US Army Corps
of Engineers
Honolulu District

Public Notice of Application for Permit

Regulatory Branch (1145b)
Building 230
Fort Shafter, Hawaii 96858-5440

Public Notice Date: May 1, 2013
Expiration Date: **June 1, 2013**
Permit File Number: POH-2006-00338

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States as described below and shown on the attached drawings.

APPLICANT: State of Hawaii, Department of Transportation, Harbors Division

AGENT: Mitsunaga and Associates, Inc.

LOCATION: Adjacent to Pier 3 at Hilo Harbor, Kuhio Bay of the Pacific Ocean, in the City of Hilo, Island of Hawaii, Hawaii (TMK: (3) 2-1-007:007, 011, 037).
Latitude: 19.728478 N Longitude: -155.056306 W

WORK: The proposed project includes the construction of a new 600-linear-foot reinforced concrete pier to the west of the existing Pier 3 at Hilo Harbor. The proposed Pier 4 would be constructed by installing fifty-nine 60-inch diameter drilled shafts along the shoreline. A permanent steel sheet pile and a 12-inch thick concrete wall would be installed on the makai side of the pier prior to the shaft drilling activities. After the installation of the drilled shafts, drilled shaft pile cap construction activities would proceed. Changes in the existing shoreline would include installing 287 20-inch octagonal piles along the proposed pier. A new articulating concrete block (ACB) mattress would be installed on a 200-foot-long slope. Barges working from the waterway would be used to facilitate the construction of the proposed pier. The types of materials proposed to be discharged and approximate amounts are as follows: concrete "fill" – 14 cubic yards; concrete – 1,820 cubic yards; armor stone – 240 cubic yards; grout – 85 cubic yards; octagonal crib piles – 390 cubic yards; ACB mattress – 490 cubic yards; crushed rock – 3,600 cubic yards; and, gravel – 2,900 cubic yards. Additional description and information of work can be found in the attached documents.

PURPOSE: The proposed project purpose is the construction of additional mooring facilities to supply goods and services to the island of Hawaii.

ADDITIONAL INFORMATION: Please see attached exhibits.

MITIGATION: To avoid impacts to waters of the U.S., the proposed project alternative has been chosen to place the proposed pier parallel to the shoreline rather than perpendicular to the shoreline,

which would take up more space and limit navigability and future expansion options. To further minimize impacts to waters, as well as prevent adverse effects to endangered species, best management practices (BMPs), are proposed to prevent detrimental impacts to the aquatic resources present within the bay system adjacent to the proposed project site. Please see the attached information for details of the proposed BMPs. No additional mitigation measures have been proposed by the applicant at this time.

WATER QUALITY CERTIFICATION: The Corps may not issue a DA permit for any activity that may result in a discharge into waters of the United States until the applicant has obtained a certification or waiver of certification as required under Section 401 of the Clean Water Act, from the **State of Hawaii Department of Health.**

COASTAL ZONE MANAGEMENT ACT CERTIFICATION: Section 307 of the Coastal Zone Management Act of 1972, as amended, requires the applicant to certify that the described activity affecting land or water uses in the Coastal Zone complies with the enforceable policies of the State/Territory's approved Coastal Zone Management Program and that the activity will be conducted in a manner consistent with the Program. A permit may not be issued until the **Office of State Planning, Department of Business, Economic Development, and Tourism** has concurred with the applicant's certification.

PUBLIC HEARING: Any person may request that a public hearing be held to consider this application. Requests for public hearings must be in writing, within the comment period specified in this notice, and state clearly and concisely, the reasons and rationale for holding a public hearing.

CULTURAL RESOURCES: The latest published version of the National and State Registers of Historic Places (NRHP and SRHP) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. There is an unevaluated property in the vicinity of the worksite. It has been designated **Site 22486**. Because the property has been determined to lie within the project area, a determination of eligibility and, if needed, a determination of effect will be made in consultation with the State Historic Preservation Officer (SHPO). This application is being coordinated with SHPO. Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

ENDANGERED SPECIES: Section 7 of the Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of species listed as threatened or endangered under the ESA or result in the destruction or adverse modification of designated critical habitat. Concurrently with the issuance of this public notice, the USACE will evaluate the potential impacts to proposed and/or listed species and their designated critical habitat and provide consultation letters to the NMFS and/or USFWS, as required, with the USACE's effects determination for the proposed project.

ESSENTIAL FISH HABITAT: The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act of 1996 (MSFCMA) (16 U.S.C. 1855 (b)) and associated federal regulations found at 50 CFR Part 600 Subpart K. The Honolulu District area of responsibility includes EFH for species managed under Fishery Management Plans. Concurrently with the issuance of this public notice, the USACE will evaluate the potential impacts to EFH and provide a consultation letter to the NMFS, as required, with the USACE's effects determination for the proposed project.

AUTHORITY: This permit application will be reviewed under the following authorities:

(X) Perform work in or affecting navigable waters of the United States – Section 10 Rivers and Harbors Act 1899 (33 U.S.C. 403).

(X) Discharge dredged or fill material into waters of the United States – Section 404 Clean Water Act (33 U.S.C. 1344). The Corps' public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

( ) Transport dredged material for the purpose of dumping it into ocean waters - Section 103 Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413). The Corps' public interest review will consider the criteria established under authority of Section 102(a) of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (40 CFR Parts 220 to 229), as appropriate.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

COMMENT AND REVIEW PERIOD: Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether it would be in the public interest to authorize this proposal. In order to be accepted, email comments must originate from the author's e-mail account and must include on the subject line of the e-mail message the permit applicant's name and reference number as shown below. All e-mail comments should be sent to **emilee.r.stevens2@usace.army.mil**. Conventional mail comments should be sent U.S. Army Corps of Engineers, Honolulu District, Building 230 (Attn: CEPOH-EC-R), Ft. Shafter, HI 96858-5440. Both conventional mail and e-mail comments must include the permit applicant's name and reference number, as shown below, and the commenter's name, address, and phone number. Please include the following name and reference number: **Hilo Harbor Pier 4, POH-2006-00338.**

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Ms. Emilee Stevens at **(808) 835-4310** if further information is desired concerning this notice.

Additional Project Information and Project Drawings (23 pages) are attached to this Public Notice.

District Engineer
U.S. Army, Corps of Engineers

Attachments

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)	OMB APPROVAL NO. 0710-003

Public reporting burden for this collection of information is estimated to average 6 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME & TITLE (an agent is not required)
State of Hawaii, Dept. of Transportation, Harbors	Mitsunaga and Associates, Inc.
6. APPLICANT'S ADDRESS 79 South Nimitz Hwy. Honolulu, HI 96813-4898	**9. AGENT'S ADDRESS** 747 Amana Street, Suite 216 Honolulu, HI 96814
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business (808) 587-3651	**10. AGENT'S PHONE NUMBERS WITH AREA CODE** a. Residence b. Business (808) 945-7882

11. STATEMENT OF AUTHORIZATION

I hereby authorize Mitsunaga and Associates, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE — DATE: 10·17·12

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Pier 4 Interisland Cargo Terminal

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Kuhio Bay, within Hilo Harbor, Pacific Ocean	Hilo Hawaii 96720
15. LOCATION OF PROJECT Hawaii (COUNTY) HI (STATE)	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

Latitude: 19°43'42 52"N Longitude: 155° 3'22.70"W

17. DIRECTIONS TO THE SITE

From Hilo International Airport, take Airport Road west and turn right on Hawaii Belt Road. Turn right on Kalanianaole Avenue. Turn left on Kuhio Street and enter Hilo Harbor (piers, passenger, and cargo terminals). The project site lies southwest of the present harbor and cargo handling facilities.

18. NATURE OF ACTIVITY (Description of project, include all features)

See additional sheet

19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)

Presently, Hilo Harbor has three commercial piers, Piers 1-3 A new fourth pier, Pl , as been de med necess ary by the State and harbor users to provide additional mooring facilities to supply goods an s ces to the I land of Hawa" because of the growing population

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. REASON(S) FOR DISCHARGE

As outlined in the Final EIS for the Hawaii Commercial Harbors 2020 Master Plan, based on the exi ting fac lit es and trend the need for development within the harbor is crucial to the growth and demand of t' s' ping cargo indu try D charge is necessary in order to create a pier that has strong stability and space for shipping an argo need .

21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS

Concrete Fill: 14 CY Grout: 85 CY Cru hed Rock 3 600 CY

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SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, facticious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both

Block 18 – Nature of Activity

600 linear feet of new reinforced concrete will create the new pier face while most of the pier stability construction will take place below sea level. The pier will be constructed by installing fifty-nine 60-inch diameter drilled shafts along the shoreline. Prior to the drilled shaft activities, a permanent steel sheet pile and a 12-inch thick concrete wall will be installed on the makai side of the pier. After the installation of the drilled shafts, drilled shaft pile cap construction activities will proceed. Changes in the existing shoreline will include installing 287 20-inch octagonal piles along the pier. Between Station 3+50 to 7:50, piles will be driven through the existing articulating concrete block (ACB) mattress, and grouting will be applied at the area of insertion. 11.5 feet of the bottom shoreline slope will be used for armor stone coverage, while 20-inch octagonal crib piles will be placed horizontally below the armor stone facing. From Station 1:50 to 3:50, piles will be driven into the underwater slope, and backfill material will be used to fill the existing slope to match the adjacent dredged slope. ACB mattresses will be installed on the filled slope, while 20-inch octagonal crib piles will be placed horizontally below the ACB mattress facing. Between Station 0+50 to 1+50, backfill material will be used to fill the existing slope to match the new adjacent slope. ACB mattress will be installed on the filled slope. The ACB mattress between Station 0+50 to 1+50 will be secured with Manta Ray anchors.

Block 21 – Discharge Area

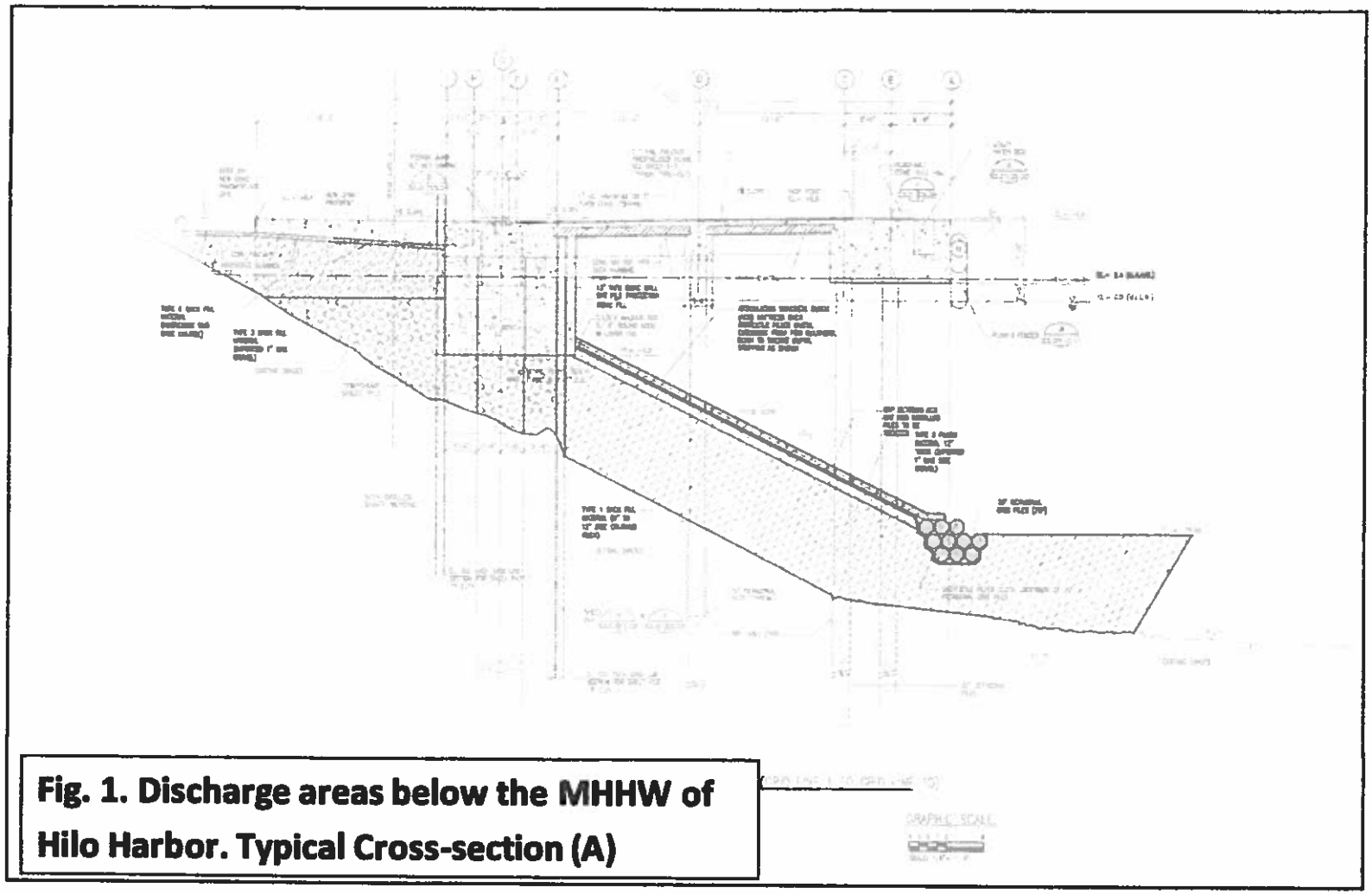


Fig. 1. Discharge areas below the MHHW of Hilo Harbor. Typical Cross-section (A)

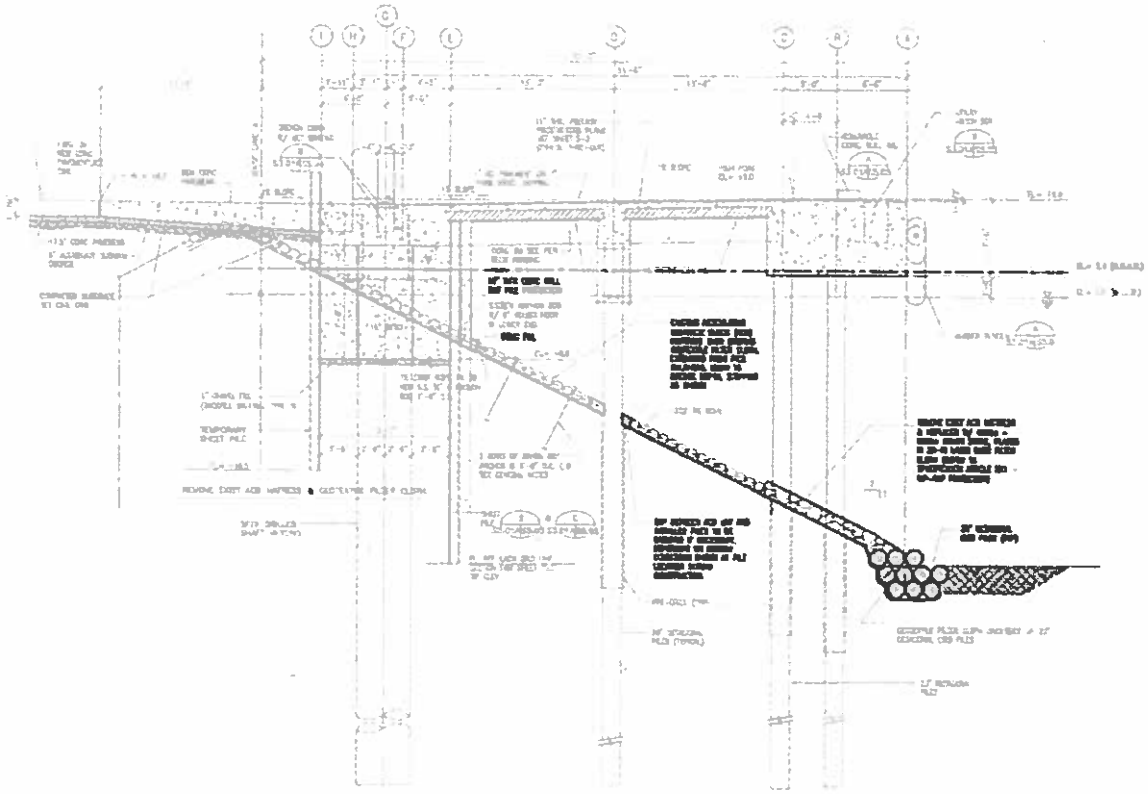
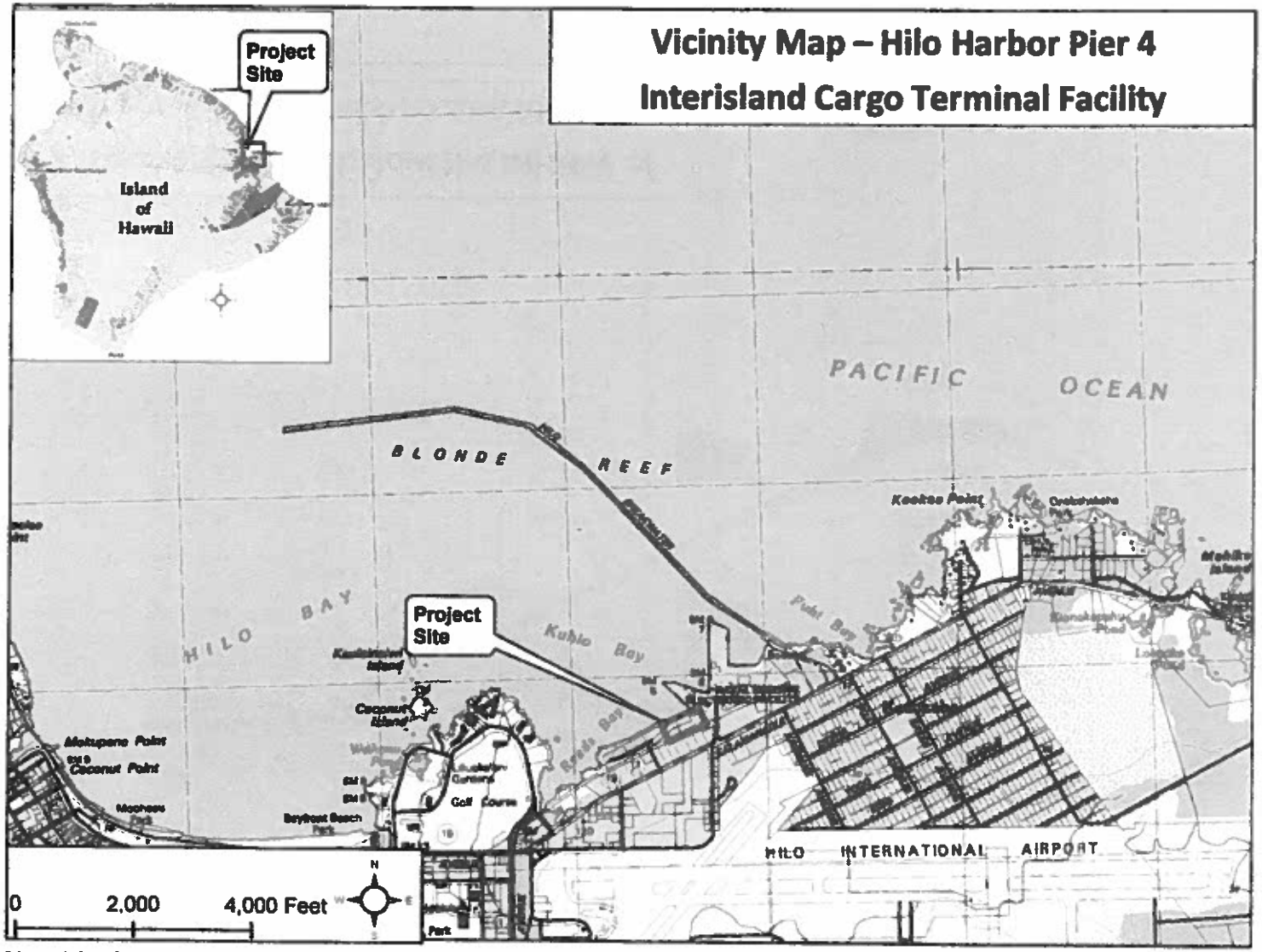
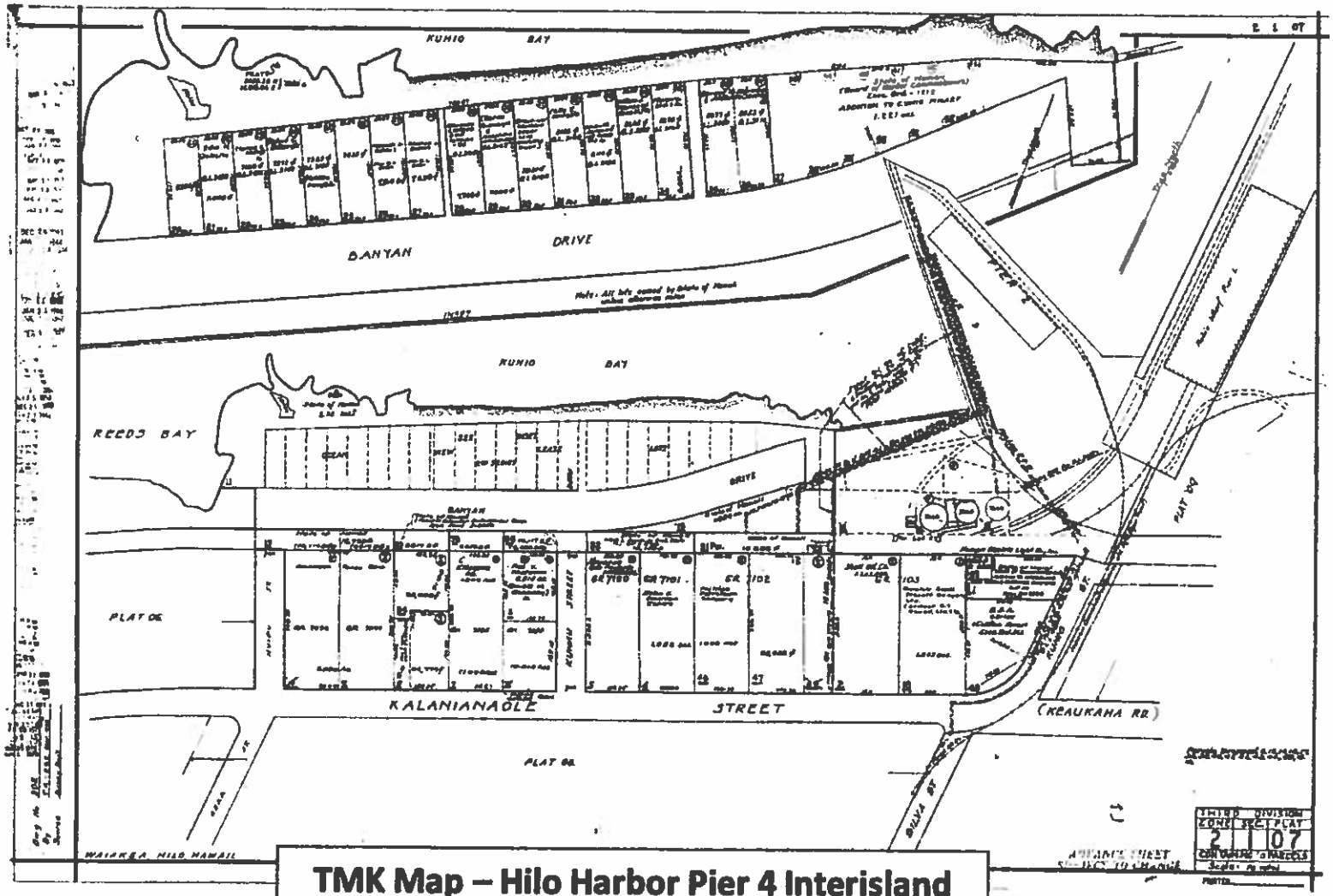


Fig. 2. Discharge areas below the MHHW of Hilo Harbor. Typical Cross-section (B)

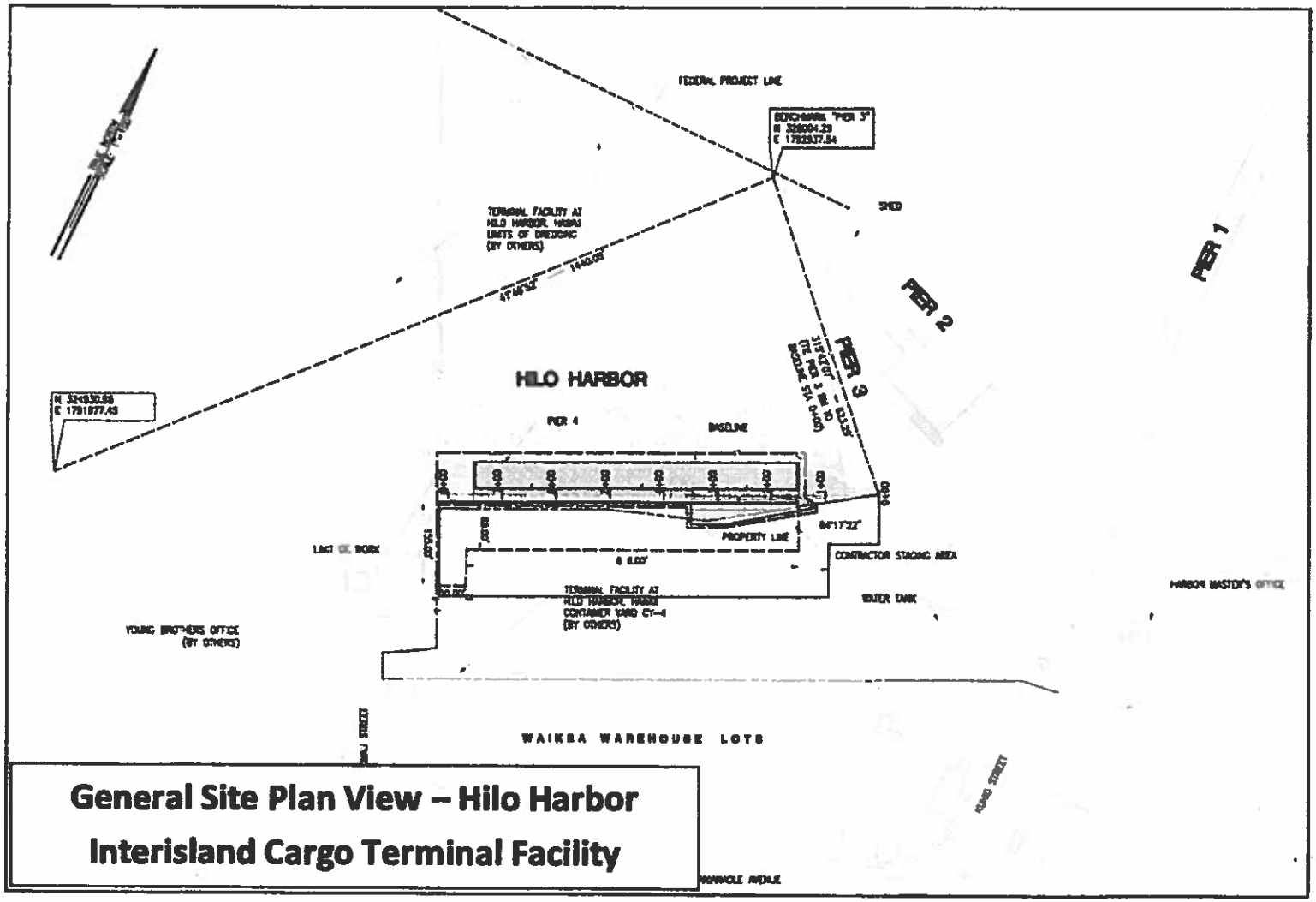


Pier 4 Interisland Cargo Terminal Hilo Harbor
DA Permit



TMK Map – Hilo Harbor Pier 4 Interisland Cargo Terminal Facility

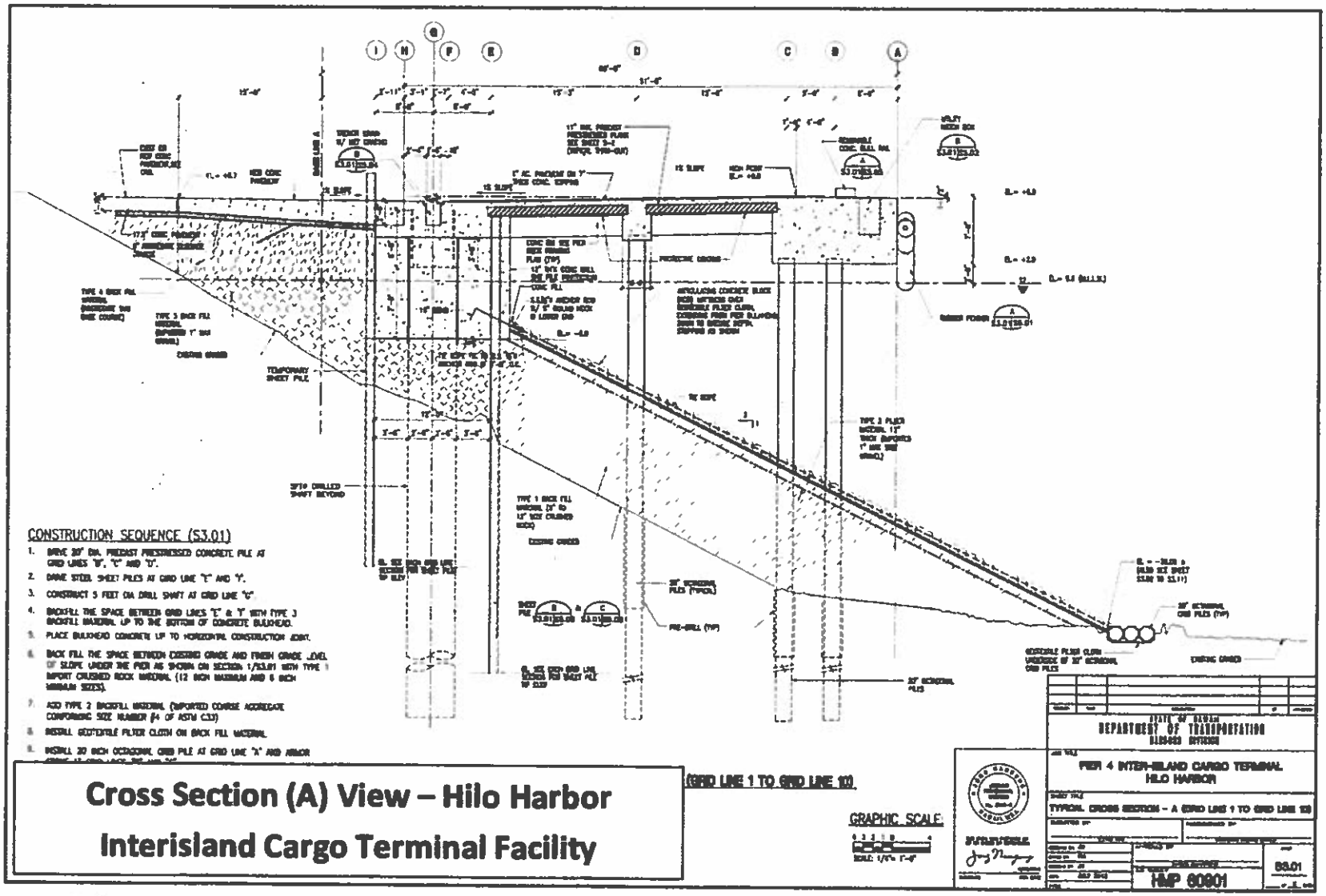
Pier 4 Interisland Cargo Terminal Hilo Harbor
DA Permit



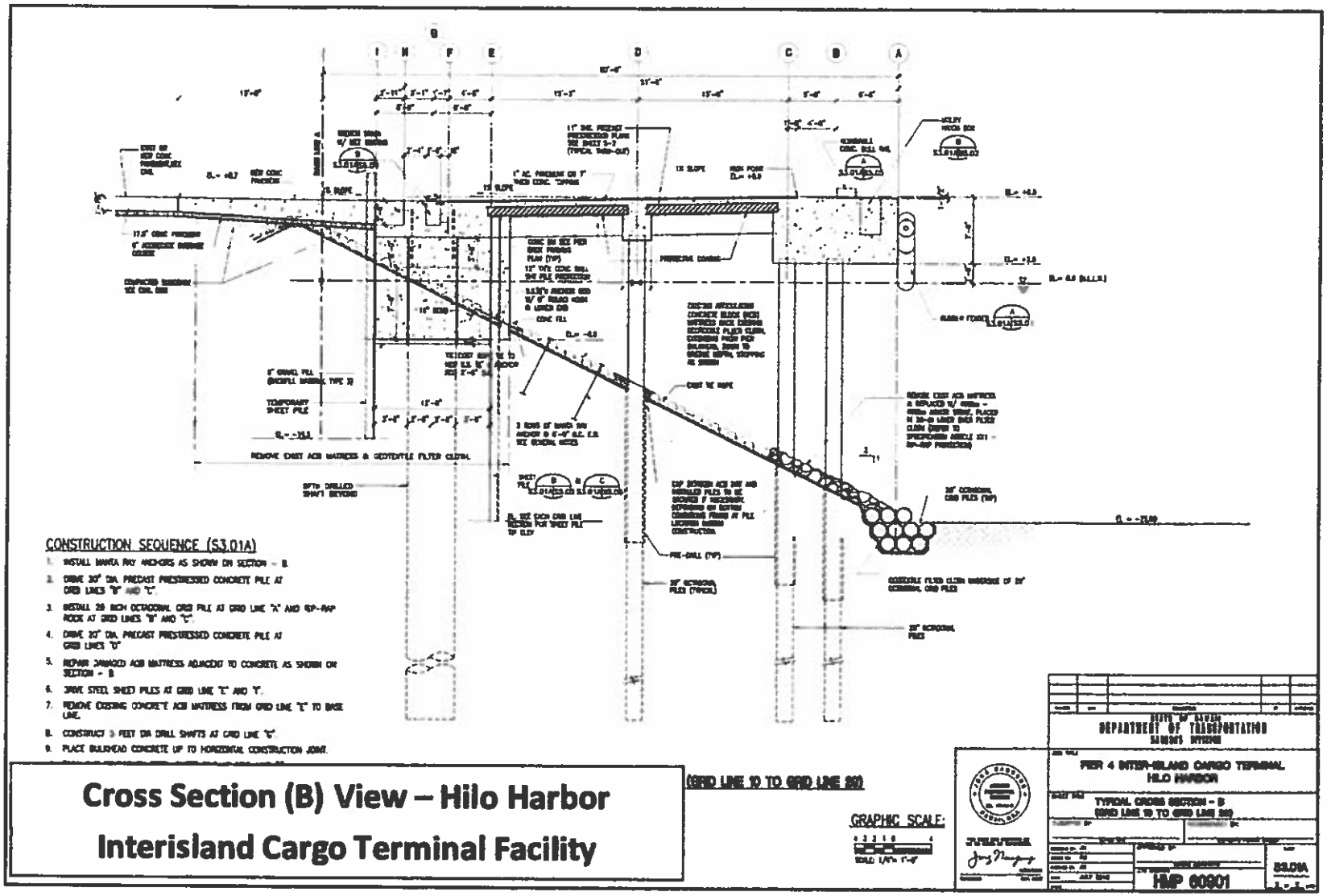
General Site Plan View – Hilo Harbor

Interisland Cargo Terminal Facility

Pier 4 Interisland Cargo Terminal Hilo Harbor
DA Permit



Pier 4 Interisland Cargo Terminal Hilo Harbor
DA Permit



Cross Section (B) View – Hilo Harbor
Interisland Cargo Terminal Facility

(GRID LINE 10 TO GRID LINE 20)

Pier 4 Interisland Cargo Terminal Hilo Harbor
DA Permit

QUESTIONNAIRE

A complete Department of the Army Permit Application consists of the application form (ENG Form 4345), drawings and environmental information necessary to determine a project's probable impact on the public interest (33 CFR Part 325.1 (d)(1) and Part 325.3(a)). Based on our experience, the environmental information necessary to make the public interest determination is often inadequate when only the ENG Form 4345 form is submitted by applicants. Project managers must then request additional information from applicants, resulting in delays in project evaluation. In order to provide more efficient processing of your application, this questionnaire has been developed to supplement the information required in ENG Form 4345 and to simplify your submittal of environmental assessment information.

A. LOCATION (supplement to Blocks 15-16 of ENG Form 4345):

1. Please provide the Tax Map Key number(s) for the project site: 2-1-007:007; 2-1-007:011; 2-1-007:037
2. Please provide the Latitude 19°43'42.52"N and Longitude 155° 3'22.70"W.
3. Please provide the watershed in which work is proposed: Waiakea

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B. DISCHARGE OF DREDGED AND/OR FILL MATERIAL (Blocks 20-22 of ENG Form 4345 also pertain to discharges of dredged and/or fill material).

1. State the source of the dredged or fill material.*
The concrete fill volume is 14 cubic yards and the surface area is 580 square feet. The grout volume is 85 cubic yards, and the surface area is 1,090 square feet. The concrete volume is 1,820 cubic yards, and the surface area is 15,040 square feet. The octagonal crib pile volume is 390 cubic yards, and the surface area is 3,520 square feet. The armor stone volume is 250 cubic yards, and the surface area is 5,170 square feet. The crushed rock volume is 3,600 cubic yards, and the surface area is 4,325 square feet. The gravel volume is 2,900 cubic yards, and the surface area is 4,170 square feet. The ACB mattress volume is 490 cubic yards, and the surface area is 18,700 square feet. The sheet pile volume is 200 cubic yards, and the surface area is 5,400 square feet. Sheet pile has a linear length of 600 feet. The temporary sheet pile volume is 80 cubic yards, and the surface area is 2,200 square feet. Temporary sheet piles will hold back 1,400 cubic yards of fill. (See Exhibit 9 for discharge areas and Attachment A – Project Construction Plans for more sections of the fill area.)

2. State the method of discharge.
Prior to the pile driving activities, sections of the existing ACB mattress from Station 3+50 to 7+50 used to protect the 2:1 slope from wave action will be carefully removed to make room for the concrete piles. During the installation of the octagonal concrete piles, predrilling work such as coring and spudding is required to locate the exact position of

the placement of the precast prestressed concrete piles and to maintain the sloped grade underwater. The octagonal concrete piles will be driven with a heavy crane situated on land or on a barge on the water. Grout or armored stone with grout will be placed in gaps between the concrete piles and the existing ACB mattress. 11.5 feet of the bottom shoreline slope will be used for armor stone coverage, while 20-inch octagonal crib piles will be placed horizontally below the armor stone facing. From Station 1+50 to 3+50, piles will be driven into the underwater slope, and backfill material will be used to fill the existing slope to match the adjacent dredged slope. ACB mattresses will be installed on the filled slope, while 20-inch octagonal crib piles will be placed horizontally below the ACB mattress facing. Between Station 0+50 to 1+50, backfill material will be used to fill the existing slope to match the new adjacent slope. ACB mattress will be installed on the filled slope. The ACB mattress between Station 0+50 to 1+50 will be secured with Manta Ray anchors.

During the installation of the drilled shafts, a shaft will be drilled and then filled with tremie concrete. After filling a drilled shaft with tremie concrete, then the drilling of a neighboring shaft will commence.

During the drilled shaft pile cap construction, a landside temporary steel sheet pile will installed prior to the start of landside bulkhead concrete work and the sheet pile will be removed after the completion of the concrete work.

Precast prestressed concrete plank and beams will be used in the pier deck construction.

Concrete paving is required on the landside of the pier construction. (See Attachment B – Construction Methods and Sequence)

3. Indicate the location of the discharge within the project site. This is best accomplished through a plan view drawing of the site that shows the footprint of filling (discharge). A cross-sectional view with existing and proposed contours (elevations) also provides necessary information on the scope of proposed work.**
Refer to Exhibit 9 and Attachment A – Project Construction Plans.

4. What types of structures or facilities would be constructed on the fill area? (Show on drawings their dimensions, layout, etc.)
The 600-foot long and 51.5-foot wide pier deck structure will be constructed above the fill area supported by the 287 20-inch octagonal concrete piles (see Exhibit 4 for the dimension of the pier deck). The space behind the concrete bulkhead between Station 1+50 and 3+50 will be filled with gravel and new concrete pavement will be placed on top of the backfill to form the base yard (see Exhibit 3).

*Note that Blocks 21 and 22 of ENG Form 4345 require both the volume (usually given in cubic yards) *and* surface area (square feet, acres, etc.) of fill.
**Please submit any drawings on 8 ½ x 11" paper whenever possible.

C. DREDGING PROJECTS

1. Please provide plans showing the dredging footprint within the project site. Include cross-sectional views depicting the existing and proposed contours. Also include a location/vicinity map and plan view (if appropriate) of the area(s) where dredge spoil will be stockpiled, processed, and disposed.
There will be no dredging for this project. The prior dredging footprint can be seen in Exhibit 10.

2. What is the type and composition of the material to be dredged?
3. How much time will be required to complete the dredging (construction window)? Will the dredging project be accomplished in phases? If so, please describe. Is maintenance dredging proposed, and, if so, what is the timeframe of the dredging cycle?
4. How much material will be dredged?
    a. Volume:
    b. Surface area:
5. State what dredging method(s) will be used, and indicate why that method(s) is proposed.
6. Where will the dredged material be de-watered?
7. Do you plan to transport dredged material for the purpose of disposing it in the ocean?
    a. Where do you plan to dispose of the dredged material?
    b. How much material (volume) will be disposed?
    c. What is the type and composition of the material?
    d. How long do you plan to dispose of the material?
    e. How will you transport the material to the ocean dump site?

D. STRUCTURES IN NAVIGABLE WATERS

1. What specific structures will be constructed (type and size)?
The proposed Pier 4 will have a concrete deck surface that is 51.5 feet wide and 600 feet long in size with most of the pier stability structures below sea level and along the shoreline. (See Attachment B – Construction Methods and Sequence)

2. What will the structures be used for?
The proposed Pier 4 will be used: 1) to provide cargo, passenger, and research vessel berths in response to the demand for space and facilities to handle increases in shipping and cargo volume at Hilo Harbor to serve the increasing resident population and the growing agricultural industry such as the coffee and flower industries and 2) to create cruise passenger harbor facilities to accommodate multiple cruise ships and to provide passenger amenities which will create more jobs in the cruise ship industry and provide additional revenue to the island from the Hawaii cruise ship industry. (See Attachment G – Final Environmental Impact Statement)

E. EXISTING ENVIRONMENT

Please submit photos when possible!

1. PHYSICAL ENVIRONMENT

a. How would you generally describe the project area and surrounding area?

(1) Level of development:

Hilo Harbor is bordered to the north by Kalanianaole Avenue and on the south by Hilo Bay. From east to west, land uses at Hilo Harbor include Piers 1, 2, and 3 and their corresponding sheds, bulk sugar storage tanks, Hawaiian Cement bulk storage facilities, Harbors Division office facilities, container yards, and a water tower. The three existing piers at Hilo Harbor handle container and general cargo, petroleum products, lumber, cement, livestock, and liquefied petroleum gas. The proposed project will be located on the northeast side of Hilo Harbor and will blend seamlessly alongside the existing commercial piers in Hilo Harbor. Hilo Harbor is surrounded on three sides by industrial uses and fuel suppliers, Gas Company storage yard and office to the east, C. Brewer fertilizer warehouse facility to the south, and the harbor container yard to the north. (See Attachment G – Final Environmental Impact Statement)

(2) Existing land and water use:

The land use for Hilo Harbor include: 1) berthing and loading/unloading of ships, barges, and small boats; 2) berthing of passenger cruise ships; 3) dry and liquid bulk cargo operations; and 4) recreational fishing. (See Attachment G – Final Environmental Impact Statement)

(3) Other general features:

None

b. What kind of substrate (soil) is found at the project site?

Substrate at the above-ground portion of the project consists of sandy soils with occasional volcanic rock outcroppings. The shoreline varies between coral and volcanic rubble to solid volcanic rock. The NRCS soil classification for the site is "Keaukaha extremely rocky muck, 6 to 20 percent slopes."

A geotechnical engineering exploration was conducted in Hilo Bay in 2006 for a prior dredging project. A separate geotechnical engineering exploration was conducted in 2007 at the Pier 4 project site. Ten bores were drilled along the shoreline under the proposed deck. Three harbor side bores were drilled to a depth of about 25 feet below the water surface. The other bores were drilled to a depth of about 120 feet below the water surface. The boring locations and subsurface profiles for two cross-sections are illustrated in Exhibit 10. From the exploratory borings collected in the engineering exploration, a harbor deposit

formation was found about 5 to 15 feet below the water surface at the project site. A clinker formation overlaid a detritus layer which extended to depths of 15 feet to 55 feet below the water surface at the project site. Beneath the detritus, a lagoonal was discovered that extended to depths of 60 feet to 90 feet below the water surface at the project site. Another detritus layer existed below the lagoonal layer, which extended to a depth of about 100 feet below the water surface. Beneath the detritus, clinker and basalt existed alternately.

c. What is the range of water levels which occur (during normal tides and during storm of flood periods)?
The range of water levels which occur during normal tides at Hilo Harbor is from 4.22 feet to 5.89 feet. (See Attachment E – NOAA Elevations on Station Datum) According to the flood zones documented by the National Flood Insurance Program, the areas of Hilo Harbor are at risk for a 100-year flood, 100-year coastal flood with velocity (wave action) with base flood elevations determined, flood depths of 1 to 3 feet representing areas of ponding, and 500-year flood. (See Attachment G – Final Environmental Impact Statement)

d. Describe the water currents and water circulation patterns at the project site.
According to the *Hilo Bay Water Circulation and Water Quality Study* (January 2009), the current analysis indicated that the surface flow is majority westward, out of Hilo Harbor and the water circulation study showed that circulation occurs from east to west in Hilo Bay at speeds ranging from 3 centimeters per second (cm/s) to 13 cm/s.

e. What is the salinity (salt, brackish, or fresh) of the water at the project site?
The water at the project site is brackish. According to the *Hilo Bay Water Circulation and Water Quality Study* (January 2009), previous studies indicated a two-layer salinity stratified pattern in Hilo Harbor. Vertical stratification of the water column is created by the large quantities of fresh water entering the harbor from groundwater and surface runoff, and this salinity gradient is more prominent during the wet season.

f. What is the quality of the water at the project site? For instance, in Hawaii a stream may be listed as a 303(d) Impaired Water by the State of Hawaii's Department of Health (DOH). See DOH's web site below:
http://www.hawaii.gov/health/environmental/env-planning/wqm/wqm.html#303pcd
Hilo Bay is listed as a 303(d) Impaired Water by the State of Hawaii's Department of Health (DOH) for nutrients and turbidity pollutants inshore of Breakwater and nearshore waters from Wainaku to Paukaa.

g. Is this area a groundwater recharge area?
This area is not a groundwater recharge area. According to the *Hilo Bay Water Circulation and Water Quality Study* (January 2009), Hilo Harbor is a groundwater sink for Wailuku River and Wailoa River.

h. What is the history or possibility of contaminants/poliutants in the substrate (soil) at the source of fill material?
Soil is not used as a filed material for this project. The fill material includes the aforementioned concrete, ACB mattress, grouting, gravel, crushed rock, aggregate, which are all clean materials.

i. Have there been problems with erosion at or near the project site?
The project will inherit the ACB mattress over geotextile filter cloth which was installed on a prior harbor dredging project to protect the 2:1 slope against wave action. During the construction process, sections of the ACB mattress from Station 3+50 to 7+50 will be removed for the installation of octagonal concrete piles and drilled shafts. Gaps between the octagonal concrete piles and drilled shafts will be grouted or filled with armor stones and grouted. 11.5 feet of the bottom shoreline slope will be used for armor stone coverage, while 20-inch octagonal crib piles will be placed horizontally below the armor stone facing. From Station 1+50 to 3+50, piles will be driven into the original underwater slope, and backfill material will be used to fill the existing slope to match the adjacent dredged slope. ACB mattresses will be installed on the filled slope, while 20-inch octagonal crib piles will be placed horizontally below the ACB mattress facing. From Station 0+00 to 1+50, ACB mattress will be installed on the 2-to-1 filled slope with three 20-inch octagonal crib piles placed horizontally at the toe.

j. Is the project site located in or near a drainage way or flood plain? If yes, describe.
The project site is located in a FEMA flood zone designated as Zone A. Zone A are areas at risk for a 100-year flood. (See Exhibit 5)

k. What is the quality of the air at the project site? Will the proposed project have an adverse, or insignificant, effect on air quality at the site? Will the impacts to air quality be temporary or permanent?
The 1999 annual average for air quality measurement at Hilo Harbor was 11 particulate matter or 10 microns or less in diameter and 2 grams per cubic meter of sulfur dioxide. Both measurements were below the State of Hawaii ambient air quality standards of 50 particulate matter or 10 microns or less in diameter and 80 grams per cubic meter of sulfur dioxide. The proposed Pier 4 will have an adverse effect on air quality at the site that cannot be avoided. The short-term construction-related effects on air quality are the creation of dust and emissions from construction vehicles, equipment, and commuting workers. The long-term effects on air quality are increased traffic volumes in the surrounding area of the proposed Pier 4 that contribute minimally to ambient carbon monoxide concentration levels. (See Attachment G – Final Environmental Impact Statement)

i. What are the existing noise levels at the project site? Will the proposed project have an adverse, or insignificant, effect on noise levels at the site? Will the impacts to noise levels be temporary or permanent?
According to a 2000 noise study, the ambient noise level in Hilo Harbor ranged from 60 to 65 Ldn(day-night average sound level), which was below the standards required for commercial and industrial development of 75 Ldn set by the Federal Housing Authority, U.S. Department of Urban Development and Veterans Administration. The proposed Pier 4 will have an adverse effect on noise levels at the site that cannot be avoided. The short-term construction-related effects on noise levels are increased noise generated by on-site equipment and vehicles. The long-term effects on noise levels are increased noise from fixed on-site mechanical equipment and harbor vehicles that will be involved in maintenance activities and transport materials and personnel to and from harbor projects. (See Attachment G – Final Environmental Impact Statement)

2. BIOLOGICAL ENVIRONMENT (attach biological survey reports if available)

a. Biological survey reports from a qualified environmental professional can provide much of the necessary information for evaluating a project's potential to impact aquatic resources. If not available, a general characterization of the plants and animals at the site should be provided.
Terrestrial and Marine Biology Surveys are detailed in Sections 3.7 & 3.8 of the July 2001 Final EIS and are summarized and updated below. Char & Associates conducted terrestrial surveys and AECOS, Inc. conducted marine surveys. The above-water portion of the project site does not support any substantial biological communities. Weedy grasses, herbs, and shrubs cover most of the lot, with occasional ironwood trees and Coconut Palms. Studies as part of the 2001 EIS noted sparse corals and common reef fish in the vicinity of the proposed Pier 4 construction site. No endangered species are found on or around the project site, with the possible exception of the Hawaiian green sea turtle. The Hawaiian green sea turtle feeds on algae growing on substrate. Water and substrate conditions in the project area are not a conducive feeding habitat for these turtles, and thus the presence of turtles would likely be temporary during transit between feeding habitats.

A benthic habitat survey in January 2009 (Attachment H – Benthic Habitat Survey for Hilo Harbor Pier 4 Expansion) in the project area shows the benthic and fish communities currently existing there are neither abundant nor diverse. Habitat structure is scarce leading to scarce fish resources, limited benthic flora, and invertebrate taxa dominated by sponges and worms. No threatened or endangered species have been observed in the project area, and of these species, only sea turtles are likely to utilize the area for foraging.

b. Please list any plants and animals found within or near the project area that are listed as threatened or endangered under the Endangered Species Act of 1973). http://endangered.fws.gov/esa.html

The Hawaiian green sea turtle is an endangered species under the Endangered Species Act of 1973.

3. SPECIAL AQUATIC SITES Is the project site located at or adjacent to any of the following areas? (Show on vicinity drawings the extent of the special sites, if they are present, clearly labeling each type.) (See Exhibit 6 and Exhibit 7)

	Dredge Site	Discharge Site	Construction Site
Sanctuaries and Refuges (protected wildlife areas)	N/A	Yes	Yes
Wetlands (swamps, marshes, bogs)	N/A	No	No
Mudflats	N/A	No	No
Vegetated Shallows (seagrass bed)	N/A	No	No
Coral Reefs	N/A	No	No
Riffle and Pool Complexes	N/A	No	No

4. HUMAN USE CHARACTERISTICS

a. What is the existing land use zoning for the site and its vicinity?
The existing land use zoning for the site is designated as MG-1A, General Industrial Use. There is a road in the vicinity of the project site. (See Exhibit 8)
b. What is on the land (including dwellings, facilities, etc.) at or near the site?
Hilo Harbor is bordered to the north by Kalanianaole Avenue, on the south by Hilo Bay, and west by Baker's Beach Lease Lots. Harbors Division will request transfer of the Baker's Beach Lease Lots and the access road that leads into the property from DLNR for the construction of Pier 4 to proceed. Access to the proposed Pier 4 will be through Kumau Street, which is the current access to the Baker's Beach Lease Lots. Baker Beach is the shoreline west of the harbor facilities. This area contains 17 house lots on leased land and all leases will terminate in 2015. This precludes the need for relocation.

From east to west, land uses at Hilo Harbor include Piers 1, 2, and 3 and their corresponding sheds, bulk sugar storage tanks, Hawaiian Cement bulk storage facilities, Harbors Division office facilities, container yards, and a water tower. The three existing piers at Hilo Harbor handle container and general cargo, petroleum products, lumber, cement, livestock, and liquefied petroleum gas. The proposed project will be located on the northeast side of Hilo Harbor and will blend seamlessly alongside the existing commercial piers in Hilo Harbor. Hilo Harbor is surrounded on three sides by industrial uses and fuel suppliers, Gas Company storage yard and office to the east, C. Brewer fertilizer warehouse facility to the south, and the harbor container yard to the north. From Kalanianaole Avenue, the view of Hilo Harbor is restricted by the industrial facilities around the harbor.
c. Do any of the following occur at or near the site?

	Dredge Site	Discharge (fill) Site	Construction Site
Local fresh water supply	N/A	No	No
Fishing (recreational, commercial)	N/A	Yes	Yes
Scenic areas	N/A	No	No
Agriculture (type)	N/A	No	No
Aquaculture (type)	N/A	No	No
Historic sites (type)	N/A	Yes	Yes
Other cultural resources (type)	N/A	No	No
Parks, monuments, preserves, etc.	N/A	No	No
Other (type)	N/A	No	No

F. ENVIRONMENTAL EFFECTS OF PROPOSED PROJECT

Briefly describe the environmental effects which may be expected as a result of your proposal, referring to the items listed in Section E above. Please don't answer "none".all projects have some effects.

1. Physical environment (effects on land, water, air, soil, etc.)
The proposed project will have a positive impact on the shoreline. As part of the pier construction, a metal sheet pile will be installed to stabilize the shoreline. Temporary BMPs for the concrete washout will ensure water quality and erosion control before, during, and after project construction. The proposed Pier 4 will create 30,900 square feet of impervious surface, which will increase surface runoff. A zone of 6,900 square feet from the end of the pier on the water side is sloped 1.5 inches to Hilo harbor and the rest of the 24,000-square-foot pier surface is designed to slope downwards toward a 2,260-cubic-foot trench drain with a metal grating, which discharges the surface runoff into Hilo Harbor through three 8-inch diameter pipes. The sheet flow from the 6,900-square-foot zone at the end of the pier on the water side was calculated at 1.94 cubic feet per second based on a 10-year 1-hour storm. The sheet flow from the rest of the 24,000 square feet pier surface entering the trench drain and exiting the three pipes was calculated at 11.54 cubic feet per second based on a 10-year 1-hour storm.

2. Biological environment (effects on plants, animals, and habitats)
Animals such as cats, dogs, barred doves, rats, and finches were observed in Hilo Harbor. A botanical survey of Hilo Harbor found introduced or alien plant species such as bingabing, Chinese banyan, and California grass. Remnants of former structures, including concrete blocks, were discovered at Hilo Harbor. (See Attachment G – Final Environmental Impact Statement)

3. Special aquatic sites (effects on wetlands, coral reefs, etc.)
A survey of marine biology (See Attachment G – Final Environmental Impact Statement) from the reinforced shoreline at the east boundary of Pier 3 along the shoreline of the

proposed Pier 4 was conducted to determine potential impacts by the proposed project. During the survey, 32 macro-organisms and two species of native (but not rare) octocoral were observed. The harbor, including the area for Pier 4, has recently been dredged and a mitigation plan prepared for the loss of coral. As part of the mitigation plan for lost of marine benthic habitat in the dredged area, day-use-mooring buoys will be installed in the Hilo area. Day-use mooring buoys have proven to be an effective tool around the world in reducing the damage to coral reefs caused by anchors. Day-use mooring buoys eliminate the need to drop anchor on coral reefs by providing boaters with a convenient means of securing their boats. The goal of mitigation is to prevent future damage to corals and fish habitat in excess of the loss of these resource functions and to provide for enhanced recreation opportunities to compensate for lost recreational fishing at the dredge site. (See Attachment I – Final Mitigation Plan at Hilo Harbor)

4. Human use (how existing human activities would be affected)
Human activities would not be affected by the proposed Pier 4. Piers 1, 2, and 3 and Radio Bay are often used by fishermen. Daytime access to the harbor is relatively unrestricted. Fishermen must vacate the area when the pier is used for cargo handling or cruise ship berthing or fuel barge berthing. Nighttime fishing (6 p.m. to 6 a.m.) is allowed with a fishing permit granted by the Harbors Division. Hilo Harbor is used as one of the sites for the Islandwide Casting Club fishing tournament held twice a year. Harbors Division is supportive of fishing at Hilo Harbor because it meets community recreational needs and helps keep the harbor area secure since fishermen have reported suspicious activities at the harbor in the past. The construction of Pier 4 will provide an additional pier for fishing activities. (See Attachment G – Final Environmental Impact Statement)

5. Historical/Cultural resources. The Corps must evaluate permit applications pursuant to Section 106 of the National Historic Preservation Act. In many cases, the Corps must coordinate its determination of a project's potential to adversely affect historic sites with the local Historic Preservation Officer. The Corps encourages applicants to contact their local Historic Preservation Officer as soon as possible in the project planning process to address any issues relevant to Section 106. The State of Hawaii's Historic Preservation Office can be found at http://www.hawaii.gov/dlnr/hpd/hpgreeting.htm . In Guam, the Historic Preservation Officer can be found at
Chapter 4, Section 3 of the EIS for the Hawaii Commercial Harbors 2020 Master Plan discusses existing archaeological and historical resources. Structural remains probably port-related facilities were identified in Site 22486 within the footprint of the proposed Pier 4 during a 2000 archaeological survey of Hilo Harbor. The site consisted of four concrete features: two concrete slabs, a set of parallel concrete curbs and two displaced sections of concrete slab located at the water's edge. The features were in fair condition and were altered. Based on the criteria outlined in the Rules Governing Procedures for Historical Preservation Review, Site 22486 was assessed as solely significant under Criterion "d:" "Have yielded, or is likely to yield, information important for research on prehistory or history." Site 22486 has yielded pertinent information for understanding historic land use in the project area. Site 22486 has been adequately

documented in maps, written descriptions, and photographs; therefore, no further work or preservation is required.

6. Indirect impacts (will the project eventually encourage or discourage residential, agricultural, urban, industrial or resort activities?)
The project will encourage industrial activities. Pier 4 has been deemed necessary by the State and harbor users. The reasons of the proposed Pier 4 are: 1) to provide cargo, passenger, and research vessel berths in response to the demand for space and facilities to handle increases in shipping and cargo volume at Hilo Harbor to serve the increasing resident population and the growing agricultural industry such as the coffee and flower industries and 2) to create cruise passenger harbor facilities to accommodate multiple cruise ships and to provide passenger amenities which will create more jobs in the cruise ship industry and provide additional revenue to the island from the rapidly expanding Hawaii cruise ship industry. (See Attachment G – Final Environmental Impact Statement)

7. Cumulative impacts (is this project similar in purpose, characteristics, and location compared to previous projects? Will this project lead to or be followed by similar projects? Are there other activities in the area similar to your proposed activity?)
Presently, Hilo Harbor has three commercial piers, Piers 1-3. These piers serve as the berthing and loading/unloading of ships, barges, and small boats, berthing of passenger cruise ships, dry cargo operations, and recreational fishing. The proposed Pier 4 will be located east of Pier 3 and will blend seamlessly alongside the existing commercial piers in Hilo Harbor. The construction of Pier 4 will be a compatible use with surrounding harbor operations and serves to implement the 2020 Harbor Master Plan. Future expansion of Hilo Harbor includes construction of Piers 5 and 6. Pier 5 would serve as Hilo Harbor's main cruise ship berthing facility and Pier 6 would function as a secondary cruise ship berthing facility. Both piers would probably be constructed with concrete deck on piles similar to the existing to Piers 1, 2, and 3 and the proposed Pier 4. (See Attachment G – Final Environmental Impact Statement)

8. Other impacts
None

ALTERNATIVES

1. List other sites which may be suitable for this proposal and indicate whether these are or could become available to you. If none, explain why.
The construction of alternative harbor facilities on the island of Hawaii was not considered because no other sites on the island would offer an economical, practicable alternative location for the proposed development.

2. If your project involves the discharge of fill material to convert wetlands or submerged areas to fastland (dry land), list any existing fastland sites which are or could become available to you. If none, clearly explain why.

This project will not involve discharging of fill material to convert wetlands. The wetland inventory from U.S. Fish and Wildlife Service shows part of the project area fall in the wetland boundary (Exhibit 7). Field renaissance by Oceanit staff in 2009 found out that the proposed project area had been developed since World War II. There is no wetland in this area.

The project will convert a portion of submerged lands to fastland (Station 1+50 to 3+50) due to the backfill placement needed for the pier construction. Other fastland sites are not available to Harbors Division.

3. List other methods or project designs which would fulfill the basic purpose of your proposal. Which ones are reasonable for you? If none, explain why.
The no action alternative and the delayed action alternative were rejected from further consideration. The no action alternative was rejected because 1) the objectives of the 2020 Master Plan would not be met; 2) State and County development policies would not be executed; 3) negative economic consequences would be anticipated in terms of lost revenue opportunity; and 4) importation costs would increase and in turn, the cost of goods for consumers would increase. The delayed action alternative was rejected because existing strained harbor facilities will not be able to accommodate the projected increases in cargo and passenger cruise ship demand. (See Attachment G – Final Environmental Impact Statement)

4. If your permit application were denied, what other alternatives would you have?
The other alternative is the no action alternative. This alternative would mean there will be no changes to the existing operations at Hilo Harbor. Harbor operations will become inefficient and hazardous due to spatial limitations. Traffic congestion in the harbor would not be improved. Existing vacant land would remain undeveloped and not used. (See Attachment G – Final Environmental Impact Statement)

MITIGATION

What can you do to avoid or minimize adverse effects of your proposal on the environment? For instance, a project might be relocated to a non-aquatic site, the footprint of fill or dredging can be minimized to only that which is necessary to achieve project purpose, a project footprint might be moved within a site to avoid aquatic resources, and/or different construction methods could be used.
Best Management Practices (BMPs) will be used to minimize water pollution, dust, and noise. Temporary water pollution BMPs will include a concrete washout system which will be installed on the project site and implemented by a licensed operator for concrete washout wastewater containment and recycling of residual concrete waste. All concrete work will be contained within water formwork and sheet piles prior to pouring. The concrete pours will be done in multiple cells. Only two cells of concrete formwork will be in use at any one time. Tremie concrete will be poured into one cell and displace ocean water from one cell to the adjacent cell. Water from the last cell will be pumped into an onshore bermed and lined area. Dust pollution will be controlled by watering, should the soil become dry. Noise pollution will be controlled by use of mufflers on equipment.

Please see the Honolulu District's Compensatory Mitigation and Monitoring Guidelines on-line on our web site (http://www.poh.usace.army.mil/regulatory.asp), or contact the Corps office listed below to request a hard copy. Thank you for your cooperation in this manner. If you have any questions, please contact the Corps of Engineers, Regulatory Branch at (808) 438-9258 in Honolulu or at (671) 339-2108 in Guam.