DRAFT ENVIRONMENTAL ASSESSMENT

Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai‘i

TMK 3rd Div. 6-1-03 Parcels 23, 36, 64, and 52

Kawaihae Road,
Kawaihae,
South Kohala District,
Island of Hawai‘i

Prepared for

State of Hawai‘i
Department of Transportation
Harbors Division

and

United States
Department of Transportation
Maritime Administration

November 2008

Prepared by
Helber Hastert & Fee, Planners

[This page intentionally blank for printing double-sided.]

EXECUTIVE SUMMARY

GENERAL INFORMATION

Project Name:	Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Project Location:	Kawaihae, South Kohala District, Island of Hawai'i
Tax Map Key	3rd Division, 6-1-03 Parcels 23 (por), 36 (por), 52, and 64
Judicial District:	South Kohala
Proposed Action:	Demolition of an Overseas Transit Shed and paving 3.8 acres
Property Owner:	State of Hawai'i Department of Transportation, Harbors Division
Accepting Authority:	US Department of Transportation, Maritime Administration / State of Hawai'i Department of Transportation, Harbors Division
EA Preparer	Helber Hastert & Fee, Planners Pacific Guardian Center, Makai Tower 733 Bishop Street, Suite 2590 Honolulu, Hawai'i 96813 (808) 545-2055 Fax: 545-2050 Scott Ezer
Total Acreage:	3.8 acres (disturbance; State lands cover 133-acre harbor site)
EA "Trigger":	Use of State lands (Chapter 343, HRS) and Federal funds (NEPA)
State Land Use District:	Urban
County General Plan:	Open (along ocean's edge) and Industrial
County Zoning:	M-1a General Industrial

Proposed Action: The Hawai'i State Department of Transportation ("H-DoT") Harbors Division, the property owner, in concert with the United States Department of Transportation, Maritime Administration ("MARAD"), propose minor improvements (the "Proposed Action") to Kawaihae Harbor as follows:

- Demolish and remove an earthquake-damaged Overseas Transit Shed ("OTS") at Pier 2A
- Remove and replace the earthquake-settled pavement under the old OTS footprint, and provide a smooth paved transition apron area to the adjoining container staging / storage yard
- Pave an adjacent baseyard / container chassis storage yard (3.1 acres)
- Provide utilities upgrades, including appropriate overhead lighting, and replacement of ADA accessible restroom facilities

A total surface disturbance of 3.8 acres is anticipated within the industrial area currently in use for commercial shipping. The estimated budget for the Proposed Action is $23 million.

Regulatory Compliance: The Proposed Action uses State lands and Federal funds, which triggers analysis under the provisions of both Hawaii Revised Statutes ("HRS") Chapter 343, the State Environmental Impact Statement Law, and the National Environmental Policy Act of 1969, 42 United States Code (USC) §4321, as implemented by the Council on Environmental Quality regulations, 40 Code of Federal Regulations ("CFR") Parts 1500-1508. The long-term environmental and social impacts of the planned growth in Hawai'i County harbors use is guided by the *Hawai'i Commercial Harbors 2020 Master Plan*, which considered island-wide impacts and previously complied with these regulations, as documented in the H-DoT Harbors Division 2001 *Final Environmental Impact Statement for the Hawaii Commercial Harbors 2020 Master Plan.* This analysis is specific to the actions presented, and defers to the full EIS to document the scope and impact of the larger plan of action.

This analysis is also prepared in compliance with US-DoT guidance, including Maritime Administration Order 600-1 (MAO 600-1), DoT 5610.1C, and contributing authorities, including Section 4(f), as originally

codified in the DoT Act of 1966, and amendments set forth in Title 49 USC Section 1653(f), later as 49 U.S.C. Section 303, and currently codified under 23 CFR 774.

This Environmental Assessment analyzes the potential impacts of the Proposed Action and Reasonable Alternatives to provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact ("FONSI"). A FONSI is anticipated. Other anticipated permits and consultations include a Section 402 National Pollution Discharge Elimination System ("NPDES") Discharge Permit issued by the State Department of Health, Clean Water Branch, informal Section 7 Endangered Species Act consultations with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, and a National Historic Preservation Act Section 106 and 110 Consultation with the State Department of Land and Natural Resources, State Historic Preservation Office. Per HRS Chapter 266-2(b), County agency approvals are not required for harbors improvements proposed by H-DoT, however coordination will be maintained to ensure County agencies are apprised of any actions which may impact County services.

Background and Rationale: Hawai'i Island imports 80 percent of its food and merchandise, with over 98% of this supply transported by sea. Hilo and Kawaihae Harbors are the only deep-draft harbors on the island of Hawai'i, and are essential infrastructure for the entry of virtually all materials imported to the island. As West Hawaii's population and economy increase, Kawaihae Harbor, located on the northwest coast in the South Kohala district, has become a major terminal for inter-island barge traffic, and has experienced a dramatic increase in its use, now moving more than half of Hawai'i Island's cargo. This high growth rate is exacerbated by an increased use of "just-in-time" inventory management, replacing warehouse space with *de facto en route* storage on public carriers (cargo ships, barges, and trucks) and in transit yards, as well as by changes in shipping technology to improve the efficiency of the operations. In response, H-DoT developed the *Hawai'i Commercial Harbors 2020 Master Plan* in 1998 to guide the development, enhancement, and maintenance of the island's harbor systems, and to quantify past and future requirements for cargo yard space. The *2020 Master Plan* states: *"...ocean shipping is Hawaii's primary life-sustaining enterprise"* with "*no feasible alternative*." This planning was supplemented and updated by the *Hawai'i Harbors Modernization Plan* (Dec. 2007), which forecasts "*Cargo container volume is expected to increase as much as 27 percent by 2010, 66 percent by 2015, and 93 percent by 2020.*"

Kawaihae Harbor has two commercial piers (Piers 1 and 2) with a total of 26.3 acres of improved cargo handling and storage areas, which accommodate both overseas and interisland cargo. This is insufficient area to meet projected needs, but sufficient land is available for expansion of these areas. Acreage requirements for efficient 2020 operations are forecast to require 43 acres of container yards (21 for overseas cargo and 22 for interisland cargo), so 16.7 acres of additional yard space will be required.

The Pier 2A / 2B area has experienced excessive traffic volume during the last 3 years, exacerbated by the October 15, 2006 earthquake damage which removed Pier 1 from service and caused significant damage to Pier 2A. Increased container traffic in the area of Young Brothers, Ltd. ("YBL") interisland container operations has resulted in the use of an unpaved area for overflow container staging, an undesirable practice from the standpoint of safety and fugitive dust. The existing Pier 2A Overseas Transit Shed (OTS), previously used for "Less than Container Load" shipments, is now earthquake damaged and is no longer required. It is an impediment to the placement of barge ramps and to the efficient loading and discharge of freight at Pier 2A. Demolition of the OTS will: (1) remove this structurally compromised, earthquake-damaged structure; (2) open up 0.7 acres in the heaviest traffic area for the loading and unloading of interisland cargo by YBL; (3) substantially improve the container movement traffic patterns at the port, and (4) allow for utilities (especially lighting) improvements which will enhance worker safety. The follow-on paving of 3.1 acres of additional baseyard area will provide additional container staging and storage space in an area currently utilized for container chassis parking and incidental storage, and designated for use as expansion storage for interisland container cargo operations. These actions take place on fill land, and no 4(f) lands are affected. No buildings, work in or on the water, or changes impacting traffic or navigation are proposed. Minor, short-term construction period impacts will include noise, traffic, and fugitive dust. Light pole foundations into original soils areas will be preceded by test borings to check for the presence of cultural material. No significant operational period impacts to traffic, harbor navigation, or commercial or recreational boating are anticipated.

Findings: Negative Declaration anticipated (FONSI).

TABLE OF CONTENTS

EXECUTIVE SUMMARY ES-1

ACRONYMS AND ABBREVIATIONS iii

1.0 PURPOSE AND NEED FOR ACTION

1.1 Summary of Proposed Action 1-1
1.2 Purpose and Need 1-2
1.3 Background 1-4
1.4 Regulatory Overview / Approvals Required 1-9

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction 2-1
2.2 Description of Alternatives 2-1
2.2.1 Proposed Action 2-1
2.2.2 Reasonable Alternative (Remove OTS and 0.7 acre Paving Only) 2-3
2.2.3 Other Alternatives Considered (but Not Carried Forward) 2-3
2.2.4 No Action 2-5
2.3 Environmental Consequences of Proposed Action and Alternatives 2-5

3.0 PHYSICAL ENVIRONMENT AND IMPACT ASSESSMENT

3.1 Overview (Location, Area, Ownership, TMK, Address, Current Use) 3-1
Surrounding Uses / Areas 3-4
3.2 Physical / Terrestrial Conditions 3-5
Climate 3-5
Geology, Topography, and Bathymetry 3-6
Soils 3- 9
3.3 Hydrology, Water Quality, and Coastal Resources 3-11
Stormwater Drainage 3-13
3.4 Air Quality 3-15
3.5 Noise 3-17
3.6 Natural Hazards (Volcanism, Earthquakes, Tsunami, Storm Surge, Hurricanes) 3-19
3.7 Biological Resources 3-24
Botanical Resources 3-24
Avifauna (Birds) 3-25
Terrestrial Animal Resources 3-27
Marine Biological Environment 3-28
Endangered Marine Species 3-28
Coral Reefs 3-29
3.8 Hazardous Materials 3-30

4.0 COMMUNITY / SOCIO-ECONOMIC ENVIRONMENT AND CONSEQUENCES

4.1 Demographics 4-1
4.2 Island Economy, Industrial and Commercial Activities, Business Development 4-2
4.3 Visual and Aesthetic Environment 4-4
4.4 Infrastructure / Utilities 4-5
Roads/Traffic 4-5

Utilities Services 4-7
Public Services and Community Resources 4-10
4.5 Historic and Cultural Resources 4- 11
Historical and Cultural Background 4-11
Construction of the Modern Harbor 4-13
Historic and Cultural Resource Assessment 4- 13

5.0 RELATIONSHIP OF THE PROPOSED PROJECT TO EXISTING PUBLIC PLANS, POLICIES, AND CONTROLS

5.1 Federal Policies and Controls 5-1
5.2 State of Hawai'i 5-6
5.2.1 State Land Use District 5-6
5.2.2 Hawai'i State Plan 5-6
5.2.3 State Plan - Transportation Functional Plan 5-9
5.2.4 State Environmental Policy 5-10
5.2.5 Coastal Zone Management Act 5-11
5.3 County of Hawai'i 5-12
5.3.1 General Plan 5-12
5.3.2 Hawai'i County Zoning 5-12
5.3.3 Special Management Area 5-12
5.3.4 Hawai'i County Code, Outdoor Lighting 5-15
5.4 Relationship of Short-Term Uses and Long-Term Productivity 5-15
5.5 Irreversible and Irretrievable Commitment of Resources 5-16
5.6 Energy Requirements and Conservation Potential 5-16

6.0 CUMULATIVE AND SECONDARY IMPACTS 6-1

7.0 ANTICIPATED DETERMINATION AND RATIONALE 7-1

8.0 AGENCIES CONSULTED 8-1

Distribution List, Early Consultation Scoping Letter, graphics, project summary)
Comment Letters with DRAFT Responses

9.0 REFERENCES 9-1

10.0 LIST OF PREPARERS 10-1

LIST OF FIGURES

Figure 1: Project Location 1-3
Figure 2: Vicinity 2-2
Figure 3: Tax Map 3-3
Figure 4: Soils 3-10
Figure 5: FEMA Flood Insurance Rate Map 3-23
Figure 6: State Land Use Districts 5-7
Figure 7: Land Use Plan Allocation Guide Map 5-13
Figure 8: County Zoning 5-14

LIST OF TABLES

Table 1: List of Potential Permits, Approvals, and Required Consultations 1-10
Table 2: Summary of Environmental Consequences of Proposed Action and Alternatives 2-6

APPENDICES

Appendix A Planning History and Documentation of Kawaihae Harbor Improvements
Appendix B Preliminary Design Drawings Documenting Proposed Action
Appendix C Subsurface Conditions Report (with Fill Thickness Table and Boring Locations Map)
Appendix D Informal Section 7 Consultation Request to National Marine Fisheries Service

ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFS	cubic feet per second
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COC	Contaminants of Concern
CWA	Clean Water Act
CWRM	DLNR Commission on Water Resource Management (State of Hawai‘i)
dBA	decibels (sound intensity level, measured on the “A” scale) dB Decibel dBA A-Weighted dB
DBEDT	Department of Business, Economic Development and Tourism (State of Hawai‘i)
DLNR	Department of Land and Natural Resources (State of Hawai‘i)
DHHL	Department of Hawaiian Home Lands (State of Hawai‘i)
DoBOR	Division of Boating and Ocean Recreation (State of Hawai‘i DLNR)
DoD	Department of Defense (United States)
DoH-CWB	Department of Health, Clean Water Branch (State of Hawai‘i)
DoT	Department of Transportation (also DOT, cf. H-DoT and US-DoT)
DWS	Department of Water Supply (County of Hawai‘i)
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency (United States, sometimes seen as USEPA)
ESA	Endangered Species Act or Environmental Site Assessment
°F	degrees Fahrenheit
F&WS	Fish and Wildlife Service (United States Department of the Interior)
FEMA	Federal Emergency Management Agency (United States)
FMP	Fishery Management Plan
FONSI	Finding of No Significant Impact
FWPCA	Federal Water Pollution Control Act
ft	feet
HABS / HAER	Historic American Buildings Survey / Historic American Engineering Record
GSP	Gross State Product
HAPC	Habitat Areas of Particular Concern
H-DoH	Hawai‘i State Department of Health (also DOH)
H-DoT	Hawai‘i State Department of Transportation (DoT)
HELCo	Hawai‘i Electric Light Company
HEER	Hazard Evaluation and Emergency Response (Office of, under H-DoH)

HHL	Hawaiian Home Lands (State of Hawai'i)
HSF	Hawai'i Superferry
kV	Kilovolt (thousand Volts)
LBP	lead-based paint
LOS	Level of Service (traffic)
LPS	Low Pressure Sodium
LUPAG	Land Use Pattern Allocation Guide
MARAD	U.S. Department of Transportation, Maritime Administration
makai	Hawaiian directional term indicating seaward or ocean-side (southwest at KH)
mauka	Hawaiian term indicating inland or mountain-side (northeast at Kawaihae)
mi	miles
mph	miles per hour
MLLW	Mean Lower Low Water
MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevens Fishery Conservation Management Act
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NELHA	Natural Energy Laboratory Hawai'i Authority (Ocean and Science Technology Park business complex at Keahole Point south of Kailua-Kona, Hawai'i)
NEPA	National Environmental Policy Act
NHL	National Historic Landmarks
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration (United States)
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration (United States)
OTS	Overseas Transit Shed
PCC	Portland Cement Concrete
PM_{10}	Particulate Matter less than 10 microns
$PM_{2.5}$	Particulate Matter less than 2.5 microns
PCBs	polychlorinated biphenyls
RP	revocable permit (indicated on TMK sheets to show leased parcels)
sf	square foot / square feet
SHPD / SHPO	State Historic Preservation Division (or Officer) (State of Hawai'i, DLNR)
USACE	United States Army Corps of Engineers
USC	United States Code
US-DoH	United States Department of Health (also DOH)
US-DoT	United States Department of Transportation (also DOT)
USEPA	United States Environmental Protection Agency
V/C	Volume to Capacity Ratio (traffic)
WPFMC	Western Pacific Fishery Management Council
WQC	Water Quality Certification
WQLS	Water Quality-Limited Segments
YBL	Young Brothers, Limited (interisland barge freight company)

1.0 PURPOSE AND NEED FOR ACTION

Organization: This Environmental Assessment must meet both HRS Chapter 343 and NEPA standards (as discussed under § 1.4), and uses a hybrid format to ensure inclusion of required elements. Since most of the reviewing agencies are located in Hawai'i, the Chapter 343 format is used, describing the affected environment and environmental consequences within the same chapter, simplifying the organization, and reducing some of the considerable redundancy which results from combining formats. Sufficient redundancy is retained to allow reviewers interested in small segments to understand the context and the fit with the other elements of the project.

Chapter 1 provides a summary of the proposed action, the purpose and need for the proposed action, background information to support H-DoT Harbors Division planning, and the regulatory context within which the action will be undertaken.

Chapter 2 provides a description of the Proposed Action and alternatives, and a summary comparing the environmental consequences of each action.

Chapter 3 describes the background information on the project, the affected environment (the environmental setting and baseline conditions and resources in the area where the proposed action would occur), an analysis of the potential environmental consequences which would result from the implementation of the proposed action or alternatives, including the potential consequences of taking no action, and the proposed mitigation, if needed.

Chapter 4 describes the social and economic context and anticipated consequences of the project, including community infrastructure, socio-economics, visual and aesthetic resources, and the cumulative impacts of harbor development.

Chapter 5 describes the relationship of the proposed project to existing public plans, policies, and controls consistent with the Federal, State, County, and community where it would be implemented.

The remaining chapters describe the cumulative and secondary impacts of the project (Ch. 6), the anticipated determination and rationale behind it (Ch. 7), the agencies which were consulted (Ch. 8), references used in the preparation of the document (Ch. 9), and the people and organizations preparing the submittal or providing significant input to the process (Ch. 10). Appendices follow this section and include comments received on the early consultation letters and the responses to same.

1.1 Summary of Proposed Action

H-DoT Harbors Division, under MARAD funding, propose minor improvements (the "Proposed Action") to Kawaihae Harbor[1], also known as the Port of Kawaihae, a State-owned deep-draft commercial harbor located in the South Kohala District on the northwest coast of the Island of Hawai'i (Fig. 1). The Proposed Action includes:

[1] Where Kawaihae Harbor is used in this document, this reference is specifically to the Kawaihae Deep Draft Commercial Harbor, or to the entire harbor complex, and not to either the North or South Kawaihae Small Boat Harbors (which are under Hawai'i Department of Land and Natural Resources (DLNR) rather than DoT Harbors control) unless referenced specifically. Kawaihae Harbor is used interchangeably with port or Port of Kawaihae.

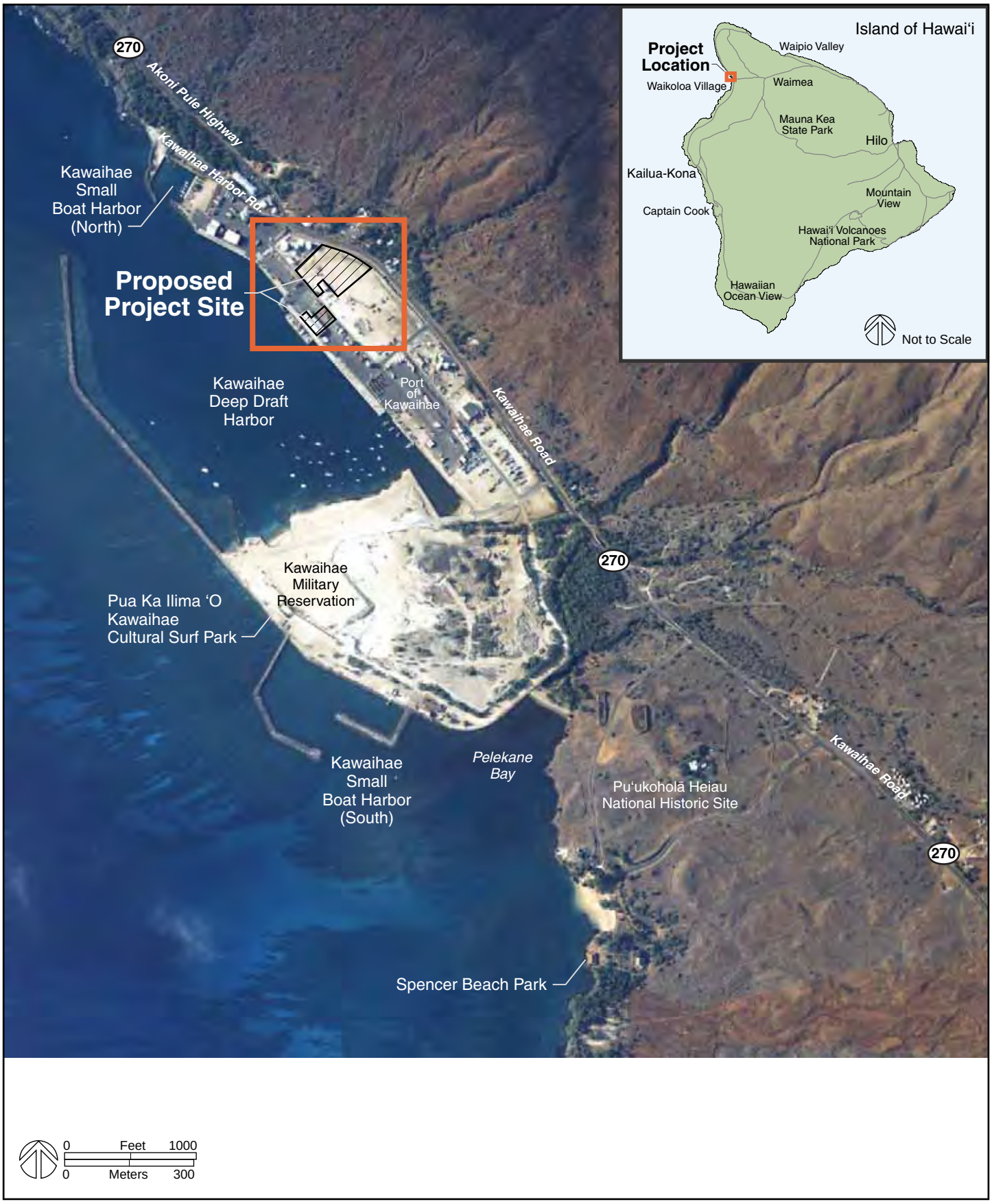
- Demolition and removal of an earthquake-damaged Overseas Transit Shed ("OTS") at Pier 2A (see cover photo);
- Removal and replacement of the earthquake-settled pavement under the old OTS footprint, and providing a smooth paved transition apron area to the adjoining container staging yard (0.7 acres);
- Paving an adjoining container chassis staging / storage yard (3.1 acres);
- Providing appropriate overhead lighting, relocating existing utilities exposed by removal of the OTS (including transformer, electrical cables, panels, and outlets, water connections with backflow prevention device, and communications lines), and such repairs and upgrades as dictated by the age and condition of existing elements; and
- Providing water system improvements to accommodate the installation of new fire hydrants in the vicinity of the present OTS following its demolition.

1.2 Purpose and Need

Purpose: The purpose of the Proposed Action is to provide improvements to the interisland container cargo area of Kawaihae Harbor to:

- Enhance worker safety by:
    - Removing the damaged OTS, which has settled 5 to 9 inches (unevenly) below the level of the pavement around the perimeter and suffered structural damage, including several broken structural cross-members and walls partially separated from the roof and foundation, leaving gaps and resulting in an undesirable amount of wall flex in response to heavy winds.
    - Repairing earthquake-settled areas and sinkholes, leveling, smoothing, and strengthening surfaces for forklift movement of loaded containers, and
    - Installing lighting sufficient to illuminate the baseyard expansion area to the tops of the container stacks
- Increase the amount of available pier space and eliminate impediments to the smooth flow of incoming and outgoing freight to barges, on-site short-term container stacking areas, and container-on-chassis staging areas
- Increase the available containerized cargo storage area consistent with long-term H-DoT Harbors Division port planning
- Provide utilities improvements and upgrades to relocate utilities presently attached to the OTS, and repair and/or replace obsolete, substandard, poorly located, or inefficient elements within the project area, as appropriate
- Minimize fugitive dust / air quality impacts on the surrounding community (caused by equipment movement across crushed coral surfaces) by paving the 3.1 -acre unimproved baseyard expansion area

Immediate Need: Substantial damage was caused by the 6.7 and 6.0 magnitude earthquakes which struck on October 15, 2006, as detailed in the following section. The damage to the OTS and settlement of this and other areas requires a higher than normal priority be afforded to these actions. While some repairs were accomplished on an emergency basis, the removal of the OTS and repairing / repaving the apron area should



Regional Location

Figure 1

Pier 2A Shed Demolition and Container Yard Improvements
Draft Environmental Assessment
Kawaihae, South Kohala, Hawaii

be accomplished as quickly as possible for the safety of workers, and to maintain the operational efficiency of the port.

Long-Term Need: Hawai'i County (synonymous with "island of Hawai'i," "Hawai'i Island," or "Big Island" in this document) imports 80 percent of its food and merchandise, with over 98% of this supply transported by sea. Hilo and Kawaihae Harbors are the only deep-draft harbors on the island of Hawai'i, and are the critical gateways for these incoming supplies and the export of Big Island-produced goods. While these harbors have a multitude of uses, including commercial and sport fishing, passenger operations, ocean mining, recreational, military, and other uses, this EA focuses on the cargo operations which sustain the lives of the island residents and maintain the viability of the island economy. Although waterborne cargo is commonly unseen and taken for granted, deep-draft harbors operations are essential to the survival, comfort, and economic well-being of the island, and continued harbors maintenance and improvements are critical to maintaining the supply of necessary goods to sustain the population. Further, life-support requirements of the island population mean these deep-draft cargo facilities are essential infrastructure which must be given priority in all harbors planning. Should either port be closed due to earthquake, tsunami, or other disaster, the remaining port would be the sole lifeline sustaining the delivery of essential commodities, including food, material, and energy imports, so sufficient reserve capacity should be maintained as insurance against unforeseen natural disasters.

1.3 Background

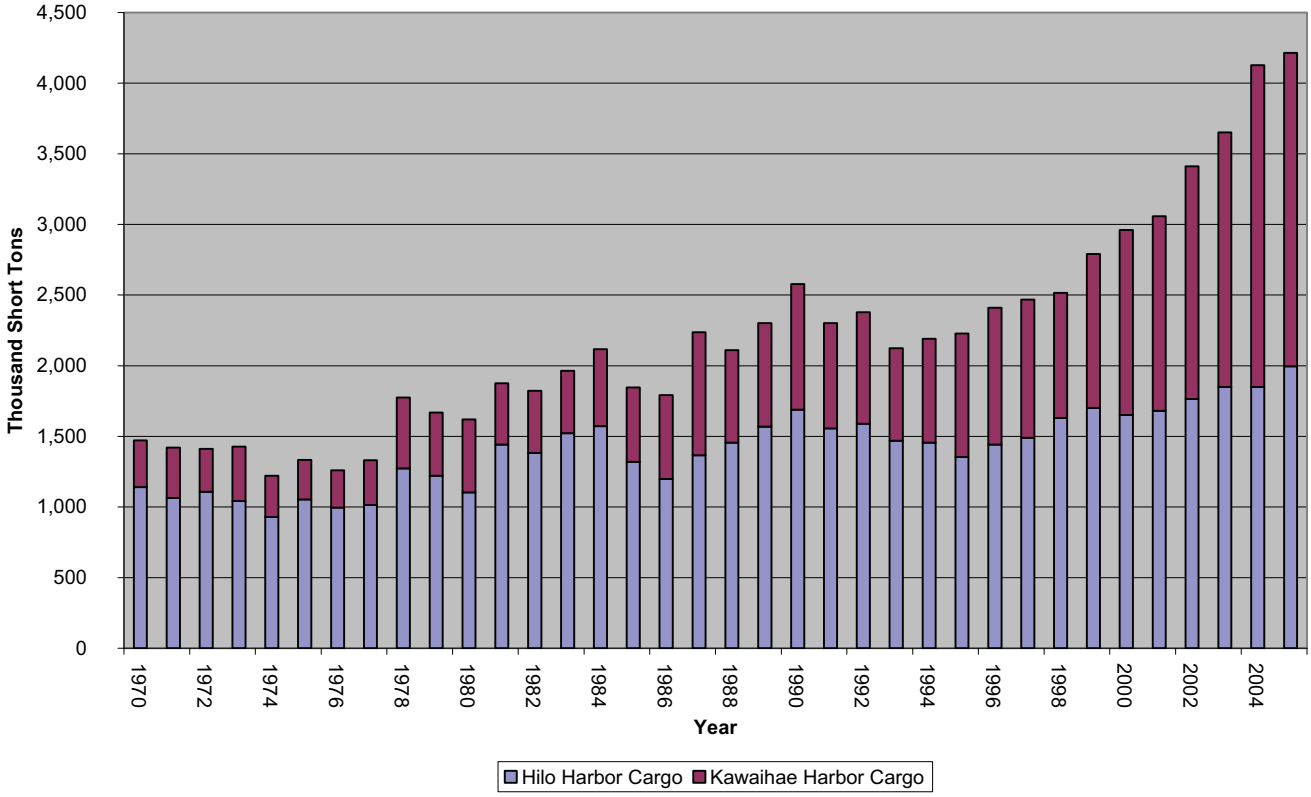
MARAD Mission: The mission of the U.S. Department of Transportation (DoT), Maritime Administration (MARAD) is to promote the development and maintenance of an adequate, well-balanced, and efficient U.S. maritime (waterborne) transportation system. This includes ensuring the maintenance and protection of maritime infrastructure (efficient ports and intermodal integration), industry (merchant marine, shipbuilding, and repair), and labor resources to meet the economic and security needs of the United States and its residents, while protecting the environment. MARAD seeks to ensure adequate reserve shipping capacity for use in time of national emergency, promote the seamless integration of maritime transportation with other segments of the transportation system, and ensure the viability of the U.S. merchant marine, sufficient to carry the Nation's domestic waterborne commerce and a substantial portion of its waterborne foreign commerce, and capable of service as a naval and military auxiliary in time of war or national emergency.

H-DoT Harbors Division Mission: The mission of the State of Hawai'i Department of Transportation (H-DoT) is to provide a safe, efficient, accessible, inter-modal transportation system that ensures the mobility of people and goods, and enhances and/or preserves economic prosperity and the quality of life. H-DoT is responsible for the planning, design, construction, operation, and maintenance of State facilities in all modes of transportation, including air, water, and land. Coordination with other State, County, and Federal programs is maintained in order to achieve the objective. H-DoT currently provides, operates, and maintains eleven commercial service airports, four general aviation airports; eleven commercial harbors; and 2,450 lane miles of highway. Harbors Division is specifically responsible for State harbor facilities. Independent special funds were established for each of the three division's major programs to fund its programs and

projects. The Harbor Special Fund was established under Section 266-19, Hawai'i Revised Statutes ("HRS"), and generates the majority of its revenues from fees and charges for profiles, dockage, demurrage, and the rental of land and wharf space at the state's commercial harbors, with the remainder generated from various service charges, permits and licenses.

Growth in Hawai'i Island Operations: Hawai'i County population grew by roughly 16% in the 7 years ending July 1, 2007, reflecting an average annual growth rate of 2.1% during this period (see Demographics discussion at Section 4.1 for details). The increase in commercial shipping has been far more dramatic, supporting not only normal consumption, but the increased need for building materials, the increased commercial output of the island, and the initiation of new shipping-intensive commercial ventures. In the 35 years from 1970 to 2005, cargo tonnage tripled from 1.47 to 4.21 million short tons. During this period, Hilo totals increased by 175%, but Kawaihae Harbor cargo totals increased by over 670%, handling the majority of the increased traffic, and increasing from less than one-third of Hilo totals to currently handling the majority of Big Island cargo.

Waterborne Cargo at Hawai'i Island Harbors in Thousands of Short Tons
(Data from DBED/T Hawai'i Data Book, Transportation Data Series, 1970 - 2005)



The dramatic increase in the use of Kawaihae Harbor as a major terminal for inter-island barge traffic is a direct response to the growth of West Hawaii's population and economy. The population trends driving this increase are likely to continue. The Hawai'i

Department of Business, Economic Development and Tourism (DBEDT), Research and Economic Analysis Division released its *Population and Economic Projections for the State of Hawai'i to 2035* in January 2008, and projected the island of Hawai'i would have a growth rate roughly double that of the state as a whole over the next two decades, tapering off after 2025. This is not totally unexpected. With a land area of 4,028 square miles (mi^2) out of a state total of 6,425 mi^2, the Big Island has more land than all the other islands combined (over 62% of the state), but only 13.5% of the population.[2] DBEDT projections forecast a population increase from 164,800 in 2005 to 279,200 by 2035, and with nearly 80% percent of its food and merchandise supply transported by sea, the expansion of service at Kawaihae Harbor will be critical to the health, well-being, and economic prosperity of the island.

Lack of Commercial Export Capacity: Presently, Kawaihae Harbor is unable to handle the volume of cargo desiring transport. This lack of commercial export capacity can have a deleterious impact on new commercial ventures, especially transportation-dependent enterprises, such as the export of deep ocean water by 5 businesses operating at the Natural Energy Laboratory Hawai'i Authority (NELHA) complex at Keahole Point south of the Kona Airport. These businesses are a model of the type of sustainable, environmentally responsible ("green") enterprises encouraged by the County and the State, and vigorously promote the clean and healthy image of Hawai'i along with the product, but require sufficient transport capacity to remain viable.

Obsolescence: Harbor issues are exacerbated by the obsolescence of harbor infrastructure and the need to modernize port operations to keep pace with modern shipping and inventory management practices. The OTS is an example of one structure built in 1959 to fill one specific role (bulk sugar cargo), adapted for non-containerized cargo, and now has no purpose. Most cargo is now shipped in 20, 40, and 45-foot long containers, but Kawaihae Harbor lacks modern crane systems, and containers are handled with large container-handling lift trucks (currently Hyster 1150HD "top lifters"), which pick up containers, carry them down a steel plate ramp between the moving barge and the dock (sometimes in sea conditions sufficiently rough to shear multiple 2inch diameter steel ramp anchoring pins). The OTS is 35 feet from the edge of the pier, and the standard ramps are 50 feet long (37 feet is the shortest), and cannot be deployed in the area of the OTS because the building would block the ramp. This pushes the Young Brothers operation south of the OTS, where it interferes with Matson operations on days when they are both in port simultaneously.

Once off the pier, the lift trucks move the containers to storage areas for stacking, or for installation directly on top of the trailer chassis (the rubber-tired trailer under-frame assemblies onto which the container is mounted for road transport). This requires clear movement, loading, and container stack storage areas to stage incoming and outgoing cargo.

Onsite storage issues are complicated by changes in shipping technology to improve the efficiency of the operations, as well as the increased use of "just-in-time" delivery practices, replacing warehouse space with *de facto en route* storage on the carriers (cargo ships, barges, and trucks) and in container cargo storage yards, where the containers are held until picked up for delivery.

[2] 2005 estimate, DBEDT 2008, p. 2. Area from *Atlas of Hawai'i*, 1998, p. 22 and xiv.

Harbors Planning: H-DoT Harbors Division Planning responded to these multiple issues by working in concert with the harbor users to develop the *Hawai'i Commercial Harbors 2020 Master Plan* (1998) to guide the development, enhancement, and maintenance of the island's harbor systems, and to quantify past and future requirements for cargo yard space. The *2020 Master Plan* states: "...ocean shipping is Hawaii's primary life-sustaining enterprise" with "no feasible alternative." This planning was supplemented and updated by the *Hawai'i Harbors Modernization Plan* (Dec. 2007), which forecasts "*Cargo container volume is expected to increase as much as 27 percent by 2010, 66 percent by 2015, and 93 percent by 2020*."

Harbors Division recognizes that Hawai'i Island requirements are interdependent and best analyzed systemically, and that the presence of two deep-draft harbors provides system redundancy and service elasticity. This improves economic efficiency by allowing delivery from the most economic route, and maintains service redundancy to maintain supply security to an island with a significantly elevated hazard potential, and where there are no viable delivery alternatives to meet the high volume of public and business needs. The location of Kawaihae Harbor on the northwest coast in the South Kohala district, and its geographic distance from Hilo Harbor (about 66 miles by the single perimeter road, which can be slow and is vulnerable to landslides and runoff flooding) makes it far better positioned to economically handle the shipping needs of the north and west sides of the island. It is also faster and cheaper to transport barges between Honolulu Harbor and Kawaihae Harbor than to ship to Hilo, and Kawaihae Harbor is far more capable of – and more appropriate for – absorbing increased cargo traffic than Hilo Harbor. Both Hilo and Kawaihae harbors are planned (and overdue) for major upgrades, as discussed in the *Hawai'i Commercial Harbors 2020 Master Plan EIS*.

Current Configuration and Projected Requirements: Kawaihae Deep-Draft Harbor has two commercial piers (Piers 1 and 2) with a total berthing space of 1,562 linear feet and a total of 26.3 acres of improved cargo handling and storage areas to accommodate both overseas and interisland cargo. *This is insufficient to meet projected needs.* However, sufficient unimproved land is available for expansion of these areas. Forecast future space requirements for efficient operations in the 20-year planning horizon are expected to require container yards for 22 acres of interisland cargo, and 21 acres of overseas cargo, so 16.7 acres of additional space will be required. The existing unimproved 3.1-acre baseyard area currently utilized for container chassis parking is designated to meet a portion of this cargo storage shortfall.

Interisland container cargo operations are run by Young Brothers, Limited (YBL), and adjoin overseas container cargo operations by Matson Navigation, along with multiple other uses by other harbor tenants and users, including (but not limited to) Akana Petroleum, Mid-Pacific Petroleum (both liquid bulk storage), West Hawai'i Concrete (dry bulk storage), Horizon Lines (containerized household and business moving), A&B Fleet Services (Matson ground transportation), and Liquid Robotics (ocean automation systems). These operations are spread out between the Kawaihae Small Boat Harbor (North) at the north end of the site and the open coral flats at the south end of the harbor. Matson, YBL, Horizon Lines, and the liquid bulk petroleum operations share Pier 2. Pier 1 has not returned to full service and is incapable of handling heavy loads; its current use is predominantly by West Hawai'i Concrete for pneumatic transfer of dry bulk concrete powder to its on-site silos.

Overseas Transit Shed: Adjoining Pier 2A is an Overseas Transit Shed (OTS). The main building area has 12,474 square feet (sf) of warehouse space, plus an added 646 sf office room/restroom area for a total 13,120 sf. An overhanging eve covers 3,211 sf, for a total covered area of 16,331 sf.[3] Constructed in 1959, this shed originally supported an overhead sugar conveyor and a gantry system which allowed direct discharge of bulk sugar into the holds of cargo barges. These elements were removed in 1996 after the sugar industry ceased operations on the island. In the past decade, the OTS has been used for "Less than Container Load" shipments, a use which has sharply declined as shipping moves to greater containerization of loads and increasingly efficient shipping and loading methods. The shed is within 40 feet of the harbor edge and it blocks the available pier apron area and there is insufficient room to allow a ramp to be deployed from barge to pier apron, impeding the efficient loading and discharge of freight. This building is no longer required, does not adequately support current operational needs, and has suffered significant earthquake damage. Removal of the OTS and associated utilities and leveling and paving the transition area to the storage yard will substantially improve the productive use of the pier area and the flexibility of operations in the area most heavily used for the loading and unloading of interisland container cargo.

Earthquake Damage Issues: Substantial damage was caused by two earthquakes on Sunday, October 15, 2006: the 6.7 magnitude Kiholo Bay earthquake with an epicenter about 12 miles northwest of Kawaihae Harbor, and the 6.0 Mahukona earthquake about 13 miles southwest (erroneously reported as an aftershock). These earthquakes, about 22 miles and 7 minutes apart, caused liquefaction of fill material, lateral displacement of the pile supported concrete piers, and significant vertical settlement of asphalt pavement (Chock, 2006). Damage increased again after another 4.0 aftershock 2 days later. Pier 2B, built under different standards in the 1990s, sustained relatively minor damage.

The OTS also sustained severe damage, with the concrete floor settling 5 to 9 inches (unevenly) below the level of the pavement around the perimeter (reportedly due to earthquake liquefaction of the fill material), and suffering structural damage, including several severed structural cross-members and walls partially separated from the roof and foundation.

Pier 1 required long-term closure for repairs, and is still not back in full service 2 years later. Pier 2A/2B required closure and Matson and YBL cargo was diverted to Hilo for two days following the earthquake while extensive emergency repairs were performed. Repairs included re-hanging the fuel pipelines (which broke free from their under-pier support hangers and fell to the sea-floor, although they remained unbroken), and repairing the separation between the pier and apron at Pier 2A.

After 2 days of emergency repairs, Pier 2B was reopened and all interisland container cargo operations consolidated there, with Matson Navigation and YBL, sharing the available space at Pier 2B. Some of the baseyard areas had significant issues with the appearance of sinkholes in the fill material.

This experience points out the need to maintain the existing infrastructure, provide redundant capacity, and plan for future service disruptions.

[3] Dimensions from the most current source (Drawing S-1, Nagamine Okawa Engineers Inc., August 2008, attached in Appendix D).

1.4 Regulatory Overview

This Environmental Assessment (EA) has been prepared under direction of the Hawai'i State Department of Transportation ("H-DoT") Harbors Division, in concert with the United States Department of Transportation, Maritime Administration ("MARAD"), to address the potential environmental and socio-economic impacts of a proposed federally-funded action on State lands. The Proposed Action triggers analysis under the provisions of both Hawaii Revised Statutes ("HRS") Chapter 343, the State Environmental Impact Statement Law, and the National Environmental Policy Act (NEPA) of 1969, 42 United States Code (USC) §4321, as amended and implemented by the Council on Environmental Quality (CEQ) "Regulations for Implementing NEPA", 40 Code of Federal Regulations ("CFR") Parts 1500-1508.

This documentation has also been prepared in compliance with U.S. Department of Transportation (US-DoT) regulations and guidance implementing NEPA and other applicable federal regulations and directives, including DoT 5610.1C and contributing authorities, including Section 4(f), as originally codified in the DoT Act of 1966, and amendments set forth in Title 49 USC Section 1653(f), later as 49 U.S.C. Section 303, and currently codified under 23 CFR 774. It also conforms to the goals and requirements of streamlining processes as described in Executive Order (EO) 13274, Environmental Stewardship and Transportation Infrastructure Project Reviews, its associated Memorandum of Understanding, and Section 1309 of the Transportation Equity Act for the 21st Century.

Other H-DoT Actions: The long-term environmental and social impacts of the planned growth in Hawai'i County harbors use is guided by the *Hawai'i Commercial Harbors 2020 Master Plan*, which considered island-wide impacts and has previously complied with applicable State environmental impact regulations, as documented in the H-DoT Harbors Division July 2001 *Final Environmental Impact Statement for the Hawaii Commercial Harbors 2020 Master Plan*, so the analysis presented here is specific to the Proposed Action at the documented site, and defers to the full EIS to document the scope and impact of the larger plan of action and any other proposed uses, or to other H-DoT environmental compliance documentation where other projects are proposed.

A detailed description and discussion of applicable Federal, State, and County laws, ordinances, authorities, and policies is included in Chapter 5.

Potential Permits Required

The following table summarizes the permits, approvals, and required consultations H-DoT Harbors Division or its contractors may be required to obtain prior to construction.

Table 1:
List of Potential Permits, Approvals, and Required Consultations

Oversight Agency	Anticipated Permit, Approval, or Consultation
Federal	
U.S. Fish and Wildlife Service	Informal Section 7 Endangered Species Act consultation
U.S. National Marine Fisheries Service	
State of Hawai'i	
Department of Health, Clean Water Branch	Section 402 National Pollution Discharge Elimination System (NPDES) Discharge Permit
Department of Land and Natural Resources, State Historic Preservation Office	National Historic Preservation Act Section 106 and 110 Consultation

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

This chapter presents a discussion of the Proposed Action and Alternatives, and a table summarizing the environmental consequences of the alternatives.

2.2 Description of Alternatives

Three primary alternatives were evaluated:

- Proposed Action
- Reasonable Alternative (remove OTS and provide 0.7 acre of paving only)
- Other Alternatives (considered, but not acceptable as Reasonable Alternatives)
- No Action

Each of these alternatives is described below. Additional alternatives were also considered, but rejected due to the expedient need for improvements. As discussed under Purpose and Need (Section 1.2), the actions under consideration have been necessitated by the pressing needs imposed by demand growth at Kawaihae Harbor, but were considerably exacerbated by the damage to the OTS and pier resulting from the October 15, 2006 earthquakes.

There is other long-term planning for the harbor, as discussed in the *Hawai'i Commercial Harbors 2020 Master Plan Environmental Impact Statement* (2001), which presents larger-scale long-term options, including a new Pier 3 Interisland Cargo Terminal. These options have not been foreclosed, but these plans include multiple other elements at a greater expense, and many of these elements, including cargo and passenger services terminals, are currently being reconsidered under the *Hawai'i Island Commercial Harbors 2035 Master Plan*, an update of the *2020 Master Plan* scheduled for completion in late 2009, which may impact the long-term plans for the harbor. However, the need for expedient repairs and improvements is pressing, and the proposed improvements will be required under any of these scenarios, and cannot be delayed to await these larger decisions.

2.2.1 Proposed Action

The Proposed Action includes activities to demolish a damaged, functionally obsolete harbor structure, to relocate, upgrade, and improve associated infrastructure, to improve harbor capacity, to improve worker safety and harbor security, as follows:

1. Demolish and completely remove the Overseas Transit Shed ("OTS", 11,200 sf projected footprint) at Pier 2A (Fig. 2)
2. Remove and replace the settled pavement under the OTS footprint with new PCC pavement, and provide a smooth paved transition apron area to permit the smooth and safe transport of container cargo from barges to the adjoining container staging / storage yard (0.7 acres paved). Pavement will be 19.5-inch-thick Portland Cement Concrete (PCC) with a minimum flexural strength of 700

Vicinity

Figure 2

psi and a 6,000 psi compressive strength over an 8-inch aggregate subbase compacted to 95%, for a total prepared depth of 27.5 inches.

3. Pave a near-by container chassis staging / storage baseyard (3.1 acres) to provide needed additional staging and storage area for containers, container chassis (for tractor-trailer hauling), and containers-on-chassis awaiting transport off the site. Pavement will be 19.5-inch thick PCC with an 8inch subbase totaling 27.5 inches, as in #2, and will include curbs and appropriate drainage improvements.
4. Provide utilities upgrades, including:
    a) Addition of one new 46.5-foot light pole to illuminate the former OTS pad, matching the existing poles elsewhere at the harbor. The light consists of a 39-foot steel light pole with a "tree" of 6 to 12 light heads with one 180 Watt low-pressure sodium (LPS) lamp per head, mounted on a 2-foot 6-¾-inch transformer base on a 5-foot high concrete pedestal for a total height of 46-foot 6-¾-inch (referred to in this EA as 46.5 feet), Pedestal will require excavation of a 5-foot diameter, 15-foot deep hole for the foundation anchor subbase and shallow (2-foot 3-inch) electrical utility trench excavation. (See Appendix B, Sheets E-2 and S-4 for light pole and foundation details.)
    b) Relocation (underground), termination, and/or repair of existing utilities exposed or altered by removal of the OTS or no longer needed, including:
        - a Hawaii Electric Light Company (HELCo) electrical transformer, electrical panels and outlets,
        - communications lines,
        - water lines and backflow prevention device,
        - close and fill existing cesspool associated with the restrooms, and
        - other minor repairs or upgrades to existing elements (such as water system improvements) as determined by their age and condition once they have been exposed,
    c) Water system improvements to accommodate the installation of 3 to 6 new fire hydrants in the vicinity of the present OTS following its demolition.
    d) Addition of 8 – 24 (anticipated[4]) new overhead light poles to provide adequate overhead lighting to illuminate the new 3.1 acre paved storage yard, consisting of 46.5-foot steel light pole / pedestal combinations (the same units described under 4.a.) with a "tree" of 6 to (normally) 12 light heads with one 180-Watt LPS lamp per head mounted on 5-foot concrete pedestals, for a total height of 46.5 feet. Pedestals will require excavation of a 5-foot diameter, 15-foot deep hole for the subbase and shallow (2-feet 3-inches) electrical utility trench excavation.
    e) Replacement of ADA accessible restroom facilities that will be demolished with the OTS building, either at the Marine Cargo Specialist office building, or a stand-alone shower/restroom building

[4] Based on conceptual design; final number to be determined in final engineering design. This document considers the impacts of the higher number unless otherwise specified.

Total Surface Disturbance Area: A total surface disturbance area of 3.8 acres is anticipated within the industrial area currently in use for commercial container cargo operations. No portion of this area is in, under, or over the waters of the United States, or in any area requiring changes to navigation or navigational aids.

Estimated Budget: The estimated budget for the Proposed Action is $23 million. This project is federally funded by MARAD and constructed on land owned by the State of Hawai‘i. All improvements become the property of the State of Hawai‘i upon acceptance.

2.2.2 Reasonable Alternative (Remove OTS and Provide 0.7 acre of Paving Only)

The Reasonable Alternative involves demolition of the OTS, relocation of associated utilities, adding one 46.5-foot light pole, and providing 0.7 acre of paving improvements to meet the primary purpose and need, but leaves out the paving of the 3.1 acre baseyard area. (This includes items 1, 2, 4.a), 4.b), and 4.c) above, but excludes items 3 and 4.d) on the 3.1 acre yard.) This alternative is of substantially lesser economic and time costs than the Proposed Action. This alternative is conceived as a measure which would allow demolition of the damaged OTS, and improved cargo operations efficiency for a few years while other decisions are made about the long-term plans for the harbor. However, selection of this option would fail to provide the additional 3.1 acres of paved area needed for container staging and storage to accommodate cargo traffic handled by Young Brothers, Ltd. (i.e., the project area would be 0.7 acres instead of 3.8 acres). It would still increase cargo movement efficiency by removing the damaged OTS to provide partial relief of the existing cramped, bottlenecked conditions for loading and unloading cargo at Pier 2. However, paving this 3.1 acre area would still be anticipated during later harbor improvements, even if not accomplished as part of this action.

2.2.3 Other Alternatives Considered (but Not Carried Forward as Reasonable)

The selection of “Reasonable Alternatives” implies consideration of options which are both real alternatives, and which are reasonable, given the range of factors which make a project practical. Insofar as there are only 2 deep-draft harbors on the island of Hawai‘i, and considering that Kawaihae Harbor is now the port through which more than half of the shipping needs of the island are met, and that both implementation time and cost are both factors, the “reasonable” criteria imposes a heavy burden. Commonly, the Reasonable Alternative would be to choose an alternative location, but this is not reasonable because the only other deep-draft harbor (Hilo) is already in need of major expansion improvements, and the growth in Kawaihae Harbor container traffic results from the inability to handle this growth in Hilo, and both harbors are essential. It would also be impractical to construct a new harbor for only a portion of the existing harbor uses, as fuel supplies and other harbor infrastructure would normally be needed in any new harbor, and this would involve enormous relocation efforts. Creating a deep draft, deep water harbor where none currently exists also does not meet the “reasonable” criteria, considering the significantly greater environmental impacts from removing sufficient coral to create a deep-draft port, plus developing the backland, wave protection, highway access, navigational, and other infrastructure requirements, the cost would be orders-of-magnitude more expensive than the anticipated budget (of about $23 million), and the time required to build and bring a new facility to operational status are considered prohibitive. Collectively, these factors dictate that alternative locations for new harbors elsewhere on the island be excluded from the analysis as unreasonable.

The following on-site alternatives have also been considered, but were not acceptable as Reasonable Alternatives, and were therefore not carried forward in this analysis.

Construct a new Interisland Cargo Terminal at Pier 3: Construction of a complete new Interisland Cargo Terminal on bare, unimproved crushed coral fill land at the proposed Pier 3 area at the south end of the harbor has been considered, and has been discussed in the *2020 Plan*, the *2020 Plan EIS*, and the *Modernization Plan*. However, while an excellent long-term option, this action is not a realistic alternative. The Proposed Action would still be required, as it responds to an immediate need exaggerated by the earthquake and the closure of Pier 1. The time required to get the Pier 3 option designed, documented, funded, and constructed would not meet the Purpose and Need within a reasonable amount of time. The construction of a new Pier 3 Interisland Cargo Terminal is not of the same order of magnitude as the current Proposed Action, and would not replace it, as these improvements (at least the demolition of the damaged OTS and 0.7 acre repaving) would still be needed to accommodate cargo traffic until the new facility was available. This alternative would be an order-of-magnitude more expensive than the existing proposal.

Provide paving improvements only: This alternative would provide for construction of the paving improvements in the 3.1 acre area only, with no demolition of the Overseas Transit Shed or relocation of associated utilities. This alternative appears appropriate from the consideration of time, budget, and environmental impacts, but would eliminate the most important and immediate element of the Purpose and Need: to remove the earthquake-damaged OTS impeding efficient use of the Pier 2A area. Therefore, this option was not carried forward in the analysis.

Reconstruction of Pier 1 and using this area for some cargo operations. The rehabilitation of Pier 1 is ongoing as this EA is being prepared and this was discussed as a possible option. Pier 1 was originally constructed in 1956, and designed for small craft and cattle ships. It cannot handle the weight or volume of modern container cargo operations, but is still useful for lighter commercial use, such as liquid and dry bulk operations, which are pumped instead of hauled by heavy container-handling lift trucks. Pier 1 still has underground lines to allow dry bulk cement to be pumped to silos, one of its primary uses. Substantial expansion of Pier 1 use is also problematic due to occasionally heavy wave action at that location.

2.2.4 No Action

Under the No Action Alternative, no action would be taken, and the harbor would remain as-is. This would have a substantial and increasing adverse impact on interisland and overseas cargo operations, with possible spill-over impacts on other harbor operations, including but not limited to potential substantial adverse impacts on overseas cargo operations, commercial boating, military training and operations, possible future interisland ferry or cruise ship options, the economic growth in the West Hawai‘i economy, the reliability of the supply of essential goods to the island in the event of a natural disaster (such as an earthquake, tsunami, eruption, or other event which could put Hilo harbor out of commission)

The No Action Alternative cannot satisfy the purpose and need for the project, and was carried through in the analysis only as a benchmark against which the environmental effects of the Proposed Action could be compared.

2.3 Environmental Consequences of the Proposed Action and Alternatives

Table 2 summarizes the environmental consequences of the Proposed Action, the Reasonable Alternative, and the No Action Alternative, as discussed in Chapter 4, Environmental Consequences. Table 2 also summarizes the mitigation measures for the Proposed Action.

Table 2:
Summary of Environmental Consequences of the Proposed Action and Alternatives

Resource Area	Proposed Action (OTS Demolition / Repaving & Paving 3.1 acre Baseyard)	Reasonable Alternative (OTS Demo, Hardening & Repaving 0.7 acre only)	No Action
Cultural resources	No impact.	No impact.	No impact.
Water quality	No impact. No in- or on-water work. Waters will be protected from construction impacts by requiring all construction activities to comply with Best Management Practices.	Same as Proposed Action.	No impact.
Marine biological resources/ Essential Fish Habitat	No impact. No adverse affect on threatened or endangered species, essential fish habitat or coral reefs.	Same as Proposed Action.	No impact.
Land use compatibility	No impact.	No impact.	No impact.
Socio-economic factors	Construction period employment benefits. Major long-term benefit to Hawai'i-island consumers and businesses, especially businesses with high-volume shipping requirements. Beneficial to statewide economy. Improved ability to buffer impacts of natural disaster. Small benefit to national defense.	Lesser short-term employment benefit. Lesser long-term benefit to businesses and consumers. Substantially lesser benefit to development and economic growth of new West Hawai'i businesses needing high-volume shipping services.	Adverse impact on Hawai'i-island businesses, especially those needing high-volume shipping services. Fails to improve lifeline disaster readiness capacity.
Soils, topography, groundwater, air quality, noise, utilities, storm drainage, traffic, hazardous and regulated materials, flood hazard	No significant adverse impacts. Minor, short-term noise and air quality (dust) impacts during construction; mitigated by BMPs. Long-term air quality improvement, no detrimental long-term impacts. Increased runoff from 3.1-acre area due to increase in new impermeable paved area. Hazardous or regulated materials would be managed in accordance with applicable State and Federal regulations.	Same as the Proposed Action, except lesser short-term air quality impacts from construction activities and greater adverse long-term air quality impacts due to fugitive dust created by vehicle movement across 3.1 acre area (to remain unpaved). Lesser long-term runoff than the Proposed Action without installation of new impermeable pavement.	No impact to most resource areas, except No Action will result in considerably greater adverse long-term air quality impacts due to increasing use of unpaved 3.1-acre baseyard area.
Endangered species	No effect likely to 2 ESA-regulated threatened or endangered species. Remote possibility of effect to be mitigated by custom light shielding and limiting light levels and hours of use, where allowable under worker safety and security requirements.	Slightly lesser impact than the Proposed Action due to non-installation of additional light poles in 3.1 acre area.	No impact.

3.0 PHYSICAL ENVIRONMENT AND IMPACT ASSESSMENT

This chapter describes the environmental setting and baseline conditions for the environmental resources within the area of the Proposed Action, and describes the consequences of the Proposed Action and Reasonable Alternative, and proposed mitigation measures, if needed. Reasonable Alternative conditions are equivalent unless noted.

3.1 Overview

Location, Area, Ownership: Kawaihae Harbor is located in the South Kohala District on the northwest coast of the Island of Hawai'i, about 35 miles north of Kailua – Kona. The main (street) entry is roughly 6,500 feet northwest of the juncture of Queen Kaahumanu Highway (Rt. 19) with Kawaihae Road, which continues to the right toward Waimea as Rt. 19 and straight to Kawaihae Harbor as Rt. 270.[5] The harbor property runs from the north side of Pelekane Bay at the south, to the Kawaihae Small Boat Harbor (North) at the northern end, just past the fork where Kawaihae Harbor Road begins on the left and Akoni Pule Hwy (Rt. 270) begins at the right (*mauka* / northeast) fork. The harbor occupies roughly 113 acres of fast land[6] owned by the State of Hawai'i. Harbors Division Property Management records indicate portions of Kawaihae Harbor are located on ceded lands,[7] including former Crown and Government lands and submerged lands (which are also considered part of the ceded lands trust). The two Kawaihae Small Boat Harbors (North and South) are also State-owned, but under DLNR Division of Boating and Ocean Recreation (DoBOR) control.

The Proposed Action affects two areas totaling 3.8 acres of that area, located at 20°02'10" N, 155°49'42" W, and lying just inland (*mauka*) of Pier 2 within the industrial area which supports container handling for the commercial deep-draft harbor. The location and affected areas are shown on Figures 1 and 2.

TMK and Current Use of Affected Parcels: The two baseyard areas affected by the Proposed Action fall within Tax Map Key (TMK) 3rd Division 6-1-03 (Fig. 3) and affect parcels 23 (portion) and 36 (portion), as well as parcels 52 and 64 (which are temporary space allocations for tenant equipment storage enclosed within the two main TMK parcels[8]). The Reasonable Alternative affects only parcels 36 and 52.

---

[5] Kawaihae Road ends at the fork in the road between the tank farm and the Kawaihae Small Boat Harbor (North), Akoni Pule Hwy (Rt. 270) begins at the right (*mauka*) fork and Kawaihae Harbor Road (previously Kawaihae Wharf Approach Road, as shown on TMK maps) begins on the left. This is shown incorrectly on numerous maps.

[6] Per *Hawai'i Commercial Harbors 2020 Master Plan EIS* (2001).

[7] Section 5 of the Admission Act (Public Law 86-3, signed in 1959, admitting Hawai'i as the fiftieth state of the Union) transferred title to ceded lands the State, to be held as a public trust for purposes identified in 5(f), including public improvements, which is consistent with the current use of, and proposed improvements to the harbor.

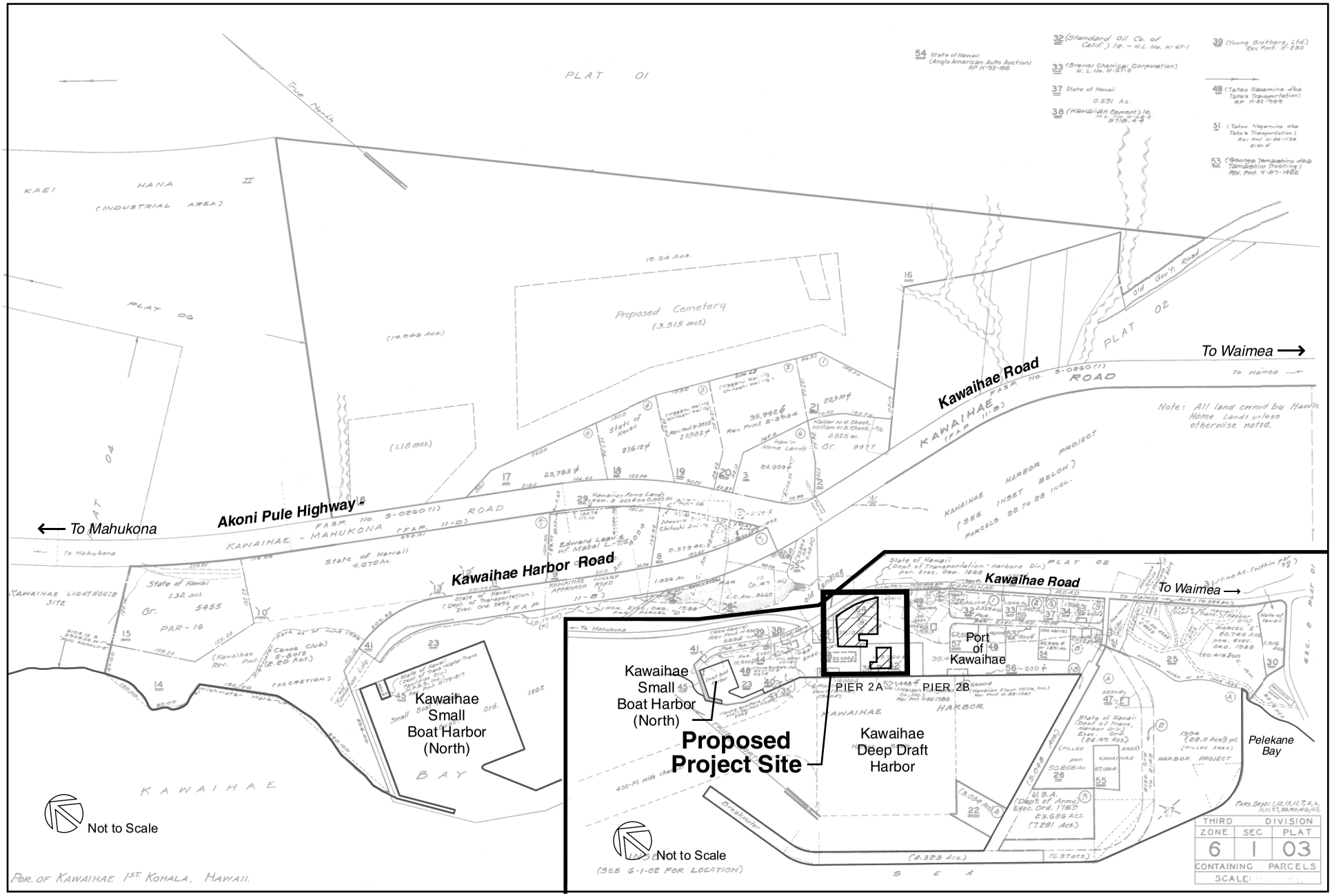
[8] Parcel 23 is the major parcel for the site. Parcels 52 (448 sf, 0.0103 ac) and 64 (720 sf, 0.0165 ac) are bookkeeping provisions to track lease rent and taxes for parcels used by Matson Navigation and West Hawai'i Concrete, respectively. Parcels 23 (1,543,854 sf, 35.442 ac) and 36 (143,764 sf, 3.3004 ac) are the parcels primarily affected by this action.

OTS Pier-Side Area (0.7 acres): Both the Proposed Action and Reasonable Alternative include removal of the OTS and removal and replacement of the former floor area and surrounding pavement with new PCC pavement to provide a smooth transition "apron" to the container staging / storage area immediately inland. These actions would take place entirely within the boundaries of parcel 36, but affect enclosed parcel 52 (no longer in use by the lessee, Matson Navigation). This area currently has both asphalt and concrete paving. The OTS is largely empty, but has portable offices and a few vehicles parked inside. Earthquake-damage gaps have been patched, but these are not structural repairs. Once the OTS is removed and the area repaired, the entire Pier 2A area can be used for cargo movement (which is currently restricted to the northern or southern ends of Pier 2A). This area will be improved by either the Proposed Action or the Reasonable Alternative.

Baseyard Area (3.1 acres): The follow-on paving of the current crushed coral surface of the container chassis storage area, and the installation of lights, will take place on a portion of parcel 23, and will affect a tiny corner of parcel 36, and parcel 64 (which is a 720 sf space inside parcel 23 allocated for a cement hopper actually sited west of parcel 64, but still inside parcel 23). The pavement will extend around three sides of the existing administration building, and roughly to the fence and drainage canal at the highway on the northeast, to Parcel 24 on the northwest, and to the existing paved areas on the southeast and southwest sides.

The current use of the site is primarily for container chassis storage, storage of a West Hawaii Concrete cement hopper and concrete blocks (around the hopper), occasional container-on-chassis parking, concrete pilings (used as barriers), dunnage (packing materials, miscellaneous odds and ends, and contractor leftovers such as 4x4s, rebars, beams, and other materials, most of which are from work conducted on-site. This parcel is also used by Young Brothers for outbound automobiles, roll-on/roll-off (RO/RO) cargo, and livestock staging (horses, and sometimes hogs, goats, sheep and cattle). This area also currently sites a restroom / shower building and old guard shack, and wraps around two sides of the Harbor Agent / Administration building.

Container handler operation is prohibited in this area due to the surface irregularities and fugitive dust problem, so this is not considered a useful container staging / storage area. This area would be paved under the Proposed Action, but would be left as is under the Reasonable Alternative or No Action Alternative.



Tax Map (TMK 3rd Division 6-1-03) **Figure 3**

Surrounding Uses / Areas

Northwest

- Kawaihae Harbor channel entrance through the main breakwater (USACE) and deep-water turning basin / navigational area (waters of the United States)
- Kawaihae Small Boat Harbor (North) at the entry channel
- Pier 1 area, with old buildings & equipment storage for Matson Navigation
- Fuel tank farm and dry bulk concrete silos

North and Northeast

- Drainage canal and fence line (runs around NE, N, and NW perimeter to the sea)
- MidPac (was Tesoro) fuel tank farm, dry bulk (concrete) silos, additional baseyard area
- Kawaihae Road ends at the fork in the road between the tank farm and the Kawaihae Small Boat Harbor (North), Akoni Pule Hwy (Rt. 270) begins at the right (*mauka*) fork and Kawaihae Harbor Road (previously Kawaihae Wharf Approach Road, as shown on TMK maps) begins on the left.
- Commercial properties (shops, restaurants, and businesses), and a few residences

East

- Small commercial parcels, including boat yard facility and possible residence
- Hawaiian Home Lands (mostly undeveloped 10,000 acre property)

South and Southeast

- Entry road, Akana Petroleum tank farm, yard areas rented by A&B and truckers
- U.S. Army Kawaihae Military Reservation (KMR, 23.686 acres, Parcel 22), LST Landing Area – Army owned land includes the breakwater and revetment structures and easements to access and maintain these areas. This area is sometimes used for exercises, including landings of LSTs and other craft.
- Kawaihae Small Boat Harbor (South, 7.75 ac); East & West Breakwaters are USACE
- State DoT / Harbors Parcel 26, 50.8 acre coral flats area for future south expansion
- Existing YMCA Facilities, with building, dock, and equipment enclosure (on DLNR land; may be relocated with Kawaihae Small Boat Harbor (South) development
- Pu‘ukohalā Heiau National Historic Site is a 77-acre park listed on the National and State Register of Historic Places which includes the site of Kamehameha I’s Royal Courtyard at Pelekane Bay and several additional historic sites, including:
    - Pu‘ukoholā Heiau (“Temple on the Hill of the Whale"), a *Luakini heiau*, the most elaborate of Hawaiian temples, where human sacrifices were preformed. Built in 1790 – 1791 by Kamehameha I to incur the favor of the war god Kuka'ilimoku, its completion marked a new era in Hawaiian history. However, the use of heiau ceased with the destruction of the kapu (taboo) system in 1819.
    - Mailekini Heiau / Fort Mailekini (“Many Maile vines”), an ancient heiau that was fortified by John Young, a former British sailor, for King Kamehameha I. Located adjacent to Pu'ukohola Heiau to the east.)
    - Haleo Kapuni Heiau (submerged, “House of Kapuni”), believed to be a shark heiau (where sacrifices were offered) the stones from this older heiau may have been taken and used to build Pu‘ukohalā Heiau
    - John Young House Site (due north of Makeahua Gulch Bridge across highway)
- Samuel M. Spencer Beach Park (County recreational area south of Pelekane Bay)

Southwest

- Pua Ka Ilima ‘O Kawaihae Cultural Surf Park (*makai* of main breakwater base)

West

- Kawaihae Deep-Draft (inner) Harbor and Main Breakwater (USACE)

3.2 Physical / Terrestrial Conditions

Climate

Existing Conditions: The Hawai'i DBED/T 2006 Data Book and the Western Regional Climate Center[9] report monthly temperatures for the coolest month averages 68°F, the warmest month averages 84°F, and the annual average is 75.7°F. The Kawaihae region is arid, with an average annual precipitation just over 9 inches, and 14 drought events are listed as having affected the region between 1981 and 2007[10], with new drought restrictions currently in place in 2008.

The Hawaiian archipelago has recognized two distinct seasons since the time of the early Hawaiians: a warmer (*kau*) summer season characterized by the sun positioned almost directly overhead and a relatively consistent (80-90%) tradewind flow from the northeast from May through September, and a cooler (*ho'oilo*) season from November through March when the sun is lower to the south, and more variable southerly or westerly "*Kona*" winds occur 20 – 50% of the time due to localized low pressure and frontal systems, bringing occasionally extensive rains.

Kawaihae Harbor is on the lee side of the island, and blocked from normal tradewind patterns by the Mauna Kea and Kohala volcanic slopes (and a lesser influence from Hualālai and Mauna Loa slopes), and a temperature inversion which causes winds to go around rather than over these mountains. Winds are highly variable, but predominantly come from the common tradewind pattern from an easterly direction (about 80° on the compass), exceed 13 mph about 35% of the time, and normally remain below 30 mph, and rarely exceed 50 mph. However, winds are also significantly influenced by the heating of the upland area, which produces a pronounced diurnal wind pattern on the Big Island, with afternoon sea breezes coming into shore, opposite the prevailing tradewinds, especially in summer when solar receipts are the strongest. Winds coming off the higher elevations and blowing toward the sea are common in the evening. The combination of these interacting factors, plus the highly unusual wind flow patterns caused by the temperature inversion and the channels in the terrain results in an unusually diverse weather pattern.

The common light and variable winds can also abruptly change to strong, unpredictable, and occasionally violent western winds which are funneled through the saddle between these two mountains and concentrated with significant force ("Waimea winds"). In the area of the Proposed Action, winds strong enough to blow over a 34-foot stack of shipping containers, or containers mounted on a truck chassis have been experienced. The Hawaii Pilots Association warns *"Kawaihae harbor is frequently subject to sudden, strong, gusty winds. ... Violent wind squalls can occur in as little as fifteen minutes, going from calm conditions to 30 knot gusts."* These winds are even stronger offshore and have been known to reach 85 mph in the 'Alenuihaha Channel between Hawai'i and Maui.

[9] DBED/T 2007 State Data Book, reports temperatures from Mahukona, about 11 miles north of the site (1976 data), and precipitation from Pauko, about 4 miles south of the site. Other information in this section from Atlas of Hawai'i, Third Edition (1998) and Western Regional Climate Center's *Climate of Hawai'i* (with average temperatures measured at Pu'ukoholā Heiau) at http://www.wrcc.dri.edu/narratives/HAWAII.htm.

[10] Reported in the *South Kohala Community Development Plan, Kawaihae Plan: Summary Background Data* (January 8, 2008), Table 2.1 Regional Drought Events Since 1981.

During Kona wind periods, southerly and westerly winds may appear for short durations, and may bring overcast skies and Kona storms, but these winds are not channeled through the saddle, and so are normally not associated with damages unless associated with severe Kona storms, which can bring sustained high winds for several days at a time, affecting navigation and creating disruptive wave action.

Hurricanes are rare, but can bring very heavy rains, and high and variable winds of around 75 mph, with 115 mph considered a worst case scenario (USACE 1984). This can easily create and exacerbate dangerous sea and surf conditions.

Impacts: This project will not impact climate, other than a small temperature increase around the paved areas. However, winds present an issue which merit careful consideration. Removal of the OTS will have a beneficial effect by eliminating a structure which is currently prone to damage by heavy winds, and which could be a hazard in a hurricane. Paving of the 3.1 acre baseyard area will reduce air quality impacts of wind-blown fugitive dust. Yard lighting poles will require sufficient subsurface anchoring to prevent them from toppling in an extreme wind event.

Mitigation: OTS demolition removes this potential wind hazard structure. Yard lighting poles will be designed with 15-foot deep reinforced concrete subsurface anchoring to prevent them from toppling in an extreme wind event. No other mitigation required.

Geology, Topography, and Bathymetry

Existing Geologic Conditions: Hawai‘i is the largest (at 4,028 square miles) and youngest island in the Hawaiian Archipelago. The island rises 13,796 feet above MSL at its highest point at the summit of Mauna Kea. The island developed during the Tertiary period as the product of six volcanoes erupting from the ocean’s floor, five of which remain above the surface of the water, and one of which, Mahukona, is now submerged. The five visible volcanoes of the Big Island are:

- Kohala (Kaumu o Kaleihoohie, 5,505 feet, last erupted about 60,000 years ago, now extinct, forming the north tip of the island),
- Mauna Kea (13,796 feet, dormant for 3,600 years),
- Hualālai (8,271 feet), erupted last in 1801 and has been inactive for over 200 years, but could become active within the next 100 years),
- Mauna Loa (13,679 feet, last active in 1984, active 3 times in the last 60 years, and “slipping slowly toward the ocean” on its southeastern flank), and
- Kīlauea (4,093 feet), the most active volcano on earth, and almost continuously active since 1983).[11]

The Kawaihae area was formed in the latter eruptive stages of the Kohala volcano, and the ground also has an ash layer covered with rocks and boulders, probably from a later explosive event from Mauna Kea or Mauna Loa.[12]

[11] A seventh volcano, Lō‘ihi Seamount (3,178 feet below MSL, 15 miles southeast of the island), is expected to emerge as an island in about 250,000 years and coalesce with Hawai‘i. Information drawn from Atlas of Hawai‘i, dates from the National Park Service, Hawai‘i Volcanoes National Park, most elevations from the Hawai‘i County Data Book.

[12] Information from *1992 DHHL Kawaihae Ten Year Master Plan* and the *2008 South Kohala Community Development Plan, Kawaihae Plan* planning documents.

Topography and Bathymetry: Kawaihae Harbor is on the southwestern flank of the Kohala Mountains, and is characterized by low-lying flatlands with a gentle slope to the water, against the saddle of the area where the Mauna Kea volcanic slopes overlap the older Kohala volcanic slopes. The harbor site is generally flat. A large coral fringe reef surrounds the harbor area. Much of the coral reef was blasted and dredged between 1957 and 1959 to create the deep-draft harbor and to provide a sufficient turning basin and navigation space for the passage of large ships. The original ocean floor was primarily coralline reef rock, interspersed with scattered sand pockets and coral heads. The current bottom material is a mix of coral rubble, silty sand, coralline gravel, and remaining coralline rock. The harbor area was then extensively filled, recontoured, and leveled using the dense crushed coral dredge material on top of lagoonal deposits of silty sands and soft clayey deposits, coralline detritus deposits, and weathered basalt at greater depths (at around 47 feet). The fill material was used to more than triple the available land area and to provide straight-and-level piers and backland areas for cargo movement and storage. Currently, most of the harbor shoreline area is hardened with piers or revetments and the harbor has 4 breakwaters of various sizes to moderate the wave action inside the harbor and against the shoreline.

Roughly half of the 3.1 acre area, all of the OTS site and pier area, and virtually all of the crushed coral flats at the south end of the harbor are new, reclaimed submerged lands (below the water level of the former shoreline) as shown in the overlay photo below.

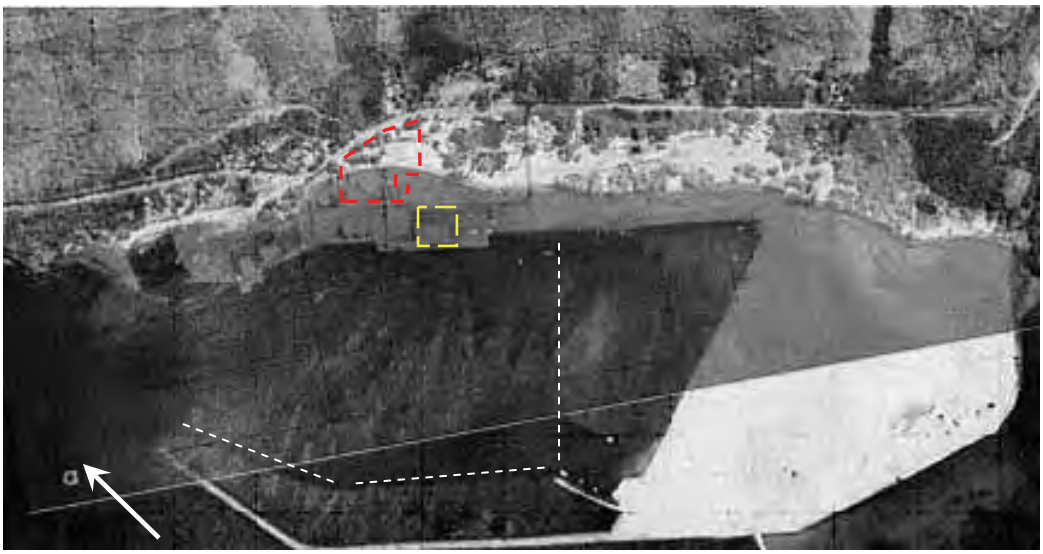


Photo 1: Overlay of early 1950s photo over early 1970s photo[13] showing new land area created by fill. Gray image along shoreline shows added land, including north Small Boat Harbor, Pier 1, shorter Pier 2, and south coral flats. (Note the as-yet incomplete fill area at the southeast end of the inner harbor.) Additional filling took place to alter the contour of the inner harbor after this photo, and Pier 2A was later extended to the south as Pier 2B. Visible coral in the center of the harbor is only on the 1950's photo (the overlay ends at the diagonal line dark to light transition), and all interior coral has been removed by the time of the 1970s photo (removed between the dashed lines and the shore). Project areas outlined in red (3.1 acre area) and yellow (OTS site) are approximate.

[13] Partial overlay of pre- and post-harbor filling by R.M. Towill Corporation, published in Kelly (1974) and found at: http://www.pacificworlds.com/kawaihae/memories/memory5.cfm.

Prior fastland areas range from about 30% of the northeast corner of the 3.1 acre area to more than 50% at the southeast, but appear to total less than 40% of this area. The addition of 8 – 15 feet of fill material over the entire original ground surface, as confirmed by site borings, elevated this portion of former fastland area (including Kawaihae Road). Boring data allows a reasonably precise determination of original ground topography and surface depths, and virtually assuring no native soil would be encountered within 8 feet of the ground surface level. (See Appendix C, Subsurface Conditions.)

Site Elevations: The area of the Proposed Action and the Reasonable Alternative are both characterized by a relatively flat topography created by the grading and compacting of fill material over time. The elevation of the area of the Proposed Action is 8.2 to 15 feet above Mean Lower Low Water (MLLW).[14] (This is equivalent to 9.1 to 15.9 feet MSL, a difference of +0.9 feet. MLLW is used on the 1999 and 2008 topographic surveys and boring logs, although 9 years of use has resulted in some compacting and settling of the site between the surveys.)

The 3.1 acre area site (Proposed Action only) slopes from a high elevation of 15 feet MLLW near the administration building to about 10.5 feet MLLW at the southwestern edge where it will join the existing pavement. This area has a slight crown to drain away from the central areas, and most of the site falls between 13 feet and 14.5 feet MLLW. There is a pronounced slope toward the sea at the southwest boundary, in the area of the parking lot for the administration building. At the northeast boundary, along the fence line paralleling the highway, the elevation averages just under 13 feet, and then slopes down to the rip-rap embankment of the drainage canal at about 10 feet MLLW. The drainage canal floor is about 3 feet MLLW, sloping gently toward the sea.

The high end of the 0.7 acre area (included in both the Proposed Action and Reasonable Alternative) where the new paved apron will connect to the existing paved area is about 10.2 feet MLLW and slopes to 8.6 feet MLLW at the OTS north pavement border to 8.2 feet MLLW at the *makai* (seaward) edge of the OTS. These exterior pavement elevations are up to 0.18 feet lower than the prior survey due to earthquake settlement, but the interior floor of the OTS settled roughly 4 – 8 inches below the surrounding pavement elevation, damaging the floor, foundation, and walls. This foundation and paving will be removed, brought to grade, and replaced with new paving following demolition. The gentle slope toward the water terminates at the toe of the pier at just under 8 feet MLLW to allow water to flow away from the OTS.

Harbor Depth: Most of harbor turning basin (i.e., the dredged maneuver area) was dredged to a minimum depth of 37.4 feet below MLLW during construction, but wave action, the earthquake, and reduced harbor circulation has reduced the draft in many areas, especially along the piers closest to the harbor entry. The maximum allowable draft for the 1,150-foot long Pier 2 is 33 feet. Responsibility for the harbor sea floor, turning basin, breakwaters, and revetments, rests with the U.S. Army Corps of Engineers.

Impacts: This project will not impact geology, topography, bathymetry, or harbor depth, nor will they create special concerns in design. Site elevations will be slightly altered to

[14] MLLW is an elevation baseline which is the lowest average low water height, which is approximately 0.91 feet below mean sea level (MSL) at Kawaihae Harbor, so all elevations below (or on the topographic site maps or boring logs) can be converted to MSL by adding 0.91 feet to the elevation. MLLW is used here for consistency with these supporting materials.

control rainwater runoff and to provide a gentle grade for the movement of heavy container cargo.

Mitigation: No mitigation is required.

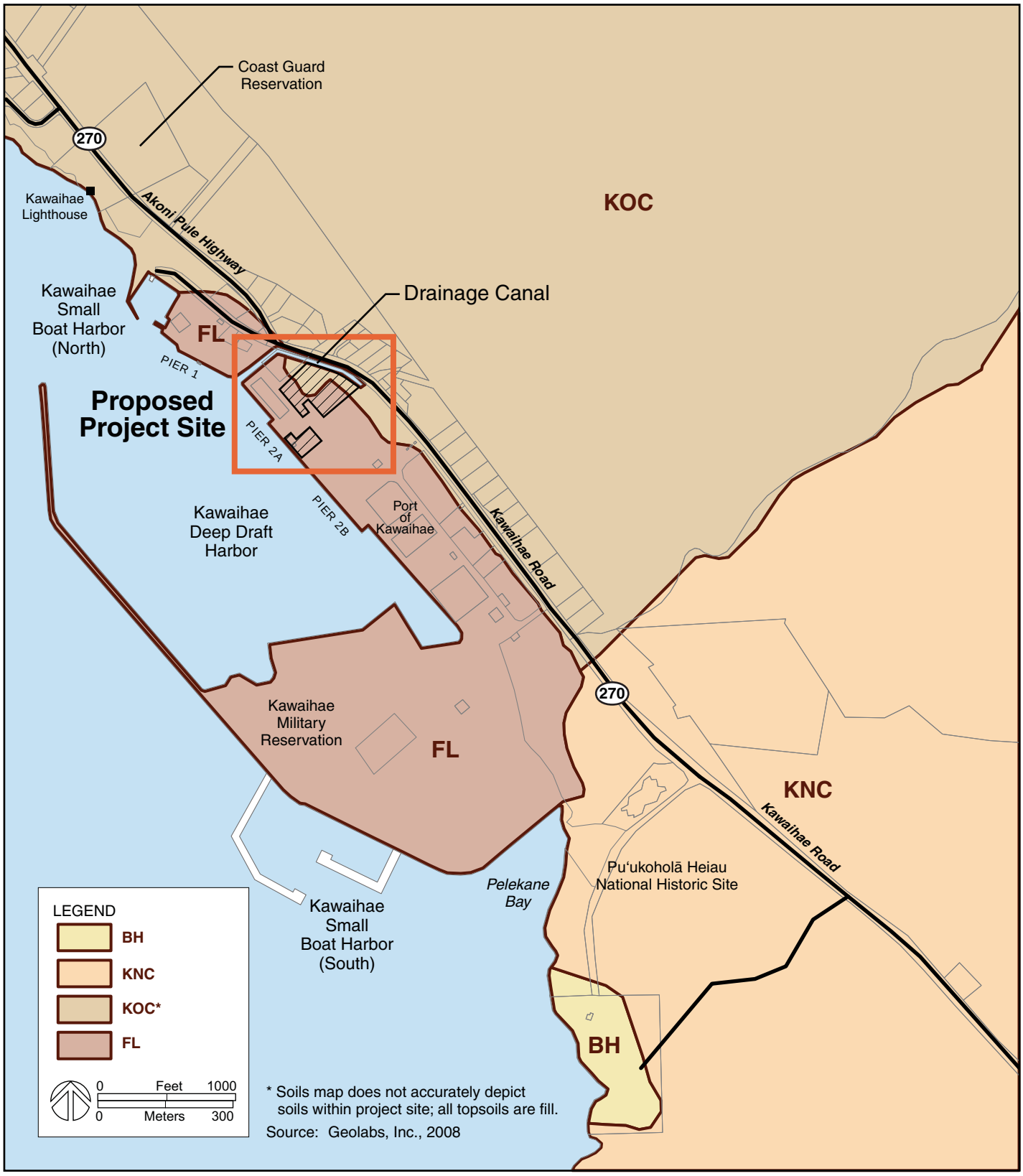
Soils

Existing Conditions: The site of the Proposed Action and Reasonable Alternative is crushed coral fill material removed from the harbor during dredging. The USDA Natural Resources Conservation Service (NRCS) Soil Map (Fig. 4) shows two types of soil in the project area, although the description is not appropriate to the coral spoil material from harbor dredging and used for the fill. The identified soil types and characteristics are:

> **Fill Land (FL)** – exists under the entire project site, including all of the previously submerged 0.7 acre area under the OTS and connecting apron area (which was previously 10 to 13 feet underwater. Fill Land also underlies the 3.1 acre truck chassis / baseyard area to a depth of roughly 8 to 13 feet, including the entire surface layer. The boring logs confirm soils and fill and transition layer depths at a number of representative locations. The USDA NRCS describes Fill Land as typically "...well drained ... permeability is moderate, runoff is medium, and the erosion hazard is slight." This fill material has been reasonably stable since the late 1950s – more than 50 years – but several sinkholes developed as a result of settlement induced by the 6.7 magnitude earthquake. This material would provide good subgrade support for asphaltic concrete and reinforced concrete pavements. Additional fill material is stockpiled for future use in the south coral flats area.
>
> **Kawaihae very rocky very fine sandy loam (KOC)**, 6 to 12 percent slopes – are indicated on the north-central and northeastern border of the 3.1 acre unpaved baseyard area. The Kawaihae series is described as "... somewhat excessively drained extremely stony soils that formed in volcanic ash. These soils have a very thin surface layer of fine sandy loam over silt loam and loam. They are gently sloping to moderately sloping soils on coastal plains at an elevation ranging from near sea level to 1,500 feet. This soil is similar to Kawaihae extremely stony very fine sandy loam, 6 to 12 percent slopes, except that rock outcrops occupy 10 to 20 percent of the surface. Permeability is moderate, runoff is medium, and the erosion hazard is moderate. Although not indicated on Soils Map, which shows the original surface soils, this area is covered by about 8 - 13 feet of fill material over the original soils in this area.

Subsurface investigation, including extraction of 16 soil boring cores plus additional bulk samples, were conducted for 3 projects in the vicinity of the Proposed Action between 1998 and 2008. A *Subsurface Conditions Report* summarized these findings:

> Based on the borings drilled, the project site is generally underlain by surface fills extending to depths ranging from about 8 to 18 feet below the existing ground surface. In the 3.1-Acre future Container Yard area, the thickness of the fills ranged from about 8 to 15 feet in the borings drilled. The thickness of the fill materials generally correspond to the original ground surface elevation of about -0.5 to +4.3 feet Mean Lower Low Water (MLLW) at the 3.1-Acre future Container Yard area.
>
> The thickness of the fill materials at the Overseas Terminal Shed (OTS) area generally ranged from about 13 to 18 feet in the borings. The thickness of the fill materials generally



Soils **Figure 4**

correspond to original ground surface elevation of about -9.5 to -3.7 feet MLLW in the OTS area. The approximate shoreline surveyed in 1954 (+1.0 foot MLLW contour) is shown on the Site Plan, Plate 2.

The approximate boring locations are shown on the Site Plan, Plate 1.

Included in the *Subsurface Conditions Report* (attached as Appendix C) is a table summarizing approximate fill thickness and ground elevations, referenced to the boring locations illustrated on the Site Plan, which also illustrates the former shoreline contour.

Impacts: Roughly <40% of the 3.1 acre area on the northeast side is fill material on top of former fastland and beach area. This is the only portion of the project area where original dry land ground soils could be encountered. Only excavation exceeding the fill depth would reach (and therefore impact) original soils, virtually assuring no native ground would be encountered within 8 feet of the ground surface level in the area with the thinnest fills. Boring data further allows determination of original ground surface depths with reasonable precision for areas where subsurface work would be required.

All work on the 0.7 acre area is on fill land reclaimed from the sea; there is no underlying original dry-land area. Demolition of the OTS, relocation of utilities, and repaving is only anticipated to affect fill materials, and only work below sea level could come in contact with original seafloor material. No mitigation is required.

Power line conduits and other utilities trenching would only impact the surface of the fill material. Subsurface excavation (to 15 feet) as required to anchor the light pole pedestal foundations is the only disturbance expected to exceed the depth of the fill layer.

Mitigation: There are no soils-related issues related to the Proposed Action on the site which require mitigation. Issues related to disturbance of the original soils is discussed under the Archeological and Cultural Resources (Section 4.4, especially p. 4-15).

Site drainage impacts and mitigation is discussed under the Stormwater Drainage section beginning on page 3-13.

3.3 Hydrology, Water Quality, and Coastal Resources

Existing Conditions:

Aquifers and Water Service: The project area is on the leeward side of the Kohala range, and is on the extreme southern border of the Mahukona aquifer, unconfined flank-type basal aquifer with an estimated sustainable yield of approximately 17 million gallons per day (mgd).[15] The site is located just north of the north border of the West Mauna Kea / Waimea aquifer, with a sustainable yield of 24 mgd, but receives its domestic water supply from this aquifer.

Groundwater depth was encountered at 5.8 to 12.8 feet below the existing ground surface in multiple soil borings, and was estimated at 5 feet below ground surface in the ESA.[16] These are not sole source aquifers, as there are no sole source aquifers on the

[15] Yield information from DLNR CWRM 2008

[16] Additional information is supplied on page 7 of the Bureau Veritas Pre-final Phase I Environmental Site Assessment (ESA).

Island of Hawai'i. Unlike the older islands, Hawai'i does not have a sedimentary coastal plain or cap-rock, so basal water levels are lower and more likely to suffer from the intrusion of seawater. However, there are no basal groundwater wells of drinking water quality in the Kawaihae area.

Hydrology / Marine Water Quality Inputs: Kawaihae Harbor lies in the very arid leeward side of the island, and receives relatively little rainfall or streamflow. But it is situated at the toe of the saddle between the Kohala and Mauna Kea volcanic slopes, so ground and surface waters form an extensive watershed area which drains toward the sea under heavy rainfall conditions. Makeāhua and Pōhaukole gulches converge and convey stormwater and sediment into the sea at Pelekane Bay, just southeast of the harbor's coral flats. North of the other two gulches, Makahuna gulch contributes stormflow into the southeast interior corner of the commercial harbor, but is blocked and stagnant or dry when no stormflow is available to overtop the concrete road bed at the south end of the coral flats fill area.

The deforestation of the upland areas and the destruction of ground-cover in the early 1800s (stripped bare by sandalwood harvesting and the grazing of introduced cattle and feral pigs and goats) contributed to considerable soil loss and the heavy sedimentation, siltation, and nutrient load deposited to Pelekane Bay. The combination of these elements smothers the coral reef, promotes algal growth, and damages the reef ecosystem which was once abundant with limu (seaweed) and fish inhabiting the once-clear waters (Tissot 1998). The dredging and addition of the harbor peninsula and breakwaters further reduced the natural circulation and sediment flushing of Pelekane Bay. Available studies such as Tissot (1998) indicate decreased diversity in the Pelekane Bay benthic community resulting from these influences. In 2003, the State Department of Health (DoH) found turbidity in the bay to be nearly 18 times the allowable water quality standard, and in 2004 listed the Pelekane Bay Watershed as a Category I high priority watershed in need of restoration.[17]

Marine water quality: The State of Hawai'i Department of Health (DoH) classifies the waters of Kawaihae and Pelekane Bay as Class A marine waters (Title 11, Chapter 54, Water Quality Standards, DoH Administrative Rules). Section11-54-03(c)(2) states:

> *It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class. No new sewage discharges will be permitted within embayments. No new industrial discharges shall be permitted within embayments, with the exception of:*
>
> *(B) Storm water discharges associated with industrial activities ....* [defined] *... and*
>
> *(C) Discharges covered by a National Pollutant Discharge Elimination System general permit, approved by the U.S. Environmental Protection Agency and issued by the Department in accordance with 40 C.F.R. Section 122.28 and all applicable requirements specified in chapter 11-55, titled "Water Pollution Control."*

[17] Pelekane Bay Watershed Sediment Runoff Analysis, 2007, as cited in the South Kohala Community Development Plan, July 11, 2008 pre-final version, p. 33.

Kawaihae Harbor / Pelekane Bay is currently listed on the State's Final 2004 List of Impaired Waters in Hawai'i, prepared under the Clean Water Act as a §303(d) Listed Watershed, which identifies "*waters which will not attain applicable water quality standards with technology-based controls alone (e.g., water quality limited).*" Primary pollutants identified by DoH were turbidity at Kawaihae Harbor / Pelekane Bay. (No Enterococci density was measured at Kawaihae, but at Spencer Beach Park (about 1.1 miles south), it was about 1/3 the geometric mean standard of 7 per 100 ml for 2007.)

Impacts: None of the work associated with the Proposed Action or Reasonable Alternative will contribute to water quality impacts to the underlying aquifer or to marine water quality. Impacts to the marine water quality environment in the region have resulted from a mix of historical deforestation, natural disasters (tsunami, storm events, and water heating resulting from lava flows), and the later harbor construction blocking the natural flushing of the bay. However, neither the Proposed Action or Reasonable Alternative will contribute to any further degradation of marine water quality.

Mitigation: This project will have no impacts, and no mitigation is required.

Stormwater Drainage

Existing Conditions: Currently, stormflow around the perimeter of the project area is channelized by a 7-foot deep drainage canal which was constructed to surround the inland side of the commercial harbor property to intercept and convey high volume flash flood or stormwater runoff to the sea, so no off-site (upland or highway) stormwater flows are likely to pass across the container yard areas, including the area for the Proposed Action and Reasonable Alternative.

Existing site drainage for the 0.7 acre OTS area and apron surface flows towards the existing trench drains and drain box adjoining the OTS apron for roughly 77% of the site on the northeastern (*mauka*) side, and the other 23% on the southwestern (*makai*) surface flows across the pier to the Pacific Ocean at the inner harbor.

The 3.1-acre baseyard would have minimal runoff during most rainfall events due to the permeability of the crushed coral fill material; it would simply seep into the surface and slightly elevate the subsurface groundwater level. However, during rainfall events of extreme intensity (i.e., sufficient to completely saturate the surface material), additional stormwater on the northeastern (*mauka*) side would run off to the existing large rip-rap lined storm drainage canal (about 2/3^{rds} of the volume), and the remaining area on the southwestern (*makai*) side would surface flow across the remaining area to the ocean.

Construction-Period Water Quality Impacts: No construction-related water quality impacts are anticipated for the Proposed Action or Reasonable Alternative. The harbor land to be used for this project adjoins the Waters of the United States (Water), but no in- or on-water work is proposed. Unexpected rainfall during construction would normally not present an erosion issue due to the existing high percolation rate of the existing crushed coral fill material. There are no perennial streams, ponds, lakes, or wetlands within the area of, or capable of receiving downstream runoff, or otherwise being affected or influenced by the Proposed Action or Reasonable Alternative. Waste, dust, and debris will be strictly controlled, and no construction or demolition material will be washed down to, or otherwise allowed to enter the Water. No dredge or fill activities are included in any action. Therefore, neither a State of Hawai'i Department of Health

Section (DoH) 401 permit nor a Department of the Army Section 404 permit would be required. However, because the construction area for the Proposed Action exceeds one acre, a National Pollution Discharge Elimination System (NPDES) permit for Discharge of Stormwater Associated with Construction Activities (NOI-C) from the Hawai'i DoH will be required. Additional NPDES permits for potential impacts from chlorination of water lines or construction dewatering will not be required, as waste water from these activities will be pumped to a tanker truck and disposed of in an approved manner, consistent with applicable State and Federal regulations, and no wastewater from these actions will be allowed to enter the Water. No permits would be required for the Reasonable Alternative or No Action Alternative.

Post-Construction Stormwater Impacts: The 0.7 acre area occupied by the OTS and the connecting apron (included in both the Proposed Action and Reasonable Alternative) are existing hardened areas which involve no increase in impermeable area and will not contribute additional stormwater runoff after construction. Upon completion, this area will have finish elevations of 7.9 feet to 10.2 feet MLLW (8.8 feet to 11.1 feet MSL), with the high points at the pavement transition (Appendix B, Sheet C-2). Drainage flows, volumes, velocities, and reception will be roughly comparable to the existing situation, therefore, no new drainage structures are necessary. Following the Department of Public Works (DPW), County of Hawaii, Storm Drainage Standard (October 1970), the 0.7-acre area in a 50-year event (i.e., rainfall intensity of 1.5 inches per hour for one-hour and a 5 minute rainfall intensity of 4 inches per hour), an on-site stormwater-generated flow rate of 2.52 cubic feet per second (cfs) are anticipated. Approximately 77% of the total flow rate (1.9 cfs) will surface flow towards the existing trench drains and drain box adjoining the OTS apron. The other 23% (0.6 cfs) would surface flow into the Pacific Ocean at the inner harbor. These flows are the same as the No Action Alternative.

Under the Proposed Action (only), paving the 3.1 acre baseyard area would increase the impermeable area by 3.1 acres and will contribute additional stormwater runoff once this area is hardened. Finish elevations would be roughly comparable to the existing site, varying from roughly 10.5 feet to 15 feet MLLW (11.4 to 15.9 feet MSL). Following the above-cited DPW standard and rainfall event, the overall flow rate of this area is calculated at 11.2 cfs. Six (6) drywells, each at an 8-foot diameter and 7.5-foot depth, and each capable of handling 2 cfs, will be constructed to handle on-site drainage. The northeastern (*mauka*) side of the site would surface flow toward the existing storm drainage canal where three (3) drywells will be located. The *makai* (western) 20% of the site would surface flow across the yard on a 2% slope toward the ocean, where two (2) additional drywells are located. The remaining 10% of the site would surface flow southerly on a 2% slope toward a shallow dry well. These flows would not occur under the Reasonable Alternative or No Action.

Mitigation: No mitigation is required for operational period stormwater runoff. No Action would have no impact. For all construction activities with a potential for stormwater runoff from the construction site, contractors would be required to implement appropriate construction Best Management Practices (BMPs) to prevent potential stormwater soil erosion from unexpected storm events. Any potential runoff would be intercepted, collected, and either absorbed on site, or filtered or treated as appropriate, consistent with State and Federal regulations. BMPs will be documented in the construction documents, including (but not limited to) the following:

- Water runoff: Geotextile silt screens anchored with absorbent sausages will be installed around the immediate work area to capture any potential water-borne sediment.
- Drain Inlets: All drywells and drain trenches will be lined with Geotextile fabric.
- Truck Wash Down Area: A plastic sheet lined and bermed wash down area will be constructed for truck washdown.

3.4 Air Quality

Ambient air quality refers to the cleanliness or purity of the background outdoor air quality, as regulated under the Clean Air Act (CAA). The State of Hawai'i is considered an attainment area under the CAA, where pollutant levels are considered to meet United States National Ambient Air Quality Standards (AAQS), as established by the U.S. Environmental Protection Agency (EPA) and codified under Title 40 of the Code of Federal Regulations Part 50. Air quality criteria pollutant levels are established for carbon monoxide, lead, nitrogen dioxide, sulfur dioxide, ozone and particulate matter less than or equal to 10 micrometers (PM_{10}). State of Hawai'i Ambient Air Quality Standards are more stringent than Federal standards for carbon monoxide and nitrogen dioxide, and include an additional standard for hydrogen sulfide.

Existing Conditions (General): The State of Hawai'i has some of the best air quality in the nation, and is commonly significantly better than required under State and Federal ambient air quality standards. However, natural causes, specifically volcanic gases emitted during eruptions from the Kilauea Volcano, commonly cause air quality standards to be exceeded in areas downwind of the volcanic activity. Unfortunately, none of the five air quality monitoring stations on the Island of Hawai'i is in the Kawaihae area; the closest station is roughly 35 miles south-southeast in Kona, which is far closer to Kilauea, the major source of air pollution on the island. Depending on local wind conditions, air quality can be significantly compromised by the continuous volcanic gas emissions from Kilauea, which contain over 1,000 tons of sulfur dioxide gas per day – an output which has persisted since 1986. These emissions can exceed 2,000 tons per day during periods of sustained eruption (USGS 2000, *et al.*).

The combination of strong sunlight and moist air promote oxidation and hydration of sulfur dioxide to a sulfuric acid aerosol. This is partially neutralized to ammonium sulfate. The combination of these volcanic vapors (locally referred to as "vog", or volcanic fog) can produce health impacts (burning or itchy eyes, breathing discomfort, headaches, or respiratory distress by aggravating asthma or other pre-existing conditions) and corrosive acid rain.

Existing Conditions (Project Site): Air quality in the areas of Proposed Action is generally very good, with the notable exception of occasional ambient vog conditions, and occasionally heavy fugitive dust from the movement of harbor equipment traffic across unpaved lots, particularly from the 3.1 acre lot intended for paving under the Proposed Action. The Harbor Manager has indicated that increased container cargo traffic at the harbor has necessitated increased use of unpaved areas in the last 3 years, and has generated complaints by nearby residents and businesses, particularly when winds come from the west and southwest. The harbor-area residential community is small (about 8 houses across from the harbor and 12 – 14 across from the heiau). There

are also concerns with the abrasive effects of the fine coral dust, particularly on mechanical equipment. Particulate Matter (PM_{10} and $PM_{2.5}$) downwind of the site has not been measured, and impacts depend on wind direction and velocity, but is likely to exceed established standards when an unpaved yard is active and winds are blowing toward houses and businesses. There is a general prohibition against the use of this area under these conditions, although stored equipment like container chassis may still have to be moved, and there is increasing pressure to use the area for overflow cargo.

Impacts: Construction period air quality impacts resulting from the Proposed Action are expected to temporarily exacerbate the fugitive dust problem, and will slightly increase the carbon monoxide (CO) emissions due to construction equipment exhaust during the period that the site is graded and light poles and electrical utilities are installed. These affects will be short-term and temporary, and would only blow toward houses and businesses when winds are from the southwest and west. Long term impacts will be a reduction in fugitive dust coming from this site.

Construction period air quality impacts resulting from the Reasonable Alternative (which is limited to 0.7 acre) would also create air quality impacts, but at a substantially lower level and duration than the total 3.8 acres included under the Proposed Action. However, the Reasonable Alternative would not pave the 3.1 acre area which is the primary source of the fugitive dust complaints, so this action would lack the long term beneficial reduction in fugitive dust coming from this area.

Mitigation: The contractor must comply with Hawaii Administrative Rules, (HAR) Title 11, Chapter 60, Air Pollution Control, and would be required to control airborne dust according to the BMPs incorporated into the construction documents, and as appropriate to ambient weather conditions (particularly wind direction and velocity) at the time specific phases of the project are underway. During the most common wind conditions, with gentle trades and off-shore winds, any dust would blow toward the harbor waterfront area and away from homes and businesses. Winds from the southwest and west, and heavy, gusting winds present a greater challenge. Dust mitigative measures would normally include water spraying and Geotextile fabric barriers installed at the harbor fence along the highway to prevent dust from blowing across the road, as appropriate, and could include cessation of grading work for the 3.1 acre area (Proposed Action only) if heavy winds are creating a substantial uncontrolled dust nuisance blowing toward area housing across the highway. For the OTS site, similar measures will be used to avoid airborne release of particulate matter from lead-based paint and control collection of paint chips during demolition, including dust barriers and a light mist of fresh water to dampen the building during demolition, as appropriate. (As noted under §3.8, there is no asbestos issue at this site.) Wet cutting or dust capture attachments will be required for cutting of concrete and pavement. All paint chips will be collected in plastic sheeting and then vacuumed into proper containers for testing and disposal in a manner consistent with applicable State and Federal regulations, Water misting will also be used during excavation of the existing concrete and AC. Geotextile fabric anchored at the edges will be used to cover all stockpiles. Neither alternative would cause National / State Ambient Air Quality Standards (AAQS) to be exceeded or be subject to Prevention of Significant Deterioration / New Source Review Regulations, or New Source Performance Standards.

CO emissions will be minor and temporary, and will not exceed State or National AAQS at the highway, and no mitigation is required. Long-term air quality impacts will be

beneficial, and do not require mitigation. No Action requires no mitigation, but would not provide the long-term air quality improvements of the Proposed Action.

3.5 Noise

Existing Conditions: Ambient noise levels in the vicinity of Kawaihae Harbor are generally low to moderate, despite its status as a working commercial harbor and industrial waterfront area. The most significant contributions come from the frequent movement of cargo containers onto and off the site by diesel-powered "semi" tractor-trailer trucks which constantly haul shipped cargo / material on and off the site, and by noise created by the loading and unloading of barges by Young Brothers and Matson Navigation when the port is active. Other existing noise sources associated with industrial waterfront operations, including heavy and light equipment, machinery, and ongoing construction or maintenance operations are sometimes evident at the harbor. Most of these are minor, sporadic, and of short-duration. Other contributions include the operation of motorized personal watercraft, highway traffic on Kawaihae Road, and natural sources such as wind and surf.

Construction Period Impacts: Construction period activities are expected to create short-term noise impacts. Typical and expected construction equipment would include jackhammers (to remove old paving in the more distant OTS area only), Caterpillar-type tractors with demolition jaws, a cold planer for AC scarifying (both in the OTS area), a vibro-hammer for driving the drilled shaft casing[18] for light pole foundations, backhoes for digging and trenching, front loaders, concrete mixing trucks, trucks to haul waste and materials and the drilling of foundations for light poles. Typical noise levels generated by this equipment will range from 80-110 decibels (dBA). Most noise will be short-term and minor, will only infrequently exceed the noise levels of existing operations, and will be attenuated by distance to levels far below nuisance or disturbance levels before reaching noise-sensitive receptors. No blasting is expected or proposed for the Proposed Action or Reasonable Alternative.

Greater noise would be generated at the 0.7 acre site where old pavement and concrete is expected to be removed with jackhammers, saws, and backhoes. The nearest off-site noise receptors are across the highway and include a boat yard, shop, and several residences. These closest receptors are over 600 feet from the area where the OTS will be demolished, utilities relocated, and pavement apron improved for either the Proposed Action or the Reasonable Alternative. A 600-foot separation would result in a 56 dBA noise attenuation, so even the loudest noises should not exceed 64 dBA off the property, which would be below nuisance and regulatory 70 dBA for construction noise levels.

Work on the 3.1 acre lot involves grading, compacting the subbase material, drilling to set light pole foundations, and trenching to install power lines, and paving. These activities are expected to produce less noise then the demolition on the 0.7 acre site, but lack the same noise-attenuating separation distance (especially along the highway) and could produce occasional short-term noise at nuisance levels at the site boundary, but

[18] The vibro-hammer is a "vibratory pile driver" which uses a high frequency (1,750 Hertz) up-and-down vibrations to push through soils at far lower noise (and seismic) levels than conventional pile drivers. The 5-foott diameter casing will be capped and the vibratory driver pushes the casing to a 15-feet depth in 15 – 30 minutes. Soil is then removed from inside the casing with a drill bucket auger sized to the 5-feet diameter of the hole. One hole is required at the 0.7 acre site, and 8 to 24 will be required at the 3.1 acre site, depending on the final lighting plan.

this will be for short periods only. The closest receptors are over 100 feet from the closest point on the 3.1 acre baseyard, and the vibro-hammers and trenching and loading (at about 100 dBA) would have a separation of about 90 and 180 feet, which would result in a 30 and 40 dBA noise attenuation, respectively, so off-site noise levels could spike to about 80 dBA if 110 dBA equipment is used at the site boundary, but are not expected to exceed this level for any activity.

Additional receptors are located considerably more distant to the north at a small commercial center with shops and restaurants. These areas are sufficiently distant (about 900 feet from the OTS and about 350 feet from the closest point on the 3.1 acre lot, for 60+ and 50 dBA attenuation, respectively) and most are air conditioned for temperature control, so noise, while audible, is unlikely to create a significant disruption under any alternative.

Community Noise Standards: Noise levels are regulated under Hawai'i Administrative Rules (HAR) 11-46-4, Community Noise Control, which specifies a maximum permissible sound level for work in an industrial area (Class 3 zoning), which may not exceed 70 dBA for more than ten per cent of the time within any twenty minute period, except as allowed by an approved Permit or Variance, issued by the State DoH Indoor and Radiological Health Branch, Noise Section. A Community Noise Permit is required for construction projects where noise levels exceed the standard. Construction is allowed on weekdays from 7 am to 6 pm, and from 9 am to 6 pm on Saturdays. The use of certain construction and demolition equipment, such as hydraulic hammers and jackhammers, is restricted to the hours of 9 am to 5:30 pm on weekdays. Sound levels exceeding allowable limits and including work on Sundays or holidays or nights requires an approved Community Noise Variance. Emergency repair of public utilities or damages from natural disasters are exempt from this regulation.

Mitigation: Despite the predominantly industrial area and minimal likelihood of significant noise impacts, BMPs would be employed, including requiring proper maintenance and muffling of all internal combustion engine powered equipment to minimize noise to the greatest practical extent. All construction activities will comply with all applicable Federal, State and local noise rules, including HAR 11-46, and work will not extend to late-night hours or early mornings when people would normally be sleeping. The Contractor will obtain a Community Noise Permit from DoH for any construction operations or equipment which emits noise at levels exceeding allowable limits at residential areas, and will take action to minimize disruption to residents and business in the area affected by the noise. A permit is unlikely to be required for work in the 0.7 acre area, but may be required for the later work on the 3.1 acre site. Construction activities are short-term and limited, and no further mitigation of short-term impacts is expected to be required.

Operational period noise impacts would be roughly equivalent to present levels, as the same work will be performed by the same equipment, although a small increase in operational noise may be noted where vehicle movements are closer to the fence line near the highway once the 3.1 acre area is paved. These levels are consistent with working industrial sites and are not expected to be obtrusive off-site. No mitigation is required. The No Action Alternative would have no impacts.

3.6 Natural Hazards

Existing Conditions: Natural hazards on the island of Hawai'i include volcanoes, earthquakes, floods and tsunamis, and hurricanes / strong winds, any of which could affect the project area. (Also presented without discussion is the relative exposure of Hilo Harbor, as Kawaihae Harbor would be indirectly affected by impacts to Hilo which could necessitate a redirection of cargo traffic to Kawaihae Harbor.)

Volcanism and Seismic activity: The island of Hawai'i is still geologically active,[19] and home to five volcanoes, four of which are considered active, and a sixth, Lō'ihi (a seamount south of the island's South Point and submerged) which will eventually emerge and add new land:

- The southernmost volcano, Kilauea, has been in a continuous eruptive cycle since January 1983, and has added 43 square miles and 3.6 billion cubic yards of material to the island on a regular basis since that time. Fortunately, lava flows originate at Kilauea crater and move toward the south, so this does not pose a threat to the project site.
- Mauna Loa is the largest shield volcano in the world, last erupted in 1984, and is believed to be ready for a new eruptive cycle.
- Hualālai last erupted in 1801, but is also likely to enter a new eruptive cycle within this century.

The Kawaihae Harbor project site sits in the saddle area where the Mauna Kea volcano overlaps the shield of the older Kohala volcano, now inactive. It is north of Hualālai and west-northwest of Mauna Kea.

Volcanic Hazard Zone: The United States Geological Survey (USGS) volcanic hazard zone map for Hawai'i Island ranks areas from 1 to 9 based on the probability of coverage by lava flows, with lower numbers indicating historically higher risk. The South Kohala District area north of Kawaihae Road (Rt. 19 toward Waimea), including Kawaihae Harbor is ranked as Zone 9, with the historically lowest risk of lava flow impact (i.e., no lava flows in the last 60,000 years), and is just north of the line of demarcation for zone 8 (lava flows in the last 10,000 years). However, the Hilo District, including Hilo Harbor is ranked as Zone 3, so the most likely impact of volcanic activity on Kawaihae Harbor would be indirect, due to impacts upon Hilo Harbor which could necessitate re-routing of cargo traffic to Kawaihae if Hilo Harbor were closed.

Seismic Hazard Zone: Volcanism is often closely related to seismic activity, and the Big Island is seismically active. Since 1990, there have been 17 earthquakes with magnitudes exceeding 5.0 on and around the Big Island[20], and the entire island of Hawai'i is designated as Seismic Zone 4, the highest possible seismic risk zone on the Uniform Building Code's 0 to 4 seismic zone criteria. As discussed under Earthquake Damage Issues (beginning on page 1-8), Kawaihae Harbor was within 13 miles of the epicenters, and suffered substantial damage from the October 15, 2006 earthquakes and later aftershock.

[19] cf. Geology and Topography on p. 3-5.

[20] Derived from online search of USGS Advanced National Seismic System/CNSS Worldwide Earthquake Catalog, query conducted August 18, 2008. Eight of these 5.0+ events occurred within the last 5 years and 4 within the last 2 years.

Impacts: This project provides beneficial improvements which would reduce the potential impact of future seismic events. Damage to bridges, buildings, piers, water and fuel tanks, water, sewer, and fuel lines, cracks in the ground, pavement, and buildings, ground settlement, landslides, dam breaks, mudflows and tsunami are common results from large seismic events. Future earthquake damage to island infrastructure, including the deep-draft harbors of Kawaihae and Hilo, is highly probable, and any of the above-cited potential problems could result from one or more of these natural hazards. The fill material, placed on top of former mud flat, reef, and beach material, is capable of shifting and settling during earthquakes. In the most recent instance, ground levels in several areas dropped from 4 to 11 inches lower than the piers. Even if damage is relatively limited, the existence of fuel tanks and fuel lines in these areas presents a potential hazard which may necessitate a service disruption to assess for possible damage after an event, to assure port safety.

Mitigation: The Proposed Action will have no affect on volcanism and seismic activity, and no mitigation is therefore required. However, this is a high-vulnerability area. Earthquakes (as well as tsunami, hurricanes, storm surge, and other natural disaster events discussed below) will continue to be a long-term threat to the port, and to the Big Island in general, and prudent planning should consider these impacts in advance.

This suggests that disaster-response planning, and earthquake-response in particular, should be considered as a central element of port planning for Kawaihae Harbor and the Big Island in general. While this would not normally be considered within the scope of normal "mitigation", maintaining port infrastructure in good condition could minimize potential damage, and additional storage space would provide buffer capacity to minimize future disruption. Additional port capacity would be extremely beneficial, and possibly vital, to the life-sustaining relief efforts which are often necessary following a natural disaster. In these occasions, a major sea-lift operation could be required to supply disaster relief, or to handle double the incoming cargo load if Hilo Harbor were to be closed to incoming supplies. Removal of the OTS, and proposed baseyard paving improvements, will substantially improve the disaster-response capacity of the port, and these efficiency and capacity improvements should be implemented as soon as practical.

Tsunami

Existing Conditions: Tsunami events are often linked to earthquakes, either local or remote, and the Big Island is at significant risk due to its high geological activity and the high probability of faulting, volcanism, and landslides. Kawaihae has experienced 5 recorded tsunami from 1896 to the present, and most of Kawaihae village was destroyed by the largest, a 14-foot wave, in 1946.[21] Tsunami risk is ranked as moderately high, a "3" on a 1 to 4 scale, where 4 is the highest. Damaging tsunami strike an average of every 7 years, suggesting the Big Island is statistically overdue for a major tsunami event.

Hilo has experienced more tsunami damage than any other Hawaiian city in recorded history. This city has been struck by 16 tidal waves of 4-foot or greater since 1837, with 9 tsunami with run-ups of 6.6 feet or more in the last 100 years, including a 26-foot

[21] Other Tsunami were 1896 (6'), 1957, 7'), 1960 (4') and 1964 (6'). Information in this section from *Atlas of Natural Hazards in the Hawaiian Coastal Zone*, p. 131, also pp. 132 (Flooding), 133 (High Waves), and 179 (Kawaihae summary).

tsunami in 1946 and a 35-foot tsunami in 1960. This is significant because tsunami damage to Hilo could substantially increase – and possibly double – shipping loads to Kawaihae Harbor, as well as increasing the need for disaster relief supplies, so efficient harbor capacity (including reserve capacity) at Kawaihae could be vital to Hawai'i island resupply in the event of crippling damage to Hilo Harbor.

Impacts: The Proposed Action and Reasonable Alternative both provide beneficial improvements to reduce the vulnerability of the harbor to future tsunami by removal of the OTS, a structurally-compromised building situated in a high-vulnerability area (see Figure 5, Flood Zones, on the following page). The Proposed Action (and to a far lesser degree, the Reasonable Alternative) improve the capacity and efficiency of the port to facilitate disaster relief, at such time as this will be required.

Mitigation: No mitigation is required.

Flooding

Existing Conditions: Flooding from high-rainfall events is a common problem in lower-lying areas with an island topography that channels water from the highlands to the seas. Additional problems are caused in some areas where roads can become flooded, and occasionally impassible, limiting the ability to transport goods around the island. This is less of a problem on the leeward side of the island, which experiences lower rainfall, and in areas with older volcanic soils, such as Kawaihae, but can still be a major problem with Kona storms and flash flooding. At Kawaihae, this problem got markedly worse in the 1800s, as the upland slopes were stripped of most trees, and most of the new shoots and remaining vegetative ground-cover was stripped bare by grazing cattle and goats. The resulting sedimentation did considerable damage to the coral reef ecosystem and washed away much of the fertile downstream soils. Currently, much of the flooding risk in the Kawaihae area is controlled by a large, 7-foot deep drainage canal surrounds the inland side of the project site to convey high volume flash flood or stormwater runoff to the sea. No mitigation or additional site protection is required.

Flood Zones: According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM, Community Panels FM1551660137C and FM1551660139C), roughly 90 percent of the project site is located in Zone X, with the makai (seaward) face of the OTS located adjoining Pier 2A in Zone VE (Fig. 5). Zone VE is defined as a designated flood hazard zone subject to high velocity wave action from storm surge and tsunami inundation. FEMA computes a base flood elevation of 10 feet MSL for this area. However, the OTS and the proposed replacement paved apron area is almost entirely below 10 feet MSL, so this entire 0.7 acre area (included in both the Proposed Action and the Reasonable Alternative) would appropriately be classified as Zone VE. (All piers within the harbor are also classified as Zone X, although are outside the project area.)

The 3.1 acre area (for the Proposed Action only) is entirely above 10 feet MSL and is within Zone X. Zone X is defined as an area of minimal flood hazard or threat of high velocity wave action. Base flood elevations have not been determined for Zone X, which is considered to be outside of the five-hundred-year floodplain.

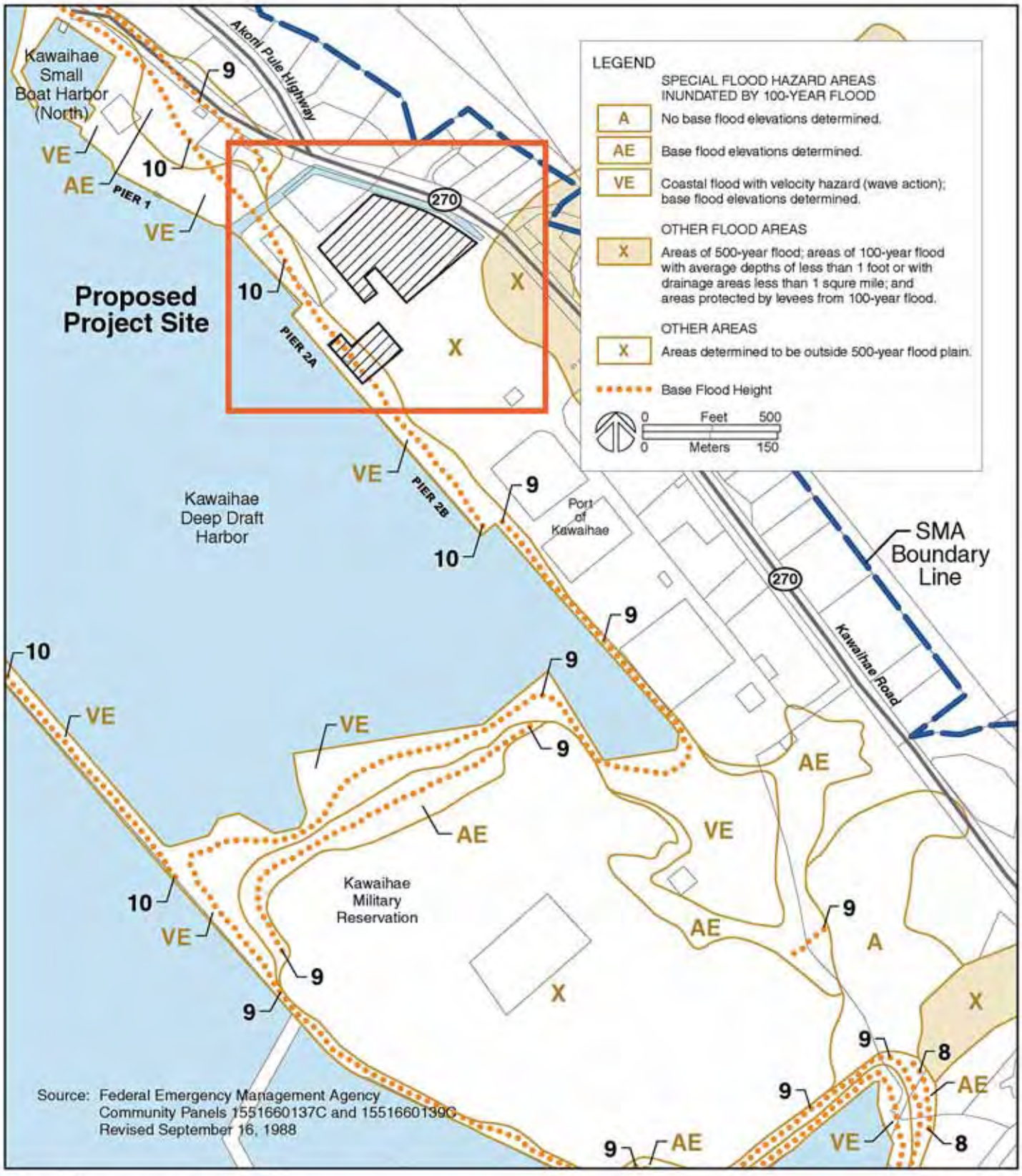
Impacts: The Proposed Action and Reasonable Alternative both propose to remove the actions, including paving and utilities improvements, would have negligible impact to the flood zone and would allow water to flow on and off the site with minimal interference, and minimal opportunity to exacerbate downstream damage from high velocity wave action.

Mitigation: No mitigation is required. Removal of the OTS will eliminate the greatest vulnerability to flood or tsunami damage, and the Proposed Action will improve the response capacity of the port in the event that tsunami disaster relief is required. There is no reasonable alternative to this site.

Hurricane, Tropical Storms, Wind, Storm Surge and Wave Damage: Winds, including storm winds, are discussed in the Climate discussion under Section 3.2 . As noted, Kawaihae Harbor is on the lee side of the island, and blocked from normal tradewind patterns by the mountainous terrain and a temperature inversion which causes winds to go around rather than over these mountains. However, when the influences of wind direction and storm intensity converge, and channel strong winds though the saddle region, they can be focused and considerably intensified, producing localized downdrafts and microbursts which can be unpredictable and hazardous to harbor users. In August 9 – 10, 1982, tropical storm John brought winds of 58 mph at Kawaihae, and this was exceeded 4 months later in December 18 – 19, 1982, with winds of 60 mph. Other high wind events impacted the area in 1985, 1986, 1992, 1993, and 1996.

Storm events can also bring Storm Surge and high wave action with the potential for significant damage to shoreline areas, especially when combined with high winter surf. The majority of the harbor shoreline has been hardened with piers and rubble-mound (stone) revetments, and a large breakwater structure was constructed to moderate wave influence and absorb wave energy. The Pier 2A/2B area, and most of the inner harbor area is generally well-protected. However, when wave sets come in through the channel entry from a north-northwest direction, the combined wind and wave action against the barges moored at piers can be harsh, and it is not uncommon for container cargo barges docked at the pier to shear off their 2-inch diameter steel ramp anchoring pins.

Mitigation: No mitigation is required. Expedient removal of the OTS is required to reduce the potential for primary and secondary damage from tsunami, hurricanes, high wind events, and related extreme sea and weather conditions.



Flood Insurance Rate Map **Figure 5**

3.7 Biological Resources

The project site is a highly disturbed area which has been in continuous Harbors[22] use for the past 50 years, and no new uses are proposed. All exposed surface land is arid and generally barren fill material from the harbor dredging, and the existing surface contours are man-made. There is no undisturbed land, natural areas, or known natural habitat for any known threatened, endangered, proposed, candidate, or rare species. No listed threatened and endangered species, or any faunal species was found to be present within this largely undisturbed, adjacent study area. However, minor resources such as dripping hose bibs may be available for exploitation by opportunistic species.

A biological survey was conducted for the *2002 Master Plan EIS* (RM Towill 2001) on the full harbor area to support the range of master-planned actions. Insofar as the Proposed Action and Reasonable Alternative proposed here are limited to removal of one building and paving over of 3.8 acres of fill land, the discussion here will be specific to those areas, but the 2001 survey is incorporated into this EA by reference as its specifically addresses the full range of harbor development and presents findings that are indicative of what species are present in the vicinity and could transit the site.

Botanical Resources

Surrounding Area (Prior Surveys): Prior work for the 1994 Kawaihae Small Boat Harbor (South) EA and the 1985 EIS found the vegetation in the southern part of the harbor over 2,000 feet (0.4 miles) south of the project area to have a few common native grasses (piligrass and fingergrass), weeds, hardy shrubs such as the haole koa and ilima; and trees such as the kiawe, monkeypod, beach heliotrope, milo, kou, and coconut palms. This information was updated for the *Hawai'i Commercial Harbors 2020 Master Plan EIS (2001),* which included *A Botanical Survey for Kawaihae Harbor*, conducted in October 2000 by Winona Char. Vegetation was broken down into two types: "*ruderal or weedy, wayside vegetation* covering the disturbed portions of the property, and *kiawe forest* occurring on the undisturbed areas." These were characterized as follows:

The heavily disturbed (i.e., reclaimed submerged lands) area is covered by fill and stockpiles of coral material, boulders, soil, and concrete pilings. "Ruderal or weedy, wayside vegetation occurs on the disturbed area" ... "composed of a weedy mixture of species, primarily the introduced buffelgrass and *Atriplex eardleyae* with scattered patches of kiawe." "Much of the site is barren with vegetation cover of 5 to 20% in most places. Closer to the edges of the disturbed area where it adjoins patches of kiawe trees, the weedy cover is 40 to 50%."

In the area generally corresponding to the Pelekane Lands area is a roughly triangular State property (Parcel 25) between the man-made harbor coral fill / stockpile area, the highway on the northeast, and the Pu'ukohalā Heiau NHS on the southeast. This area is relatively undisturbed and supports a small kiawe forest, providing a natural area buffer between the commercial harbor and the NHS and highway. This area has a kiawe tree canopy cover that is closed in most places (i.e., the branches of the trees overlap and

[22] Refers to the current harbor configuration, currently under H-DoT Harbors Division administration, although the original construction occurred under the Territorial Board of Harbor Commissioners. Use of the area as a harbor predates western contact.

cover is 60% or more). Old stumps and cut branches scattered in the area suggest the trees are occasionally cut for firewood. No harbors development is planned for this area.

Existing Conditions (Current Project Site): As indicated, the project area is all fill land which has been built up from crushed coral fill material, with no original ground surface in the first 8 to 13 feet of surface material. The project site is an arid region which gets about 9 inches of annual rainfall, and has a barren appearance, similar to dark beach sand. The area appears to have almost no vegetation, but a few hardy opportunistic species have found damp spots under building eves, in other drainage / runoff areas, or near leaking faucets, where they have established a toehold. Therefore, as part of this project, a Botanical Survey was conducted in September 2008 by Robyn Sweesy to update the prior survey conducted in 2000 by Winona Char.

No threatened and endangered (T&E) species, rare species, or listed species of concern were found in the project areas, consistent with prior surveys. The Hawai'i Biodiversity and Mapping Program (HBMP) database[23] was consulted to review their records to see if any plant or animal species had ever been reported on the site in any historical reports, and the database manager confirmed: "There have been no recordings of rare species within your project site." A map was provided by HBMP to illustrate the locations of all reported T&E or rare species in the vicinity, and contained none in the project area.

Impact and Mitigation: Since there are no threatened, endangered, or rare species in the project areas, the proposed OTS removal and repaving actions would not have an adverse impact on botanical resources, and no mitigation is required.

Avifauna (Birds)

Surrounding Area Vicinity / Prior Surveys: In the *2020 Master Plan EIS* (2001), H-DoT Harbors Division noted that doves and cardinals were observed by Winona Char when conducting the Botanical survey for the commercial harbor area (2000). The older 1985 EIS[24] indicated that birds found in the surrounding area include the Ruddy Turnstone (*Arenaria interpres*), California Plover, Wandering Tattler (*Heteroscelus incanus*), Japanese White-eye (*Zosterops japonicus)*, House Sparrow (*Passer domesticus*), American Golden Plovers (*Pluvialis dominica*), Cardinal, House Finch (*Carpodacus mexicanus*), Warbling, Silverbill (*Lonchura spp.*), Spotted Dove (*Streptopelia chinensis*), and Barred Dove. According to the 1994 EA, the endangered Hawaiian Hawk (*Buteo solitarius*), and Hawaiian Owl (*Asio flammeus sandwicensis*) may also occasionally transit or forage in the area, but do not nest, breed, or roost in the area.

Existing Conditions (Current): During recent visits to the project area for the site survey and the botanical survey, only pigeons were noted on the project area. Pigeons (*Patagioenas spp.*) and Common Myna (*Acridotheres tristis*) birds were observed on the wet sea-level portions of the coral flats area to the south of the commercial harbor, 2,000 feet (¼-mile) or more southeast of the project area. The project area contains no habitat

[23] The Hawaii Biodiversity and Mapping Program Natural Diversity Database tracks population trends over time for biologically rare species for any time period where recorded data exists, supported by the research and observations of scientists and individuals. This does not represent a comprehensive site-specific field survey, but is a database of known rare species compiled from recordings going back to the 1800s.

[24] Latin names were matched where proper names were used. Others listed as indicated in the 1985 EIS.

area, and none of these birds nest, breed, or inhabit the project area, although birds may transit the site, or come in and land on the ground or structures from time to time.

Consultation with the United States Department of the Interior Fish and Wildlife Service (FWS) revealed that the federally threatened Newell's shearwater (*Puffinus auricularis newelli*) or ʻaʻo, and the federally endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and a species of concern, the Band-rumped storm petrel (*Oceanodrama castro*) may fly over the project area. Other species which are not listed under the Endangered Species Act but are protected under the Migratory Bird Treaty Act may transit the area while traveling to or from their high-elevation nesting areas.

The threatened Newell's Shearwater was formerly common on the Island of Hawaiʻi, and is known to nest high in the mountains on the windward side under thick vegetation, such as the ʻuluhe fern. The FWS species data sheet states that shearwater nesting occurs in areas with 47 – 100 inches of annual rainfall, not the 10 – 20 inches above Kawaihae. The endangered Hawaiian petrel nests at high elevations and burrows or excavates 4 – 6 feet or more in lithosols characterized by boulders and erosional debris found in association with bedrock, and can be found under rocky outcrops, lava tubes, or other suitable burrows. Both birds feed, and are most commonly observed, far off-shore.

A 2003 study obtained radar contacts at night[25], which indicate birds, presumed to be petrels or shearwaters, overfly the Kawaihae area. These contacts did not include actual sightings. No radar contacts were recorded on the most recent (2008) observational attempts.[26]

The primary concern is that these seabirds (especially Newell's Shearwaters fledglings headed toward the sea in the fall) fly at night and may become disoriented or confused by bright lights. They may also become confused and circle bright lights until they become exhausted and "fall out". Night-flying seabirds also fly into things they cannot see, especially man-made structures like utility poles, wires, trees, or buildings, which can result in death. Either event increases vulnerability to predation and vehicles. However, this interference with navigation or blinding effect seems more of an issue with individual lights than with illuminated fields.

Numerous inquiries (F&WS, DoH, HB&MP Natural Diversity Database) have uncovered no instances of bird fallout or confusion due to light distraction, or any impact with wires or structures, during any portion of the history of this site, or anywhere in the surrounding area. There have been no dead birds found on site during the formal DoH reporting period for West Nile Virus, which has been in place over 5 years (roughly since the end of 2002). This monitoring program requires that any dead or downed birds found on site be recovered and turned in for testing as potential carriers.[27] There are no reports of any instances of bird fallout or disoriented birds flying in circles around the lights at any time in the past[28], despite the lighting of the site since the late 1950's, and the prior use of 45-

[25] Day, Cooper, and Blaha (2003) obtained an unreported number of unknown radar contacts (presumed to be between 2 and 9 from the narrative), had no visual confirmation of species, and sampled only from 7 to 10 pm, not the 3 am to dawn period of concern.

[26] Personal contact, Megan Laut, USFWS, August 2008

[27] Data on any threatened and endangered species received by DoH is communicated to the USGS National Wildlife Health Center. A printout of their data collected for the Big Island (which runs from 1993, and so pre-dates the initiation of DoH data collection), shows no bird fatalities in the area.

[28] Personal communication with Kawaihae Harbor Manager Elton Suganuma.

foot light poles with poorly shielded 1,000 Watt high pressure sodium floodlights in the 1970s.

Impacts: The Proposed Action is limited to a 3.8-acre portion of the harbor used by YBL, out of a 113-acre site owned by the State. Young Brothers' only night operations at Kawaihae Harbor are Mondays and Fridays from 3:30 am to dawn, so full power illumination is needed for roughly 7 total hours per week, split between 2 nights. This represents about 8% of the evening hours during the week. Further, the current operational profile restricts full power lighting to the very limited hours of active operations, with "twilight" lighting levels used for inactive periods (using only one light per pole), so most lights are only switched on when the yard becomes active. The area is therefore only lit during periods when birds would be returning, not during departing periods when fledglings are most vulnerable.

Mitigation: This project poses no threat to habitat, and the Proposed Action may affect, but is not likely to adversely affect any Federally-listed threatened and endangered species, or any species of concern. Informal Endangered Species Act (ESA) Section 7 consultation is presently on-going as part of the distribution of this Draft EA. Results of that consultation will be presented in the Final EA.

The potential for light distraction of seabirds, and the concern with light-scatter affecting astronomical observations, can both be mitigated by:

1. Limiting light poles to the 46.5-foot heights already in use elsewhere in the harbor;
2. Use of lower-power (180 Watt) monochromatic low-pressure sodium lighting (as opposed to the more common full-spectrum high-pressure sodium lighting) which provides high contrast with sharply reduced brightness and glare, yet the yellow light does not attract insects and is not believed to be used for avian navigation;
3. Special-ordering custom-designed light-fixtures with "top-visor" shielding to minimize the potential for stray light up-scatter and side-scatter, so that the bulb is not visible at lamp height from the side;
4. Limiting light levels and hours of use to the minimum levels allowable under Occupational Safety and Health Administration (OSHA) worker safety and security requirements; and
5. Notifying workers on-site during seabird fledging months to be aware of the potential for seabird confusion and fallout, and having a response plan to implement in the event that a circling or downed bird is discovered.

Terrestrial Animal Resources

Existing Conditions: As previously discussed, the project area has been built up from crushed coral fill material with no original ground surface in the first 8 to 13 feet of surface material. Other than the northwestern edge of the 3.1-acre area, the remainder of the commercial harbor area is reclaimed submerged land. This can be clearly seen on Photo 1 (p. 3-7), where more than half the 3.1-acre site is new land, and much of the prior land was beach sand. There is no original ground cover left on the site of the Proposed Action, the is no remaining habitat, no known new habitat, and minimal plant growth of a few opportunistic species exploiting the very few areas where construction

may have created a protected spot near a pipe leak or runoff channel. During the period when this area was used to support the sugar industry, there had been a problem with rats (*Rattus spp.*) which fed on the sugar, and feral cats (*Felis cattus*), which fed on the rats. There have been no reported recent sightings on the barren areas subject to the Proposed Action, although there still may be populations across the highway and/or at the south coral flats area.

As previously indicated, the Hawai'i Biodiversity and Mapping Program database was consulted to review their records to see if any animal species had been reported on the site in historical reports, and the database manager confirmed that there have been no recordings of rare species within the project site at any time within their database, which extends back more than a century. The 1994 EA for the Kawaihae Small Boat Harbor (South) indicated the Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) could transit the area, but this was not confirmed by other sources.

Impacts: Based on the above, it is safe to conclude that there are no rare, endangered, or threatened species known to exist within the project area, or that use the project area as a critical habitat, or that would be significantly affected by the Proposed Action or Reasonable Alternative. No Action would have no impact.

Mitigation: No mitigation is required.

Marine Biological Environment

Essential Fish Habitat

Existing Conditions: All the waters around the island of Hawai'i to the limit of the Exclusive Economic Zone from the surface to a depth of 200 meters have been designated as Coral Reef Essential Fish Habitat (EFH), and all near-shore areas around the northwest shore of the island of Hawaii, including the waters off Kawaihae, have been designated as EFH by the Western Pacific Regional Fishery Management Council (WPRFMC) for one or more species covered under the Fishery Management Plan (FMP) applicable to Hawaii.

Impacts: Neither the Proposed Action nor the Reasonable Alternative proposes any in- or on-water work, and no construction material would be allowed to enter the Waters, and none of the alternatives would result in any adverse impacts to EFH. Further, none of the alternatives increases the utilization of the harbor beyond that of No Action.

Mitigation: No mitigation is required.

Endangered Marine Species

Existing Conditions: There are no resident threatened or endangered marine species in the project areas and there is no critical habitat designated for any listed marine species within the waters of Kawaihae Harbor. However, because the Harbor provides a broad open area easily accessible from open water, a listed species can easily enter and transit the area.

Four protected marine species have been recorded offshore within the general area, or have been recorded in the area due to the discovery of a dead animal:

- The threatened Green sea turtle *(Chelonia mydas*) are commonly seen in the area, and may transit through and feed in the harbor area, though they do not nest in the area because there is no desirable and easy accessible land for nesting. (One dead animal carcass was recovered at Puako, roughly 4 miles south of Pelekane Bay, in August 2000.)
- The endangered Hawksbill sea turtle (*Eretmochelys imbricata*) may also transit or feed in the harbor area but is less commonly seen.
- The endangered Hawaiian monk seal (*Monachus schauinslandi*) may transit through the harbor area and has been recorded in the vicinity.
- The endangered Humpback whale *(Megaptera novaeangliae*) may transit the vicinity, and is commonly seen in the area during the "whale season" between December and May every year. The Kohala coast (including Kawaihae Harbor) is included as part of the Humpback Whale National Marine Sanctuary.

Impacts: This project poses no threat to habitat. There is no in- or on-water work or demolition action as part of the Proposed Action or Reasonable Alternative, and no construction materials, debris, or washdown to the Waters will be permitted, and no areas where a Monk seal or sea turtle might swim or haul out of the water would be affected, and no potential impacts to the Humpback Whale National Marine Sanctuary, or the critical habitat of any other species of concern. The only potential impact is believed to be noise from the demolition of the old concrete floor area of the OTS pad, which could propagate far enough to be an annoyance to species in the area. Therefore, the project may affect, but is unlikely to adversely affect, any threatened or endangered marine species.

Mitigation: Informal Endangered Species Act (ESA) Section 7 consultation is presently on-going as part of the distribution of this Draft EA. Results of that consultation will be presented in the Final EA. Based on discussion with National Marine Fisheries Service representatives, mitigating actions would include scanning the area for the presence or absence of threatened and endangered species any time work of a potentially disturbing nature is scheduled near the water (e.g., jackhammers or noisy demolition activities), and allowing those individuals to transit the area prior to commencing such work.

Coral Reefs

Existing Conditions: The coral reefs within the Pelekane Bay / Kawaihae Harbor area were heavily impacted by extensive runoff and siltation following the deforestation and denuding of the uplands in the early 1800s, with devastating effects on the corals and the aquatic ecosystem. Even more extensive damage was done when the harbor was constructed in the 1950s, with the first major use of explosive methods to cut a deep-draft harbor into the coral shelf. These actions are long past, and the remaining impact to the coral ecosystem are primarily due to the reduced circulation and flushing of the area caused by the blockage of the harbor peninsula. In an effort to improve water quality in Pelekane Bay, H-DoT will be working with the U.S. Army Corps of Engineers to analyze the impacts of a circulation channel through the coral stockpile, between Kawaihae Harbor and Pelekane Bay. This project is part of the future Kawaihae Harbor Modifications Feasibility Study, intended to begin in 2009.

Impacts: Neither the Proposed Action nor the Reasonable Alternative proposes any in- or on-water work, and no construction material would be allowed to enter the Waters, and none of the alternatives would adversely affect coral reef ecosystems. This project is therefore not subject to the provisions of Executive Order 13089 (Coral Reef Protection) or the Coral Reef Conservation Amendments Act of 2007.

Mitigation: To prevent construction activities associated with the Proposed Action or Reasonable Alternative from having any impact on the marine biological environment, any potential water quality impacts would be strictly controlled by requiring contractors to follow the BMPs specified in the construction documents. These standards would apply to all work at either site.

- Work conducted near the shore with a potential to enter the Water requires appropriate barriers or other means to prevent debris from falling, blowing, or flowing into harbor waters. Removed material, soils, pollutants, and construction material would not be allowed to enter harbor waters, adequate precautions would remain in place when work has ceased to prevent stormwater from transporting any loose material to the Water, and no wash down of work areas into the Water would be permitted.
- Potential soil erosion runoff would be strictly controlled, and construction area runoff would not be permitted to flow into harbor waters. Erosion control measures would be maintained and drainage channels cleared of blockage and debris after heavy rainfall events and as necessary. Soil disturbance in excess of one acre is anticipated at the 3.1-acre baseyard site, so a NPDES general permit would be required for the entire project, if contracted at one time, or the 3.1 acre area portion of the work, if accomplished under a separate contract.

Other Potential Impacts: There are no wetlands in or adjoining the site of the Proposed Action or Reasonable Alternative, so no wetlands would be affected. A High Salinity Anchialine Pool exists approximately three-quarters of a mile to the southeast of the project site below Pu'ukohalā Heiau and at the lower end of Pōhaukole Gulch, but would not be affected by the Proposed Action or Reasonable Alternative.

Mitigation: No mitigation is required for either of these issues.

3.8 Hazardous Materials

Demolition activities commonly have the potential to disturb and potentially release any existing hazardous and regulated materials prior to their removal from the project site. Due to the age of the OTS (1959) and the potential for encountering hazardous and regulated materials, a Phase I Environmental Site Assessment (ESA) and Hazardous Materials Survey was conducted by Bureau Veritas North America, Inc. in July 2008 in preparation for the Proposed Action. This assessment examined both the OTS and 0.7-acre surrounding area, and the 3.1-acre baseyard area, for the presence of potential hazardous materials such as lead-based paint (LBP), asbestos containing materials (ACM), polychlorinated biphenyls (PCBs), arsenic-treated building materials, and/or chemicals present in petroleum fuels.

Bureau Veritas' ESA findings and recommendations are presented verbatim:

Asbestos-Containing Materials Assessment

Based on Bureau Veritas' review of a previous asbestos assessment report (conducted in 1996) and recent onsite inspection, five types of suspect ACM were identified at the subject property, including: sealant on corrugated metal wall/ceiling panels, window putty, asphalt pavement, floor tiles (and associated mastic), and roofing materials. Bureau Veritas conducted bulk sampling of suspect ACM that were not previously sampled, and submitted the samples to a qualified laboratory for asbestos analysis.

Based on the results of our assessment, no asbestos was detected in any of the materials sampled from the project areas. Therefore, no special handling with respect to asbestos-containing materials is required during the planned renovations of the project areas.

Lead Paint Assessment

Bureau Veritas identified a total of 14 types of paint at the subject property that may be impacted during the planned renovation/demolition activities. Bureau Veritas also reviewed a portion of a 1996 LBP assessment report for the OTS building on the subject property. However, because the results of the previous assessment required confirmation, representative paint samples were collected and analyzed for lead content.

Based on Bureau Veritas' paint sampling and laboratory analytical results, two types of confirmed LBP were identified on the OTS building, including: (1) yellow paints on the interior and exterior corrugated metal walls/ceiling; and (2) brown/red paints on the interior steel supports. Six of the remaining paint samples collected from the OTS contain detectable lead concentrations and are considered lead containing paint (LCP). The paint samples collected from the other structures, including the light posts, the small shed, and the restroom building, reported no detectable lead.

The yellow LBP on the corrugated metal walls/ceiling of the OTS appeared in fair to poor condition, with several small areas of peeling /delaminated paint observed on the interior and exterior walls (primarily the lower portion of the walls). All of the remaining LBP/LCP were observed in fair to good condition. During the planned demolition activities, the general contractor and their subcontractors must follow the Hawai'i Occupational Safety and Health (HIOSH) Lead in Construction Standard (Health Standards, Title 12,Subtitle 8, Part 3, Chapter 148.1) when workers have a potential to be exposed to lead during work activities (i.e., demolition, renovation, cutting, drilling, sanding, grinding, etc.).

Building materials covered with LBP must undergo Toxicity Characteristic Leaching Procedure (TCLP)-Lead laboratory analysis prior to disposal in the landfill. Therefore, Bureau Veritas recommends that a representative sample of the LBP-covered building materials from the OTS be collected and submitted to a qualified laboratory for TCLP-Lead analysis. The Environmental Protective Agency (EPA) defines lead-containing materials as hazardous waste if they contain a TCLP-Lead concentration greater than 5.0 milligrams per liter (mg/L). If TCLP-Lead exceeds this concentration, the LBP-covered building materials must be properly removed and packaged prior to demolition activities for disposal at a facility that accepts lead waste.

Arsenic-Containing Materials Assessment

Canec is an old type of fiberboard found in Hawaii, which was made from processed sugar cane and treated with arsenic as a deterrent to insects and mildew. One type of canec fiberboard material was identified at the subject property, located on three of the walls and the ceiling of the employee break room in the OTS building. One sample of this material was collected and analyzed for arsenic content.

Based on the laboratory results, the canec sample contains 1,500 milligrams per kilogram (mg/kg) arsenic, which is greater than the regulatory level of 100 mg/kg. The estimated quantity of this confirmed arsenic-containing material is approximately 4,320 square feet. This material should be properly handled and removed in accordance with the HIOSH Inorganic Arsenic in Construction Standard prior to building demolition activities.

> When detectable concentrations of arsenic are identified, there are HIOSH requirements to protect workers during the disturbance of arsenic-containing materials. These requirements include air monitoring during disturbance activities such as demolition and renovation.
>
> For the disposal of arsenic-containing materials, reportable concentrations of arsenic require Toxicity Characteristic Leaching Procedure (TCLP)-Arsenic analysis when total arsenic levels are at 100 milligrams per kilogram (mg/kg) or greater. This level is based on the TCLP for arsenic regulatory level of 5.0 milligrams per liter (mg/L) or greater.

Bureau Veritas also verified the existing pad-mounted electrical transformer (to be removed) is PCB-free (as noted on p. 4-8, and footnote 33).

Mitigation Summary: Wherever hazardous and regulated materials are encountered, appropriate mitigative measures would be taken to control the material, minimize releases to the environment, and to protect demolition and construction personnel. Any construction, demolition, handling, removal, and/or disposal of such material would be carried out by qualified personnel in accordance with applicable State and Federal safety, health, and environmental regulations.

The Proposed Action would not directly or cumulatively introduce toxic or hazardous chemicals, organic substances, or solid wastes into bodies of water, into the air, onto land or into groundwater. The Proposed Action would not create additional sources of environmental contamination in the area or be affected by the limited existing contamination. The Reasonable Alternative would accomplish the same demolition of the OTS in the same manner, and would therefore have the same construction period impacts as the Proposed Action. The No Action Alternative would have no impacts.

Disposal of Hazardous and Non-Hazardous Demolition Waste: Commercial contractors would dispose of non-hazardous construction and demolition waste off-site at an approved construction and demolition sanitary landfill. Recycling and reuse measures are encouraged to divert solid waste from the landfill and minimize waste from the Proposed Action or Reasonable Alternative.

All materials determined to be hazardous shall be packaged, labeled, marked, stored, transported, treated and disposed of in accordance with 40 CFR 260 through 270, 49 CFR 171 through 178, and all other applicable Federal, State and local laws and regulations. The No Action Alternative would generate no wastes.

4.0 COMMUNITY / SOCIO-ECONOMIC ENVIRONMENT AND CONSEQUENCES

This chapter describes the socio-economic environment and community context within which the Proposed Action and Reasonable Alternative would fit, focusing on the baseline conditions of the man-made environment, and the resource base within the area of the Proposed Action. It describes the consequences of the Proposed Action and Reasonable Alternative, and proposed mitigation measures, if needed. Reasonable Alternative conditions are equivalent unless noted.

4.1 Demographics

Existing Conditions: According to the County of Hawai'i Data Book, the total 2007 population for the island of Hawai'i is estimated as 173,057 people on a land area of 4,028 square miles (mi^2), for a population density of 43 persons per square mile ($/mi^2$). The State as a whole has an estimated 1,283,388 people on a total land area of 6,425 mi^2, (approximately 200 persons/mi^2). These are up from 148,677 and 1,212,670, respectively, in the Year 2000 U.S. census records. Thus, the Big Island has more than 62% of the total land in the state, but only 13.5% of the population.

The South Kohala area (Census Tract 217) had a reported population of 9,140 persons in 1990 and 13,131 in 2000. In 2000, there was separate reporting for the Kawaihae-Waikoloa area (tract 217.01), with 6,015 on a land area of 148.8 square miles[29], for a density of 40.4 persons per square mile, roughly equivalent to the average density of the County as a whole. Most of these people are in the Waikoloa area, as Kawaihae has a very small population, with about 8 houses in the area directly across from the harbor, and 12 – 14 more across from the heiau. The Hawaiian Home Lands areas (the major landowner across the street from Kawaihae Harbor) is listed in 2000 Census data as having a population of 103 persons, 38 of which are self-identified as Native Hawaiian, and 69 of which are identified as racially mixed.

County Trends: Big Island population has been increasing at a higher-than-average rate. DBEDT 2030-series population growth projections for 2005 were exceeded by about 1.085%. DBEDT 2035-series population growth projections show this growth spurt tapering off sharply, but still growing at roughly double the rate for the state as a whole until 2015.

District Trends: The 2000 Census showed the South Kohala district to be the fourth most populated, and the fastest growing district in the County for the prior decade.[30] This is due to the economic vitality of the area and excellent employment opportunities in Northwest Hawai'i. While long-range projects show a substantial and continuing reduction in population growth rates over the next three decades, growth will continue into the foreseeable future due to the existing population, birth rate, and favorable economic climate.

[29] DBEDT 2007, Table 1.18, and County of Hawai'i Data Book (online, 4/16/2008 update), Table 1.8.
[30] South Kohala Community Development Plan (CDP); July 11, 2008 Pre-Final, p. 26.

Hawaii County Population, DBEDT Projection to Year 2035							
	2005	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Total resident population	**164,769**	**185,850**	**205,820**	**225,000**	**243,420**	**261,340**	**279,150**
Annual growth rate (%) in total resident population		2.4%	2.1%	1.8%	1.6%	1.4%	1.3%
Adapted from DBEDT Hawaii County Population Projection, Selected Components, 2005-2035. Actual Census figures presented for year 2005; projected future estimates rounded to the nearest ten.							

Impacts: The Proposed Action and Reasonable Alternative respond to increased cargo / shipping demand. Expanded port capacity does not stimulate or induce population growth.

Mitigation: No mitigation is required.

4.2 Island Economy, Employment, Industrial and Commercial Activities Business Development, and Quality of Life

Existing Conditions: About 40% of all hotel rooms on the island are within the South Kohala district, and within the County the three major resort complexes in the district (Waikoloa Beach Resort, Mauna Kea Resort, and the Mauna Lani Resort) developed 3,400 visitor units in the 18 years ending in 1998. This produced a large number of non-government jobs, and injected significant capital which resulted in substantial increases in home construction and economic opportunities in multiple sectors of the economy. A comparison of the employment provided by various Hawai'i County employers illustrates the economic importance of resort employment in the South Kohala area (with asterisk), with only government jobs (italicized) having greater economic influence:

Employee Count for 10 Largest Hawai'i County Employers (2004)[31]

1	*State of Hawai'i*	*7,608*
2	*County of Hawai'i*	*2,291*
3	*US Government*	*1,221*
4	Hilton Waikoloa Village	1,100 *
5	KTA Superstores	785
6	Fairmont Orchid Hawai'i	600 *
7	Mauna Lani Bay Hotel & Bungalows	580 *
8	Four Seasons Resort Hualalai	557
9	Mauna Kea Beach Hotel	556 *
10	Hapuna Beach Prince Hotel	542 *

[31] Source: County of Hawai'i Data Book, as presented in So. Kohala CDP (op. cit., p. 27)

There are additional plans to develop support facilities and recreational amenities (such as golf courses) to support these activities, as well as additional rental units and residential development. Other growing sectors with a synergistic relationship to tourism include sport fishing, recreational boating, skin and SCUBA diving, and other water-based sports activities, as well as horseback riding, bicycling, hiking, and many other outdoor activities. Most of these are consistent with community visions supporting ecologically-sustainable activities and promoting the wholesome and health-conscious image of Hawai'i tourism and the growing eco-tourism market.

Other Important Commercial Activities: Numerous forms of agriculture, including production of vegetable produce, tropical flowers, cattle ranching (for milk, meat, and breeding stock), and other forms of diversified agriculture are of great importance to the island economy. The Waimea area has been one of the most productive growing regions on the Big Island since pre-contact times, with Kawaihae being the focal area for trading and shipping out upland production. Pigs, banana, sweet potato, taro, and wood were important crops in the earliest recorded history. Important established vegetable crops now include cabbage, broccoli, tomatoes, lettuce, daikon (radish), peppers, carrots, celery, and kale. The fertile upland soils and diverse range of climatic conditions and settings support a diversity of crops, and provide an exceptional opportunity for future agricultural experimentation and the development and production of new crops well into the future, so the area is likely to remain one of the State's most important agricultural areas in perpetuity.

New Industrial and Commercial Activities, and Business Development: In addition to tourism and agriculture, West Hawai'i is also an established center for innovative ventures in aquaculture and new energy technologies. The Natural Energy Laboratory Hawai'i Authority (NELHA) complex at Keahole Point south of the Kona Airport is especially notable for its role as a technology incubator.

Some commercial ventures (especially 5 businesses operating at NELHA to export deep ocean water to Japan and other international markets), are highly transportation-dependent enterprises, and the lack of commercial export capacity is a serious constraint on business growth. These businesses provide a model of the type of sustainable, environmentally responsible ("green") enterprises encouraged by the County and the State. Further, these businesses vigorously promote the clean and healthy image of Hawai'i along with the product, and provide a significant opportunity to enhance this image, but require sufficient transport capacity to remain viable.

Impacts: Population and economic growth drive demand for cargo transport services, and this produces a need for port facilities to accommodate this growth. The Proposed Action or Reasonable Alternative are minor harbor improvement projects which will have no impact on population and a small, beneficial effect on economic growth. These improvements are considered minor, as they do little more than address existing demand, but supporting port capacity contributes to keeping the cost of shipping at competitive levels, and helps maintain the quality of life enjoyed on the island.

The No Action Alternative would have no direct impact on population but would have adverse long-term indirect impacts on the island's economy and general economic prosperity due to constraining shipping volumes (see Socioeconomic Impacts discussion

under Cumulative and Secondary Impacts on p. 6-4). In the event of a major natural disaster damaging or interfering with port operations, such as a major tsunami or earthquake putting Hilo Harbor out of commission, the lack of reserve cargo-handling capacity at Kawaihae could have a substantial negative effect on the island economy, shutting down the shipment of non-essential items to allow space for critical resupply of food and essentials.

Mitigation: No mitigation is required.

Economic Analysis: Construction spending for the Proposed Action or the Reasonable Alternative will provide a substantial benefit to the local economy by providing short-term (construction period) employment opportunities for multiple trades hired to accomplish the required demolition, construction, and installation activities. Where outside contractors are brought in to supervise technical aspects of this project, or to install specialized equipment, there would be a minor, short-term influx of personnel, but most work will be accomplished by local workers. Neither alternative would directly increase long term employment on the site, but the maintenance of efficient port capacity supports the continuing economic growth and vitality of the local economy, and considerable indirect economic benefits would accrue to the local economy as a result of the long-term gradual planned improvements to State harbors.

By comparison, the No Action Alternative – the prevention or cessation of harbor upgrades – would have a clearly adverse effect on the island's economy. Limiting transport capacity could slightly limit growth, and would be expected to impact new business startups and export business (such as deep ocean water exports) disproportionately, as export capacity is currently a substantial limiting factor. Creating a scarcity situation usually increases prices, which would be expected to impact other exporters (such as Big Island agriculture), as exporters bid for available space. Such limitations would reduce business profit, County GDP, total civilian jobs, and thereby total personal income and tax receipts to the county. Restricting incoming transport capacity would similarly not directly limit growth, but would make shipped items (fuel oil, food, commodities, etc.) more expensive across the board, affecting businesses and consumers alike, and artificially depressing the island economy. This is discussed further under Chapter 6: Cumulative and Secondary Impacts.

4.3 Visual and Aesthetic Environment

The project area is a working commercial harbor in an industrial-zoned area. It is a utilitarian working waterfront area, purpose-built to fill a vital public need, and all improvements are consistent with the Master Plan to accomplish this purpose.

However, the coastline, as with the coastline of the majority of the state (although normally not including commercial harbors), has scenic elements worthy of preservation. The commercial harbor area is primarily visible from Kawaihae Road, the nearest coastal highway coming into Kawaihae, and is clearly seen in the viewplane from this highway (see photo). The site is also visible from the Pu'ukohalā Heiau National Historic Site NHS which is about 4,200 feet (0.8 miles) south-southwest of the harbor. While the harbor was constructed as an industrial area, and would not normally be considered a scenic resource, it does contribute a unique scenic element which has become a defining feature of the Kawaihae coastline for the last 50 years, although this is primarily due to the arms of the

breakwaters and the south coral flats, while the commercial container cargo area is of lesser impact to the viewplane.

Photo 2: Photograph of Kawaihae Harbor seen from the high point on the coastal highway, with Pu'ukohalā Heiau NHS in the foreground. (Note: The damaged OTS, slated for demolition under this project, is below the arrow.)

Impacts: The Proposed Action and Reasonable Alternative would not contribute to a deterioration of scenic views, and would remove the damaged OTS, providing a beneficial (although minor) improvement to the scenic viewplane. Other improvements would not be visible from public viewplanes, although they would be visible from the road directly across from the port entry.

Mitigation: No mitigation is required.

4.4 Infrastructure / Utilities

Roads / Traffic

Existing Conditions: Primary access to Kawaihae Harbor is via Kawaihae Road (Highway 270), in a 2.2-mile long segment which extends from Queen Kaahumanu Highway to its north end, where the road forks continues north as Akoni Pule Highway (Highway 119), and south to the Kawaihae Small Boat Harbor (North). This segment has two 11-foot wide travel lanes, a 5 to 7-foot wide paved shoulder, and no traffic signals or turn lanes. It is posted at 45 mph in the harbor area. A large portion of the harbor traffic here is "semi" tractor trailer rigs which haul container cargo on and off the harbor for Matson, Young Brothers, and Horizon lines, as well as trucks hauling fuel and concrete. The commercial port is a secured site, and the main access road (perpendicular to Pier 2A on Fig 2) passes through a security gate with full-time guards. A separate gated and locked north entry is available adjacent to the cement silo, but is generally unused. The Kawaihae Small Boat Harbor (North) is unfenced and has open access to the parking lot and an unpaved yard adjoining the north fence line of the commercial harbor, and some tractor-trailer rigs appear to stop here so the drivers can go to the small commercial area across the street with several restaurants. The southern harbor entry is chained, so

temporary access to Kawaihae Small Boat Harbor (South), and public access to the YMCA Halau Kukui Aquatics Center of Kawaihae and the Pua Ka Ilima ‘O Kawaihae Cultural Surf Park (Fig. 2) is through the secured gate, as is Army access, except when the south gate is opened for maneuvers and major movements. H-DoT has scheduled the south entry for independent access improvements as the Kawaihae Small Boat Harbor (South) improvements move forward. Anecdotal information from H-DoT personnel indicate that the harbor road intersection (perpendicular to Pier 2) has minimal congestion during the both the morning and evening peak hours. Traffic at the Kawaihae Road/Queen Kaahumanu Highway intersection does experience congestion, apparently from the design of the intersection, which lacks a signal and a second right-turn lane for traffic continuing south on Queen Kaahumanu Highway.

Impacts: This project would improve the efficiency of the flow of cargo through the port, and the Proposed Action (but not the Reasonable Alternative) would provide roughly 10% of the additional container yard space required for efficient operations in the 2020 – 2030 time frame, allowing it to accommodate growth in service demand as it occurs, but would not create significant operational impacts on Kawaihae Road.

Construction Period Impacts: There will be short-term impacts to local traffic for the transport of workers, equipment, construction materials, and removal of demolition waste during construction for both the Proposed Action and Reasonable Alternative. Under the Proposed Action, the OTS demolition and paving of the 0.7 acre yard will occur first, and the paving of the 3.1 acre baseyard area is expected to occur a year or more later, after design is complete. The paving of the 3.1 acre lot will have the greater impact due to the amount of concrete required at the site. If the Reasonable Alternative is selected, the 3.1 acre baseyard area will not be paved.

Concrete for construction is expected to be provided from the West Hawaii Concrete batch plant in the Kamuela-Waimea area about 10 miles away, but could also be supplied from their second plant in Kailua-Kona. Pavement for the 0.7 acre former OTS and apron area will be poured in sections and is expected to require a period of 16 days with 8 truck loads per day (a total of 132 loads). Trucks will be staged at 30 minute intervals. Pavement for the 3.1 acre baseyard area will be poured in sections at a later time. This is expected to require a period of 48 days with 12 truck loads per day. Trucks will be staged at 20 minute intervals (a total of 581 truck loads over that 48-day period).

Mitigation: Concrete mixing trucks will be moved to the site over a period of roughly 4 hours per day, and will be scheduled to avoid both peak traffic periods and periods with heavy cargo transport on and off the site. This will avoid periods when multiple trucks could stack up and delay through traffic. Possible additional mitigation, such as providing alternate truck access by the secondary north entrance with separate security will be implemented if warranted by contractor traffic interference with cargo transport. These issues will be worked out with the harbor users prior to the initiation of construction or demolition activities.

Traffic impacts are therefore expected to be minor, and would occur for the duration construction periods only, and would be scheduled when they would avoid exceeding the capacity of the roadway. Construction equipment not involved in the movement of materials on or off the site is expected to remain on-site within the harbor during the construction period. No off-site road work, road closures, diversions, or significant interference with local traffic is anticipated as part of this action. Whenever possible,

movements of materials and removal of demolition waste would also be scheduled to avoid peak traffic periods to minimize impacts.

Operational Period Impacts and Mitigation: This project proposes no change in the existing use of the harbor, and would therefore have no operational period impacts on traffic under any of the alternatives. Peak hour congestion is an existing problem at the Kaahumanu Highway intersection, and will continue to occur under any scenario, including No Action. However, increased on-site cargo storage will increase the ability of the Young Brothers cargo operation to schedule movement of cargo during less congested periods, and movement of container chassis, and container-on-chassis trailers will be more efficient on paved surfaces and would no longer be subject to the operational restrictions required to minimize fugitive dust impacts to surrounding properties.

Overall, freight volumes have been progressively increasing for many years, and will continue to increase, with progressive incremental impacts under any scenario, including No Action, with roughly comparable traffic impacts, so no traffic impacts can be attributed to these improvements. Therefore, no mitigation is required. The Reasonable Alternative will have minimal improvements to cargo staging, as the 3.1 acre area will not be paved. No Action would have no direct impact, but (along with the Reasonable Alternative) would continue to impose restrictions on the efficient loading and unloading of containers to and from barges and carrier chassis, and their staging and movement off-site, preventing the planned improvements in cargo staging and allowing port efficiency to continually decline over time.

Utilities Services

Domestic Water

Existing Conditions: Domestic / drinking water is supplied to the Kawaihae Harbor area (and further down along Akoni Pule Highway) from the Waimea aquifer via a County Department of Water Supply (DWS) 12-inch water main running along Kawaihae Road. This supply draws on the County of Hawai`i's Lāmāmilo Water system, which has an average consumption of 3 mgd. Kohala Ranch and DHHL Kawaihae Homestead lands *makai* (inland) of the harbor draw water from the Mahukona aquifer. Water is supplied to the OTS via an underground lateral in an underground utilities trench leading to a meter (with 1-1/4-inch pipes in and out) and reduced pressure backflow preventer (Watts Regulator 009RP, 3-inch piping) at the south end of the building.

Impacts: Plumbing to the OTS, including the backflow preventer, will be removed as part of the demolition contract. The existing meter will be capped and remain in place, and the backflow preventer will be relocated. The demolition of the OTS will remove 4 restrooms, so there will be a reduced fixture unit count, but the reduction in use will be minimal, as workers currently using these facilities will use other bathrooms available on site. The Proposed Action or Reasonable Alternative may require slightly increased water resources during construction, primarily for dust control, concrete preparation, if pipes need to be flushed, or items or areas washed. These uses would be short-term and temporary, and will not significantly increase the water budget.

Mitigation: No increase in water use is anticipated in the post-construction period, and no mitigation is required. DWS would be notified prior to any relocation or alteration of the backflow prevention device and water line to obtain plan approval.

Electrical Service

Existing Conditions: Electrical Service is supplied to the South Kohala coast via existing 69 kV and 12 kV overhead power transmission line installed along an existing electrical utility easement along Kawaihae Road. Power comes from the Hawai'i Electric Light Company (HELCo) power plant in Waimea. An existing power cable runs underground across the site to a pad-mounted electrical transformer, electrical panels, and lighting control panels just west of the OTS, with additional cabling continuing to the OTS and another pad-mounted electrical transformer and electrical panels at the south end of the building.

Impacts: The existing pad-mounted electrical transformer (PCB-free[32]) and electrical panels at the south end of the OTS will be removed prior to demolition. Electrical power use will experience a small increase during the construction period for the operation of electrical equipment, but will not exceed installed capacity. Addition of from 8 to 24 light poles (depending on final design) is anticipated to cover the 3.1-acre baseyard, and one additional pole to illuminate the former OTS pad area. Operational period demand will increase during the periods when the yard is fully illuminated, but this is expected only when the yard is active (roughly 7 hours per week).[33] Poles have 6 - 12 light heads, with one 180 Watt lamp per head, so most poles will draw less than 2 kW at full power. Low-power (twilight level) lighting[34] is used all night for security purposes, and this involves lighting a single 180W head on about half the poles. Since this demand takes place during off-peak hours, no impact on existing generating requirements is anticipated as a result of this action.

Mitigation: Lighting power requirements have been mitigated by strictly limiting lighting to what is required by OSHA for operational periods and by MARSEC for non-operational security requirements. No further mitigation is required.

Communications

Existing Conditions: Telephone service is supplied to the Young Brothers offices in the OTS by Hawaiian Telecom. A communications panel is at the south end of the OTS, and a cable runs in a buried utilities trench from the panel northwest to the main service lines at the Kawaihae Road.

Impacts: Telephone service connections will be relocated as part of this action.

---

[32] Bureau Veritas contacted Mr. Dave Okamura, Assistant Technical Superintendent with HELCO, on June 25, 2008, for information regarding the PCB status of the transformer within Vault 33662. According to a letter from Mr. Okamura, dated July 1, 2008, the transformer was purchased in 2000, installed in 2001, and is a PCB-Free unit. The correspondence from HELCO regarding the transformer is included in Appendix D of BV's Phase 1 ESA.

[33] Young Brothers, Ltd. requires lighting on Mondays and Fridays from 3:30 am to sunrise (only YBL operations areas are covered under the EA). Lighting is needed for about 2:50 per night (5:40 per week), conservatively rounded up to 7 hours per week.

[34] Security lighting (1-foot candle at 1 meter above the ground) is used about 12 hours per night, 7 days per week.

Mitigation: No mitigation is required. Hawaiian Telcom OSP Engineering will be notified prior to any demolition activities at or near their facilities, so they can remove their equipment.

Sewage / Sanitation

Existing Conditions: Two Americans with Disabilities Act (ADA) of 1990 accessible restrooms exist at the south end of the OTS, which consist of one male and one female restroom. These are the only ADA-accessible restrooms in the commercial harbor, but rely on very old plumbing and require frequent maintenance, so they have not been in regular current use, but can be opened if needed. An existing cesspool located approximately 15 feet east of the Transit Shed's southeast corner serves the existing OTS restrooms. Ten additional bathroom stalls are distributed around the commercial harbor working areas.

Impacts: Demolition of the OTS will include removal of 2 ADA-accessible restrooms. The cesspool will no longer be required once the OTS is demolished, and must be closed, pumped out, and filled in.

Mitigation: The scope of work for the Kawaihae Harbor Pier 2 Improvements Project includes the proper closure of this cesspool by pumping out the contents and completely filling it, in compliance with Federal, State, and County requirements (as shown on Sheet C-4 of Appendix B). Once filled, the sewer and entire surrounding area will be paved with 19.5 inches of PCC. In compliance with Americans with Disabilities Act (ADA) of 1990 requirements[35], a new ADA-accessible restroom will be provided (through a separate project) within the commercial harbor by H-DoT, currently expected to be at the Marine Cargo Specialist building office or a stand-alone shower/restroom building, as part of its program of planned improvements. This will be accomplished prior to or contemporaneous with the demolition of the OTS.

Solid Waste Collection

Existing Conditions: Kawaihae Harbor is not a significant generator of solid waste. Currently, household-type waste and garbage (i.e., non-hazardous solid waste) is disposed of in two trash-collection dumpsters located on the central area of the 3.1-acre portion of the subject property. The solid waste is collected and disposed offsite by a private contractor, Pacific Waste, on a regular schedule.

Impacts: The Proposed Action and Reasonable Alternative would generate comparable amounts of short-term construction waste due to demolition and removal of the OTS and related utilities and paving materials. No Action would generate no construction waste. No long-term increase in waste generation is expected to result from any alternative.

Due to the age of the OTS (1959) and the potential for encountering hazardous and regulated materials, a Phase I Environmental Site Assessment (ESA) and Hazardous Materials Survey was conducted by Bureau Veritas North America, Inc. in July 2008. These findings are documented in Section 3.8.

[35] ADAAG 4.1.6(1)(a) states: "No alteration shall be undertaken which decreases or has the effect of decreasing accessibility or usability of a building or facility below the requirements for new construction at the time of alteration." Because these were added under a consent decree, which required the accessible restrooms be built in the first place, replacement will be required.

Mitigation: The demolition contractor will dispose of construction and demolition waste at an approved construction and demolition landfill. Disposal of Hazardous and Regulated Material is documented in Section 3.8. Neither the Proposed Action nor the Demolition and New Construction Alternative would introduce hazardous and regulated materials into bodies of water, into the air, onto land or into groundwater, other than by approved landfill disposal methods in accordance with applicable State and Federal regulations. Neither alternative would create additional sources of environmental contamination in the area. Operational (post-construction) period activities require no mitigation.

Public Services and Community Resources

Police and Fire Protection

Existing Conditions: Kawaihae Harbor has full-time on-site security and a guard shack at the entry to provide security service, consistent with MARSEC and Homeland Security requirements. Police backup protection is provided by the Hawaii County Police Department, based out of their South Kohala District Station.

Impacts: No increase demands on the services of either the Hawaii County Police Department or the Hawaii County Fire Department are expected as a result of any of the alternatives, including No Action.

Mitigation: No mitigation is required.

Recreational Facilities and Community Parks

Existing Conditions: The Kawaihae Harbor area has numerous recreational areas, including the Kawaihae Small Boat Harbor / North (SBH/N) (docking facilities with easy public access by road or water) and the Kawaihae Small Boat Harbor / South (SBH/S) (minimal facilities except for YMCA, no public docks, chained access road). Adjoining the SBH/S is the YMCA Halau Kukui Aquatics Center of Kawaihae (used by the Waimea Family YMCA for youth sailing camps and organized ocean recreation), and the Pua Ka Ilima ‘O Kawaihae Cultural Surf Park (both with chained access). Additional recreational areas further south include Pelekane Beach (below Pu‘ukoholā Heiau NHS), and Samuel M. Spencer Beach Park (and other sites) located further to the south.

The public also occasionally uses the open beach-like areas of the south coral flats area of the inner harbor for passive recreation. However, Kawaihae Harbor is a working industrial area which is critical infrastructure with the same security requirements as other ports and airports nationwide. It is not a recreational area, and should not be mistaken for such. However, some portions not currently in use have been left open to the public as long as there is no interference with the commercial port harbor operations. This is new land (a reclaimed submerged area), not a beach, and adequate nearby public areas exist for beach access purposes. This area will be closed to public use when required for Army operations, when future harbor expansion takes place, or at such time as security needs dictate.

Some boaters currently moor their boats in the inner harbor, which has also been allowed in the short term. However two small boat harbors are provided for public use on the north and south ends of the commercial harbor. Existing uses are likely to be allowed in the

short-term as long as there is no interference with commercial cargo operations. However, this option may be terminated once the Kawaihae Small Boat Harbor (South) is fully operational, or at such time as security needs dictate.

Impacts: Recreational facilities and community parks areas will not be affected by the construction of, or operations on the proposed project areas, with the possible exceptions of minor noise and/or fugitive dust during construction. Due to the distances involved, no impacts are likely to affect activities, other than possibility of dust at the SBH/N if the wind were to set from the south-southeast.

There will be no long-term impacts other than a possible reduction of fugitive dust at the SBH/N. The Proposed Action and Reasonable Alternative will not limit access to, obstruct, or create other impacts to the existing public recreation areas around Kawaihae Harbor, and long-term project impact will be equivalent to the No Action Alternative.

Mitigation: No mitigation is required, other than dust mitigation, as previously discussed (Section 3.4).

4.5 Historic and Cultural Resources

Historic and Cultural Background of the Kawaihae area

This brief section is to present the highlights and milestones to demonstrate the long historic use of the Kawaihae area as a primary port and commercial hub, the substantial changes over time, its long stagnation, and its rebirth as a major port critical to the future of West Hawaii.

- The South Kohala region is believed to have been first settled sometime between 750-1000 AD, first in the coastal areas, and then further inland. The mix of resources made this a coveted area which was fought over by many on- and off-island chiefs in pre-contact times.
- The Kawaihae Landing / Pelekane Bay area has been in use as a landing area for canoes and water transportation since before recorded history. The area had a large natural fringe reef “nearly level with the water”, which moderated wave action and improved the availability of fish, but had few houses and was too arid to support much cultivation north of the bay (King, 1779). There was a fresh water stream, small sandy bay, beach, and sufficient area to haul out and repair canoes, as recorded by Vancouver (1793). Early Hawaiians had water flowing from the two major gulches to support planting around Pelekane Bay, and freshwater springs provided water for drinking water and bathing, but the surrounding area was otherwise generally barren. The area around and above Kawaihae area was dense with hardwood forests, and observations by Ellis in 1793 (Handy, 1972) indicated the fertile inland area was productive and supported a significant population, and Kawaihae was the port through which these goods flowed for local trading, and to supply ships, as reported by Cleveland (1799) and others. The variation in early reports suggests that the area had a dismal brown appearance when there had been a shortage of rain, but appeared green in other accounts. The major traditional production for commerce was fish and salt, and it was the major trading center for these valuable commodities, as the availability of salt allowed immediate preservation of the fish and meat resources.
- Kawaihae village was home to Kamehameha I in the earliest era of first recorded history. Overlooking the bay, he built the massive Puʻukohalā Heiau (temple) for his war god in 1790. Once completed, this was where he invited his cousin Keoua, his arch-rival aliʻi from Kaʻū who had amassed substantial power on the island, to have him killed by Keʻeaumoku as he stepped from his canoe. His body was brought to the new heiau as a sacrifice – a

critical event which consolidated Kamehameha's control over the island. This heiau is now the Pu'ukohola National Historical Site, a site of great historic and cultural significance.

- Kawaihae Harbor was visited by Captains Cook, Vancouver, and others on the earliest recorded visits to Hawai'i. It became the home to John Young (captured from the *Eleanora*) and Isaac Davis (the sole survivor of the massacre of the crew of the *Fair American*), who both became prisoners of Kamehameha I, and later became ali'i and trusted advisors instrumental in his conquest and unification of the Kingdom of Hawai'i. Once Kamehameha became king, it was necessary for all sea captains to gain his permission before initiating any trade or other activities, so Kawaihae was a busy port of call.
- Kawaihae is reported to be the port of arrival for the first ships which introduced horses and cattle to the Big Island, beginning when Captain George Vancouver landed there in1793, and presented Kamehameha with a bull and five cows. "Following Vancouver's advice, Kamehameha placed a kapu on the cattle, and very quickly they were overrunning the islands, destroying the forests and native vegetation." (Desha 2000: 360).
- John Palmer Parker arrived in Hawai'i on a ship about 1812..." and later married Princess Kipikane, ... [got] a homestead up in the Mana area ... [and was] hired by King Kamehameha to get rid of the wild cattle that were becoming a problem." Parker had land in Kawaihae, and created a successful business operating out of Kawaihae supplying whaling vessels with salted meat, sweet potatoes, and other crops, and selling hides and tallow for export. Later, under A.W. Carter, the ranch brought in Hereford cattle as breeding stock. Cattle were herded to Kawaihae Harbor, and (without a loading pier) had to be pulled out to the steamers with their heads lashed to the sides of the lifeboats, and then hauled out of the water and loaded into pens for the trip to O'ahu slaughterhouses.
- Beginning in the early 1800's, sandalwood was extensively harvested from upland areas, and by 1845 had stripped many areas bare. The cattle, protected by Kamehameha's kapu, were running wild by 1807, multiplying rapidly and over-grazing the land, preventing new growth from surviving and contributing to the devastation. By 1830, "...the Kawaihae area was described as barren with little vegetation... [and] water in the gulches had ceased to flow (Greene, 1993, quoted by Tissot, 1998). When missionary Lorenzo Lyons landed in Kawaihae in 1832, he described it as "about as desolate a place as I have ever seen, nothing but barrenness, with here and there a native hut." (Ch.7, §4) The deforestation resulted in siltation from flash flooding which heavily damaged the coral reef and had a disastrous and lasting impact on the ability of the ecosystem to support the local population.
- The mid-1800s were a period of decline for Kawaihae. "The Reverend Lorenzo Lyons noted in 1841, while preaching in Kawaihae, that its population stood at 726 people, 300 less than the previous year. His letters attribute this decrease to its being such a "wretchedly poor place," offering so little to eat that families were forced to relocate to more fertile regions." (Handy, *Cultural Revolution in Hawai'i*, p. 5-6)
- "By 1890 Henry Whitney reported that: '*Kawaihae itself is a small village, which thirty years ago was of some importance, and did a considerable trade with the whalers that then visited it. It has dwindled very much since then. At present it is the landing for the cattle ranches of South Kohala*'." (Cordy, *A Study of Prehistoric Social Change*, p. 21, *op cit.*])
- A pier was constructed just north of Kawaihae village around 1937, and was used to berth interisland steamers, load cattle, and for other shipping purposes.
- Cattle drives from Parker Ranch lands in Waimea to the Kawaihae Wharf were a prominent feature of this era, as they had been in prior times, as the increasing population of military personnel and defense department requirements led to increased shipments of cattle through Kawaihae.
- Kawaihae's importance increased substantially as the United States ramped up to a wartime footing as WWII picked up, and Kawaihae had an exaggerated importance to the war effort. The Army installed a troop training camp in Waimea beginning in 1942 which housed up to 40,000 men. The troops shipped in and out through Kawaihae, which was also used for amphibious shore landing training exercises. The beaches were fenced with

barbed wire, the residents Home Guard trained on, maintained, and manned large shore guns to guard the shoreline against invasion, and cattle shipments through Kawaihae from Parker Ranch were increased as an important supply source to support the defense effort.

- The "April Fool's Day" 1946 tsunami destroyed the pier, the houses on the beach, and wiped out much of the village and many of the landmarks, and left behind a substantial quantity of water in low-lying areas, which became a long-term feature of the area.
- At the same time, the tsunami destroyed the numerous fishponds, wiping out commercial fishing, and flooded the old salt pan ground depression with water and debris. Most residents moved out. The flooded area created a brackish land-locked fish pond populated with mullet, but noted for its bad odor, due to stagnant water, trash accumulation from the tsunami, and algal growth, although there was apparently sufficient tidal infiltration for the water to rise and fall with the tides. Caught fish had to be moved and allowed to live in a clean water environment prior to consumption.
- Kawaihae's strategic importance was again recognized after devastation of the 1946 tsunami, and construction of a deep-draft harbor was recommended in 1949. The evictions and modifications were considered somewhat heavy-handed in the eyes of the local community, but many were already gone, and the action revitalized the harbor sufficiently to maintain its traditional and historic role as the commercial hub of north and west Hawai'i.
- The military presence increased again in the 1950s with additional development of Pohakuloa, and a presence was maintained at Kawaihae to watch over their assets.

Construction of the Modern Harbor: Kawaihae Harbor was initially constructed between 1957 and 1959 by the U.S. Army Corps of Engineers (USACE), as authorized under Section 101 of the National Rivers and Harbors Act of May 17, 1950. A 2,650'-long breakwater and navigational improvements to the harbor basin were completed in 1962. In 1969-70 the Army used conventional explosives in to break up coral from the large fringing reef just north of Pelekane Bay, and the area was dredged to create the deep-draft harbor and add an additional 850' breakwater. Coral dredged from the harbor was crushed and used as fill to produce a permeable sand-like surface treatment, and a dike, revetment, and breakwater were installed to create additional stable backland areas and a protected anchorage. Piers were installed to accommodate cargo movement and Army material transport. (See the photo overlay of 1950s and 1970 shoreline under Topography section on p. 3-7.)

Modifications to the existing deep-draft harbor and construction of a light-draft harbor within the south end of the deep-draft harbor was authorized under Section 301 of the Rivers and Harbors Act of October 1965, as recommended by the Chief of Engineers and documented in House Document No. 75, 89th Congress, 1st Session (Final EIS for Kawaihae Harbor, 1985, p.5). Direct barge service to Kawaihae began in 1982, and the channel and turning basin were deepened. Interisland container cargo began in 1986.

The State later requested the light-draft harbor be relocated outside the deep-draft harbor's main breakwater to a point on the southwest flank of the revetted (coral flats) fill area to separate these vessels from the commercial cargo operations. The USACE Nuclear Cratering Group completed additional construction in both the deep-draft harbor and the Kawaihae Small Boat Harbor / South (SBH/S) as part of Project Tugboat in December 1970. Additional construction on the SBH/S west and east breakwaters was completed in July 1998, with SBH/S on-shore improvements transferred to the State DLNR Division of Boating and Ocean Recreation (DoBOR) in July 1998. All off-shore improvements (all breakwaters and revetted moles) are maintained by and remain the property of the USACE.

Historic and Cultural Resource Assessment

The NHPA defines historic properties as "…any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places…."(16 USC 470w). For the purposes of this EA, the terms "historic properties" and "cultural resources" are used synonymously.

For the purposes of this analysis, significant cultural resources are those properties listed or eligible for listing in the National Register of Historic Places (NRHP). As defined in the implementing regulations for Section 106 of the NHPA, impacts of an undertaking on significant cultural resources are considered adverse if they "diminish the integrity of the property's location, design setting, materials, workmanship, feeling, or association" (36 CFR 800.5). Examples of adverse effects include, but are not limited to, the following:

- Physical destruction, damage, or alteration, of all or part of the property;
- Isolation of the property from, or alteration of the character of, the property's setting when that character contributes to the property's qualification for listing on the NRHP;
- Introduction of visual, audible, or atmospheric elements that are out of character with the property, or alter its setting;
- Neglect of a property resulting in its deterioration or destruction; and
- Transfer, lease, or sale of the property (36 CFR 800.5)

Consultation: As part of the consultations conducted for this Environmental Assessment, the following agencies and organizations have been afforded an opportunity to comment and recommend measures to avoid adverse effects on cultural resources:

- State Historic Preservation Officer (SHPD, Dept. of Land & Natural Resources)
- U.S. Department of the Interior, National Park Service (NPS)
- Office of Hawaiian Affairs (OHA)
- Department of Hawaiian Home Lands (DHHL)
- Historic Hawaii Foundation
- Hui Malama I Na Kupuna O Hawaii Nei

Existing Conditions / Nearby Historic and Cultural Sites: The Pu'ukoholā Heiau National Historic Site (NHS) (Site Number 10-05-4139, TMK: (3) 6-2-002: 009, 010, and 016) is located approximately 4,200 feet (0.8 miles) south of the project site. This 77-acre site, operated and maintained by the National Park Service, includes multiple historic landmarks, including Pu'ukoholā Heiau, Mailekini Heiau, the submerged Haleokapuni Heiau (shark heiau), and the John Young Homestead (across the highway, in the small conservation segment just north of the "270" north of the NHS on Fig. 6 on p. 5-7). The State has provided the undeveloped Pelekane Lands buffer zone area to permanently isolate the commercial harbor operations from the NHS, and has Cooperative Agreement HI-89-8 in effect to allow NPS to oversee this buffer area.

Prior Assessments and Archeological Reconnaissance: The *Hawai'i Commercial Harbors 2020 Master Plan Environmental Impact Statement* was prepared in 2001 to cover the proposed master planned improvements to the harbor, including the areas for the Proposed Action and Reasonable Alternative, and no historical or archeological sites were determined to exist, and no cultural practices were identified within the project area. The

preparation of the EIS included a comprehensive assessment of the Kawaihae region[36] by Cultural Surveys Hawai'i (CSH), drawing on previous archaeological and historic assessments of the area, including Kelly (1974), Kelly and Nakamura (1981), Barrere (1983), Clarke (1983), Clarke (1986), and Cultural Surveys Hawai'i's own prior work (1991). CSH also included oral histories of the Kawaihae Harbor area taken from Kawaihae residents, especially to determine if there would be any cultural practices which could be adversely affected (there were none). This archeological reconnaissance found *"... no historic or archeological sites within the harbor boundaries" (Cultural Surveys Hawai'i, 1991*, as recorded in the 2001 EIS).

Impacts: The Proposed Action and Reasonable Alternative are limited to paving action, the demolition and removal of one building, utilities relocation, and light installation. Visual impacts would be reduced by the removal of the OTS. No blasting or pile-driving would be required, nor any other action would produce seismic impacts. The harbor area was constructed on crushed coral fill material dredged from the harbor after blasting out a deep water turning basin, and has no original ground cover. Over 10 feet of fill material covers most of the original ground surface, so even if cultural deposits were present, there would be no impact unless excavations exceeded the depth of the fill layer.

Careful attention should be paid to the location of the original shoreline in the consideration of potential impacts. As shown on Photo 1 (p. 3-7, most of the project area is new land (recovered submerged lands), which was not dry land in the past. This can be clearly seen in the overlay photo, and the old shoreline is also illustrated on both the County TMK map and the *Subsurface Conditions* report by the Geotechnical consultant (Geolabs, Inc., September 22, 2008, included as Appendix C, and discussed in Section 3.2. Archeological impacts are only of potential concern when excavating past the fill layer mauka of this former shoreline. Therefore:

- All work on the 0.7 acre area is on fill land reclaimed from the sea; there is no underlying original dry-land area which could be uncovered by drilling or excavation, so no archeological impacts are expected or likely.
- Less than 40% of the 3.1-acre area on the northeast side is fill material on top of former fastland and beach area. This estimated 1.2-acre area is the only portion of the project area where original dry land ground soils could be encountered. In the test borings, only one spot was found which had less than 9.5 feet of fill over this original soil, and most areas had at least 11 feet of fill. Therefore, only drilling or excavation in this area has the potential to enter into a cultural layer, and no impacts are expected or likely as long as there is no excavation or disturbance of the cultural soil layer below the crushed coral fill layer. Insofar as the archeological reconnaissance found *"... no historic or archeological sites within the harbor boundaries"*, the possibility of significant impact is considered remote, however, 4 - 10 lightpoles must have 15-foot deep pedestal foundations installed, so a potential impact does exist for the 5-foot diameter holes drilled along the northeast boundary.
- Other than the area beneath the light poles on the *mauka* (northwest) portion of the 3.1 acre area to be repaved, no affect to historic or cultural properties is anticipated. Excavation for the *mauka* light poles could encounter cultural material

[36] Kawaihae Harbor is located in the lowland area of Kawaihae 2, known as "Hikina."

below the fill layer, and therefore may affect, but is unlikely to adversely affect historic or cultural resources.

Mitigation: For the *mauka* boundary area (the northwest 1.2 acre portion of the 3.1 acre baseyard area), contractors would only be allowed to conduct drilling or excavation which exceeds the depth of the fill layer under an approved Archeological Monitoring Plan. This plan may include additional mitigation such as test boring into original soil layers at the actual locations selected for light foundations, or other means to determine the possible presence of cultural materials at the light pole location prior to use of the bucket drills. Should cultural material be encountered, all work in that area will immediately cease, the area will be protected from further disturbance, and SHPD will be immediately contacted to determine the appropriate action and the appropriate treatment of any discovery. This requirement will be included in construction documents.

5.0 RELATIONSHIP OF THE PROPOSED PROJECT TO EXISTING PUBLIC PLANS, POLICIES, AND CONTROLS

This chapter describes the relationship of the proposed project to applicable public laws, regulations, plans, policies, and controls at the Federal, State, and County levels. Where key issues have compliance and mitigation discussions thoroughly addressed elsewhere in the document, this information is not repeated here.

5.1 Federal Policies and Controls

Section 1.4, Regulatory Overview discussed the triggers for this EA, and indicated compliance with Federal statutes and authorities, including:

- National Environmental Policy Act (NEPA) of 1969, 42 USC §4321, as amended and implemented by the CEQ "Regulations for Implementing NEPA", 40 CFR Parts 1500-1508. (Section 1.4.1)
- U.S. Department of Transportation (US-DoT) regulations and guidance implementing NEPA and other applicable federal regulations and directives, including Maritime Administrative Order 600-1 (MAO 600-1), DoT 5610.1C and contributing authorities, including Section 4(f), as originally codified in the DoT Act of 1966, and amendments set forth in Title 49 USC Section 1653(f), later as 49 U.S.C. Section 303, and currently codified under 23 CFR 774.
- Executive Order (EO) 13274, Environmental Stewardship and Transportation Infrastructure Project Reviews (especially streamlining processes), and its associated Memorandum of Understanding.
- Section 1309 of the Transportation Equity Act for the 21st Century.

Additional Federal plans, policies, and controls are discussed below.

5.1.1 Coastal Zone Management

The purpose of the Coastal Zone Management Act (CZMA) of 1972, as amended (16 USC §1451 *et seq.*) is to encourage states to manage and conserve coastal areas as a unique, irreplaceable resource. Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs see Section 5.2.5). These are then implemented under County oversight.

MARAD and H-DoT Harbors Division have completed an "effects" test per 15 CFR Part 930, Section 930.33(a)(1) and assessed reasonably foreseeable direct and indirect effects on Hawaii's coastal use and resources, reviewed relevant management program enforceable policies, and determined that the Proposed Action does not have significant foreseeable adverse coastal affects to Hawaii's defined coastal zone per 15 CFR 930, §930.35. This determination is based on comprehensive State master planning and a comprehensive review of harbors projects in the *2020 Plan EIS* and in Chapter 6 of this EA. Additional planning for future actions is underway, but pre-decisional, and will be documented under an EIS in compliance with Act 2 of the Session Laws of Hawai'i 2008, as discussed in Chapter 6.

5.1.2 Clean Water Act

The Federal Water Pollution Control Act (FWPCA), 33 USC §1251 -1387, is the Federal statute regulating the discharge of water pollution. Congress revised the FWPCA into the Clean Water Act (CWA) in 1972. The goals of the CWA included: (1) "the discharge of pollution into the navigable waters be eliminated by 1985," (2) "the discharge of toxic pollutants in toxic amounts be prohibited," and (3) an "interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and... recreation in and on the water... by July 1, 1983" (CWA §101(a), 33 USC §1251(a)).

Section 401 of the CWA requires a Water Quality Certification (WQC) be obtained from the State (or territory) for actions that require a Federal permit to conduct an activity, construction or operation that may result in discharge to waters of the United States. The State of Hawai'i Department of Health, Clean Water Branch (DoH-CWB) issues the WQC for Hawai'i waters.

Section 402 of the CWA requires a National Pollution Discharge Elimination System (NPDES) general permit for point source discharges including storm water discharges associated with construction activities. The permit would be required if construction activities disturb a land area of 1 acre or more and discharge storm water from the construction site to waters of the U.S. The DoH-CWB issues the NPDES for Hawai'i waters.

This project does not require a Section 401 WQC but will require a Section 402 NPDES, as discussed under Section 3.3.

5.1.3 Section 4(f) of the Department of Transportation Act

The Department of Transportation Act (DoT Act) of 1966 included a special provision - Section 4(f) - set forth in Title 49 United States Code (U.S.C.), Section 1653(f), which stipulated that the Federal Highway Administration (FHWA) and other DoT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of land, and the action includes all possible planning to minimize harm to the property resulting from use. Under the1983 recodification of the DoT Act, Section 4(f) became 49 U.S.C. Section 303. After several modifications to simplify the process and the approval of projects that have only *de minimis* impacts on lands impacted by Section 4(f), FHWA issued a Final Rule on Section 4(f) on March 12, 2008, clarifying the 4(f) approval process, simplifying its regulatory requirements, and moving the Section 4(f) regulation to 23 CFR 774.

Neither the Proposed Action and Reasonable Alternative utilize land from parks, recreational areas, wildlife or waterfowl refuges, or public and private historical sites, and are therefore do not require Section 4(f) review and approval.

5.1.4 Coral Reef Conservation Amendments Act of 2007

Coral Reef Conservation Amendments Act of 2007 (16 USC §6401 et seq.) amends the Coral Reef Conservation Act of 2000 to extend the awarding of coral reef conservation grants to projects addressing emerging priorities or threats, including monitoring and assessment, research, pollution reduction, education, and technical support. It authorizes NOAA to undertake or authorize actions to minimize injury to coral reefs or coral ecosystems from vessel impacts, derelict fishing gear, vessel anchors and anchor chains, and unforeseen or disaster-related circumstances. It includes activities designed

to minimize the likelihood of reef damage in the activities that may be taken under an existing program to conserve coral reefs and reef ecosystems. The original 2000 Act established the U.S. Coral Reef Task Force to coordinate Federal actions to preserve and protect coral reef ecosystems. For purposes of the Act, "coral reef" means any reef or shoal composed primarily of corals.

This project proposes no in-, on- or under-water work which would affect coral reefs, as discussed under Section 3-7.

5.1.5 Executive Order 13089, Protection of Coral Reefs

Executive Order 13089, Protection of Coral Reefs, directs all Federal agencies whose actions may affect U.S. coral reef ecosystems to (in part): Identify their actions that may affect U.S. coral reef ecosystems; Utilize programs and authorities to protect and enhance the condition of such ecosystems; and Ensure, to the extent permitted by law, that any actions they authorize, fund or carry out will not degrade the conditions of such ecosystems.

The coral reefs around Kawaihae Harbor were partially demolished during original construction over a half-century ago. However, This project proposes no in-, on- or under-water work which would affect coral reefs or degrade coral reef ecosystems, as discussed under Section 3-7, and is therefore not subject to the provisions of EO 13089 or the Coral Reef Conservation Amendments Act of 2007.

5.1.6 Executive Order 11988, Floodplain Management

Executive Order No. 11988 (May 24, 1977, 42 F.R. 26951) requires each Federal agency to determine whether the Proposed Action would occur in a floodplain, to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains when (1) acquiring, managing. And disposing of Federal lands and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use.

The Proposed Action and Reasonable Alternative both lie in Zone X (areas determined to be outside the 500-year flood plain) and VE (a designated flood hazard zone subject to high velocity wave action) on FEMA Flood Insurance Rate Maps.

The Proposed Action and Reasonable Alternative will both remove a structure that lies partially in the VE Zone, thus reducing the likelihood of damage connected with a tsunami.

5.1.7 Executive Order 13123, Greening the Government Through Efficient Energy Management

Executive Order 13123 (3 June 1999) requires the Federal government to improve its energy management for the purpose of saving taxpayer dollars and reducing emissions that contribute to air pollution and global climate change. Federal agencies are required to reduce greenhouse gas emissions; reduce energy consumption per square foot of facility; strive to expand use of renewable energy; reduce the use of petroleum within its facilities; and reduce water consumption.

The Proposed Action and Reasonable Alternative would both comply with the EO by eliminating 11,200 sf of building space which is no longer required, eliminating all future repair and maintenance expense and all building energy use, and significantly improves the flow of cargo through the area. The Proposed Action (only) would further improve the efficiency of port operations by paving the 3.1-acre baseyard area to enable storage use (which has significant worker safety issues and is considered too dangerous for cargo storage in the present configuration). This will contribute to more efficient movement of cargo on to and off of the commercial harbor, and anticipated significant future reductions in fugitive dust emissions from operations from the site.

As explained, yard lighting is required for worker safety, per OSHA requirements, during the anticipated 7 non-daylight hours per week when the yard will be active. Low-level lighting is now required for port security under Homeland Security requirements, which will pose additional energy demands unrelated to operations in this yard.

5.1.8 Executive Order 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition

Executive Order 13101 (14 September 1998) is intended to improve the Federal government's use of recycled products and environmentally preferable products and services. It states that pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort.

The Proposed Action would incorporate efficient waste handling and provisions for recycling waste products. Demolition debris and construction waste would be recycled to the maximum extent possible. The remaining demolition debris and construction waste would be disposed of at an approved construction and demolition landfill by the contractor. The No Action Alternative would create no waste.

5.1.9 Executive Order 12898, Environmental Justice

Executive Order 12898 (11 February 1994) requires the federal government to identify and address the potential for disproportionately high and adverse human health and environmental effects of their actions on minority and low-income populations.

The Proposed Action and Reasonable Alternative sites are located within the working commercial waterfront industrial area. This area was originally selected due to its favorable location, available land, and long-standing traditional use as an anchorage and commercial port-of-call, and both alternatives are relatively minor housekeeping actions which increases the efficiency of this continued industrial waterfront use. The Proposed Action will produce long-term beneficial air quality improvements for the nearby residential community. Only short-term construction period noise and air quality impacts could disproportionately affect minority or low-income populations or housing, or to raise environmental justice concerns, and these will be mitigated to the maximum possible extent, as discussed in Sections 3.4 and 3.5. The Reasonable Alternative or No Action Alternative, if selected, would avoid paving the 3.1 acre baseyard area, and would NOT gain the significant beneficial impacts on downwind properties by continuing to expose them to the adverse affects of heavy fugitive dust and compromised air quality (i.e., particulate matter probably exceeding Federal and State regulatory levels) when this baseyard area is used for container staging, storage, or other vehicle transit during periods when winds are blowing toward housing. Therefore, the larger scope of the

Proposed Action is preferable due to lesser concerns with potential Environmental Justice complaints by downwind residents.

5.1.10 Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks

Executive Order 13045 (21 April 1997) requires Federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children; and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health or safety risks.

Children do not frequent the sites of the proposed improvements, which are secured locations, but do live across the street. No alternative would be likely to directly or cumulatively introduce toxic or hazardous chemicals, organic substances or solid wastes into bodies of water, into the air, onto land or into groundwater, other than the occasional fugitive dust problem discussed with this EA. There may be small quantities of hazardous materials at either site, but under the Proposed Action or Reasonable Alternative, should hazardous or regulated materials be encountered, removal and disposal would be performed to minimize exposure or release to the environment, in accordance with State and Federal requirements. Under the No Action Alternative, any hazardous materials present in the facility would not be disturbed.

There are children living directly across the street from the harbor, and the Proposed Action will produce long-term beneficial air quality improvements for the children living nearby. Only short-term construction period air quality impacts could create potential environmental health risks, and these will be mitigated to the maximum possible extent, as discussed in Sections 3.4. The Reasonable Alternative or No Action Alternative, if selected, would avoid paving the 3.1 acre baseyard area, and would not gain the significant beneficial air quality improvements, and would continue to expose neighborhood children to the potential health risks of heavy fugitive dust and compromised air quality. Therefore, the larger scope of the Proposed Action is preferable due to lesser concerns with potential Environmental Justice complaints by downwind residents.

5.1.11 Executive Order 13148, Greening the Government Through Leadership in Environmental Management

Executive Order 13148 (21 April 2000) requires Federal agencies to meet goals and requirements in the following areas: environmental management; environmental compliance; right-to-know and pollution prevention; release and use reductions of toxic chemicals and hazardous substances; reductions in ozone-depleting substances; and environmentally beneficial landscaping.

Under the Proposed Action and Reasonable Alternative, removal and disposal of all demolition or construction debris containing hazardous substances would be performed according to State and Federal requirements. Under the No Action Alternative, any hazardous materials present in the facility would not be disturbed.

5.2 STATE OF HAWAI'I

5.2.1 State Land Use District

Under the provisions of *Hawai'i Revised Statutes* (HRS) Chapter 205, the State Land Use Commission classifies all lands in the State of Hawai'i under one of four land use districts: (1) Conservation; (2) Agriculture; (3) Urban; and (4) Rural. The project site lies within the Urban District, as classified by the State Land Use District map (Fig. 6), so this is an appropriate use and no land use permit is required by the State.

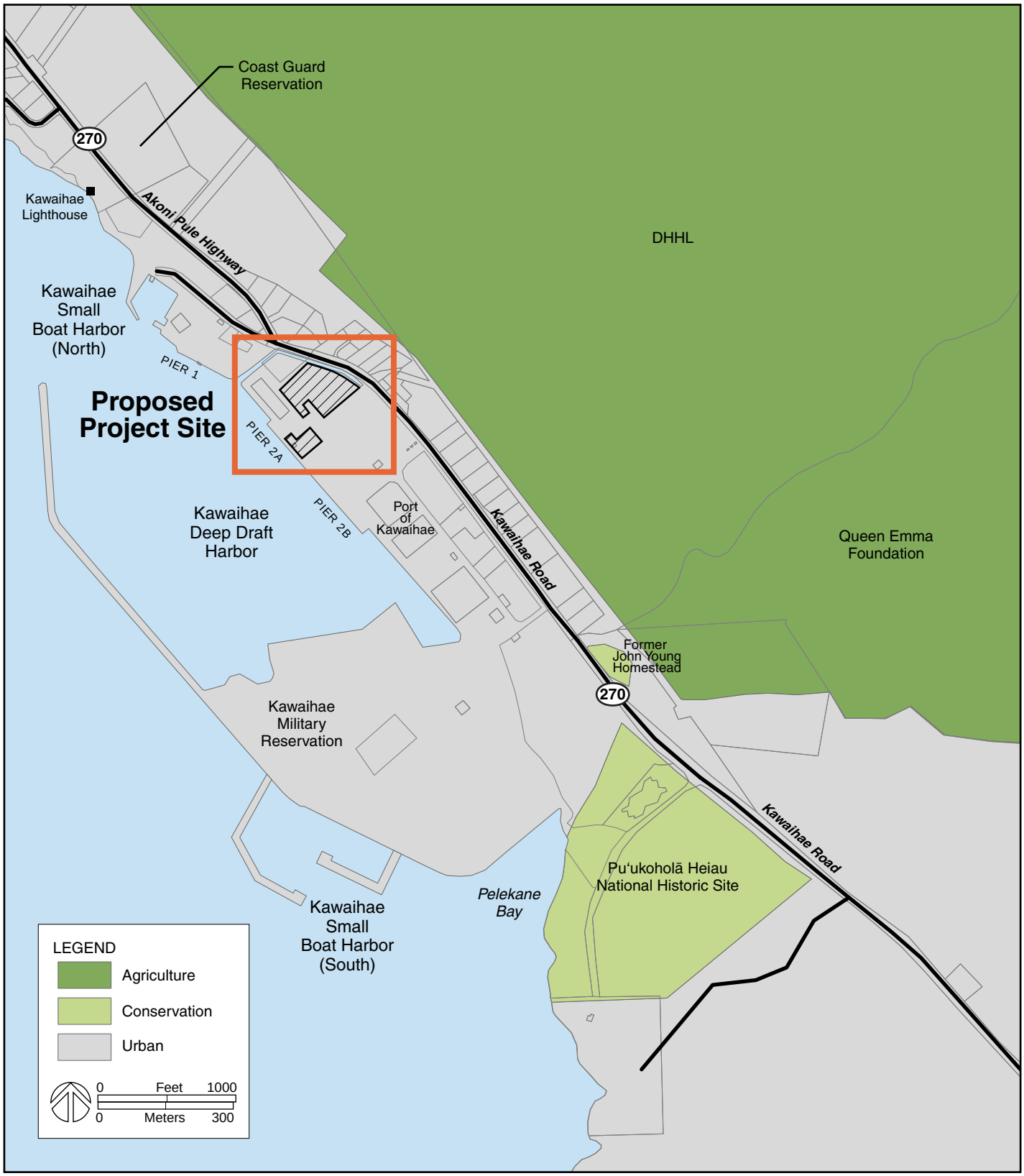
Land Use Compatibility: Kawaihae Harbor has been a major trading port since pre-contact times, and has been devoted to the use of – and continually modified to support – the ever-evolving commercial harbor operations since the development of the modern harbor in the late 1950s. The proposed H-DoT / Harbors improvements are master planned and the *2020 Master Plan* has already been reviewed through the complete EIS process in 2001. This action would improve the functional and operational characteristics of the working waterfront with no change in land use. This site has been protected from encroaching incompatible land uses, and all land within the harbor boundary is under State control. Thus, none of the alternatives would constrain or be constrained by operations on neighboring land. No land use changes are proposed or required, and there are no significant direct, indirect, short-term, or long-term land use compatibility impacts from any of the alternatives.

Admission Act (Public Law 86-3) (Ceded Lands): Harbors Division Property Management records indicate portions of Kawaihae Harbor are located on ceded lands, including former Crown and Government lands and submerged lands (which are also considered part of the ceded lands trust). The Admission Act (Public Law 86-3, signed in 1959, admitting Hawai'i as the fiftieth state of the Union) Section 5 transfers title to 1.4 million acres of ceded lands the State, to be held as a public trust for purposes identified under Section 5(f), including public improvements. The proposed improvements to the harbor are consistent with these specifically-authorized public purposes.

5.2.2 Hawai'i State Plan – General

The *Hawai'i State Plan*, established through the State's legislative process in the Hawai'i State Planning Act (Chapter 226, HRS) establishes a framework for the planning and coordination of major state and county activities and investments. Part I details the State's long-range goals, objectives, policies and priorities, Part II establishes a statewide planning system to coordinate and implement the plan, and Part III establishes priority guidelines to address areas of statewide concern. Under Chapter 226-1, HRS, Findings and Purpose, the State Plan:

> *"... shall serve as a guide for the future long-range development of the State; identify the goals, objectives, policies, and priorities for the State of Hawai'i; provide the basis for determining priorities and allocating limited resources, such as public funds, services, manpower, land, energy, water, and other resources; improve coordination of state and county plans, policies, programs, projects, and regulatory activities; and establish a system for plan formation and program coordination to provide for an integration of all major state and county activities"* (Chapter 226-1, HRS;).



State Land Use District **Figure 6**

Elements of the *Hawai'i State Plan* relevant to the project include the following

HRS Section 226-7 Objectives and policies for the economy – agriculture.

(a) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:

(2) Growth and development of diversified agriculture throughout the State.

(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.

Discussion: The State Agricultural Functional Plan (1991) intended to facilitate implementation of these agricultural objectives recognizes agriculture as a key sector of Hawai'i's economy. It calls for improved effectiveness in marketing for Hawai'i-grown agricultural commodities and the development of new value added products for local, visitor industry, and export markets.

The Proposed Action is consistent with and supports the long-range agricultural goals, objectives, policies and priorities of this act and the Agricultural Functional Plan. Kawaihae Harbor is critical infrastructure which supports agricultural enterprises and production, both for outgoing sales and incoming goods for consumption. The Proposed Action support the improvement and expansion of infrastructure critical to providing reliable sea-borne cargo-handling capacity required for the export of Hawai'i-grown crops, meat products, livestock, ornamentals, and new value added products, and allows cost-effective transport of Hawai'i products to neighbor islands or to overseas destinations. It also provides import security, and helps maintain a back-up port capability in case of natural disaster or other event which might disrupt the flow of freight from Hilo Harbor. The Reasonable Alternative is supportive, but at a far lesser level. The No Action Alternative would do nothing to maintain, repair, and improve aging infrastructure, which is of insufficient capacity to provide for the future security of island residents and agricultural enterprises.

HRS Section 226-10 Objective and policies for the economy – potential growth activities.

(a) Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth activities that serve to increase and diversify Hawai'i's economic base.

(b) To achieve the potential growth activity objective, it shall be the policy of this State to:

(1) Facilitate investment and employment in economic activities that have the potential for growth such as diversified agriculture, aquaculture, apparel and textile manufacturing, film and television production, and energy and marine-related industries.

Discussion: The Proposed Action (and, to a far lesser extent, the Reasonable Alternative) support growth activities that serve to increase and diversify Hawai'i's economic base per 226-10(a), as well as facilitating investment and employment in economic activities that have the potential for growth, especially diversified agriculture, aquaculture, and marine-related industries. It supports both small farmers and larger agricultural / aquacultural industries, investment in and expansion of a diversified economic base, and the success of innovative new ventures promoting sustainable economic development promoting Hawaiian products which cast Hawai'i in a favorable context. No Action offers no support.

HRS Section 226-14 Objectives and policies for facility systems – in general.

(b)(1): Accommodate the needs of Hawai'i's people through coordination of facility systems capital improvement priorities in consonance with state and county plans.

Discussion: The Proposed Action (and, to a far lesser extent, the Reasonable Alternative) support capital improvement priorities to maintain essential public infrastructure required to sustain the population, economy, and diversified growth (and other) goals, consistent with State and County planning, as described in the State and County sections of this chapter.

5.2.3 Hawai'i State Plan – Transportation Functional Plan

The *Hawai'i State Plan*, via the Hawai'i State Planning Act (Chapter 226, HRS) called for the development of a range of State functional plans to establish State policy priorities and objectives in a range of key policy areas, and to formulate strategies to implement these priorities. The State Transportation Functional Plan (1991) identified issues, objectives, and policies critical to the transportation sector, stating: "*Our transportation systems are our lifelines for the goods, business trade, and services essential to our community's well-being and survival. In an island state, these lifelines must be secure and function well.*" It went on to point out critical issues, stating: "*... we can no longer afford to defer the expansion of existing infrastructure, the replacement of aging infrastructure, or the maintenance of these vital systems.*" The Plan also specifically seeks to reduce congestion via Policy I.A.1.: "*Increase transportation capacity and modernize transportation infrastructure in accordance with existing master plans ...*".

A few key objectives and policies of the enabling legislation included the following:

HRS Section 226-17 Objectives and policies for facility systems – transportation.

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

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

(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.

(b) To achieve the transportation objectives, it shall be the policy of this State to:

(4) Provide for improved accessibility to shipping, docking, and storage facilities;

(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;

(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;

(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;

(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;

(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;

(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives.

Discussion: The Proposed Action (and, to a far lesser extent, the Reasonable Alternative) support the entire range of listed objectives, allocating capital improvement funds to maintain and improve essential public infrastructure. Specifically, it facilitates efficient, economical, safe, and convenient movement of goods; provides port improvements for access between barges, docks, and storage; accommodates community needs as they develop; facilitates a variety of carriers to offer competing services for the interisland movement of goods; increases the capacity of harbor systems and support facilities to effectively accommodate transshipment and storage needs; encourages transportation systems which accommodate statewide economic growth and diversification; encourages safe and convenient use of low-cost, energy-efficient, and minimally polluting means of transportation; and promotes the timely delivery of supporting transportation infrastructure in order to accommodate growth as it occurs.

5.2.4 State Environmental Policy

Chapter 344 HRS, the State Environmental Policy, establishes guidelines to balance the implementation of environmental policy within the State of Hawai‘i, with applicable guidelines stating:

Section *344-1 Purpose*. *The purpose of this chapter is to establish a state policy which will encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawai‘i.*

Section *344-4 Guidelines.* *In pursuance of the state policy to conserve the natural resources and enhance the quality of life, all agencies, in the development of programs, shall, insofar as practicable, consider the following guidelines:*

(5) Economic development.

(A) Encourage industries in Hawai‘i which would be in harmony with our environment;

(B) Promote and foster the agricultural industry of the State; and preserve and conserve productive agricultural lands;

(D) Encourage all industries including the fishing, aquaculture, oceanography, recreation, and forest products industries to protect the environment;

(6) Transportation.

(A) Encourage transportation systems in harmony with the lifestyle of the people and environment of the State;

(C) Encourage public and private vehicles and transportation systems to conserve energy, reduce pollution emission, including noise, and provide safe and convenient accommodations for their users.

Discussion: The Proposed Action is consistent with the environmental protection guidelines of HRS 344-4. The Proposed Action carries out the planned agenda of H-DoT and MARAD to improve transportation security on the island of Hawai‘i. It is the most efficient, lowest impact transportation system available, for which there is no practical alternative. Economic development programs on the Big Island are largely dependent upon cost-effective transportation to move goods to market, and supporting the needs of the population, and of the businesses who depend on sea-borne transport to bring in the goods, and provide jobs for local residents. Maintaining transport capacity supports Big Island agriculture, new industries which are in harmony with the

environment, disaster relief capacity, and the security of the island population, and state-wide self-sufficiency objectives which further reduce dependence on fossil fuels.

The Reasonable Alternative provides less support for these objectives. The No Action Alternative would not provide the needed improvements to fully support the above-cited objectives.

5.2.5 Coastal Zone Management

The objectives of the Hawai'i Coastal Zone Management (CZM) program are set forth in Chapter 205A, HRS. The objectives of the program are intended to promote the protection and maintenance of valuable coastal resources. All lands in Hawai'i are classified as valuable coastal resources. The CZM objectives and policies (Section 205A-2) applicable to the project are cited and discussed below.

- *Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources;*
- *Provide public or private facilities and improvements important to the State's economy in suitable locations;*
- *Improve the development review process, communication, and public participation in the management of coastal resources and hazards;*
- *Ensure that new developments are compatible with their environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.*

Discussion: The Proposed Action and Reasonable Alternative involve upgrades to vital community infrastructure within an industrial zone master planned for this long-standing use. It would provide planned and desirable improvements at Kawaihae Harbor, a State harbor facility of vital importance to the State's economy in the most suitable location in West Hawai'i. This action directly supports the objective of *providing public or private facilities and improvements important to the State's economy in suitable locations*.

Although the original development of the harbor in the late 1950s did cause significant alteration of natural landforms and existing public views to and along the shoreline, this was accomplished to meet an essential public purpose for which there were limited alternatives, and which provide substantial public benefit. The Proposed Action and Reasonable Alternative would not degrade scenic or open space resources, and will improve the scenic environment by eliminating a large Overseas Transit Shed which is no longer required. The *Hawai'i Commercial Harbors 2020 Master Plan EIS*, completed in (2001), provided an opportunity for comprehensive public review of the overall, long-term program of improvements, in compliance with HRS 205A-2 as well as public participation in the management of this important coastal resource.

The Proposed Action is limited to 3.8 acres within the industrial area designated for commercial container cargo operations, and would have a net positive effect on this designated use of the coastal resources of Kawaihae Harbor. It would not have reasonably foreseeable direct or indirect adverse short term or long term effects on other coastal uses or resources of the State's coastal zone. The project is set back from the shoreline, and will not involve alterations to the coastline, stream channels, or other water bodies or water sources. Consultation with the Hawai'i Coastal Zone Management Program confirmed that H-DoT Harbors projects are not subject to a CZMA federal consistency review and approval.

5.3 COUNTY OF HAWAI'I

5.3.1 General Plan

The *County of Hawai'i's General Plan*, (2005), promotes land use objectives to 1) designate and allocate land uses in appropriate proportions and mix and in keeping with the social, cultural, and physical environments of the County, 2) protect and encourage the intensive and extensive utilization of the County's important agricultural lands, and 3) protect forest, water, natural and scientific reserves and open areas. The Plan, under Standards, delineates designated land uses through the use of the Land Use Pattern Allocation Guide (LUPAG) maps, as the graphic expression of the General Plan policies relating to land use. The 0.7-acre currently occupied by the OTS is designated as Open Area and will be repaved and left open after OTS removal. The 3.1-acre area is designated for industrial use on the LUPAG map (Fig. 7). Both designations are compatible with the proposed use, and no land use amendment would be required.

5.3.2 Hawai'i County Zoning

The project site is located entirely within the County of Hawai'i General Industrial - 1 acre (MG-1a), Zoning District (Fig. 8). As described in the Hawai'i County Code, Chapter 25, Zoning, Section 25-5-150. *Purpose and applicability*, states: "*The MG (general industrial) district applies to areas for uses that are generally considered to be offensive or have some element of danger*", as would be appropriate for the secure loading and unloading of heavy cargo in a secured, limited-access area. A list of permitted uses are enumerated under Section 25-5-152. *Permitted uses:*

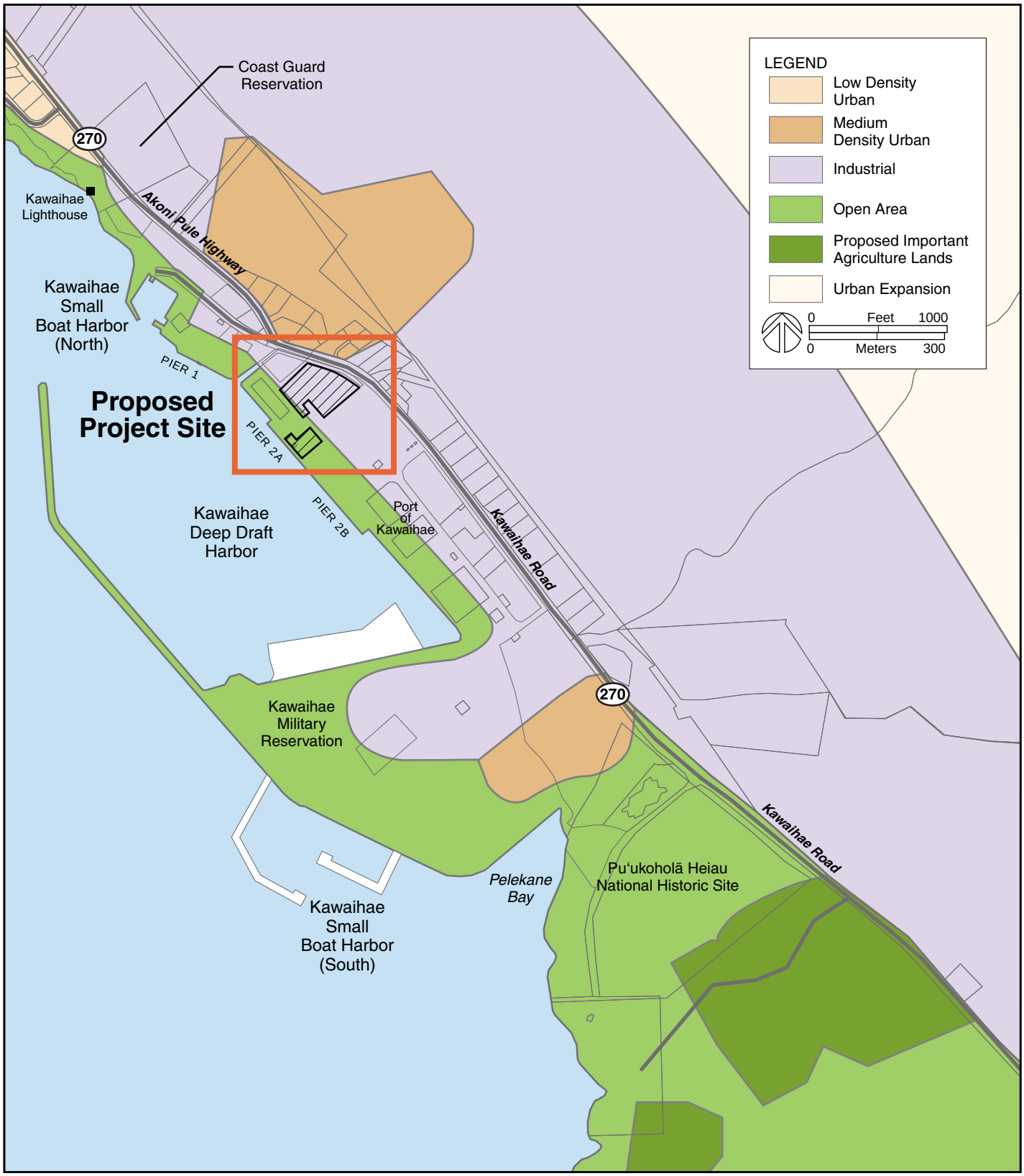
(a) The following uses shall be permitted in the MG district:
- (7) Automobile and truck storage facilities.
- (23) Contractors' yards for equipment, material, and vehicle storage, repair, or maintenance.
- (31) Freight movers.
- (43) Marine railways, drydocks, and ship or boat yards.
- (60) Transportation and tour terminals.
- (61) Truck, freight and draying terminals.
- (67) Yacht harbors and boating facilities.

(c) Any other use not otherwise permitted in subsection (a) that relates to the manufacturing, transportation, processing, assembling, distributing, repairing, and storage of goods, products, or materials, shall be permitted in the MG district.

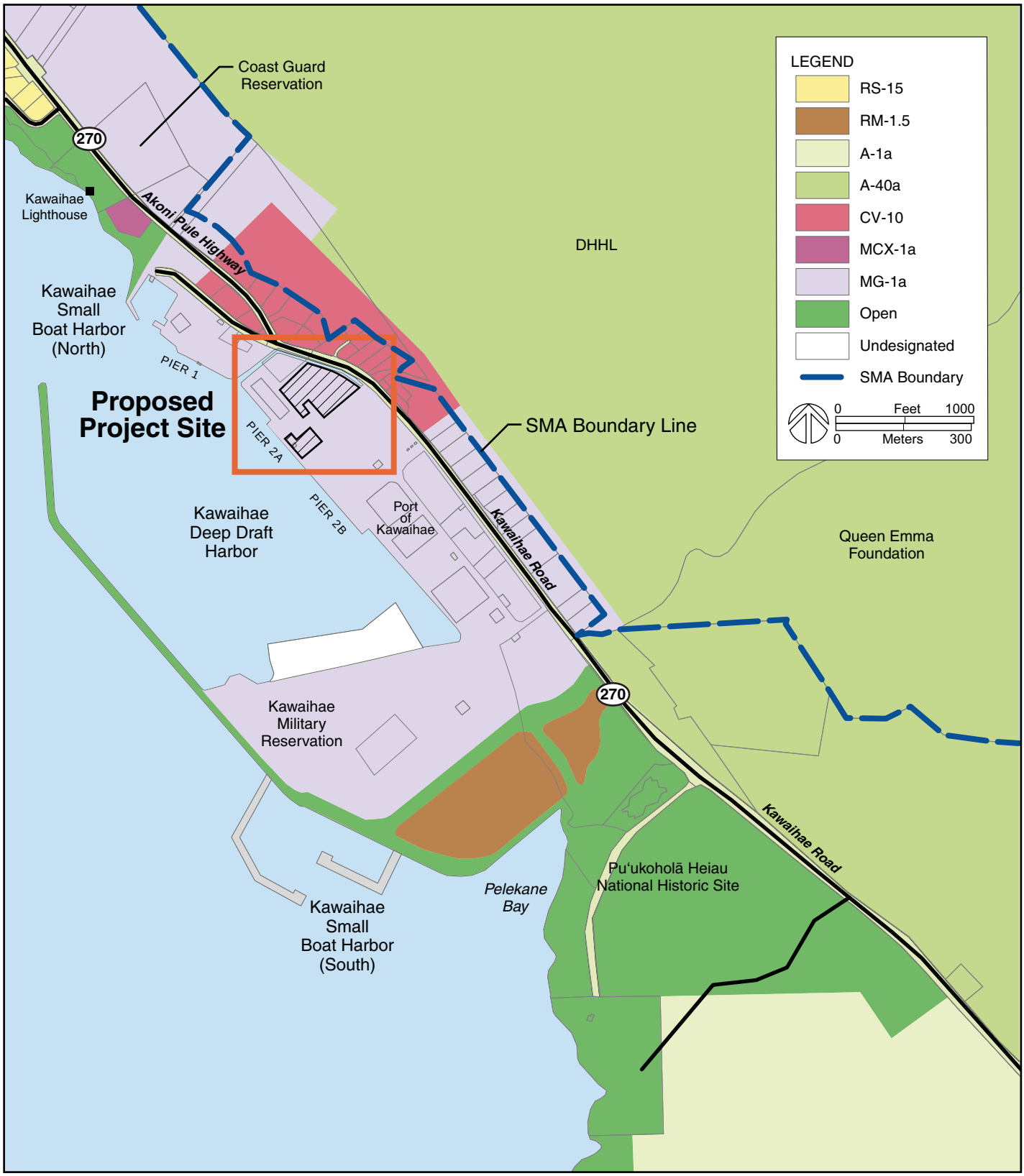
A State harbor facility, with its multiple compliant uses, clearly falls within the permitted use according to County Zoning, and no amendments or approvals would be required..

5.3.3 Special Management Area

The entire Kawaihae Harbor area is within the County's Special Management Area (SMA) boundary (Fig. 8), but is not subject to SMA oversight by the County. HRS Chapter 266-2(b) states: *Notwithstanding any law or provision to the contrary, the Department of Transportation is authorized to plan, construct, operate, and maintain any commercial harbor facility in the State, including, but not limited to, the acquisition and use of lands necessary to stockpile dredged spoils, without the approval of county agencies*. As a State harbor facility, no SMA permit is required.



County Land Use Plan Allocation Guide Map **Figure 7**



County Zoning/SMA Boundary **Figure 8**

5.3.4 Hawai‘i County Code, Chapter 14, Article 9, Outdoor Lighting

The *Hawai‘i County Code*, Chapter 14, Article 9 specifies standards for outdoor lighting, which Section 14-50 applies to the installation of all outdoor lighting fixtures within the County. Section 14-52, General requirements, part (a) Standard source, states that "*Low pressure sodium lamps shall be the only light source permitted for all Class II type outdoor light fixtures*.", which Section 14-51 characterizes as "... *outdoor lighting used for, but not limited to, illumination for walkways, roadways, equipment yards, parking lots, outdoor security, and other similar applications in which general illumination of the grounds is the primary concern.*" Section 14-51(a)(8) defines "Partially shielded" as meaning "*... the outdoor lighting fixture is constructed so that at least ninety percent of the light emitted by the fixture is projected below the horizontal plane of the lowest point of the fixture.*" Section 14-55 indicates that Class II lighting using partially shielded Low Pressure Sodium lamps has no restrictions on hours or operations.

The Proposed Action and Reasonable Alternative include lighting that conforms to these requirements.

5.4 Relationship of Short-Term Uses and Long-Term Productivity

This section lists the trade-offs between short-term and long-term gains and losses due to the Proposed Action. "Short-term" refers to the construction period; "long-term" refers to the operational period.

The Proposed Action and the Reasonable Alternative would have the following short- and long-term gains and losses, although the Reasonable Alternative would provide only minimal support:

<u>Short-term</u>

- Short-term construction period impacts on air quality, noise, and traffic
- Short-term economic gains associated with the employment created by the construction contracts
- Short-term impacts on harbor operations

<u>Long-term</u>

- Long-term support for economic growth and diversification associated with the employment created by existing and new export businesses, including diversified agriculture and deep-sea water sales
- Long-term support for economic stability by maintaining the existing harbor infrastructure and conditions to promote efficient operations
- Long-term improvements in port capacity and ability to buffer port operations at Hilo Harbor, and readiness to support disaster relief and national security

The No Action Alternative would have hidden continued long-term costs imposed by lower efficiency and an inability to accommodate essential demand elements, including (but not limited to) seasonal peak (or other surge) requirements, expanded shipping (especially business export) needs, and emergency reserve capacity to support national and regional emergency operations requirements.

5.5 Irreversible and Irretrievable Commitment of Resources

Resources that are committed irreversibly or irretrievably are those that cannot be recovered if the proposed project is implemented.

The Proposed Action and the Reasonable Alternative provide flexible open operations and container handling space, plus additional container staging / storage space (Proposed Action only), and do not irretrievably and irreversibly alter the existing property, but do commit fiscal resources, labor, construction equipment, and materials to improve the existing harbor facility.

The No Action Alternative would avoid any alteration of the property or commitment of fiscal resources, but would not support the Purpose and Need for the project.

5.6 Energy Requirements and Conservation Potential

The Proposed Action would have a net increase in the energy budget during the demolition and removal of the OTS and the construction of paving and utility (principally lighting) improvements. Operational power consumption may be slightly reduced by the elimination of the OTS, but will be offset by the addition of a light pole in its place, and will increase due to yard lighting of the 3.1 acre area (Proposed Action only). This lighting will only be used at full power when the yard is active – currently about 7 hours per week – and is essential for worker safety. Low (twilight-level) lighting (less than 10% of normal power draw) is currently required for harbor security, so this security lighting will represent an increase in the energy budget, but the requirement for this lighting addresses Homeland Security concerns rather than operational needs introduced by the Proposed Action or Reasonable Alternative.

The Reasonable Alternative and No Action Alternative would result in a lesser expenditure of energy for construction and yard lighting, but would result in minimal saving in the long-term energy budget due operating at a lower level of efficiency and would introduce significant worker safety and fugitive dust concerns at times when use of the 3.1 acre yard is necessary. Without the additional yard lighting, the Reasonable Alternative and No Action Alternative would avoid the cost of security lighting, which would therefore not increase energy requirements, but the Homeland Security lighting needs will remain unmet.

The No Action Alternative would significantly compromise the operational efficiency and safety of port operations, and increase energy consumption for the movement of cargo around the existing OTS.

6.0 CUMULATIVE AND SECONDARY IMPACTS

Overview: Cumulative impacts on environmental resources result from the incremental effects of development and other actions, evaluated in conjunction with other government and private past, present, and reasonably foreseeable future actions. Cumulative impacts can result from actions which are individually minor, but collectively significant, and which take place over a period of time. The analysis of cumulative impacts considered the objectives of statewide upgrades to H-DoT facilities, and the needs of the island of Hawai'i in particular.

Secondary (or indirect) impacts are caused by the Proposed Action and are later in time or further removed in distance, but are still reasonably foreseeable. These uncertainties can be imposed by trends (reasonably foreseeable) and events (often unforeseen). Secondary and indirect impacts may include growth-inducing and other effects related to induced changes in patterns of land use, population density, growth rate, and/or related effects on air and water quality, natural systems, and ecosystems.

Existing Conditions: Harbors facilities statewide are planned for major upgrades. This is a long-term plan, documented under the notional *Hawai'i Commercial Harbors 2020 Master Plan*. This plan was approved, published (1998), and had its probable impacts disclosed and publicly reviewed under Hawai'i's Chapter 343 Environmental Impact Law in the *Hawai'i Commercial Harbors 2020 Master Plan Environmental Impact Statement* (2001). That plan included paving the entire baseyard *mauka* (inland) of Pier 2 (seen on Fig. 2 as the sand-colored area between Kawaihae Road and Pier 2), including both areas included in the Proposed Action, and running north to the MidPac fuel tank farm and south to the entry road. The area south of the 3.1 acre area has already been paved (as shown on drawing C-5 from project HC 5313 in Appendix B). The current action differs from the earlier plan in the designation of the current project areas for interisland rather than overseas cargo, and did not include OTS demolition and reconfiguration of the Pier 2 area. Additional input from several of the major harbor users (the Hawai'i Harbor User's Group (HHUG, not the same as the prior users group)) resulted in a revised and more elaborate proposal, known as the *Hawai'i Harbors Modernization Plan* (HHMP, announced December 2007). The HHMP, as proposed, would entail a 6-year plan with statewide capital expenditures of $842 million[37] broken down roughly as follows:

- Maui: Kahului Harbor - $345.1 million
- O'ahu: Honolulu Harbor - $257.3 million
- O'ahu: Kalaeloa Harbor - $57.9 million
- Hawai'i: Hilo Harbor - $61.4 million
- Hawai'i: **Kawaihae Harbor - $87.8 million**
- Kaua'i: Nawiliwili Harbor - $10.3 million

The total upgrades to Kawaihae Harbor, as envisioned in the Modernization Plan (currently under revision for the upcoming *Hawai'i Commercial Harbors 2035 Master Plan*), were estimated at $87.8 million, and included the following long-term projects:

[37] Proposed amount from 2007. The revised current estimate is expected to be closer to $625 million based on informal communication, but the current plan is under revision and there is no current published source to cite.

- Expansion of barge and terminal improvements at Pier 2.
- A southern extension of Pier 2 to provide additional overseas operational area.
- Construction of a new multi-use Pier 4.
- Site improvements to allow the development of liquid bulk storage facilities.

Direct Impacts: The first priority on an island physically remote from most of the food and consumable goods which support life is to keep the vital commercial interisland container cargo operations running efficiently. The Proposed Action and Reasonable Alternative both include the most vital and time-critical portion of the first item: the removal of an earthquake-damaged shed impeding current operations and the repair of earthquake-settled pavement (a maintenance issue). The only "expansion" is limited to paving an existing 3.1 acre baseyard, and this action is not included in the Reasonable Alternative. The OTS removal and 0.7-acre apron area repaving action will cost an estimated $3 million, and is included in both the Proposed Action and Reasonable Alternative. This action will have the direct effect of increasing the efficiency of port operations by freeing up space for operations at Pier 2A. The later action to pave an additional 3.1-acre baseyard area (Proposed Action only) will provide a direct improvement in baseyard container-handling capacity, and will cost an additional $19 million. These proposed actions are a direct response to a growing critical need.

Other Planned Upgrades: Interisland Ferry: Under the provisions of Act 2, Session Laws of Hawai'i 2008, planning, engineering, and environmental studies are presently underway to address the potential environmental impacts associated with the operations of a high-speed, large-capacity interisland ferry system throughout the state, including Kawaihae Harbor. Ferry service is intended to accommodate expedient transit of both passengers and vehicles including (but not limited to) the current interisland ferry service operated by Hawai'i Superferry (HSF).

The large-capacity ferry operations and related projects, and the cumulative impacts there from, will be considered in the *Statewide Large-Capacity Ferry EIS* being prepared for the separate and unrelated project, pursuant to Act 2, and are not specifically addressed in this Draft EA, except as how the Hawai'i Superferry may affect the shed demolition and container yard improvements being considered in the Proposed Action.

At this time, H-DoT has indicated that no decisions have been made regarding selection of any designs to accommodate the Hawai'i Superferry at Kawaihae Harbor. The Proposed Action described in this Draft EA is not intended to cover, and does not include any special provisions or accommodations designed for Superferry operations or use.

The key environmental issues for HSF or any other high-speed, high-capacity ferry services are not issues of concern for this proposed paving and OTS demolition project, so there is no "cumulative" element to any such impacts, and no mitigation would be required.

Cumulative Impacts

Cumulative impacts were assessed for all resource areas discussed in this document. Issue areas with potential impacts were expanded for further discussion in the document and are summarized here with an emphasis on potential cumulative and secondary impacts. An additional issue area, Emergency Response Capacity, is not a traditional element for most Environmental Assessments, but has been added due to the critical life support role of the harbor in supplying essentials to island residents.

The areas of potential cumulative impacts are as follows:

Threatened and Endangered Bird Species: There is a possible, but highly unlikely impact to seabird navigation (bird attraction or confusion), despite no prior history of impacts at the site. Additional future lighting could increase this likelihood, but this harbor has been operational for 50 years, with no recorded prior incidents, so this risk is considered remote. Further, lighting a larger landscape may eliminate the issues associated with potential point source light confusion. Mitigation (as noted in Section 3.7) is proposed to both minimize any potential impact, and to be prepared to respond should a bird incident occur. Mitigation similar to that proposed here would also minimize any potential impacts of any future expansion at Kawaihae Harbor, and would be more effective if applied to other night operations.

Air Quality: Long-term air quality in the vicinity of Kawaihae Harbor would be significantly improved under the proposed action, but will continue to worsen under the Reasonable Alternative or No Action Alternative, as the fugitive dust problem will progressively increase as increasing shipping volumes force increased utilization of the 3.1 acre baseyard area. Under current harbors planning, additional areas will need to be paved for container handling and storage to meet future needs, and this will contribute to a beneficial cumulative impact on air quality by further long-term reductions in the unpaved areas contributing to the fugitive dust problem. Vehicle emissions may have a minor increase as harbor cargo-handling increases.

Cultural and Visual Impacts: There are no direct impacts under the proposed action. However, other expansion of Kawaihae Harbor could have minor impacts to the viewplane from Pu‘ukoholā Heiau NHS. However, this action eliminates the largest visual element on the project site, removing building bulk from the near-shore area rather than contributing or adding to other visual elements in a cumulative manner, so the OTS removal would be considered beneficial. Paving of other container cargo yards (as will be needed to meet projected island shipping needs), would be unlikely to adversely affect the historic and scenic viewplanes since it merely paves an existing baseyard area and does not introduce visual any discordant visual elements. However, the increased use of the area for containers (in place of the chassis parking) would be more visually imposing from the road directly in front of the site, but this is an industrial zoned area well away from the historic sites, master planned specifically for container cargo operations, and for which no reasonable non-visible alternative exists, so this is an appropriate and necessary use. Regarding other H-DoT Harbors planning, the major statewide long-range plans are under current revision, with no decisions available at the time this EA is written. Should the (currently deleted) Pier 3 complex or conceptual Pier 4 multi-purpose facility from the Modernization Plan (also deleted in the form and location previously considered) be reintroduced in future proposals, this issue would then be revisited in their own environmental compliance documentation.

Emergency Response Capacity: This project is expected to produce a beneficial impact on emergency service response capacity after a natural disaster by increasing interisland cargo capacity, which would clearly be additive to other, additional planned cargo service upgrades. Cumulatively, such additions would provide a highly significant beneficial improvement in the ability to handle the additional load to supply Big Island residents if Hilo Harbor were closed due to an emergency situation or a natural disaster such as an earthquake or tsunami, as the Big Island has no alternative land supply routes.

Combined Cumulative and Secondary Impact:

Socioeconomic Impacts: This project is expected to produce a beneficial direct impact on interisland cargo capacity and efficiency, which would be additive to additional planned cargo staging and storage space upgrades. Taken together, these harbor improvements would cumulatively provide substantial beneficial secondary socioeconomic impacts on Big Island residents and businesses, with a possible disproportionate benefit to those on the west side of the island, and to business requiring heavy-weight or high volume import or export capability, or those requiring timely import or export of perishable cargo such as food or agricultural items. Tertiary economic benefits to the sustainability of the island economy, with indirect (multiplier) effects on the general business climate, employment, wages, and quality of life would also be expected. These cumulative benefits apply primarily to the Proposed Action; the Reasonable Alternative would provide very modest benefits, and the No Action Alternative would have no benefit, and would ultimately pose secondary impact constraints on new business development and adverse pressure on the island economy (especially agricultural and water exports), general business climate, employment, wages, and quality of life. Limitation of cargo capacity under No Action (and, to a lesser extent, the Reasonable Alternative) could also present direct supply-and-demand pressure on shipping costs due to competition for scarce cargo capacity, which would result in secondary impacts on cost of living, and possible adverse tertiary impacts on the island economy, employment, wages, and quality of life.

Not Included as a Cumulative or Secondary Impact:

Population growth: Population growth on the Big Island exceeds that of the rest of Hawai‘i. The proposed increase in port capacity responds to the shipping requirements of that expanded population. That is, increased port capacity does not induce growth, it addresses the demand created by such growth. A larger population eats more food, uses more gas, wears more clothes, and needs more houses, bicycles, schoolbooks, and so on. Cargo capacity demand is the secondary impact of that growth, it does not produce or induce growth. Supply restriction simply leads to competition for a scarce commodity, and increases prices, while excess capacity keeps prices down.

Water Quality: The Proposed Action has no long-term water quality impacts, and proposes no in- or on-water work, so there is no cumulative component to be added to other actions. Only increases in impermeable area which increase stormwater runoff from the baseyard and any other paved areas could have a cumulative impact, and this is limited to rainwater which has no opportunity to pick up a sediment load. Any such expansion and increase in stormwater runoff would require separate analysis, and would be covered under its own compliance documentation.

Traffic: A *Traffic Analysis Report, Hawai'i Commercial Harbors 2020 Master Plan* (Julian Ng, Nov. 2000), was prepared to support the analysis presented in the *Final Environmental Impact Statement for the Hawai'i Commercial Harbors 2020 Master Plan (2001).* The 2001 EIS, based on this study, addresses traffic issues for the harbor as a whole under existing and future traffic conditions, long-term growth issues, cumulative impacts of all proposed harbor development, and the full range of harbor uses which would affect road service demands, including the proposed two-lane bypass road from Queen Kaahumanu Highway to Akoni Pule Highway. Both the EIS and Traffic Analysis (attached to the EIS as Appendix B) are incorporated by reference. However, this is relevant only to the cumulative impacts of all Kawaihae Harbor development, not to the Proposed Action, which has no long term traffic impacts which would differ from the No Action Alternative. Existing traffic conditions at the intersection of Queen Kaahumanu Highway and Kawaihae Road will persist with or without the project, and should be reviewed as long-term solutions to regional traffic patterns.

As this EA is being written, a new Environmental Impact Statement, under the provisions of Article 2, Session Laws of Hawai'i 2008, is being prepared to address the potential impacts of interisland ferry service (discussed on p. 6-2). Because those identified uses would have traffic impacts, that document should be referenced to update the information from the prior EIS.

Conclusion: Neither the Proposed Action nor the Reasonable Alternative would result in significant direct or indirect adverse effects on resource areas other than those listed above, and neither is expected to contribute to cumulative impacts on any other resource areas when evaluated in conjunction with other government and private sector past, present and foreseeable future actions.

[This page intentionally blank for printing double-sided.]

7.0 ANTICIPATED DETERMINATION AND RATIONALE

In determining whether an action may have a significant impact on the environment, the applicant or agency must consider all phases of the project, its expected primary and secondary consequences, its cumulative impact with other projects, and its short-term and long-term effects. The anticipated Finding of No Significant Impact (FONSI) is based on review and analysis of the significance criteria specified in HAR 11-200-12. An action shall be determined to have a significant effect on the environment if it:

1. Involves an irrevocable commitment or loss of or destruction of natural or cultural resources

The Proposed Action and Reasonable Alternative would take place on a site occupied by the same commercial deep-draft harbor since 1957, in use as a major shipping port since 1937, and as a major harbor and trading center since before recorded history. The Proposed Action supports and continues that use, on a site which has already been heavily disturbed to adapt it for that purpose, and master planned for future expansion in support of that purpose.

There is no recorded presence of Federal or State-protected endangered, threatened or candidate species that are likely to be jeopardized by the Proposed Action (as discussed in Section 3.7). No significant archaeological or cultural resources would be disturbed or placed at risk (Section 4.4), and there are no known or reported Native Hawaiian or other cultural practices occurring on the project site or which are likely to be significantly impacted by the Proposed Action. The Proposed Action will result in a slightly lesser impact on important historic and scenic views identified in State or County public planning documents.

2. Curtails the range of beneficial uses of the environment

The Proposed Action and Reasonable Alternative represents a continuation of an existing use on a previously developed site dedicated to the existing use, and no additional clearing of land is required for either action. It would improve the utilization of the Kawaihae Harbor property, resulting in significant positive long-term benefits to the community (as noted in #4 below).

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 Action and Reasonable Alternative are consistent with the State's long-term environmental policies, and the policies and guidelines specified in Chapter 344, HRS, and strongly supports the implementation of the economic development guidelines of HRS 344-4 §(5) (A), (B), and (D), and transportation guidelines of HRS 344-4 §(6)(A) and (C), as discussed in Section 5.2.4.

4. Substantially affects the economic welfare, social welfare, and cultural practices of the community or State

The Proposed Action would have beneficial direct and indirect (secondary) social and economic benefits to the State and County, as discussed in Chapter 4. Short term

benefits include construction period spending and employment and the induced effects of spending on the economy. Long term benefits include significantly improved container cargo transport efficiency, enhanced life support supply capability for the island of Hawai‘i, especially the ability to deal with future natural disaster situations which could compromise shipment of vital necessities to the island, significantly enhanced support of local economic enterprises and economic diversification, especially for new businesses heavily dependant upon high volume container cargo transport capacity, and improved future employment prospects in the South Kohala district. Improving the productivity and profitability of Hawai‘i-based agriculture ventures also contributes to statewide agricultural self-sufficiency, improves the economic vitality of the local community, and increases tax revenues. The Reasonable Alternative would improve shipping efficiency, but not storage capacity, and would have a significantly smaller beneficial effect.

By contrast, the No Action Alternative would provide no benefit, and would perpetuate the small but growing economic constraint that is imposed by insufficient shipping capacity.

The Proposed Action and alternatives would not adversely affect cultural resources or practices, or create environmental health and safety risks.

5. Substantially affects public health

The Proposed Action would provide a long-term beneficial public health impact to residents living downwind of Kawaihae Harbor. Although this may be considered a minor change in that it affects only a small number of people in the downwind area, the paving of the 3.1-acre baseyard area will significantly reduce these air quality impacts and significantly improve the quality of life for those living downwind. There would be minor short-term construction-related impacts (noise, air quality, and traffic) in the area affecting the same population, but these impacts would be short-term and limited to the pavement construction period, and offset by the long-term improvements. Standard construction best management practices would be used to minimize the temporary impacts. The Reasonable Alternative would have short-term impacts but no long-term improvements. The No Action Alternative would have no short-term impacts and no long-term improvements.

Further, this project will produce a beneficial impact on emergency service response capacity after a natural disaster by increasing interisland cargo capacity, which will improve the capacity of the port to handle the additional load to supply Big Island residents if Hilo Harbor were closed due to an emergency situation or a natural disaster such as an earthquake or tsunami, a significant improvement to public safety.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities

The Proposed Action and alternatives would have no impact on population or public facilities, the same as No Action. The project area is currently in use, and no increase in occupancy or change in use is planned. The project area is essential existing public transportation infrastructure, vital to the supply of existing residents. This infrastructure would be beneficially improved by the Proposed Action (and to a much lesser extent, by the Reasonable Alternative). However, cargo supply has no effect which would result in increasing population levels, it merely responds to demand for import or export capacity. Any increases in population, or demands on public facilities, will occur irrespective of this

action. No significant adverse impacts to any public facilities are expected or likely. No increase in traffic is expected (other than minor short term impacts during the construction period).

7. Involves a substantial degradation of environmental quality;

The Proposed Action and alternatives would beneficially improve air quality in the long term, and would not degrade any environmental quality indicator other than short-term construction period air quality impacts. Long-term impacts to water quality, noise levels, and natural resources would be minimal or non-existent. The use of standard construction and erosion control best management practices would minimize anticipated minor construction-related short-term impacts (i.e., noise, air quality, stormwater runoff).

8. Is individually limited and cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The long term impacts of the Proposed Action and Reasonable Alternative are roughly comparable to the No Action Alternative. There is no commitment to future actions whatsoever. Future increases in container staging and storage capacity would be an expected outcome of the continued economic vitality of the region and the growth of new business ventures, especially export-dependent businesses. The proposed action responds to cargo capacity demands, and does not create additional demands.

9. Substantially affects a rare, threatened, or endangered species, or its habitat;

No threatened, endangered or candidate listed animal or plant species protected by Federal or State regulations would be impacted by the Proposed Action and its alternatives. There are no significant biological resources in the project vicinity which would be put at risk by the Proposed Action and alternatives.

10. Detrimentally affects air or water quality or ambient noise levels;

The Proposed Action would not significantly affect air or water quality or ambient noise levels other than short-term and temporary construction period impacts. The use of best management practices would minimize construction-related impacts, and the project would comply with applicable Federal, State and local regulations and standards. Long term air quality impacts would be strongly beneficial. The replacement of an estimated 3.1 acres of permeable surface with impervious surfaces would increase the amount and rate of stormwater runoff; however this is unlikely to be a problem due to compliant design with appropriate approvals. Surface water quality would not be impacted. Increases in ambient noise levels that may result from short term construction activities is not expected to adversely impact noise sensitive receptors, and would be controlled in compliance with DOH's Community Noise Standards (Chapter 11-46, HAR) to minimize off site construction period noise impacts.

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

The Proposed Action is within a flood plain / tsunami zone and would remove the only existing building within the critical waterfront area. The project area is not located within an environmentally sensitive area, and includes no beaches, erosion-prone areas, estuary, or fresh water. It is, of necessity, located on coastal waters in potentially

geologically hazardous land, but this is an optimal use for which there is no practical alternative.

12. Substantially affects scenic vistas and viewplanes identified in County or State plans or studies

The Proposed Action would not obstruct or adversely affect scenic vistas or viewplanes identified in County or State plans or studies, and would reduce the impact of the site on the coastal viewplane by demolishing and removing the damaged OTS.

13. Requires substantial energy consumption

The Proposed Action requires additional energy for lighting 3.1 acres of additional yard area consistent with worker safety requirements imposed by OSHA (during operational periods when the yard is active, about 7 hours per week) and MARSEC and Homeland Security (for low-level security lighting during night hours when the yard is inactive), consistent with applicable Federal law. The OTS area will also have one new light pole and additional lights added to one existing pole. There is no alternative to this consumption under these existing authorities. Limiting lighting to minimal levels for each operational regime and use of high-efficiency low-pressure sodium lamps will provide optimal lighting levels at the highest efficiency and lowest practical energy cost.

Conclusion:

Based on the foregoing evaluation of significance criteria, the overall and cumulative effects of the Proposed Action would not have a significant adverse effect on the environment, and an Environmental Impact Statement would not be required. The Department of Transportation Harbors Division and the United States Department of Transportation Maritime Administration therefore anticipate a Finding of No Significant Impact (FONSI).

8.0 AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT EA

An informational letter was sent on July 21, 2008 to 42 agencies and organizations (listed below) to solicit comments on the proposed action. Substantive comments received are to be addressed in the DEA. A total of 13 agencies and organizations provided written comments. The parties who responded in writing are identified by an asterisk (*) and their letters and the corresponding responses are included in this section, except for letters to the USFWS and NMFS, which appear in Appendix D , related to Informal Consultation under Section 7 of the Endangered Species Act.

PRECONSULTATION DISTRIBUTION LIST

FEDERAL

Army Corps of Engineers, Pacific Ocean Division
*NOAA/National Marine Fisheries Service, Pacific Islands Regional Office
U.S. Coast Guard, 14th C.G. District Commander
*US Department of the Interior, Fish & Wildlife Service
US Department of the Interior, National Park Service
*US Department of Agriculture, Natural Resources Conservation Service
US Environmental Protection Agency

STATE OF HAWAII

Department of Transportation
*Comptroller, Dept. of Accounting & General Services
Department of Health
*Department of Land and Natural Resources
Office of Planning, Department of Business, Economic Development & Tourism
Department of Agriculture
*Department of Hawaiian Home Lands
*Office of Hawaiian Affairs
University of Hawai'i at Mānoa Environmental Center
*University of Hawai'i at Mānoa Hawai'i Biodiversity and Mapping Program
Adjutant General, State of Hawaii, Department of Defense

COUNTY OF HAWAI'I

*Department of Planning
Department of Transportation Services
Board of Water Supply
Department of Public Works
*Department of Environmental Management
Department of Parks and Recreation
*Fire Department
*Police Department
Mayor Harry Kim
Hawai'i County Council

PRIVATE / OTHER

*Historic Hawaii Foundation
Hawaii Electric Light Company (HELCo)
Hawaiian Telecom
The Nature Conservancy
Sierra Club, Hawai‘i Chapter
Hui Malama I Na Kupuna O Hawai‘i Nei
Kawaihae Boating Association
Kohala Trollers Club
Pua Ka Ilima ‘O Kawaihae Cultural Surf Park, Inc.
Waimea-Kawaihae Community Association

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
2008-TA-0301

AUG 14 2008

Mr. Scott Ezer
Helbert, Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Subject: Technical Assistance Regarding the Draft Environmental Assessment for Improvements at Pier 2A, Kawaihae Harbor, Hawaii

Dear Mr. Ezer:

Thank you for your letter, received July 22, 2008, providing the opportunity for input on the development of a draft Environmental Assessment for improvements to Pier 2A at Kawaihae Harbor on the island of Hawaii. Our comments are based upon the information you provided in your letter, and on discussions from a meeting held at our office on July 16, 2008 with two representatives from the Service, you, and four other individuals representing two additional organizations involved in the proposed project. The proposed project is to demolish an existing shed, pave the storage yard, and improve utilities, including lighting.

We searched our databases including data compiled by the Hawaii Biodiversity and Mapping Program, and three species, collectively referred to as seabirds, may fly over the harbor area: the threatened Newell's shearwater (*Puffinus auricularis newelli*); the endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*); and a species of concern, the Band-rumped storm petrel (*Oceanodroma castro*). Seabirds are attracted to artificial lights and they fly around the light source until they either collide with a tall object such as an adjacent building, light pole, wire, or fall to the ground from exhaustion. Once grounded, they are vulnerable to predators or often struck by vehicles along roadways. Increased lighting at the harbor resulting from the proposed redevelopment may increase the number of listed seabirds attracted to the area.

To assist you in developing your project to minimize impacts to species listed under the Endangered Species Act (ESA) of 1973 [16 U.S.C. 1531-1544], as amended, we provide the following guidance. We recommend that all existing and additional lighting be downshielded and that motion detectors and timers be installed on all light fixtures. We also recommend the development and implementation of a Seabird Response Plan, which includes:

- Response plan for circling/downed birds when lights may be turned off temporarily if it is safe for workers and if birds are circling the lights.
- Seabird awareness training for staff (this should be verified on their personnel file).

- A list of qualified bird rescue contact(s) such as a local vet or rehabilitation center or Hawaii Division of Forestry and Wildlife (DOFAW) representative.
- Active searching for downed birds at the harbor during fledging season (September 15 through December 15).
- Maintaining a pet carrier on site at all times with instructions on how and where to keep recovered birds.
- Logging seabird incidences that are submitted to the U.S. Fish and Wildlife Service (Service) and DOFAW within 48 hours of discovery.

Under section 7 of the ESA, it is the Federal agency's (or non-federal designee) responsibility to make the determination of whether or not the proposed project "may affect" federally listed species or designated critical habitat. Projects that are determined to have "no effect" to federally listed species and/or critical habitat do not require additional coordination or consultation with the Service. A "may affect, not likely to adversely affect" determination is appropriate when effects to individuals of federally listed species are expected to be discountable (i.e., unlikely to occur), insignificant (minimal in size), or completely beneficial. This conclusion requires written concurrence from the Service.

If you have questions regarding these comments or section 7 consultation, please contact Megan Laut, Fish and Wildlife Biologist, Consultation and Technical Assistance Program (phone: 808-792-9400, fax: 808-792-9581).

Sincerely,

Christa Russell

for Patrick Leonard
Field Supervisor

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 50004 Rm. 4-118
Honolulu, HI 96850
808-541-2600

August 21, 2008

Charles Wilson
Helber, Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, HI 96813

Dear Mr. Wilson,

Subject: USDA- NRCS Review of the Draft Environmental Assessment Early Consultation for Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Island of Hawaii.

Thank you for providing the NRCS the opportunity to review the Early Consultation Request for the Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Island of Hawaii. In review of the project site location it was found that no Prime or Important Farmlands exist or will be impacted at this site. In addition, no hydric soils are located in the project area. Hydric soils identify potential areas of wetlands. If wetlands do exist, any proposed impacts to these wetlands would need to demonstrate compliance with the "Clean Water Act", and may need an Army Corp of Engineers 404 permit.

Please find enclosed an NRCS Soil Survey Map and selected soil reports. The Soil Survey Map identifies all soil map units in the project area. The soil reports provide selected soil properties and interpretations e.g., Small commercial buildings, soil layers with USDA textures, and engineering classifications. The limitation ratings for the selected uses, Small commercial buildings and Shallow excavations, are severe and moderate respectively. These ratings do not preclude the intended land use, however they do identify potential limitations for the use, which may require corrective measures, increase costs, and/or require continued maintenance.

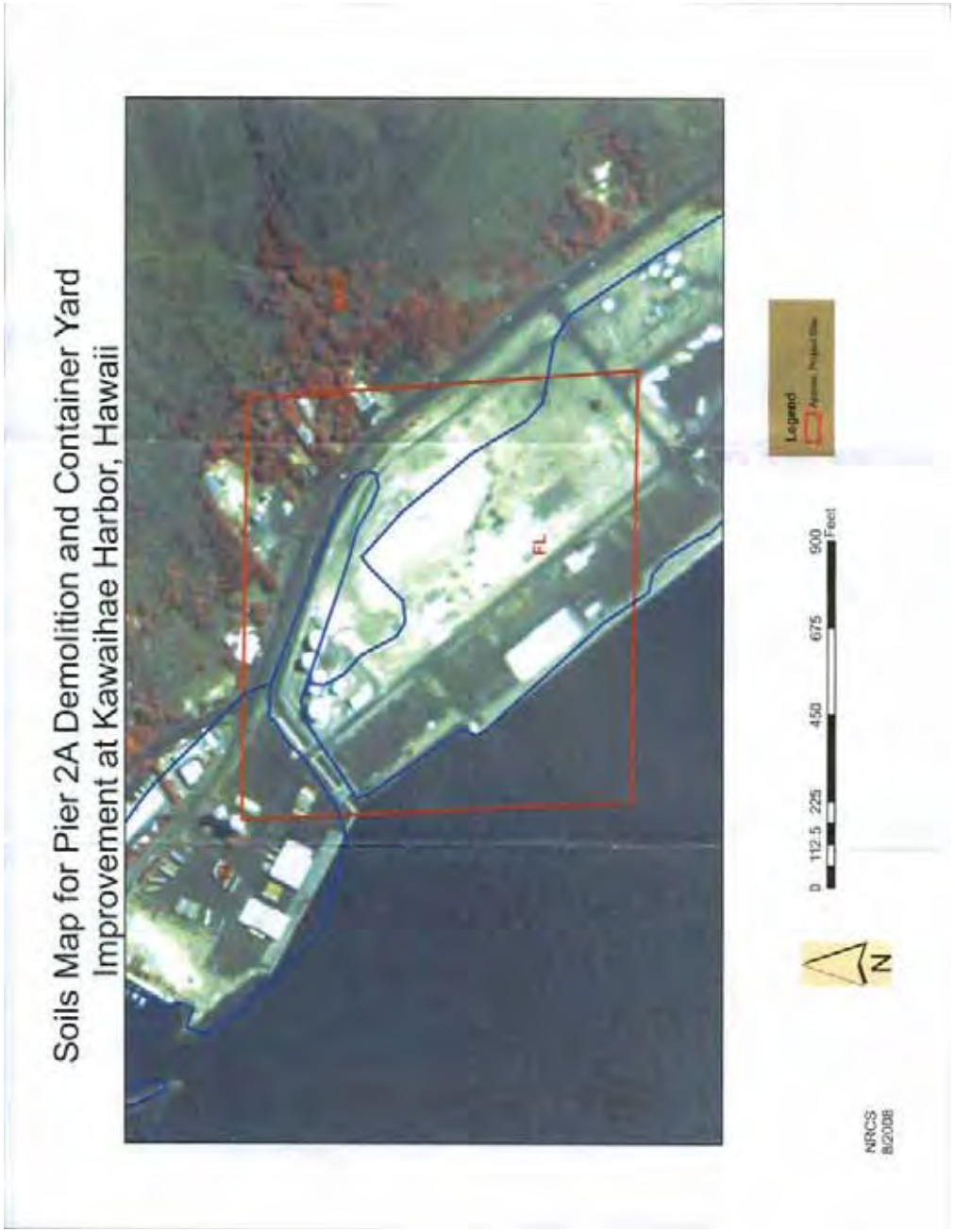
The NRCS Soil Survey is a general planning tool and does not eliminate the need for an onsite investigation. If you have any questions concerning the soils or interpretations for this project please call, Tony Rolfes, Assistant State Soil Scientist, (808) 541-2600 x129, or email, Tony.Rolfes@hi.usda.gov.

LAWRENCE T. YAMAMOTO
Director
Pacific Islands Area

cc: Michael Robotham, Assistant Director for Soil Science and Natural Resource Assessments, USDA-NRCS, Honolulu, HI

Enclosures:

Helping People Help the Land



Selected Soil Interpretations

Island of Hawaii Area, Hawaii

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

*This soil interpretation was designed as a "limitation" as opposed to a "suitability". The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation.

Map symbol and soil name	Pct. of map unit	ENG - Small Commercial Buildings (HI) *		ENG - Shallow Excavations (HI) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value
FL:					
Fill land	100	Severe		Moderate	
		Flash flooding > Rare	1.00	Flash flooding >= ocassional	0.50
				Caving potential is low	0.10
KOC:					
Kawaihae, very rocky	70	Severe		Severe	
		Slopes > 8%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) from 20 to 40"	0.20	Caving potential is low	0.10
		Fragments (>3") 25 to 50%	0.03	Slopes 8 to 15%	0.04
				Fragments (>3") 25 to 50%	0.03
Rock outcrop	30	Severe		Severe	
		Slopes > 8%	1.00	Bedrock (hard) < 40" depth	1.00
		Bedrock (hard) < 20" depth	1.00	Caving potential is low	0.10
				Slopes 8 to 15%	0.04

Engineering Properties

Island of Hawaii Area, Hawaii

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 Inches	3-10 Inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
FL:												
Fill land	0-12	Silty clay loam	MH-A (proposed), OH	A-7	0	0-5	95-100	95-100	90-100	85-95	80-99	20-30
	12-60	Silty clay loam	MH-A (proposed), OH	A-7	0	0-5	95-100	95-100	90-100	85-95	80-99	20-30
KOC:												
Kawaihae, very rocky	0-2	Extremely stony very fine sandy loam	ML-A (proposed)	A-4, A-5	40-55	10-20	75-95	75-85	70-80	50-60	35-45	NP-10
	2-33	Stony loam, Stony silt loam	ML-A (proposed)	A-4, A-5	10-25	5-10	85-95	85-95	80-95	50-65	35-45	NP-10
	33-43	Bedrock	---	---	0	0	0	0	0	0	0	NP
Rock outcrop	0-60	Bedrock	---	---	0	0	0	0	0	0	0	NP

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

November 12, 2008

Mr. Lawrence T. Yamamoto, Director
U.S. Department of Agriculture
USDA Natural Resources Conservation Service
Pacific Islands Area
P.O. Box 50004, Room 4-118
Honolulu, HI 96850-0050

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Mr. Yamamoto,

Thank you for taking the time to respond to our Early consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor. We appreciate your confirmation that no Prime or Important Farmlands exist or will be impacted at this site, and that no hydric soils are located in the project area, which might identify potential wetlands areas. We have also confirmed these facts on the ground.

We also appreciate your inclusion of the NRCS Soil Survey Map and selected soils reports. However, at this particular portion of the harbor site, the area indicated on the soils map as KOC soils type (northwest corner) is covered by roughly 8 – 10 feet of fill material, based on site boring logs and the opinion of the geotechnical consultant Geolabs, Inc.

Thank you again for your interest in this project. A copy of your letter and this response will be included in the Draft Environmental Assessment (DEA). We are uncertain if you would like to receive a review copy of the DEA, when published, since you have indicated the Proposed Action will have no impact to any Prime or Important Farmlands or other areas of NRCS concern. We would appreciate a call or email to confirm that you would or would not like to be among the recipients / reviewers. We would be happy to provide one, when available, if you contact me by phone at 545-2055, or by email to sezer@hhf.com..

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawai'i 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

---

USDA Natural Resources Conservation Service

Tabular Data Version: 1
Tabular Data Version Date: 05/27/2008

This report shows only the major soils in each map unit. Others may exist.

Water Features

Island of Hawaii Area, Hawaii

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
FL:										
Fill land	C	Low	January	---	---	---	---	None	Very brief	Occasional
			February	---	---	---	---	None	Very brief	Occasional
			March	---	---	---	---	None	Very brief	Occasional
			April	---	---	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	Very brief	Rare
			June	---	---	---	---	None	Very brief	Rare
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Occasional
			December	---	---	---	---	None	Very brief	Occasional
KOC:										
Kawaihae, very rocky	B	Medium	Jan-Dec			---	---	None	---	None
Rock outcrop	D	---	Jan-Dec			---	---	None	---	None

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 31, 2008

Charles Willson
Helber, Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

LOG NO: 2008.3036
DOC NO: 0807MD107
Archaeology

Dear Mr. Willson:

SUBJECT: **National Historic Preservation Act (NHPA) Section 106 Review –**
Request for Comment on a Draft Environmental Assessment Early Consultation
for Proposed Improvements at Kawaihae Harbor
Kawaihae Ahupua`a, South Kohala District, Island of Hawai`i
TMK: (3) 6-1-003:023 (por.), 036 (por.), 052 & 064

Thank you for the opportunity to review the aforementioned project, which we received on July 24, 2008. The proposed undertaking involves the demolition of the shed on Pier 2A and container yard improvements at Kawaihae Harbor.

What we would like to see in the Draft EA is more information on the proposed electrical work. The Kawaihae Harbor is an historical district. We need to know if any of the utility lines, etc. will entail excavating through the coral fill underlying the harbor; below this fill may be historical sites. We would also appreciate clarification on whether an archaeological inventory survey has been conducted as part of this undertaking, and whether or not you propose archaeological monitoring during construction.

Thank you again for the opportunity to comment at this stage. We look forward to reviewing the Draft EA.

If you have any questions about this letter please contact Morgan Davis at our Hawaii Island office at (808) 981-2979.

Aloha,

Nancy A. McMahon

Nancy A. McMahon
Deputy State Historic Preservation Officer

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

State Historic Preservation Officer
State of Hawaii
Dept. of Land & Natural Resources
Kakuhihewa Building, Suite 555
601 Kamokila Blvd.
Kapolei, Hawaii 96707

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Ms. McMahon, et.al.,

Thank you for taking the time to respond to our Early consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We understand that Kawaihae Harbor is a historical district, and that any excavation below the crushed coral fill material (which comprises the entire surface layer of the site) has a potential to disturb the original soils below the fill material, and that there is some possibility that this layer could contain historical material. However, a full Environmental Impact Statement (EIS) was prepared in 1991 for the proposed improvements to the harbor, including these areas, and this included an archeological reconnaissance which found *"... no historic or archeological sites within the harbor boundaries (Cultural Surveys Hawai'i, 1991)."* Thus, even a shallow disturbance beyond the fill layer has minimal opportunity to uncover or disturb cultural material.

To get a professional opinion on the depth of the fill material before reaching the cultural layer, we asked Geolabs, Inc., which has been retained for the geotechnical analysis (and was also the consultant for the geotechnical work and borings for prior projects on the site), to confirm the depth of the fill layer on the site. In an email dated August 22, 2008, Satoshi Tanaka, P.E., Senior Project Engineer with Geolabs, stated: *"Based on our borings, we believe that the fill materials on the mauka side of this line may be about 8 to 10 feet in thickness. For areas makai of the former shoreline, we believe that the fill thickness generally exceeds 10 feet."*

This is backed up by the results of the borings performed for the Geotechnical Report on the prior project (1999) which show soils transitions at approximately 2.3 feet and then about 7 to 8 feet below that, both composed of coralline material, for a total fill depth of 9.3 to 10.3 feet below the surface. Even assuming some additional surface settlement and slightly irregular contours of the original surface, we are confident that the proposed paving and installation of lights and utilities can be conducted with a comfortable margin to avoid any disturbance of the underlying original ground cover [cultural layer]. We will compute depths from additional borings (from 1999, 2007, and 2008) as work progresses, and this information will be included in the Draft EA.

The Environmental Assessment (EA) will also provide additional information on the proposed electrical work, and any other work which would involve any subsurface excavation with any potential for entry into the cultural layer. Conceptual design calls for between 8 and 24 light poles, each 46 feet high. Each pole will have a foundation about 15 feet deep and 5 feet in

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

diameter. We estimate that between 4 and 10 of the foundations that are mauka of the former shoreline will encounter original soil material. The Draft EA identifies mitigation that requires an Archeological Monitoring Plan prior to the excavation of these foundations.

We hope this adequately addresses your concerns. We will provide you with a copy of the Draft Environmental Assessment as soon as it is published, and a copy of your letter and this response will be included in the Draft EA. If you have any remaining questions or concerns, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com..

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

PHONE (808) 594-1888 FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD08/3756

August 8, 2008

Scott Ezer
Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawai'i 96813

RE: Request for comments on the proposed pier 2A shed demolition and container yard improvements, early consultation, Kaiwaihae Harbor, south Kohala, Hawai'i, TMKs: 6-1-03; 23, 36, 52 and 64.

Aloha e Scott Ezer,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated July 21, 2008. OHA has reviewed the project and offers the following comments.

OHA expresses preliminary concerns regarding potential impacts to water quality as well as adverse effects to cultural resources and potential seabird attraction due to the mentioned overhead lighting. However, as the information provided with the invitation to comment is rather sparse, OHA will reserve further comment for the upcoming environmental assessment.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold at (808) 594-0263 or e-mail him at granta@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Administrator

C: Kona CRC

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Clyde W. Nāmuʻo, Administrator
Office of Hawaiian Affairs
711 Kapiolani Blvd, Suite 1250
Honolulu, HI 96813

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawaiʻi
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawaiʻi
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Mr. Nāmuʻo,

Thank you for taking the time to respond to our Early Consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We appreciate your comments regarding " … preliminary concerns regarding potential impacts to water quality as well as adverse affects to cultural resources and potential seabird attraction due to … overhead lighting." We can offer the following responses:

Water Quality: Neither the Proposed Action nor the Reasonable Alternative involve any work in or on the water, no construction or demolition material will be allowed to wash into the water, and no impacts to water quality are expected or likely.

Cultural Resources: We understand that Kawaihae Harbor is a historical district, and that any excavation below the crushed coral fill material (which comprises the entire surface layer of the site) has a potential to disturb the original soils below the fill material, and that there is some possibility that this layer could contain historical material. However, a full Environmental Impact Statement (EIS) was prepared in 2001 for the proposed improvements to the harbor, including these areas, and this included an archeological reconnaissance which found *"... no historic or archeological sites within the harbor boundaries (Cultural Surveys Hawai'i, 1991)."* Thus, even a shallow disturbance beyond the fill layer has minimal opportunity to uncover or disturb cultural material. However, we requested a professional opinion on the depth of the fill material from Geolabs, Inc., which has been retained for the geotechnical analysis (and was also the consultant for the geotechnical work and borings for prior projects on the site), and they stated: *"Based on our borings, we believe that the fill materials on the mauka side of this line may be about 8 to 10 feet in thickness. For areas makai of the former shoreline, we believe that the fill thickness generally exceeds 10 feet."*

This is confirmed by the borings logs we have seen from the prior project (1999) which show fill soils composed of coralline material to a total depth of 9.3 to 10.3 feet below the surface. The Proposed Action calls for between 8 and 24 new light poles for a 3.1-acre area on the mauka portion of the site. These new 45-foot poles will require foundations 15 feet deep and 5 feet in diameter. Approximately 4 to 10 poles will be installed mauka of where the shoreline stood prior to the construction of the harbor in the late 1950s. It is these holes that have the potential to penetrate the fill layer. Prior to any ground disturbing activities, an Archaeological Monitoring Plan will be prepared and submitted to the State Historic Preservation Division for approval. Requirements of the Plan will be written into contracts for the project.

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Potential Seabird Attraction: We have been in discussion with U.S. Department of the Interior, Fish and Wildlife Service (F&WS) regarding the potential for seabird attraction to site lighting. Three species are of particular concern: the threatened Newell's shearwater (*Puffinus auricularis newelli*), the endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and a species of concern, the Band-rumped storm petrel (*Ocenodroma castro*) may fly over the harbor area. However none are known to inhabit or have habitat in the vicinity of the project area, and breeding populations of live on the windward side of the island, where there is appropriate habitat. What is known is that there appears to be no problem at this site. Based on interviews with long-time workers on the site, DoH, the USGS National Wildlife Health Center, and the State Department of Health (which has required formal reporting since the initiation of the West Nile Virus disease vector monitoring program at the end of 2002), we have yet to hear of a single instance of bird death, fallout, or confusion from the yard lights, or in the region. The modern harbor was constructed around 1956, so there has been site lighting of the harbor area for a long period of time. We have only construction drawings specifying the lighting back to the 1970s, mostly of it unshielded until recently), so it is reasonably safe to conclude that no significant hazard exists to nocturnal seabirds. Nevertheless, we are proposing mitigation to minimize any future possibility of this, although we have not, as yet, concluded our consultation with F&WS.

All of the above issues will be addressed in greater detail in the Draft Environmental Assessment (DEA). We will provide you with a copy of the DEA as soon as it is published, and a copy of your letter and this response will be included in the DEA. If you have any remaining questions or concerns, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

LINDA LINGLE
GOVERNOR
STATE OF HAWAI'I

MICAH A. KĀNE
CHAIRMAN
HAWAIIAN HOMES COMMISSION

KAULANA H. PARK
DEPUTY TO THE CHAIRMAN

ROBERT J. HALL
EXECUTIVE ASSISTANT

STATE OF HAWAI'I
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAI'I 96805

August 1, 2008

Mr. Charles Willson
Helber, Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Willson:

Thank you for the opportunity to provide comments in the early consultation process of your anticipated Draft Environmental Assessment report for the demolition of an overseas transit shed (Pier 2A) and container yard improvements at Kawaihae Harbor, Hawaii. The Department of Hawaiian Home Lands has no comments to offer.

Should you have any questions, please call the Planning Office at (808) 620-9480.

Aloha and mahalo,

Micah A. Kane, Chairman
Hawaiian Homes Commission

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

November 12, 2008

Micah A Kane, Chairman
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Mr. Kane,

Thank you for taking the time to respond to our Early Consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We understand the Department of Hawaiian Home Lands has no comments to offer, and a copy of your letter and this response will be included in the Draft Environmental Assessment (DEA). You will receive a copy of the DEA as soon as it is published.

If you have any remaining questions or concerns, or would like to be removed from the mailing list for the DEA, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scot Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

From: Roy Y s Kam [mailto:rkam@hawaii.edu]
Sent: Wednesday, August 06, 2008 4:18 PM
To: Charlie Willson
Cc: rkam@hawaii.edu
Subject: Kawaihae Harbor

Mr. Wilson,

Attached is the information you requested for the Kawaihae Harbor. There have been no recordings of rare species within your project site. Attached is a jpeg map for your records. If you need further information, my contact information is noted below.

Roy Kam
Database Manager
Hawaii Biodiversity and Mapping Program
University of Hawaii at Manoa
Center for Conservation Research and Training
Ph: 956-8094
Fax: 956-8493

Mailing Address:
3050 Maile Way Gilmore Hall #406
Honolulu, Hawaii 96822
Office Address:
Biomedical and Sciences Building
Court B, Room #203

--

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Mr. Roy Kam, Database Manager
Hawai'i Biodiversity & Mapping Program
Center for Conservation Research and Training
University of Hawai'i at Mānoa
3050 Maile Way Gilmore Hall 406
Honolulu, HI, 96822

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Mr. Kam,

Thank you for taking the time to respond to our Early Consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We appreciate the review of your database, the map you provided, and your confirmation that "There have been no recordings of rare species within your project site." We appreciate the confirmation that the Hawaii Biodiversity and Mapping Program Natural Diversity Database tracks population trends over time for biologically rare species for any time period where recorded data exists, and back to the 1800s where supported by observations. We understand that this does not represent a comprehensive site-specific field survey, but is a database of known rare species recordings. We note your limitation on distribution, and will use this information only as requested, to support our reporting for our Environmental Assessment (EA) work at Kawaihae Harbor.

If you would like to be removed from the mailing list for the DEA, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

LINDA LINGLE
GOVERNOR

RUSS K. SAITO
COMPTROLLER

BARBARA A. ANNIS
DEPUTY COMPTROLLER

(P)1279.8

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

AUG 18 2008

Mr Charles Willson
Helber, Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Willson:

Subject: Early Consultation for Draft Environmental Assessment
Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor
Kawaihae, South Kohala District, Island of Hawaii
TMK: (3) 6-1-03:23 (por), 52, 64

Thank you for the opportunity to provide comments for the Early Consultation for the Draft Environmental Assessment for the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If there are any questions regarding the above, please have your staff call Mr. David DePonte of the Planning Branch at 586-0492.

Sincerely,

ERNEST Y. W. LAU
Public Works Administrator

DD:vca
c: Mr. Glenn Okada, DAGS Hawaii District Office
DOH OEQC

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

November 12, 2008

Russ K. Saito, Comptroller
State of Hawaii
Department of Accounting and General Services
Planning Branch
P.O. Box 119
Honolulu, HI 96810

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Mr. Saito,

Thank you for taking the time to respond to our Early consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor. We appreciate your confirmation that "The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities...".

A copy of your letter and this response will be included in the Draft Environmental Assessment (DEA). Per David DePonte's verbal request, we will forward a CD copy of the DEA, when available, instead of the printed version.

If you have any remaining questions or concerns, please fee free to contact me by phone at 545-2055, or by email to sezer@hhf.com. Per your letter, if we have questions or issues to discuss, we will direct them to David DePonte of your Planning Branch at 586-0492.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Harry Kim
Mayor

Christopher J. Yuen
Director
Brad Kurokawa, ASLA
LEED® AP
Deputy Director

County of Hawaii
PLANNING DEPARTMENT
101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-4224
(808) 961-8288 • FAX (808) 961-8742

August 11, 2008

Mr. Charles Wilson
Helber Hastert & Fee, Planners
733 Bishop Street, Suite 2950
Honolulu, HI 96813

Dear Mr. Wilson:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment (EA)
Project: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Kawaihae , South Kohala, Hawai'i
Tax Map Key: (3) 6-1-3:23(por), (3) 6-1-3:36 (por), (3) 6-1-3:52, and (3) 6-1-3:64

This is in response to your letter dated July 21, 2008.

According to the letter, the Hawaii State Department of Transportation ("HDoT") Harbors Division, in partnership with the United States Department of Transportation, Maritime Administration ("MARAD") are proposing the following improvements to the subject site:

- Demolishing and removal of an Overseas Transit Shed ("OTS") at Pier 2A;
- Strengthening the pavement under the old OTS footprint, and providing a smooth paved transition apron area to the adjoining container storage yard;
- Paving a 3.1 acre adjoining container chassis storage yard; and
- Providing utility upgrades, including appropriate overhead lighting.

We have the following to offer for the proposed project:

The subject property is located entirely within the County's Special Management Area (SMA), but land owned by HDoT is exempt from CZM/SMA rules and requirements. However, the draft EA should show how this project will fit CZM/SMA objectives and should indicate HDoT's exempt status.

Additionally, the South Kohala Community Development Plan, which includes the project site, is currently being considered by the County of Hawaii Planning Commission, and is scheduled to be adopted as ordinance by the Hawaii County Counsel before years end. Please consider this document as you are conducting your environmental assessment.

Please provide this office with a copy of the draft EA upon its publication. Should you have questions, please contact Christian Kay of my staff at 961-8288 extension 254.

Sincerely,

CHRISTOPHER J. YUEN
Planning Director

CRK:cs
P:\pubhc\wpwin60\CKay\EAdraftPre-consul\Wilson_HHF_Kawaihae Harbor.doc

cc: Mr. Allen Salavea, Kona Planning Office

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Mr. Chris Yuen, Director
County of Hawaii
Department of Planning
Aupuni Center
101 Pauahi Street, Suite 3
Hilo, HI 96720

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Mr. Yuen,

Thank you for taking the time to respond to our Early consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We appreciate your confirmation that land owned by Hawai'i Department of Transportation (H-DOT) projects are exempt from CZM/SMA rules and requirement. The Environmental Assessment (EA) will state this, and will nevertheless address how the project fits CZM/SMA objectives.

The EA will also consider the South Kohala Community Development Plan (the July 11, 2008 Pre-Final version currently available), with particular attention to the Kawaihae Community Plan section. Please keep us apprised of any changes to the CDP document, as we can only consider this as potential future rulemaking until the ordinance is adopted.

We will provide you with a copy of the Draft Environmental Assessment as soon as it is published, and a copy of your letter and this response will be included in the Draft EA (DEA). If you have any remaining questions or concerns, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com..

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Harry Kim
Mayor

Darryl J. Oliveira
Fire Chief

Glen P.I. Honda
Deputy Fire Chief

County of Hawai'i
HAWAI'I FIRE DEPARTMENT
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720
(808) 981-8394 • Fax (808) 981-2037

August 6, 2008

Attention: Charles Willson
Helber Hastert & Fee, Planners
Pacific Guardian Center
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

RE: DRAFT ENVIRONMENT ASSESSMENT EARLY CONSULTATION
PIER 2A SHED DEMOLITION AND CONTAINER YARD IMPROVEMENTS AT KAWAIHAE HARBOR, SOUTH KOHALA DISTRICT, HAWAII
TAX MAP KEY 3RD DIV. 6-1-03 PARCELS 23 (POR), 36 (POR), 52, & 64

We have no comments to offer at this time in reference to the above-mentioned Draft Environmental Assessment.

DARRYL OLIVEIRA
Fire Chief

JCP:lpc

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Darryl J. Oliveira, Fire Chief
Hawaii County Fire Department
25 Aupuni Street
Hilo, HI 96720

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Chief Oliveira,

Thank you for taking the time to respond to our Early Consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We understand the Fire Department has reviewed our notification and have no comments to offer at this time. A copy of your letter and this response will be included in the Draft Environmental Assessment (DEA).

If you have any remaining questions or concerns, or would like to be removed from the mailing list for the DEA, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Harry Kim
Mayor

Lawrence K. Mahuna
Police Chief

Harry S. Kubojiri
Deputy Police Chief

County of Hawaii
POLICE DEPARTMENT
349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-2389

August 4, 2008

Mr. Charles Wilson
Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

RE: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor
Draft Environmental Assessment Early Consultation
TMK: 3rd Div. 6-1-03 Parcels 223 (por), 36 (por), 52, and 64

Dear Mr. Wilson:

This responds to your July 21, 2008, correspondence requesting comments on the above-referenced project.

Staff has reviewed the Draft Environmental Assessment and has no comments or recommendations to submit at this time.

Should you have any questions, please contact Captain James Sanborn, Commander of the South Kohala District, at 887-3080.

Sincerely,

LAWRENCE K. MAHUNA
POLICE CHIEF

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

JNS:dv

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Lawrence K. Mahuna, Police Chief
Hawaii County Police Department
349 Kapiolani Street
Hilo, HI 96720

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Chief Mahuna,

Thank you for taking the time to respond to our Early Consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We understand the Police Department staff have reviewed our Early Consultation notification (this was not the full Draft Environmental Assessment) and have no comments or recommendations to submit at this time. A copy of your letter and this response will be included in the Draft Environmental Assessment (DEA).

Should we have any future questions, we will direct them to Capt. James Sanborn, Commander of S. Kohala District, at 808-887-3080, per your letter.

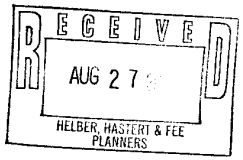
If you have any remaining questions or concerns, or would like to be removed from the mailing list for the DEA, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

HISTORIC HAWAI'I FOUNDATION



August 26, 2008

Scott Ezer
Principal
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

RE: Section 106 and NEPA Consultation Draft Environmental Assessment and Early Consultation for Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawaii

Dear Mr. Ezer:

Thank you for referring the above-mentioned project to Historic Hawai'i Foundation for consultation under Section 106 of National Historic Preservation Act.

Since 1974, Historic Hawai`i Foundation (HHF) has been a statewide leader for historic preservation. HHF's mission is to preserve and encourage the preservation of Hawai`i's historic buildings, places, objects and communities.

Historic Hawai'i Foundation looks forward to commenting on the Environmental Assessment (EA) for the proposed project. We would like to know the age of the shed proposed for demolition in order to determine if it may have any historic significance. We will provide comments on any concerns we may have after reviewing the forthcoming EA.

Thank you for the opportunity to comment.

Very truly yours,

Kiersten Faulkner, AICP
Executive Director

680 Iwilei Road, Suite 690 / Honolulu, Hawai'i 96817 / Tel (808)523-2900 / Fax (808)523-0800
Email preservation@historichawaii.org / Web www.historichawaii.org

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Ms. Kiersten Faulkner, Executive Director
Historic Hawaii Foundation
680 Iwilei Road, Suite 690
Honolulu, HI 96817

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Ms. Faulkner,

Thank you for taking the time to respond to our Early Consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor, and for your assistance with our National Historic Preservation Act Section 106 consultation.

Regarding your request for information about the age of the Overseas Transit Shed (OTS) to determine historic significance, we have determined the construction date is 1960 (according to County of Hawai'i Real Property Tax online records). This building, Piers 1 and 2, and roughly half of this portion of the harbor land area, is reclaimed submerged land built entirely on crushed coral fill material dredged from the harbor during construction.

When originally constructed, this shed supported an overhead sugar conveyor and a gantry system to allow direct discharge of bulk sugar into the holds of cargo barges. These distinctive elements, and other sugar-industry features, were removed in 1996 after the sugar industry ceased operations on the island, so there is little historic integrity to connect the OTS to its prior use. In the intervening decade, the OTS was used to store "Less than Container Load" shipments, a use which has sharply declined as shipping moves to greater containerization of loads and increasingly efficient shipping and loading methods. Unfortunately, the shed is so close to the water's edge that it blocks the available pier apron area so that there is insufficient room to allow a ramp to be deployed from barge to pier apron, impeding the efficient loading and discharge of freight.

On top of this, heavy damage was sustained by this building during the two earthquakes on October 15, 2006. The 6.7 magnitude Kiholo Bay and 6.0 Mahukona earthquakes were both within about 13 miles of the site. These quakes caused liquefaction of the crushed coral fill material the OTS is built on, lateral displacement of the pile-supported concrete piers, and significant vertical settlement of asphalt pavement. The OTS settled 5 to 9 inches (unevenly) below the level of the pavement around the perimeter and suffered structural damage, including several severed structural cross-members and walls partially separated from the roof and foundation, leaving large gaps, and resulting in an undesirable amount of wall flex in response to heavy winds.

In summary, this building is heavily damaged, no longer required, and interferes with the current cargo operations. The heavy damage, even without the substantial settlement of the building below the surrounding surface, would be prohibitively expensive to repair, especially considering the interior use of lead-based paints and arsenic-containing canac fiberboard on the interior walls and ceilings fo the office areas. It would also be imprudent to relocate due to the heavy damage.

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

While we are sensitive to the need to preserve important historic elements from Hawai'i's past, this building is not a good candidate for restoration or preservation. The building needs to be demolished, and the ground below it needs substantial work to strengthen the area for its continued use.

The Proposed Action will accomplish the removal of the damaged structure, significantly improve the productive use of the pier area, and begin to provide additional paved area to support existing cargo demand.

We hope this information is sufficient to answer your questions. A copy of your letter and this response will be included in the Draft Environmental Assessment (DEA), and we will send you a copy as soon as it is published.

If you have any remaining questions or concerns, or would like to be removed from the mailing list for the DEA, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Harry Kim
Mayor

Bobby Jean Leithead Todd
Director

Nelson Ho
Deputy Director

County of Hawaii
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
25 Aupuni Street • Hilo, Hawai`i 96720-4252
(808) 961-8083 • Fax (808) 961-8086
http://co.hawaii.hi.us/directory/dir_envmng.htm

August 28, 2008

Mr. Charles Wilson
Helber, Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, HI 96813

Subject: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai`i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai`i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52 and 64

Dear Mr. Wilson,

I apologize for our belated response to your request for comments on the subject project. Our comments are enclosed.

Thank you for allowing us the opportunity to review and comment on this project.

Sincerely,

Bobby Jean Leithead Todd
DIRECTOR

enclosure

cc: Mike Dworsky, SWD Chief
Terin Gloor, SW Engineer

10971 4

SOLID WASTE DIVISION
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
COUNTY OF HAWAII – 108 RAILROAD AVENUE – HILO, HI 96720
HILO (808) 961-8514 WAIMEA (808) 887-3018 KONA (808) 327-3507
Fax: 961-8553 887-3025 327-3506

MEMORANDUM

August 22, 2008

TO: Bobby Jean Leithead Todd, Director

FROM: Terin Gloor, P.E., Solid Waste Engineer

SUBJECT: Draft Environmental Assessment for: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai`i – TMK(s) 6-1-03:23, 36, 52, and 64.

The draft environmental assessment indicates that there may be a significant volume of solid waste generated by demolition activity. This activity will require a demolition plan as defined in the "Solid Waste Demolition Plan Guidelines". Additionally, if materials from this demolition are to be landfilled in either of the County landfills the form: "Generator's Waste Profile Sheet" will be required.

I have attached copies of both of these documents to this memorandum. Should you have any questions or require additional information, please contact me at (808) 961-8058.

Harry Kim
Mayor

Bobby Jean Leithead-Todd
Director

Nelson Ho
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
25 Aupuni Street • Hilo, Hawai'i 96720-4252
(808) 961-8083 • Fax (808) 961-8086
http://co.hawaii.hi.us/directory/dir_envmng.htm

May 18, 2007

SOLID WASTE DEMOLITION PLAN
Guidelines

INTENT AND PURPOSE

This is to establish guidelines for reviewing demolition plans, for which special conditions are placed on commercial, industrial, and multiple structure demolition projects. The demolition plan will be used to: (1) identify the anticipated waste generated by the demolition, (2) detail site specific hazardous waste investigation and disposal procedures, (3) report recycling and reuse procedures.

REPORT

The report will contain the following:

1. Description of the project and the waste it may be generating: i.e. analysis of anticipated waste volume and composition.

2. List materials to be recycled, reused, and sorting procedures. Also, identify a responsible party for overseeing this effort.

3. Identification of the proposed disposal site and transportation methods for the various components of the waste and recyclable commodities, including the route that truck will be using to transport the waste and recycled materials. We will not allow the use of the County transfer stations for any demolition project.

REQUIREMENTS AND CONDITIONS

1. A demolition plan will be required for all commercial, industrial, and multiple structure demolition projects.

2. We will require the owner to provide or resolve all recommendations and mitigation measures as outlined in the report; besides any conditions placed on the applicant by the Department of Environmental Management.

3. The owner is responsible for certifying that the demolition plan is executed.

Michael Dworsky
Michael Dworsky, P.E.
CHIEF, Solid Waste Division

CONCUR:

Bobby Jean Leithead-Todd
DIRECTOR

Hawai'i County is an Equal Opportunity Provider and Employer.

GENERATOR'S WASTE PROFILE SHEET
PLEASE PRINT IN INK OR TYPE

Service Agreement on File? ☐ YES ☐ NO
☐ Hazardous ☐ Non-Hazardous ☐ TSCA

Profile Number: SWD _____
Renewal Date: __/__/__

A. Waste Generator Information

1. Generator Name: _____
2. SIC Code: _____
3. Facility Street Address: _____
4. Phone: _____
5. Facility City: _____
6. State/Province: _____
7. Zip/Postal Code: _____
8. Generator USEPA/Federal ID#: _____
9. County: _____
10. State/Province ID#: _____
11. Customer Name: _____
12. Customer Phone: _____
13. Customer Contact: _____
14. Customer Fax: _____
15. Billing Address: _____

☐ Same as above

B. Waste Stream Information

1. Description
   a. Name of Waste: _____
   b. Process Generating Waste: _____

c. Color	d. Strong odor (describe):	e. Physical State @ 70°F	f. Layers	g. Free liquid range
		☐ Solid ☐ Liquid ☐ Gas ☐ Sludge ☐ Other	☐ Single Layer ☐ Multi-Layer	to %
				h. pH: Range to %

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥200°F ☐ Not applicable

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHCs] present in any concentration and submit representative analysis):

Constituents	Concentration Range	Constituents	Concentration Range

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. ☐ Oxidizer ☐ Pyrophoric ☐ Explosive ☐ Radioactive ☐ Carcinogen ☐ Infectious ☐ Shock Sensitive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA Notification? (list in Section B.1.j) ☐ YES ☐ NO

m. Does the waste represented by this profile contain dioxins? (list in Section B.1.J) ☐ YES ☐ NO

n. Does the waste represented by this profile contain asbestos? ☐ YES ☐ NO
If yes ☐ friable ☐ non-friable

o. Does the waste represented by this profile contain benzene? ☐ YES ☐ NO
If yes, concentration _____ ppm
Is the waste subject to the benzene waste operations NESHAP? ☐ YES ☐ NO

p. Is the waste subject to RCRA Subpart CC controls? ☐ YES ☐ NO
If yes, volatile organic concentration _____ ppm

q. Does the waste contain any Class I or Class II ozone-depleting substances? ☐ YES ☐ NO

r. Does the waste contain debris? (list in Section B.1.j) ☐ YES ☐ NO

2. Quantity of Waste
Estimated Volume _____ ☐ Tons ☐ Yards ☐ Drums ☐ Other (specify) _____

3. Shipping Information
   a. Packaging:
   ☐ Bulk Solid; Type/Size: _____ ☐ Bulk Liquid; Type/Size: _____
   ☐ Drum; Type; Size: _____ ☐ Other: _____
   b. Shipping Frequency: Units _____ Per: ☐ Month ☐ Quarter ☐ Year ☐ One time ☐ Other _____
   c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If No, skip d, e, and f) ☐ YES ☐ NO

GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Profile Number: SWD _____

d. Reportable Quantity (lbs; kgs.): _____ e. Hazard Class/ID#: _____
f. USDOT Shipping Name: _____
g. Personal Protective Equipment Requirements: _____
h. Transporter/Transfer Station: _____

C. Generator's Certification (Please check appropriate responses, sign and date below.)

1. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2. ☐ YES ☐ NO
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U) _____
   b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (If yes, list in Section B.1.j) ☐ YES ☐ NO
   c. Does this waste contain debris? (If yes, list size and type in Chemical Composition - B.1.) ☐ YES ☐ NO
2. Is this a state hazardous waste ☐ YES ☐ NO
   Identify ALL state hazardous waste codes _____
3. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ☐ YES ☐ NO
   If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up Activity. For state mandated clean-up, provide relevant documentation.
4. Does the waste represented by this waste profile sheet contain radioactive material, or is disposal Regulated by the Nuclear Regulatory Commission? ☐ YES ☐ NO
5. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (If yes, list in Chemical Composition - B.1.j) ☐ YES ☐ NO
   a. If yes, were the PCBs imported into the U.S.? ☐ YES ☐ NO
6. Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste Material, and has all relevant information within the possession of the Generator regarding known or Suspected hazards pertaining to the waste been disclosed to the Contractor? ☐ YES ☐ NO
7. Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor? ☐ YES ☐ NO

☐ Check here if a Certificate of Destruction or Disposal is required.

Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize the SWD to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

Certification Signature: _____ Title: _____
Name (Type or Print): _____ Company Name: _____ Date: _____
☐ Check if additional information is attached. Indicate the number of attached pages _____

D. SWD Management's Decision — FOR SWD USE ONLY

1. Management Method ☐ Landfill ☐ Non-hazardous Solidification ☐ Bioremediation ☐ Incineration ☐ Hazardous Stabilization ☐ Other (Specify) _____
2. Proposed Ultimate Management Facility: _____
3. Precautions, Special Handling Procedures, or Limitation on Approval: _____

Special Waste Decision ☐ Approved ☐ Disapproved
Salesperson's Signature: _____ Date: _____
Division Approval Signature (Optional): _____ Date: _____
Special Waste Approvals Person Signature: _____ Date: _____

Form SWD-DEM-COH-HW 02/08

Additional Information for Contaminated Soil Reviews

1. Is this a hazardous waste (RCRA C)? ☐ Yes ☐ No
2. Does this waste contain heavy metals? ☐ Yes ☐ No
   If yes, explain & identify _____
3. Does the waste contain PCBs? ☐ Yes ☐ No
   If yes, explain _____
4. Is the waste a TSCA waste? ☐ Yes ☐ No
   If yes, explain & identify _____
5. Is the waste a CERCLA waste? ☐ Yes ☐ No
   If yes, explain & identify _____
6. Regulatory agency & Contact _____
7. Generator _____
8. Type of Contamination _____
9. Consultant Name & Number _____
10. Review report attached ☐

If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Sheet and additionally attached sheets from information provided by the generator and additional information as it has determined to be reasonably necessary.

Certification Signature: _____ Title: _____
Name (Type or Print): _____ Company: _____ Date: _____

Submittal Instructions

The following are the items that should be in any review report, in the order noted.

1. List of regulatory agencies and regulations applicable to the project. Include Names and contact information (phone numbers) for all agencies involved for follow up.
2. Contact information: generator, type of contamination, and site history in narrative form.
3. Consultant information (i.e. Names, phone numbers) include the consultant that did the original investigation and subsequent investigations.
4. Report format for technical information.
   A. Background information for site and processes.
   B. Summary of investigative action. Including sampling and testing information pertinent to disposal.
   C. Summary of remedial actions and how material being disposed was generated.
   D. Rational for the determination that material is solid waste this should be based on applicable regulations.
   E. Site location maps and site drawings.
   F. Summary table of test data.
   G. Laboratory data.

Actions Taken

Date _____
Accepted _____ Rejected _____
Reason for rejection _____

Helber Hastert & Fee
Planners, Inc.

November 12, 2008

Ms. Bobby Jean Leithead Todd
County of Hawaii
Department of Environmental Management
25 Aupuni Street
Hilo, HI 96720-4252

Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Draft Environmental Assessment Early Consultation
Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64

Dear Ms. Todd:

Thank you for taking the time to respond to our Early consultation letter regarding the proposed improvements to the interisland container cargo operations areas at Kawaihae Harbor.

We appreciate the information regarding the County's programs dealing with demolition plans and landfills. We would like to point out that under the provisions of Chapter 266, Hawaii Revised Statutes (HRS), which deals with harbors in the State of Hawai'i, the Department of Transportation (DOT) is exempted from obtaining County approvals for harbors projects:

> *"Notwithstanding any law or provision to the contrary, the department of transportation is authorized to plan, construct, operate, and maintain any commercial harbor facility in the State, including, but not limited to, the acquisition and use of lands necessary to stockpile dredged spoils,* ***without the approval of county agencies****."* (Section 266-2(b), HRS) (emphasis added)

As such, DOT Harbors Division will not be submitting a demolition plan or "Generator's Waste Profile Sheet" for this project. The contractor has indicated that all scrap metal associated with the demolition will be recycled, with only lumber remaining from an interior break room/lavatory to be land-filled. Appropriate hazardous materials analysis will be conducted to determine suitability for land-filling, with debris to be handled according to appropriate federal regulations regarding hazardous materials.

We will provide you with a copy of the Draft Environmental Assessment as soon as it is published, and a copy of your letter and this response will be included in

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

the Draft EA (DEA). If you have any remaining questions or concerns, please feel free to contact me by phone at 545-2055, or by email to sezer@hhf.com.

Sincerely,

Scott Ezer
Principal
Helber Hastert & Fee, Planners

[This page intentionally blank for printing double-sided.]

9.0 REFERENCES

Bureau Veritas North America, Inc., *Pre-Final Phase I Environmental Site Assessment and Hazardous Materials Survey, Kawaihae Harbor Pier 2 Improvements Project, Kawaihae Harbor, (TMK: [3] 6-1-003: Parcels 023 [por.], 036 & 052), Kawaihae, Hawai'i.* July 31, 2008.

Chock, Gary, ed., et. al. *Compilation of Observations of the October 15, 2006 Kiholo Bay (Mw 6. 7) and Mahukona (Mw 6.0) Earthquakes, Hawai'i.* December 31, 2006. An EERI / Structural Engineers Association of Hawaii / University of Hawai'i Report. Available at: http://www.seaoh.org/attach/2006-10-15_KiholoBay_SEAOH_report.pdf

Department of Hawaiian Home Lands. 1992 DHHL Kawaihae Ten Year Master Plan,

Fletcher, Charles H. III, Eric E. Grossman, Bruce M. Richmond, and Ann E. Gibbs. *Atlas of Natural Hazards in the Hawaiian Coastal Zone*. USGS Series 1-2761, 2002. Main document at: http://pubs.usgs.gov/imap/i2761/sections/1_Intro.pdf. Maps available at: http://pubs.usgs.gov/imap/i2761/ .

Greene, Linda Wedel. *A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawai'i Island.* September 1993. Prepared for United States Department of the Interior, National Park Service, Denver Service Center. Available at: http://www.nps.gov/history/history/online_books/kona/history.htm

Handy, E.S. Craighill and Elizabeth Green Handy. *Native Planters in Old Hawai'i: Their Life, Lore, and Environment*. Bishop Museum Press, 1972.

Haraguchi, Paul. *Hurricanes in Hawai'i.* Prepared for Department of the Army, US Army Corps of Engineers, Pacific Ocean Division [Honolulu]. 1984

Hawai'i, County of. *The 1989 General Plan, Hawai'i County.* Accessed online at: http://www.co.hawaii.hi.us/planning/main.htm. Proposed revisions at: ttp://www.co.hawaii.hi.us/la/gp/toc.html.

Hawai'i, County of, Department of Research and Development. *County of Hawai'i Data Book*. Available at: http://www.hawaii-county.com/databook_current/dbooktoc.htm. Table 5.18 - Climatic Normals, Means, and Extremes for Hilo Airport: 2002 from: http://www.hawaii-county.com/databook_current/Table%205/5.18.doc; Table 5.10 - Volcanic Eruptions on Hawai'i Island: 1750 to 2004 http://www.hawaii-county.com/databook_current/Table%205/5.10.pdf; Table 5.11 - Earthquakes of Magnitude 5 or Greater: 1974 to 2005. http://www.hawaii-county.com/databook_current/Table%205/5.10.pdf

Hawai'i, County of. *Hawai'i County Code 1983 (*"Unofficial" June 2005 Edition, as Amended), accessed online at: http://www.co.hawaii.hi.us/countycode/chapter25.pdf. (zoning regulations)

Hawai'i, County of. *Hawai'i County Data Book* (current online version compiled by Department of Research and Development). *Table 1.1-- Resident Population, State of Hawai'i, by Counties: 1980, 1987 to 2007*. Online at http://www.co.hawaii.hi.us/databook_current/Table%201/1.1.pdf , section updated 4/16/2008. Also *Table 1.8 – Resident Population, Land Area and Density, by Census Tract, Hawaii County: 2000*, based on U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171), Summary File (March 2001); figures compiled and calculated by the Hawai'i DBEDT, Hawai'i State Data Center. Available at: http://www.hawaii-county.com/databook_current/Table%201/1.8.pdf; *Table 5.5 – Elevations of Major Summits in Hawaii, by Island*. Available at: http://www.hawaii-county.com/databook_current/Table%205/5.5.pdf

Hawai'i Pilots Association. Island of Hawaii (Hilo, Kawaihae) Harbor data available at: http://64.40.108.214/hpa/BigIsland.asp

Hawai'i, State of, Department of Business, Economic Development, and Tourism (DBEDT) Research and Economic Analysis Division. *The Hawai'i Input-Output Study: 1997 Benchmark Report.* March 2002. Available online at: http://www.hawaii.gov/dbedt/97io/index.html

Hawai'i, State of. Department of Business, Economic Development and Tourism (DBEDT). *2007 The State of Hawai'i Data Book*. Especially: *Table 1.18-- Resident Population for Hawaii, Kauai, Kalawao, and Maui Counties, by District and Census Tract: 1990 and 2000.* *Table 5.29: Water Quality at Selected Public Beaches: 2006 and 2007.* All accessed 9/1/08 – 9/8/08 at: http://hawaii.gov/dbedt/info/economic/databook/db2007/section01.xls#'01.18'!A1 *Table 5.36: Temperatures and Precipitation for Selected Places.* (precipitation and meteorological records from Hawaii State DLNR, CWRM, UH School of Ocean and Earth Science and Technology, Department of Meteorology,) Accessed 9/1/08 at: http://hawaii.gov/dbedt/info/economic/databook/db2007/section05.pdf
,. Also Table 5.32: *Air Quality at Specified Locations*. This table not available in 2007 Data Book. Accessed 9/1/08 at: http://www.hawaii.gov/dbedt/info/economic/databook/db2005
Accessed 9/1/08 at: http://hawaii.gov/dbedt/info/economic/databook/db2007/section05.pdf

Hawai'i, State of, Department of Business, Economic Development and Tourism, *CENSUS 2000*.

Hawai'i, State of, Hawai'i, Department of Business, Economic Development and Tourism, Research and Economic Analysis Division. *Population and Economic Projections for the State of Hawaii to 2035: DBEDT 2035 Series.* January 2008. Available at: http://hawaii.gov/dbedt/info/economic/data_reports/2035LongRangeSeries/2035_Long_Range_Series_Report1.pdf

Hawai'i, State of, Department of Health.*2004 Annual Summary Hawai'i Air Quality Data*. Available at: http://www.Hawaii.gov/health/environmental/air/cab/cabmaps/pdf/databook2004.pdf

Hawai'i, State of, Department of Health. *Draft 2006 Integrated Report of Assessed Waters In Hawai'i, Part 1 – Marine Waters.* Prepared under Clean Water Act §303(d) and §305(b) Available at: http://hawaii.gov/health/environmental/env-planning/wqm/pt1_marine.pdf

Hawai'i, State of, Department of Health, Environmental Planning Office. *Final 2004 List of Impaired Waters in Hawaii*. June 16, 2004. (Also known as the Hawaii Section 303(d) Water Body List or Water Quality Limited Waters List.) Available online at: http://www.hawaii.gov/health/environmental/env-planning/wqm/303dpcfinal.pdf .

Hawai'i, State of, Department of Health. *Chapter 54, Water Quality Standards, April 17, 2000* (also found under Hawai'i Administrative Rules Title 11), §11-54-03 Classification of water uses. Available online at: http://www.epa.gov/bioindicators/pdf/HI_WQS_final.pdf; complete text at http://www.epa.gov/waterscience/standards/wqslibrary/hi/hawaii_9_wqs.pdf.

Hawai'i, State of, Department of Health. *Review of Hawaii's 2004 Section 303(d) Water Body List* (Attachment to letter from Alexis Strauss, EPA Region 9 to Laurence K. Lau, Hawaii Dept. of Health describing rationale for EPA's approval of Hawaii's 2004 Section 303(d) water quality limited waters list), June 21, 2004. Available at: http://www.hawaii.gov/health/environmental/env-planning/wqm/appletter.pdf.

Hawai'i, State of, Department of Health, Clean Water Branch. *Water Quality Standards Map of the Island of Hawai'i*. October 1987. Available at: http://www.Hawai'i.gov/health/environmental/water/cleanwater/wqsmaps/pdf/Hawaii.pdf

Hawai'i, State of, Department of Land and Natural Resources. *State Historic Preservation Division Inventory of Historic Properties*. 2002. Available at: http://www.state.hi.us/dlnr/hpd/register/reghaw.pdf

Hawai'i, State of, Department of Land and Natural Resources, Commission on Water Resource Management (CWRM). *Hawaii Water Plan: Water Resource Protection Plan.* 2008. Figure 3-6 Island of Hawai'i Ground Water Hydrologic Units, and Table 3-10 Comparison of Predicted Sustainable Yields Considered by the CWRM Sustainable Yield in Million Gallons Per Day. Available at: http://hawaii.gov/dlnr/cwrm/planning/wrpp2008update/FINAL_WRPP_Sect03.pdf

Hawai'i, State of, Department of Land and Natural Resources, Division of Boating and Ocean Recreation, prepared by M&E Pacific, Inc. *Final Environmental Assessment, Kawaihae Small*

Boat Harbor (South) Improvements, Phase 1, Kawaihae, Island of Hawai'i, Hawai'i (TMK (3)6-1-003: Por. 026). May 2008.

Hawai'i, State of, Department of Transportation, Harbors Division, January 1995, *Environmental Impact Statement for Development of Kawaihae Small Boat Harbor*.

Hawai'i, State of, Department of Transportation, Harbors Division *Final Environmental Impact Statement for the Hawaii Commercial Harbors 2020 Master Plan, Island of Hawai'i*. Prepared by RM Towill Corporation. July 2001.

Hawai'i, State of, Department of Taxation, Taxation Maps Bureau. *Tax Map, Third Taxation Division, Zone 6, Section 1, Plat 3* (TMK 3rd 6-1-3). From: http://www.co.hawaii.hi.us/maps/tmk/

Hawai'i, State of, Department of Transportation (H-DoT) Harbors Division. (No formal title) Kawaihae Harbor information website: http://www.state.hi.us/dot/harbors/hawaii/hawaii.htm

Hawai'i, State of, *Hawai'i Revised Statutes.*

Hawai'i, State of, *Island of Hawai'i Aquifer Map*, October 10, 1995, website address: http://www.Hawai'i.gov/dlnr/cwrm/data/gwHawaii.pdf

Hawai'i, State of, Survey Division. *Map of the Kawaihae 2nd, South Kohala* (Registered Map 2230) - survey and map by A.B. Loebenstein, 1903. Available at: http://uakoko.org/maps/reg-map-2230-WIDE.pdf

Juvik, Sonia P. and James O Juvik, eds. *Atlas of Hawai'i.* Department of Geography, University of Hawai'i at Hilo, Third Edition, 1998.

M&E Pacific, Inc., *Master Plan for Kawaihae Small Boat Harbor (South)*, December 2003.

National Imagery and Mapping Agency (NIMA). *North Pacific Ocean, Hawaiian Islands, Oahu-South Coast, Pearl Harbor, Navigation Chart 19366*. Mercator projection, scale: 1:15,000, 34th edition. May 1999.

National Wilderness Preservation System Database, December 2004, website address: http://www.wilderness.net/index.cfm?fuse=NWPS&sec=map.

Nishimura, Brian T. *Pave Additional Barge Terminal Area, Kawaihae Harbor.* (Job H.C. 5313) Final EA. For Hawai'i Department of Transportation. September 1999.

NOAA Western Regional Climate Center (WRCC). *Climate of Hawai'i.* Available at http://www.wrcc.dri.edu/narratives/HAWAII.htm.

Pukui, Mary Kawena, Samuel H. Elbert, and Esther T. Mookini. *Place Names of Hawai'i.* University of Hawai'i Press. 1974 / 1984.

Sea Engineering, Inc., *Phase I Berthing and Facilities Plan, Kawaihae Small Boat Harbor*, April 1998.

Stearns, H.T. *Quaternary Shorelines in the Hawaiian Islands.* Bernice P. Bishop Museum Bulletin, 1978, v. 237, p. 1-57. [Ref. in Lauer, et al.]

Thompson, Rod. *1 of 3 Piers at Kawaihae Reopens; Cargo Resumes to West Hawai'i.* Honolulu Star Bulletin, Vol. 11, Issue 291, October 18, 2006. At: http://starbulletin.com/2006/10/18/news/story06.html

Tissot, Brian N. *Changes in the marine habitat and biota of Pelekane Bay, Hawai'i over a 20-year period.* March 1998. Prepared for U.S. Fish & Wildlife Service Pacific Islands Office. Available at: http://www.coralreefnetwork.com/research/pelekane/default.htm

Townscape. *South Kohala Community Development Plan*. July 11, 2008 (Pre-Final). Esp. Ch.. 6 *Kawaihae Community Plan*. Prepared for the County of Hawai'i. Available at: http://www.hcrc.info/community-planning/community-development-plans/south-kohala/skcdppre-finaldraft07.11.08c.pdf/view

Tranquilli, Betsy. *Aftershock further damages Kawaihae Harbor piers.* West Hawaii Today. October 18, 2006. Available at: http://www.westhawaiitoday.com/articles/2006/10/18/local/local08.txt.

U.S. Army Engineer District, *Final Environmental Assessment for Kawaihae Harbor for Light-Draft Vessels*, December 1994.

U.S. Department of Agriculture USDA Natural Resources Conservation Service (NRCS). *NRCS Web Soil Survey.* Available online at: http://websoilsurvey.nrcs.usda.gov/app/, map accessed 8/8/08. (Also used USDA Soil Conservation Service, Soil Survey of Island of Hawai'i, State of Hawai'i, Map 83, Dec. 1973.)

U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Center for Operational Oceanographic Products and Services. *Tidal Station Locations and Ranges.* At: http://tidesandcurrents.noaa.gov/tides07/tab2wc3.html#167

U.S. Department of the Interior, U.S. Geological Survey, *Advanced National Seismic System (ANSS) /CNSS Worldwide Earthquake Catalog* hosted by the Northern California Earthquake Data Center (NCEDC) at: http://www.ncedc.org/cnss/catalog-search.html (Query conducted 8/18/2008.)

U.S. Department of the Interior, National Park Service, Hawai'i Volcanoes National Park. *Frequently Asked Questions*. Available at: http://www.nps.gov/havo/faqs.htm

U.S. Environmental Protection Agency (EPA). *National Ambient Air Quality Standards.* Available online at: http://www.epa.gov/air/criteria.html and http://www.scorecard.org/env-releases/def/cap_naaqs.html

U.S. Environmental Protection Agency, *Sole Source Aquifer Designations in EPA, Region 9*, June 2000.

U.S. Federal Emergency Management Agency (FEMA), National Flood Rate Map, *Flood Insurance Rate Map. Community Panels FM1551660137C and FM1551660139C.*

U.S. Fish and Wildlife Service, Office of Endangered Species, "*Endangered Species Information System*" species account for "*Shearwater, Townsend's, Newell's; Species Id ESIS101026"*, dated March 14, 1996. Available at: http://fwie.fw.vt.edu/WWW/esis/lists/e101026.htm

U.S. Fish and Wildlife Service, *Wetlands Online Mapper*, September 2005, website address: http://wetlandsfws.er.usgs.gov/wtlnds/launch.html

U.S. Fish and Wildlife Service Wilderness Areas, September 2002, website address: http://www.fws.gov/realty/table10.html

U.S. Geological Survey, National Earthquake Information Center, World Data Center for Seismology (Denver). *Preliminary Earthquake Report* available at: http://earthquake.usgs.gov/eqcenter/eqinthenews/2006/ustwbh/#details Earthquake Location Map at: http://neic.usgs.gov/neis/eq_depot/2006/eq_061015_twbh/neic_twbh_l.html

U.S. Geological Survey, *Volcanic Hazard Zones of the Island of Hawai'i*. 1987. Available at: http://pubs.usgs.gov/gip/hazards/maps.html

Western Regional Climate Center. *Climate of Hawai'i.* Accessed 9/1/08 at http://www.wrcc.dri.edu/narratives/HAWAII.htm.

10.0 LIST OF PREPARERS

MARAD	
Scott Davies Program Manager, Port Infrastructure Development	
Dan Yuska, Environmental Specialist	
Hawai'i Department of Transportation (H-DOT) Harbors Division	
Wade K. Takamoto Project Manager, Kawaihae Harbor Project	
Helber Hastert & Fee, Planners, Inc.	Principal EA Authors
Scott Ezer, Principal-in-Charge	M.A. Urban Planning
Charles Willson, Author	M.Ed. Environmental Education
Engineering Team / Partners	
Akimeka LLC	Prime Contractor
James Francoise Director, Hawaii Operations	
Joanna Nellos	
Moffatt & Nichol	Harbor Engineering
Dean Kokubun,	
Robert Bennett	
R.M. Towill Corporation	Civil Engineering
Craig Luke, PE	
Nagamine Okawa Engineers Inc.	Structural Engineering
Jason Tateishi	
Thermal Engineering Corporation	Mechanical Engineering
David H. Niino	
MK Engineers, Ltd.	Electrical Engineering
Geolabs, Inc.	Soil Engineering
Bureau Veritas North America, Inc.	Phase 1 Environmental Assessment
Timothy J. Swartz	
Healy Tibbitts	Harbor Construction and Management
Rick A. Heltzel	
Clay Hutchinson	

[This page intentionally blank for printing double-sided.]

APPENDIX A

Planning History and Documentation of Kawaihae Harbor Improvements

PLANNING CHRONOLOGY, documents, and EAs and related to Kawaihae Harbor

Initial Kawaihae Harbor construction was in 1957 - 1959 by the Army Corps of Engineers using conventional ammonium nitrate explosives to remove sufficient coral to create the deep-draft harbor and breakwater. Coral removed from the harbor was used as fill to create additional stable backland area with suitable wharf hardscape for cargo movement, and ground up to produce permeable sand-like surface treatment

"Construction of a harbor for light-draft vessels at Kawaihae, Hawai'i, was authorized by Section 301 of the River and Harbor Act of 18 October 1965, in accordance with recommendations of the Chief of Engineers contained in House Document No. 75 89th Congress, lst Session. This document also provided for modifications to the existing Kawaihae Deep-Draft Harbor." [Final EIS for Kawaihae Harbor, July 1985, p.5]

March 1968. *General Design Memorandum for engineering and design of the modification to the **deep-draft** harbor and construction of the **light-draft** harbor within the deep-draft harbor basin* (approved June 1968)

State requests the light-draft harbor be relocated to the south, outside the authorized site within the deep-draft harbor.

August 1971. *General Design Memorandum and Final Environmental Statement* (not Assessment, per enactment of NEPA 1970)

October 1975. *Environmental Assessment June 1978 Information Supplement to the Final Environmental Statement*

1985 *Environmental Impact Statement for Development of Kawaihae Small Boat Harbor* (included in DLNR EA)

December 1994. *Final Environmental Assessment for Kawaihae Harbor for Light-Draft Vessels*. U.S. Army Corps of Engineers District (included in DLNR EA, proposed detailed south SB Harbor build-out plan, Appendix D, Fig 5 & 6 have conceptual Plans A & B [pdf 125 & 127], fig 8 shows Heiaus)

January 1995, *Environmental Impact Statement for Development of Kawaihae Small Boat Harbor*. DoT Harbors Division

April 1998. *Phase I Berthing and Facilities Plan, Kawaihae Small Boat Harbor*. Sea Engineering, Inc.

August 1998. *Hawaii Commercial Harbors 2020 Master Plan.* DoT / Harbors Division

September 1999. *Pave Additional Barge Terminal Area, Kawaihae Harbor, Final EA*

July 2001. Hawai'i, State of, Department of Transportation, Harbors Division, *Final Environmental Impact Statement for the Hawaii Commercial Harbors 2020 Master Plan, Island of Hawai'i*. Prepared by RM Towill Corporation. [Accepted by the Governor 8-20-01]

December 2003. M&E Pacific, Inc., *Master Plan for Kawaihae Small Boat Harbor (South)*.

December 18, 2007. Gov. Lingle announcement of **Hawai'i Harbors Modernization Plan**

December 18, 2007. *Hawai'i Harbors Modernization Plan Fact Sheet*. DoT / Harbors Division

May 2008. *Final Environmental Assessment, Kawaihae Small Boat Harbor (South) Improvements, Phase 1, Kawaihae, Island of Hawai'i, Hawai'i (TMK (3)6-1-003: Por. 026).* M&E Pacific, Inc., prepared for State of Hawai'i, Department of Land and Natural Resources, Division of Boating and Ocean Recreation. [blue items contained in refs here]

Kawaihae Harbor improvements (see graphic) include:

- Expansion of barge and terminal improvements at Pier 2 at Kawaihae Harbor
- Southern extension of Pier 2 to provide additional overseas operational area at Kawaihae Harbor
- Construction of a new multi-use Pier 4 at Kawaihae Harbor
- Site improvements to allow the development of liquid bulk storage facilities at Kawaihae Harbor

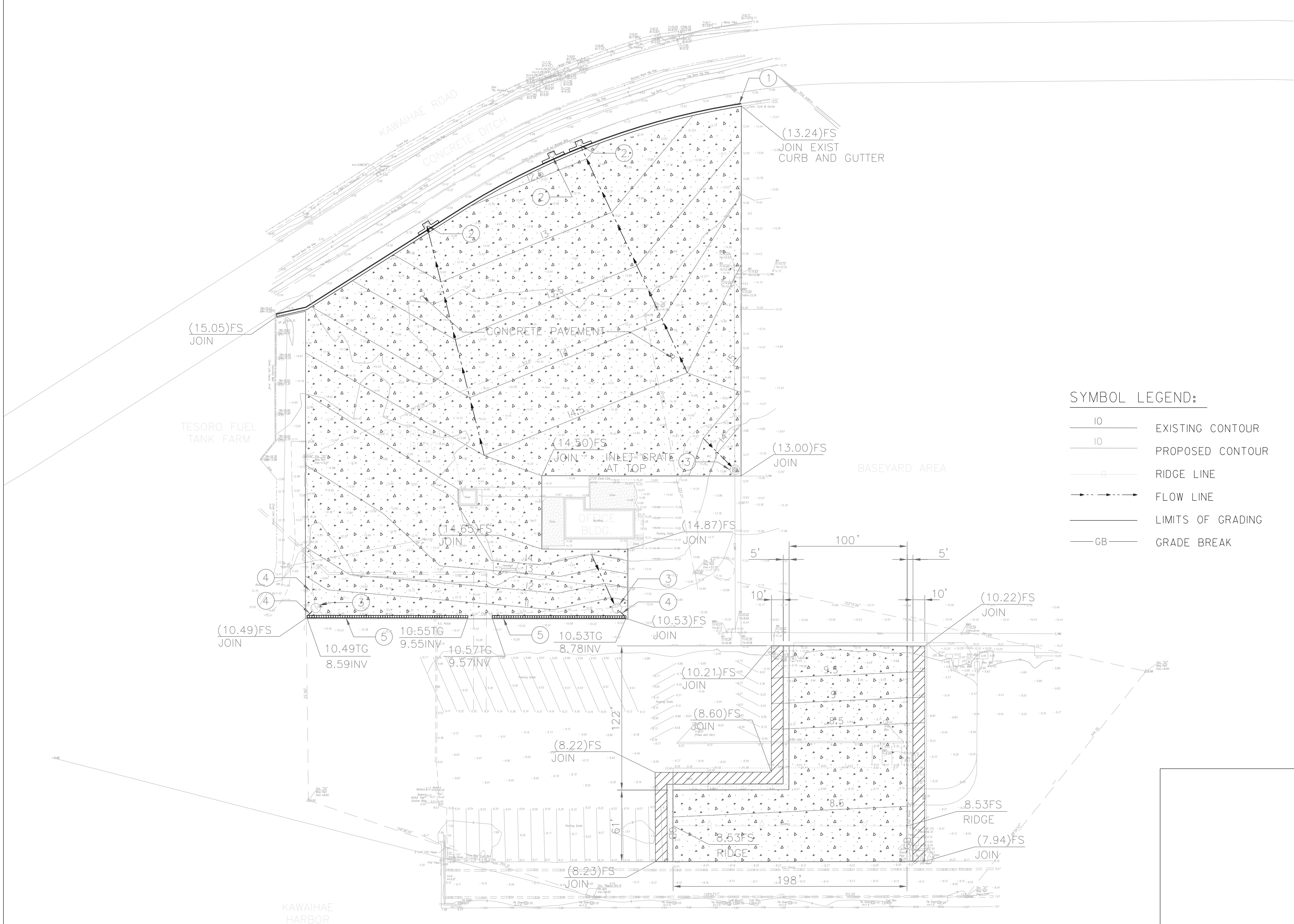
May 2008. *Final Environmental Assessment, Kawaihae Small Boat Harbor (South) Improvements, Phase 1, Kawaihae, Island of Hawai'i, Hawai'i (TMK (3)6-1-003: Por. 026).* Hawai'I Department of Land and Natural Resources, Division of Boating and Ocean Recreation, prepared by M&E Pacific, Inc.

APPENDIX B

PRELIMINARY DESIGN DRAWINGS

DOCUMENTING PROPOSED ACTION

[This page intentionally blank for printing double-sided.]



CONSTRUCTION NOTES:

1. CURB AND GUTTER TYPE "2DG" PER D.O.T. STD. PLAN D-04
2. TYPE "A" CATCH BASIN PER D.O.T, STD PLAN H-01 WITH SHALLOW DRY WELL, 8' DIA. AND 7.5' DEEP FROM FINISHED SURFACE
3. SHALLOW DRY WELLS, 8' DIA. AND 7.5' DEEP FROM FINISHED SURFACE
4. 18" REINFORCED CONCRETE PIPE (RCP)
5. TRENCH DRAIN

PAVING LEGEND:

- 19.5" PVC ON 8" AGGREGATE SUBBASE. PAVEMENT SUBGRADE SOILS SHALL BE SCARIFIED TO A DEPTH OF AT LEAST 8" AND COMPACTED 95% RELATIVE COMPACTION MINIMUM. SEE SHEET C-3 AND SOILS REPORT FOR DETAILS.
- 5' WIDE KEYED CONCRETE TRANSITION SLAB, SEE DETAIL 2, SHEET C-3 FOR DETAILS.
- AC TRANSITION TOPPING, SEE DETAIL 2, SHEET C-3 FOR DETAILS.

SYMBOL LEGEND:

- 10 EXISTING CONTOUR
- 10 PROPOSED CONTOUR
- R RIDGE LINE
- FLOW LINE
- LIMITS OF GRADING
- GB GRADE BREAK

NOTES:

1. IF SOFT, LOOSE, AND/OR SILTY CLAY SOIL CONDITIONS ARE ENCOUNTERED AT THE SUBGRADES, THAT MATERIAL SHALL BE OVER-EXCAVATED TO UNDERLYING DENSE MATERIAL. IF UNDERLYING DENSE MATERIAL DOES NOT EXIST, PROVIDE AN ADDITIONAL 18" LAYER OF NO. 3B FINE GRAVEL WRAPPED IN A NON-WOVEN FILTER FABRIC (MIRAFI 180N OR EQUAL) BELOW THE BEDDING LAYER.
2. PRIOR TO EXCAVATION, THE CONTRACTOR IS REQUIRED BY SECTION 269F, HAWAII REVISED STATUTES TO CONTACT THE HAWAII ONE CALL CENTER AT 1-866-423-7287.

60% PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION
WASHINGTON, D.C.

PIER 2A SHED DEMOLITION AND CONTAINER YARD IMPROVEMENTS, KAWAIHAE HARBOR, HAWAII

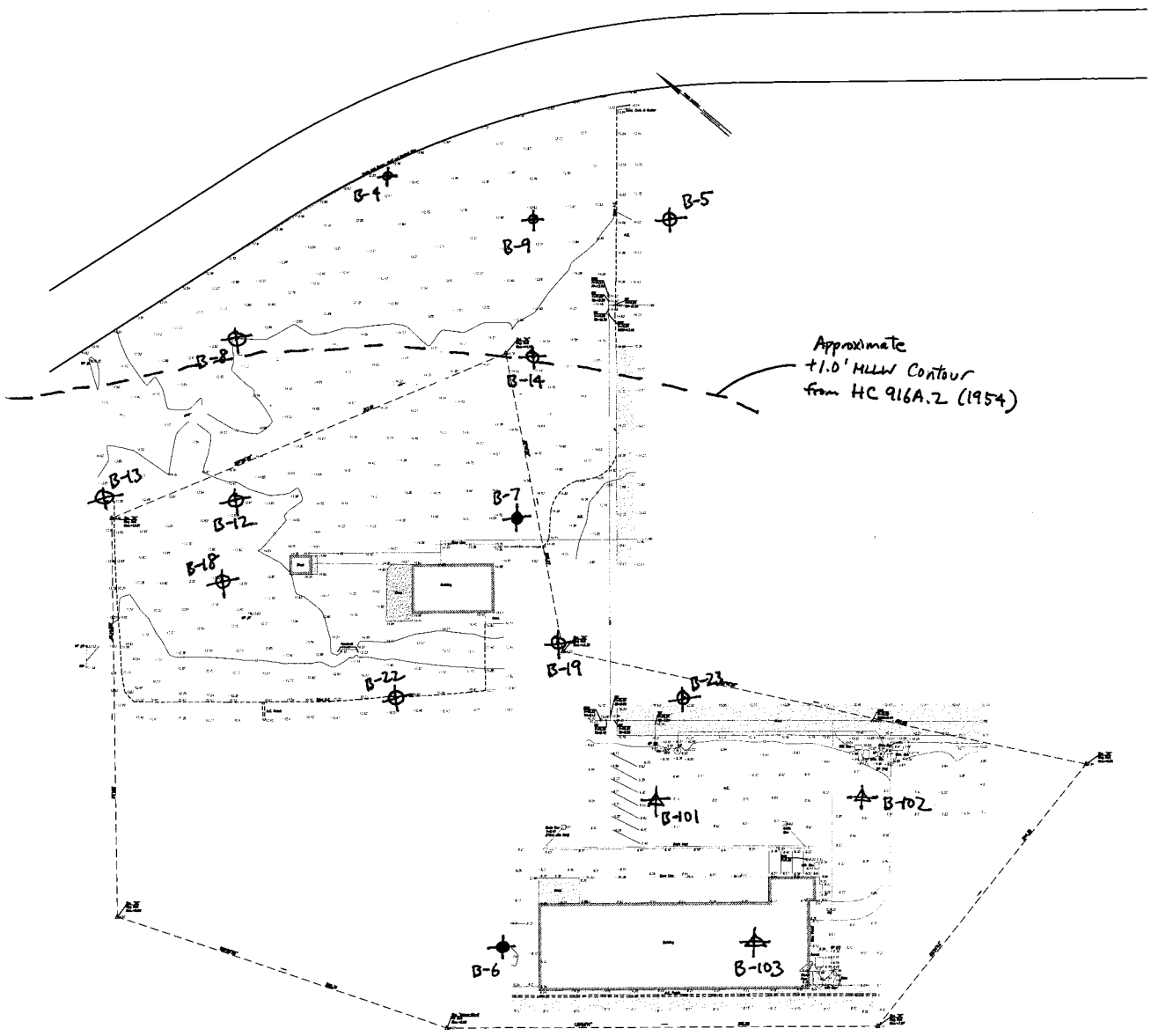
PROPOSED SITE GRADING, DRAINAGE AND PAVEMENT PLAN

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

H.C. 50038

C-2

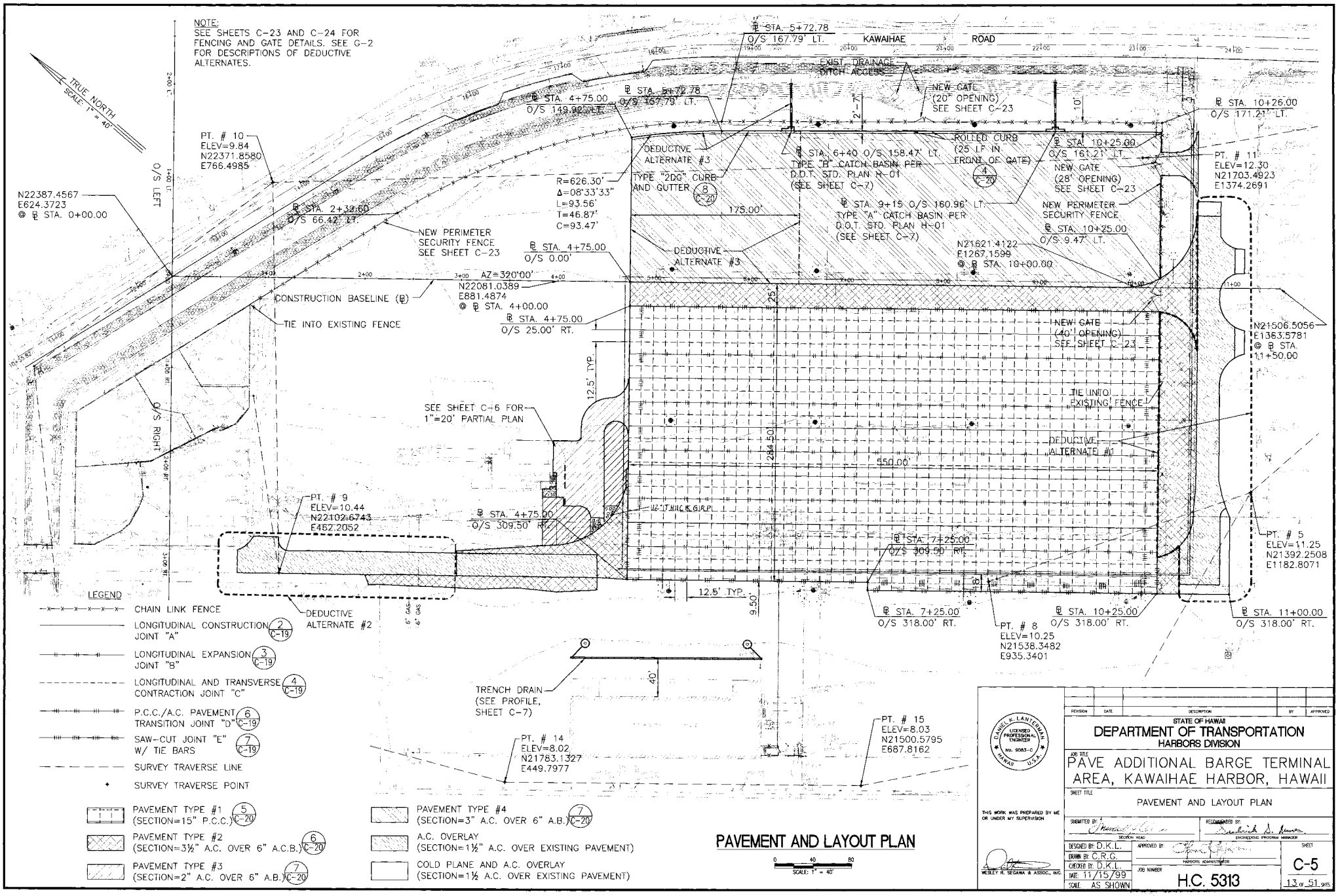
4 XX

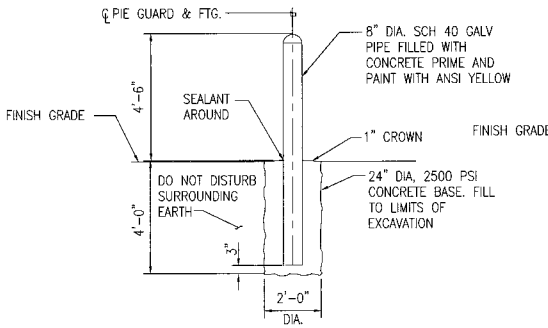


Boring Symbols

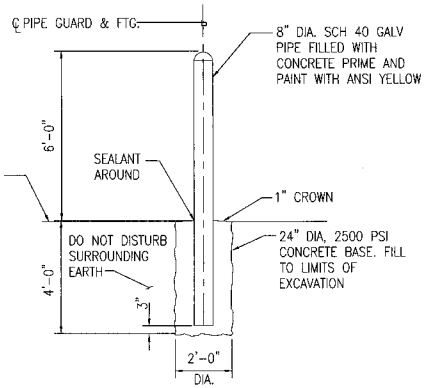
- from W.O. 4086-00 (10/99)
- from W.O. 5762-00 (1/07)
- from W.O. 6076-00 (8/08)

W.O. 6076-00
Kawaihae Harbor

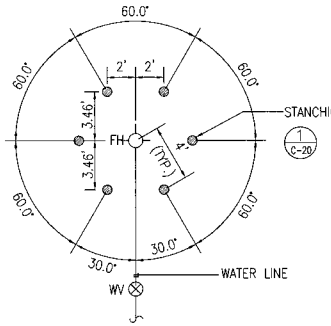

NOTE:
SEE SHEETS C-23 AND C-24 FOR FENCING AND GATE DETAILS. SEE G-2 FOR DESCRIPTIONS OF DEDUCTIVE ALTERNATES.
TRUE NORTH
SCALE: 1" = 40'
KAWAIHAE ROAD
℄ STA. 5+72.78
O/S 167.79' LT.
EXIST. DRAINAGE DITCH ACCESS
NEW GATE (20' OPENING) SEE SHEET C-23
℄ STA. 4+75.00
O/S 149.99' LT.
℄ STA. 5+72.78
O/S 157.79' LT.
℄ STA. 10+26.00
O/S 171.21' LT.
PT. # 10
ELEV=9.84
N22371.8580
E766.4985
DEDUCTIVE ALTERNATE #3
TYPE "2DG" CURB AND GUTTER (8 C-20)
℄ STA. 6+40 O/S 158.47' LT.
TYPE "B" CATCH BASIN PER D.O.T. STD. PLAN H-01 (SEE SHEET C-7)
ROLLED CURB (25 LF IN FRONT OF GATE) (4 C-20)
℄ STA. 10+25.00
O/S 161.21' LT.
NEW GATE (28' OPENING) SEE SHEET C-23
PT. # 11
ELEV=12.30
N21703.4923
E1374.2691
R=626.30'
Δ=08°33'33"
L=93.56'
T=46.87'
C=93.47'
N22387.4567
E624.3723
@ ℄ STA. 0+00.00
℄ STA. 2+32.60
O/S 66.42' LT.
NEW PERIMETER SECURITY FENCE SEE SHEET C-23
175.00'
℄ STA. 9+15 O/S 160.96' LT.
TYPE "A" CATCH BASIN PER D.O.T. STD. PLAN H-01 (SEE SHEET C-7)
NEW PERIMETER SECURITY FENCE
℄ STA. 10+25.00
O/S 9.47' LT.
℄ STA. 4+75.00
O/S 0.00'
DEDUCTIVE ALTERNATE #3
N21621.4122
E1267.1599
@ ℄ STA. 10+00.00
AZ=320°00'
N22081.0389
E881.4874
@ ℄ STA. 4+00.00
CONSTRUCTION BASELINE (℄)
TIE INTO EXISTING FENCE
℄ STA. 4+75.00
O/S 25.00' RT.
25'
NEW GATE (40' OPENING) SEE SHEET C-23
N21506.5056
E1363.5781
@ ℄ STA. 11+50.00
12.5' TYP.
TIE INTO EXISTING FENCE
SEE SHEET C-6 FOR 1"=20' PARTIAL PLAN
284.50'
DEDUCTIVE ALTERNATE #1
550.00'
PT. # 9
ELEV=10.44
N22102.6743
E462.2052
℄ STA. 4+75.00
O/S 309.50' RT.
12" THICK GIRPL
℄ STA. 7+25.00
O/S 309.50' RT.
PT. # 5
ELEV=11.25
N21392.2508
E1182.8071
12.5' TYP.
9.50'
℄ STA. 7+25.00
O/S 318.00' RT.
℄ STA. 10+25.00
O/S 318.00' RT.
℄ STA. 11+00.00
O/S 318.00' RT.
PT. # 8
ELEV=10.25
N21538.3482
E935.3401
DEDUCTIVE ALTERNATE #2
6" GAS
6" GAS
TRENCH DRAIN (SEE PROFILE, SHEET C-7)
40'
PT. # 14
ELEV=8.02
N21783.1327
E449.7977
PT. # 15
ELEV=8.03
N21500.5795
E687.8162
O/S LEFT
O/S RIGHT
LEGEND
CHAIN LINK FENCE
LONGITUDINAL CONSTRUCTION JOINT "A" (2 C-19)
LONGITUDINAL EXPANSION JOINT "B" (3 C-19)
LONGITUDINAL AND TRANSVERSE CONTRACTION JOINT "C" (4 C-19)
P.C.C./A.C. PAVEMENT TRANSITION JOINT "D" (6 C-19)
SAW-CUT JOINT "E" W/ TIE BARS (7 C-19)
SURVEY TRAVERSE LINE
SURVEY TRAVERSE POINT
PAVEMENT TYPE #1 (SECTION=15" P.C.C.) (5 C-20)
PAVEMENT TYPE #2 (SECTION=3½" A.C. OVER 6" A.C.B.) (6 C-20)
PAVEMENT TYPE #3 (SECTION=2" A.C. OVER 6" A.B.) (7 C-20)
PAVEMENT TYPE #4 (SECTION=3" A.C. OVER 6" A.B.) (7 C-20)
A.C. OVERLAY (SECTION=1½" A.C. OVER EXISTING PAVEMENT)
COLD PLANE AND A.C. OVERLAY (SECTION=1½ A.C. OVER EXISTING PAVEMENT)
PAVEMENT AND LAYOUT PLAN
0 40 80
SCALE: 1" = 40'
DANIEL K. LANTERMAN LICENSED PROFESSIONAL ENGINEER No. 9063-C HAWAII U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
WESLEY R. SEGAWA & ASSOC., INC.
REVISION DATE DESCRIPTION BY APPROVED
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION
JOB TITLE
PAVE ADDITIONAL BARGE TERMINAL AREA, KAWAIHAE HARBOR, HAWAII
SHEET TITLE
PAVEMENT AND LAYOUT PLAN
SUBMITTED BY: SECTION HEAD
RECOMMENDED BY: ENGINEERING PROGRAM MANAGER
DESIGNED BY: D.K.L.
DRAWN BY: C.R.G.
CHECKED BY: D.K.L.
DATE: 11/15/99
SCALE: AS SHOWN
APPROVED BY: HARBORS ADMINISTRATOR
JOB NUMBER H.C. 5313
SHEET C-5
13 OF 51 SHTS.
98lic05.dwg 1-24-2000 14:52 pm HST



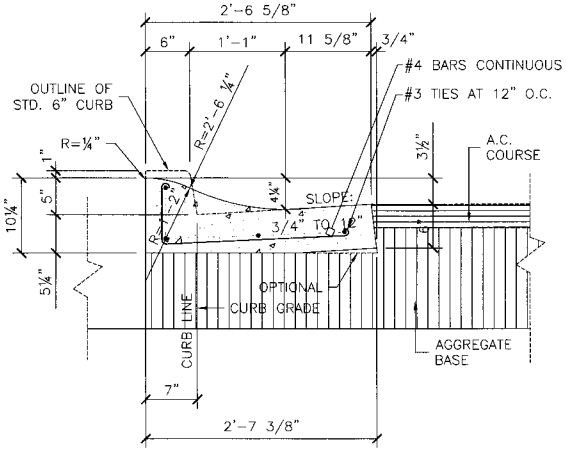
1 C-20 DETAIL – 4'–6" STANCHION
SCALE: 1/2"=1'-0" C-TB



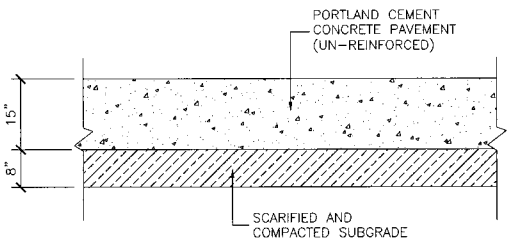
2 C-20 DETAIL – 6' STANCHION
SCALE: 1/2"=1'-0" C-TB1



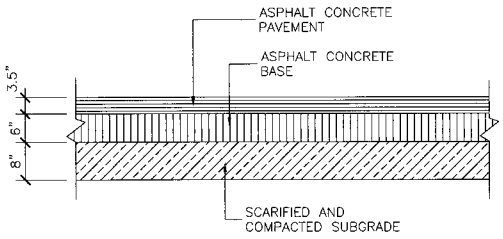
3 C-20 TYPICAL LAYOUT OF STANCHIONS AT FIRE HYDRANTS
SCALE: 1/4" = 1'-0" C-TLOB



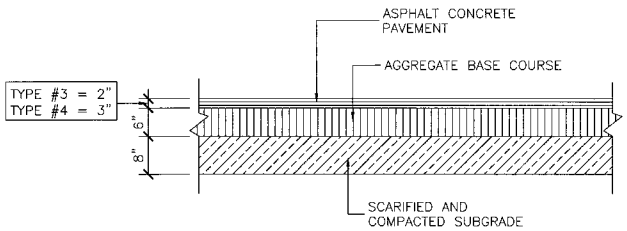
4 C-20 CAST–IN–PLACE CONC. ROLLED CURB
SCALE: 1½"=1'-0"



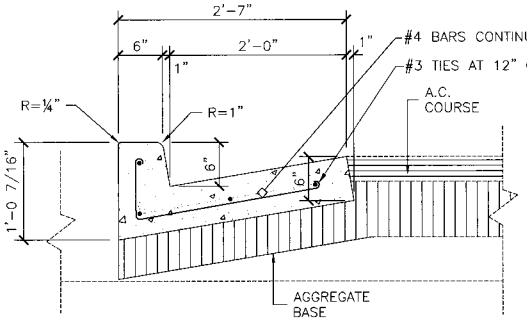
5 C-20 PAVEMENT SECTION PAVEMENT TYPE #1
NOT TO SCALE



6 C-20 PAVEMENT SECTION PAVEMENT TYPE #2
NOT TO SCALE

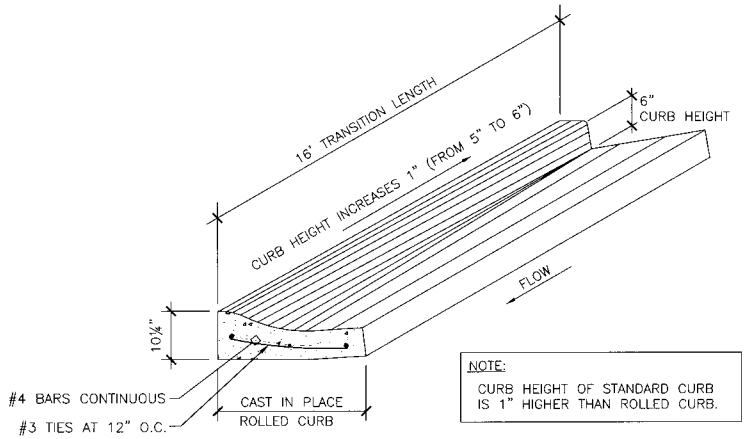


7 C-20 PAVEMENT SECTION PAVEMENT TYPE #3 & #4
NOT TO SCALE



CURB AND GUTTER, TYPE 2DG

8 C-20 CAST–IN–PLACE CONC. CURB AND GUTTER
SCALE: 1½"=1'-0"



NOTE:
CURB HEIGHT OF STANDARD CURB IS 1" HIGHER THAN ROLLED CURB.

9 C-20 ROLLED CURB TRANSITION
NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY	APPROVED

DANIEL K. LANTERMAN LICENSED PROFESSIONAL ENGINEER No. 9083-C HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

WESLEY R. SEGAWA & ASSOC., INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

JOB TITLE
PAVE ADDITIONAL BARGE TERMINAL AREA, KAWAIHAE HARBOR, HAWAII

SHEET TITLE
DETAILS

SUBMITTED BY: SECTION HEAD
RECOMMENDED BY: ENGINEERING PROGRAM MANAGER

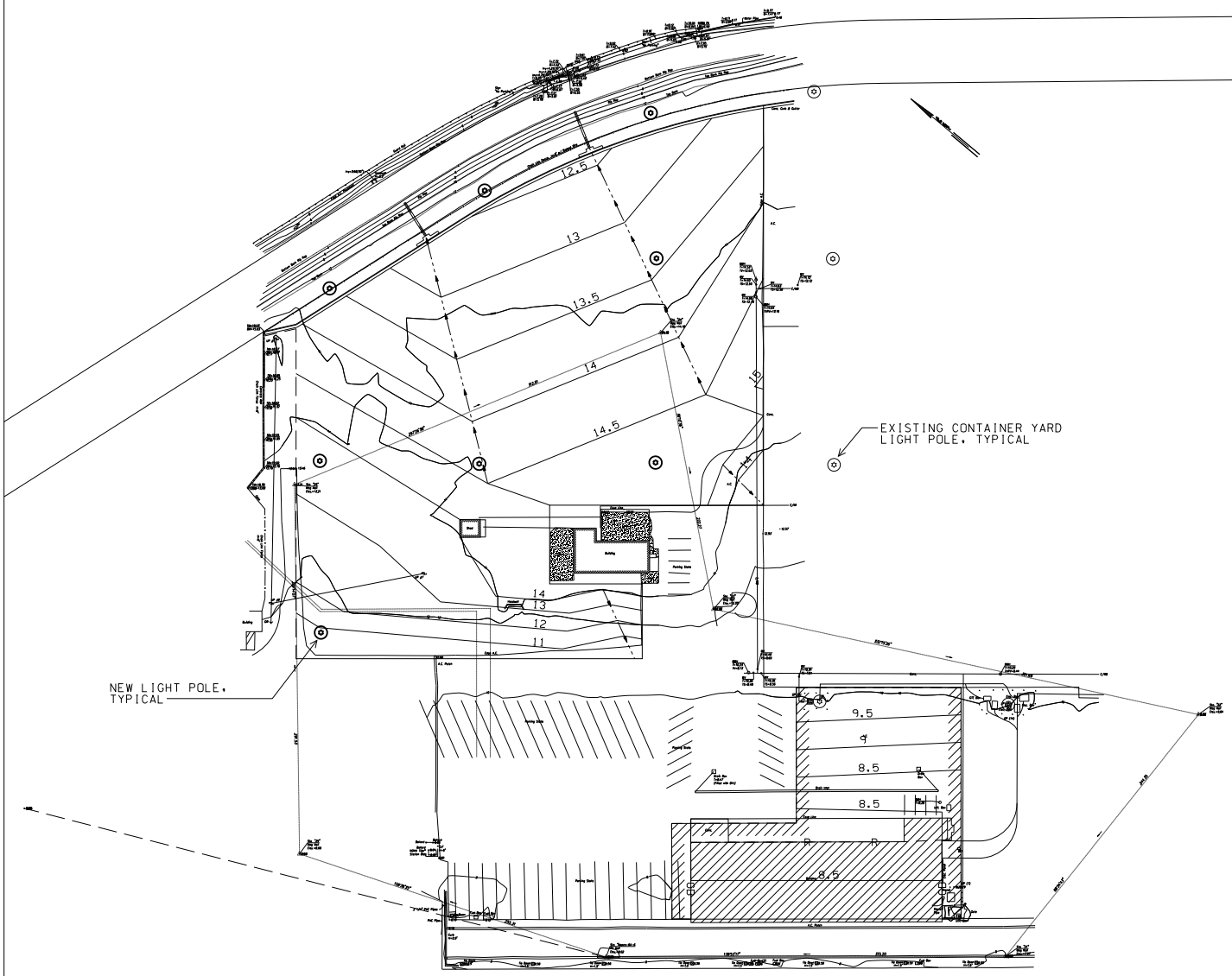
DESIGNED BY: D.K.L.
DRAWN BY: C.R.G.
CHECKED BY: D.K.L.
DATE: 11/15/99
SCALE: AS SHOWN

APPROVED BY: HARBORS ADMINISTRATOR

JOB NUMBER
H.C. 5313

SHEET
C-20
28 OF 51 SHTS

9811c20.dwg 11-18-99 2:57:02 pm HST



GRAPHIC SCALE

0′ 40′ 80′ 120′

1″ = 40′

CONCEPTUAL SITE ELECTRICAL PLAN – 3.1 ACRE LOT

SCALE: 1″ = 40′-0″

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

REVISION	DATE	DESCRIPTION	BY	APPROVED

U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION
WASHINGTON, D.C.

JOB TITLE

PIER 2A SHED DEMOLITION AND CONTAINER YARD IMPROVEMENTS, KAWAIHAE HARBOR, HAWAII

SHEET TITLE

CONCEPTUAL SITE ELECTRICAL PLAN – 3.1 ACRE LOT

APPROVED BY: _____ CHIEF, DIVISION OF COST ANALYSIS AND PRODUCTION

APPROVED BY: _____ CHIEF, OFFICE OF SHIP CONSTRUCTION

DESIGNED BY:XX
DRAWN BY: XX
CHECKED BY: XX
DATE: XX/XX/09
SCALE: X:XXX

SUBMITTED BY: _____ MARAD PROJECT MANAGER

JOB NUMBER **H.C. 50038**

SHEET **E-1** OF XX SHTS.

NOTES

1. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY, INCLUDING ALL TEMPORARY ITEMS USED FOR THE DEMOLITION OF THE PROJECT.
2. SEE ELECTRICAL PLANS FOR ELECTRICAL DISCONNECTS AND DEMO WORK.
3. SEE MECHANICAL PLANS FOR PLUMBING DISCONNECTS AND DEMO WORK.
4. ALL CONCRETE SHALL BE CLASS A (3000 PSI 28-DAY STRENGTH) PER HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2005.
5. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.
6. ALL REINFORCING BARS SHALL BE PREFABRICATED EPOXY-COATED ACCORDING TO ASTM A934/A934M.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING AS NEEDED FOR ALL DEMOLITION WORK.
2. THE CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO DEMOLITION.
3. THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH YOUNG BROTHERS REGARDING THE REMOVAL OF HAZARDOUS MATERIALS.
4. THE CONTRACTOR SHALL CONTACT YOUNG BROTHERS ONE WEEK PRIOR TO STARTING CONSTRUCTION REGARDING THE REMOVAL OF THE 3 TIMBER LOGS AND 8'x20' PORTABLE.

THE FOLLOWING PAGES ARE FROM THE EXECUTIVE SUMMARY OF THE "PRE-FINAL PHASE I ENVIRONMENTAL SITE ASSESSMENT AND HAZARDOUS MATERIALS SURVEY" DATED JULY 31, 2008.

PLEASE REFER TO THE REPORT FOR MORE INFORMATION.

Asbestos-Containing Materials Assessment

Based on Bureau Veritas' review of a previous asbestos assessment report (conducted in 1996) and recent onsite inspection, five types of suspect ACM were identified at the subject property, including: sealant on corrugated metal wall/ceiling panels, window putty, asphalt pavement, floor tiles (and associated mastic), and roofing materials. Bureau Veritas conducted bulk sampling of suspect ACM that were not previously sampled, and submitted the samples to a qualified laboratory for asbestos analysis.

Based on the results of our assessment, no asbestos was detected in any of the materials sampled from the project areas. Therefore, no special handling with respect to asbestos-containing materials is required during the planned renovations of the project areas.

Lead Paint Assessment

Bureau Veritas identified a total of 14 types of paint at the subject property that may be impacted during the planned renovation/demolition activities. Bureau Veritas also reviewed a portion of a 1996 LBP assessment report for the OTS building on the subject property. However, because the results of the previous assessment required confirmation, representative paint samples were collected and analyzed for lead content.

Based on Bureau Veritas' paint sampling and laboratory analytical results, two types of confirmed LBP were identified on the OTS building, including: (1) yellow paints on the interior and exterior corrugated metal walls/ceiling; and (2) brown/red paints on the interior steel supports. Six of the remaining paint samples collected from the OTS contain detectable lead concentrations and are considered lead-containing paint (LCP). The paint samples collected from the other structures, including the light posts, the small shed, and the restroom building, reported no detectable lead.

The yellow LBP on the corrugated metal walls/ceiling of the OTS appeared in fair to poor condition, with several small areas of peeling /delaminated paint observed on the interior and exterior walls (primarily the lower portion of the walls). All of the remaining LBP/LCP were observed in fair to good condition. During the planned demolition activities, the general contractor and their subcontractors must follow the Hawaii Occupational Safety and Health (HIOSH) Lead in Construction Standard (Health Standards, Title 12,Subtitle 8, Part 3, Chapter 148.1) when workers have a potential to be exposed to lead during work activities (i.e., demolition, renovation, cutting, drilling, sanding, grinding, etc.).

Building materials covered with LBP must undergo Toxicity Characteristic Leaching Procedure (TCLP)-Lead laboratory analysis prior to disposal in the landfill. Therefore, Bureau Veritas recommends that a representative sample of the LBP-covered building materials from the OTS be collected and submitted to a qualified laboratory for TCLP-Lead analysis. The Environmental Protective Agency (EPA) defines lead-containing materials as hazardous waste if they contain a TCLP-Lead concentration greater than 5.0 milligrams per liter (mg/L). If TCLP-Lead exceeds this concentration, the LBP-covered building materials must be properly removed and packaged prior to demolition activities for disposal at a facility that accepts lead waste.

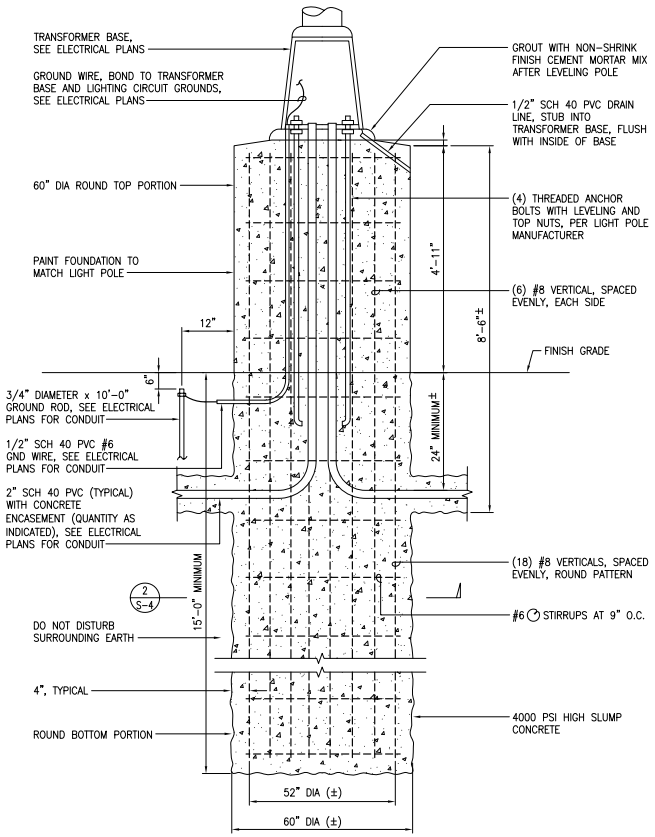
Arsenic-Containing Materials Assessment

Canec is an old type of fiberboard found in Hawaii, which was made from processed sugar cane and treated with arsenic as a deterrent to insects and mildew. One type of canec fiberboard material was identified at the subject property, located on three of the walls and the ceiling of the employee breakroom in the OTS building. One sample of this material was collected and analyzed for arsenic content.

Based on the laboratory results, the canec sample contains 1,500 milligrams per kilogram (mg/kg) arsenic, which is greater than the regulatory level of 100 mg/kg. The estimated quantity of this confirmed arsenic-containing material is approximately 4,320 square feet. This material should be properly handled and removed in accordance with the HIOSH Inorganic Arsenic in Construction Standard prior to building demolition activities.

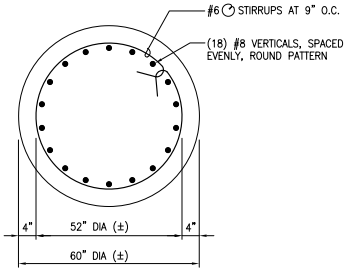
When detectable concentrations of arsenic are identified, there are HIOSH requirements to protect workers during the disturbance of arsenic-containing materials. These requirements include air monitoring during disturbance activities such as demolition and renovation.

For the disposal of arsenic-containing materials, reportable concentrations of arsenic require Toxicity Characteristic Leaching Procedure (TCLP)-Arsenic analysis when total arsenic levels are at 100 milligrams per kilogram (mg/kg) or greater. This level is based on the TCLP for arsenic regulatory level of 5.0 milligrams per liter (mg/L) or greater.



1 S-4 NEW LIGHT POLE FOUNDATION DETAIL
NOT TO SCALE

NOTES:
1. DUCT SEAL ALL OPEN ENDS OF CONDUIT WITHIN THE TRANSFORMER BASE EXCEPT DRAIN LINE CONDUIT.
2. THE FOUNDATION AND PEDESTAL SHALL BE POURED MONOLITHICALLY.



2 S-4 SECTION
NOT TO SCALE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

REVISION	DATE	DESCRIPTION	BY	APPROVED

U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION
WASHINGTON, D.C.

JOB TITLE
PIER 2A SHED DEMOLITION AND CONTAINER YARD IMPROVEMENTS, KAWAIHAE HARBOR, HAWAII

SHEET TITLE
NOTES AND FOUNDATION DETAIL

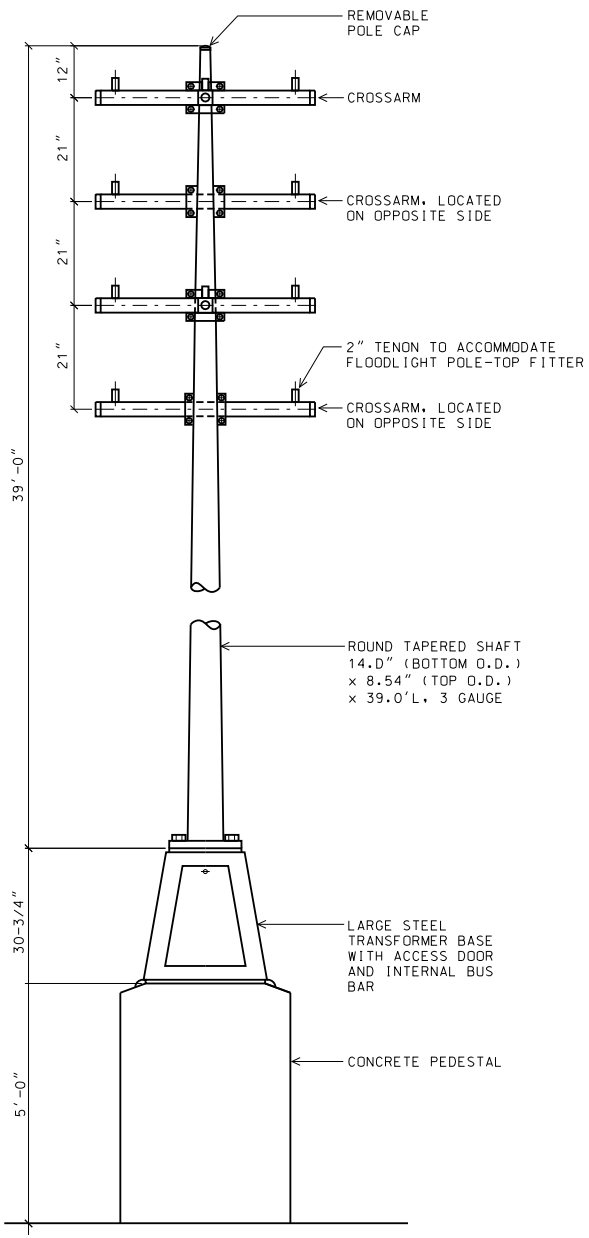
APPROVED BY: CHIEF, DIVISION OF COST ANALYSIS AND PRODUCTION
APPROVED BY: CHIEF, OFFICE OF SHIP CONSTRUCTION

DESIGNED BY: CA
DRAWN BY: LL
CHECKED BY: DO
DATE: 09/11/08
SCALE: NONE

SUBMITTED BY: MARAD PROJECT MANAGER

JOB NUMBER H.C. 50038

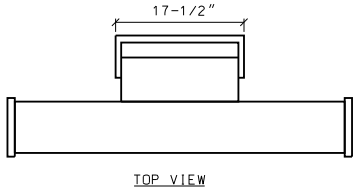
SHEET S-4
XX OF XX SHTS.



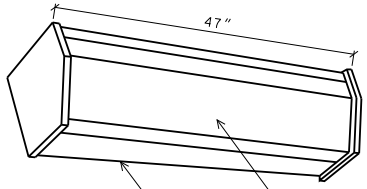
NEW LIGHT POLE

1 / E-2 LIGHT POLE DETAILS

NOT TO SCALE



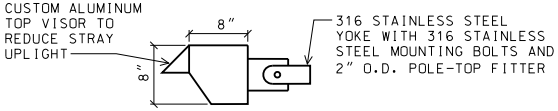
TOP VIEW



HIGH IMPACT RESISTANT POLYCARBONATE LENS

EXTRUDED AND DIE-CAST ALUMINUM HOUSING WITH STAINLESS STEEL HARDWARE

HOUSING	EXTRUDED AND DIE-CAST ALUMINUM
LENS	HIGH-IMPACT RESISTANT POLYCARBONATE LENS
LAMP	180W LPS
BALLAST	208V, HIGH POWER FACTOR
FINISH	DARK BRONZE



SIDE VIEW

LOW PRESSURE SODIUM FLOODLIGHT DETAIL

NOT TO SCALE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

REVISION	DATE	DESCRIPTION	BY	APPROVED

U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION
WASHINGTON, D.C.

JOB TITLE

PIER 2A SHED DEMOLITION AND CONTAINER YARD IMPROVEMENTS, KAWAIHAE HARBOR, HAWAII

SHEET TITLE

LIGHT POLE DETAILS

APPROVED BY: CHIEF, DIVISION OF COST ANALYSIS AND PRODUCTION

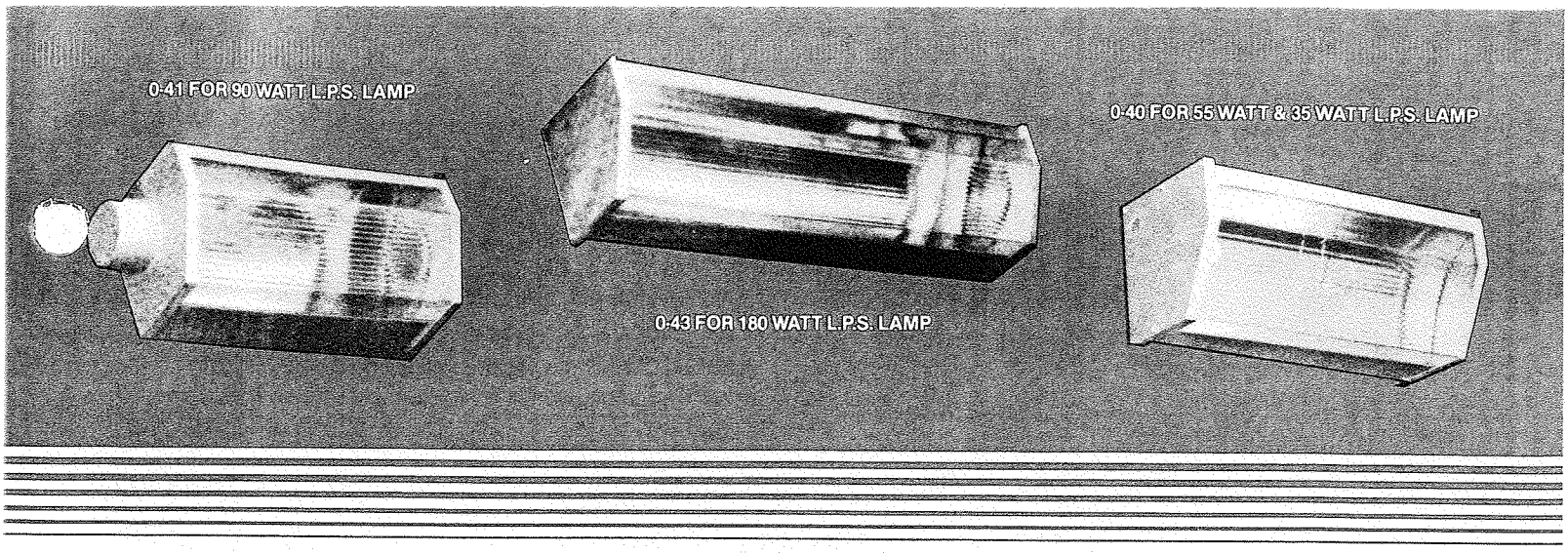
APPROVED BY: CHIEF, OFFICE OF SHIP CONSTRUCTION

DESIGNED BY:XX
DRAWN BY: XX
CHECKED BY: XX
DATE: XX/XX/09
SCALE: X:XXX

SUBMITTED BY: MARAD PROJECT MANAGER

JOB NUMBER **H.C. 50038**

SHEET **E-2** OF XX SHTS.



Enduring Performance

Sturdy, corrosion resistant housing of extruded and cast aluminum assures long, problem-free operation.

Polycarbonate high-impact resistant lens foils breakage attempts.

Minimum size relamping door eliminates giant swinging door with long gasket path. Avoids squeezing, tearing, loosening, or ripping of gaskets — even after long years of service.

Compact door assures constant, uniform gasket pressure. Keeps out dust and dirt through life.

Bugs are not attracted to yellow light source and stay away from WALL-MOST-FLOOD in droves.

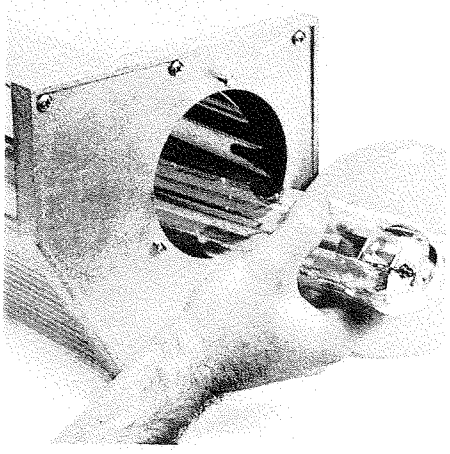
Thermally isolated ballast chamber has separate access door for wiring. Sealed optical chamber need not be disturbed.

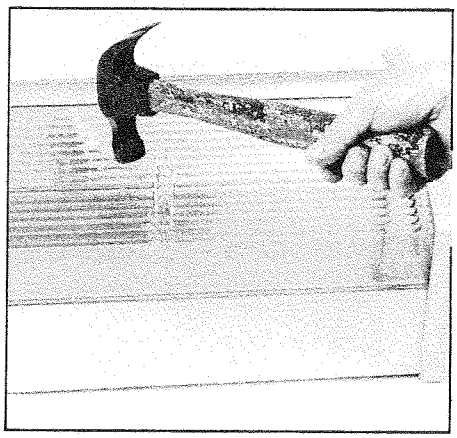
Vandalism and unauthorized entry into units is reduced by absence of obvious latches and dog bolts.

Lamp replacement is handled without disturbing aimed position of unit, through end access door.

Emergency Protection

Most lamps restrike after short (up to 20 seconds) outage, assuring continuous illumination under trouble condition.

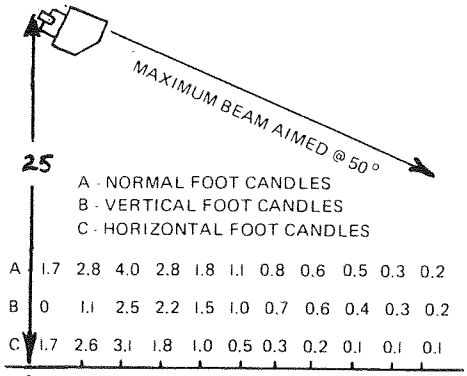




Environmentally Safe

Discarded L.P.S. lamps, are non polluting and do not add mercury or other non-biodegradable contaminents to our environment. Fluorescent and all H.I.D. lamps unfortunately do.

Absence high voltage starter eliminates "pulsing" of burned out lamps. Avoids arcing, short circuits and danger of fire.

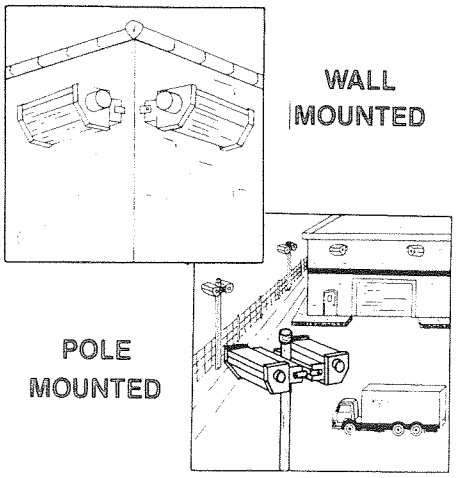


DATA FOR VOIGT No. 0-41-000 WITH 90 W. L.P.S. LAMP

FOR	MULTIPLY VALUES BY
VOIGT No. 0-42-000 WITH 135 W. L.P.S. LAMP	1.7
VOIGT No. 0-43-000 WITH 180W. L.P.S. LAMP	2.4

Enhancing Appearance

Low silhouette contour (8" maximum depth) presents minimum visual bulk and makes a clean aesthetic statement on wall or pole; singly or in multiple clusters.



APPENDIX C

Subsurface Conditions Report

Fill Thickness Table

Boring Locations Map

GEOLABS, INC.
Geotechnical Engineering and Drilling Services

September 22, 2008
W.O. 6076-10

Ms. Joanna Nellos
Akimeka LLC
1600 Kapiolani Boulevard, Suite 527
Honolulu, HI 96814

Subsurface Conditions
Pier 2A Shed Demolition and Container Yard Improvements
Kawaihae Harbor
H.C. 50038
Kawaihae, South Kohala, Hawaii

Dear **Ms. Nellos:**

As requested, this letter summarizes the subsurface conditions encountered in borings drilled at the project site. The findings presented herein are subject to the limitations noted at the end of this letter.

Subsurface Conditions

Our field exploration for this project consisted of drilling and sampling three borings, designated as Boring Nos. 101 through 103, extending to a depth of about 29.5 feet below the existing ground surface. In addition, borings previously drilled in the vicinity of the project site for projects presented in the following reports were also used to evaluate the subsurface conditions for the above project:

- Geolabs' report entitled "Geotechnical Engineering Exploration, Pave Additional Barge Terminal Area, Kawaihae Harbor, Job H.C. 5313, Kawaihae, South Kohala, Hawaii" dated October 25, 1999, and
- Geolabs' letter report entitled "Liquefaction Assessment, Piers 1 and 2 at Kawaihae Harbor, Kawaihae, South Kohala, Hawaii" dated January 12, 2007.

The approximate boring locations are shown on the Site Plan, Plate 1. Based on the borings drilled, the project site is generally underlain by surface fills extending to depths ranging from about 8 to 18 feet below the existing ground surface. In the 3.1-Acre future Container Yard area, the thickness of the fills ranged from about 8 to 15 feet in the borings drilled. The thickness of the fill materials generally correspond to the original ground surface elevation of about -0.5 to +4.3 feet Mean Lower Low Water (MLLW) at the 3.1-Acre future Container Yard area.

The thickness of the fill materials at the Overseas Terminal Shed (OTS) area generally ranged from about 13 to 18 feet in the borings. The thickness of the fill materials generally correspond to original ground surface elevation of about -9.5 to -3.7 feet MLLW

in the OTS area. The approximate shoreline surveyed in 1954 (+1.0 foot MLLW contour) is shown on the Site Plan, Plate 2.

The fill materials encountered generally consist of medium dense to dense sandy gravel and gravelly sands with some silts. In some areas, the fills graded with cobbles and boulders. The following table summarizes the approximate thickness of the fill materials encountered in our borings (Years 1999, 2007 & 2008).

SUMMARY OF APPROXIMATE FILL THICKNESS

Location	Boring No.	Boring Date	Approximate Fill Thickness (feet)	Approximate Ground Elevations	
				Existing* (feet MLLW)	Original (feet MLLW)
Overseas Terminal Shed	B-101	August 2008	13	+9.3	-3.7
	B-102	August 2008	13	+9.2	-3.8
	B-103	August 2008	18	+8.5	-9.5
	B-6	January 2007	14	+8	-6
	B-23	October 1999	>11.5**	+10.4	N.E.
3.1-Acre Container Yard	B-7	January 2007	15	+14.5	-0.5
	B-4	October 1999	9.5	+13.8	+4.3
	B-5	October 1999	8	+12.3	+4.3
	B-8	October 1999	13	+15.2	+2.2
	B-9	October 1999	11	+14.1	+3.1
	B-12	October 1999	>11.5**	+15	N.E.
	B-13	October 1999	>11.5**	+14.9	N.E.
	B-14	October 1999	>11.5**	+14.9	N.E.
	B-18	October 1999	>11.5**	+12.7	N.E.
	B-19	October 1999	13	+12.6	-0.4
	B-22	October 1999	10	+10.6	+0.6

* Existing ground elevations at the time of the field exploration
** Fill materials extended to maximum depth explored in the boring
N.E. - Not Encountered at the maximum depth of boring

The fills were generally underlain by lagoonal deposits, coralline detritus deposits, and weathered basalt formation at greater depths. The lagoonal deposits and coralline detritus generally consisted of loose to dense silty sands and soft clayey silts. Weathered basalt formation was encountered from a depth of about 47 feet below the ground surface in Boring No. 7 drilled in January 2007.

At the time of our field exploration, we encountered groundwater in the borings ranging from approximately 5.8 to 12.8 feet below the existing ground surface. The groundwater levels measured during our field exploration corresponded to approximately Elevations -1.1 to +3 feet MLLW. Due to the proximity of the project site to the Pacific Ocean, it should be noted that groundwater levels are expected to change with tidal fluctuations. Seasonal precipitation, surface water runoff, and other factors also may influence the groundwater levels at the project site.

Limitations

The findings submitted herein are based, in part, upon information obtained from the borings. Variations of the subsurface conditions between and beyond the borings may occur, and the nature and extent of these variations may not become evident until construction is underway. If variations then appear evident, it will be necessary to re-evaluate the findings provided herein.

The locations for Boring Nos. 101 through 103 indicated herein are approximate, having been taped from features shown on the topographic survey map provided by Moffatt and Nichol on July 29, 2008. Elevations of the borings were based on interpolation between the spot elevations and contour lines shown on the same plans. Locations and elevations of borings previously drilled were referenced from their respective reports and transcribed to the above referenced topographic survey map for ease of reference. The physical locations and elevations of the borings should be considered accurate only to the degree implied by the methods used.

Closure

We appreciate the opportunity to be of continued service to you on this project. If you have questions or need additional information, please contact our office.

Respectfully submitted,

GEOLABS, INC.

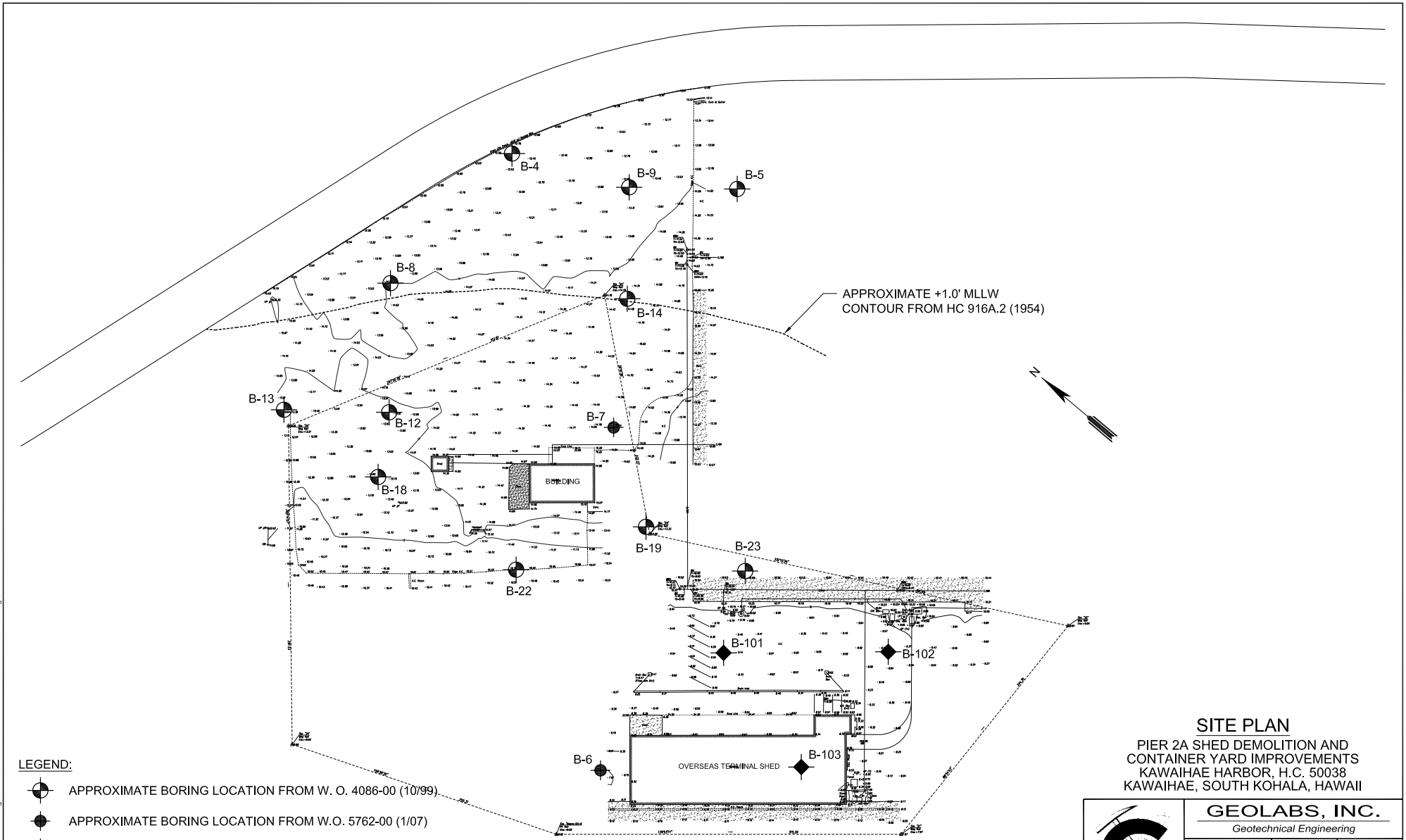
By _____
Robin M. Lim, P.E.
Vice President

RML:ST:mj

Attachment: Site Plan, Plate 1

cc: Moffatt & Nichol – Mr. Dean Kokubun (1 Copy)

(h:\6000Series\6076-10.st1)



LEGEND:

- APPROXIMATE BORING LOCATION FROM W. O. 4086-00 (10/99)
- APPROXIMATE BORING LOCATION FROM W.O. 5762-00 (1/07)
- APPROXIMATE BORING LOCATION FROM W.O. 6076-00 (8/08)

REFERENCE: TOPOGRAPHIC SURVEY MAP TRANSMITTED BY MOFFATT & NICHOL ON 7/29/08.

SITE PLAN

PIER 2A SHED DEMOLITION AND
CONTAINER YARD IMPROVEMENTS
KAWAIHAE HARBOR, H.C. 50038
KAWAIHAE, SOUTH KOHALA, HAWAII

GEOLABS, INC.
Geotechnical Engineering

DATE	DRAWN BY	PLATE
SEPTEMBER 2008	JRP	1
SCALE: 1" = 80'	W.O.: 6076-00&10	

APPENDIX D

Informal Section 7

Consultation Request

to

National Marine Fisheries Service

U.S. Department
of Transportation
**MARITIME
ADMINISTRATION**

1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

Mr. Patrick Leonard
Field Supervisor
U.S. Department of the Interior,
U.S. Fish and Wildlife Service
300 Ala Moana Blvd, #3-122
Honolulu, HI 96850
ATTN: Ms. Megan Laut

OCT 27 2008

**Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i
Endangered Species Act Determination Kawaihae, South Kohala District, Island of Hawai'i
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64**

Dear Mr. Leonard:

The Maritime Administration, in cooperation with the State of Hawai'i Department of Transportation Harbors Division, is preparing an Environmental Assessment for the demolition of an existing overseas transit shed and container yard improvements at the Kawaihae Commercial Harbor, Hawai'i. The Maritime Administration seeks U.S. Fish and Wildlife Service (USFWS) concurrence with the determination that although endangered and threatened species may be present in the project area, they will not be adversely affected.

Key elements of the Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i Environmental Assessment include:

1. Demolition and complete removal of the Overseas Transit Shed (OTS)
2. Strengthening settled pavement under the OTS footprint, and providing a smooth paved transition apron area to permit the smooth and safe transport of container cargo from barges to the adjoining container storage yard (0.7 acres paved). The pavement will be 19.5"-thick Portland Cement Concrete (PCC) with a minimum flexural strength of 700 psi and a 6,000 psi compressive strength over an 8" aggregate subbase compacted to 95%, for a total prepared depth of 27.5".
3. Paving a near-by container chassis storage baseyard (3.1 acres) to provide needed additional container storage, storage of container chassis for tractor-trailer hauling, and staging of containers-on-chassis awaiting transport off the site. Pavement will be 19.5-inch thick PCC with 8" subbase totaling 27.5 inches as in #2, above, and will include curbs and appropriate drainage improvements.
4. Upgrading utilities to include:
    a. Addition of one, new 46.5' light pole to illuminate the former OTS pad, matching the existing poles elsewhere at the harbor. The light consists of a 39' steel light pole with a "tree" of 6 to 12 light heads with one 180 Watt low-pressure sodium (LPS) lamp per head,

mounted on a 2' 6-¾" transformer base on a 5' high concrete pedestal for a total height of 46' 6-¾" (referred to in this EA as 46.5'), Pedestal will require excavation of a 5' diameter, 15' deep hole for the foundation anchor subbase and shallow (2' 3") electrical utility trench excavation. (See Appendix B of EA, Sheets E-2 and S-4 for light pole and foundation details.)

b. Relocation or termination of existing utilities exposed by removal of the OTS including:
   - an electrical transformer, electrical panels and outlets,
   - communications lines,
   - water lines and backflow prevention device,
   - close and fill existing cesspool associated with the restrooms, and
   - other minor repairs or upgrades to existing elements as determined by their age and condition once they have been exposed.

c. Addition of 8 to 24 (anticipated) new overhead light poles to adequately illuminate the new 3.1 acre paved storage yard, consisting of 46.5' steel light pole / pedestal combinations (the same units described under 4.a.) with a "tree" of 9 to 12 light heads with one 180-Watt LPS lamp per head mounted on 5' concrete pedestals, for a total height of 46.5'. Pedestals will require excavation of a 5' diameter, 15' deep hole for the subbase and shallow (2' 3") electrical utility trench excavation.

Consultation with USFWS revealed that the federally threatened Newell's shearwater (*Puffinus auricularis newelli*) or 'a'o, and the federally endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*), and a species of concern, the Band-rumped storm petrel (*Oceanodrama castro*) may fly over the project area. Other species which are not listed under the Endangered Species Act but are protected under the Migratory Bird Treaty Act may transit the area while traveling to or from their high-elevation nesting areas.

The threatened Newell's shearwater was formerly common on the Island of Hawai'i, and is known to nest high in the mountains on the windward side under thick vegetation, such as the 'uluhe fern. The USFWS species data sheet states that shearwater nesting occurs in areas with 47 - 100" of annual rainfall, not the 10 - 20" above Kawaihae. The endangered Hawaiian petrel nests at high elevations and burrows or excavates 4 - 6' or more in lithosols characterized by boulders and erosional debris found in association with bedrock, and can be found under rocky outcrops, lava tubes, or other suitable burrows. Both birds feed, and are most commonly observed, far off-shore.

A 2003 study obtained radar contacts at night[1], which indicate birds, presumed to be petrels or shearwaters, overfly the Kawaihae area. These contacts did not include actual sightings. No radar contacts were recorded on the most recent (2008) observational attempts.

The primary concern is that these seabirds (especially Newell's shearwaters fledglings headed toward the sea in the fall) fly at night and may become disoriented or confused by bright lights. They may also become confused and circle bright lights until they become exhausted and "fall out." Night-flying seabirds also fly into things they cannot see, especially man-made structures like utility poles, wires, trees, or buildings, which can result in death. Either event increases vulnerability to predation and vehicles. However, this interference with navigation or blinding effect seems more of an issue with individual lights than with illuminated fields.

[1] Day, Cooper, and Blaha (2003) obtained an unreported number of unknown radar contacts (presumed to be between 2 and 9 from the narrative), had no visual confirmation of species, and sampled only from 7 to 10 pm, not the 3 am to dawn period of concern.

Numerous inquiries (USFWS, DoH, HB&MP Natural Diversity Database) have uncovered no instances of bird fallout or confusion due to light distraction, or any impact with wires or structures, during any portion of the history of this site, or anywhere in the surrounding area. There have been no dead birds found on site during the formal DoH reporting period for West Nile Virus, which has been in place over 7 years (roughly since the end of 2002). This monitoring program requires that any dead or downed birds found on site be recovered and turned in for testing as potential carriers.[2] There are no reports of any instances of bird fallout or disoriented birds flying in circles around the lights at any time in the past[3], despite the lighting of the site since the late 1950's, and the prior use of 45' light poles with poorly shielded 1,000 Watt high pressure sodium floodlights in the 1970s.

Impacts: The Proposed Action is limited to a 3.8-acre portion of the harbor used by Young Brothers, Ltd. (YBL), out of a 113-acre site owned by the State. Young Brothers only night operations at Kawaihae Harbor are Mondays and Fridays from 3:30 am to dawn, so full power illumination is needed for roughly 7 total hours per week, split between 2 nights. This represents about 8% of the evening hours during the week. Further, the current operational profile restricts full power lighting to the very limited hours of active operations, with "twilight" lighting levels used for inactive periods (using only one light per pole), so most lights are only switched on when the yard becomes active. The area is therefore only lit during periods when birds would be returning, not during departing periods when fledglings are most vulnerable.

Precautionary Measures: This project poses no threat to habitat and will not adversely affect any Federally-listed threatened and endangered species, or any species of concern. Nevertheless, the following protective actions will be implemented:

1. Limiting light poles to the 46.5' heights already in use elsewhere in the harbor;
2. Use of lower-power (180 Watt) monochromatic low-pressure sodium lighting (as opposed to the more common full-spectrum high-pressure sodium lighting) which provides high contrast with sharply reduced brightness and glare, yet the yellow light does not attract insects and is not believed to be used for avian navigation;
3. Special-ordering custom-designed light-fixtures with "top-visor" shielding to minimize the potential for stray light up-scatter and side-scatter, so that the bulb is not visible at lamp height from the side;
4. Limiting light levels and hours of use to the minimum levels allowable under Occupational Safety and Health Administration (OSHA) worker safety and security requirements; and
5. Notifying workers on-site during seabird fledging months to be aware of the potential for seabird confusion and fallout, and having a response plan to implement in the event that a circling or downed bird is discovered.

---

[2] Data on any threatened and endangered species received by DoH is communicated to the USGS National Wildlife Health Center. A printout of their data collected for the Big Island (which runs from 1993, and so pre-dates the initiation of DoH data collection), shows no bird fatalities in the area.

[3] Personal communication with Kawaihae Harbor Manager Elton Suganuma.

The Maritime Administration has determined that while the three bird species may be present in the project area, any effects will not be of the magnitude or duration to constitute an "adverse effect" as defined within Section 7 of the Endangered Species Act. As such, the Maritime Administration seeks USFWS's written concurrence with this determination.

Thank you for your consideration of this request. If you have any questions, please call Mr. Daniel Yuska of my staff at 202-366-0714.

Sincerely,

for Michael C. Carter
Director, Office of Environment

U.S. Department
of Transportation
**MARITIME
ADMINISTRATION**

1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

Mr. Donald Hubner, Acting Regional Manager
Protected Resources
NOAA-NMFS
Pacific Island Regional Office
1601 Kapiolani Boulevard, Suite 110
Honolulu, HI 96814-4700

OCT 27 2008

**Re: Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawaii
Endangered Species Act Determination Kawaihae, South Kohala District, Island of Hawaii
TMK 3rd Div. 6-1-03 Parcels 23 (por), 36 (por), 52, and 64**

Dear Mr. Hubner:

The Maritime Administration, in cooperation with the State of Hawaii Department of Transportation Harbors Division, is preparing an Environmental Assessment for the demolition of an existing overseas transit shed and container yard improvements at the Kawaihae Commercial Harbor, Hawaii. The Maritime Administration seeks National Marine Fisheries Service (NMFS) concurrence with the determination that endangered and threatened species will not be adversely affected by the subject action because there are no listed species in the project area.

Key elements of the Pier 2A Shed Demolition and Container Yard Improvements at Kawaihae Harbor, Hawai'i Environmental Assessment (EA) include:

1. Demolition and complete removal of the Overseas Transit Shed (OTS)
2. Strengthening settled pavement under the OTS footprint, and providing a smooth paved transition apron area to permit the smooth and safe transport of container cargo from barges to the adjoining container storage yard (0.7 acres paved). The pavement will be 19.5"-thick Portland Cement Concrete (PCC) with a minimum flexural strength of 700 psi and a 6,000 psi compressive strength over an 8" aggregate subbase compacted to 95%, for a total prepared depth of 27.5".
3. Paving a near-by container chassis storage baseyard (3.1 acres) to provide needed additional container storage, storage of container chassis for tractor-trailer hauling, and staging of containers-on-chassis awaiting transport off the site. Pavement will be 19.5-inch thick PCC with 8" subbase totaling 27.5 inches as in #2, above, and will include curbs and appropriate drainage improvements.
4. Upgrading utilities to include:
    a. Addition of one, new 46.5' light pole to illuminate the former OTS pad, matching the existing poles elsewhere at the harbor. The light consists of a 39' steel light pole with a "tree" of 6 to 12 light heads with one 180 Watt low-pressure sodium (LPS) lamp per head, mounted on a 2' 6-¾" transformer base on a 5' high concrete pedestal for a total height of 46' 6-¾" (referred to in this EA as 46.5'), Pedestal will require excavation of a 5' diameter, 15' deep hole for the foundation anchor subbase and shallow (2' 3") electrical utility trench

excavation. (See Appendix B of EA, Sheets E-2 and S-4 for light pole and foundation details.)

b. Relocation or termination of existing utilities exposed by removal of the OTS including:
   - an electrical transformer, electrical panels and outlets,
   - communications lines,
   - water lines and backflow prevention device,
   - close and fill existing cesspool associated with the restrooms, and
   - other minor repairs or upgrades to existing elements as determined by their age and condition once they have been exposed.

c. Addition of 8 to 24 (anticipated) new overhead light poles to adequately illuminate the new 3.1 acre paved storage yard, consisting of 46.5' steel light pole / pedestal combinations (the same units described under 4.a.) with a "tree" of 9 to 12 light heads with one 180-Watt LPS lamp per head mounted on 5' concrete pedestals, for a total height of 46.5'. Pedestals will require excavation of a 5' diameter, 15' deep hole for the subbase and shallow (2' 3") electrical utility trench excavation.

There are no resident threatened or endangered marine species in the project areas and there is no critical habitat designated for any listed marine species within the waters of Kawaihae Harbor. However, because the Harbor provides a broad open area easily accessible from open water, a listed species can easily enter and transit the area.

Four protected marine species have either been recorded outside the project area but geographically nearby.

- The threatened Green sea turtle *(Chelonia mydas)* are commonly seen in the area, and may transit through and feed in the harbor area, though they do not nest in the area because there is no desirable and easy accessible land for nesting. (One dead animal carcass was recovered at Puako in August 2000)
- The endangered Hawksbill sea turtle (*Eretmochelys imbricata*) may also transit or feed in the harbor area but is less commonly seen. (One dead animal carcass was recovered in Kawaihae Harbor in June 2000.)
- The endangered Hawaiian monk seal (*Monachus schauinslandi*) may transit through the harbor area and has been recorded in the vicinity
- The endangered Humpback whale *(Megaptera novaeangliae)* may transit the vicinity, and is commonly seen in the area during the "whale season" between December and May every year. The Kohala coast (including Kawaihae Harbor) is included as part of the Humpback Whale National Marine Sanctuary.

Impacts: This project poses no threat to habitat. There is no in- or on-water work or demolition action as part of the Proposed Action or Reasonable Alternative, and no construction materials, debris, or washdown to the Waters will be permitted, and no areas where a Monk seal or sea turtle might swim or haul out of the water would be affected, and no potential impacts to the Humpback Whale National Marine Sanctuary, or the critical habitat of any other species of concern. The only potential impact is believed to be noise from the demolition of the old concrete floor area of the OTS pad, which could propagate far enough to be an annoyance to species in the area. Therefore, the project may affect, but is unlikely to adversely affect, any threatened or endangered marine species.

Precautionary Measures: Informal Endangered Species Act (ESA) Section 7 consultation is presently on-going as part of the distribution of this Draft EA. Results of that consultation will be presented in the Final EA. Based on discussion with NMFS representatives, mitigating actions could include scanning the

area for the presence or absence of threatened and endangered species any time work of a potentially disturbing nature is scheduled (e.g., jackhammers or noisy demolition activities), and allowing those individuals to transit the area prior to commencing such work.

The Maritime Administration has determined that while the Proposed Action that no endangered or threatened species will be adversely affected because there are no listed species within the project area. The Maritime Administration seeks NMFS's written concurrence with this determination.

Thank you for your consideration of this request. If you have any questions, please call Mr. Daniel Yuska of my staff at 202-366-0714.

Sincerely,

for Michael C. Carter
Director, Office of Environment