISLAND OF HAWAII

DATE: 11/05/2015





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### **2.1.4 Regional Land Use History**

In ancient Hawai‘i, Kona was the most densely populated area in the Hawaiian Islands (about 20,000 inhabitants at its peak). Kona was also a favorite area of residence for Hawai‘i’s chiefs. Ancient Hawaiian life was based around the *ahupua‘a*, a section of the land that extended from the mountain to the sea. Settlement generally occurred in three main zones: the narrow arid coastal strip consisting of small fishing villages near the shore, particularly around fishponds and bays; the barren middle zone comprised of lava fields, which supported temporary use, including natural caves used by travelers between the coast and uplands; and the agricultural uplands, which supported scattered settlements where dryland taro and sweet potatoes were extensively cultivated, along with other crops (County of Hawai‘i Planning Department, 2008).

Today, world-renowned “Kona Coffee” is the signature product of Kona. Initially introduced to Hawai‘i in the early 1800s, coffee thrives in the rich volcanic soils and unique climate of Kona on the sheltered leeward slopes of Mauna Loa and Hualālai, roughly between the elevations of 700 to 2,000 feet, along a 15-mile long “coffee belt” extending from Kailua to Hōnaunau. The history of Kona coffee has been preserved with efforts such as the Kona Heritage Corridor. Historically, rural villages evolved in support of the agricultural lifestyle, and they are valued by the residents of Kona today as a link with their past and path to their future. This lifestyle persists through today’s thriving coffee industry and is valued by visitors to the Kona area who help to support the growth of diversified agriculture (County of Hawai‘i Planning Department, 2008).

The proposed Project is located on the KES campus, which was built to accommodate growth in the area. According to the KES website (<http://kealakehe.k12.hi.us/>):

*Kealakehe School was erected in 1969. Named for the area in which it is located, Kealakehe School is appropriately matched to the location. “Ala” or “keala” means “the path, road, or highway; also, “ke‘e” means “crooked or winding.” So, Kealakehe is “winding road.”*

*It was planned as a “different” school due to the circular classroom cluster building design. The first buildings included the cafeteria, the library, and buildings D and E. In 1970-71 portable classrooms 1, 2, and 3 were installed, and at approximately the same time, the administration building and building F were added.*

*Except for Kailua School, Kona schools were generally small and scattered. In general, there was strong feeling in the community that a bigger and more modern school was needed. Mr. Peter Kawahara served as the school’s first principal at a time when the Kona area’s population experienced tremendous growth. By 1982, it was the largest elementary school in West Hawai‘i.*

*In 1986, the school was split into two separate schools due to the large enrollment of over 1,400 students. Kealakehe Elementary, located on the original campus, includes kindergarten to grade 5. A new school, Kealakehe Intermediate, was established just*

Kealakehe Elementary School New Classroom Building  
*Draft Environmental Assessment- Anticipated Finding of No Significant Impact*

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*below the elementary school and provides for grades 6 to 8. At that time, Ms. Mae Yamasaki was appointed principal of the elementary, which served a student population of approximately 740 students.*

## **2.2 OBJECTIVES OF THE PROJECT**

The objective of this Project is to provide 21<sup>st</sup> century classroom facilities within the KES campus to accommodate the current and projected increases in student enrollment accompanying growth in the area. DOE projects that Kealakehe ES may see a growth of approximately 33 students from 2015 to 2021. The intent of the proposed KES New Classroom Building is to provide additional classroom capacity to help absorb future growth for the complex. According to the DOE, the surrounding elementary schools do not have as much vacant land to expand on. More students may be coming to Kealakehe ES in the future as the possible result of shifting the school service boundary. For example, Kahakai ES is projected to grow by about 90 students in the next 5 years.

## **2.3 KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING**

KES will be adding a new classroom building to its campus. The KES New Classroom Building will include six general classrooms, one special education (SPED) self-contained classroom, one itinerant room, one art/science classroom, one faculty center, one conference room, and one custodial room. In addition to the program spaces, the building will also include restrooms and a communications room, as well as mechanical and electrical rooms.

## **2.4 SUSTAINABLE PLANNING AND DESIGN**

The DOE and Urban Works, Inc. (DOE's consultant architect) have designed the new classroom building to a level that will meet the Hawai'i Collaborative for High Performance Schools (HI-CHPS) Criteria for New Construction and Major Modernizations.

The HI-CHPS Criteria is a system developed by a committee of K-12 school stakeholders under the guidance of the Hawai'i State DOE and the National CHPS nonprofit organization. The criteria are used to design and construct healthy, high performance, and green schools. Hawai'i is the 13<sup>th</sup> state to adopt a CHPS high performance school criteria.

## **2.5 DESIGN PROCESS**

Following an initial stakeholder meeting in August 2014 to introduce the scope of the Project, the Project architect, Urban Works, Inc., and the DOE conducted the preliminary site selection process, during which time five potential locations were identified. In adherence to the requirements for HI-CHPS, four mandatory meetings have to be held with the various groups

Kealakehe Elementary School New Classroom Building  
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within the Project, and the first meeting with the stakeholders to present the siting options was held on January 27, 2016. Once the stakeholders have agreed on the final siting, it is anticipated that the design process will proceed with a 2-week DOE review period between the Schematic Design (SD) and Pre-Design phase and the Pre-Design and Final Design phase.

General input to date has been solicited through the following:

- DOE Workshops
- Pre-consultation letters for this EA were mailed to Federal, State, and County agencies on October 5, 2015, to notify them of the Project and invite any comments to be addressed in the Draft EA. Comment and response letters are reproduced in Appendix A.
- Summary in the TBD edition of *The Environmental Notice*

## **2.6 PROJECT COST AND SCHEDULE**

The DOE anticipates construction will commence summer of 2018 at the earliest, if sufficient funds are appropriated to allow the Project to go to bid. The estimated construction based bid is approximately \$6 million. The entire project cost, including Basic Bid, Contingency, Construction Management, Staff, Works of Art, Equipment, additional design efforts, and Utilities would be approximately \$8 million dollars based on \$6 million dollar basic bid.

The Project schedule is solely dependent on funding appropriation by the State Legislature as a line item. In May 2017, should legislative add-on funding be available in the 2018 fiscal year appropriation, then the project construction document would route for permitting June 2017. Bid would likely commence after the allotment advice and permitting. Should funding and workflow be timely, bidding could take place in the winter of 2017, with construction commencing in the summer of 2018.

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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 of the Project, and mitigation measures to minimize impacts.

#### **3.1 CLIMATE**

The climate on the Island of Hawai‘i, as well as within the State of Hawai‘i, can be characterized as mild and subtropical, with relatively low day-to-day and month-to-month variability. Differences in the climates of various areas are generally attributable to the island’s geologic formation and topography creating distinct ecosystems and microclimates ranging from tropical rain forests to dryer plains, along with corresponding differences in temperature, humidity, wind, and rainfall over short distances (Department of Geography, University of Hawai‘i at Hilo, 1998). According to the Köppen climate classification system, the Island of Hawai‘i features four out of five of the world’s major climate zones, and eight out of thirteen of the sub-zones (Miller, 1978).

The entire State of Hawai‘i lies well within the belt of northeasterly trade winds generated by the semi-permanent Pacific high pressure cell to the north and east of the islands. Areas along the eastern coasts of the islands are particularly affected by the trade winds and are usually well-ventilated nearly year-round. The dominant winds on the Island of Hawai‘i include trade winds, Kona winds, and winds associated with hurricanes and tropical storms. Northeast trade winds prevail most (70%) of the year and generally blow 10-20 mph (Fletcher III, Grossman, Richmond, & Gibbs, 2002).

The massive domes of Mauna Loa and Hualālai shelter the Kona Coast from the predominant trade winds. In the absence of trade winds, light sea-land breezes prevail – the heating of the land during the day causes light winds to blow in from the sea, and the cooling of the land at night causes light winds to flow from the land to the sea. The sea breezes converge with trade winds that have passed through the Humu‘ula Saddle and around the upper slopes of Mauna Loa, producing frequent afternoon showers over the island’s interior sections and mountain slopes. This afternoon rainfall contrasts with the weather of the windward side of the island where rain most often falls near midnight. The rainfall pattern in Kona is common during the summer trade wind season, making Kona unique in the State in having its highest annual rainfall during the summer, with February being the driest month and September the wettest. Rainfall increases from the shoreline going *mauka*, reaching a peak between about 2,000 feet and 2,500 feet in elevation, where 60-80 inches can fall annually in some areas. Above this band, annual rainfall progressively declines to approximately 20 inches near the summits of Hualālai and Mauna Loa (County of Hawai‘i Planning Department, 2008).



Overall, the conditions on the Kona Coast are somewhat warmer and decidedly drier than in windward locations of the island. According to the *Climate of Hawai'i* website, temperatures at the Project site are very moderate with an average annual temperature of 71.74 degrees Fahrenheit (F), and average monthly temperatures ranging from 68.53 degrees F in February to 75 degrees F in August. The Project site receives an average annual rainfall of approximately 42 inches, with February being the driest month (2.15 inches) and September the wettest (4.42 inches) (Giambelluca, et al., 2014).

### **POTENTIAL IMPACTS AND MITIGATION MEASURES**

The proposed KES New Classroom Building is not anticipated to have any negative impacts on regional climate. However, micro-climatic effects at the site and vicinity, such as temperature and wind changes, may occur. No mitigation measures are proposed.

## **3.2 GEOLOGY AND TOPOGRAPHY**

The Island of Hawai'i lies over or just north of the Hawaiian hot spot and is composed of five volcanoes and one active seamount: Kohala, Hualālai, Mauna Loa, Kīlauea, Mauna Kea, and Loihi located offshore. Of these, only Mauna Loa, Kīlauea, and Loihi are considered active, while Hualālai (8,271 ft.) is dormant with its most recent eruption ending sometime in 1800-1801. From the western banks of the shallow coastal lagoon at Kīholo Bay, the coast formed by the Hualālai Volcano extends southwest, around the western tip of the island at Keāhole Point, and south beyond Kailua-Kona to Kuamo'o Point. This shoreline is characterized by low rocky headlands fronted by fringing reef, small rocky remnants offshore, and tidepools and beaches (both black and white) along the shore (University of Hawai'i at Mānoa, School of Ocean and Earth Science and Technology, 2013).

The exposed lava flows in the Kailua-Kona community are due to the volcanic activity of the Hualālai Volcano, the base of which is not exposed. Its volcanics are composed of post-shield stage lavas and pyroclastics of alkalic basalt, rare hawaiiite, the Waawaa trachyte member, and the Kona ash beds. The Hualālai volcanics are connected with the Mauna Loa's Kau basalt (SSFM International, Inc., November 2009).

The lava flows associated with the Keauhou aquifer system are less than 5,000 years old. Most rainfall, except in heavy storms, percolates rapidly into the porous lava. Due to higher rainfalls in the *mauka* areas, short and shallow stream valleys have been eroded into the surface of the volcano. The most prominent in the region is the intermittent Wai'aha Stream near Hōlualoa. Heavy localized rainfall can easily exceed the capacity of the shallow drainageways resulting in flooding of adjoining areas. Moreover, even relatively slight changes in topography through grading and other land-disturbing activities can affect the capacity of drainage courses or change the direction of flows. Areas that have not previously experienced flooding could flood during

even short periods of high rainfall. The predominantly steep topography of Kona causes runoff to flow quickly, resulting in short response times to potentially rapid flooding (County of Hawai'i Planning Department, 2008). Sediments in the region mainly consist of beach deposits and reworked tephra.

The KES campus is located within the Kealakehe Ahupua'a, which generally runs in an east-west direction. The *ahupua'a* covers an area of approximately 3,532 acres, with the northern edge extending from the Pacific Ocean at the Honokohau Marina and the Kaloko-Honokohau National Historical Park, in a *mauka* direction for approximately seven miles, up to an elevation of approximately 4,750 feet in the Honua'ula Forest Reserve. The southern edge of the *ahupua'a* extends from the *makai* areas at rocky Kaiwi Point up *mauka* to the forest reserve. The Project site is also located in the watershed of the Wai'aha Stream, which is a channel that extends from the top of Hualālai Volcano down to the Kona Coast.

The land within the Project site slopes generally from northeast to southwest at approximately 10 percent overall. The distance between the ocean shoreline and Project area is approximately 2.3 miles. Elevation of the Project site is approximately 690-790 feet above mean sea level (AMSL) (See Figure 6).

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Project will involve grading portions of the site. Prior to grading, necessary grading permits will be acquired. Grading activities will follow Best Management Practices (BMPs) as described in the grading permit.

Clearing and grubbing activities will temporarily disturb the soil retention values of the existing vegetation and expose soils to erosional forces. BMPs that include both structural and non-structural controls will be incorporated into temporary construction practices and permanent site design to minimize impacts. BMPs utilized during construction may include the following:

- Minimizing the time of construction including coordinated phasing for site control;
- Retaining existing ground cover as long as possible;
- Constructing drainage and erosion 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, ground-cover, 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 fences, sediment traps, and diversion swales, where appropriate.
- Contractor training

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After construction, establishment of permanent landscaping will provide long-term erosion control. Construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control.

No significant impact to drainage is anticipated. However, in the long-term, the Project will result in an increase in impervious surface area and therefore more potential storm runoff. To mitigate this concern, the Storm Drainage Standards described in Section 27-26 of the Hawai'i County Code 1983 (2005 Edition) will be incorporated into drainage design to ensure the Project does not impact the existing storm water quality or volume of runoff. To satisfy the County's standards for the protection of water quality, LID features will be integrated into the school design to maintain or improve the existing storm peak flows and storm water quality exiting the site of the Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed areas.





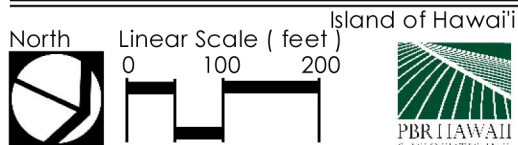
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**LEGEND**

 Project Site

**Figure 6  
Topography**

**Kealakehe Elementary School  
New Classroom Building**



Source: Pictometry Online (2012).  
Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



### **3.3 SOILS**

There are three soil suitability studies prepared for lands in Hawai‘i whose principal focus has been to describe the physical attributes of land and the relative productivity of different land types for agricultural production; these are: 1) the U.S. Department of Agriculture Natural Resource Conservation Services (NRCS) Soil Survey; 2) the University of Hawai‘i Land Study Bureau (LSB) Detailed Land Classification; and 3) the State Department of Agriculture’s Agricultural Lands of Importance to the State of Hawai‘i (ALISH) system.

#### **3.3.1 Natural Resource Conservation Service Soil Survey**

The NRCS Soil Survey for the Island of Hawai‘i classifies the soils of the KES campus as: Kaimu extremely stony peat, 7 to 25 percent slopes (rKED) and Punalu‘u extremely rocky peat, 6 to 20 percent slopes (rPYD). (Figure 7).

The **Kaimu series** are well-drained soils, thin and organic, mixed with minor amounts of basic volcanic ash in ‘A‘a lava. They are found on uplands at an elevation ranging from near sea level to 1,000 feet. They receive from 40 to 60 inches of annual rainfall. Kaimu extremely stony peat (rKED) exhibits 7 to 25 percent slopes, rapid permeability and slow runoff. The erosion hazard is slight. In a representative profile, the surface layer is very dark brown extremely stony peat about 3 inches thick and is underlain by fragmental ‘A‘a lava. This soil is neutral in pH. According to the NRCS, this soil is not suitable for cultivation. However, small areas are used for pasture, macadamia nuts, papaya, and citrus fruits.

The **Punalu‘u series** consists of well-drained thin organic soils over pahoehoe lava bedrock. They are found at elevations ranging from near sea level to 1,000 feet and receive from 60 to 90 inches of rainfall annually. Punalu‘u extremely rocky peat (rPYD) exhibits slopes of 6 to 20 percent. A profile surface layer is black peat about 4 inches thick which is underlain by pahoehoe lava bedrock. The soil is medium acidic. The peat is rapidly permeable while the lava is very slowly permeable, although water moves rapidly through the cracks. Runoff is slow and the erosion hazard is slight. Roots are matted over the pahoehoe lava. This soil is used for pasture. This soil is found in the southeast corner of the KES campus.

#### **3.3.2 LSB Detailed Land Classification**

The University of Hawai‘i LSB document, Detailed Land Classification, Island of Hawai‘i classifies soils based on a productivity rating. Letters indicate class of productivity, with A representing the highest class and E the lowest. The Site is not classified under the University of Hawai‘i LSB Detailed Land Classification system. This means that soils at the site are not considered to be suitable land for agriculture, or it was already designated within the State Land Use Urban District during the study (Figure 8).

### **3.3.3 ALISH**

The ALISH classification system is based primarily, but not exclusively, on the soil characteristics, the establishment of criteria for classification of lands, and the inventory of prime farm lands that meet the criteria or similar criteria for the respective classes in the national NRCS classification system. The ALISH system identifies and maps three broad classes of agricultural land – Prime, Unique, and Other Important Agricultural Land, as well as Unclassified Land. The Site is not classified under the ALISH classification system (Figure 9).

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Project will not reduce the inventory of agriculturally significant land. The Site has a NRCS capability classification of VII: class VII soils have very severe agricultural limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife; subclass *s* soils have soil limitations within the rooting zone, such as shallowness of the rooting zone, stones, low moisture-holding capacity, low fertility that is difficult to correct, and salinity or sodium content. In addition, the Site is not classified under the LSB and ALISH classification system, and has been in use as a public school site since 1969.

Impacts to the soils of the Site include the potential for soil erosion and the generation of dust during grading and construction. Clearing and grubbing activities will temporarily disturb the soil retention values of the existing vegetation and expose soils to erosional forces. Some wind erosion of soils could occur without a proper watering and re-grassing program. Heavy rainfall could also cause erosion of soils within disturbed areas of land. BMPs that include both structural and non-structural controls will be incorporated into temporary construction practices and permanent site design to minimize impacts. BMPs utilized during construction may include the following:

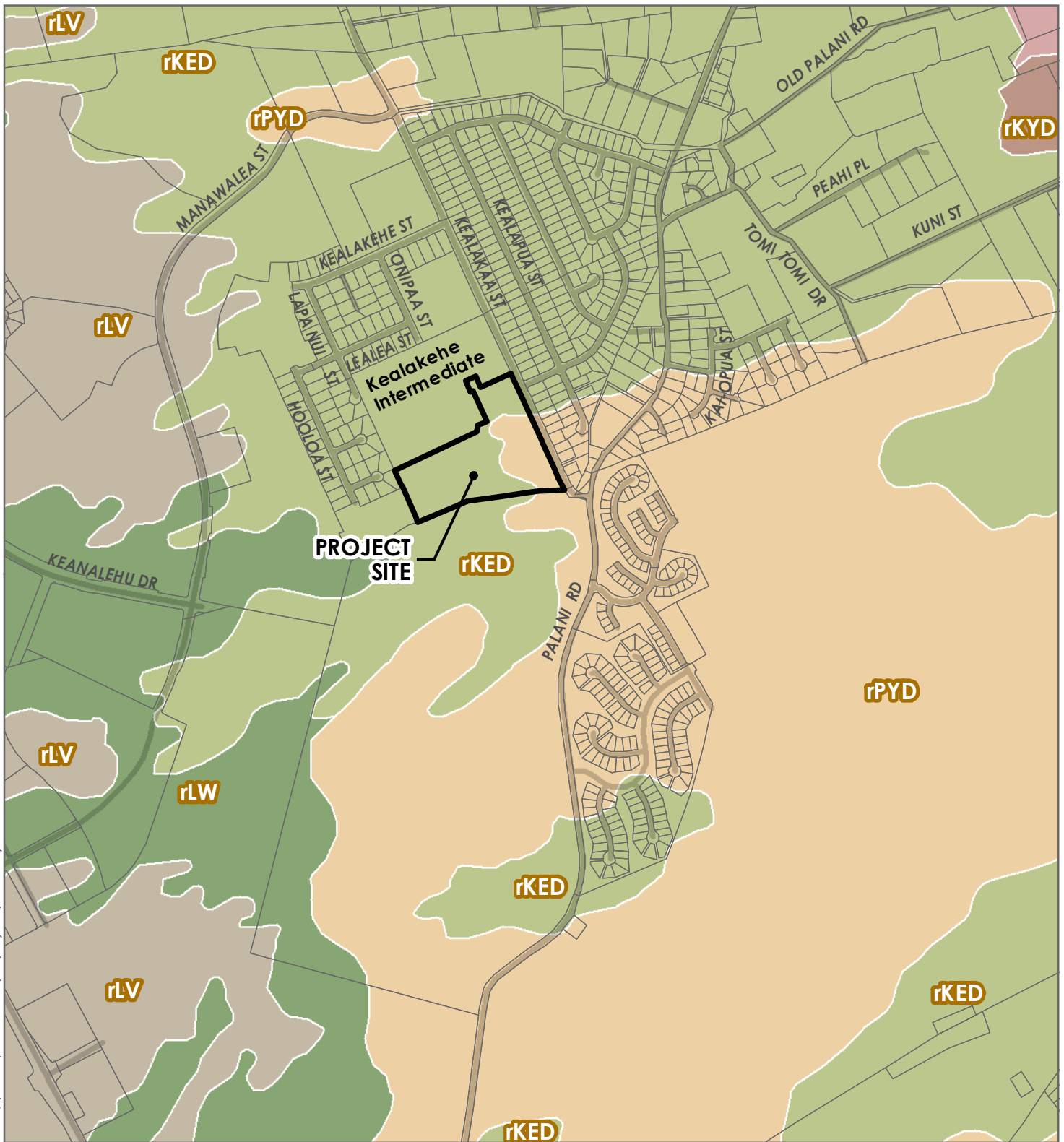
- Minimizing the time of construction including coordinated phasing for site control;
- Retaining existing ground cover as long as possible;
- Constructing drainage and erosion control features early;
- Using temporary area sprinklers in non-active construction areas when ground cover is removed;
- Providing a water truck on-site during the construction period to provide for immediate sprinkling, as needed;
- Using temporary, ground-cover, 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 fences, sediment traps, and diversion swales, where appropriate.
- Contractor training

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After construction, establishment of permanent landscaping will provide long-term erosion control.

Construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control. Grading activities will follow BMPs as described in the grading permit.



Path: Q:\Hawaii\Ke alakehe ES\GIS\Projects\Soil Survey.mxd

DATE: 11/8/2015

**LEGEND**

- Project Site
- rKED: Kaimu extremely stony peat, 7-25% slopes
- rKYD: Kona extremely rocky muck, 6-20% slopes
- rLV: Lava flows, aa
- rLW: Lava flows, pahoehoe
- rPXE: Puna extremely stony muck, 3-25% slopes
- rPYD: Punaluu extremely rocky peat, 6-20% slopes

Source: U.S. Department of Agriculture Natural Resources Conservation Service (1973).  
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

**Figure 7**  
**NRCS Soil Survey**  
**Kealakehe Elementary School**  
**New Classroom Building**

Island of Hawai'i

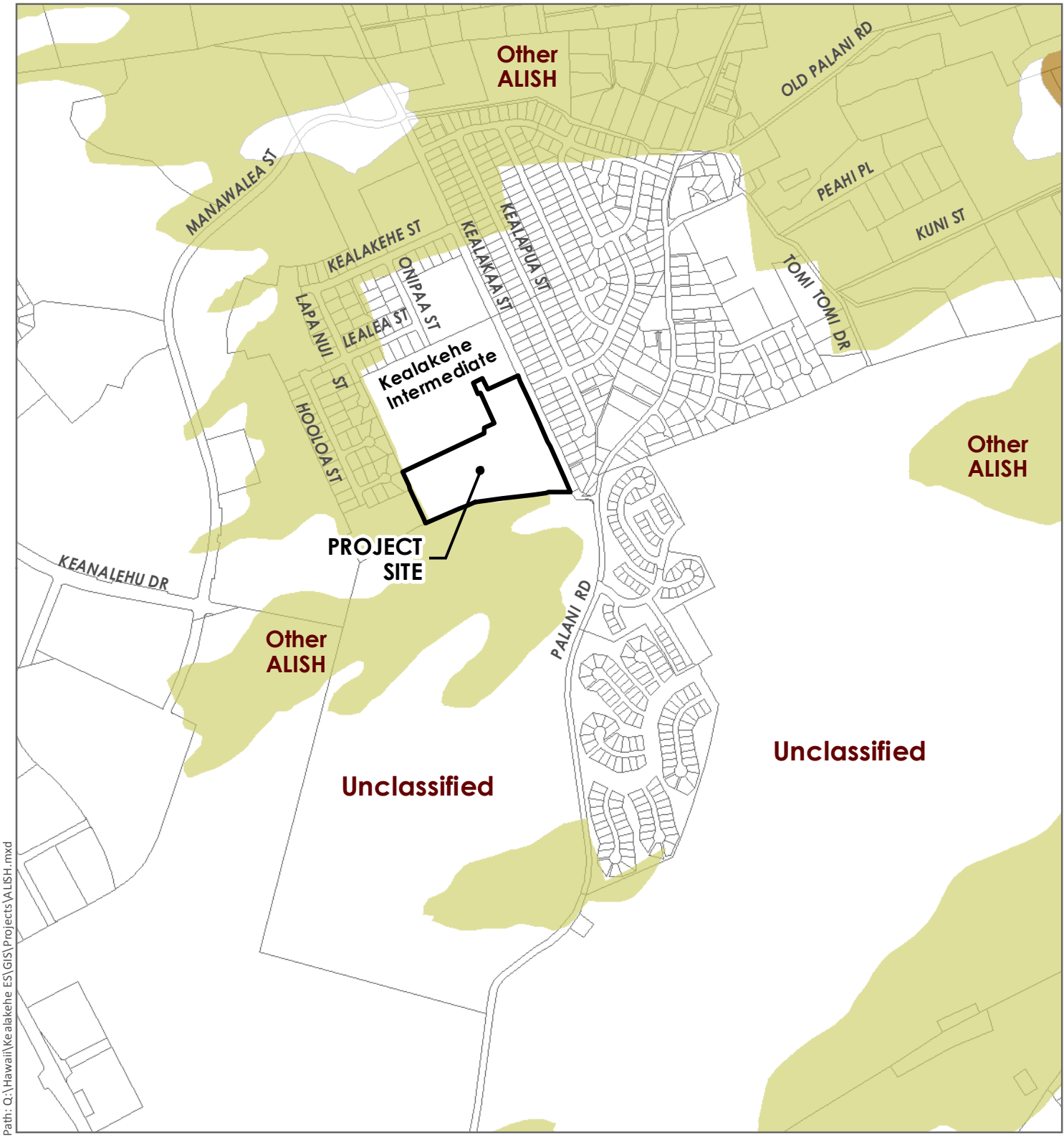
North

Linear Scale ( feet )

PBR HAWAII  
& ASSOCIATES, INC.








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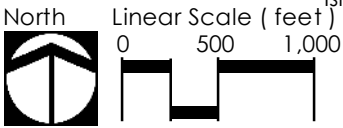
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**LEGEND**

-  Project Site
-  Prime ALISH
-  Unique ALISH
-  Other ALISH
-  Unclassified

**Figure 9**  
**Agricultural Lands of Importance to the State of Hawai'i (ALISH)**

**Kealakehe Elementary School**  
**New Classroom Building**



Island of Hawai'i



Source: Hawai'i State Department of Agriculture (1977).  
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

### **3.4 HYDROLOGY**

#### **Surface Water**

As noted in Section 3.2 (Geology and Topography) above, the lava flows associated with the Keauhou aquifer system are less than 5,000 years old. Most rainfall, except in heavy storms, percolates rapidly into the porous lava. Due to higher rainfalls in the *mauka* areas, short and shallow stream valleys have been eroded into the surface of the volcano. The most prominent in the region is Wai‘aha Stream near Hōlualoa. Heavy localized rainfall can easily exceed the capacity of the shallow drainageways resulting in flooding of adjoining areas. Moreover, even relatively slight changes in topography through grading and other land-disturbing activities can affect the capacity of drainage courses or change the direction of flows. Areas that have not previously experienced flooding could flood during even short periods of high rainfall. The predominantly steep topography of Kona causes runoff to flow quickly, resulting in short response times to potentially rapid flooding (County of Hawai‘i Planning Department, 2008).

The KES campus covers an area with an elevation difference of approximately 100 feet over a distance of approximately 1,030 feet, from the school entrance at Kealaka‘a Street at approximately 800 ft. above mean sea level (AMSL), down to a detention basin at 690 ft. AMSL located behind (*makai*) of the Project area. With rainfall, surface water thus flows from the existing buildings and impervious surfaces of the upper portions of campus, through the Project area, down into the detention basin near the lowest point of the campus. As previously noted, the soils underlying the school are characterized by the USDA NRCS as Kaimu extremely stony peat (rKED), which exhibits rapid permeability and slow runoff and is underlain by fragmental ‘A‘a lava.

#### **Wetlands**

There are no large fresh water surface streams, ponds, lakes, or wetlands near the KES campus. The KES campus is located about 2.7 miles from the Wai‘aha Stream, an intermittent stream that acts as the southern boundary of the Keahuolū Ahupua‘a.

#### **Ground Water**

The occurrence of groundwater resources in the State of Hawai‘i is highly variable in extent and type. Aquifers range from being limited in size to being very extensive, and from being isolated to being connected with other aquifers. Under the State’s Water Resource Protection Plan, aquifers of the Island of Hawai‘i have been classified under an aquifer coding system. This system is comprised of Aquifer Sectors, and then Aquifer Systems located within these sectors. An Aquifer Sector reflects an area with broad hydrogeological (subsurface) similarities while maintaining traditional hydrographic (surface), topographic, and historical boundaries. The Aquifer System is an area within a sector that is more specifically defined by hydrogeologic continuity, particularly hydraulic connections among aquifer types and units.

On the Island of Hawai‘i, groundwater is the primary source of drinking water. In Kona, groundwater occurs as both basal groundwater and high-level (dike-impounded perched) groundwater. The basal lens in Kona is relatively thin and inconsistent due to the low rainfall input and the lack of a geological “plug” that could slow the leakage of the groundwater at the coastline. Consequently, wells drawing from basal groundwater in Kona are susceptible to salinity if they are drilled too deep or if they are over-pumped. In the 1990s, exploratory wells drilled above the 1,600-foot elevation in Kona encountered high-level (dike-impounded perched) groundwater 25 to 460 feet above sea level (County of Hawai‘i Planning Department, 2008).

The KES campus is situated in the Kauhau Aquifer System (80901), which is within the Hualālai Aquifer Sector. Groundwater aquifers of the Hualālai volcanics are known to extend at least 4 miles inland to the Māmalahoa Highway. Beyond about five miles, high level groundwater may only exist in one of the Hualālai rift zones.

The Department of Water Supply (DWS) of the County of Hawai‘i provides water service to KES via a water main is located along Kealakaa Street.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Project is not anticipated to have any significant adverse impacts on groundwater resources. No long-term uses that could contaminate ground water are expected to develop as part of the Project. Drinking water to the Project will be provided by the DWS water main along Kealakaa Street, assuming water pressure and flow are adequate for future development.

The Project is not anticipated to have any direct or indirect effect on surface water resources, such as perennial or intermittent streams, wetlands, anchialine ponds, or other special aquatic sites.

The proposed Project will result in an increase in impervious surface area and therefore more potential storm runoff, however as noted elsewhere, the soils underlying the school exhibit rapid permeability and slow runoff, and is underlain by fragmental ‘A‘a lava. Moreover, the Storm Drainage Standards described in Section 27-26 of the Hawai‘i County Code 1983 (2005 Edition) will be incorporated into drainage design to ensure the Project does not impact the existing storm water quality or volume of runoff. To satisfy the County’s standards for the protection of water quality, LID features will be integrated into the school design to maintain or improve the existing storm peak flows and storm water quality exiting the site of the Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed areas.

To minimize water quality impacts and to protect the soil resources during construction, activities will conform to Chapter 10, Erosion and Sediment Control, Hawai'i County Code. A National Pollutant Discharge Elimination System (NPDES) construction site stormwater discharge permit must be obtained by the contractor before the Project commences. The construction site stormwater NPDES permit will include completion of a Storm Water Pollution Prevention Plan (SWPPP) that identifies the best management practices (BMPs) that will be used during construction. These BMPs may include, but will not be limited to, the following:

- Revegetation using hydromulch or curlex-type of geotextile immediately following restoration;
- Prior to ground disturbance, installing silt fences, stormwater ponds, check dams, and other barriers;
- Regular inspection of sediment control devices and immediately after periods of heavy rainfall by trained personnel;
- Planting of a temporary cover crop;
- Installing covers over soil stockpiles;
- Installation of vehicle-entrance sediment barriers;
- Washing of vehicles in the designated wash area before they egress the Project site;
- Regular inspection and maintenance of equipment to check for and stop leaking hoses and fittings; and
- Equipping the job site with spill kits and training personnel in its use along with proper waste disposal.

During construction, the grading will follow BMPs as described in the grading permit and Hawai'i Administrative Rules on Fugitive Dust, Section 11-60.133, Anti-degradation policy, Section 11-54-1.1. By utilizing BMPs, the Project will minimize sediment coming off the Site, reducing the potential of the Project contributing to the turbidity of area waterways. The contractor will submit a site specific construction BMP Plan to the State DOH before grading commences.

Once KES New Classroom Building is fully operational, the school administration will be responsible for implementing and administrating programs to ensure that any hazardous materials utilized are properly stored, used, and disposed and that such materials do not enter into the on-site LID storm water features or the storm drain.

### **3.5 NATURAL HAZARDS**

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

The State of Hawai'i Department of Defense, Hawai'i Emergency Management Agency (State Civil Defense) operates a system of civil defense sirens throughout the State to alert the public of emergencies and natural hazards, particularly tsunamis and hurricanes.

The closest existing siren is HA602, Kealakehe School siren, which is located approximately 800 feet (northeast) from the Project site.

It should be noted that KES is designated as a Public Emergency Shelter ([data.hawaii.gov](http://data.hawaii.gov)) and will continue to be so even with the development of the proposed KES New Classroom Building.

### **3.5.1 Floods**

Based on information provided by the State Department of Land and Natural Resources Engineering Division, according to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program, the Project site is not located within any designated floodway. The Site is located in Zone X, which is an area determined to be outside the 500-year flood plain (Figure 10).

### **3.5.2 Tsunamis**

Since the early 1800's, approximately 50 tsunamis have inundated the State of Hawai'i's shores. Seven historical events have caused major damage. According to the FEMA FIRM, the Site is located well inland and uphill of areas which would be impacted by coastal flooding from a tsunami.

### **3.5.3 Hurricanes**

Hurricanes are classified into one of five categories according to the Saffir-Simpson Hurricane Scale. This scale provides some indication of the potential damage and flooding a hurricane will cause upon landfall. Since 1980, two hurricanes have had a devastating effect on Hawai'i. They were Hurricane 'Iwa in 1982 (Category 1- sustained winds between 75–95 mph) and Hurricane 'Iniki in 1992 (Category 4- sustained winds between 131–155 mph). In both instances, damage was sustained primarily on the Islands of Kaua'i and O'ahu. While it is difficult to predict such natural occurrences, it is reasonable to assume that future hurricanes are likely, given historical events. However, the Island of Hawai'i has historically received less threat and damage from hurricanes as compared to the Island of Kaua'i.

The three major elements that make a hurricane hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (Federal Emergency Management Agency, 1993). Of these three, only strong winds and heavy rainfall could affect the Project. The Project site is not located along the shoreline and is at an elevation over 700 feet above mean sea level. As a result, this location makes impacts from large waves and storm surge highly improbable.



### **3.5.4 Earthquakes**

In Hawai‘i, most earthquakes are linked to volcanic activity, unlike other areas where a shift in tectonic plates is the cause of an earthquake. Each year, thousands of earthquakes occur in the islands, particularly on the Island of Hawai‘i, the vast majority of which are detectable only with highly sensitive instruments. However, moderate and disastrous earthquakes have occurred in the islands in the past. The largest earthquake in the state (magnitude 7.9) occurred in 1868 on the Island of Hawai‘i.

On the Island of Hawai‘i, earthquakes may occur before or during a volcanic eruption, or may result from the underground movement of magma that comes close to the surface. The majority of the island’s seismicity is related to the movement of magma within Kīlauea or Mauna Loa. A few of the island’s earthquakes are less directly related to volcanism. These originate in the zones of structural weakness at the base of volcanoes or deep within the earth beneath the island due to the gravitational adjustment of the volcanic edifice.

Non-volcanic Hawaiian earthquakes reflect the long-term accumulation and release of lithospheric stresses, rather than short-term processes associated with the motion of magma before or during an eruption. The long-term stresses consist in part of stresses generated in the crust and mantle by the weight of the volcanic rock that composes the islands. In that sense, most Hawaiian earthquakes that are not directly associated with eruptions are nonetheless broadly related to volcanic activity.

The seismic risk classification of the Island of Hawai‘i is Zone 4 Seismic Probability Rating, which indicates a 10 percent chance of severe shaking in a 50-year interval. Seismic tremors on the island have caused ground cracks, landslides, ground settlement, damaging tsunami, and mudflows. Buildings, bridges, and water tanks have been destroyed or damaged, and utility, sewer, and water lines have been disrupted (Fletcher III, Grossman, Richmond, & Gibbs, 2002). New construction could be impacted by seismic activity resulting in destruction and possible injury or loss of life.

The seismic hazard is highest along the southeast coast of the Island of Hawai‘i, followed by the Kona coast. The locations of larger damaging earthquakes of magnitude 6 or greater since 1868 on the Island of Hawai‘i have generally occurred on the southern half of the island, primarily on the eastern end. The most recent large earthquake on the southeast flank occurred in June 1989 with a magnitude 6.1. The largest earthquake in recent history occurred about 10 miles from the KES campus on October 15, 2006, and registered a magnitude of 6.7. The October 15<sup>th</sup> earthquake is probably not directly related to future volcanic eruptions. A magnitude 6.9 tremor on August 21, 1951, damaged homes on the Kona coast and triggered numerous damaging landslides. As mentioned above, the largest earthquake on the Island of Hawai‘i on record was a magnitude 7.9 that occurred in 1868 near the south coast which triggered a tsunami along the

Ka‘ū-Puna coast that drowned 46 people and which spawned numerous landslides that resulted in 31 deaths.

### **3.5.5 Volcanic Hazards**

Hawaiian volcanoes erupt either at their summits where lava collects and may overflow from craters called calderas, or along their flanks where lava issues through fractures called rift zones. The volcanic hazard is associated with lava flows, explosive eruptions, airborne lava fragments, poisonous and corrosive volcanic gases, and ground cracks and settling. Airborne ash, cinders, and other lava fragments are usually only hazardous in the immediate vicinity of an eruption (Fletcher III, Grossman, Richmond, & Gibbs, 2002).

Volcanic hazard zone maps developed for the Island of Hawai‘i were revised by the U.S. Geological Survey in 1987. The current map divides this island into zones ranked from 1 through 9 based on the probability of coverage by lava flows, with Zone 1 having the most repeatedly active vents in historic time, and Zone 9 being least active. Lava flow risks are defined according to geology, seismic and volcanic activity history, and recent scientific predictions. Hazard zones from lava flows are based mainly on the location and frequency of both historic and prehistoric eruptions. Hazard zones also take into account larger topographic features of the volcanoes that will affect the distribution of lava flows.

Based on this map, the Project site is located within an area with a hazard zone rating of 4. This hazard zone area includes not only all of Kailua-Kona town, but also the entire Hualālai Volcano. The rating of 4 is for areas having a greater distance from active vents and topography making it less likely that flows will cover that area. There is a small percentage of the area that has been covered with lava in the past 10,000 years. The percentage of Hualālai Mountain that has been subject to damage from lava in the last 750 years is less than 15 percent. Hualālai Volcano is considered dormant, having last erupted in 1801. Indeed, the frequency of eruptions on Hualālai is lower than on Kīlauea and Mauna Loa.

Property loss and economic devastation are the most frequent consequences of lava flow. Based on the probability of lava flows in Zone 4, there is a low concern for developing structures in the Project site area. Figure 11 displays the Volcanic Hazard Zones for the Island of Hawai‘i.

### **3.5.6 Wild-land Fires**

The greatest danger of fire is where wild-land (trees and brush) borders urban areas. Although all the Hawaiian Islands are vulnerable to wild-land fires (especially during the summer months, prolonged drought and/or high winds), the great majority of wildfires are human-caused (intentionally caused or by negligence) and start along roadsides. The numbers of such fires are increasing. Wildfires can and do also occur naturally. Hawai‘i County has a Fire Prevention Bureau that works to prevent fires before they can cause injuries and property damage. The State Department of Land and Natural Resources, Division of Forestry and Wildlife has authority

under Chapter 185, Hawai‘i Revised Statutes, Land Fire Protection Law, for the prevention, pre-suppression, and suppression of wildfires for forest reserves. It also has the authority to cooperate with established fire control agencies for the protection of lands not within the Department’s protection areas. The Project will comply with all fire code requirements.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Project is not anticipated to increase the Site’s exposure to any natural hazard. However, the Project is anticipated to increase the amount of impervious surfaces which may cause increased runoff and flooding, especially during a storm or heavy rain event. Storm water will be managed to ensure that there are negligible increases to the volume of flow leaving the site from current conditions. The Storm Drainage Standards described in Section 27-26 of the Hawai‘i County Code 1983 (2005 Edition) will be incorporated into drainage design to ensure the Project does not impact the existing storm water quality or volume of runoff. To satisfy the County’s standards for the protection of water quality, LID features will be integrated into the school design to essentially maintain or improve the existing storm peak flows and storm water quality exiting the site of the Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed areas.

During construction, BMPs will be implemented to reduce the potential for storm water pollution leaving the Project area. Once the proposed KES New Classroom Building is fully operational, the school administration will be responsible for implementing and administrating programs to ensure that any hazardous materials utilized are properly stored, used, and disposed and that such materials do not enter into the on-site LID stormwater features, the retention basin, or the surrounding areas.

With the exception of an increase in impervious surface area, construction of the Project will not exacerbate any natural hazard conditions. Should there be a hurricane or earthquake, the potential impact of destructive winds and torrential rainfall and earth movement will be mitigated through compliance with the International Building Code. The site is located outside the designated tsunami evacuation zone and is at an elevation that is very unlikely to be impacted by a tsunami. As previously noted, KES is designated as a Public Emergency Shelter ([data.hawaii.gov](http://data.hawaii.gov)) and will continue to be so even with the development of the proposed KES New Classroom Building. Based on the probability of lava flows in Zone 4, there is a low concern for volcanic hazards in the area. The Project will comply with all fire code requirements, mitigating potential impacts from wild-land fire hazards. During the Pre-Consultation process, the State Department of Defense wrote that it had no comments to offer relative to the project.



BASEMAP: FIRM BASEMAP



# Flood Hazard Assessment Report

www.hawaiiinfip.org

## Property Information

COUNTY: HAWAII  
 TMK NO: (3) 7-4-019:044  
 WATERSHED: WAIAHA  
 PARCEL ADDRESS: 5062 ONIPAA STREET  
 KAILUA KONA, HI 96740

## Notes:

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## Flood Hazard Information

FIRM INDEX DATE: APRIL 02, 2004  
 LETTER OF MAP CHANGE(S): NONE  
 FEMA FIRM PANEL: 1551660711C  
 PANEL EFFECTIVE DATE: PANEL NOT PRINTED

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION 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/>



*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 known 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:

	<b>Zone A:</b> No BFE determined.
	<b>Zone AE:</b> BFE determined.
	<b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	<b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	<b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.
	<b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.
	<b>Zone AEF:</b> 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.

	<b>Zone XS (X shaded):</b> 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.
	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.

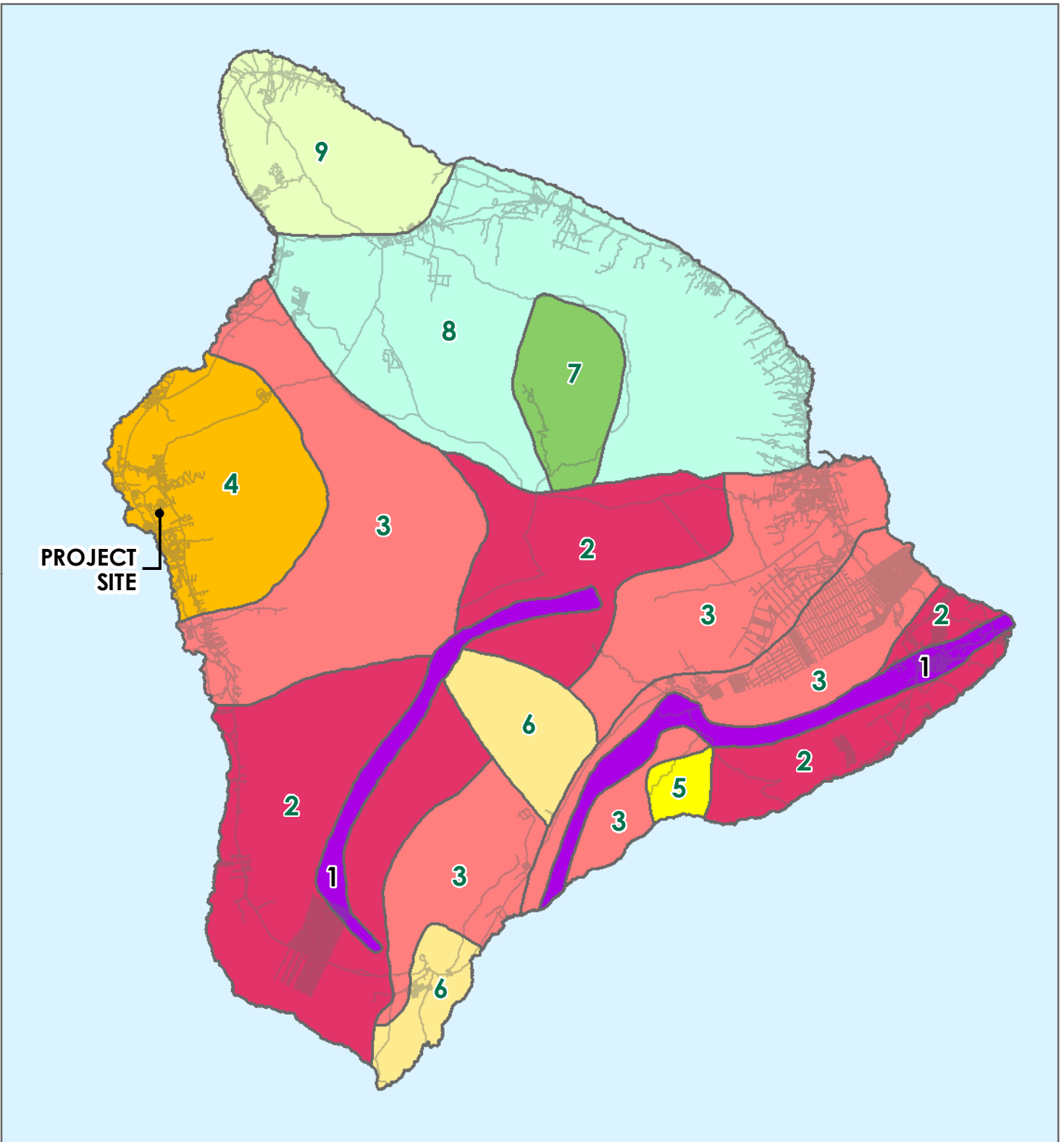
## OTHER FLOOD AREAS

	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.
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**Figure 10 : Flood Zone  
 Kealakehe Elementary School  
 New Classroom Building**



DATE: 11/10/2015



**LEGEND**

Project Site

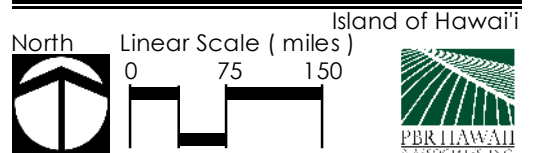
Lava Flow Hazard Zones



← Increasing severity of hazard

**Figure 11**  
**Lava Flow Hazard Zones**

**Kealakehe Elementary School**  
**New Classroom Building**



Source: U.S. Geological Survey (1991).  
Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

### **3.6 BOTANICAL RESOURCES**

The Project site and surrounding areas have a history of intense disturbance from urban development. The campus was erected in 1969 and is a landscaped school with open lawns and mostly non-native trees and shrubs (see site photographs in Figure 5). The proposed KES New Classroom Building will be built in the remaining undeveloped portion of the KES campus, either an area with dry grasses and shrubs, or possibly on open lawn. No threatened or endangered plant species are known to exist on the school campus. The Site was compared to the U.S. Fish and Wildlife Service's (USFWS) surveys of Critical Habitats using the state GIS database and no critical habitats appeared within the Project site.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The erosion control features required for the construction will mitigate impacts to the existing vegetation. The landscape architectural design for the proposed KES New Classroom Building will incorporate native species and/or plants proven to be adaptable to the area.

During the Pre-Consultation process, the Hawai'i State Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW) wrote that:

"...Though we know of no endangered plants directly within the proposed project site, this area does contain habitat occupied or formerly occupied by the endangered aupaka (*Isodendrion pyriformium*), and halapepe (*Chrysodracon hawaiiense*)."

As recommended by DLNR DOFAW, a thorough botanical survey will be conducted prior to any vegetation or ground disturbance.

### **3.7 WILDLIFE RESOURCES**

No avian species listed as endangered, threatened, proposed, or as a candidate species by the U.S. Fish and Wildlife Service (USFWS) or by the State of Hawai'i under its endangered species program are known to be present on the Project site or in the immediate vicinity. The Project site is not located within a State designated Natural Area Reserve. The Project site was compared to the USFWS' surveys of Critical Habitats using the state GIS database and no critical habitats appeared within the Project site. Furthermore, it is not within an area designated as habitat for the recovery of Hawaiian forest birds because these areas are generally situated above the 3,000-foot elevation. Avian species present on the Project site would likely consist of introduced species such as various types of pigeons and doves, babbler, silvereyes, saltators, and cardinals.

The Project site does not contain wetlands or important forest reserves that are suitable habitat for endangered, threatened, proposed, or candidate species of avifauna and fauna.



The only mammals that are likely to be present in the area include feral or domestic cats (*Felis catus*), roof rats (*Rattus r. rattus*), Norway rats (*Rattus norvegicus*), Polynesian rats (*Rattus exulans hawaiiensis*), and European house mice (*Mus domesticus*), as well as small Indian mongooses (*Herpestes a. auropunctatus*). Most animal species in this part of Kona, including birds, mammals, and invertebrates, are alien. However, two native endangered species, Hawaiian Hawks (*Buteo solitarius*) and Hawaiian hoary bats (*Lasiurus cinereus semotus*), are often seen in the area and in many other parts of the Island of Hawai'i.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Existing mammalian species present are introduced alien species which compete with native species over the same natural resources. There is nothing unique about the Project site or its vegetation. There are similar habitats in and around the Project area. Consequently, the Project will not have significant impacts on native avian or mammalian resources present within the general Project area.

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

This section describes the existing conditions of the human environment, potential impacts of the proposed KES New Classroom Building, and preliminary mitigation measures to minimize any impacts.

### **4.1 ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCES**

The Project site and surrounding areas have a history of intense disturbance from urban development. The campus was erected in 1989. The proposed KES New Classroom Building will be located between the Cafeteria and Building G. The DOE will ensure compliance with HRS Chapter 6E prior to any building permits.

#### **4.1.1 Potential Cultural Impacts**

Analysis of the potential effect of the proposed KES New Classroom Building on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the Project to introduce elements which may alter the setting in which cultural practices take place is a suggested guideline of the OEQC (2012).

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Project is not anticipated to have a negative impact on the archaeological, cultural, or historical resources of the Site.

A Cultural Impact Assessment (CIA) was completed in 2008 by Paul H. Rosendahl, PhD., Inc. (PHRI) for a proposed sewer line project located in the DHHL lands (TMK (3) 7-4-21:21) immediately adjacent to (and south of) the KES campus. The primary objective of the CIA was to identify any native Hawaiian traditional and customary rights currently being practiced within or adjacent to the project area that could be negatively affected, constrained, or restricted by the sewer line project (Belt Collins, December 2009).

The CIA found that few cultural activities occurred or continues to occur in that project area. The few cultural practices that do occur are the gathering of ocean resources and specific plants from the 300-foot elevation seaward. The current KES New Classroom Building Project is not located within these shoreline gathering areas (Belt Collins, December 2009).

Based on historical research and the CIA previously completed for the adjacent area, it is reasonable to conclude that Hawaiian rights related to gathering, access or other customary activities within the Project area will not be affected and there will be no adverse effect upon cultural practices or beliefs. Because there were no cultural activities identified within the Project area, no adverse effects are anticipated.

Kealakehe Elementary School New Classroom Building  
*Draft Environmental Assessment- Anticipated Finding of No Significant Impact*

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During the Pre-Consultation process, the Department of Land and Natural Resources (DLNR) State Historic Preservation Division (SHPD) wrote:

"Our records indicate that an archaeological literature review and field report (Hammatt and Shideler 2006) was submitted and reviewed by SHPD on January 30, 2007 (Log No. 2007.0269, Doc. No. 0701MK26). The review indicated that the current Kealakehe Elementary School campus was surveyed at the time of construction (1989), and no historic properties were identified during the survey. The results of the field inspection indicated that no archaeological historic properties were identified and the potential for subsurface archaeological resources was unlikely. The report recommended that no further work is necessary, and SHPD concurred with this recommendation (Log No. 2007.0269, Doc. No. 0701MK26)."

"Based on the information above, SHPD's determination is **no historic properties affected**. The permit processing may continue. In addition, SHPD has no further comments in regards to HRS §343, Environmental Assessment." (See comment letter in Appendix A.)

The State of Hawai'i DOE and its contractors will comply with all State and County laws and rules regarding the preservation of archaeological and historic sites. The construction documents will include provisions that, in the event that historic resources, including human skeletal remains, cultural layers, cultural deposits, features, artifacts, sinkholes, lava tubes or lava blisters/bubbles are identified during grading and grubbing activities, work will cease immediately and the State Historic Preservation Division will be contacted to assess the significance of the find and recommend appropriate mitigation measures, as necessary.

## **4.2 TRANSPORTATION**

### **4.2.1 Roadways, Access, and Parking Facilities**

The Kealakehe Elementary School is primarily served by Kealaka'a Street, a two-lane road that serves to collect much of the southern portion of older Kealakehe Village to Palani Road (County Highway 190), and across Palani Road to the Queen Lili'uokalani Village Subdivision via Palihiolo Street. The intersection of Kealaka'a/Palihiolo and Palani Road is signalized with painted crosswalks across Kealaka'a Street and across the southern intersection of Palani Road. Palani Road is a County right-of-way that provides primary access between Māmalahoa Highway in the uplands of North Kona, and Kailua-Kona town at Kailua Bay.

Kealaka'a Street is a two-lane road with sidewalks and on-street parking on both sides of the street between Manawalea Street to the southern-most entry to Kealakehe Elementary School.

Kealakehe Elementary School New Classroom Building  
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There are also sidewalks that extend from the School, along Kealaka‘a Street, to the intersection with Palani Road. The posted speed limit along Kealaka‘a Street fronting both the Elementary and Intermediate School is 20 miles per hour. Where Kealaka‘a intersects with Kealakehe Street, Manawalea Street and Kumakani Street, painted crosswalks are provided.

If the vehicular entries to Kealakehe Elementary School are blocked, students, teachers/staff and parents can access the school via the adjoining Kealakehe Intermediate School or from Lapanui or Onipa‘a Streets via Kealakehe Street.

Most of the roads in older Kealakehe Village west of Kealaka‘a Street connect to either Kealakehe Street or Manawalea Street. Most of the roads in the Village east of Kealaka‘a Street connect to Uluaoa Street, which eventually intersects with Palani Road.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Short-term construction-related activities are expected to cause minimal increases in traffic in the immediate Project vicinities. After completion of construction, this Project will not result in an increase in traffic volumes once the Project is completed.

During the Pre-Consultation process, the Hawai‘i State Department of Transportation (DOT) wrote that the Project is not anticipated to have a significant impact on State highway facilities.

**4.2.2 Public Transportation**

Hele-On is a public transportation service provided by the Hawai‘i County Mass Transit Agency, with routes covering most of the Island of Hawai‘i. There are presently two bus routes that loop from Palani Road onto Kealaka‘a and Uluaoa Streets: the Kona-Hilo Route, and the Intra-Kona Route. Both routes pass the main entrance to Kealakehe Elementary School on Kealaka‘a Street and stop in the vicinity of the school.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

In the long-term, no significant change in student population is expected. Therefore, the impact of Kealakehe Elementary School’s contribution to the cumulative traffic impacts on State highways facilities in the area (Māmalahoa Highway) should be minimal. In general, the proposed classroom building is not anticipated to have a long-term impact on traffic and access at Kealakehe Elementary School.

The Project will not require permanent rerouting or alteration of roadway traffic, but it may be required occasionally to accommodate construction equipment. Traffic cones and other directional devices will be placed in the roadway to guide vehicles around work areas. The contractor will implement measures to provide access past work sites and to minimize the inconvenience to the community. These measures may include the following:

- Posting flagmen for traffic control around work sites.
- Backfilling/covering all trenches at the end of the work day.
- Posting safety devices and signs for the duration of construction.
- Scheduling construction and material deliveries during non-peak traffic hours.
- Scheduling construction activities that require lane closures to occur thirty minutes after school begins, ending thirty minutes prior to the end of the school day

### **4.3 NOISE**

Current sources of noise in the vicinity of the Project include noises associated with vehicular traffic, particularly along Palani Road, Kealaka‘a Street, and Māmalahoa Highway, wind through vegetation and with typical residential and school noises.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Because the Project is taking place on a school campus, children, who are sensitive receptors, may be impacted.

The Project is expected to produce short-term increased noise levels during construction that will include an increase in heavy equipment/vehicular traffic in the area. However, upon completion of the Project, noise levels will be reduced back to pre-construction levels. Because the proposed KES New Classroom Building will occur within the boundaries of the public school campus, the DOE will work closely with school officials regarding construction activities to reduce noise impacts to students and staff.

Community Noise Control regulations (HAR Title 11, Chapter 46) establish maximum permissible sound levels for construction activities occurring within three “acoustical” zoning districts. Under these regulations, the Project area and immediate vicinity fall under the Class A zoning district. This district limits maximum permissible daytime noise (7AM-10PM) to 55 dB(A) and nighttime noise (10PM-7AM) to 45 dB(A).

In general, construction activities cannot exceed the permissible noise levels for more than ten percent of the time within any twenty minute period except by permit or variance. Any noise source that emits noise levels in excess of the maximum permissible sound levels cannot be operated without first obtaining a noise permit from the DOH. Although the permit does not attenuate noise, it regulates the hours during which excessive noise is allowed.

Exposure to noise is expected to vary by construction activity, and the type of equipment used during the different activities. Heavy machinery and pneumatic impact equipment will likely generate noise in the range of 82-96 decibels-weighted (dB(A)) within 50 feet of the source. The general contractor(s) is expected to be responsible for obtaining necessary permits and complying with all permit conditions. There is a need to balance work activities to meet permit

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conditions for "acoustical" zoning districts while minimizing traffic disruptions. Work is expected to be scheduled primarily for daytime hours, as described in HAR Title 11, Chapter 46 (7AM-10:00 PM), Monday through Friday. The contractor is also expected to ensure that all construction equipment with motors is properly equipped with mufflers in good operating condition. The contractor may employ other mitigation measures to minimize those temporary noise impacts.

To the extent possible, the noisiest construction will be scheduled during the summer months to minimize impact on students. Because the proposed KES New Classroom Building will occur within the boundaries of a public school campus, the DOE and Contractor(s) will work closely with KES officials regarding construction activities to reduce noise impacts to students and staff particularly during crucial standardized testing periods.

#### **4.4 AIR QUALITY**

Ambient air quality standards (AAQS) have been established by both Federal and State governments that limit ambient concentrations of six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead, ozone, and particulate matter less than 10 microns in aerodynamic diameter (PM<sub>10</sub>) or less than 2.5 microns (PM<sub>2.5</sub>). In addition, a State standard has been established for hydrogen sulfide (H<sub>2</sub>S). State AAQS are more stringent than the comparable national limits (NAAQS) except for the standards for sulfur dioxide, particulate matter, and lead, which are set at the same levels.

Hawai'i's standards are not divided into primary and secondary standards as are the National standards. Primary standards are intended to protect public health with an adequate margin of safety while secondary standards are intended to protect public welfare through the prevention of damage to soils, water, vegetation, man-made materials, animals, wildlife, visibility, climate, and economic values.

Air quality in Hawai'i is generally characterized as relatively clean and low in pollution. Northeast trade winds that are predominant throughout the year typically carry emissions and other air pollutants from inland areas out toward the ocean. Air quality in the Project area is believed to be relatively good, except for occasional impacts from upwind sulfur dioxide volcanic emissions that convert to a particulate-sulfate volcanic haze ("vog") and from localized traffic congestion, particularly in the Kailua-Kona community. Occasionally, wind patterns carry emissions from Kīlauea Volcano to the northwest, in the direction of the Site. Air flow from this southeast direction carrying vog can result in an increase in pollution and a decrease in visibility, and can impair the health of sensitive receptors.

Kīlauea Volcano is recognized as the largest point source of SO<sub>2</sub> gas in the United States. Gaseous emissions increased dramatically in 2008 when a new vent opened at the volcano's



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summit. Emission estimates increased to 3,000 – 5,000 tons per day (TPD) of SO<sub>2</sub>, in contrast to previous average emission of 1,700 TPD.

The State Department of Health (DOH) has monitoring stations on the Island of Hawai‘i, which mainly measure air quality impacts from the volcano and geothermal energy production. The closest air monitoring station to the Project area is located on the upper campus of Konawaena High School, approximately 13 miles south of the KES campus. Based upon the DOH 2014 air quality data for the Kona air monitoring station, there were no occurrences of PM<sub>10</sub>, PM<sub>2.5</sub>, ozone, SO<sub>2</sub>, CO, or H<sub>2</sub>S greater than the National and State standards (State of Hawai‘i, Department of Health, 2015)

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Long-term air quality impacts due to the Project are not expected. Actions associated with the Project are not expected to exceed any State or Federal air quality standards.

Short-term air quality impacts due to the Project may result from construction activities. However, emissions are unlikely to violate state or federal air quality standards based on the good air quality and moderate level of existing traffic volumes in the region. On a localized level during construction, air quality in the area may be impacted by exhaust generated from construction equipment and fugitive dust. The contractor will implement BMPs necessary to reduce any negative air quality impacts. BMPs for dust control may include but are not limited to:

- (a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;*
- (b) Providing an adequate water source at the site prior to start-up of construction activities;*
- (c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;*
- (d) Minimizing dust from shoulders and access roads;*
- (e) Providing adequate dust control measures during weekends, after hours and prior to daily start-up of construction activities; and*
- (f) Controlling dust from debris being hauled away from the Project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.*

A combination of these and other measures to mitigate potential air quality impacts will be implemented as appropriate. Exhaust emissions from construction equipment and increased vehicular traffic should not violate State or Federal air quality standards based on the moderate level of existing traffic volumes in the region.

#### **4.5 VISUAL RESOURCES**

The Hawai'i County General Plan (2005) has identified the backdrop of Hualālai Volcano as the predominant visual attribute of the region. Its steep green slopes can be viewed from the coast, and from higher elevations, spectacular vistas can be seen of the coastline, ocean, and horizon (County of Hawai'i, 2005). The Honokōhau coastline is another notable site of natural beauty identified by the General Plan that is visible from the Project site.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

No important view planes or scenic sites recognized in the Hawai'i County General Plan would be affected. Neither the view of Hualālai Volcano from the coast nor the view of the Honokōhau coastline from higher elevations would be substantially affected. Some initial impact to visual character may occur on a localized scale because of construction activities and vegetation clearing, mostly involving landscaped or non-native wild vegetation, and creation of paved surfaces. The Project would not substantially affect the scenic character of this area.

#### **4.6 INFRASTRUCTURE AND UTILITIES**

A team of design consultants has been retained to address infrastructure requirements for the proposed improvements. Key findings are summarized in the following sections.

##### **4.6.1 Water System**

The Department of Water Supply (DWS) of the County of Hawai'i provides water service to KES via a water main located along Kealaka'a Street.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The new structure will be connected to the existing water system to support plumbing and restroom requirements. The proposed water system will include a domestic water line, a fire line, and a fire hydrant as part of the proposed KES New Classroom Building. Drinking water to the Project will be provided by the DWS water main along Kealaka Street, assuming water pressure and flow are adequate for future development. The school population is not expected to change; therefore, an increase in the average daily demand for water is not anticipated.

##### **4.6.2 Wastewater System**

The nearest wastewater treatment plant is the Kealakehe Wastewater Treatment Plant (KWWTP) located approximately 2.2 miles southwest of the Project site. A series of gravity-fed, county-owned sewer lines collect and convey wastewater from residences in some areas of Kailua-Kona to the KWWTP. However, the Project site is not currently connected to these sewer lines or to

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the KWWTP. Sewage is handled entirely on-site via a septic tank system. An existing leach field associated with the septic tank system is located *makai* of Building G.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Although the proposed KES New Classroom Building will include new restroom facilities, the school population (students and staff) will not increase, therefore, a change in peak waste water flow is not expected. The new classroom building will connect to a new individual wastewater system.

During the Pre-Consultation process, the County Department of Environmental Management wrote that it had no comments to offer on this Project.

**4.6.3 Drainage System**

The existing drainage system consists of a drywell located along the northern side of the fire lane, fronting Building P-4 and Building “G.”

According to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program, the Project site is not located within any designated floodway. The Site is located in Zone X, which is an area determined to be outside the 500-year flood plain, as shown on Figure 10 and described in Section 3.5.1.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

In the long-term, the Project will result in an increase in impervious surface area and therefore more potential storm runoff. The Storm Drainage Standards described in Section 27-26 of the Hawai‘i County Code 1983 (2005 Edition) will be incorporated into drainage design to ensure the Project does not impact the existing storm water quality or volume of runoff. To satisfy the County’s standards for the protection of water quality, LID features will be integrated into the school design to essentially maintain or improve the existing storm peak flows and storm water quality exiting the site of the Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed areas.

Construction will necessitate the use of materials of various toxicities. Adhesives, paints and fuel for equipment are the primary materials that have the potential to be accidentally spilled. The contractor will incorporate sessions that include spill prevention and clean up into its jobsite training.

During construction, BMPs will be implemented to reduce the potential for storm water pollution leaving the Project area. Once the proposed New Classroom Building is fully operational, the school administration will be responsible for implementing and administrating programs to

ensure that any hazardous materials utilized are properly stored, used, and disposed and that such materials do not enter into the on-site LID stormwater features, the detention basin, or the surrounding areas.

#### **4.6.4 Electrical and Communications System**

Hawaii Electric Light Company, Inc. (HELCO) and Hawaiian Telcom currently provide electrical and telecommunication service, respectively, to the North Kona area.

HELCO is regulated by the State and owns and operates a number of power generation facilities in the County.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

This Project will not affect the existing electrical or telecommunications demand generated by these communities and subsequently HELCO's power generating facilities, however, the existing network of utilities may be impacted during construction. Coordination with the various service and utility providers will be performed during design of the Proposed Project. Coordination will continue during the construction phase to insure service interruptions are minimized during construction, and all necessary safety precautions are met.

In an effort to meet State energy conservation, and clean energy goals (HRS Chapters 344 and 226), measures for energy efficiency and cost effective energy conservation will be implemented into the Proposed Project to reduce the maximum electrical load and energy consumption. The electrical systems will be designed to allow the future interconnection of photovoltaic arrays that could provide 100% of the annual electric energy needs for the Proposed Project in accordance with HI-CHPS requirements. The future photovoltaic arrays will be mounted on the rooftop of the building, which will be designed to accommodate the additional weight, and possibly free-standing mounting structures that would be provided by others.

#### **4.6.5 Solid Waste**

The Department of Environmental Management (DEM) Wastewater/Solid Waste Division operates two County landfills, one in Kona (Pu'uana'hulu Landfill) and the other in Hilo (Hilo Landfill). There are also several solid waste transfer stations located around the island. The nearest transfer station is the Kealakehe Transfer Station and Recycling Center in Kailua-Kona, located an approximately 3.8-mile drive downhill from KES.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Solid waste generated at the Site during the construction phase will increase over current conditions. Waste is expected to include materials from construction and grading activities. This Project is being designed for HI-CHPS verification. Therefore LID and construction practices are expected to be implemented in an effort to divert materials that can be reused/recycled away

from the landfill as well as minimize the amount of waste generated. Every effort will be made to reduce the waste generated during the construction phase and when possible materials/structures will be re-used and or recycled.

In the long-term, solid waste generation is not expected to increase because there will be no substantive change in enrollment with the new classroom building. During the Pre-Consultation process, the County Department of Environmental Management wrote that it had no comments to offer on this Project.

#### **4.7 HAZARDOUS MATERIALS**

The proposed Project will include the addition of facilities within the KES Campus. The proposed KES New Classroom Building will not alter existing structures, but may impact the existing paved court.

##### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Construction will necessitate the use of materials of various toxicities. Adhesives, paints and fuel for equipment are the primary materials that have the potential to be accidentally spilled. The contractor will incorporate sessions that include spill prevention and clean up into its jobsite training. Certified contractors will address the abatement of these hazardous materials in a manner that meets the State of Hawai‘i’s DOH requirements and ensures that these materials are properly contained and disposed.

In addition, the Proposed Project is being designed for HI-CHPS verification.

#### **4.8 SOCIO-ECONOMIC CHARACTERISTICS**

##### **4.8.1 Population**

The U.S. Census reported that the population of the County of Hawai‘i was 185,079 in 2010. The overall population increased by approximately 9% between 2000 and 2010 according to the U.S. Census 2010.

The Site is located within the U.S. Census Bureau’s Kailua Census Designated Place (CDP). In 2010, the population was 11,975, of which 3,106 were 19 years old or younger. The average household size was 2.74 people. Table 4-1 summarizes the population and characteristics of the area compared to the County and State.



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**Table 4-1: Population Characteristics**

Area	Population (2010)	Median Age (years)	Persons/ Household	Ethnicity (percent)
Kailua CDP	11,975	38.4	2.74	White: 36.7% Asian: 18.1% Hawaiian: 8.3% Other/Mixed: 36.9%
County of Hawai'i	185,079	40.9	2.7	White: 33.7% Asian: 22.2% Hawaiian: 8.5% Other/Mixed: 35.6%
State of Hawai'i	1,360,301	38.6	2.89	White: 24.7% Asian: 38.6% Hawaiian: 5.9% Other/Mixed: 30.8%

Source: (U.S. Census Bureau, 2010)

The permanent population of North Kona is very ethnically diverse, with about 25% of the population being Hawaiian or Part-Hawaiian. Residential stability is lower than in most communities, and the percentage of idle teens is higher than in most communities. More than half of the adolescents in North Kona responding to a statewide survey reported a lack of interest in school. The graduation rate at Kealakehe High School is 87%; however, only 39% go on to higher education. Twenty-two percent of young adults out of school do not have a high school diploma or equivalent (Earles, 2014).

The per capita income of a family of four living in North Kona is 25% lower than the state average, with about 19% of families with children living below the poverty level. Of these, over 44% are single female households with children under the age of 19. North Kona has among the highest proportions of children under 18 in the state, the highest rate of child abuse and neglect, and the highest rate of death of ages 1 through 14 in the state (Earles, 2014).

The State projects a 95% increase in multi-national immigration, with increasing numbers of English as a Second Language students entering the schools. The cultural diversity of North Kona is evident in the non-white population which includes Japanese, Filipinos, Portuguese, Mexicans, Africans, Vietnamese, Native Americans, Eskimos, Aleuts, Koreans, Micronesians, Samoans, Guamanians, and other Pacific Islanders. Of these, 18% speak a language other than English, with 43% able to speak only limited English. Many of those able to speak English speak a different language at home. Some others speak a form of Hawai'i Creole English (also known as Pidgin English), which is part of the everyday language for many in Hawai'i (Earles, 2014).

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

DOE projects that Kealakehe ES may see a growth of approximately 33 students from 2015 to 2021. The intent of the proposed KES New Classroom Building is to provide additional

classroom capacity to help absorb future growth for the complex. According to the DOE, the surrounding elementary schools do not have as much vacant land to expand on. More students may be coming to Kealakehe ES in the future as the possible result of shifting the school service boundary. For example, Kahakai ES is projected to grow by about 90 students in the next 5 years. The Proposed Project will not affect area population. The construction of the Project will improve KES's facilities in an effort to better meet the needs of the existing school population.

#### **4.8.2 Economy**

The local economy within the Kailua CDP is primarily based on accommodation and food services, followed by retail trade, education/health care/social services, and construction. Within the Kailua CDP, approximately 64% of the population is employed, 5.6% unemployed, and 30% not in the labor force.<sup>1</sup>

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

In the long term, the Project will not affect the economy within the Kailua CDP. The construction of the Project will improve the school's facilities in an effort to better meet the needs of the existing school population. In the short term this Project will have a positive effect on the State's economy by providing work during the planning, design and construction of the Project.

## **4.9 PUBLIC SERVICES AND FACILITIES**

### **4.9.1 Schools**

KES is one of six public schools (three elementary, one intermediate, one high, and one elementary/middle school) in the DOE Kealakehe Complex Area in the Hawai'i District. In addition, there are three public charter schools in the Kealakehe Complex Area. Table 4-2 presents public school and public charter school enrollment information (School Year 2014-15) for the Kealakehe Complex Area.

Private schools in the area include Hawaii Montessori Schools-Kona Campus (Early childhood-K), Kona Adventist Christian School (K-8), and Makua Lani Christian Academy (Pre-K-12). This area has the highest ratio of private schools to public schools on Hawai'i Island. Many of the families with the means send their children to private schools (Earles, 2014).

There is no college or university as yet in the area. However, the University of Hawai'i is currently building the Hawai'i Community College Pālanui Campus near the Kona

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<sup>1</sup> Based upon the employment status of the population 16 years or older

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International Airport. The recently opened college campus will provide unprecedented academic opportunities for West Hawai‘i residents, and has the potential to boost the local economy (Earles, 2014).

**Table 4-2: Enrollment for Public Schools and Public Charter Schools in Kealakehe Complex**

School	Enrollment in SY 2014- 2015
Holualoa Elementary	479
Kahakai Elementary	691
Kealakehe Elementary	1,003
Waikoloa Elementary & Middle	784
Kealakehe Intermediate	709
Kealakehe High	1,299
<i>Innovations PCS</i>	228
<i>Kanu o ka ‘Āina NCPCS</i>	307
<i>West Hawai‘i Explorations PCS</i>	248
<b>TOTAL =</b>	<b>5,748</b>

Source: (State of Hawai‘i, Department of Education, 2015)

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The objective of this Project is to provide 21<sup>st</sup> century classroom facilities to accommodate the current and projected increases in student enrollment accompanying growth in the area. The proposed new classroom building is anticipated to include six general education classrooms, an art/science classroom, a fully self-contained SPED classroom, an itinerant room, a faculty center, and a conference room, in addition to restrooms and utility rooms. As such, overall impacts are anticipated to be positive, not only directly for KES, but also indirectly for Kealakehe Intermediate and High Schools and the rest of the Complex Area schools.

Potential negative impacts to KES and Kealakehe Intermediate School would mostly be associated with short-term construction-related activities. Noise and dust emissions would likely constitute the primary impacts associated with construction activities. In order to mitigate these impacts, the contractor would be required to comply with applicable regulations and permit conditions governing construction activities to minimize disruptions to on-going classes, and nearby residential areas. Best management practices (BMPs) would be implemented to minimize dust, erosion, and other impacts from construction-related activities in accordance with permit requirements and State DOH regulations.

## **4.9.2 Police, Fire, and Medical**

### **Police Protection**

The proposed Project is located in the Hawai‘i Police Department Area II, Kona Patrol District. The Kona Patrol District encompasses 834 square miles and is between the South Kohala District at Kaauau Point and the Ka‘ū District at Kaulanamauna. Its officers operate from a central station in Kealakehe and from district stations in Keauhou and Captain Cook, as well as a mini-station in Kailua Village. The central Kona Station is located at 74-611 Hale Maka‘i Place, Kailua-Kona, an approximately 3.8-mile drive – or an approximately 1.6-mile crow’s flight – *makai* (downhill) from the proposed Project site.

The Hawai‘i Police Department has a number of community policing initiatives with the mission to form partnerships with the communities of Hawai‘i Island. According to their website:

*Community Police Officers are responsible for developing partnerships within the community in an effort to create a safe and secure environment. This can be accomplished through community mobilization, crime prevention efforts and problem solving (i.e., Neighborhood Watch, Citizen Patrol, etc.). Through mobilization, Community Police Officers can facilitate a community’s efforts to create positive changes within their neighborhood (Hawai‘i Police Department, 2015).*

As part of their community outreach efforts, the School Resource Officer (SRO) program was established on the Island of Hawai‘i in 2003. It is a collaborative effort by law enforcement officers, educators, students, parents, and the community to offer law-related educational programs in the schools in an effort to reduce crime, drug abuse, and violence, and to provide a safe school environment. The SROs deal with crime on campus, teach informative classes to students, provide law related counseling and are liaisons between the school and the Police Department. Most important, they are positive role models for the students. An SRO is assigned to Kealakehe Intermediate School, immediately adjacent to KES.

The Hawai‘i Isle Police Activities League (HI-PAL) program was established on the Island of Hawai‘i in 1980. It provides social and athletic activities for the youth of Hawai‘i between the ages of 5 and 17. HI-PAL comes under the jurisdiction of each district commander, whose patrol and community police officers, with community member assistance, provide positive activities for youths that teach moral and social values, such as sportsmanship, fair play, respect for authority, self-discipline and the benefits of hard work, all while having fun. HI-PAL also reaches out to youths who are considered “at risk” due to economic, geographical, or social situations.

**Fire Protection**

The Hawai‘i County Fire Department’s (HCFD) Fire Protection Division has the responsibility of protecting life and property from fire and other multifarious emergencies. The Fire Department’s multi-emergency work force manages a variety of crises throughout the Island of Hawai‘i and adjacent shores. HCFD provides the following services for all Hawai‘i Island residents and visitors: (1) fire suppression (structural, vehicular, brush, crop, etc.); (2) medical emergencies (pre-hospital for traumatic or natural illness); (3) land and sea rescues involving water sports or fishing, overdue hikers, hunters, or fishermen, etc.; (4) vehicular or other extrications; and (5) hazardous materials mitigation. The County has contracted with the State Department of Health for emergency medical ambulance services. All fire department personnel who provide basic and advanced life support are licensed or certified as required by State law.

The HCFD has 20 full-time fire/medic stations, and twenty volunteer fire stations. There are over 60 pieces of fire service apparatus, equipment, and vehicles available for a variety of emergencies that may occur on the island’s 4,028 square miles. For firefighting purposes, the County of Hawai‘i is divided into two battalion areas, East and West.

The proposed Project is situated approximately 1.9 miles *mauka* (uphill) from the Kailua Fire Station (Hawai‘i County Fire Station #7, West Battalion), which is located at 74-5109 Kealaka‘a Street, Kailua-Kona.

**Medical Services**

The Kona Community Hospital services the Kona community, and is located in Kealakekua 18 miles south of Kona International Airport, and approximately 12 miles south of KES.

Kona Community Hospital is a 94-bed acute and long-term care hospital. This hospital provides 24-hour emergency services and a family practice medical clinic with 34 long-term care beds, 11 psychiatric and 49 acute. The current hospital was rebuilt in 1975 to replace the former wooden structure with 52 beds and to further serve the medical needs of the area.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Project is not expected to create an increased demand on existing Police, Fire, or Medical services after construction, as the proposed Project will not generate an increase in student population. It is noted however, that there will be an occasional and unavoidable need for one or more of these services. During the Pre-Consultation process, the County Fire Department wrote that the proposed Project be in accordance with the Hawai‘i State Fire Code, National Fire Protection Association 2006 version, with County of Hawai‘i amendments. During the Pre-Consultation process, the County Police Department wrote that it had no comments on the proposed Project.



### **4.9.3 Recreational Facilities**

Limited recreational and cultural opportunities exist in this community. As a result, Kealakehe Intermediate School allows the Leeward Chargers football team to practice on the field every year, from March 1 to June 10, three (3) times a week. There is no cultural or community center, and the public library is closed Mondays and is open only one evening a week. There are nine parks, and one regulation size baseball field in the area.

The closest park to KES is the Old Kona Airport State Recreation Area, which is located approximately 3 miles *makai* and downhill of the KES campus. The park is approximately one mile long and covers an area of 103.7 acres, including baseball and soccer fields, tennis courts, and picnic/barbecue areas, as well as a stretch of rocky coastline featuring tide pools and a cove enjoyed by snorkelers and scuba divers. The park also includes the Kekuaokalani Gymnasium and the Kona Community Aquatic Center, which features a 50-meter swimming pool that is free and open to the public. These facilities are run by the County of Hawai‘i.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Since the Proposed Project will not increase enrollment and will be located three miles away, no impacts on the Old Kona Airport State Recreation Area are anticipated.

## **5 LAND USE CONFORMANCE**

State of Hawai'i and County of Hawai'i land use plans, policies, and ordinances relevant to the proposed KES New Classroom Building are described below.

### **5.1 STATE OF HAWAI'I**

#### **5.1.1 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 Site is located within the State Land Use Urban District. Public schools are permitted use in the State Land Use Urban District.

#### **5.1.2 Coastal Zone Management Act, Chapter 205A, Hawai'i Revised Statutes**

The U.S. Congress enacted the Coastal Zone Management (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 (10) 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, including the Project site.

The proposed Project site is located outside of the Special Management Area (SMA). The objectives and policies of the Hawai'i Coastal Zone Management (CZM) Program, along with a detailed discussion of how the KES Project conforms to these objectives and policies, are discussed below.

#### **Recreational Resources**

*Objective: Provide coastal recreational opportunities accessible to the public.*

*Policy A: Improve coordination and funding of coastal recreational planning and management; and*

*Policy B: Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*

- (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*

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

**Discussion:** The Site is located in North Kona, on the slopes of Hualālai Volcano. It is not a coastal development, is not located on the coastline, and is not in the SMA; therefore, policies regarding shoreline recreation resources are not applicable. However, to protect marine water quality the Project will be designed and built in compliance with all applicable Federal, State, and County regulations pertaining to storm water management including the Storm Drainage Standards described in Section 27-26 of the Hawai‘i County Code 1983 (2005 Edition). BMPs will be integrated into the construction project. LID features will be integrated into the Project design to essentially maintain or improve the existing storm peak flows and storm water quality exiting the site of the Proposed Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Proposed Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed area.

### **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.*

*Policy A: Identify and analyze significant archaeological resources;*

*Policy B: Maximize information retention through preservation of remains and artifacts or salvage operations; and*

*Policy C: Support State goals for protection, restoration, interpretation, and display of historic resources.*

**Discussion:** The Cultural Impact Assessment for a previous project in the adjacent area found that few cultural activities occurred or continues to occur in the Project area. The few cultural practices that do occur are the gathering of ocean resources and specific plants from the 300-foot elevation seaward. The current KES New Classroom Building Project is not located within these shoreline gathering areas. It is thus reasonable to conclude that Hawaiian rights related to gathering, access or other customary activities within the Project area will not be affected and there will be no adverse effect upon cultural practices or beliefs. Because there were no cultural activities identified within the Project area, no adverse effects are anticipated.

### **Scenic and Open Space Resources**

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

*Policy A: Identify valued scenic resources in the coastal zone management area;*

*Policy 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;*

*Policy C: Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*

*Policy D: Encourage those developments which are not coastal dependent to locate in inland areas.*

**Discussion:** The proposed Project is not coastal dependent and will be located inland, away from the shoreline; therefore, it is anticipated that there will be no effect on the quality of the coastal scenic and open space resources. In addition, the proposed New Classroom Building is located within the boundaries of an existing elementary school. The Proposed Project will be constructed in close proximity to the existing structures allowing the large open spaces within the campus to be retained.

### **Coastal Ecosystems**

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

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*Policy A: Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*

*Policy B: Improve the technical basis for natural resource management;*

*Policy C: Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*

*Policy 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*

*Policy E: Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

**Discussion:** The Proposed Project is not a coastal development, is not located on the coastline, nor within the SMA. To protect marine water quality the Project will be designed and built in compliance with all applicable federal, state, and county regulations pertaining to storm water management. The Storm Drainage Standards described in Section 27-26 of the Hawai'i County Code 1983 (2005 Edition) will be incorporated into drainage design to ensure the Project does not impact the existing storm water quality or volume of runoff. To satisfy the County's standards for the protection of water quality, LID features will be integrated into the school design to essentially maintain or improve the existing storm peak flows and storm water quality exiting the site of the Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Proposed Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed areas. BMPs will be employed during construction to reduce erosion of soils and fugitive dust during construction. These measures will also protect down-gradient resources and prevent secondary and cumulative impacts of storm water.

## **Economic Uses**

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

*Policy A: Concentrate coastal dependent development in appropriate areas;*

*Policy 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*

*Policy C: Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*

*(i) Use of presently designated locations is not feasible;*

*(ii) Adverse environmental effects are minimized; and*

*(iii) The development is important to the State's economy.*

**Discussion:** The proposed KES New Classroom Building does not directly impact the State's coastal-dependent economy; however, during construction, the Project will generate short-term employment (and accompanying State income and excise tax revenue). This Project will improve the facilities that will be utilized by the DOE to create a foundation for KES students' educational success.

## **Coastal Hazards**

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

*Policy A: Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;*

*Policy B: Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;*

*Policy C: Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*

*Policy D: Prevent coastal flooding from inland projects.*

**Discussion:** The Project is located well outside the tsunami inundation zone. In addition, decentralized LID drainage measures will be incorporated into the Project to reduce flooding hazards. As the footprint of the proposed KES New Classroom Building is estimated to cover only 5,500 square, it anticipated that there will be an insignificant increase in runoff from the Site.



## **Managing Development**

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

*Policy A: Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*

*Policy B: Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*

*Policy C: Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

**Discussion:** The Project is not a coastal development, is not located on the coastline, and is not in the SMA. Stakeholders were engaged in workshops early in the design phase of the Project. Pre-consultation comments were obtained and are reproduced in Appendix A. In addition, this EA discusses potential impacts and mitigation measures of the Project and provides an opportunity for input.

## **Public Participation**

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

*Policy A: Promote public involvement in coastal zone management processes;*

*Policy 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*

*Policy C: Organize workshops, policy dialogues, and site- specific mediations to respond to coastal issues and conflicts.*

**Discussion:** The Project is not a coastal development, is not located on the coastline, and is not in the SMA. Stakeholders were engaged in workshops early in the design phase of the Project. Pre-consultation comments were obtained and are reproduced in Appendix A. In addition, this EA discusses potential impacts and mitigation measures of the Project and provides an opportunity for input.

## **Beach Protection**

*Objective: Protect beaches for public use and recreation.*

*Policy 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;*

*Policy 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*

*Policy C: Minimize the construction of public erosion-protection structures seaward of the shoreline.*

**Discussion:** The Project is not a coastal development, is not located on the coastline, and is not in the SMA; therefore, this objective and these policies are not applicable.

## **Marine Resources**

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

*Policy A: Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*

*Policy B: Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*

*Policy 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;*

*Policy 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*

*Policy E: Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

**Discussion:** The Proposed Project is not a coastal development, is not located on the coastline, and is not in the SMA; therefore, policies regarding shoreline recreation resources are not applicable. However, to protect marine water quality the Project will be designed and built in compliance with all applicable federal, state, and county regulations pertaining to storm water management. The Storm Drainage Standards described in Section 27-26 of the Hawai'i County

Code 1983 (2005 Edition) will be incorporated into drainage design to ensure the Project does not impact the existing storm water quality or volume of runoff. To satisfy the County's standards for the protection of water quality, LID features will be integrated into the school design to essentially maintain or improve the existing storm peak flows and storm water quality exiting the site of the Proposed Project. Drainage on the site will be HI-CHPS verified. Filtration/infiltration through vegetation will capture the majority of the increased runoff resulting from the Proposed Project and allowing it to seep into the ground rather than leaving the Site. Overflow from the LID features will primarily be conveyed to grassed areas. BMPs will be employed during construction to reduce erosion of soils and fugitive dust during construction. These measures will also protect down-gradient resources and prevent secondary and cumulative impacts of storm water.

### **5.1.3 Hawai'i State Plan**

The Hawai'i State Plan (Chapter 226, HRS), establishes a set of goals, objectives and policies that serve as long-range guidelines for the growth and development of the State. Objectives and policies pertinent to the proposed Project are as follows:

#### **§ 226-21: Objectives and policies for socio-cultural advancement – education.**

***Objective:** 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.*
- (2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.*
- (3) Provide appropriate educational opportunities for groups with special needs.*
- (7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.*
- (8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.*

**Discussion:** The objective of this Project is to provide 21<sup>st</sup> century classroom facilities to accommodate the current and projected increases in student enrollment accompanying growth in the area. The proposed KES New Classroom Building is anticipated to include six general education classrooms, an art/science classroom, a fully self-contained SPED classroom, an itinerant room, a faculty center, and a conference room, in addition to restrooms and utility

rooms. The Project thus supports the objective and policies regarding education. Additionally, the DOE and Urban Works, Inc. (DOE's consultant architect) have designed the new classroom building to a level that will meet the Hawai'i Collaborative for High Performance Schools (HI-CHPS) Criteria for New Construction and Major Modernizations.

## **5.2 COUNTY OF HAWAI'I**

County-specific land use plans and ordinances pertaining to the Project include the County of Hawai'i General Plan, and the Kona Community Development Plan.

### **5.2.1 County of Hawai'i General Plan**

The County of Hawai'i's General Plan (amended 2005) is the policy document for the long range comprehensive development of the Island of Hawai'i. The General Plan is intended to guide the pattern of future development in the County based on long-term goals, while identifying and promoting the visions, values, and priorities important to its people. Specific General Plan goals and policies applicable to the Project follow.

#### *Section 10.1 - Public Facilities*

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

#### **Policies:**

- (a) *Continue to seek ways of improving public service through the coordination of service and maximizing the use of personnel and facilities.*
- (b) *Coordinate with appropriate State agencies for the provision of public facilities to serve the needs of the community.*

**Discussion:** Although the school is owned, funded, and administered by the State, the proposed Project is consistent with the County of Hawai'i General Plan Section 10.1, Goal A, regarding public facilities. The KES New Classroom Building will improve public service by creating state-of-the-art public facilities.

The objective of this Project is to provide 21<sup>st</sup> century classroom facilities to accommodate the current and projected increases in student enrollment accompanying growth in the area. The proposed KES New Classroom Building is anticipated to include six general education classrooms, an art/science classroom, a fully self-contained SPED classroom, an itinerant room, a faculty center, and a conference room, in addition to restrooms and utility rooms. Additionally, the DOE and Urban Works, Inc. (DOE's consultant architect) have designed the new classroom

building to a level that will meet the Hawai'i Collaborative for High Performance Schools (HI-CHPS) Criteria for New Construction and Major Modernizations. The Project is thus consistent with the County of Hawai'i General Plan's goal and policies regarding public facilities.

**Section 10.2 - Education**

**Policies:** *Educational policies relate to the provision of facilities rather than programs, which are the province of the State. It is nevertheless recognized that the facilities and programs are the tools necessary to improve total educational service.*

- (a) *Encourage continuous joint pre-planning of schools with the Department of Education and the University of Hawaii to ensure coordination with roads, water, and other support facilities and considerations such as traffic and safety, and access for vehicle, bicycle, and pedestrian. Encourage master planning of present and proposed public and private institutions.*
- (b) *Encourage combining schoolyards with county parks and allow school facilities for afterschool use by the community for recreational, cultural, and other compatible uses.*
- (c) *Encourage joint community-school library facilities, where a separate community library may not be feasible, in proximity to other community facilities, affording both pedestrian and vehicular access.*
- (d) *Encourage implementation of the Department of Education's 'Educational Specifications and Standards for Facilities.'*
- (e) *Encourage the Hawaii State Library System to seek alternate sites for public libraries located on the campuses of public schools.*

**Standards:**

- (a) *In proposed communities, sufficient acreage shall be reserved for school facilities. Sites shall be free from flooding and drainage problems, excessive slope and incorporate appropriate street and driveway design and location to minimize traffic interference, pedestrian hazard, and enable safe and easy access for vehicles, bicycles, and pedestrians.*

**Courses of Action (North Kona):**

- (a) *Encourage expansion of Holualoa school complex to meet school district needs.*
- (b) *Encourage the State Department of Education to add facilities as the need arises.*
- (c) *Improve basic school facilities to meet current standards.*
- (d) *Encourage construction of a new library facility to serve the Kailua-Keauhou area.*

**Discussion:** The objective of this Project is to provide 21<sup>st</sup> century classroom facilities to accommodate the current and projected increases in student enrollment accompanying growth in the area. The proposed KES New Classroom Building is anticipated to include six general education classrooms, an art/science classroom, a fully self-contained SPED classroom, an itinerant room, a faculty center, and a conference room, in addition to restrooms and utility rooms.

For this Project, joint planning between County and State entities will ensure coordination with roads, water, and other support facilities and infrastructure, as well as considerations such as traffic, safety, and access. Additionally, the DOE and Urban Works, Inc. (DOE's consultant architect) have designed the new classroom building to a level that will meet the Hawai'i Collaborative for High Performance Schools (HI-CHPS) Criteria for New Construction and Major Modernizations. The Project is thus consistent with the County of Hawai'i General Plan's policies and standards regarding the provision of facilities for education.

Section 10.2.4.5.1 (North and South Kona Profile) of the County of Hawai'i General Plan recognizes that the Kealakehe Complex has been experiencing ongoing student population growth problems, putting a strain on existing facilities. Consequently, the Courses of Action for North Kona call for the expansion and improvement of area facilities to meet current needs and standards. This Project is thus consistent with the General Plan's recommended courses of action for North Kona.

### **5.2.2 Land Use Pattern Allocation Guide**

The General Plan's accompanying Land Use Pattern Allocation Guide (LUPAG) Map establishes the future land use patterns for the island, including the community of Kailua-Kona. The LUPAG designates the Project site as Low Density Urban and Medium Density Urban. The proposed Project is consistent with the LUPAG designation, as it involves a proposed educational facility within an existing public facility, Kealakehe Elementary School.

### **5.2.3 Kona Community Development Plan**

The Hawai'i County General Plan requires that community development plans be adopted by the County Council for each judicial district in the County. The Kona Community Development Plan (KCDP), which the County Council recently adopted in September 2008, represents the judicial districts of North and South Kona covering 800 square miles of land or 20 percent of the land area for the County.



Kona has experienced tremendous growth over the past several decades, attracting an influx of new residents. The population has more than doubled, driven by resort development and the second-home residential market. As a result of this rapid growth rate, the Kona community recognizes the need to adopt sensible planning strategies that will meet growth demands and deal with issues of added traffic, affordable housing, and infrastructure, while maintaining or enhancing the quality of life for Kona residents. A major goal of the plan is to provide essential infrastructure and facilities to accommodate population growth in the area. Specific KCDP principles and policies applicable to the Project follow.

***Guiding Principle 6: Provide infrastructure and essential facilities concurrent with growth.*** *Future growth should occur where infrastructure (roads and utilities) and essential facilities (i.e. police, fire, and schools) are already in place. These facilities should be maintained at a level that will enhance the quality of life for Kona residents.*

***Policy PUB – 6.6: Important role of schools in creating a sense of community.*** *The quality of its schools defines the quality of the Kona community. Quality schools show the caring of the community for its children. Quality schools are an investment in the quality of the future, which create outstanding citizens who acquire market-competitive survival skills.*

**Discussion:** The Project is consistent with the KCDP. The Project will add to and improve existing school facilities in anticipation of future growth in the area. The 21<sup>st</sup> century facilities will be maintained at a level that will enhance the quality of life for Kona residents. The proposed Project is located within the Kona Urban Area as defined by the KCDP.

Moreover, the Project will enhance the quality of the Kealakehe Elementary School, effectively investing in the quality of the future of the Kona community.

#### **5.2.4 County of Hawai‘i Zoning Code**

The zoning regulations for the County of Hawai‘i are prescribed in Chapter 25 of the Hawai‘i County Code. This Zoning Code is applied and administered within the framework of the General Plan, and for the purpose of promoting health, safety, morals, and the general welfare of the County.

Under the Zoning Code, various zoning districts are established which regulate the type of development and permitted uses of property, and are depicted on zoning district maps. The current zoning for the Project site is A-1a Agricultural (minimum lot size of 1 acre).

This Project will be consistent with the County’s Zoning Code because it involves a government service for public benefit by providing additional and improved school facilities. Such use is permitted in any zoning district. As stated in Hawai‘i County Code Section 25-4-11(c): *“Public uses, structures and buildings and community buildings are permitted uses in any district,*

*provided that the director has issued plan approval for such use.”* Therefore, the Project will require a Plan Approval issued by the Hawai‘i County Planning Department.

### 5.3 APPROVALS AND PERMITS

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

**Table 5-1: Approvals and Permits**

<b>Permit/Approval</b>	<b>Responsible Agency</b>
Chapter 343, HRS Compliance	Office of Environmental Quality Control
ADA Compliance	State Disability & Communication Access Board
National Pollutant Discharge Elimination System (NPDES) construction site stormwater discharge permit	State Department of Health, Clean Water Branch
Noise Permit (if necessary)	State Department of Health, Indoor and Radiological Health Branch
Plan Approval	County of Hawai‘i, Planning Department
Grubbing, Grading and Stockpiling Permit	
Building Permits (including electrical, plumbing, civil)	
Occupancy	

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## **6 ALTERNATIVES**

This section identifies and evaluates a range of alternatives that could meet the purpose and need and possibly avoid, reduce, or minimize adverse environmental effects.

### **6.1 NO ACTION ALTERNATIVE**

Under the “no action” alternative, the construction of a new classroom building would not occur.

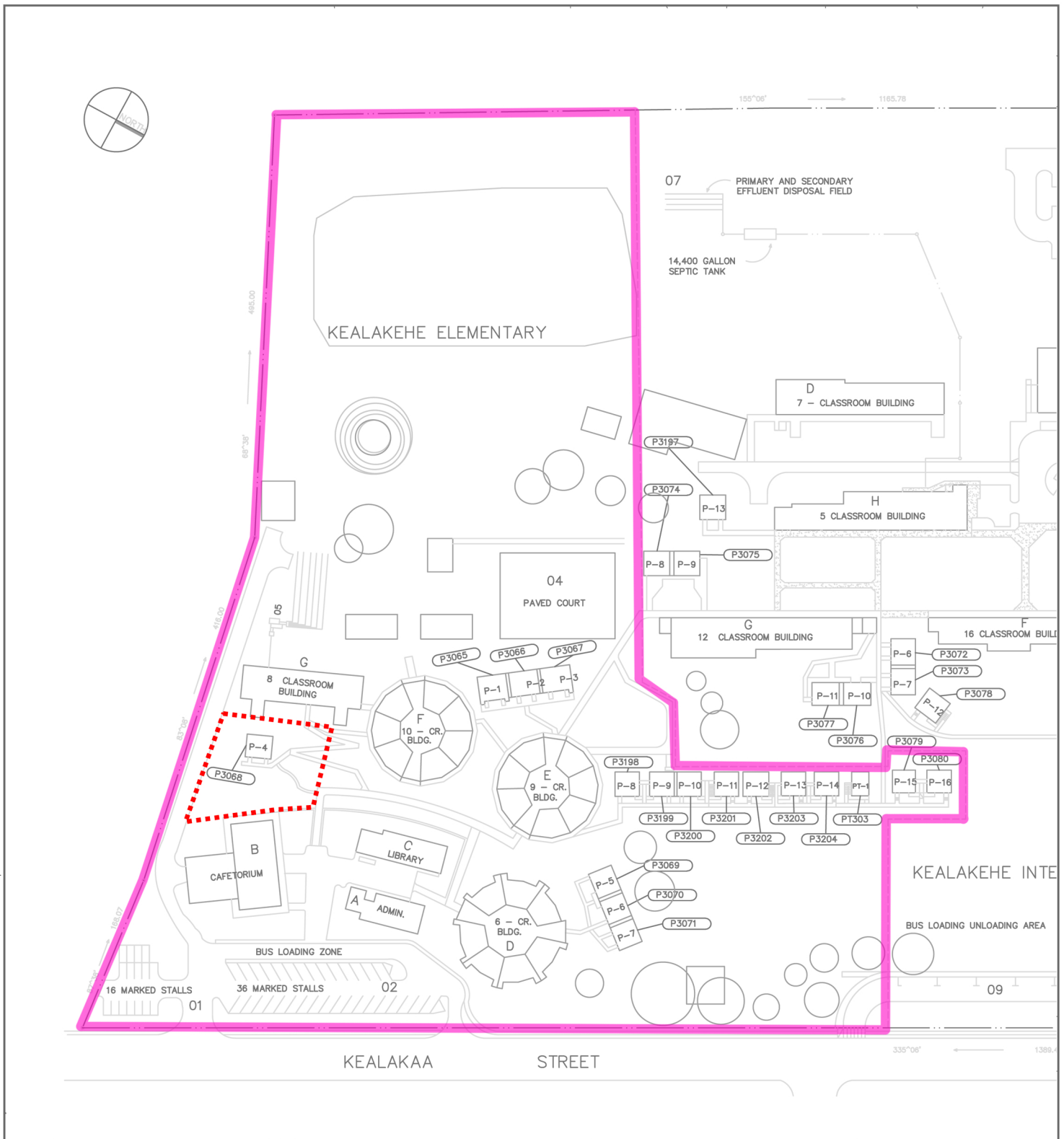
The “no action” alternative would preserve the existing problems with limited classroom facilities. As such, the overall impacts are anticipated to be negative, not only directly for KES, but also indirectly for Kealakehe Intermediate and High Schools and the rest of the Complex Area schools. However, because no new facilities would be built, there would be no increase in energy demand or impervious surface area that could potentially impact storm water quality or quantity.

### **6.2 ALTERNATIVE SITES WITHIN THE CAMPUS**

The existing KES campus was logically developed along Kealaka‘a Street, along the *mauka* portion of the property. While there is some undeveloped portion of the KES campus along Kealaka‘a Street, most of the developable area is located *makai* of the campus buildings but *mauka* of the existing detention basin. (See Figure 12)



In general, siting the KES New Classroom Building will be more visible from Kealaka‘a Street, and possibly more disruptive to students in existing classrooms.

Siting the KES New Classroom Building between existing campus buildings and detention basin may be less disruptive to existing classrooms and less visible from Kealaka‘a Street.



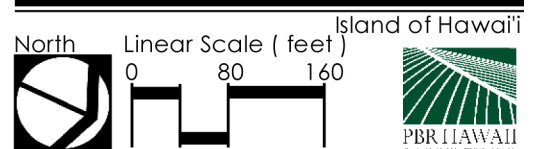
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**LEGEND**

-  Project Site
-  Approximate Building Location

**Figure 12  
Site Location**

**Kealakehe Elementary School  
New Classroom Building**



## 7 FINDINGS AND ANTICIPATED DETERMINATION

To determine whether the implementation of the Project may have a significant impact on the physical and human environment, all phases and expected consequences of the proposed Project have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts. Based on this evaluation, the Proposing Agency (State of Hawai‘i DOE) anticipates issuing a Finding of No Significant Impact (FONSI). The supporting rationale for this finding is presented below.

### 7.1 SIGNIFICANCE CRITERIA

The discussion below evaluates the significance of the Project’s impacts based upon the Significance Criteria set forth in Hawai‘i Administrative Rules section 11-200-12.

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

**Discussion:** The location for the proposed building will be sited on an undeveloped portion of an existing school campus within the built environment of the Kealakehe residential community. Previous environmental and cultural studies have been conducted around KES. Site investigations revealed the absence of any natural or cultural resources potentially subject to irrevocable loss as a result of construction.

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

**Discussion:** The current use of the site as a school will not change as a result of this Project. The site will continue to be utilized as an elementary school campus.

*(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 Environmental Policies enumerated in Chapter 344, HRS promote conservation of natural resources, and an enhanced quality of life for all citizens. The Project is not expected to significantly impact any natural resources and is expected to enhance the quality of life of for families with children attending KES by improving and expanding teaching facilities.

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

**Discussion:** The Project is anticipated to have a beneficial impact on the social welfare of the North Kona communities within the Kealakehe School Complex by improving the educational facilities at KES.



(5) *Substantially affects public health;*

**Discussion:** The Project and its construction will be designed to adhere to environmental health laws and to avoid the potential degradation of noise, water and air quality of surrounding properties.

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

**Discussion:** The Project will not result in an increase in student population and is not anticipated to generate or stimulate residential growth in the Kealakehe community, resulting in, for example, increased usage of area parks or roads.

(7) *Involves a substantial degradation of environmental quality;*

**Discussion:** The Project as proposed will be built for HI-CHPS verification. Wherever possible, green materials like recycled flooring, paints with low volatile organic compounds will be integrated into the ultimate design of the Project. Where feasible, Project landscaping will utilize native trees and shrubbery. No substantial environmental degradation is anticipated as a result of the Project, particularly because the Project is occurring entirely within a previously disturbed area. Also, as the Project will be in compliance with all pertinent statutes and regulations (e.g., regulations pertaining to grading), no substantial environmental degradation is anticipated.

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

**Discussion:** The Project is not part of a larger project, nor does it commit the State or County to any other larger actions, and will not generate any additional actions having a cumulative effect on the environment. As discussed throughout, construction activities may generate temporary impacts that can be addressed through BMPs for construction. Long term, the proposed KES New Classroom Building has some potential to contribute to cumulative impacts (i.e. addition of impervious surfaces to the site), but with planned mitigation measures (i.e. LID techniques to infiltrate storm water) the Proposed Project is not anticipated to generate any cumulative impacts to the human or natural environment.

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

**Discussion:** The Proposed Project is located within the built environment of the KES campus. No rare, threatened or endangered species have been identified in the vicinity of the Site.

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

**Discussion:** No State or Federal air quality standards will be violated during or after the construction of the Project. The only anticipated issues related to air quality may be during

construction; however, construction activities would be temporary. Long-term negative impacts related to air quality are not expected.

No State or Federal water quality standards will be violated during or after the construction of the Project; the Project will also be required to comply with all applicable water quality standards, as required by the County. While the Project will result in an increase in impervious surface area, LID elements have been incorporated into the design so water quality will remain unchanged from pre-construction conditions. The quantity and quality of storm water runoff will not be impacted by the Project.

Construction activities will inevitably create temporary noise impacts. If necessary, contractors will employ mitigation measures to minimize those temporary noise impacts including the use of mufflers and implementing construction curfew periods. Pursuant to Chapter 11-46, Hawai'i Administrative Rules, all construction activities must comply with all community noise controls. Long-term noise impacts are expected to return to preconstruction 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 Site does not lie in an environmentally sensitive area such as a flood zone, tsunami zone, geologically hazardous area, beach, erosion-prone area, estuary, freshwater or coastal waters.

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

**Discussion:** No important view planes or scenic sites recognized in the Hawai'i County General Plan would be affected by the Project. Neither the view of Hualālai Volcano from the coast nor the view of the Honokōhau coastline from higher elevations would be substantially affected. Some initial impact to visual character may occur on a localized scale because of temporary construction activities and vegetation clearing, mostly involving landscaped or non-native wild vegetation, and the creation of paved surfaces. Overall, the Project would not substantially affect the scenic character of this area.

*(13) Requires substantial energy consumption.*

**Discussion:** The Project may result in an increase in energy demand. However, the Project will be constructed to the standard necessary to achieve HI-CHPS verification, energy conservation will also be incorporated into the Project design. The new building will include energy saving design elements and oriented to maximize natural ventilation and day lighting. The preliminary engineering analysis has determined that power is currently available in the area and the capacity can support the Project.

## **7.2 ANTICIPATED DETERMINATION**

Pursuant to Chapter 343, HRS, the State of Hawai‘i DOE anticipates issuing a Finding of No Significant Impact (FONSI) based on this Environmental Assessment. This finding is founded on the basis of impacts and mitigation measures examined in this document, public comments received during the pre-consultation phase, and analyzed under the above criteria.

## 8 CONSULTATION

### 8.1 INDIVIDUALS AND ORGANIZATIONS CONSULTED WITH PRIOR TO THE EA PROCESS

In the course of planning for the proposed New Classroom Building at KES, workshops were held with stakeholders and pre-consultation information packets were mailed out, and meetings were held with various organizations.

#### 8.1.1 Pre-Assessment Consultation Letters

Information regarding the Project was provided to following individuals, community organizations, private groups, and government agencies. The information notified them that an EA was being prepared for the Project and solicited concerns or comments. Those who have provided written comments are highlighted in *italics* below. The comments received and corresponding responses are reproduced in Appendix A.

#### Federal

- *U.S. Army Corps of Engineers, Honolulu District*
- Federal Emergency Management Agency, Region IX

#### State of Hawai'i

- *Office of Environmental Quality Control (OEQC)*
- *Department of Accounting and General Services*
- Department of Agriculture
- Department of Business, Economic Development and Tourism (DBEDT)
- DBEDT – Hawai'i State Energy Office
- *DBEDT – State Office of Planning*
- *Department of Defense*
- Department of Education
- *Department of Hawaiian Home Lands*
- Department of Health (DOH)
- *DOH – Environmental Planning Office*
- *Department of Land and Natural Resources (DLNR)*
- *DLNR – State Historic Preservation Division (SHPD)*
- *Department of Transportation*
- *Office of Hawaiian Affairs*
- State Representative Nicole Lowen
- State Senator Josh Green

**County of Hawai'i**

- *Department of Environmental Management*
- Department of Parks and Recreation
- Department of Research and Development
- *Department of Water Supply*
- *Fire Department*
- Office of Housing and Community Development
- *Planning Department*
- *Police Department*
- Councilmember Karen Eoff

**Other**

- Hawaiian Electric Company, Inc.
- Oceanic Time Warner Cable
- Hawaiian Telecom
- Queen Lili'uokalani Trust

## 9 REFERENCES

- Belt Collins. (December 2009). *Final Environmental Assessment: Queen Lili'uokalani Village Off-Site Sewer Line*. County of Hawai'i: Prepared for the Department of Environmental Management.
- County of Hawai'i. (2005). *County of Hawai'i General Plan*. Hilo: County of Hawai'i.
- County of Hawai'i Department of Research and Development. (2015). *County of Hawai'i Data Book*. Retrieved from County of Hawai'i: <http://records.co.hawaii.hi.us/weblink/1/edoc/78458/2015-HawaiiCtyDataBook.pdf>
- County of Hawai'i Planning Department. (2008). *Kona Community Development Plan*. Kona, Hawai'i: County of Hawai'i.
- Department of Geography, University of Hawai'i at Hilo. (1998). *Atlas of Hawai'i* (3rd ed.). Honolulu: University of Hawai'i Press.
- Earles, A. (2014). *Kealakehe Complex 21st Century Community Learning Centers (CCLC) Evaluation SY 2013-14*. Honolulu: State of Hawai'i Department of Education.
- Federal Emergency Management Agency. (1993). *Hazard Mitigation Report, Hurricane Iniki (In Response to the September 12, 1992 Federal Disaster Declaration. FEMA-961-DR-HI)*. San Francisco, CA: FEMA.
- Fletcher III, C. H., Grossman, E. E., Richmond, B. M., & Gibbs, A. E. (2002). *Atlas of Natural Hazards in the Hawaiian Coastal Zone*. Denver, CO: United States Geological Survey Information Services.
- Foote, D. E., Hill, E. L., Nakamura, S., & Stephens, F. (1972). *Soil Survey of the Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lana'i, State of Hawai'i*. USDA, Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Experiment Station.
- Giambelluca, T. W., Shuai, X., Barnes, M. L., Alliss, R. J., Longman, R. J., Miura, T., et al. (2014). *Evapotranspiration of Hawai'i. Final report submitted to the U.S. Army Corps of Engineers - Honolulu District, and the Commission on Water Resource Management, State of Hawai'i*. Retrieved from Climate of Hawai'i: <http://climate.geography.hawaii.edu/>
- Giambelluca, T.W.; Chen, Q.; Frazier, A.G.; Price, J.P.; Chen, Y.-L.; Chu, P.-S.; Eischeid, J.K.; Delparte, D.M. (2013). Online Rainfall Atlas of Hawai'i. *Bull. Amer. Meteor. Soc.*, 94, 313-316.



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- Handy, E. a. (1972). *Native Planters in Old Hawai'i: Their Life, Lore, and Environment*. Bishop Museum Press: Honolulu.
- Hawai'i Police Department. (2015). *Hawai'i Police Department*. Retrieved October 6, 2015, from Hawai'i Police Department: [www.hawaiiipolice.com](http://www.hawaiiipolice.com)
- Hurricane Shelter Criteria Committee. (2005). *Report of Recommended Statewide Public Hurricane Shelter Criteria*. Report to State Legislature.
- Kamakau, S. (1992). *Ruling Chiefs of Hawai'i*. Honolulu: The Kamehameha School Press.
- Kealakehe Elementary School. (2016). *Kealakehe Elementary School*. Retrieved August 2016, from <http://kealakehe.k12.hi.us/>
- Kelly, M., Nakamura, B., & Barrère, D. (1981). *Hilo Bay: A Chronological History. Land and Water Use in the Hilo Bay Area, Island of Hawai'i*. Honolulu: Bernice P. Bishop Museum.
- King, J. (1784). A Voyage to the Pacific Ocean undertaken by the command of his majesty, for the making of discoveries in the northern hemisphere by Capts. Cook, Clerke, and Gore on the Resolution and Discovery 1776-1780. 3.
- Longo et al, B. (2010). An Indoor Air Quality Assessment for Vulnerable Populations Exposed to Volcanic Vog From Kīlauea Volcano. *Family Community Health*, vol. 33, no. 1, pp. 21-31.
- MacDonald, G. A., Abbott, A. T., & Peterson, F. L. (1983). *Volcanoes in the Sea: The Geology of Hawai'i, Second Edition*. Honolulu: University of Hawai'i Press.
- Martin & Chock, Inc. (2015). *County of Hawai'i Multi-Hazard Mitigation Plan*. Prepared for County of Hawai'i Civil Defense Agency.
- Miller, J. F. (1978). *Mauna Loa Observatory: A 20th Anniversary Report*. Silver Spring, MD: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories.
- NOAA. (2016, August). 1981-2010 Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days.
- Pukui, M. S. (1974). *Place Names of Hawai'i*. Honolulu: University of Hawaii Press.
- SSFM International, Inc. (November 2009). *Final Environmental Assessment: Queen Lili'uokalani Village Subdivision Large Capacity Cesspool Conversion Project*. County of Hawai'i: Prepared for the Department of Environmental Management.

Kealakehe Elementary School New Classroom Building  
*Draft Environmental Assessment- Anticipated Finding of No Significant Impact*

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- State of Hawai‘i, Department of Education. (2008). *Educational Specifications (EDSPECS) for Elementary Schools*. Retrieved from <http://www.hawaiipublicschools.org/DOE%20Forms/Facilities/EDSPECSELEMSCHOOL.S.pdf>
- State of Hawai‘i, Department of Education. (2015, February 18). *Official 2014-2015 Public and Charter School Enrollment*. Retrieved October 6, 2015, from Hawai‘i State Department of Education: <http://www.hawaiipublicschools.org/ConnectWithUs/MediaRoom/PressReleases/Pages/Hawaii-public-school-enrollment-grows-by-2,000-students.aspx>
- State of Hawai‘i, Department of Health. (2014). *2014 State of Hawai‘i Water Quality Monitoring and Assessment Report*. Honolulu.
- State of Hawai‘i, Department of Health. (2015). *State of Hawai‘i Annual Summary 2014 Air Quality Data*. Honolulu: State of Hawai‘i, Department of Health.
- State of Hawai‘i, Department of Land and Natural Resources, Commission on Water Resource Management. (2005). *Surface-Water Hydrologic Units*. Honolulu: State Of Hawai‘i.
- U.S. Census Bureau. (2010). *2010 Census*.
- United States Geological Survey. (1997, July 18). *Volcanic and Seismic Hazards on the Island of Hawai‘i: Volcanic Hazards*. Retrieved August 22, 2016, from <http://pubs.usgs.gov/gip/7000036/report.pdf>
- United States Geological Survey. (2016). *Water Watch*. Retrieved 2016, from <http://waterwatch.usgs.gov>
- University of Hawai‘i at Mānoa, School of Ocean and Earth Science and Technology. (2013). *Hawai‘i*. Retrieved September 30, 2015, from Coastal Geology Group: <http://www.soest.hawaii.edu/coasts/publications/hawaiiCoastline/hawaii.html>
- Washington Department of Health and others. (2001). *Wildfire Smoke: A Guide for Public Health Officials*.

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# **Appendix A: Pre-Assessment Consultation Comments & Responses**







DEPARTMENT OF THE ARMY  
HONOLULU DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
FORT SHAFTER, HAWAII 96858-5440

- 2 -

October 28, 2015

SUBJECT: Pre-Consultation Request for the Environmental Assessment of the Kealahoe Elementary School New Classroom Building located in Kailua-Kona, Hawaii; DA File No. POH-2015-00199

Vincent Shigekuni  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Mr. Shigekuni:

The Honolulu District, U.S. Army Corps of Engineers (Corps), has received your letter dated October 5, 2015 for the proposed Kealahoe Elementary School new classroom building located in Kailua-Kona, Hawaii. Your project has been assigned Department of the Army (DA) file number POH-2015-00199. Please reference this number in all future correspondence.

Please be advised, if the proposed project involves work in waters of the U.S., a DA authorization may be required. Under Section 10 of the Rivers and Harbors Act, structures and/or work in or affecting the course, location, condition, or capacity of navigable waters of the U.S. require DA authorization. Navigable waters of the U.S. are waters subject to the ebb and flow of the tide.

Under Section 404 of the Clean Water Act, DA authorization is required for discharges of dredged or fill material into waters of the U.S., including wetlands. Generally, discharges of fill material include materials that change the bottom elevation of a water of the U.S. and includes rock, sand, soil, debris, overburden, etc. Waters of the U.S. include navigable waters of the U.S. and other waters including wetlands, rivers, streams, lakes, and ponds.

Thank you for your cooperation with the Honolulu District Regulatory Program. Please contact this office if you have any questions. You may contact me at 808-835-4306 or via email at [kate.m.bliss@usace.army.mil](mailto:kate.m.bliss@usace.army.mil)

Sincerely,

Kate Bliss  
Project Manager  
Regulatory Office



August 25, 2016

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Ms. Kate Bliss  
Project Manager  
Regulatory Office  
U.S. Army Corps of Engineers, Honolulu District  
Building 252  
Fort Shafter, HI 96858-5440

**SUBJECT: POH-2015-00199  
PRE-CONSULTATION FOR A HRS CHAPTER 343  
ENVIRONMENTAL ASSESSMENT – KEALAKEHE  
ELEMENTARY SCHOOL NEW CLASSROOM BUILDING,  
KAILUA-KONA, NORTH KONA, HAWAII – TMK (3) 7-4-  
019-044 POR.**

Dear Ms. Bliss:

Thank you for your letter dated October 28, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we greatly appreciate your advice regarding the requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. We can inform you that the proposed project is not located near or will involve work (including discharge of fill material) in waters of the U.S., and therefore Department of Army authorization should not be required.

We appreciate your participation in the environmental review process. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.



DAVID Y. IGE  
GOVERNOR OF HAWAII



SCOTT GLENN  
INTERIM DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

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

November 6, 2015

PBR Hawaii  
Attn: Vincent Shigekuni,  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Dear Mr. Shigekuni,

**SUBJECT:** Pre-Consultation Request for Kealahou Elementary School New Classroom building, Kailua-Kona, Hawaii.

The Office of Environmental Quality Control has reviewed the information contained in your October 5, 2015 letter about the subject project, and offers the following comments for your consideration.

Based on the information provided, we recommend the consideration of low impact development and green initiatives. The Office of Planning, Land Use Development and Green Building (<http://planning.hawaii.gov/lud/>) has resources for low impact development and green buildings. We also recommend using native vegetation for landscaping, as per Act 233 (2015). We look forward to reviewing a Draft EA that includes sufficient information to enable recipients and the public to understand the project and to provide substantive feedback.

Thank you for your role in Hawaii's environmental review process and for the opportunity to comment at this early stage of this project. As you prepare to submit documents for publication and public review in The Environmental Notice, we appreciate your diligence in using current and correct publication forms available online. If you have any questions as you navigate this process, please consult our website at <http://health.hawaii.gov/oeqc> (see in particular the link to the Environmental Assessment Preparation Toolkit on the right panel) or contact our office at (808) 586-4185.

Sincerely,

Scott Glenn, Interim Director



August 25, 2016

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Mr. Scott Glenn, Interim Director  
State of Hawaii  
Office of Environmental Quality Control  
Department of Health  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Mr. Glenn:

Thank you for your letter dated November 6, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input regarding low impact development, green initiatives, and use of native vegetation for landscaping. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.



DAVID Y. DE  
CONSTRUCTION



**STATE OF HAWAII**  
**DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES**

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

DOUGLAS MURDOCK  
Comptroller  
AUDREY HIDANO  
Deputy Comptroller

(P)1280.5

NOV 5 - 2015

Mr. Vincent Shigekumi  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Mr. Shigekumi:

**Subject:** Pre-Consultation for Chapter 343 Environmental Assessment  
Kealahke Elementary School, New Classroom Building  
Kailua-Kona, North Kona, Hawaii  
TMK: (3) 7-4-019:044 por

This is in response to your letter dated October 5, 2015 regarding the subject project. The Department of Accounting and General Services (DAGS) does not have any comments to offer at this time. DAGS is responsible for providing repair and maintenance services for Department of Education (DOE) school facilities on the island of Hawaii. Staff from our Hawaii District Office will continue to coordinate with DOE and their representatives on the design of the new classroom building.

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

Sincerely,

*for*  
*De P. / hnto*  
DOUGLAS MURDOCK  
Comptroller

c: Mr. Duane Kashiwai, DOE Facilities Development Branch  
Mr. Jerry Watanabe, DAGS Hawaii District Office  
Miles Tagawa, DAGS Hawaii District Office



August 25, 2016

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KAMIKAWA YUEN, IEDP/APBD-C  
Principal

W. FRANK BRANDT, ASIA  
Chairman Emeritus

Dear Mr. Murdock:

Thank you for your letter dated November 5, 2015 [Ref. No. (P)1280.5], regarding the subject project. As the planning sub-consultant for the State Department of Education (DOE), we appreciate your participation in the environmental review process, and your input that your Department has no comments to offer relative to the project. We acknowledge that the Department of Accounting and General Services (DAGS) is responsible for providing repair and maintenance services for DOE school facilities on the Island of Hawaii; and that staff from your Hawaii District Office will continue to coordinate with DOE on the design of the new classroom building.

Your letter will be included in the Draft EA. We will send you a copy of the Draft EA when it is available.

Sincerely,

PBR HAWAII

*Greg Nakai*  
Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

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**OFFICE OF PLANNING  
STATE OF HAWAII**

205 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

DAVID Y. IGE  
GOVERNOR  
LEO R. ASUNCION  
ACTING DIRECTOR  
OFFICE OF PLANNING

Telephone: (808) 867-2646  
Web: <http://planning.hawaii.gov>

Ref. No. P-14938

November 2, 2015

Mr. Vincent Shigekuni  
Vice President  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii: 96813-3484

Dear Mr. Shigekuni:

**Subject:** Pre-Consultation for a HRS Chapter 343 Environmental Assessment – Kealahou Elementary School New Classrooms Building, Kailua-Kona, North Kona, Hawaii; TMK: (3)7-4-019:044 (poor)

Thank you for the opportunity to provide comments on the early consultation request for the Kealahou Elementary School new classroom-building project. The pre-consultation review material was transmitted to our office by letter dated October 5, 2015.

It is our understanding that the objective of this project is to provide updated educational facilities to accommodate the current and projected increases in student enrollment for the North Kona region of West Hawaii County. The proposed new classroom building will include six general education classrooms, an art/science classroom, a self-contained Special Education classroom, an itinerant room, a faculty center, a conference room, restrooms, and utility rooms.

The new building will be located on the same parcel of land that contains active educational facilities (makai of the existing elementary school building, and south of the adjacent intermediate school buildings).

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

1. Pursuant to the Hawaii Administrative Rules (HAR) Chapter 11-200-10(4) – technical, economic, social, and environmental characteristics – this project must demonstrate that it is consistent with a number of state environmental, social, and economic goals and policies for land-use and housing development. OP provides technical assistance to state and county agencies in administering the statewide planning system in Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Plan. The Hawaii State Plan provides goals, objectives, policies, and priority guidelines for growth, development, and the allocation of resources throughout the

Mr. Vincent Shigekuni  
Vice President  
November 2, 2015  
Page 2

State. The Hawaii State Plan includes diverse objectives and policies of state interest including but not limited to the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and sustainability.

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

2. The coastal zone management area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" see HRS § 205A-1 (definition of "coastal zone management area").  
HRS Chapter 205A requires all State and county agencies to enforce the coastal zone management (CZM) objectives and policies. The Draft EA should include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2. The assessment on compliance with HRS Chapter 205A is an important component for satisfying the requirements of HRS Chapter 343. These objectives and policies include recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.  
3. Also pursuant to HAR § 11-200-10(4) and HAR § 11-200-10(6) – summary of impacts and alternatives considered; the negative effects of stormwater runoff ensuing from human activities should be evaluated. The Draft EA should summarize the potential impact to nearshore marine resources and actions proposed to ensure the coastal ecosystem is protected and potential hazards mitigated. Issues that should be examined in the Draft EA include, but are not limited to, site characteristics in relation to erosion controls, protection of wetlands, and flood prone areas. These items, as well as the marine water quality classification, should be considered when developing mitigation measures to protect the coastal ecosystem.

The review material indicated that this project is located well up slope of the coastline, it is located in an urban setting, and there are undeveloped open space, and roadways nearby. The Draft EA should examine the project site's cumulative impact on coastal resources from polluted runoff, and sediment loss. It should also take into account the natural features of the land such as dry gulches, topographic contours,




Mr. Vincent Shigekuni  
Vice President  
November 2, 2015  
Page 3

undeveloped open space adjacent to the parcel, cumulative impacts that may result from the proposed action, and any existing drainage infrastructure that may directly connect the parcel to the coastline and vulnerable marine resources.

OP has a number of resources available to assist in the development of projects which ensure sediment and stormwater control on land, thus protecting the nearshore environment. OP recommends consulting these guidance documents and stormwater evaluative tools when developing strategies to address polluted runoff. They offer useful techniques to keep soil and sediment in place and prevent contaminating nearshore waters, while considering the practices best suited for each project. These three evaluative tools that should be used during the design process include:

- [Hawaii Watershed Guidance](http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI_Watershed_Guidance_Final.pdf) provides direction on site-appropriate methods to safeguard Hawaii's watersheds and implement watershed plans
- [Stormwater Impact Assessments](http://files.hawaii.gov/dbedt/op/czm/initiative/stormwater_impact/final_storm_water_impact_assessments_guidance.pdf) can be used to identify and evaluate information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area
- [Low Impact Development \(LID\). A Practitioners Guide](http://files.hawaii.gov/dbedt/op/czm/initiative/lid_guide_2006.pdf) covers a range of structural best management practices (BMP's) for stormwater control management, roadway development, and urban layout that minimizes negative environmental impacts

If you have any questions regarding this comment letter, please contact Josh Hekeikia of our office at (808) 587-2845.

Sincerely,  
  
Leo R. Asuncion  
Acting Director

August 25, 2016

Mr. Leo R. Asuncion, Acting Director  
Office of Planning  
State of Hawai'i  
P.O. Box 2359  
Honolulu, Hawai'i 96804

Attn: Mr. Josh Hekeikia

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**PBR HAWAII**  
& ASSOCIATES, INC.

August 25, 2016

Mr. Leo R. Asuncion, Acting Director  
Office of Planning  
State of Hawai'i  
P.O. Box 2359  
Honolulu, Hawai'i 96804

Attn: Mr. Josh Hekeikia

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Mr. Asuncion:

Thank you for your letter dated November 2, 2015 (Ref. No. P-14938), regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input that the Draft Environmental Assessment (EA) should: (1) include a discussion of the proposed project's ability to meet the goals, objectives, policies, and priority guidelines set forth in HRS Chapter 226, the Hawai'i State Plan; (2) include a discussion of the proposed project's ability to meet the objectives and policies set forth in HRS § 205A-2 regarding coastal zone management (CZM); and (3) evaluate the proposed project site's cumulative impacts on coastal resources from runoff and sediment loss.

Your letter will be included in the Draft EA. We will send you a copy of the Draft EA when it is available.

Sincerely,

PBR HAWAII



Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.



DAVID Y. IGE  
GOVERNOR



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

October 19, 2015

ARTHUR J. LOGAN  
MAJOR GENERAL  
ADJUTANT GENERAL

KENNETH S. HARA  
COLONEL  
DEPUTY ADJUTANT GENERAL

PBR HAWAII & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813

Attn.: Mr. Vincent Shigekumi

Subject: Pre-Consultation for a HRS Chapter 343 Environmental Assessment – Kealahou  
Elementary School New Classroom Building, Kailua-Kona, North Kona, Hawaii  
– TMK (3) 7-4-019:044 por.

Dear Mr. Shigekumi:

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 project.

If you have any questions or concerns, please have your staff contact Mr. Lloyd Maki, Assistant  
Chief Engineering Officer at (808) 733-4250.

Sincerely,

  
ARTHUR J. LOGAN  
Major General  
Hawaii National Guard  
Adjutant General

c: Ms. Havinne Okamura, Hawaii Emergency Management Agency



August 25, 2016

**PRINCIPALS**

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ROY TAKEMOTO  
*Managing Director - Hilo*

SCOTT MURAKAMI/ASIA/IEDP/ARBD-C  
*Associate*

DACHENG DONG/IEDP/ARBD-C  
*Associate*

MARC SHIMAMURA/ASIA  
*Associate*

Maj. Gen. Arthur J. Logan  
Adjutant General  
State of Hawaii; Department of Defense  
3949 Diamond Head Road  
Honolulu, Hawaii 96816-4495

ATTN: Mr. Lloyd Maki, Assistant Chief Engineering Officer

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343  
ENVIRONMENTAL ASSESSMENT – KEALAKEHE  
ELEMENTARY SCHOOL NEW CLASSROOM BUILDING,  
KAILUA-KONA, NORTH KONA, HAWAII – TMK (3) 7-4-  
019:044 POR.**

Dear Major General Logan:

Thank you for your letter dated October 19, 2015, regarding the subject project. As the  
planning sub-consultant for the State Department of Education, we appreciate your  
participation in the environmental review process, and your input that your Department  
has no comments to offer relative to the project. Your letter will be included in the  
Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII



Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

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August 25, 2016

Ms. Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission  
State of Hawai'i  
Department of Hawaiian Home Lands  
P.O. Box 1879  
Honolulu, Hawai'i 96805

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Ms. Masagatani:

Thank you for your letter dated October 27, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your Department's participation in the environmental review process, and DHHL's input that the Draft Environmental Assessment (EA) should discuss the proposed project's potential impacts on: (1) Hawaiian Home Lands in Kealahou; (2) your Department's ability to implement its Kealahou Regional Plan, Hawai'i Island Plan, and Water Policy Plan; and (3) DHHL's water reservation of 3,398 MGD in the Keaouhu Aquifer System. We also appreciate your input that the Villages of Laiohua Community Association should be consulted during the EA process. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

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Associate

MARC SHIMAMATSU/ASHA  
Associate

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Tel/Cel: (808) 315-6878

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**STATE OF HAWAII**  
DEPARTMENT OF HAWAIIAN HOME LANDS  
P. O. BOX 1879  
HONOLULU, HAWAII 96805

October 27, 2015

Mr. Vincent Shigekuni  
PBR Hawaii & Associates  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

**Subject:** Pre-Assessment Consultation for Kealahou Elementary School New Classroom Building, Kailua-Kona, North Kona, HI TMK: 3-7-4-019:044 (portion)

Thank you for the opportunity to provide comments during the pre-assessment period for the above project. DHHL has land holdings of approximately 922 acres in the Kealahou region. The draft environmental assessment (DEA) should assess the proposed project's potential impacts on Hawaiian Home Lands in Kealahou as well as DHHL's ability to implement its Kealahou Regional Plan, Hawai'i Island Plan, and Water Policy Plan. Additionally, the Villages of Laiohua Community Association should be consulted during the EA process. Lastly, the DEA should also determine the proposed impact the project will have on DHHL's water reservation of 3,398 MGD in the Keaouhu Aquifer System.

If you have further questions, please contact Andrew Choy at (808) 620-3279 or email him at andrew.h.choy@hawaii.gov.

Aloha,

Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission

c: DHHL West Hawaii District Office (via email)  
Villages of Laiohua Community Association (via email)

DAVID Y. IGE  
GOVERNOR  
STATE OF HAWAII

SHAN S. INITSUI  
LT. GOVERNOR  
STATE OF HAWAII



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

In reply, please refer to:  
File # EPO 15-256

October 13, 2015

Mr. Vincent Shigekuni  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484  
Via email: vshigekuni@pbrhawaii.com

Dear Mr. Shigekuni:

**SUBJECT: Pre-Consultation Environmental Assessment (PC EA) for Kealakehe Elementary School**  
New Classroom Building, North Konga, Hawaii  
TMK: (3) 7-4-019-044 POR.

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PC EA to our office on October 7, 2015. Thank you for allowing us to review and comment on the proposed project. The PC EA was routed to the District Health Office on Hawaii and the Hazard Evaluation & Emergency Response Branch. They will provide specific comments to you if necessary. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: <http://health.hawaii.gov/epo/landuse>. Projects are required to adhere to all applicable standard comments.

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

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

Mahalo nui loa,

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

Attachments: EJS-SCREEN – 3 page report  
OECC Viewer – 1 page

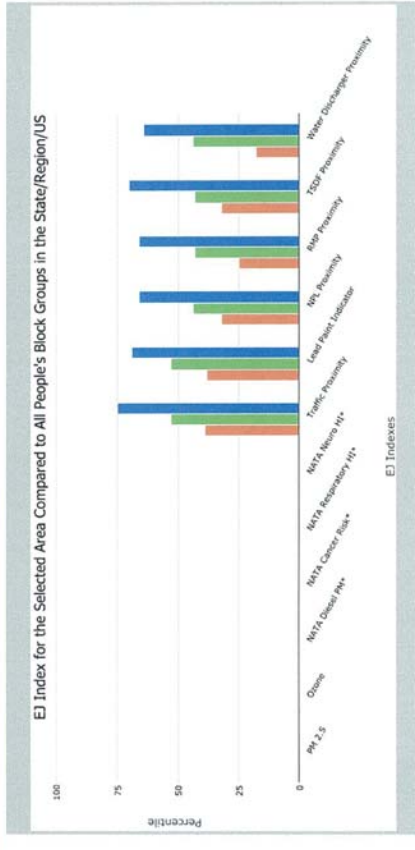
c: DHO Hawaii & HEER (via email only)



**EJS-SCREEN Report**

for 1 mile Ring Centered at 19.669729, -155.982989, HAWAII, EPA Region 9  
Approximate Population: 5688

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
<b>EJ Indexes</b>			
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*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	39	53	75
EJ Index for Lead Paint Indicator	38	53	69
EJ Index for Proximity to NPL sites	32	44	66
EJ Index for Proximity to RMP sites	25	43	66
EJ Index for Proximity to TSDFs	32	43	70
EJ Index for Proximity to Major Direct Dischargers	18	44	64



This report shows environmental, demographic, and EJ indicator values. 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 EJS-SCREEN documentation for discussion of these issues before using reports.

October 13, 2015





October 13, 2015  
+ Digital Point

Selected Variables	Raw Data	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
<b>Environmental Indicators</b>							
Particulate Matter (PM 2.5 in ug/m <sup>3</sup> )	N/A	N/A	N/A	9.95	N/A	9.78	N/A
Ozone (ppb)	N/A	N/A	N/A	49.7	N/A	46.1	N/A
NATA Diesel PM (ug/m <sup>3</sup> *)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Cancer Risk (lifetime risk per million)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	11	280	15	190	13	110	24
Lead Paint Indicator (% Pre-1960 Housing)	0.011	0.17	17	0.25	20	0.3	12
NPL Proximity (site count/km distance)	0.0033	0.092	11	0.11	0	0.096	0
RMP Proximity (facility count/km distance)	0.013	0.18	3	0.41	1	0.31	0
TSDF Proximity (facility count/km distance)	0.0034	0.092	11	0.12	0	0.054	4
Water Discharger Proximity (facility count/km distance)	0.0098	0.33	2	0.19	0	0.25	0
<b>Demographic Indicators</b>							
Demographic Index	60%	51%	78	46%	70	35%	82
Minority Population	79%	77%	41	57%	69	36%	84
Low Income Population	42%	25%	83	35%	63	34%	66
Linguistically Isolated Population	5%	6%	58	9%	43	5%	70
Population With Less Than High School Education	16%	10%	79	18%	54	14%	64
Population Under 5 years of age	11%	6%	87	7%	85	7%	88
Population over 64 years of age	10%	14%	31	12%	52	13%	42

\* The National-scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. 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: <http://www.epa.gov/ttn/atw/natamain/index.html>.

For additional information, see: [www.epa.gov/environmentaljustice](http://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.



August 25, 2016

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Source: OEQC Viewer: <http://eha-web.doh.hawaii.gov/oeqc-viewer/>

Ms. Laura Leitloha Phillips McIntyre, AICP  
Program Manager, Environmental Planning Office  
State of Hawaii

Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT – KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII – TMK (3)7-4-019-044 POR.**

Dear Ms. McIntyre:

Thank you for your letter (your reference number EPO 15-256) dated October 13, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we reviewed the Environmental Planning Office's (EPO) standard comments relating to Environmental Health programs. We understand that all standard comments specifically applicable to the proposed project must be adhered to. The organization of this letter follows the list of standard comments on your website.

**Clean Air Branch**

We acknowledge that there is a potential for fugitive dust emissions during all phases of construction and operations. The Draft EA will address construction-related impacts related to fugitive dust. All construction activities will comply with the provisions of Section 11-60.1-33, Hawaii Administrative Rules (HAR) related to Fugitive Dust. Adequate measures to control dust during various phases of construction will be required to be implemented by whatever contractor is employed by the State Department of Education to effect the project's development.

**Clean Water Branch**

We reviewed and understand the standard comments provided by the Clean Water Branch (CWB).

- Potential Impacts to State Waters.** Any potential impacts to the waters off the coast of Kailua-Kona caused by the construction and/or operation of the proposed project will meet the provisions of the: a) anti-degradation policy (Chapter 11-54-1.1, HAR); b) designated uses (Chapter 11-54-3, HAR); and c) water quality criteria (Chapter 11-54-4 through 11-54-8, HAR). However, direct discharges of storm water runoff into marine waters are not expected to occur due to Best Management Practices to reduce airborne dust and waterborne silt during construction, and due to the distance from the shoreline.
- National Pollutant Discharge Elimination System permit coverage.** As the area to be disturbed will likely be greater than one acre, a National Pollutant Discharge Elimination System (NPDES) permit for Storm Water Associated with Construction Activity will be necessary.





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- Clean Water Act.** Pursuant to the "Clean Water Act," a Section 401 Water Quality Certification from the State Department of Health, Clean Water Branch will be obtained if it is determined that the project may result in any discharge into navigable waters or as otherwise triggered.
- State Water Quality Standards (Chapter 11-54 and 11-55, HAR).** All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

**Hazard Evaluation and Emergency Response Office**

We understand that the Hazard Evaluation and Emergency Response (HEER) Office provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to releases or threats of releases of hazardous substances. We do not expect hazardous substances, pollutants, or contaminants to be present at the project site. However, if any of these are found at the project site, HEER will be contacted to determine the appropriate actions to comply with the relevant environmental laws.

**Indoor and Radiological Health (IRH) Branch**

The proposed project will comply with the following Hawaii's Administrative Rules:

- Chapter 11-39 Air conditioning and Ventilation
- Chapter 11-46 Community Noise Control

In addition, the proposed project will probably not trigger the need to comply with HAR Chapter 11-45 regarding radiation control, as well as HAR Chapters 11-501 through 11-504 regarding asbestos.

**Safe Drinking Water Branch**

We note that the Safe Drinking Water Branch administers programs to protect drinking water sources from contamination.

- Public Water System.** As a public water system will be developed as part of the proposed project, the owners and operators of this system will be required to comply with HAR Title 11, Chapter 20, titled "Rules Relating to Public Water Systems." Potable water will be supplied by the County of Hawaii's Department of Water Supply, which draws water from a series of groundwater wells and shafts.
- Underground Injection Control.** Wastewater generated by the users of the proposed project will be handled entirely on-site via a septic tank system. Should the construction of an injection well be necessary for the subsurface disposal of wastewater, sewage effluent, or surface runoff, an Underground Injection Control (UIC) permit will be obtained from the Department of Health before any injection well construction commences.

**Solid and Hazardous Waste Branch**

The Hawaii's County Department of Environmental Management (DEM) Wastewater/Solid Waste Division operates two County landfills, one in Kona (Pu'uunahulu Landfill) and the other in Hilo (Hilo Landfill). There are also several solid waste transfer stations located around the island. Solid waste generated at the Site during the construction phase will increase over current conditions. Waste is expected to include

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materials from construction and grading activities. This Project is being designed for HILCHPS verification. Therefore low-impact development (LID) and construction practices are expected to be implemented in an effort to divert materials that can be reused/recycled away from the landfill as well as minimize the amount of waste generated. Every effort will be made to reduce the waste generated during the construction phase and when possible materials/structures will be re-used and or recycled. Waste contractors will be asked to submit disposal receipts and invoices to ensure proper disposal of waste.

The proposed project will also comply with the provisions of Section 11-260 to 11-280, Hawaii Administrative Rules, relating to hazardous waste.

**Wastewater Branch**

The proposed project will not connect to the County wastewater system, because wastewater will be handled entirely on-site via an existing septic tank system.

Thank you for participating in the environmental review process. Your letter will be included in the Draft EA. We will send you a copy of the Draft EA when it is available.

Sincerely,

PBR HAWAII

Greg Nakai  
 Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
 Brent Sumida, Urban Works, Inc.

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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

November 5, 2015

PBR Hawaii & Associates, Inc.  
Attention: Mr. Vincent Shigekuni  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

via email: [vshigekuni@pbrhawaii.com](mailto:vshigekuni@pbrhawaii.com)

Dear Mr. Shigekuni:

**SUBJECT:** Pre-Consultation for the HRS Chapter 343 Environmental Assessment – Kealahou Elementary School new Classroom Building

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 Lydia Morikawa at 587-0410. Thank you.

Sincerely,

  
Russell Y. Tsuji  
Land Administrator

Enclosure(s)  
cc: Central Files

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 14, 2015

MEMORANDUM

**DLNR Agencies:**

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

*TS*

*TS*

*TS*

**FROM:** Russell Y. Tsuji, Land Administrator  
**SUBJECT:** Pre-Consultation for a HRS Chapter 343 Environmental Assessment – Kealahou Elementary School new Classroom Building  
**LOCATION:** North Kona, Hawaii; TMK: (3) 7-4-019-044 por.  
**APPLICANT:** PBR Hawaii & Associates, Inc. for the Department of Education

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by November 3, 2015.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

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

Signed:   
Print name: Cary S. Chang, Chief Engineer  
Date: 10/15/15

cc: Central Files

RECEIVED  
LAND DIVISION  
2015 OCT 30 AM 11:09  
DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII



DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/ Russell Y. Tsuji  
Ref.: Pre-Consultation for a HRS Chapter 343 EA for Kealahou Elementary School New Classroom  
Building, N. Kona  
Hawaii, 066

COMMENTS


- We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_\_.
- Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X. The National Flood Insurance Program (NFIP) does not regulate developments within Zone X.
- Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_\_.
- Please note that the project site must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.
- Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:
  - Mr. Mario Sui Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
  - Mr. Carter Romero (Acting) at (808) 961-8943 of the County of Hawaii, Department of Public Works.
  - Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
  - Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.
- The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

Additional Comments: \_\_\_\_\_  
Other: \_\_\_\_\_

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

Signed:  CARY S. CHANG, CHIEF ENGINEER  
Date: 10/29/15





## Flood Hazard Assessment Report

www.hawaii.nfp.org

---



**Property Information**

COUNTY: HAWAII  
 TRK NO: [J] 7-4 038-044  
 WATERSHED: WAHAHA  
 PARCEL ADDRESS: 502 ONIPAA STREET  
 KALUA KONA, HI 96740

**Flood Hazard Information**

FIRM INDEX DATE: APRIL 02, 2004  
 LETTER OF MAP CHANGES: NONE  
 FEMA FIRM PANEL: 155160071C  
 PANEL EFFECTIVE DATE: PANEL NOT PRINTED

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION 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://dfrereng.hawaii.gov/dam/>

**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 advised that this report is provided for informational purposes only. The DLNR, its officers, and employees are not liable for 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 FOOTPRINT LEGEND**  
 (Water legend does not correspond with NFIP)

	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 AD: 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 AEP: Floodway areas in Zone AE. The floodway is the area of land adjacent to the flood zone that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.
	<b>NON-SPECIAL FLOOD HAZARD AREA:</b> An area in a flood hazard risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.
	<b>Zone XE (X shaded):</b> 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.
	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.
	<b>OTHER FLOOD AREAS</b>
	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.

**SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY FLOODING:** Areas of land that are subject to inundation by flooding of 1% annual chance flood, also known 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, AD, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the base flood. Mandatory flood insurance purchase applies in these zones:



August 25, 2016  
 Mr. Russell Y. Tsuji, Land Administrator  
 State of Hawai'i  
 Department of Land and Natural Resources  
 Land Division  
 P.O. Box 621  
 Honolulu, Hawai'i 96809

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII'I - TMK (3) 7-4-019-044 POR.**

Dear Mr. Tsuji:

Thank you for your letter dated November 5, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we offer the following responses to comments from the Department of Land and Natural Resources (DLNR) Divisions listed below.

- Engineering Division.** We acknowledge the Division's comments that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X, and that the National Flood Insurance Program (NFIP) does not regulate developments within Zone X. This information will be noted in the Draft EA.
- Land Division - Hawai'i District.** We acknowledge that the Land Division - Hawai'i District has no comments relative to the project at this time.

We appreciate your participation in the environmental review process. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

*Greg Nakai*

Greg Nakai  
 Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
 Brent Sumida, Urban Works, Inc.

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

October 14, 2015  
**MEMORANDUM**

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

**FROM:** Russell Y. Tsuji, Land Administrator  
**SUBJECT:** Pre-Consultation for a HRS Chapter 343 Environmental Assessment - Kealakehe Elementary School new Classroom Building North Kona, Hawaii; TMK: (3) 7-4-019-044 por.  
**APPLICANT:** PBR Hawaii & Associates, Inc. for the Department of Education

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **November 3, 2015.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

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

Signed: *Lydia Morikawa*

Print name: LYDIA MORIKAWA  
 Date: 10/14/15

cc: Central Files

RECEIVED  
 LAND DIVISION  
 HILO, HAWAII  
 15 OCT 22 11:00



DAVID Y. ICE  
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

November 16, 2015



PBR Hawaii & Associates, Inc.  
Attention: Mr. Vincent Shigekumi  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

via email: [vshigekumi@pbrhawaii.com](mailto:vshigekumi@pbrhawaii.com)

Dear Mr. Shigekumi:

**SUBJECT:** Pre-Consultation for the HRS Chapter 343 Environmental Assessment – Kealahou Elementary School new Classroom Building

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments previously sent you on November 5, 2015, enclosed are comments from the Division of Forestry & Wildlife on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

Russell Y. Tsuji  
Land Administrator

Enclosure(s)

cc: Central Files

DAVID Y. ICE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 14, 2015

**MEMORANDUM**

**TO:**

**DLNR Agencies:**

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

**FROM:**

Russell Y. Tsuji, Land Administrator  
**SUBJECT:** Pre-Consultation for a HRS Chapter 343 Environmental Assessment – Kealahou Elementary School new Classroom Building  
**LOCATION:** North Kona, Hawaii; TMK: (3) 7-4-019:044 por.  
**APPLICANT:** PBR Hawaii & Associates, Inc. for the Department of Education

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by November 3, 2015.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

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

Signed: \_\_\_\_\_

Print name: Steve Begfeld

Date: 11/19/15

cc: Central Files

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
19 EAST KAWILI STREET  
HILO, HAWAII 96720  
PH: (808) 974-4221 FAX: (808) 974-4226

November 6, 2015

MEMORANDUM

**TO:** Russell Y. Tsuji, Land Administrator  
**FROM:** Steve Bergfeld, Hawaii Island Branch Manager, Forestry and Wildlife *SB*  
**SUBJECT:** Pre-Consultation for a HRS Chapter 343 Environmental Assessment – Kealakehe Elementary School new Classroom Building  
**LOCATION:** North Kona, Hawaii; TMK: (3) 7-4-019:044 por.  
**APPLICANT:** PBR Hawaii & Associates, Inc. for the Department of Education

Thank you for the opportunity to comment on the proposed project. Though we know of no endangered plants directly within the proposed project site this area does contain habitat occupied or formerly occupied by the endangered aupaka (*Isodendron pyriformis*), and hala pepe (*Chrysodracon hawaiiense*). We recommend that a thorough botanical survey be conducted prior to any vegetation or ground disturbance.



**Aerial Location Map**  
**Kealakehe Elementary**



DATE: 10/5/2015

Source: Picometry Online (2012). Landsat 7 (ETM) Imagery (1999-2003). ERI Online Basemap.  
Disclaimer: This product has been prepared for general planning purposes only and should not be used for regulatory interpretation or other special analysis.



August 25, 2016

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MARC SHIMAZU, ASIA  
*Associate*

Mr. Russell Y. Tsuji, Land Administrator  
State of Hawai'i  
Department of Land and Natural Resources  
Land Division  
P.O. Box 621  
Honolulu, Hawai'i 96809

Attn: Ms. Lydia Morikawa

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Mr. Tsuji:

Thank you for your letter dated November 16, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education (DOE), we offer the following response to comments from the Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW). We will state in the Draft EA, that during the Pre-Consultation process, that DLNR DOFAW wrote that:

"...Though we know of no endangered plants directly within the proposed project site this area does contain habitat occupied or formerly occupied by the endangered aupaka (*Isodendron pyriformum*), and halapepe (*Chrysodracon hawaiiense*)."

The Draft EA will further note that as recommended by DLNR DOFAW, a thorough botanical survey will be conducted prior to any vegetation or ground disturbance.

We appreciate your participation in the environmental review process. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

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

STATE HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING  
601 KAKOIKOLA LVD, STE 555  
KAPOLEI, HAWAII 96707

SUZANNE B. CASE  
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FISHERY AND WILDLIFE  
KARAOA WAVE ISLAND RESERVE COMMISSION  
STATE PARKS

Mr. Russell Y. Tsuji and Mr. Arnold Uehara  
December 28, 2015  
Page 2

Please contact me at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) if you have any questions regarding this letter.

Aloha

Susan A. Lebo, PhD  
Archaeological Branch Chief

cc: Nancy Matsukawa, Principal, Kealakehe Elementary School ([Nancy.Matsukawa@notes.k12.hi.us](mailto:Nancy.Matsukawa@notes.k12.hi.us))  
Vincent Shigekuni, VP, PBR-Hawaii ([vshigekuni@pbrhawaii.com](mailto:vshigekuni@pbrhawaii.com))

December 28, 2015

Russell Y. Tsuji, Administrator  
Land Division  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

Arnold Uehara, ASA  
Facilities Division  
Kealakehe School District  
74-5000 Puoohihui Street  
Kailua-Kona, HI 96740

LOG NO: 2015.038.11  
DOC NO: 1512CC19  
Archaeology,  
History and Culture

Dear Sirs:

**SUBJECT: Chapter 6E-8 Historic Preservation Review –  
Pre-Consultation for a HRS Chapter 343 Environmental Assessment  
Kealakehe Elementary School New Classroom Building  
Kealakehe Ahupua'a, Kona District, Island of Hawaii'i  
TMK: (1)7-4-019-044 portion**

Thank you for the opportunity to review and comment on the proposed construction of a new school classroom building within the Department of Education (DOE) Kealakehe Elementary School Complex and to comment on Hawaii Revised Statutes (HRS) 343 Environmental Assessment. We received this submittal on October 19, 2015, and apologize for the delayed review. The new 5,500 square feet classroom building will be constructed on approximately a 3.1-acre portion of the 29.7-acre existing Kealakehe Elementary School campus owned by the State of Hawaii. The building will accommodate projected student increases and will consist of six general education classrooms, faculty center, a conference room, SPED classroom, restrooms and utility rooms.

Our records indicate that an archaeological literature review and field report (Hammatt and Shideler 2006) was submitted and reviewed by SHPD on January 30, 2007 (Log No. 2007.0269, Doc. No. 0701MK26). The review indicated that the current Kealakehe Elementary School campus was surveyed at the time of construction (1989), and no historic properties were identified during the survey. The results of the field inspection indicated that no archaeological historic properties were identified and the potential for subsurface archaeological resources was unlikely. The report recommended that no further work is necessary, and SHPD concurred with this recommendation (Log No. 2007.0269, Doc. No. 0701MK26).

Based on the information above, SHPD's determination is **no historic properties affected**. The permit processing may continue. In addition, SHPD has no further comments in regards to HRS §343, Environmental Assessment.

Please attach to the permit. In the event that historic resources, including human skeletal remains, cultural layers, cultural deposits, features, artifacts, sinkholes, lava tubes or lava blisters/bubbles are identified during grading and grubbing activities please cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division at (808) 692-8015.



August 25, 2016

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Susan A. Lebo, PhD  
Archaeological Branch Chief  
State of Hawai'i, Department of Land and Natural Resources  
State Historic Preservation Division  
Kakuhihewa Building  
601 Kamokila Boulevard, Suite 555  
Kapolei, Hawai'i 96707

**SUBJECT: CHAPTER 6E-8 HISTORIC PRESERVATION REVIEW -  
PRE-CONSULTATION FOR A HRS CHAPTER 343  
ENVIRONMENTAL ASSESSMENT - KEALAKEHE  
ELEMENTARY SCHOOL NEW CLASSROOM BUILDING,  
KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-  
019-044 POR.**

Dear Dr. Lebo:

Thank you for your letter dated December 28, 2015 (LOG NO: 2015.03811, DOC NO: 1512GG19), regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input that your agency's determination is "no historic properties affected," and that the permit processing may continue. We recognize that this determination was reached based on an archaeological literature review and field report submitted to and reviewed by the State Historic Preservation Division (SHPD) on January 30, 2007, and that the report recommended that no further work is necessary, and SHPD concurred with this recommendation.

In addition, we acknowledge that SHPD has no comments at this time in regards to the HRS Chapter 343 Environmental Assessment (EA). Your letter will be included in the Draft EA.

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

DAVID Y. IGE  
GOVERNOR



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

November 6, 2015

Mr. Vincent Shigekuni  
Vice President  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

Subject: Pre-Consultation, HRS 343, Environmental Assessment  
Kealakehe Elementary School – New Classroom Building  
North Kona, Hawaii, TMK: (3) 7-4-019; Por. 044

Thank you for your letter of October 5, 2015, requesting our input on our concerns regarding the proposed construction of a classroom building on the grounds of the Kealakehe Elementary School.

The project, on the grounds of the Kealakehe Elementary School, will access roads under the jurisdiction of the County of Hawaii. The project is not anticipated to have a significant impact to our State highway facilities.

If you have any questions, please contact Nami Wong, Systems Planning Engineer, Highways Division, Planning Branch, at (808) 587-6336. Please reference file review number PS 2015-187 in all contacts and correspondence regarding these comments.

Sincerely,

FORD N. FUCHIGAMI  
Director of Transportation

FORD N. FUCHIGAMI  
DIRECTOR

DEPUTY DIRECTORS

JADE T. BUTAY  
ROSS M. HGASHI  
EDWIN H. SNIFEN  
DARRELL T. YOUNG

IN REPLY REFER TO:

DIR 1236

HWY-PS 2.1162



August 25, 2016

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DACHUNG DONG, LEED AP  
Associate

MARC SHIMIZU, ASHA  
Associate

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

Attn: Ms. Nami Wong, Systems Planning Engineer, Highways Division

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT – KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII – TMK (3) 7-4-019-044 POR.**

Dear Mr. Fuchigami:

Thank you for your letter dated November 6, 2015 (Reference number DIR 1236/HWY-PS 2.1162), regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input that the project will access roads under the jurisdiction of the County of Hawaii, and that it is not anticipated to have a significant impact on State highway facilities. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

HONOLULU OFFICE  
1400 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484  
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E-mail: [sysadmin@pbrhawaii.com](mailto:sysadmin@pbrhawaii.com)

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

HRD 15-7637

November 13, 2015

PBR HAWAII & Associates, Inc.  
Attn: Vincent Shigekuni  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Re: Pre-Consultation for Environmental Assessment - Kealahou Elementary School New  
Classroom Building  
Kealahou Ahupua'a, Kona Moku, Hawaii'i Mokupuni  
TMK: (3) 7-4-019-044

Aloha Mr. Shigekuni:

The Office of Hawaiian Affairs (OHA) received your letter dated October 5, 2015, requesting comments on the above-titled project. Given the project descriptions provided, our agency has no comments at this time. Should you have any questions, please contact Everett Ohta at 594-0231 or everett@oha.org.

'O wau iho nō me ka 'oia 'i'o,

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

KC: rg

\*Please address replies and similar, future correspondence to our agency:

Dr. Kamana'opono Crabbe  
Attn: OHA Compliance Enforcement  
560 N. Nimitz Hwy., Ste. 200  
Honolulu, Hawaii'i 96817



August 25, 2016

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Managing Director - Hilo

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Associate

DACHENG DONG, LEED AP  
Associate

MARC SHIMAMURA, ASIA  
Associate

Dr. Kamana'opono Crabbe  
Ka Pūhaha, Chief Executive Officer  
State of Hawaii'i  
Office of Hawaiian Affairs  
560 N. Nimitz Hwy., Ste. 200  
Honolulu, Hawaii'i 96817

ATTN: OHA Compliance Enforcement

SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343  
ENVIRONMENTAL ASSESSMENT - KEALAKEHE  
ELEMENTARY SCHOOL NEW CLASSROOM BUILDING,  
KAILUA-KONA, NORTH KONA, HAWAII'I - TMK (3) 7-4-  
019-044 POR.

Dear Dr. Crabbe:

Thank you for your letter dated November 13, 2015 (Reference No. HRD 15-7637), regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input that your agency has no comments at this time. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

HONOLULU OFFICE  
1719 Halekū Street, Suite 650  
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Fax: (808) 521-1402  
E-mail: syshimura@pbrhawaii.com

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William P. Keoni  
Mayor



County of Hawaii

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

345 Kekaha'o'a St., Suite 41• Hilo, Hawaii 1 96720

(808) 961-8083 • Fax: (808) 961-8086

<http://www.hawaii.gov/departmental-management/>

BJ Leithhead Todd  
Director

John A. Medeiros  
Deputy Director



October 5, 2015

Ms. BJ Leithhead Todd, Director  
County of Hawai'i  
Department of Environmental Management  
25 Aupuni Street  
Hilo, Hawai'i 96720

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT – KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII – TMK (3) 7-4-019-044 POR.**

Dear Ms. Leithhead Todd,

Mr. Vincent Shigekuni  
PBR Hawai'i and Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

RE: Pre-Consultation for a HRS Ch 343 EA – Kealakehe Elementary School New Classroom Bldg.  
Kailua-Kona, North Kona, TMK:7-4-019:044 por.

Our department has no comments to offer on this project.  
Thank you for allowing us to review and comment.

Sincerely,  
  
BJ Leithhead Todd  
DIRECTOR

**PRINCIPALS**

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**HILO OFFICE**  
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Hilo, Hawaii 96720-1533  
Tel: (808) 935-4878

email is an unsecured paper

PBR HAWAII & Associates, Inc., has been contracted by Urban Works, Inc., to prepare a Hawai'i Revised Statutes (HRS) Chapter 343 Environmental Assessment for the proposed new classroom building on the Kealakehe Elementary School campus in the North Kona Judicial District, County of Hawai'i.

The objective of this project is to provide 21<sup>st</sup> century classroom facilities to accommodate the current and projected increases in student enrollment accompanying growth in the area. The proposed new classroom building is anticipated to include six general education classrooms, an art/science classroom, a fully self-contained SPED classroom, an itinerant room, a faculty center, and a conference room, in addition to restrooms and utility rooms.

The project site is shown on the attached figure and is located on an approximately 3.1-acre portion of TMK (3) 7-4-019:044. The footprint of the proposed new classroom building is expected to occupy approximately 5,500 square feet of the campus (approximately 9,810 square feet of total program area). The project site is located behind (makai of) the existing elementary school buildings, and south of the adjacent Kealakehe Intermediate School buildings.

With this letter, we seek your input on the project and comments as to whether the proposed project may have an impact on any of your existing or proposed projects, plans, policies, or programs, and if there are any specific issues that should be addressed in the HRS Chapter 343 Draft Environmental Assessment. Please send us any comments you may have by **November 5, 2015**, to:

PBR HAWAII & Associates, Inc.  
Attn: Vincent Shigekuni  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

Ms. Leithhead Todd  
 SUBJECT: PRE-CONSULTATION FOR AN ENVIRONMENTAL ASSESSMENT – KEALAKEHE  
 ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII –  
 TMK (3) 7-4-019-044  
 October 5, 2015  
 Page 2 of 2

Please do not hesitate to contact me at (808) 521-5631 or vshigekumi@pbhawaii.com if you have any questions or require any additional information.

Sincerely,

PBR HAWAII



Vincent Shigekumi  
 Vice President

Enclosure: Regional Location Map

O:\06313126-01 Kealakehe Elementary EA\EA\Pre-Consultation\Kealakehe Elem School Pre-Consultation Letter DRAFT-01.docx



Aerial Location Map  
**Kealakehe Elementary**



DATE: 10/5/2015

Source: Pictometry Online (2012). Lndat7 (ETM) Imagery (1999-2003). ERI Online Basemap.  
 Disclaimer: This report has been prepared for general planning purposes only and should not be used for boundary interpretations or other legal analyses.





August 25, 2016

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*Associate*

DACHENG DONG, LI, DD, AP  
*Associate*

MARC SHIMAMATSU, ASIA  
*Associate*

Ms. BJ Leithhead Todd, Director  
County of Hawai'i  
Department of Environmental Management  
345 Kekuanoa Street, Suite 41  
Hilo, Hawai'i 96720

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Ms. Leithhead Todd:

Thank you for your letter dated October 20, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input that your Department has no comments to offer relative to the project. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

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**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**  
 345 KEKUAŌA STREET, SUITE 20 • HILO, HAWAII 96720  
 TELEPHONE (808) 961-8050 • FAX (808) 961-8657

November 24, 2015

Mr. Vincent Shigekuni  
 PBR Hawaii  
 ASB Tower, Suite 650  
 1001 Bishop Street  
 Honolulu, HI 96813

Dear Mr. Shigekuni:

**Subject: Pre-Environmental Assessment for Kealahoe Elementary School New Classroom Building  
 Tax Map Key 7-4-019-044 Portion**

This is in response to your Pre-Environmental Assessment letter dated October 7, 2015.

Please be informed that there are two existing 2-inch meters serving the elementary school. These meters are connected to an existing 8-inch waterline along Kealahoe Street.

The Department will request estimated maximum daily water usage calculations, prepared by a professional engineer licensed in the State of Hawaii, for review and approval. After review of the calculations, the Department will determine if the existing meters serving the school are adequate to support the additional water demand or if a larger or additional meter will be required. Should the water demand for the new classroom building exceed the original water allocation for the school, additional facilities charges may also apply.

There is also an existing 12-inch waterline within Kealahoe Street which interconnects with the 8-inch waterline and these are adequate to provide 2,000 gallons per minute for fire protection, as required per the Department's Water System Standards for schools.

Any meter(s) serving the proposed project will require the installation of a reduced principle type backflow prevention assembly within five feet of the meter on private property. The Department must inspect and approve the installation prior to commencement of water service. Construction plans showing the proposed water system improvements must also be submitted for review and approval.

Should there be any questions, please contact Mr. Ryan Quitariano of our Water Resources and Planning Branch at 961-8070, extension 256.

Sincerely yours,

*Keith K. Okamoto*  
 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.



August 25, 2016

Keith K. Okamoto, P.E.  
 Manager-Chief Engineer  
 County of Hawaii  
 Department of Water Supply  
 345 KekuaŌa Street, Suite 20  
 Hilo, Hawaii 96720

Attn: Mr. Ryan Quitariano, Water Resources and Planning Branch

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Mr. Okamoto:

Thank you for your letter dated November 24, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process and the information provided regarding the existing 2-inch meters serving the elementary school.

As requested, the estimated maximum daily water usage calculations for the proposed project will be submitted to the Department of Water Supply (DWS) for review and approval prior to receiving a water commitment.

We appreciate the information provided on the DWS' Standard for the required fire flow at the property's frontage, as well as the adequacy of the existing 8-inch waterline.

Your letter will be included in the Draft EA. We will send you a copy of the Draft EA when it is available.

Sincerely,

PBR HAWAII

*Greg Nakai*

Greg Nakai  
 Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
 Brent Sumida, Urban Works, Inc.

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William P. Kenoi  
Mayor



County of Hawaii  
HAWAII FIRE DEPARTMENT  
25 Aupuni Street • Suite 2501 • Hilo, Hawaii 96720  
(808) 932-2900 • Fax (808) 932-2928

Darren J. Rosario  
Fire Chief  
Renwick J. Victorino  
Deputy Fire Chief

October 16, 2015

Mr. Vincent Shigekuni  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Mr. Shigekuni

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343  
ENVIRONMENTAL ASSESSMENT – KEALAKEHE  
ELEMENTARY SCHOOL NEW CLASSROOM BUILDING,  
KAILUA-KONA, NORTH KONA, HAWAII – TMK (3) 7-4-  
019-044 POR.**

In regards to the above-referenced project pre-consultation, the following shall be in accordance:

**NFPA 1, UNIFORM FIRE CODE, 2006 EDITION**

*Note: Hawaii's State Fire Code, National Fire Protection Association 2006 version, with County of Hawaii amendments. County amendments are identified with a preceding "C-" of the reference code.*

Chapter 18 Fire Department Access and Water Supply

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

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

**18.1.1 Plans.**

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



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Vincent Shigekuni  
October 16, 2015  
Page 2

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

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

**18.2 Fire Department Access.**

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

**18.2.2\* Access to Structures or Areas.**

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

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

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

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

**18.2.3.1 Required Access.**

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

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



**18.2.3.1.3\*** When not more than two one- and two-family dwellings or private garages, carports, sheds, agricultural buildings, and detached buildings or structures 400ft<sup>2</sup> (37 m<sup>2</sup>) or less are present, the requirements of 18.2.3.1 through 18.2.3.2.1 shall be permitted to be modified by the AHJ.

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

#### **18.2.3.2 Access to Building.**

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

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

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

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

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

#### **18.2.3.4 Specifications.**

##### **18.2.3.4.1 Dimensions.**

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

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

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

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

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

##### **18.2.3.4.3 Turning Radius.**

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

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

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

##### **18.2.3.4.5 Bridges.**

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

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

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

##### **18.2.3.4.6 Grade.**

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

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

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

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

#### **18.2.3.5 Marking of Fire Apparatus Access Road.**

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

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

#### **18.2.4\* Obstruction and Control of Fire Department Access Road.**

##### **18.2.4.1 General.**

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

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

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

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

##### **18.2.4.2 Closure of Accessways.**

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

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

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

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

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

#### **18.3 Water Supplies and Fire Hydrants**

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

##### **EXCEPTIONS:**

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

- 1) In that a single water tank is used for both domestic and firefighting water, the water for domestic use shall not be capable of being drawn from the water reserved for firefighting;
  - 2) Minimum pipe diameter sizes from the water supply to the Fire Department Connection (FDC) shall be as follows:
    - a) 4" for C900 PVC pipe;
    - b) 4" for C906 PE pipe;
    - c) 3" for ductile iron;
    - d) 3" for galvanized steel.
  - 3) The Fire Department Connection (FDC) shall:
    - a) be made of galvanized steel;
    - b) have a gated valve with 2-1/2 inch, National Standard Thread male fitting and cap;
    - c) be located between 8 ft and 16 ft from the Fire department access. The location shall be approved by the AHJ;
    - d) not be located less than 24 inches, and no higher than 36 inches from finish grade, as measured from the center of the FDC orifice;
    - e) be secure and capable of withstanding drafting operations. Engineered stamped plans may be required;
    - f) not be located more than 150 feet of the most remote part, but not less than 20 feet, of the structure being protected;
    - g) also comply with section 13.1.3 and 18.2.3.4.6.1 of *this code*.
  - 4) Commercial buildings requiring a fire flow of 2000gpm shall be provided with a second FDC. Each FDC shall be independent of each other, with each FDC being capable of flowing 500gpm by engineered design standards. The second FDC shall be located in an area approved by the AHJ with the idea of multiple Fire apparatus' conducting drafting operations at once, in mind.
  - 5) Inspection and maintenance shall be in accordance to NFPA 25.
  - 6) The owner or lessee of the property shall be responsible for maintaining the water level, quality, and appurtenances of the system.
- EXCEPTIONS TO SECTION 18.3.8:**
- 1) Agricultural buildings, storage sheds, and shade houses with no combustible or equipment storage.
  - 2) Buildings less than 800 square feet in size that meets the minimum Fire Department Access Road requirements.



Vincent Shigekuni  
October 16, 2015  
Page 9

- 3) For one and two family dwellings, agricultural buildings, storage sheds, and detached garages 800 to 2000 square feet in size, and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 1000 feet.
- 4) For one and two family dwellings, agricultural buildings, and storage sheds greater than 2000square feet, but less than 3000 square feet and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 500 feet.
- 5) For buildings with an approved automatic sprinkler system, the minimum water supply required may be modified.

If there are any questions regarding these requirements, please contact the Fire Prevention Bureau at (808) 323-4761.

DARREN J. ROSARIO  
Fire Chief

KT:ds



**PRINCIPALS**  
THOMAS WITTENFASIA  
Chairman

R SHAN DUNCAN ASIA  
President

RUSSELL YU CHUNG FAN LIU LEE D'APRIDA C  
Executive Vice President

VINCENT SHIGEKUNI  
Vice President

GRANT MURAKAMI MICHIE LEE D'APRIDA C  
Vice President

TOMASCHWILL ACFP  
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Principal

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Senior Associate

ROY TAKEMOTO  
Managing Director - Hilo

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Tel: (808) 521-5631  
Fax: (808) 523-1402  
E-mail: syosudm@pbrhawaii.com

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printed on recycled paper

August 25, 2016

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

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 FOR.**

Dear Chief Rosario,

As the planning sub-consultant for the State Department of Education, we want to thank you for your letter dated October 16, 2015 regarding the proposed Kealakehe Elementary School New Classroom Building.

We appreciate your participation in the environmental review process, and the information on the NFPA Uniform Fire Code, 2006 Edition. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.



William P. Kenoi  
Mayor

West Hawaii's Office  
74-5044 Aiea Keohohole Hwy  
Kailua-Kona, Hawaii 96740  
Phone (808) 323-4770  
Fax (808) 327-3563

**County of Hawaii**  
PLANNING DEPARTMENT

Duane Kamaha  
Director

Bobby Command  
Deputy Director

East Hawaii's Office  
101 Puuhi Street, Suite 3  
Hilo, Hawaii 96720  
Phone (808) 961-8288  
Fax (808) 961-8742

November 5, 2015

Mr Vincent Shigekuni  
PBR Hawaii'i & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

Dear Mr Shigekuni.

**Subject:** Pre-Environmental Assessment Consultation  
**Applicant:** State of Hawaii (Executive Order No. 2312 dated April 18, 1967, for the Kealahoe School Site to be under the control and management of the Department of Education)  
**Project:** New Classroom Building for Kealahoe Elementary School  
**TMK:** 3) 7-4-019-044, North Kona, Hawaii'i

This is to acknowledge receipt of your October 5, 2015, letter requesting comments from this office regarding the preparation of a Draft Environmental Assessment (DEA) for the subject project.

Proposed is a new classroom building on the Kealahoe Elementary School campus. This building will include six general education classrooms, an art/science classroom, a fully self-contained special education classroom, an itinerant room, a faculty center, and a conference room in addition to restrooms and utility rooms.

The subject 29.68 acre parcel is designated Urban by the State Land Use Commission and zoned Agricultural (A-1a) by the County. In addition, the Hawaii'i County General Plan Land Use Allocation Guide (LUPAG) Map designates the parcel as Low Density Urban and Medium Density Urban. It is not located within the Special Management Area.

Hawaii'i County Code Section 25-4-11(c) states that "Public uses, structures and buildings and community buildings are permitted uses in any district, provided that the director has issued plan approval for such use." Therefore, the proposed project will require a Plan Approval issued by this office.

Mr Vincent Shigekuni  
PBR Hawaii'i & Associates, Inc.

Page 2  
November 5, 2015

In the DEA, describe how the proposed use is consistent with the policies, standards, and courses of action of the County of Hawaii'i General Plan, as amended in 2005. We note 10.2.4.5.2(b) and (c) Courses of Action (North Kona) – "Encourage the State Department of Education to add facilities as the need arises" and "Improve basic school facilities to meet current standards", respectively. Further, the project site is located in the Kona Community Development Plan (CDP) planning area. Please review and include discussion of the proposed project's consistency with its overall goals, objectives, policies and actions.

Thank you for the opportunity to provide preliminary comments on the proposed project. Please provide our department with a copy of the DEA for our review and comment.

If you have questions, please feel free to contact Esther Imamura at (808) 961-8139.

Sincerely,

  
DUANE KAMAHA  
Planning Department

ETI.kit  
P:\Wpwin60\ETV\Estadraftpre-Consun\VPBR Kealahoe El Bldg.Rtf  
cc: Planning Department, Kona



August 25, 2016

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*Associate*

MARC SHIMAMU, AIA  
*Associate*

Mr. Duane Kamaha, Director  
County of Hawaii  
Planning Department  
East Hawaii Office  
101 Puuahi Street, Suite 3  
Hilo, Hawaii 96720

Attn: Ms. Esther Imamura

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019-044 POR.**

Dear Mr. Kamaha:

Thank you for your letter dated November 5, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, the information on the site's land use designations, and your input that the proposed project will require a Plan Approval issued by your office, according to the provisions of Hawaii County Code Section 25-4-11(c). We also appreciate your input that the Draft Environmental Assessment (EA) should include discussion of the proposed project's consistency with the goals, objectives, policies, standards, and courses of action set forth in the County of Hawaii General Plan, as amended in 2005, as well as the Kona Community Development Plan.

Your letter will be included in the Draft EA. We will send you a copy of the Draft EA when it is available.

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

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William P. Kenoi  
Mayor



## County of Hawai'i

POLICE DEPARTMENT  
349 Kapi'olani Street • Hilo, Hawai'i 96720-3998  
(808) 955-3311 • Fax: (808) 961-2389

October 20, 2015

Mr. Vincent Shigekuni  
Vice President  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

**SUBJECT:** PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII, TAX MAP KEY (3) 7-4-019:044 POR.

Dear Mr. Shigekuni:

This is in response to your letter dated October 5, 2015, requesting information and comments regarding the pre-consultation for an environmental assessment for the construction of a new classroom building at the Kealakehe Elementary School in Kailua-Kona, North Kona, Hawai'i.

Thank you for allowing the Hawai'i Police Department to make comments regarding this environmental assessment. At this time, the Hawai'i Police Department has no comments.

Should you have any questions or concerns please contact Captain Randal M. Ishii, Commander of the Kona District, at (808)326-4646, extension 299.

Sincerely,

HARRY S. KUBOJIRI  
POLICE CHIEF

PAUL H. KEALOHA, JR.  
ASSISTANT POLICE CHIEF  
AREA II OPERATIONS

RMI/jaj  
RS150660

Harry S. Kubojiri  
Police Chief

Paul K. Ferreira  
Deputy Police Chief



August 25, 2016

**PRINCIPALS**  
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Principal

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Chairman Emeritus

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

Chief Harry S. Kubojiri  
Police Chief  
County of Hawai'i  
Police Department  
349 Kapiolani Street  
Hilo, Hawai'i 96720

ATTN: Captain Randal M. Ishii, Kona District Commander

**SUBJECT: PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT - KEALAKEHE ELEMENTARY SCHOOL NEW CLASSROOM BUILDING, KAILUA-KONA, NORTH KONA, HAWAII - TMK (3) 7-4-019:044 POR.**

Dear Chief Kubojiri:

Thank you for your letter dated October 20, 2015, regarding the subject project. As the planning sub-consultant for the State Department of Education, we appreciate your participation in the environmental review process, and your input that your Department has no comments to offer relative to the project. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Greg Nakai  
Planner

Cc: Duane Y. Kashiwai, DOE Facilities Development Branch  
Brent Sumida, Urban Works, Inc.

