



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

FEB 23 2016

OFFICE OF THE SUPERINTENDENT

February 9, 2016

Mr. Scott Glenn
Interim 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
Kalaheo High School Athletic Field Improvements
DOE Job Nos.: Q94001-12 and Q94001-13

RECEIVED
16 FEB 10 AM 1:48
OFC. OF ENVIRONMENTAL
QUALITY CONTROL

Dear Mr. Glenn:

The Hawaii State Department of Education has reviewed the Draft Environmental Assessment for the subject project, and anticipates a Finding of No Significant Impact. Please publish the notice in the February 23, 2016 issue of the OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and two (2) hardcopies of the Draft EA, and a CD containing electronic files of these documents in MS-Word and PDF formats, respectively.

Should you have any questions or concerns, please contact our consultant for this project, Mr. Lance Fukumoto of Fukunaga & Associates, Inc. at (808) 944-1821.

Very truly yours,

Kathryn S. Matayoshi
Superintendent

KSM:dw
Enclosures

c: Lance Fukumoto, Fukunaga & Associates, Inc.
Facilities Development Branch

FILE COPY

October 2015

NON-CHAPTER 343 DOCUMENT
PUBLICATION FORM
OFFICE OF ENVIRONMENTAL QUALITY CONTROL FEB 23 2016

Project Name: Kalaheo High School Athletic Field Improvements

Applicable Law: Chapter 25, Revised Ordinances of Honolulu

Type of Document: Draft Environmental Assessment

Island: Oahu

District: Koolauapoko

TMK: 4-4-034:024, 028, 029

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16 FEB 10 PM 2:26
OFC. OF ENVIRONMENTAL
QUALITY CONTROL

Permits Required: Special Management Area, NPDES Permit for Construction Related Discharges, Grading Permit, Building Permit

Applicant or Proposing Agency: Department of Education, State of Hawaii; P.O. Box 2360, Honolulu, HI 96804; Cheng-Hsin Chang, (808) 586-0481

Approving Agency or Accepting Authority: N/A

Consultant: Fukunaga & Associates, Inc.; 1357 Kapiolani Blvd., Suite 1530, Honolulu, HI 96814; Lance Fukumoto, (808) 944-1821

Status: DEA-AFNSI

Project Summary:

The proposed project will improve the existing athletic field at Kalaheo High School. The improvements involve reconstructing the existing football field as a football/soccer field in combination with new bleachers and walkways, including drainage and irrigation improvements and new field equipment. The project will benefit the community by providing the school with the basic facilities to meet its program needs, thereby removing the limitations on its physical education program. The proposed project will have minor short term construction impacts on noise and air quality. No long term impacts are expected.

Kalaheo High School Athletic Field Improvements

DRAFT
ENVIRONMENTAL ASSESSMENT



Prepared for:
State of Hawaii
Department of Education

Prepared by:
Fukunaga & Associates, Inc.
1357 Kapiolani Blvd., Suite 1530
Honolulu, Hawaii 96814

October 2015

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LIST OF ABBREVIATIONS

ALISH	Agricultural Lands of Importance to the State of Hawaii
BMP	Best Management Practices
BWS	Honolulu Board of Water Supply
CWRM	State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management
CZM	Coastal Zone Management
DBEDT	State of Hawaii, Department of Business, Economic Development, and Tourism
DLNR	State of Hawaii, Department of Land and Natural Resources
DOE	State of Hawaii, Department of Education
DOFAW	State of Hawaii, Department of Land and Natural Resources, Division of Forestry & Wildlife
DOH	State of Hawaii, Department of Health
DPP	City & County of Honolulu, Department of Planning and Permitting
EA	Environmental Assessment
EIS	Environmental Impact Statement
F	Fahrenheit
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawaii Administrative Rules
HECO	Hawaiian Electric Company
HPD	Honolulu Police Department
HRS	Hawaii Revised Statutes
IRH	State of Hawaii, Department of Health, Indoor and Radiological Health Branch
JROTC	Junior Reserve Officer Training Corps
KHCMP	Draft Kawainui-Hamakua Complex Master Plan
KPWMP	Koolaupoko Watershed Management Plan
KSCP	Koolaupoko Sustainable Communities Plan
LUO	Land Use Ordinance
MGD	Million Gallons per Day
MSL	Mean Sea Level
NFHS	National Federation of State High School Associations
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service

List of Abbreviations

OCCL	State of Hawaii, Department of Land and Natural Resources, Office of Conservation and Coastal Lands
ROH	Revised Ordinances of Honolulu
RUSP	Revised Ultimate Site Plan
SHPD	State of Hawaii, Department of Land and Natural Resources, Historic Preservation District
SMA	Special Management Area
TMK	Tax Map Key
UHERO	University of Hawaii, Economic Research Organization
U.S.	United States
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USP	Ultimate Site Plan

EXECUTIVE SUMMARY

Project Name:

Project 1:
Kalaheo High School Athletic Field Improvements
D.O.E. Job No.: Q94001-12
Kailua, Oahu, Hawaii

Project 2:
Kalaheo High School Bleachers for Athletic Field and Tennis Court
D.O.E. Job No.: Q94001-13
Kailua, Oahu, Hawaii

Proposing/Approving Agency:

Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Consultant:

Project 1:
Fukunaga & Associates, Inc.
1357 Kapiolani Boulevard, Suite 1530
Honolulu, Oahu, Hawaii 96814

Project 2:
Sato and Associates Inc.
2046 So. King Street
Honolulu, Hawaii 96826

Project Summary:

The State of Hawaii Department of Education proposes to improve the existing athletic field at Kalaheo High School. The improvements include re-grading the existing football field, landscaping and irrigation, new bleachers and walkways, and installation of a new retaining wall and drainage facilities.

The project area is located within the Urban State Land Use District; and within Residential R-7.5 and Preservation P-1 zoning designations. The project area is also located within the Special Management Area (SMA), and in a letter dated May 8, 2015, the City and County of

Honolulu Department of Planning and Permitting indicated that a major special management area use permit would be required.

Determination:

A Finding of No Significant Impact (FONSI) is anticipated for this project.

CHAPTER 1. INTRODUCTION

1.1 Purpose for Environmental Assessment

The State of Hawaii, Department of Education (DOE) proposes to improve the existing athletic field and install bleachers at Kalaheo High School.

In a letter dated May 8, 2015, the City and County of Honolulu, Department of Planning and Permitting (DPP) indicated that the project is exempt from the preparation of an Environmental Assessment (EA) pursuant to the State DOE Exemption List under Chapter 343 Hawaii Revised Statutes (HRS) and Hawaii Administrative Rules (HAR), Chapter 11-200-8; however, an EA must be prepared pursuant to Chapter 25 of the Revised Ordinance of Honolulu (ROH) related to the Special Management Area (SMA). Section 25.3.3 (c) (1) indicates:

“Any proposed development within the special management area requiring a special management area use permit shall be subject to an assessment by the agency in accordance with the procedural steps set forth in HRS Chapter 343. The director may allow the assessment to be conducted concurrently with the processing of the application for a special management area use permit.”

The majority of the project area is located within the Special Management Area; therefore, the DPP determined that an EA would be required.

1.2 Existing Facilities and Operations

Kalaheo High School is located along the northwest side of Mokapu Saddle Road and Mokapu Boulevard at the intersection with Kapaa Quarry Road/Iliana Street. It encompasses tax map keys (TMK) 4-4-034:024, 028 and 029 which comprise approximately 19.3 acres in land area. Existing facilities include thirteen (13) buildings accommodating over 50 classrooms, a gymnasium, cafeteria, industrial arts facilities and administration; an athletic field, tennis courts and a parking lot.

The school’s vision is to promote a community of learners where students prepare for the challenges and opportunities in a diverse and global society, and its mission is to prepare students for higher education, future employment and responsible citizenship. The curriculum offers a broad range of courses, such as high-level language arts, mathematics, social studies and sciences through its Honors and Advanced Placement courses. Kalaheo High also has an award-winning Naval Junior Reserve Officer Training Corps (JROTC), and strong career and technical education pathways, including arts and communication academy, health services, industrial and engineering technology and public human services. In 2013-14, student enrollment was 908 and the number of employed faculty members was 49.

Kalaheo High School is part of the DOE Kalaheo Complex within the Windward District. Its service area is generally bound on the north by the Pacific Ocean; on the east by Kailua Bay; and

on the south by the Ulumawao Ridge, Kawainui Marsh, Kaelepulu Stream, Mid-Pacific Country Club and Keolu Hills. The communities encompassed by the service area include Kaneohe Marine Corps Base, Kailua, Lanikai and the majority of the residential area along Kaneohe Bay Drive from Mokapu Saddle Road to the H-3 highway.

1.3 Project Need and Objective

The school was initially opened in 1966 as the Kalaheo Hillside Intermediate School. In 1971, the DOE adopted a plan to convert the intermediate school into a high school to provide another secondary school to relieve the overcrowded conditions at the Kailua High and Kailua Intermediate Schools. The conversion of Kalaheo from an intermediate to a high was completed by adding grades 10 through 12 and phasing out grades 7 and 8 between 1973 and 1976. To facilitate this conversion, the DOE adopted an Ultimate Site Plan (USP) in February 1974. From the time of adoption of this USP and 1984, several improvements on the original school were completed; including: a parking lot, an industrial arts building, expansion of the existing athletic field and a gymnasium. The USP was revised twice, with the DOE adopting the Revised Ultimate Site Plan (RUSP) in 1983. The RUSP was based on a design student enrollment of 1,400, grades 9 through 12. The following proposed facilities were located in the RUSP:

- Football/track field with bleachers and lights
- Baseball field
- Two playcourt units
- Tennis courts
- Varsity/junior varsity locker/shower
- Swimming pool
- Parking for 219 cars in two additional parking lots

Approximately 35.3 acres of land would need to be acquired, bringing the new total area for the school site to approximately 54.6 acres.

In 1984, an Environmental Impact Statement (EIS) was approved for the Revised Ultimate Site Plan. It estimated a land acquisition cost of \$870,000 and a design and construction cost of \$16.2 million, however, did not propose a schedule for the land acquisition or construction of the facilities.

The primary objective of the DOE is to provide adequate educational opportunities to all school-age children residing in Hawaii, and a sub-objective is to provide adequate facilities to provide such education. The RUSP for Kalaheo High School is to facilitate implementing these objectives.

1.4 Project Description

The RUSP proposed a new football and track field combination with bleachers and lights to replace the existing athletic field on the northwest corner of Mokapu Saddle Road and Iliana Street. The existing athletic field was last improved in 1975 and is ageing; the soccer field size and clearances does not meet the National Federation of State High School Associations

(NFHS), which specifies 15 foot safe clear zone around playing field and a minimum of 1.5 percent for engineered natural turf soccer fields which are surface drained.

Due to budgetary constraints, the DOE decided to reconstruct the field as a football/soccer field combination with bleachers, and excluded the lighting and track field from the project, which would have required additional land. The proposed project includes the following improvements:

- Athletic field improvements to provide a natural grass regulation soccer field and a natural grass football field with slope in accordance with latest NFHS rules and regulations.
- 1' to 4' grade adjustment retaining walls to expand the grass field to accommodate a regulation football and soccer field with required safety clear zones.
- New drainage swale and drainage system improvements.
- Concrete ramp, walkway, bleachers and concrete piers along the North sideline to accommodate spectators.
- Installation of ball-stopper nets to minimize/prevent errant soccer balls and footballs from going over the chain link fencing into the highway area, brush area and Building M (Industrial Arts) area.
- Field equipment, including new football goal posts, soccer goals, scoreboard and associated electrical work.
- Irrigation system, grassing and soil amendments for new natural grass athletic field.

These improvements are shown in **Figures 1-1** and **1-2**.

1.5 Construction Schedule and Cost

Project 1 was bid in June 2014, and a contract of \$1.04 million was awarded.

Project 2 was bid in June 2014, and a contract of \$418,800 was awarded.

Construction of both projects is anticipated to begin following the acceptance of this EA or subsequent EIS, and compliance with all State and City rules, regulations, and ordinances and acquisition of all associated permits and clearances. The DOE favorably predicts that construction will begin in early 2016 and will be completed by fall 2016.

CHAPTER 2. DESCRIPTION OF THE ENVIRONMENT, IMPACTS AND MITIGATIVE MEASURES

2.1 Climate

The island of Oahu is characterized by a tropical savanna climate with little seasonal and diurnal variability in temperature. Average monthly temperatures for the project area range between 79 and 85 degrees F for the highs and between 69 and 76 degrees F for the lows. The average annual precipitation is 42.6 inches, predominantly falling between the months of October and April. Trade winds flow from east to west and prevail during the greater part of the year.

2.2 Topography

The island of Oahu was formed by two different shield volcanoes, the Waianae and the Koolau, with the former being the older of the two. Formation of the island began approximately 4 million years ago. Both volcanoes have undergone erosion and coral reef growing stages and have experienced submarine landslides. This activity helped create the Kawainui and Kaelepulu embayments, which in turn have shaped the land forming the Kailua area.

The topography throughout the most of the project area is relatively flat. Existing ground elevations within the athletic field range between 18 and 22 feet MSL. The hillside to the north and west of the athletic field experiences steep slopes in the range of 15 to 20 percent, and ground elevations northwest of the field quickly rise to 60 feet MSL at the project area boundary. See **Figure 2-1**.

2.3 Soils

2.3.1 Soil Survey

The USDA, Soil Conservation Service 1972 “Soil Survey” provides detailed information on soil classifications, characteristics and maps showing their locations on the islands. The survey is useful for engineers and builders because the information includes descriptions of soil properties and the relative stability of soils for engineering purposes. According to the survey, only three different soil types are found within the project area as described below. **Figure 2-2** shows the locations of these soils.

- Jaucas sand, 0 to 15% slopes (JaC): in most places the slope does not exceed 7 percent. A representative profile is single grain, pale brown to very pale brown, sandy, more than 60 inches deep, and neutral to moderately alkaline throughout the profile. Often the surface layer is dark brown as a result of accumulation of organic matter and alluvium. Runoff is very slow to slow, and permeability is rapid. Water erosion is a slight hazard, but wind erosion is a severe hazard where vegetation has been removed. This soil is used for pasture, sugarcane, truck crops, and urban development.

- Mokuleia clay loam (Mt): This soil occurs as small areas on the coastal plains and is nearly level. A representative profile includes a very dark greyish-brown clay loam surface layer about 16 inches thick. The next layer is dark-brown and light-grey, single-grain sand and loamy sand 34 to more than 48 inches thick. The surface layer is neutral in reaction, and the underlying material is moderately alkaline. Permeability is moderate in the surface layer and rapid in the subsoil. The erosion hazard is no more than slight, and runoff is very slow. In places roots penetrate to a depth of 5 feet or more. This soil is used for sugarcane, truck crops, and pasture.
- Marsh (MZ): This classification consists of wet, periodically flooded areas covered largely with grasses and bulrushes or other herbaceous plants. It occurs as small, low-lying areas along the coastal plains. Fresh or brackish water stands on the surface, depending on its proximity to the ocean. Marsh vegetation thrives.
- Water (W): Included in the project area is the Maunawili Stream and the Kawainui Canal.

2.3.2 Land Study Bureau

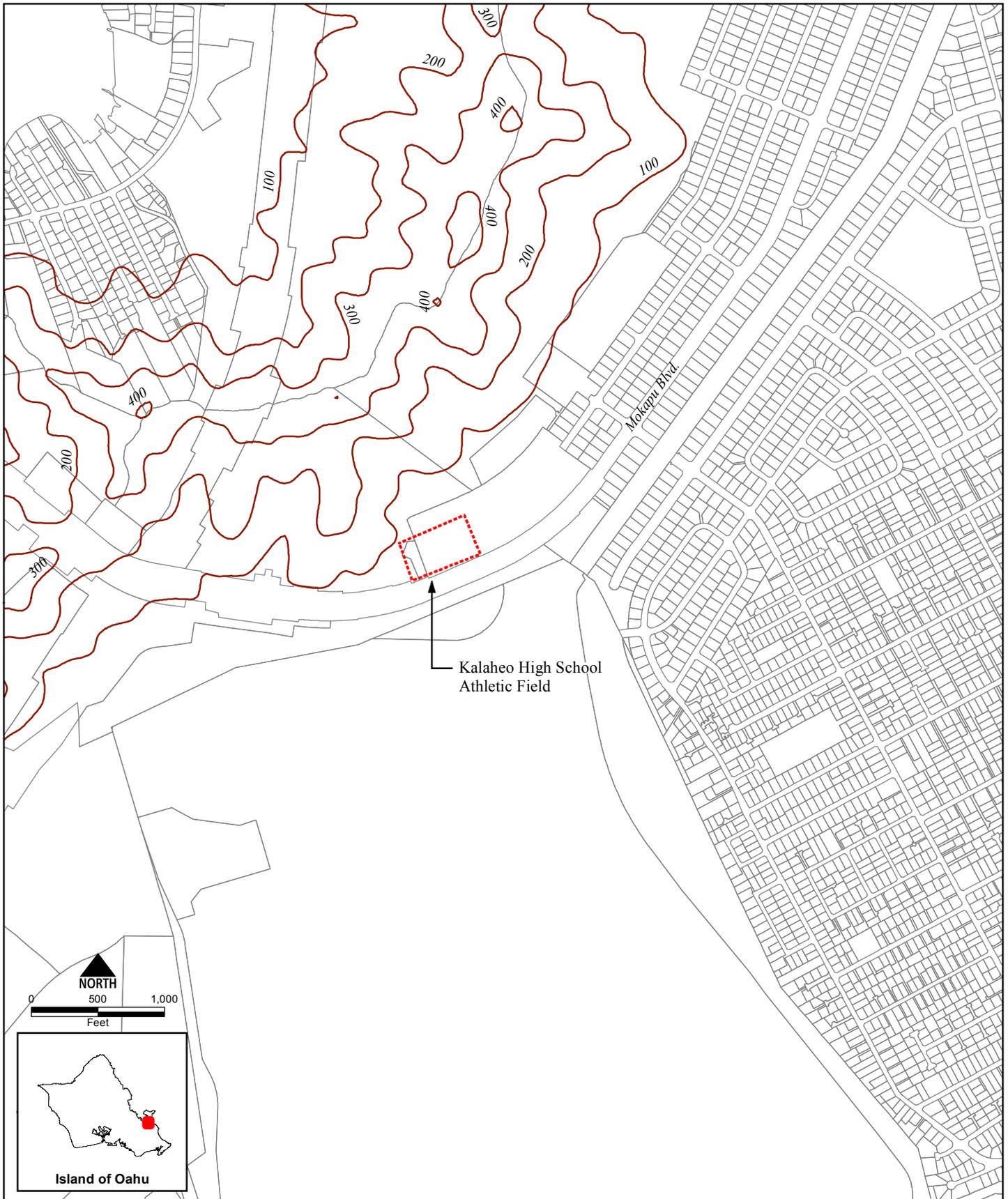
The University of Hawaii, Land Study Bureau 1972 “Detailed Land Classification – Island of Oahu” grouped all non-urban lands into five categories based on their soil properties and capabilities for agricultural productivity measured by their performance for selected crops. The categories were assigned letters “A” through “E” in order of highest to least productive. The project area is almost entirely within State Urban land and therefore is not associated with a Land Study Bureau category; however, a small section of TMK 4-4-034:028 is within State Conservation land and has been classified by the Land Study Bureau as “E”. See **Figure 2-3**.

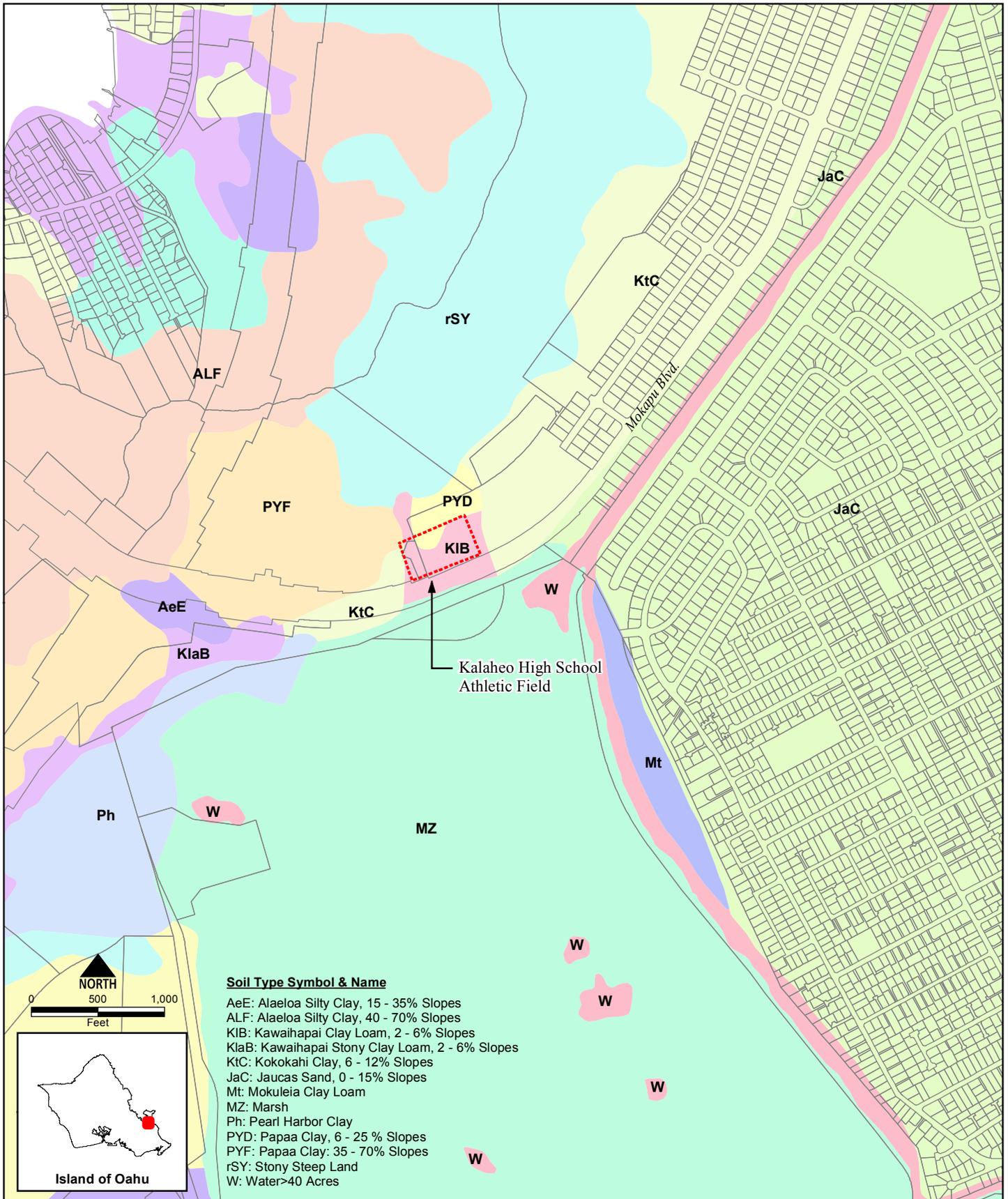
2.3.3 Agricultural Lands of Importance to the State of Hawaii

The Department of Agriculture “Agricultural Lands of Importance to the State of Hawaii” (ALISH) provided a classification system for identification of agriculturally important lands to the State, which established three classes of agricultural lands primarily, but not exclusively, on the basis of soil characteristics. The classifications are: Prime Agricultural Land, Unique Agricultural Land and Other Agricultural Land. These classifications provide decision makers understanding of long-term implications of several land use options for production of food, feed, forage, and fiber crops, however, do not designate areas to any specific land use. Lands not considered for classification as ALISH are: 1) Developed urban land over 10 acres; 2) Natural or artificial enclosed bodies of water over 10 acres; 3) Forest reserves; 4) Public use lands, e.g. parks and historic sites; 5) Lands with slopes in excess of 35%; and 6) Military installations, except undeveloped areas over 10 acres. The project area is entirely within lands not considered for classification. See **Figure 2-4**.

2.4 Natural Hazards

As shown on **Figure 2-5**, the Flood Hazard Assessment Report, which is based on the Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA),



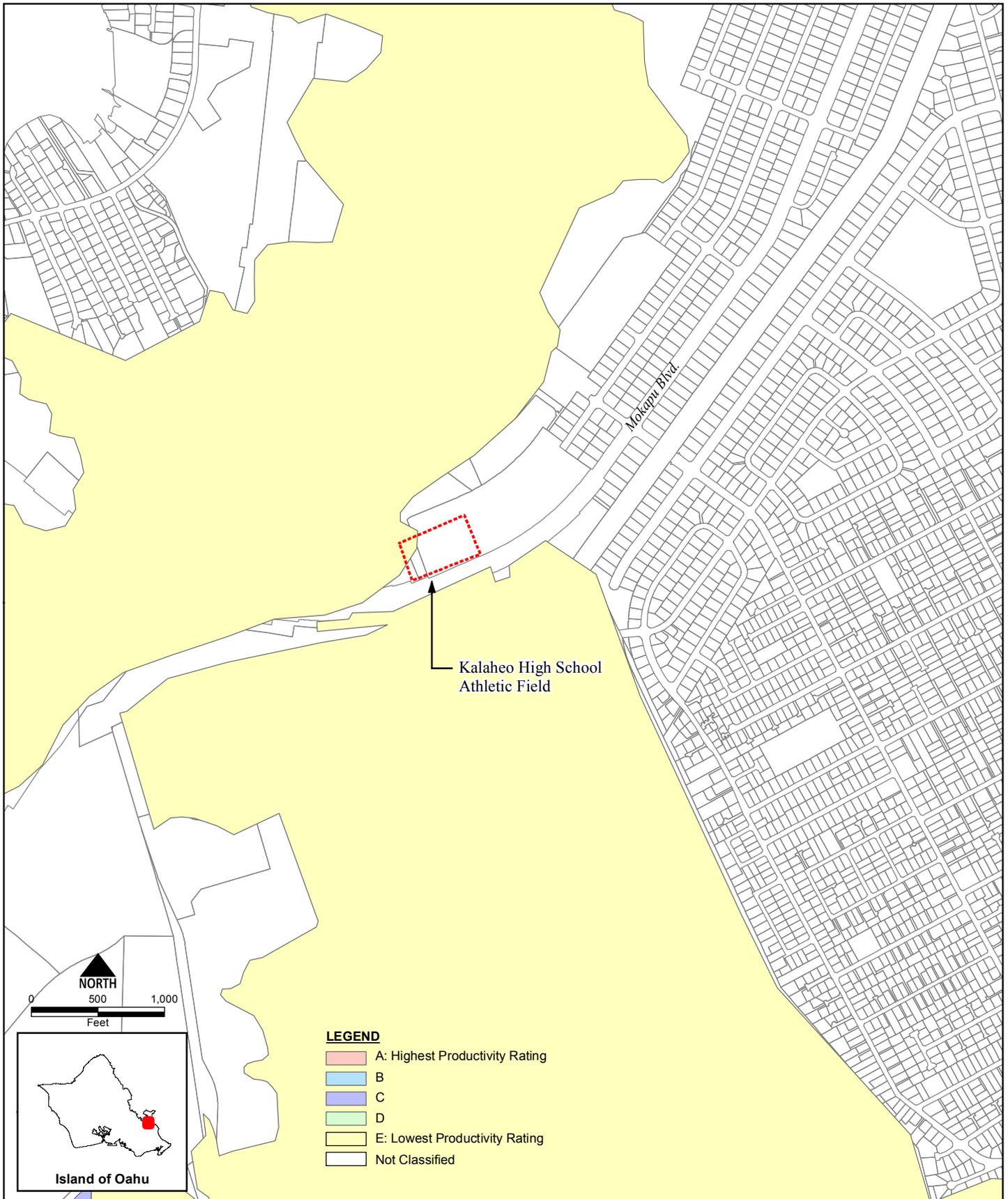


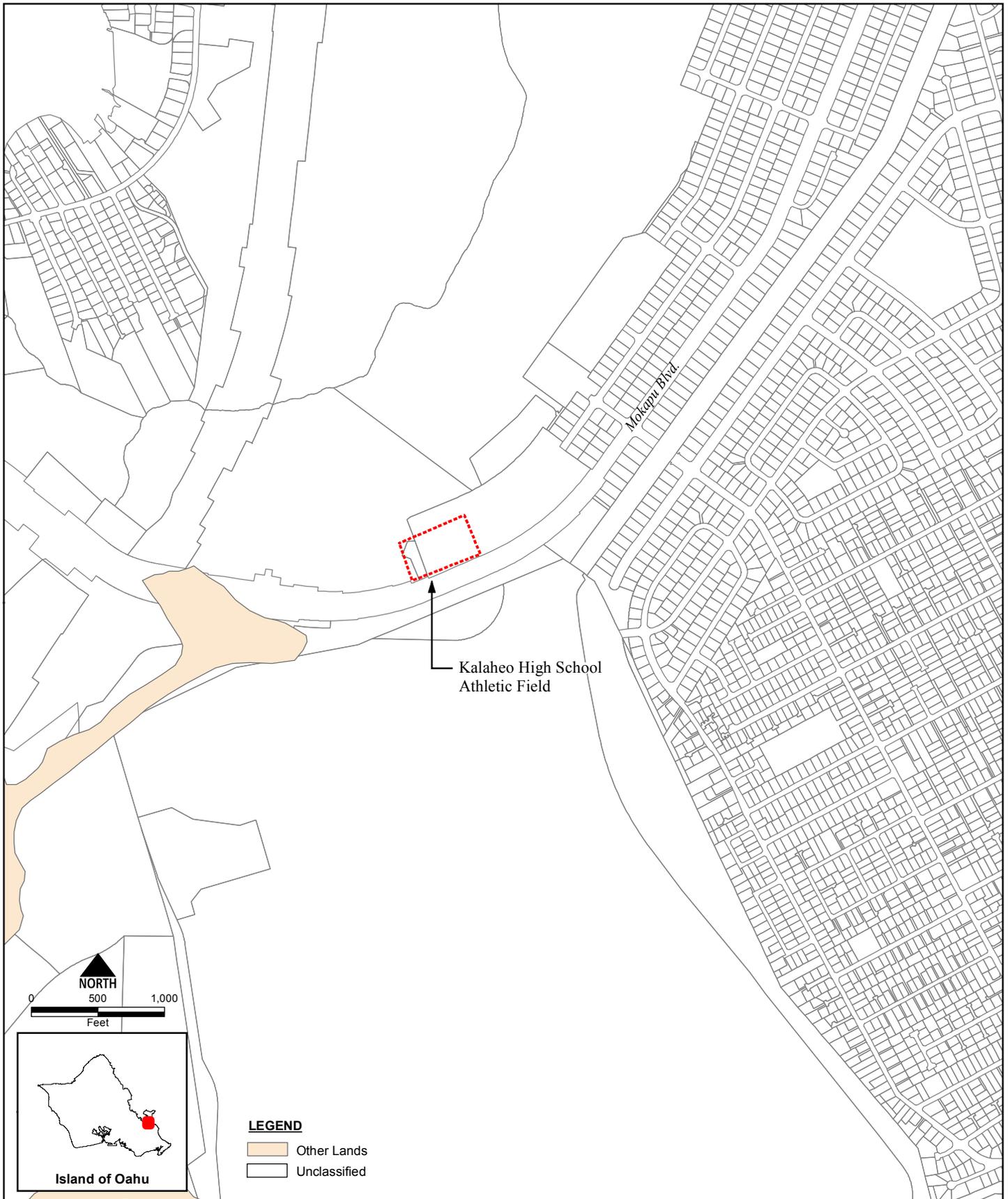
Kalaheo High School Athletic Field Improvements
 Draft Environmental Assessment

FUKUNAGA & ASSOCIATES, INC.

USGS SOIL MAP

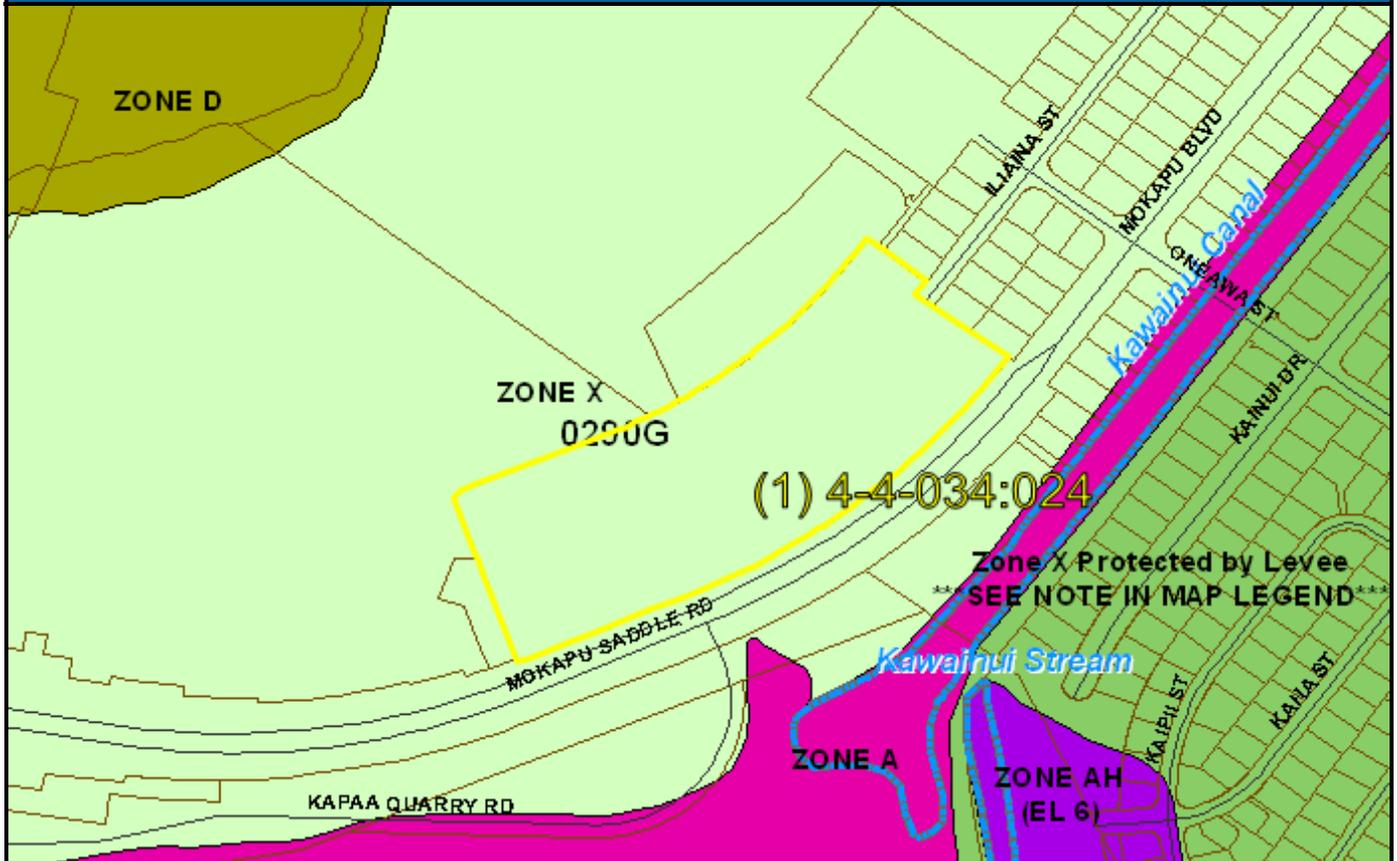
Figure 2-2







FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

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

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

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

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

OTHER FLOOD AREAS

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

PROPERTY INFORMATION

COUNTY: HONOLULU
TMK NO: (1) 4-4-034-024
PARCEL ADDRESS: 730 ILI'IAINA ST
 KAILUA, HI 96734
FIRM INDEX DATE: JANUARY 19, 2011
LETTER OF MAP CHANGE(S): NONE
FEMA FIRM PANEL(S): 15003C0290G
PANEL EFFECTIVE DATE: JANUARY 19, 2011

PARCEL DATA FROM: APRIL 2014
IMAGERY DATA FROM: MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator
 City and County of Honolulu
 Mario Siu-Li, CFM (808) 768-8098
State NFIP Coordinator
 Carol Tyau-Beam, P.E., CFM (808) 587-0267

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

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

indicates that the project area is located in Zone X. This is an area determined to be outside of the 500 year flood plain and less than 1 foot depth in a 100 year flood event.

According to the City and County of Honolulu, Department of Emergency Management's Tsunami Evacuation Maps, the nearly all of the project area is within the "Safe Zone", and a small strip adjacent to Mokapu Boulevard is in the "Extreme Tsunami Evacuation Zone". The area is therefore not considered to be vulnerable to tsunamis.

2.5 Hydrology

The Commission on Water Resource Management has established hydrologic units for both groundwater and surface water resources. Groundwater is described in the State Water Code as: "any water found beneath the surface of the earth, whether in perched supply, dike-confined, flowing, or percolating in underground channels or streams, under artesian pressure or not, or otherwise". Surface water is defined as: "both contained surface water—that is, water upon the surface of the earth in bounds created naturally or artificially including, but not limited to, streams, other watercourses, lakes, reservoirs, and coastal waters subject to state jurisdiction—and diffused surface water—that is, water occurring upon the surface of the ground other than in contained water bodies. Water from natural springs is surface water when it exits from the spring onto the earth's surface".

Groundwater hydrologic units have been delineated by Aquifer Sector Areas which are further subdivided into Aquifer System Areas. The project lies within the Waimanalo Aquifer System Area [30604], which is part of the Windward Aquifer Sector Area [306]. The Sustainable Yield for the Waimanalo Aquifer System Area is 10 MGD.

Surface water hydrologic units are divided by watershed units which are comprised of one or more drainage basins. The project is located within the Kawainui surface water hydrologic unit [3033]. According to the Hawai'i Stream Assessment, the Kawainui/Maunawili stream system is the only perennial stream in the vicinity of the project area.

2.6 Flora and Fauna

The flora within the project area and vicinity consists of vegetation common to the area, such as grasses, koa haole and klu with occasional guava and kiawe trees. No rare and endangered plants are known within the area. The fauna within the project area and vicinity consists of introduced species that are common throughout the area, such as rats, mice, mongoose, insects and feral cats. The University of Hawaii 1973 "Atlas of Hawaii" indicates the avifauna known to exist in the area includes cardinals, barred and spotted doves, mocking birds, mynahs, golden plovers, pueos, rice birds, sparrows and white eyes.

Kawainui-Hamakua Complex Master Plan (KHCMP), described further in Section 3.6, identifies the flora and fauna found within the adjacent Kawainui State Park Preserve – Kalaheo Section and Kapaa Section, which are located across Mokapu Saddle Road/Mokapu Boulevard from the project area. The flora includes Milo grove at the western end of the Kalaheo Section; monkeypod trees and other non-native and invasive plants; non-native scrub plants on land; and

native and non-native wetland plants. In the Kalaheo Section, Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW) has observed that adult and juvenile endangered Hawaiian waterbirds utilize the water's edge of the Kawainui Canal for foraging and loafing but has not observed nesting and fledgling birds in this area. Non-native animal species are commonly visible along the Kawainui Canal or within the upland areas. The four endangered Hawaiian waterbirds known to utilize the Kawainui Marsh as primary habitat are the Hawaiian coot, the Hawaiian duck, the Hawaiian moorhen and the Hawaiian Stilt. Numerous native and non-native aquatic species inhabit the canal itself, including indigenous goby, endemic goby, and endemic eleotrid that utilize the canal to migrate between the ocean and the Kawainui area. The Kapaa Section consists of mostly non-native species, and the adjacent wetland is not known to be a habitat for native Hawaiian endangered waterbirds.

2.7 Drainage

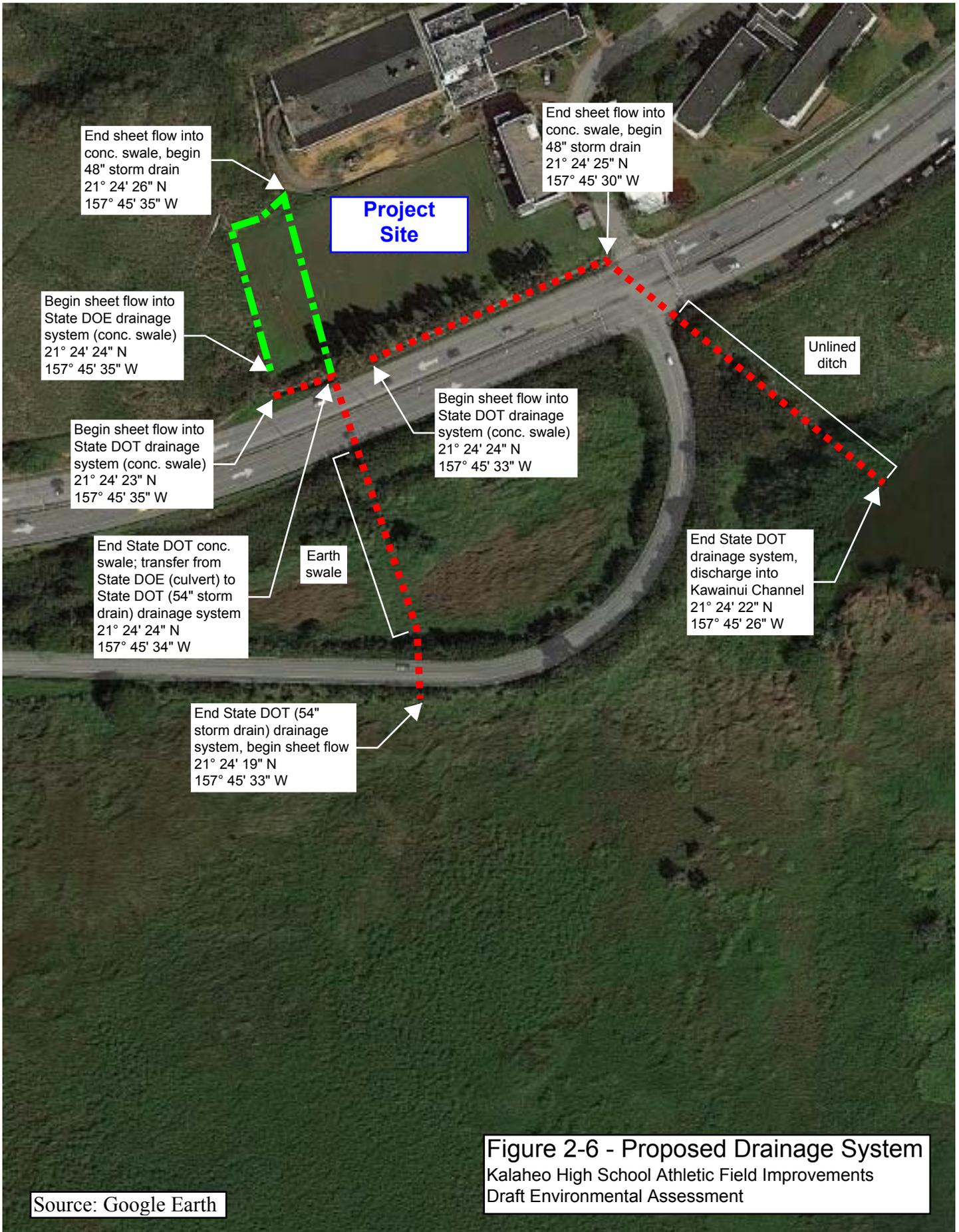
Part of the overland flow from the steep hillside to the west of the project area travels across the athletic field to two concrete drainage swales along the shoulder of Mokapu Saddle Road. The rest of the flow is intercepted by an existing concrete drainage swale to the northwest of the athletic field and carried to a 48" storm drain under the field, crossing Mokapu Saddle Road, and discharging on the south side. The majority of the runoff from the athletic field enters the longer concrete drainage swale along Mokapu Saddle Road; it is carried to a 48" storm drain crossing to the southeast side of the intersection of Mokapu Saddle Road/Mokapu Boulevard and Iliana Street/Kapaa Quarry Road and discharges to a natural drainage swale which leads to the Kawainui Canal.

Construction of the new swale along the west end of the athletic field will intercept even more of the overland flow from the steep hillside to the west of the project area and carry it to the 48" storm drain described above. See **Figures 1-1** and **2-5**. This will benefit the athletic field by reducing the amount of overland flow traveling across the field and therefore facilitate improved drainage; however, this will also reduce the amount of infiltration by the field and therefore increase the amount of flow at the two discharge points previously described. This is not expected to impact the adjacent Kawainui State Park Preserve – Kalaheo Section and Kapaa Section.

2.8 Water Quality

The Department of Health (DOH), Water Quality Standards Map, indicates that the area across Mokapu Saddle Road/Mokapu Boulevard from the project area are designated inland Class "1" waters, including the Kawainui Canal, which is expected to be the receiving water for stormwater runoff from the project site. The objective of Class "1" inland waters is "that these waters remain in their natural state as nearly as possible with an absolute minimum of pollution from any human-caused source".

A National Pollution Discharge Elimination System (NPDES) Permit will be required for the project because the disturbed area will be greater than one acre. As part of the permit requirements, Best Management Practices (BMP) will be incorporated which will control the



discharge of storm water runoff and improve the quality of the effluent resulting from construction activities. The BMPs will be shown and described on the design plans and will be subject to approval from DOH. Based on preliminary information, part of the treated storm water runoff leaving the project site during construction will sheet flow approximately 1,000 feet over vegetated land to reach Maunawili Stream, which will further improve the quality of the effluent through natural filtration. Part of the treated storm water runoff leaving the project site will travel along a natural drainage swale to the Kawainui Canal. It is not expected that storm water runoff from the proposed project will impact the quality of these receiving waters.

2.9 Hazardous Materials

There are no sites listed in the DOH, Solid and Hazardous Waste Branch, Hawaii Leaking Underground Storage Tank Database, nor incidents listed in the DOH, Hazard Evaluation and Emergency Response Office records in the vicinity of the project area.

2.10 Air Quality

The DOH, Clean Air Branch monitors ambient air for several air pollutants at 13 monitoring stations throughout Oahu, Big Island and Maui; however, there are no monitoring stations on the windward side of Oahu. Air quality in the vicinity of the project is typically very good; the existing sources of air pollution are emissions from motor vehicles traveling on adjacent Mokapu Saddle Road/Mokapu Boulevard and nearby Kapaa Quarry Road. Short term impacts during the construction period may arise from construction activity. Emissions from construction vehicles may slightly increase air pollution; however, these will likely be dispersed by the prevailing trade winds. Fugitive dust arising from trenching activities and construction vehicles must comply with the provisions of HAR 11-60.1-33. The contractor will be encouraged to implement a dust control plan, which may include several measures, including using dewatering trucks and covering stockpiles of excavated material.

2.11 Noise

The predominant existing source of noise within the project area is vehicular traffic along Mokapu Saddle Road/Mokapu Boulevard and Kapaa Quarry Road. HAR Title 11, Chapter 46 describes the regulations for community noise control and sets forth maximum noise tolerances by zoning district, which are to be administered by DOH, Indoor and Radiological Health Branch (IRH). Noise from construction activities will be short-term and localized, but will likely exceed these tolerances. An approved Community Noise Permit will be required for construction during the hours of 7:00 am and 6:00 pm Monday through Friday, and 9:00 am through 6:00 pm Saturdays. Construction outside of these hours will require an approved Community Noise Variance. The use of certain equipment (pile drivers, jackhammers, etc.) will be limited to between 9:00 am and 5:30 pm, Monday through Friday. Any permits and/or variances required from the DOH IRH Branch would be obtained by the Contractor prior to construction.

2.12 Archaeological and Cultural Resources

The State Historic Preservation District (SHPD) maintains the Hawaii Register of Historic Places, which are recognized as districts, sites, structures, buildings and objects and their significance in Hawaii’s history, architecture, archaeology, engineering and culture. The National Park Service (NPS) maintains the National Register of Historic Places, which includes significant properties nominated by State and Federal agencies, historic areas in the National Park System and all National Historic Landmarks. A review of the State Register of Historic Places on the SHPD website and the National Register of Historic Places on the NPS website revealed that there are no historic places within the project area.

The proposed project will be constructed within the existing school grounds which have previously been disturbed. In the unlikely event that historical or cultural resources are encountered during construction, work will be halted in the immediate area of the discovery and SHPD will be contacted as outlined in HRS Chapter 6E.

2.13 Socio-Economic Characteristics

According to the U.S. Census Bureau, the population, percent non-Caucasian, and median household income of the communities within the project area are as follows:

Table 2-1: Selected Socio-Economic Data

Census Designated Place	Population¹	% Minorities¹	Median Household Income²
Kailua	38,635	56.0	\$97,883

¹Source: U.S. Census Bureau, 2010 Census Redistricting Data (Public Law 94-171) Summary, extracted by DBEDT, Hawaii State Data Center

²Source: U.S. Census American Community Survey (ACS), 2009-2013

The University of Hawaii, Economic Research Organization (UHERO) prepared a County economic forecast in June 2015. The study concludes that the Hawaii economy is poised for better performance over the next several years. Tourism will see additional healthy gains on the Neighbor Islands for the next two years, and construction will become a significant contributor to growth. Unemployment rates have been decreased substantially by gains in employment, and moderate expansion of jobs and income will continue, which will solidify the local spending leg of the economic expansion. The predictions relevant to Oahu are as follows:

- Honolulu visitor growth has ended for now because of capacity constraints.
- The construction industry has begun to add a moderate number of jobs on Oahu. Activity has been focused in nonresidential resort and retail development, although residential permitting numbers on Oahu are suppressed by the categorization of some components of high-rise condo development as nonresidential.
- The strongest job growth other than construction will generally be seen in the wholesale and retail trade sector in the near term, but slowing as the tourism expansion wanes. Our large “other services” category, including everything from entertainment to professional

services, will continue to see moderate growth. Government budget pressure will limit the role of the public sector in job creation, particularly at the Federal level.

- In the near term, overall job growth will continue at a moderate pace. The tighter labor market conditions and low inflation associated with reduced energy prices will support healthy growth in real income, in the neighborhood of 2+% on Oahu for the next few years, before falling back as the County economies slow toward trend.
- Most of the risks to the economic forecast are external to Hawaii. These risks include the potential for policy errors by the Federal Reserve; greater fiscal austerity in the United States, Europe, or Japan; or a failure to orchestrate a “soft landing” of China’s slowing economy. In the absence of these surprises, a long-awaited pickup in construction and improving household finances will drive moderate growth for the next several years.

The proposed project is not expected to have any long-term economic impacts; however, it will have minor positive short-term impacts associated with construction. These impacts include the creation of jobs for the anticipated duration of construction, assuming the project is awarded to a local contractor; and indirect economic stimulus from those workers spending their income on goods and services.

2.14 Utilities

Existing utilities within the project area are limited to electrical, telephone, cable television, sanitary sewers and waterlines. Water service is provided by the Honolulu Board of Water Supply. Electrical service is provided by Hawaiian Electric Company (HECO), telephone service is provided by Hawaiian Telcom, and cable television service is provided by Oceanic Time Warner Cable. Service lines located within the project area are exclusively for the use of the school.

The proposed project will include replacement of the existing landscape irrigation system for the athletic field. The proposed point of connection to the existing water system is a gate valve within the school site. Although replacement of the irrigation system is not expected to affect the existing water system, all work will be required to follow the Board of Water Supply Water System Standards. The project will also include replacement of existing electrical panels and ducts which will supply the new scoreboard for the athletic field. This work is not expected to affect the existing HECO system.

2.15 Transportation

Mokapu Saddle Road/Mokapu Boulevard is a four-lane divided major arterial State road and an important mode of transport between Kaneohe and Kailua. In addition to personal automobile traffic, it also provides transport for the TheBus, which has a two routes running in both directions. Route 85 connects Downtown Honolulu, University of Hawaii at Manoa and Kaneohe/Kailua; and Route PH5 connects Pearl Harbor, Kaneohe and Kailua. Both routes only run on weekdays.

Kapaa Quarry Road in the vicinity of Mokapu Saddle Road is under State or City ownership; however other sections of the road are privately owned. This road provides the only access to the City and County of Honolulu Kapaa Transfer Station and is therefore often traveled by hauling vehicles.

Road closures are not expected during construction. Construction vehicles may travel either of these roads to access the site; however, any impact on transportation along these roadways will be negligible.

2.16 Police Protection

The nearest Honolulu Police Department (HPD) station is located approximately 3.6 miles west of the project area in Kaneohe. There is also a HPD substation located approximately 1.8 miles southeast of the project area in Kailua. As discussed previously, there are not anticipated to be any road or lane closures; therefore, police protection services should not be affected.

2.17 Fire Protection

The Honolulu Fire Department Aikahi station is located approximately 1.3 miles north of the project area along Kanehoe Bay Drive in Kailua. Waterlines potentially affected by the proposed project are located within the school property which is not expected to affect external water transmission and distribution mains; therefore, fire protection services should not be affected.

2.18 Educational Facilities

In addition to Kalaheo High School, there are several schools within the State Department of Education Kalaheo Complex, which encompasses the approximate service area of Kalaheo High School. These schools include: Aikahi Elementary, Kailua Elementary, Kailua Intermediate, Kainalu Elementary, Mokapu Elementary and Lanikai Elementary. All of these schools are greater than a mile away from Kalaheo High School are not expected to be impacted by the proposed project.

CHAPTER 3. RELATIONSHIP TO FEDERAL, STATE AND COUNTY PLANS AND POLICIES

3.1 Hawaii State Plan

The Hawaii State Plan, Chapter 226 of the Hawaii Revised Statutes, was first adopted in 1978. It serves as a guide for the future long-range development of the State through identification of goals, objectives, policies, and priorities. The objectives and policies relevant to the proposed project are described below:

§226-11 Objectives and policies for the physical environment—land-based, shoreline, and marine resources.

- (a) Planning for the State’s physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:
 - (1) Prudent use of Hawai‘i’s land-based, shoreline, and marine resources.
 - (2) Effective protection of Hawai‘i’s unique and fragile environmental resources.
- (b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:
 - (2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.
 - (3) Take into account the physical attributes of areas when planning and designing activities and facilities.
 - (4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.

§226-12 Objective and policies for the physical environment—scenic, natural beauty, and historic resources.

- (a) Planning for the State’s physical environment shall be directed towards achievement of the objective of enhancement of Hawai‘i’s scenic assets, natural beauty, and multi-cultural/historic resources.
- (b) To achieve the scenic, natural beauty, and historic resources objectives, it shall be the policy of this State to:
 - (1) Promote the preservation and restoration of significant natural and historic resources.
 - (2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.
 - (3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.
 - (4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai‘i’s ethnic and cultural heritage.
 - (5) Encourage the design of developments and activities that complement the natural beauty of the islands.

§226-13 Objective and policies for the physical environment—land, air, and water quality.

- (a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:
 - (1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.
- (b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:
 - (2) Promote the proper management of Hawai'i's land and water resources.
 - (3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.

§226-21 Objective and policies for socio-cultural advancement—education.

- (a) 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.
- (b) To achieve the education objective, it shall be the policy of this State to:
 - (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.
 - (4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.
 - (5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.
 - (6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.
 - (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.
 - (9) Support research programs and activities that enhance the education programs of the State.

The proposed project is in compliance with the aforementioned goals and objectives.

3.2 State Land Use Law

Chapter 205 of the Hawaii Revised Statutes, the State Land Use Law, classified four major land use districts in which all lands are placed and established a framework of land use management and regulation for these lands. The four land use districts are: Rural, Urban, Agricultural and Conservation. The State Legislature established the Land Use Commission (LUC) to administer the State Land Use Law.

The Conservation District is regulated by the Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands (OCCL), and is divided into five subzones: Protective, Limited, Resource, General and Special. The first four subzones are arranged in a hierarchy of environmental sensitivity, ranging from the most to the least sensitive; the Special subzone is applied in special cases specifically to allow a unique land use on a specific site. As established in Hawaii Administrative Rules (HAR) Chapter 13-5, Subchapters 2 and 3, these subzones define a set of "identified land uses" which may be allowed by discretionary permit or some sort of approval from the DLNR. Major permits are required for land uses which have the greatest potential impact, and an EA and/or an EIS and potentially Public Hearing are required; minor permits are required for land uses which may have fewer impacts.

The majority of the project area is within the Urban land use district, and a small portion of TMK 4-4-034:028 is within the Conservation district, General subzone. The area across Mokapu Boulevard from the project site is considered part of the Kawainui Marsh, which is within the Protected subzone. See **Figure 3-1**. HAR Chapter 13-5 states the following in regards to the General subzone:

§13-5-14 General (G) subzone.

- (a) The objective of this subzone is to designate open space where specific conservation uses may not be defined, but where urban use would be premature.
- (b) The (G) subzone shall encompass:
 - (1) Lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use; and
 - (2) Lands suitable for farming, flower gardening, operation of nurseries or orchards, grazing; including facilities accessory to these uses when the facilities are compatible with the natural physical environment.
- (c) Identified land uses in the general (G) subzone are restricted to those listed in section 13-5-25.

§13-5-25 Identified land uses in the general subzone.

- (a) In addition to the land uses identified in this section, all identified land uses and their associated permit or site plan approval requirements listed for the protective, limited, and resource subzones also apply to the general subzone, unless otherwise noted.
- (b) If a proposed use is not presented below or in section 13-5-22, 13-5-23, or 13-5-24, an applicant may request a temporary variance, petition the land use commission for a land use district boundary change, or initiate an administrative rule change to have the proposed use added to the identified land uses.
- (c) Identified land uses in the general subzone and their required permits (if applicable), are listed below:
 - (1) Identified land uses beginning with the letter (A) require no permit from the department or board;
 - (2) Identified land uses beginning with the letter (B) require site plan approval by the department;
 - (3) Identified land uses beginning with the letter (C) require a departmental permit; and

- (4) Identified land uses beginning with the letter (D) require a board permit and where indicated, a management plan.

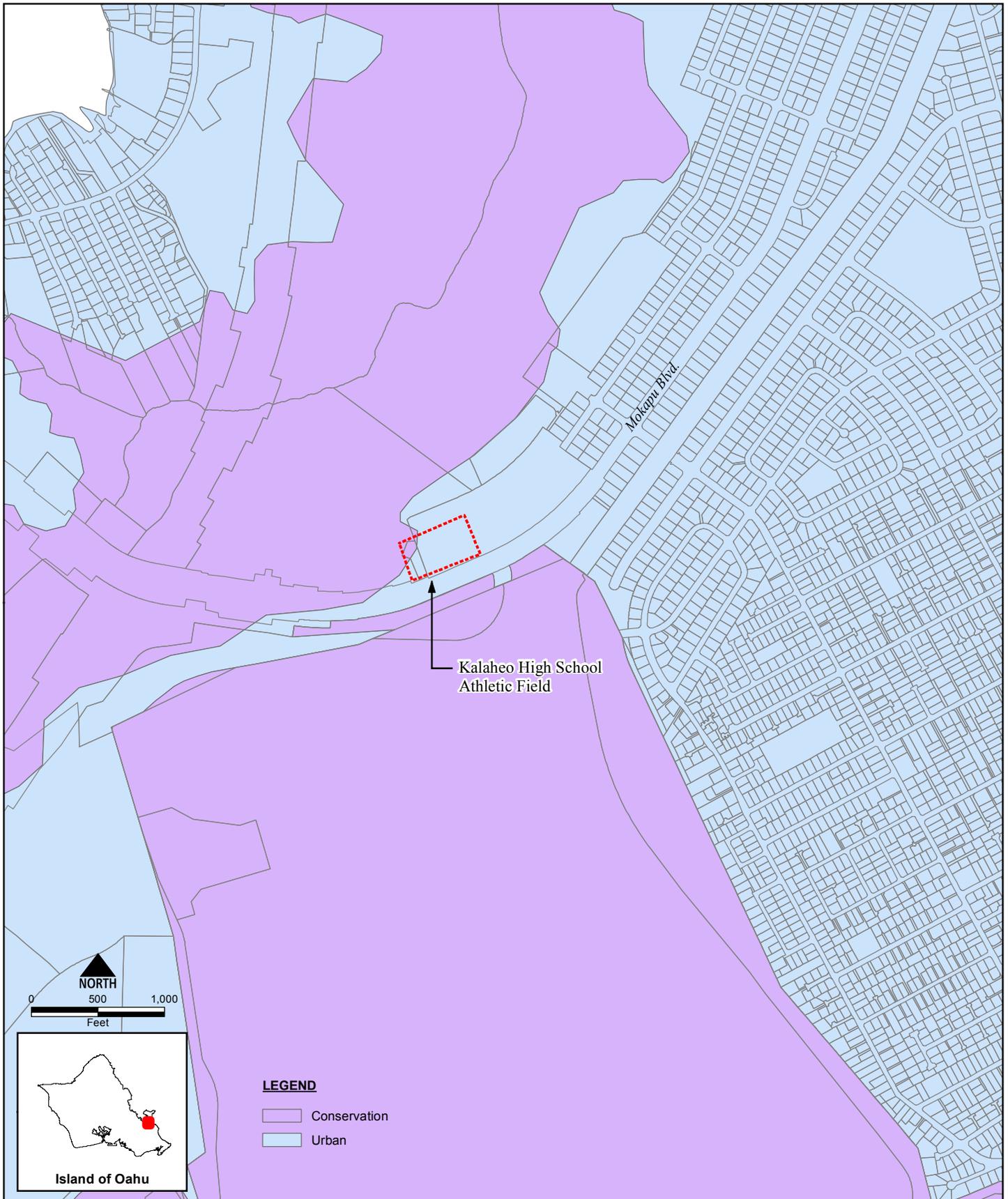
The land use of the proposed project is not identified in HAR Chapter 13-5 as an allowable use in the Conservation district General subzone; therefore, a determination from the LUC was sought to ascertain the location of the boundary between the Urban and Conservation districts within TMK 4-4-034:028. In 1975, the Kalaheo High School athletic field was improved through expansion into and installation of drainage improvements within TMK 4-4-034:028. The drainage improvements included a concrete swale parallel to and at an offset of approximately 20 feet from the northwest property line. The approved drawings of these improvements, shown in **Figure 3-2**, clearly depict the State Land Use Boundary line on the mauka side of this drainage swale. Since all of the work under the proposed project will be makai of this drainage swale, the DOE maintained that the proposed project is entirely within the Urban designation. A request for a Land Use boundary determination was sent to the LUC, along with the aforementioned approved drawing and the Bid Set drawings of the proposed project, on September 11, 2015. On September 17, 2015, the LUC concurred that the proposed project is entirely within the Urban designation.

3.3 City and County of Honolulu General Plan

The City and County of Honolulu General Plan, a requirement of the City Charter, is a broad but comprehensive statement of objectives and policies which sets forth the long-range aspirations of Oahu's residents and the strategies of actions to achieve them within an approximate 20-year planning horizon. The Department of Planning and Permitting strives to maintain the dynamic nature of the General Plan; the current edition was released in 1992, and amended in 2002, and a public review draft of proposed revisions was released in 2012. It is the focal point of a comprehensive planning process that, together with the regional development plans, provides a direction and framework to addresses physical, social, economic and environmental concerns affecting the City and County of Honolulu. This planning process serves as the coordinative means by which the City and County government provides for the future growth of the metropolitan area of Honolulu.

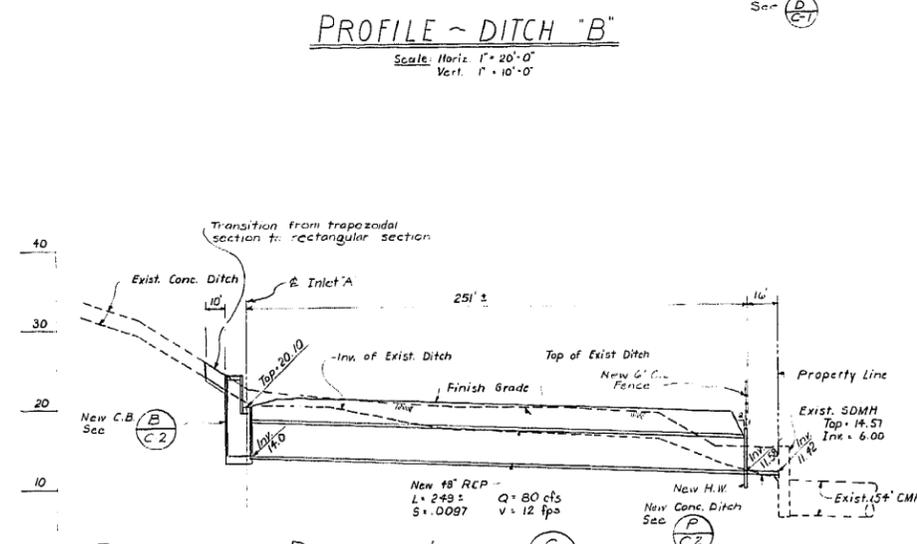
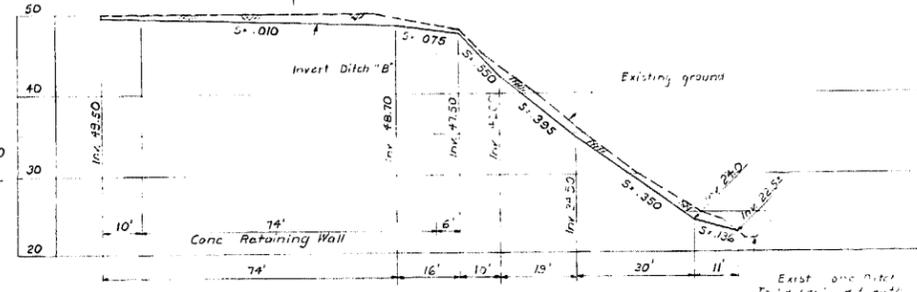
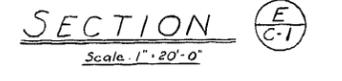
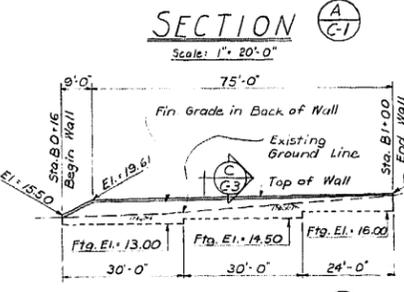
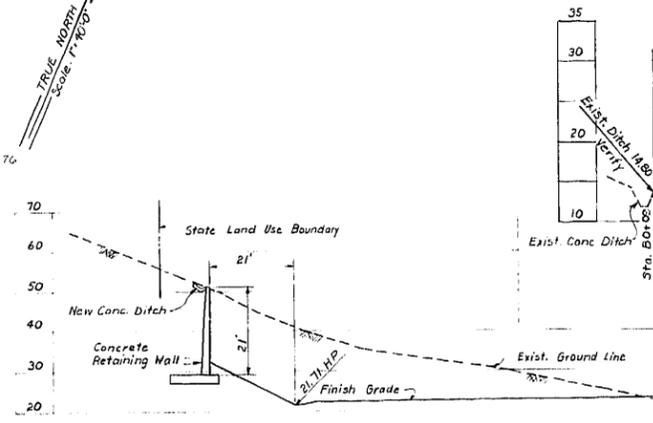
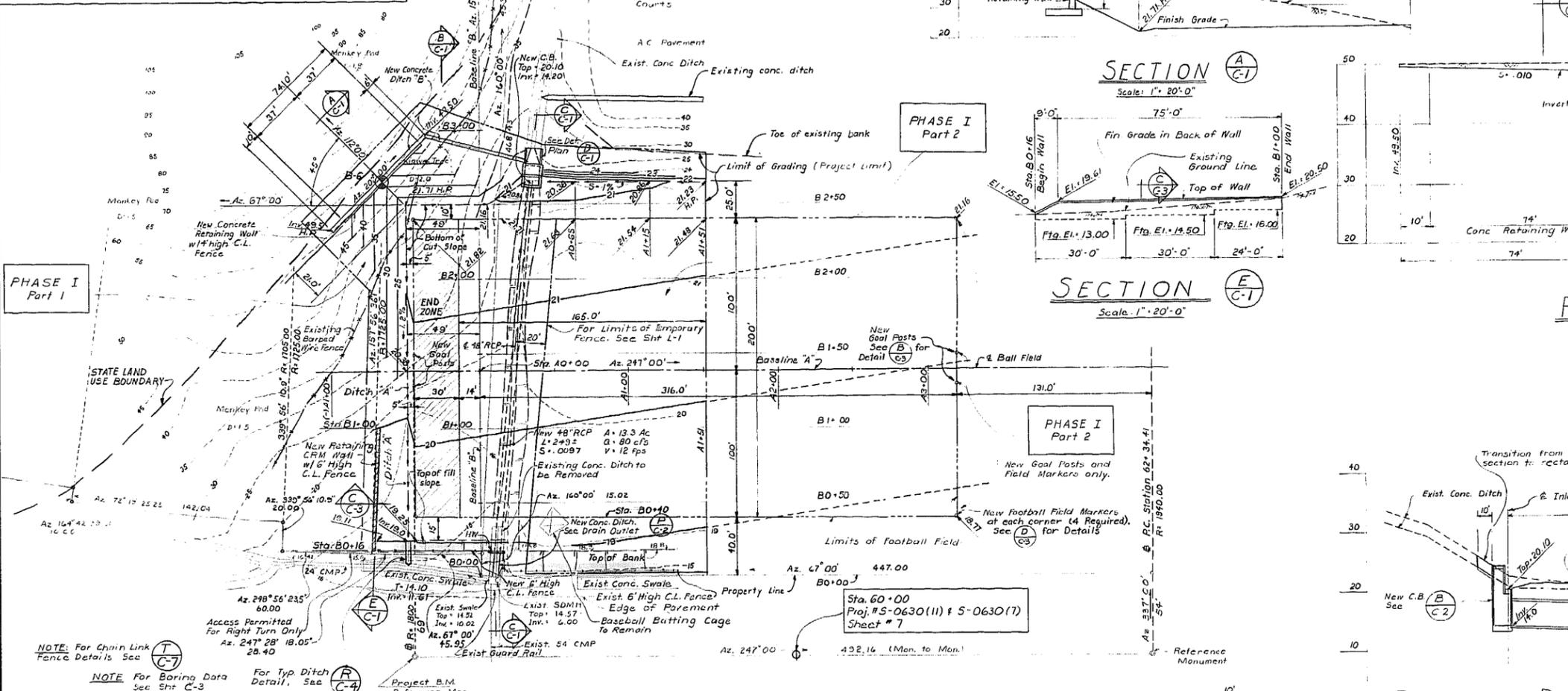
There are eleven (11) areas of concern outlined in the General Plan:

- (1) population;
- (2) economic activity;
- (3) the natural environment;
- (4) housing,
- (5) transportation and utilities;
- (6) energy;
- (7) physical development and urban design;
- (8) public safety;
- (9) health and education;
- (10) culture and recreation; and
- (11) government operations and fiscal management

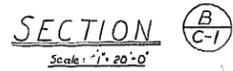
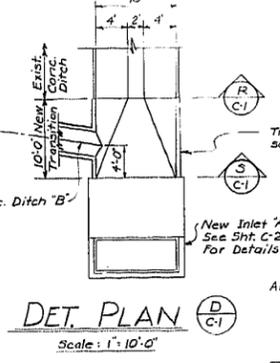
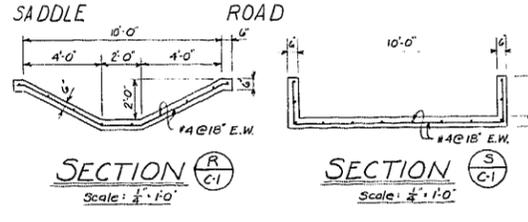


NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

- The Contractor shall obtain a construction permit from the State Highway District Engineer of 727 Kapiolani prior to the commencement of work within State highway right-of-way.
- Construction and restoration of all existing highway facilities within State right-of-way shall be done in accordance with all applicable sections of the Standard Specifications for Road and Bridge Construction, dated 1968, and the Specifications for Installation of Miscellaneous Improvements Within State Highways, dated April 1, 1974 of the State Highway Division.
- All lanes shall be opened to traffic during the morning peak hours from 6:00 a.m. to 9:00 a.m. and during the afternoon peak hours from 3:00 p.m. to 6:00 p.m. and during off-work hours. Only one lane of Mokuapu Blvd shall be closed at any other time.
- The Contractor shall provide, install, and maintain all necessary signs, lights, street barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the Rules and Regulations governing the Use of Traffic Control Devices at Work Sites on or adjacent to Public Streets and Highways, adopted by the Highway Safety Coordinator, and the U.S. Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways, Part II, Traffic Controls for Highway Construction and Maintenance Operations, dated 1971.
- The minimum pavement structure shall consist of 2-1/2 inches asphalt concrete 8 inches base course and 12 inches select borrow.



GRADING PLAN
Scale 1" = 40'-0"



APPROVED FOR GRADING ONLY:

Kay Hayashida
DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

1/11/76
DATE

William P. H. Lee
DATE 2/8/75
CHIEF, DIVISION OF ENGINEERING

2/12/75
DATE

REVISION NO.	SYMBOL	DESCRIPTION	SHT. OF	DATE	APPROVED: STATE PUBLIC WORKS ENGINEER
DEPT. OF ACCOUNTING & GENERAL SERVICES DIVISION OF PUBLIC WORKS STATE OF HAWAII KALAHEO HIGH SCHOOL ATHLETIC FIELD EXPANSION AND GROUND IMPROVEMENTS KAILUA, OAHU, HAWAII PHASE I GRADING PLAN - ATHLETIC FIELD					
DESIGNED BY: M.F.		CHECKED BY: I.T.F.		DADS JOB NO. 02-16-6615.2	DRAWING NO. C-1
DRAWN BY: X.S.		APPROVED BY:		DATE 1-14-75	SHEET 2 OF 12
SCALE: AS SHOWN					

The General Plan does not define specific land uses or area.

The policies and objectives for Health and Education, Section 9, relevant to the proposed project, are as follows:

- Objective B: To provide a wide range of educational opportunities for the people of Oahu.
- Policy 3: Encourage the after-hours use of school buildings, grounds, and facilities.
- Policy 4: Encourage the construction of school facilities that are designed for flexibility and high levels of use.

The proposed project is consistent with the aforementioned policies.

3.4 Koolaupoko Sustainable Communities Plan

Chapter 24 of the Revised Ordinances of Honolulu (ROH) sets out the requirement for the preparation of development plans, which are community-oriented plans intended to help guide public policy, investment, and decision-making through a planning horizon to year 2020. Each of these plans covers a geographic planning region on Oahu, addressing the specific conditions and community values of each region. The Koolaupoko Sustainable Communities Plan (KSCP) is one of eight such development plans. Two of the eight planning regions were areas to which major growth in population and economic activity were anticipated to be directed over the next 20 years and beyond, and the remaining six planning regions, including Koolaupoko, were envisioned to remain relatively stable. The plans for the former regions were titled “Development Plans,” and the plans for the latter regions were titled “Sustainable Communities Plans”. The vision statement and supporting provisions of the KSCP is hence oriented toward maintaining and enhancing the region’s ability to sustain its unique character and lifestyle. These plans were adopted and revised by ordinance and are required to implement objectives and policies set forth in the General Plan.

The 2000 Koolaupoko Sustainable Communities Plan is incorporated into Ordinance 00-47 by reference. A public review draft of the update was made available in October 2014. The 2000 KSCP is organized in five chapters addressing Koolaupoko’s role in Oahu’s development pattern; the vision for Koolaupoko’s future; land use policies, principles, and guidelines; public facilities and infrastructure policies and principles; and implementation. In carrying out the purposes of the General Plan, Koolaupoko is not expected to undergo growth over the 20-year horizon. Policies in support of this goal limit the potential for expansion of the residential development, commercial centers and economic activity, and focus on maintaining the patterns of development characteristics of its urban fringe and rural areas. The future vision is shaped around two principal concepts: the protection of the communities’ natural, scenic, cultural, historic and agricultural resources; and the need to improve and replace, as necessary, the region’s aging infrastructure systems.

Section 3.1 of the KSCP calls for the preservation of open space, an element of which is wetlands, wildlife preserves and nature parks/preserves. The Kawainui Marsh is specifically

indicated as one of these. The guideline in the KSCP relating to wildlife preserves in Koolaupoko relevant to this project states the following:

“Prohibit encroachment or intensification of residential or other urban uses near wildlife sanctuaries and nature parks.”

Chapter 4 of the KSCP sets forth public facilities and infrastructure policies and principles, and Section 4.7 specifically deals with school and library facilities. The planning principle/guideline described in the KSCP for planning and operating schools in Koolaupoko relevant to this project is as follows:

“Shared Facilities. The Department of Parks and Recreation should coordinate with the DOE regarding the development and use of athletic facilities such as playgrounds, play fields and courts, swimming pools, and gymnasiums where the joint use of such facilities would maximize use and reduce duplication of function without compromising the schools’ athletic programs.”

It is not known whether the Department of Parks and Recreation has attempted to coordinate with the DOE for the proposed project. The project is otherwise in conformance with the principles and objectives outlined in the KSCP.

3.5 Koolaupoko Watershed Management Plan

The Koolaupoko Watershed Management Plan (KPWMP) is a long-range plan with a 20-year timeframe to the year 2030 for the preservation, restoration, and balanced management of ground water, surface water, and related watershed resources in the Koolaupoko District. Prepared jointly by the City and County of Honolulu Department of Planning and Permitting (DPP) and the Honolulu Board of Water Supply (BWS) in accordance with the State Water Code, the Hawaii Water Plan, and the City’s Ordinance 90-62 that established the Oahu Water Management Plan, it is one of eight district-specific plans that together will form the updated Oahu Water Management Plan. The KPWMP was approved by the Honolulu City Council in August 2012 and adopted by the State Commission on Water Resource Management (CWRM) in September 2012.

The overall goal and five major objectives for all eight watershed management plans are as follows:

Goal: To formulate an environmentally holistic, community-based, and economically viable watershed management plan that will provide a balance between: (1) the preservation and restoration of Oahu’s watersheds, and (2) sustainable ground water and surface water use and development to serve present and future generations.

Objective #1: Promote sustainable watersheds

Objective #2: Protect and enhance water quality and quantity

Objective #3: Protect Native Hawaiian rights and traditional and customary practices

Objective #4: Facilitate public participation and education, and project implementation

Objective #5: Meet future water demands at a reasonable cost

The KPWMP provides a summary profile of the Koolaupoko District, including in-depth discussion of demographic, cultural, and physical aspects. The KPWMP also provides detailed tabulations of existing water use and forecasts of future water use and demand both by source (surface, ground, recycled) and by end use category (Municipal, agriculture, irrigation). Finally, the KPWMP provides information on specific water supply and watershed management “Projects with Champions,” and more general information on “Watershed Management Strategies.”

The proposed project is not expected to impact the water supply or watershed management and is therefore in conformance with the Koolaupoko Watershed Management Plan.

3.6 Kawainui-Hamakua Complex Master Plan

Prepared in 2014 for the DLNR, Division of Forestry and Wildlife (DOFAW) and Division of State Parks, the Draft Kawainui-Hamakua Complex Master Plan (KHCMP) is a planning guide for the future of just over 1,000 acres of precious natural and cultural resources in the Kailua ahupuaa. Kawainui is generally bounded by Mokapu Saddle Road/Mokapu Boulevard to the north, the Kawainui flood control levee to the east, Kailua Road and Kalanianaʻole Highway to the south, and Kapaa Quarry Road to the west. Hamakua is generally bounded by Kailua Road to the north, Hamakua Drive to the east, residential properties to the south, and Puuoeahu hillside to the west. 986 acres of this land is State owned. Kawainui is the largest remaining freshwater wetland in the State, and it, along with Hamakua, were designated as State Wildlife Sanctuaries by Executive Orders to protect the wetlands as wildlife habitat.

The KHCMP is a vision and call for community action for appropriate land use. It supports continued wetland restoration and upland reforestation, Hawaiian cultural practices, on-site learning activities focused on the environment and culture, and public access for passive outdoor recreation with the goal of sustaining and preserving the Kawainui-Hamakua Complex for future generations.

The KHCMP is divided into five chapters; these cover the history and overview of the project, existing conditions, the planning process and framework, the plan, and implementation of the plan. The KHCMP addresses each of the 14 parcels that comprise the Kawainui-Hamakua Complex separately. The only two parcels with the potential to be impacted by the proposed project are the Kawainui State Park Preserve – Kalaheo Section, and the Kawainui State Park Preserve – Kapaa Section, both of which are located across Mokapu Saddle Road/Mokapu Boulevard from the project area.

The Kalaheo Section is located on the southeast corner of Mokapu Boulevard and Kapaa Quarry Road and is comprised of a 3.33 acre section under jurisdiction of the DLNR Division of State Parks and the a 1.25 acre section within the Kawainui Marsh State Wildlife Sanctuary. The KHCMP’s vision for Kalaheo is use of the area as an interpretive center for the Kawainui-

Hamakua Complex and a cultural center for canoe/voyaging studies. It includes a launch site for paddling practice on Kawainui Canal and Kailua Bay for small groups, such as school paddling teams. Other envisioned activities envisioned include education and practices related to Hawaiian canoes and voyaging, such as celestial navigation, and potentially a qualified curator organization to maintain the park and administer canoe/voyaging activities. The plan also includes an approximately 1,000 square foot interpretive shelter; an approximately 4,200-square-foot hale waa accommodating canoes and equipment and a large covered lanai space for educational/cultural activities; a small rest room building; an approximately 300-square-foot roofed observation pavilion; approximately 42 parking stalls with a loading zone; a pedestrian bridge crossing the Kawainui Canal connecting the Kalaheo Section to the levee; and paths and boardwalks.

The Kapaa Section is located between Mokapu Saddle Road and Kapaa Quarry Road. It is approximately 16.9 acres and is under the jurisdiction of the DLNR Division of State Parks. The KHCMP plans a 0.6-mile path and boardwalk system for the Kapaa Section with stunning views across Kawainui to Puuoeahu, Olomana, Ulumawao, and the Koolau mountains. Invasive plant species are planned to be removed and replaced with native species on the steep slopes above Kapaa Quarry Road and on the marsh side, where it will form a protective buffer for the marsh.

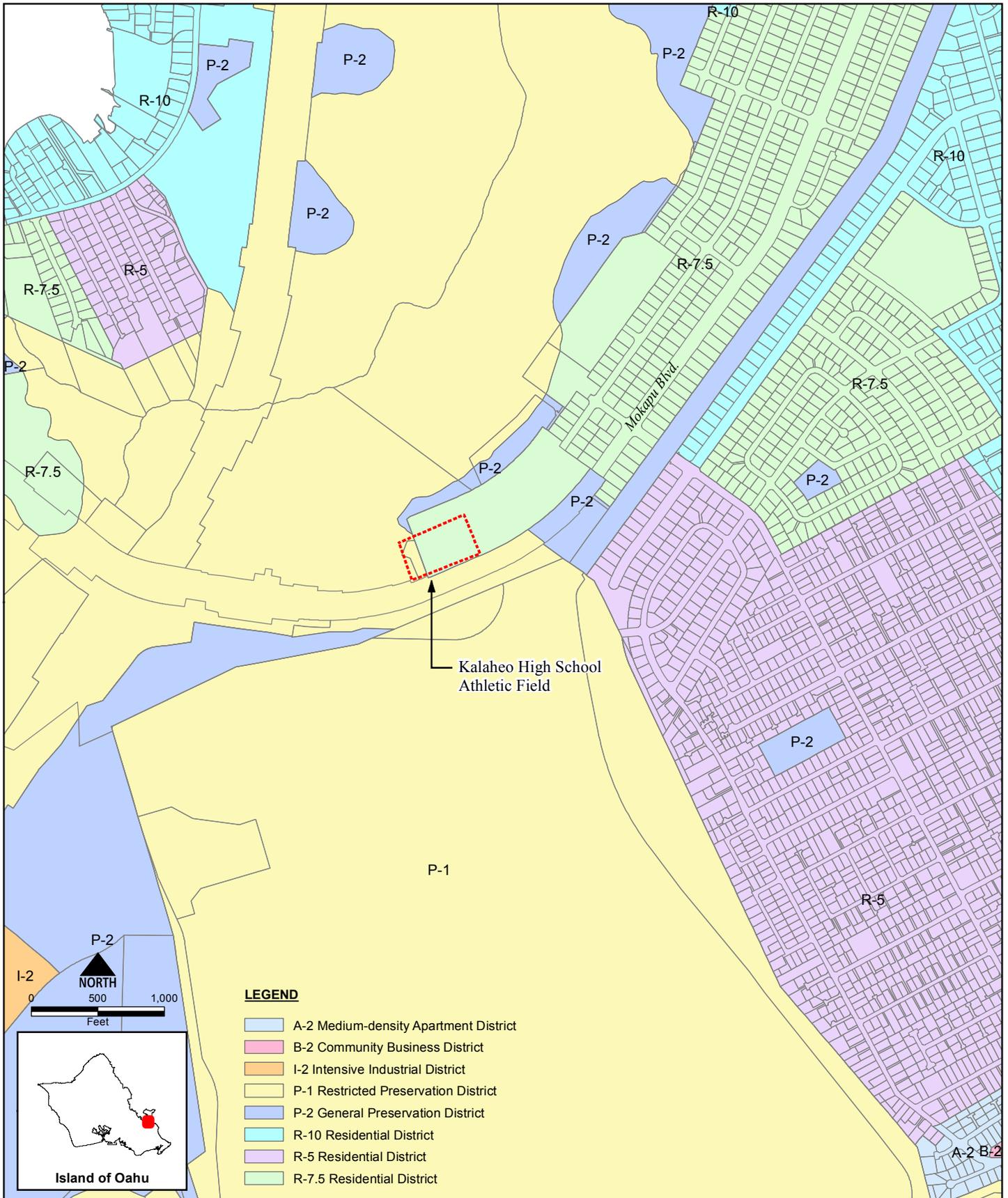
The proposed project is in conformance with the Kawainui-Hamakua Complex Master Plan. However, the DOE should coordinate with the State DLNR to ensure that the two existing drainage swales crossing the Kalaheo and Kapaa sections, which carry flow from the project area, are maintained.

3.7 City and County of Honolulu Zoning

Chapter 21 of the Revised Ordinances of Honolulu (ROH), Land Use Ordinance (LUO), sets forth the City's zoning district classifications and prescribes the permitted land uses and activities within those designations. The proposed project is within the P-1 Preservation district and the R-7.5 Residential district, with TMK 4-4-034:028 entirely in the former and TMK 4-4-034:024 entirely in the latter. TMK 4-4-034:029 is within the P-1 and P-2 zones; however, this section of the school is not within the project area. See **Figure 3-3**. The LUO states the following regarding the Preservation district:

Sec. 21-3.40 Preservation districts--Purpose and intent.

- (a) The purpose of the preservation districts is to preserve and manage major open space and recreation lands and lands of scenic and other natural resource value.
- (b) It is intended that all lands within a state designated conservation district be zoned P-1 restricted preservation district.
- (d) Should lands be removed from either the state-designated conservation district or from federal jurisdiction, all uses, structures and development standards shall be as specified for the P-2 general preservation district.



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CITY & COUNTY OF HONOLULU ZONING MAP

Figure 3-3

- (e) It is also the intent that lands designated urban by the state, but well suited to the functions of providing visual relief and contrast to the city's built environment or serving as outdoor space for the public's use and enjoyment be zoned P-2 general preservation district. Areas unsuitable for other uses because of topographical considerations related to public health, safety and welfare concerns shall also be placed in this district.

Sec. 21-3.40-1 Preservation uses and development standards.

- (a) Within the P-1 restricted preservation district, all uses, structures and development standards shall be governed by the appropriate state agencies.
- (c) Within the P-2 general preservation district, permitted uses and structures shall be as enumerated in Table 21-3.
- (d) Within the P-2 general preservation district, development standards shall be as enumerated in Table 21-3.1.
- (e) Additional Development Standards.
 - (1) Height. The maximum height may be increased from 15 to 25 feet if height setbacks are provided.
 - (2) Height Setbacks. Any portion of a structure exceeding 15 feet shall be set back from every side and rear buildable area boundary line one foot for each two feet of additional height above 15 feet.

Per Section 21-3.40-1(a), all uses, structures and development within the P-1 designation shall be governed by the appropriate State agencies. As discussed in Section 3.2, the State Land Use Commission determined that the proposed project is entirely within the Urban State Land Use district; therefore, the proposed project is in conformance with the City and County of Honolulu LUO.

3.8 Coastal Zone Management Program

Hawaii's Coastal Zone Management (CZM) Program was approved in 1977 through HRS Chapter 205A subsequent to the passage of the Federal CZM Act in 1972. The program was enacted to provide a common focus for State and County actions dealing with land and water uses and activities. It is administered by the State Department of Business, Economic Development and Tourism (DBEDT), Office of Planning; however, each County has been delegated local authority and is responsible for issuing permits for activities within its lands. The permit associated with the CZM relevant to this project is the Special Management Area (SMA). The SMA is a land area extending inland from the shoreline as delineated by the maps developed through the CZM program in which development is regulated. Permit requirements are set forth in ROH Chapter 25 and is under the jurisdiction of the DPP.

As shown in **Figure 3-4**, the greater part of the project area is within the SMA. According to the SMA Ordinance, only actions considered a development are subject to a SMA permit. This project is considered a development because of the following:

Sec. 25-1.3 Definitions.

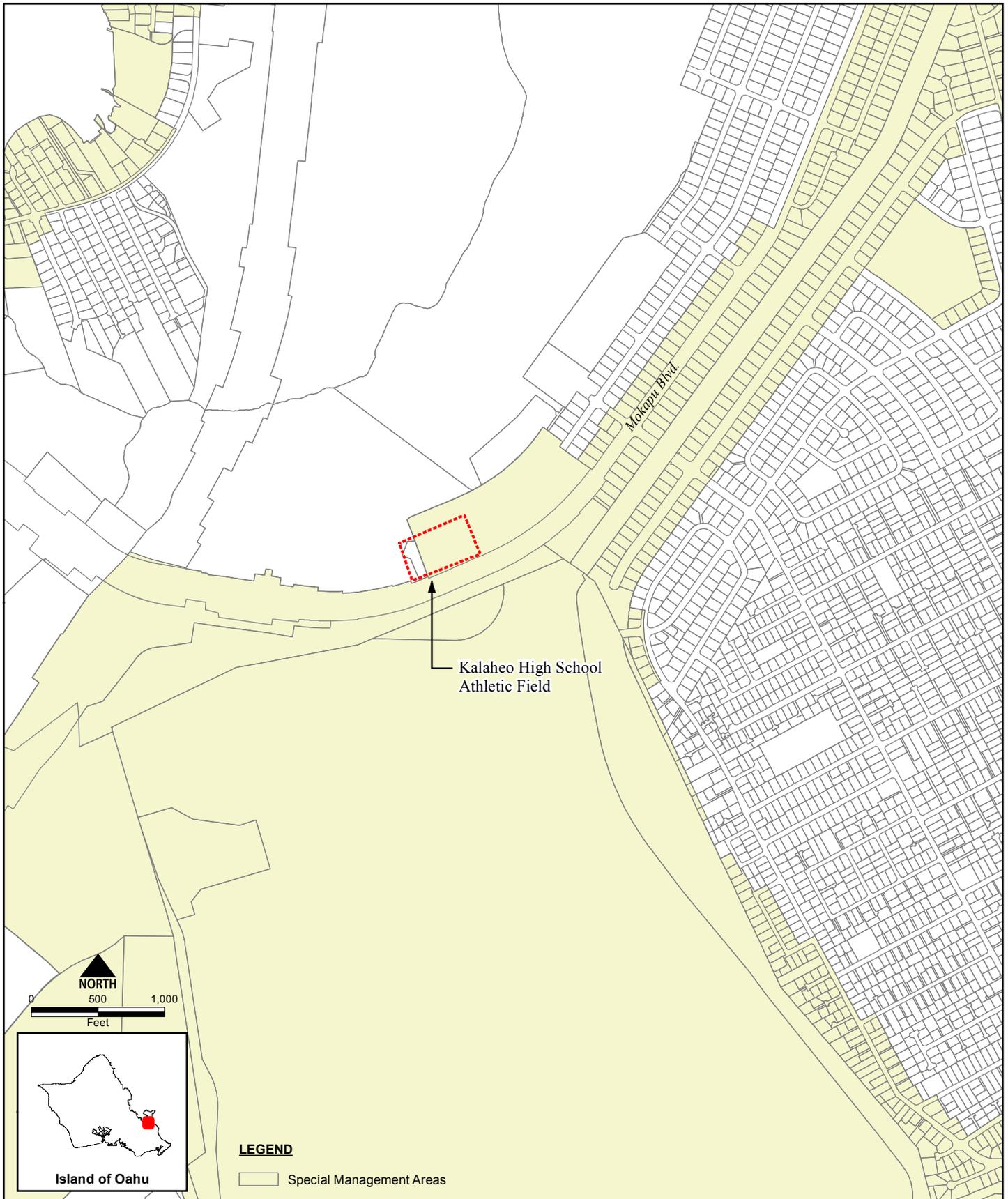
“Development” means any of the uses, activities or operations on land; in or under water, within the special management area that are included below, but not those uses, activities, or operations excluded in paragraph (2).

(1) “Development” includes but is not limited to the following:

(B) Grading, removing, dredging, mining or extraction of any materials;

(E) Construction, reconstruction, demolition or alteration of the size of any structure.

In a letter dated May 8, 2015, the DPP confirmed that a SMA major permit would be required for this project because the construction cost will exceed \$500,000. Preparation of this Environmental Assessment is one of the requirements of the SMA permitting process.



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SMA MAP

Figure 3-4

CHAPTER 4. ALTERNATIVES CONSIDERED

4.1 No Action

Under the No Action alternative, the athletic field would not be in compliance with NFHS requirements and be unsafe if not improved. Per the 1984 Environmental Impact Statement (EIS) for the Revised Ultimate Site Plan (RUSP), because of the lack of facilities, the school's physical education program is limited and some of its athletic teams must go off-campus to practice and to play home games. Without improvements, the school will not be provided with the basic facilities to meet its program needs. The school's football team would be one of these athletic teams.

Without the proposed drainage improvements, the athletic field would continue to the path of travel for part of the overland flow from the adjacent hillside. The drainage improvements could prevent flooding after heavy rain events.

For these reasons, the No Action alternative was rejected.

4.2 Other Alternatives

An evaluation report was prepared for the RUSP where six different alternative site plans were developed and evaluated for the same facility improvements as described in Section 1.3. This evaluation report is included as an appendix to the 1984 EIS. The proposed project is in conformance with the selected RUSP; therefore, development of new alternatives was not necessary for this Environmental Assessment.

CHAPTER 5. DETERMINATION

In accordance with Hawaii Administrative Rules §11-200-12, the potential effects of the proposed project are evaluated for the significance criteria which are summarized as follows:

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource:* The proposed project will not cause a loss to or destruction of any natural or cultural resource as discussed in Sections 2.6 and 2.12.
2. *Curtails the range of beneficial uses of the environment:* Construction of the proposed project and its intended uses will not impact any activities occurring in the area and therefore will not curtail the beneficial uses of the environment.
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:* The proposed project will be conform to Chapter 344, HRS. All permits and approvals in accordance with State and County rules and regulations will be obtained.
4. *Substantially affects the economic welfare, social welfare, and cultural practices of the community or State:* The proposed project is not anticipated to significantly affect the economic or social welfare, or cultural practices of the community or State.
5. *Substantially affects public health:* The proposed project will promote public health by providing better athletic facilities for the students of Kalaheo High School.
6. *Involves substantial secondary impacts, such as population changes or effects on public facilities:* The proposed project will not trigger a population increase nor appreciably affect public facilities or utilities.
7. *Involves a substantial degradation of environmental quality:* The scale of the proposed project is small and it will not degrade environmental quality.
8. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions:* The proposed project is part of the Revised Ultimate Site Plan (RUSP) for Kalaheo High School, prepared in 1983 by the DOE. The 1984 Environmental Impact Statement affirmed that the cumulative impact of the RUSP will not significantly affect the environment. The proposed project is not related to other activities in the area such that cumulative effects upon the environment would be considerable.
9. *Substantially affects a rare, threatened, or endangered species, or its habitat:* The proposed project will not substantially affect a rare, threatened, or endangered species, or its habitat, as discussed in Section 2.6.

10. *Detrimentially affects air or water quality or ambient noise levels: The proposed project will not permanently affect air or water quality or ambient noise levels:* Minor short term impacts associated with construction involving air quality, noise and water quality and will be mitigated by appropriate measures required in the construction contract. BMP's will be utilized to mitigate water quality impacts associated with storm water runoff, and DOH regulations for community noise will be followed.
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:* As discussed in Section 2.4, the proposed project is not in an area prone to natural hazards. The proximity to the Kawainui Canal is not expected to have any impact on the proposed project.
12. *Substantially affects scenic vistas and viewplanes identified in county or state plans or studies:* The new structures associated with the proposed project are minor and will not affect scenic vistas and viewplanes.
13. *Requires substantial energy consumption:* Construction of the proposed project and operation and maintenance of the new scoreboard will involve minimal energy consumption.

This Environmental Assessment has henceforth determined that the proposed project will not have significant adverse impacts on the environment, and therefore, an Environmental Impact Statement (EIS) is not warranted. It is anticipated that a Finding of No Significant Impact (FONSI) shall be issued for the proposed project.

CHAPTER 6. CONSULTED PARTIES

The Draft Environmental Assessment will be distributed to various agencies and interested parties for review and comment. The agencies and interested parties are listed below. Comments received will be incorporated in the Final Environmental Assessment.

Agency or Interested Party	Send Draft EA
Federal Agencies	
Department of the Army	x
U.S. Fish & Wildlife Service	x
U.S. Department of Agriculture, National Resources Conservation Service	x
State Agencies	
Department of Agriculture	x
Department of Business, Economic Development, and Tourism, Office of Planning	x
Department of Business, Economic Development, and Tourism, Land Use Commission	x
Department of Hawaiian Home Lands	x
Department of Health, Clean Air Branch	x
Department of Health, Clean Water Branch	x
Department of Health, Indoor and Radiological Health Branch	x
Department of Health, Safe Drinking Water Branch	x
Department of Health, Solid and Hazardous Waste Branch	x
Department of Land and Natural Resources, Land Division	x
Department of Land and Natural Resources, Division of Aquatic Resources	route
Department of Land and Natural Resources, Division of Boating and Ocean Recreation	route
Department of Land and Natural Resources, Division of Forestry & Wildlife	route

Consulted Parties

Agency or Interested Party	Send Draft EA
Department of Land and Natural Resources, Division of State Parks	route
Department of Land and Natural Resources, Commission on Water Resource Management	route
Department of Land and Natural Resources, Office of Conservation and Coastal Lands	route
Department of Land and Natural Resources, State Historic Preservation Division	x
Department of Transportation, Director	x
Office of Hawaiian Affairs	x
City and County of Honolulu Agencies	
Board of Water Supply	x
Department of Planning and Permitting	x
Department of Transportation Services	x
Honolulu Fire Department	x
Honolulu Police Department	x
Utility Companies	
Hawaiian Telcom, Inc.	x
Hawaiian Electric Company, Inc.	x
Oceanic Time Warner Cable	x
The Gas Company	x
Other Individuals/Organizations	
Ahahui Malama I Ka Lokahi	x
Kawainui Heritage Foundation	x

CHAPTER 7. REFERENCES

“2013 State of Hawaii Data Book,” prepared by State of Hawaii, Department of Business, Economic Development and Tourism.

City and County of Honolulu, Department of Emergency Management

“Environmental Impact Statement for Kalaheo High School Revised Ultimate Site Plan,” prepared for Division of Public Works, Department of Accounting and General Services; by Engineers Surveyors Hawaii, May 1984.

Federal Emergency Management Agency

“General Plan, Objectives and Policies,” prepared by City and County of Honolulu, Department of General Planning, 1992 amended October 3, 2002.

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Hawaii Revised Statutes

“Hawaii Stream Assessment: A Preliminary Appraisal of Hawaii’s Stream Resources, Report R84,” prepared for State of Hawaii, Commission on Water Resource Management; by National Park Service, Hawaii Cooperative Park Service Unit, December 1990.

“UHERO County Forecast,” prepared by University of Hawaii, Economic Research Organization, June 2015.

“Kalaheo High, Trend Report: Educational and Fiscal Responsibility, School Report for School Year 2013-2014,” prepared by State of Hawaii, Department of Education.

“Kawainui-Hamakua Complex Master Plan, Draft,” prepared for State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife and Division of State Parks; by HHH Planners, May 2014.

“Koolaupoko Sustainable Communities Plan,” prepared by City and County of Honolulu, Department of Planning and Permitting, July 2000.

“Koolaupoko Sustainable Communities Plan, Public Review Draft,” prepared by City and County of Honolulu, Department of Planning and Permitting, October 2014.

“Koolaupoko Watershed Management Plan, prepared for Honolulu Board of Water Supply; by Townscape, Inc., September 2012.

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National Park Service

“Noise Reference Manual, Oahu Edition,” prepared by State of Hawaii, Department of Health, Indoor and Radiological Health Branch, February 2008.

“Oahu General Plan, Proposed 2013 Edition, Public Review Draft,” prepared for City and County of Honolulu, Department of Planning and Permitting; by Helbert Hastert & Fee Planners, Inc., November 2012.

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“Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii,” United States Department of Agriculture, Soil Conservation Service, August 1972.

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State of Hawaii, Department of Health

State of Hawaii, Department of Land and Natural Resources, State Historic Preservation Division

State of Hawaii, Office of Planning, Hawaii Statewide GIS Program

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U.S. Census American Community Survey

“Water Resource Protection Plan,” prepared for State of Hawaii, Commission on Water Resource Management; by Wilson Okamoto Corporation, June 2008.