



US Army Corps  
of Engineers  
Alaska District

# Public Notice of Application for Permit

Juneau Field Office  
Regulatory Division (1145)  
CEPOA-RD  
P.O. Box 22270  
Juneau, Alaska 99802-2270

<b>PUBLIC NOTICE DATE:</b>	<b>September 25, 2015</b>
<b>EXPIRATION DATE:</b>	<b>October 24, 2015</b>
<b>REFERENCE NUMBER:</b>	<b>POA-2005-1976</b>
<b>WATERWAY:</b>	<b>Portage Cove</b>

---

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

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 Randal Vigil at (907) 790-4491 or by email at Randal.P.Vigil @usace.army.mil if further information is desired concerning this notice.

**APPLICANT:** Haines Borough, PO Box 1209, Haines, Alaska 99827

**AGENT:** Dick Somerville, PND Engineers, Inc., 9360 Glacier Highway, Suite 100, Juneau, Alaska 99801

**LOCATION:** The project site is located within Section 35, T. 30 S., R. 59 E., Copper River Meridian; USGS Quad Map Skagway A-2; Latitude 59.233733° N., Longitude 135.440287° W.; Portage Cove Harbor, in Haines, Alaska.

**PURPOSE:** The applicant's stated purpose is to construct harbor and wave protection facilities to increase capacity while providing safe vessel navigation, moorage, launching, loading, staging and parking improvements, and provide clearance for proposed boat launch, drive down float, and additional vessel moorage.

**PROPOSED WORK:** The applicant requests authorization for the following work in waters of the United States (U.S.):

- Dredge approximately 129,450 cubic yards (cy) of marine sediment from approximately 7.93 acres below the Mean High Water mark (MHW), (approximate elevation +15.8 feet above the 0.0 foot contour), to provide sufficient water depth vessels at all tidal ranges. The disposal of 104,450 cy of the dredged material is proposed through the discharge over 50 acres of the seafloor at a location approximately 1.5 miles northeast of the proposed dredging site at Latitude 59.238333° N., Longitude 135.400639° W. in Chilkoot Inlet.
- Discharge approximately 23,380 cubic yards of armor rock and 19,320 cy of dredged material into approximately 3.73 acres below the plane of the High Tide Line (HTL), (approximate elevation +21.2 feet above the 0.0 foot contour), to construct a parking area, boat launch ramp, and protect the dredged area slopes.
- Remove from below MHW and dispose one 11 feet wide by 136 feet long transient float including six 12-inch diameter steel piles and all miscellaneous mounting hardware and appurtenances.
- Remove from below MHW and relocate one 36 feet wide by 42 feet long seaplane float including two 16-inch diameter steel piles and all miscellaneous mounting hardware and appurtenances.
- Replace from below MHW three 12-inch diameter steel piles from transient float designated to remain.
- Replace from below MHW 1,800 linear feet of 16-inch diameter High Density Polyethylene (HDPE) sewer outfall pipe; replace 70 linear feet of 16-inch diameter ductile iron pipe sewer outfall diffuser.
- Relocate from below MHW one 28 feet wide by 50 long, pile-supported, (four 24-inch diameter steel) work float.
- Install below MHW one 10 feet wide by 320 feet long, pile-supported, (sixteen 16-inch diameter steel), headwalk float.
- Install below MHW one 10 feet wide by 275 feet, pile-supported, (ten 16-inch diameter steel), long mainwalk float.
- Install below MHW one 10 feet wide by 230 feet long, pile-supported, (ten 16-inch diameter steel), mainwalk float.
- Install below MHW one 10 feet wide by 124 feet long, pile-supported, (ten 16-inch diameter steel), transient float.

- Install below MHW six 5 feet wide by 42 feet long, pile-supported, (six 16-inch diameter steel), finger floats.
- Install below MHW twelve 4 feet wide by 32 feet long finger floats.
- Install below MHW one 44 feet wide by 300 feet long, pile-supported, (ten 12-inch diameter steel), boarding float.
- Install below MHW one 50 feet wide by 180 feet long, pile-supported, (twelve 24-inch diameter steel), drive down float with one 17 feet wide by 145 feet long, pile-supported, (eight 16-inch diameter steel), transfer bridge.
- Install below MHW one 20 feet wide by 40 feet long, pile-supported (twelve 16-inch diameter steel), approach dock with one 7 feet wide by 80 feet long covered aluminum gangway and one 20 feet wide by 20 feet long gangway landing float
- Install below MHW 700 linear feet of wave barrier with navigational lighting; supported with forty-eight 30-inch diameter steel bearing piles and one hundred thirty-one 24-inch diameter steel barrier piles with sheet pile wings.
- Install below MHW 2,650 linear feet of HDPE sewer outfall pipe with diffuser. Work would include installation of 900 linear feet of corrugated polyethylene drainage pipe, three concrete storm drain manholes, one storm drain oil water separator, and one concrete storm drain outfall with check valve and debris protection grate.

All work would be performed in accordance with the enclosed plan (sheets 1 - 20), dated July 30 , 2015.

**ADDITIONAL INFORMATION:** The applicant submitted to the Corps of Engineers a sediment characterization and analysis report dated December 2014, for the above referenced proposed dredging. According to the applicant's report, no historical or present contamination exists at the proposed dredge site. A portion of the dredged material would be used as fill material for the proposed parking area. Any excess material not incorporated into the proposed project would be disposed of through unconfined open water disposal.

The aforementioned sediment characterization study was performed under a sediment sampling plan approved on June 18, 2015, by the Corps of Engineers. Based on the data provided, this material appears to be suitable for in-water disposal as proposed, provided all other requirements to offset impacts to the aquatic environment are satisfied, including the the Environmental Protection Agency's 404(b)(1) Guidelines.

In order to proceed with the proposed work the applicant is required to obtain a State of Alaska, Department of Natural Resources easement and a Department of

Environmental Conservation wastewater treatment facility outfall approval to for the proposal to relocate/replace the existing outfall and diffuser.

**APPLICANT PROPOSED MITIGATION:** The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges of dredged or fill material.

**Avoidance:** The applicant has provided the following avoidance measures:

Project footprint. The fill footprint has been minimized to the greatest extent practicable, while still meeting the purpose of the project. The use of a vertical wave barrier in lieu of a rubble mound breakwater drastically reduces the project footprint and filling of waters of the U.S.

Avoid migration barriers to salmonids. At no time will the construction activities result in a migration barrier to salmonids.

Avoid introduction of contaminated material during construction. Contaminant-free, clean shot rock embankment and surface materials will be used during all aspects of construction. Material used for construction or discharge will not consist of unsuitable material, (e.g., trash, debris, car bodies, asphalt, etc.).

Preparation of Fill Site. Placement of clean shot rock fill materials will be utilized so that entry of fine sediment and other suspendible material into Portage Cove / Chilkoot Inlet is kept to the minimum practicable. A clean shot rock containment dike, lined with geotextile filter fabric, will be utilized to contain dredged fill materials incorporated into the fill prism.

Avoid impacts to water quality. The contractor will comply with water quality restrictions as required by law and implement corrective measures if water quality standards are exceeded.

Avoid potential water quality impacts to Portage Cove / Chilkoot Inlet by controlling surface water run-off. Surface water runoff will be directed away from Portage Cove through a storm drain conveyance and treatment system prior to discharge.

Avoid impacts from potential spills during construction. To prevent spills or leakage of hazardous material during construction, standard spill-prevention measures including on-site spill kits will be implemented. The contractor will be responsible for the preparation of a Spill Prevention, Control, and Countermeasures (SPCC) plan to be used for the duration of the project as required by permitting agencies.

Prevent petroleum and hazardous materials from entering waters of the U.S. during construction. Care will be taken to prevent any petroleum products or other toxic or deleterious materials from entering the waters of the U.S. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., will be checked regularly for drips or leaks, and

shall be maintained and stored properly on secondary containment pallets to prevent spills.

Avoid impacts to marine mammals. Driving piles can generate underwater sound pressure waves that have the potential to disrupt migration and harass or injure marine mammals. A marine wildlife monitor shall be assigned to the project during pile driving operations. The observer shall begin to observe 15 minutes prior to pile driving activities, and throughout the duration of each pile driving event The following measures will be taken:

- To minimize disturbance and harm from pile-driving noise, the construction contractor will implement ramp-up procedures outlined in the Anchorage Fish and Wildlife Field Office Observer Protocols for Pile Driving (AFWFO 2012):
  - To minimize take of marine mammals that may be in the project area by pile-driving activities, (both impact and vibratory methods), three low energy pile-driving events will be used to initiate pile-driving activities. This will consist of initiating pile-driving sound for 15 seconds at reduced energy followed by a 1-minute wait period, and repeating this process two additional times. If no marine mammals are noted in the marine wildlife observation area, pile driving can commence.
  - If no pile driving has occurred for 30 minutes, the initiation procedure, (vibratory or impact), will be repeated.
  - The wildlife observer's primary responsibility will be to watch for and report on events related to marine mammal species.
- To avoid harm to humpback whales, Western Distinct Population Segment (DPS) Steller sea lions, and protected marine mammals, a conservative marine wildlife observation area of 350 meters for pile-driving activities will be implemented. Marine wildlife monitoring will follow the following protocol:
  - A wildlife observer must be able to identify the designated marine species and be equipped with binoculars, a range finder, two-way radio communication with construction foreman/superintendent, and a log book.
  - If a marine mammal comes within the designated marine wildlife observation area, all in-water work will be halted immediately; work may resume when the animal(s) moves outside the observation area on its own accord.
  - The wildlife observer will have the authority to stop pile driving if a marine mammal is observed within the observation area.

**Minimization:** The applicant has provided the following minimization measures:

Minimization of potential impacts to Essential Fish Habitat (EFH) species during critical life stage. Timing windows will be incorporated and strictly observed during construction activities for all in-water work to minimize potential adverse effects to salmon during critical life stages. In-water work will be timed to avoid those times when eggs are in the gravel and juvenile salmon are out-migrating as stipulated in the permit special conditions. Once construction has ceased, the proposed project is not expected to measurably impact EFH-listed fish populations at the Portage Cove Harbor site.

Minimization of potential water quality and run-off impacts during construction. A Storm Water Pollution Prevention Plan will be prepared for the project. Best management practices (BMPs) will be used during construction to prevent erosion and runoff from entering Portage Cove/Chilkoot Inlet. BMPs would include installing temporary erosion control measures such as wood excelsior mats, straw bales, and/ or silt fencing, until re-vegetated plants can bind the soil and/ or installing diversion dikes to channel rain water away from the disturbed soils.

Minimization of impacts to estuarine intertidal/subtidal habitat. The configuration of the intertidal fill was reduced and pile supported structures were added to minimize the amount of fill that would be placed in estuarine intertidal and subtidal habitats. A vertical wave barrier was chosen to minimize the project footprint while still protecting the harbor.

Minimization of potential turbidity impacts during construction. Potential impacts to Portage Cove /Chilkoot Inlet during construction, such as increased turbidity, excavation near stream banks, potential in-stream scaffolding, and substrate disturbance would be temporary in nature and minimized through implementation of construction techniques and BMPs. Floating silt curtains will be used around fill areas during construction to minimize potential turbidity impacts. To minimize substrate disturbance and sediment suspension when removing piles, a vibratory hammer will be used.

Minimization of noise impacts from pile driving. The Haines Borough will specify the use of vibratory pile driving equipment as the primary installation method for the project.

- Impact hammers shall only be allowed for piles that encounter soils too dense to penetrate with the vibratory equipment.
- The specifications shall require the use of cushion blocks for all impact hammers. Use of a pile cushion between the impact hammer and the piling will help to attenuate sound.

Minimization of impacts to bald eagles and migratory birds. The U.S. Fish and Wildlife Service (USFWS) bald eagle nest atlas shows one nest within the vicinity of the project (nest number 28) approximately 1.1 miles from the project site. Due to this distance from the project the Proposed Action is not expected to have impacts on bald eagles or migratory birds in the project area; however, the following measures will be taken to minimize potential impacts.

- If active bird nests, eggs, or nestlings are observed during construction, USFWS agency personnel will be contacted for guidance.
- If a bald eagles nest is located in the vicinity of the project area during construction, agencies will be contacted and a bald eagle permit will be obtained, if needed, in accordance with 50 CFR Part 22.

Minimization of impacts from invasive species. Revegetation and planting activities are not anticipated for this work. Should it be necessary, the prevention and establishment

of invasive plants during planting and revegetation activities will be accomplished by following the Cooperative Extension Service's "DON'T plant in Alaska" list.

**Compensatory Mitigation:** The applicant provides the following information in regards to compensatory mitigation:

The Haines Borough recognizes that the fill/ parking area will result in permanent loss of habitat. In order to assess the value of the habitat, a Habitat Functional Assessment of Impacts and Mitigation Assessment report was generated by Hart Crowser Guly 2015. This report describes the approach used to define the ecological functions provided by the habitats that will unavoidably be lost or temporarily be affected and to determine the effectiveness of mitigation actions. The approach utilized for this analysis is based on a habitat evaluation model used and recommended by federal agencies including National Oceanic and Atmospheric Administration (NOAA) and U.S. Army Corps of Engineers (USACE). A Habitat Equivalency Analysis (HEA) was applied to determine adequate mitigation for the harbor expansion.

The applicant proposes to provide compensatory mitigation for unavoidable impacts to wetlands and waters of the U.S., following the 2008 *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* and in accordance with the USACE Section 404 Permit. The Haines Borough will contract with the Southeast Alaska Land Trust (SEAL Trust) for credits from their *in-lieu* fee program. The Haines Borough will make a payment into the *in-lieu* fee program that will be determined based on the need to compensate for the shortterm loss of approximately 4 Habitat Functional Acres and the long term loss of .02 Habitat Functional Acres. The Haines Borough will work closely with USACE, the SEAL Trust, and other agencies and organizations involved in the management and stewardship of aquatic resources in the greater Haines area, to ensure adequate compensation is made for the unavoidable impacts to aquatic resources and their functions.

**WATER QUALITY CERTIFICATION:** A permit for the described work will not be issued until a certification or waiver of certification, as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

**CULTURAL RESOURCES:** The latest published version of the Alaska Heritage Resources Survey (AHRs) 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 are no listed or eligible properties in the vicinity of the worksite. Therefore, the Corps of Engineers has determined the proposed project does not have the potential to cause effects to historic properties. Consultation of the AHRs constitutes the extent of cultural resource investigations by the District Commander at this time, and he is otherwise unaware of the presence of such resources. This application is being coordinated with the State Historic Preservation Office (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:** The project area is within the known or historic range of the Humpback Whale (*Megaptera novaeangliae*), and Steller Sea Lion (*Eumetopias jubatus*) Western DPS.

We have determined the described activity may affect the endangered Humpback Whale (*Megaptera novaeangliae*), and Steller Sea Lion (*Eumetopias jubatus*) Western DPS. We will initiate the appropriate consultation procedures under section 7 of the Endangered Species Act with the National Marine Fisheries Service (NMFS). Any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

**ESSENTIAL FISH HABITAT:** The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect EFH.

The project area is within the known range of the Chinook (*Oncorhynchus tshawytscha*), chum (*Oncorhynchus keta*), Coho (*Oncorhynchus kisutch*), pink (*Oncorhynchus gorbuscha*), and sockeye (*Oncorhynchus nerka*) salmon.

We have determined the described activity may adversely affect EFH in the project area for the following species Chinook (*Oncorhynchus tshawytscha*), chum (*Oncorhynchus keta*), Coho (*Oncorhynchus kisutch*), pink (*Oncorhynchus gorbuscha*), and sockeye (*Oncorhynchus nerka*). The proposed project would involve pile driving, and construction of over water covering structures, which may increase the potential for injury or mortality to salmon from pressure waves generated from pile driving, elevation of suspended particulates within the water column, and/or loss of habitat. This Public Notice initiates EFH consultation with the NMFS. Any comments or recommendations they may have concerning EFH will be considered in our final assessment of the described work.

**TRIBAL CONSULTATION:** The Alaska District fully supports tribal self-governance and government-to-government relations between Federally recognized Tribes and the Federal government. Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This Public Notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Commander during the public comment period.



**PUBLIC HEARING:** Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

**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 and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The outcome of the general balancing process would determine whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur. The decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore 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. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Commander determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. 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 proposed activity.

**AUTHORITY:** This permit will be issued or denied 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). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

Project drawings and a Notice of Application for State Water Quality Certification are enclosed with this Public Notice.

District Commander  
U.S. Army, Corps of Engineers

Enclosures

# STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION  
DIVISION OF WATER  
401 Certification Program  
Non-Point Source Water Pollution Control Program

DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WQM/401 CERTIFICATION  
410 WILLOUGHBY AVENUE  
JUNEAU, ALASKA 99801-1795  
PHONE: (907) 465-5321/FAX: (907) 465-5274

## NOTICE OF APPLICATION FOR STATE WATER QUALITY CERTIFICATION

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. By agreement between the U.S. Army Corps of Engineers and the Department of Environmental Conservation, application for a Department of the Army permit to discharge dredged or fill material into navigable waters under Section 404 of the Clean Water Act also may serve as application for State Water Quality Certification.

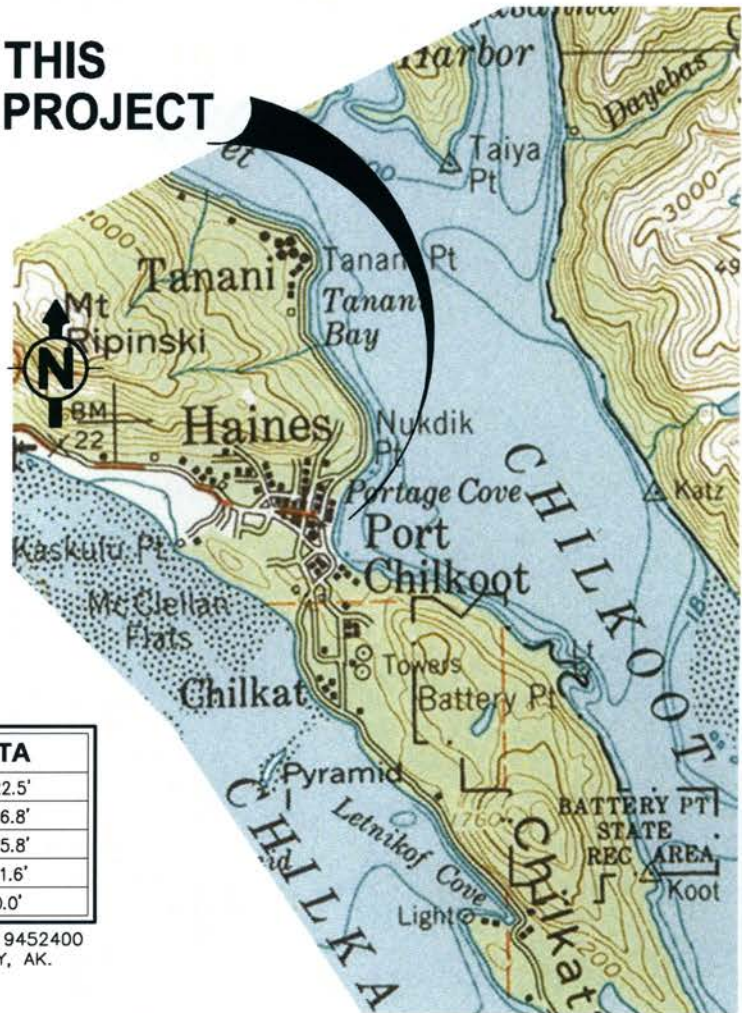
Notice is hereby given that the application for a Department of the Army Permit described in the Corps of Engineers' Public Notice No. **POA-2005-1976, Portage Cove**, serves as application for State Water Quality Certification from the Department of Environmental Conservation.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

Any person desiring to comment on the project, with respect to Water Quality Certification, may submit written comments to the address above by the expiration date of the Corps of Engineer's Public Notice.



**THIS PROJECT**



TIDAL DATA	
EHW	22.5'
MHHW	16.8'
MHW	15.8'
MLW	+1.6'
MLLW	0.0'

STATION: 9452400  
SKAGWAY, AK.

**VICINITY MAP**

SCALE IN MILES



TOPOGRAPHY MAP FROM:  
USGS ALASKA TOPOGRAPHIC SERIES  
SKAGWAY, ALASKA-CANADA, 1982.

**PURPOSE:**

CONSTRUCT HARBOR AND WAVE PROTECTION FACILITIES TO INCREASE CAPACITY WHILE PROVIDING SAFE VESSEL NAVIGATION, MOORAGE, LAUNCHING, LOADING, STAGING & PARKING IMPROVEMENTS

**DATUM:**

MLLW = 0.0' HTL = 21.2'

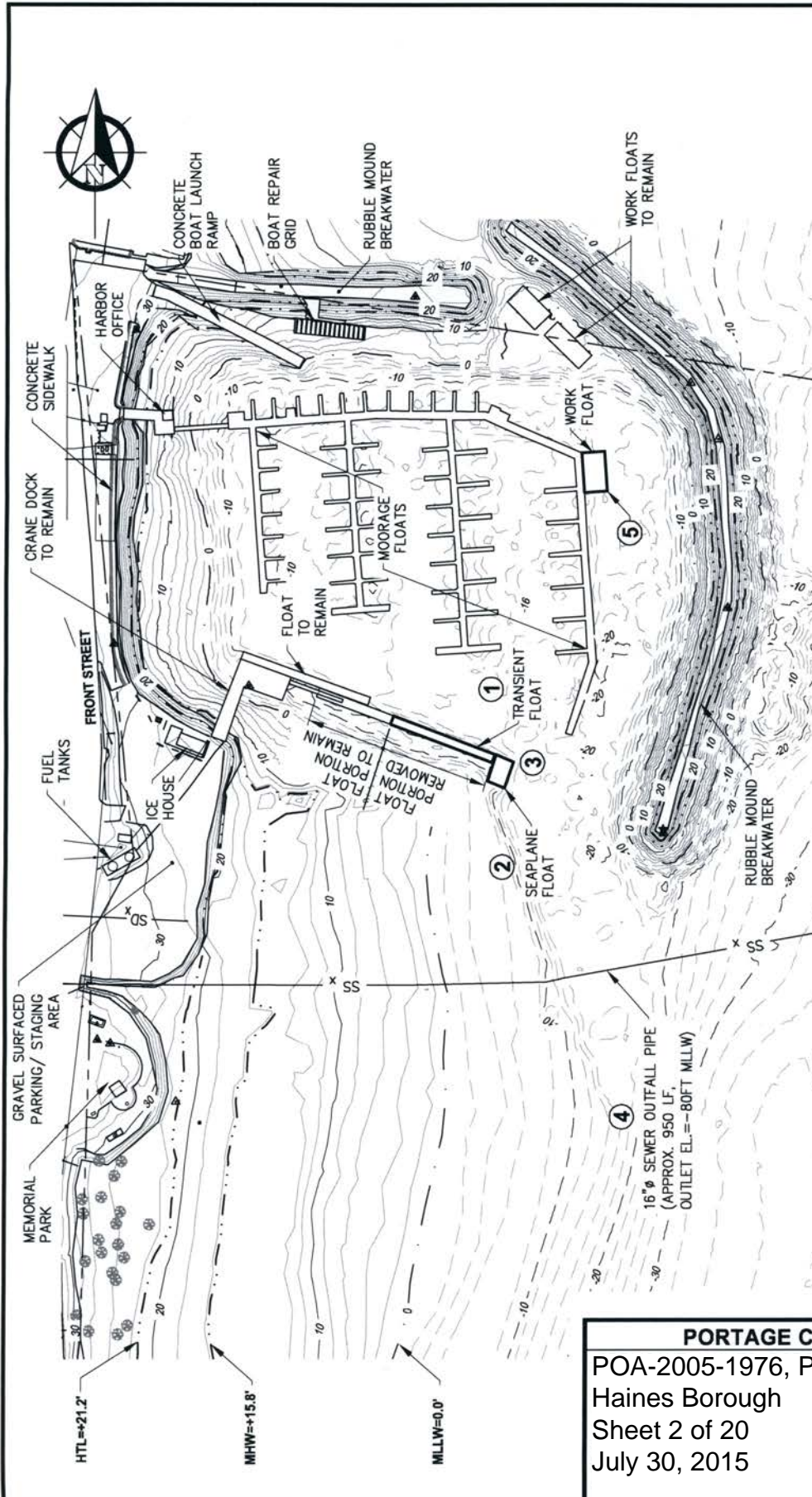
**VICINITY MAP**

PND PROJECT NO. 102029.09

**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
Haines Borough  
Sheet 1 of 20  
July 30, 2015





**DEMOLITION SUMMARY**

- ① REMOVE AND DISPOSE 11'x136' TRANSIENT FLOAT INCLUDING (6) 12" Ø STEEL PILES & ALL MISCELLANEOUS MOUNTING HARDWARE AND APPURTENANCES.
- ② REMOVE AND RELOCATE SEAPLANE FLOAT (36'x42') INCLUDING (2) 16" Ø STEEL PILES & ALL MISCELLANEOUS MOUNTING HARDWARE AND APPURTENANCES.
- ③ REPLACE (3) 12-IN. DIA. STEEL PILES FROM TRANSIENT FLOAT DESIGNATED TO REMAIN.
- ④ REPLACE APPROX. 1,800 LF OF 16-IN. DIA HDPE SEWER OUTFALL PIPE; REPLACE APPROX. 70 LF 16-IN. DIA. D.I.P. SEWER OUTFALL DIFFUSER PIPE.
- ⑤ RELOCATE WORK FLOAT (APPROX. 28'x50')

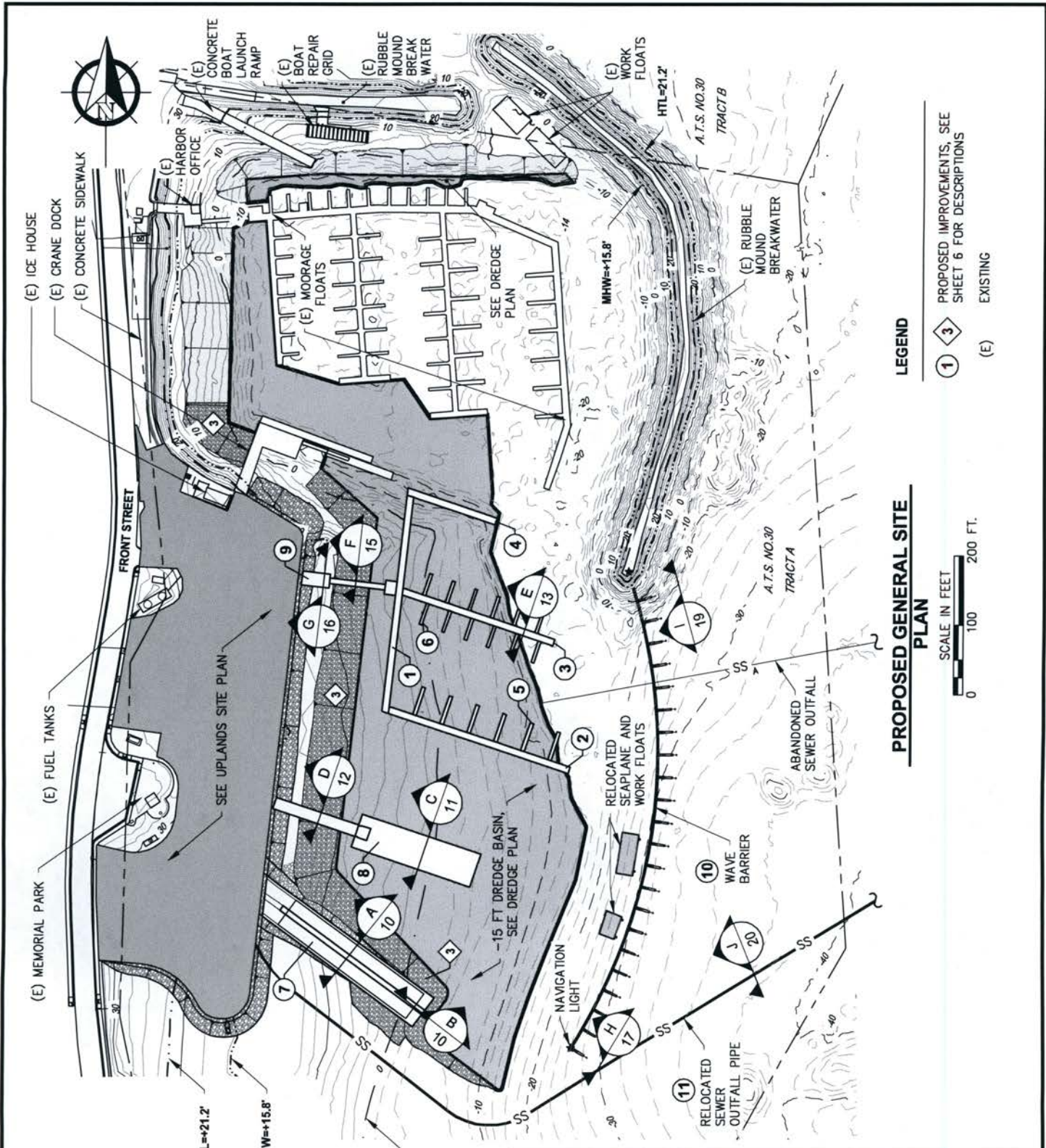
**NOTE:**  
 EXISTING SEWER OUTFALL PIPE TO BE RELOCATED WITHIN PROJECT LIMITS.  
 DIFFUSER LOCATION TO REMAIN SAME.

**EXISTING CONDITIONS  
 AND DEMOLITION PLAN**



**PORTAGE COVE HARBOR EXPANSION**  
 POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 2 of 20  
 July 30, 2015





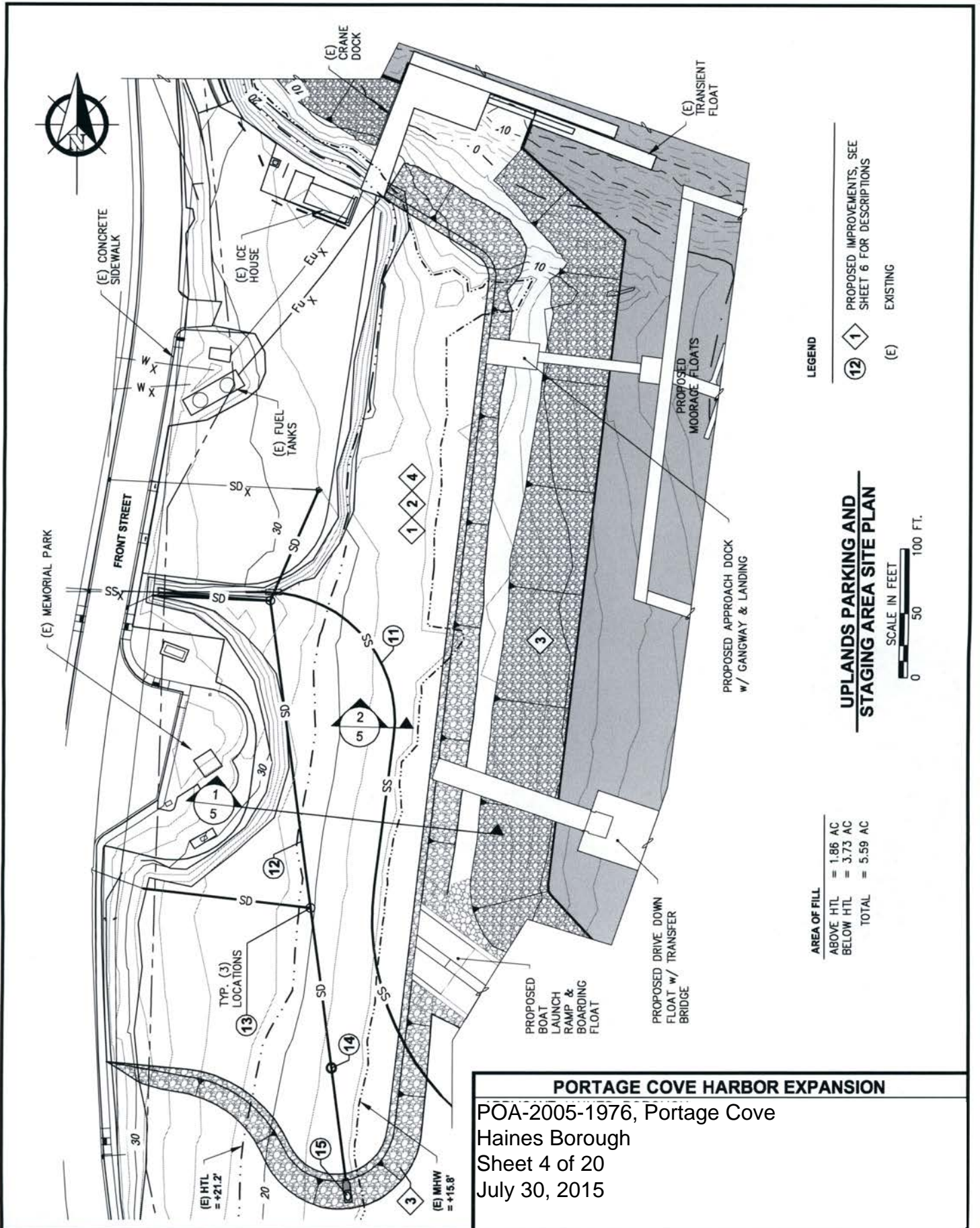
**PROPOSED GENERAL SITE PLAN**

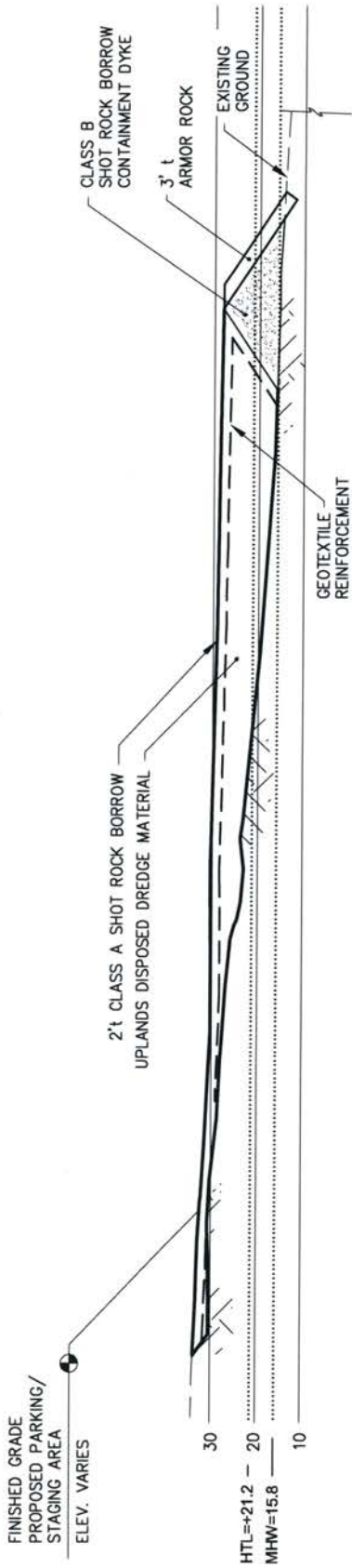
- LEGEND**
- ① PROPOSED IMPROVEMENTS, SEE SHEET 6 FOR DESCRIPTIONS
  - ③ EXISTING



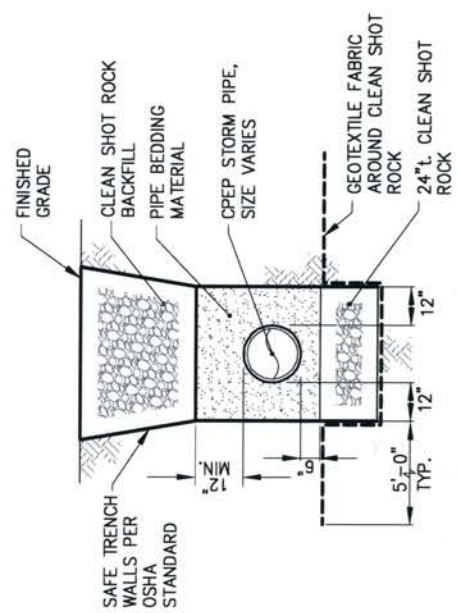
**PORTAGE COVE HARBOR EXPANSION**  
 POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 3 of 20  
 July 30, 2015







1  
4  
**TYPICAL UPLAND SECTION**  
NOT TO SCALE



2  
4  
**TYPICAL UPLAND PIPE SECTION**  
NOT TO SCALE

**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 5 of 20  
 July 30, 2015



SUMMARY OF PROPOSED IMPROVEMENTS		
SYMBOL	ITEM	PILE SIZE DIA.
①	HEADWALK FLOAT - 10' x 320'	16"φ
②	MAINWALK FLOAT - 10' x 275'	16"φ
③	MAINWALK FLOAT - 10' x 230'	16"φ
④	TRANSIENT FLOAT - 10' x 124'	16"φ
⑤	(6) FINGER FLOATS - 5' X 42'	16"φ
⑥	(12) FINGER FLOATS - 4' X 32'	N/A
⑦	BOAT LAUNCH RAMP & BOARDING FLOAT - 44' x 300'	12"φ
⑧	DRIVE DOWN FLOAT (DDF) - 50' x 180' WITH TRANSFER BRIDGE (TB) - 17' x 145'	DDF - 24"φ / TB - 16"φ
⑨	20' x 40' APPROACH DOCK WITH 7' x 80' COVERED ALUMINUM GANGWAY AND 20' x 20' GANGWAY LANDING FLOAT	16"φ
⑩	WAVE BARRIER WITH NAVIGATION LIGHT - APPROX. 700 LF	30"φ VERTICAL BEARING PILES; 30"φ BATTER BEARING PILES; 24"φ BARRIER PILES WITH SHEET PILE WINGS

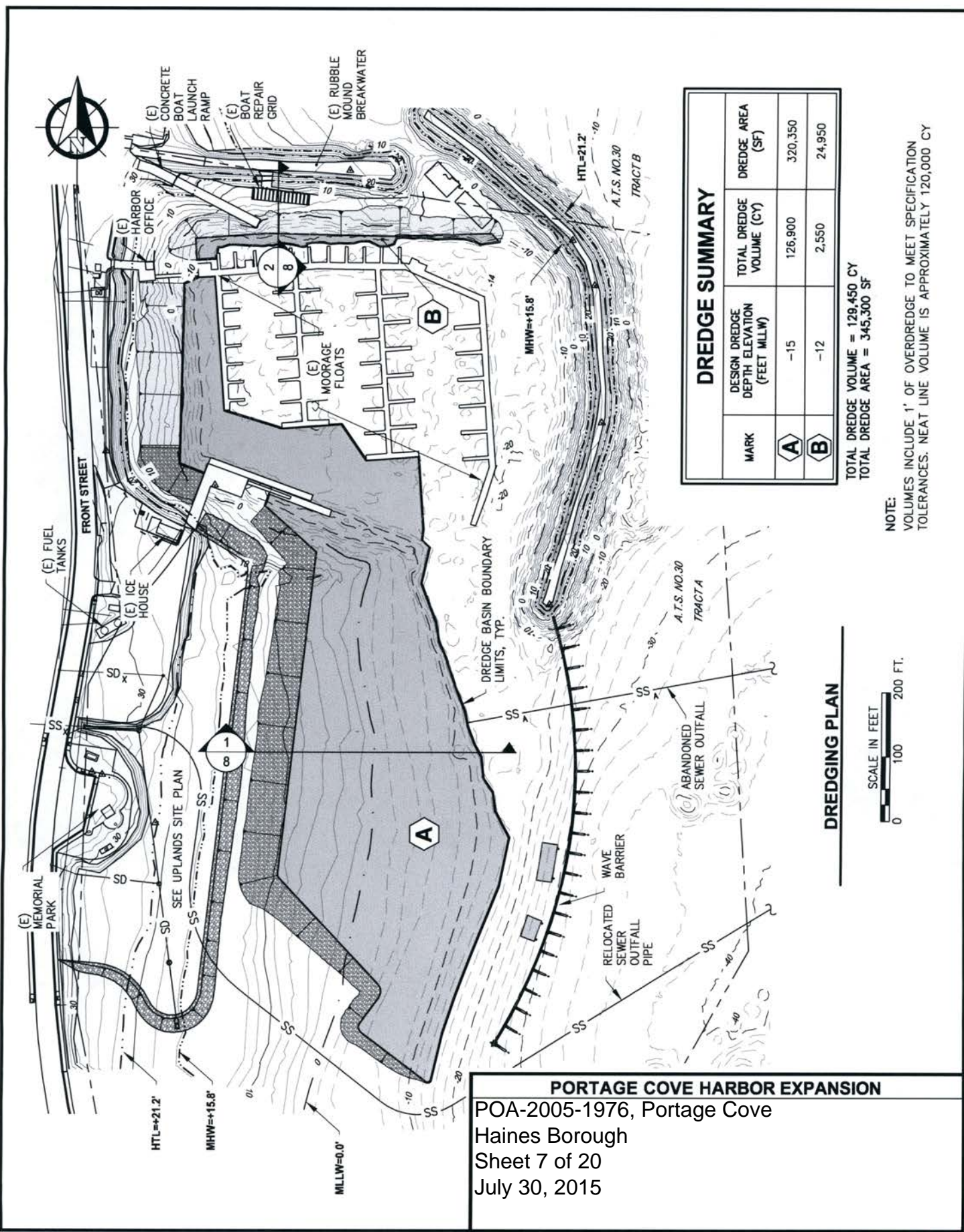
**NOTE:**

TOTAL AREA OF OVER WATER COVERAGE: APPROX. 38,790 SF  
 TOTAL PILES: APPROX. 280

SUMMARY OF PROPOSED STRUCTURES	
SYMBOL	STRUCTURE
⑪	16" DIA. HDPE SEWER OUTFALL PIPE WITH DIFFUSER - APPROX. 2,650 LF
⑫	900 LF CPEP STORM DRAIN PIPE
⑬	(3) CONCRETE STORM DRAIN MANHOLES
⑭	(1) STORM DRAIN OIL WATER SEPARATOR
⑮	(1) CONCRETE STORM DRAIN OUTFALL STRUCTURE WITH CHECK VALVE & DEBRIS PROTECTION GRATE

MATERIAL SCHEDULE		
SYMBOL	DESCRIPTION	QUANTITY SEAWARD OF HTL
①	DREDGED MATERIAL - UPLAND DISPOSAL	19,320 CY
②	DREDGE MATERIAL - OFFSHORE DISPOSAL	104,450 CY
③	ARMOR ROCK	7,120 CY
④	CLEAN SHOT ROCK FILL	16,260 CY

**PORTAGE COVE HARBOR EXPANSION**  
 POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 6 of 20  
 July 30, 2015



DREDGE SUMMARY			
MARK	DESIGN DREDGE DEPTH ELEVATION (FEET MLLW)	TOTAL DREDGE VOLUME (CY)	DREDGE AREA (SF)
A	-15	126,900	320,350
B	-12	2,550	24,950

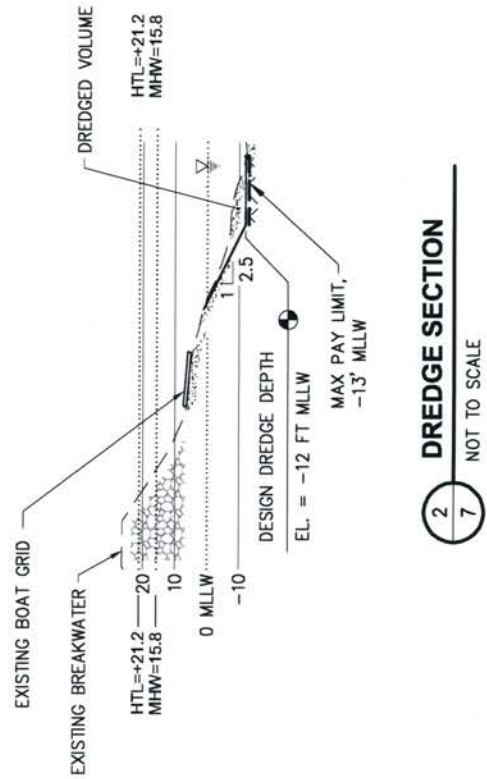
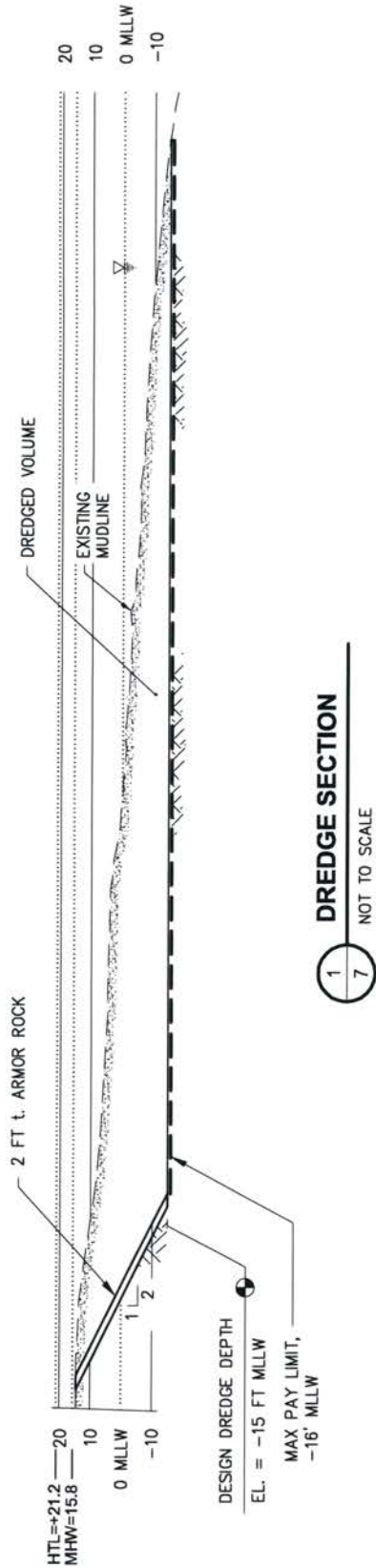
TOTAL DREDGE VOLUME = 129,450 CY  
 TOTAL DREDGE AREA = 345,300 SF

NOTE:  
 VOLUMES INCLUDE 1' OF OVERDREDGE TO MEET SPECIFICATION TOLERANCES. NEAT LINE VOLUME IS APPROXIMATELY 120,000 CY

**DREDGING PLAN**



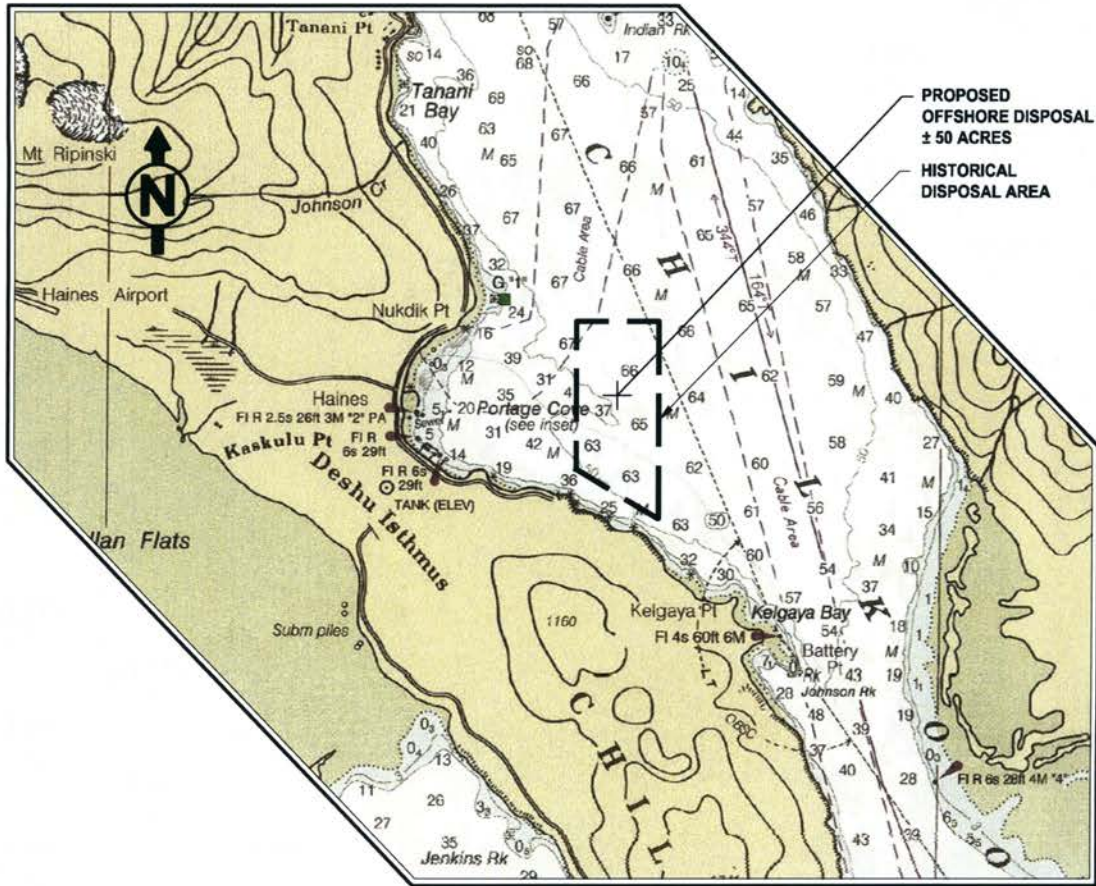
**PORTAGE COVE HARBOR EXPANSION**  
 POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 7 of 20  
 July 30, 2015



**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
Haines Borough  
Sheet 8 of 20  
July 30, 2015





PROPOSED  
OFFSHORE DISPOSAL SITE CENTER  
± 50 ACRES  
HISTORICAL  
DISPOSAL AREA

BATHYMETRY FROM: NOAA 17317  
LYNN CANAL - SHERMAN POINT  
TO SKAGWAY

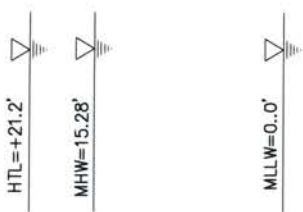
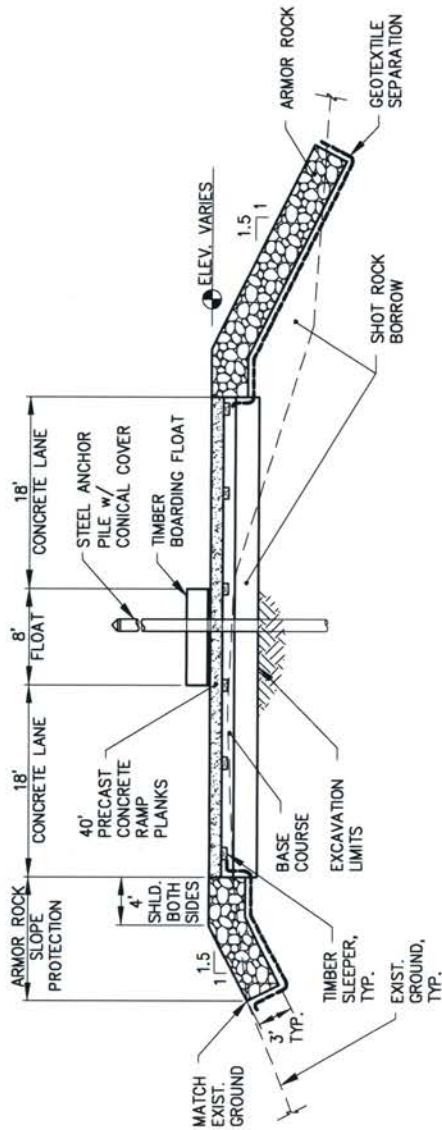
**OFFSHORE DISPOSAL SITE**



**OFFSHORE  
DISPOSAL SITE CENTER:**  
  
LAT: N 59°14'18"  
LONG: W 135°24'2.3"

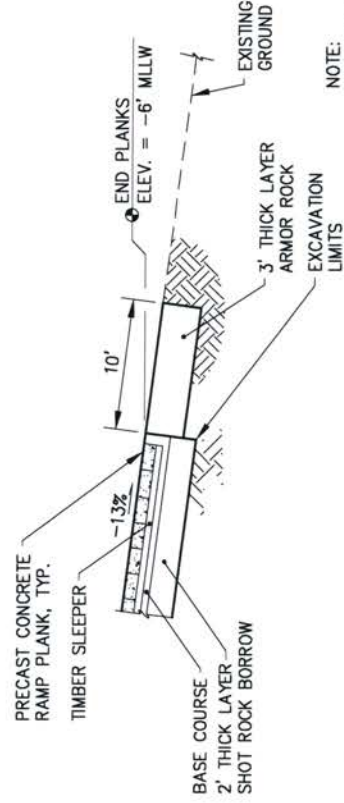
NOTE:  
CENTER LOCATION APPROXIMATE

**PORTAGE COVE HARBOR EXPANSION**  
POA-2005-1976, Portage Cove  
Haines Borough  
Sheet 9 of 20  
July 30, 2015



**TYPICAL BOAT LAUNCH RAMP AND BOARDING FLOAT SECTION**

NOT TO SCALE



NOTE:  
BOARDING FLOAT  
NOT SHOWN THIS  
VIEW FOR CLARITY.

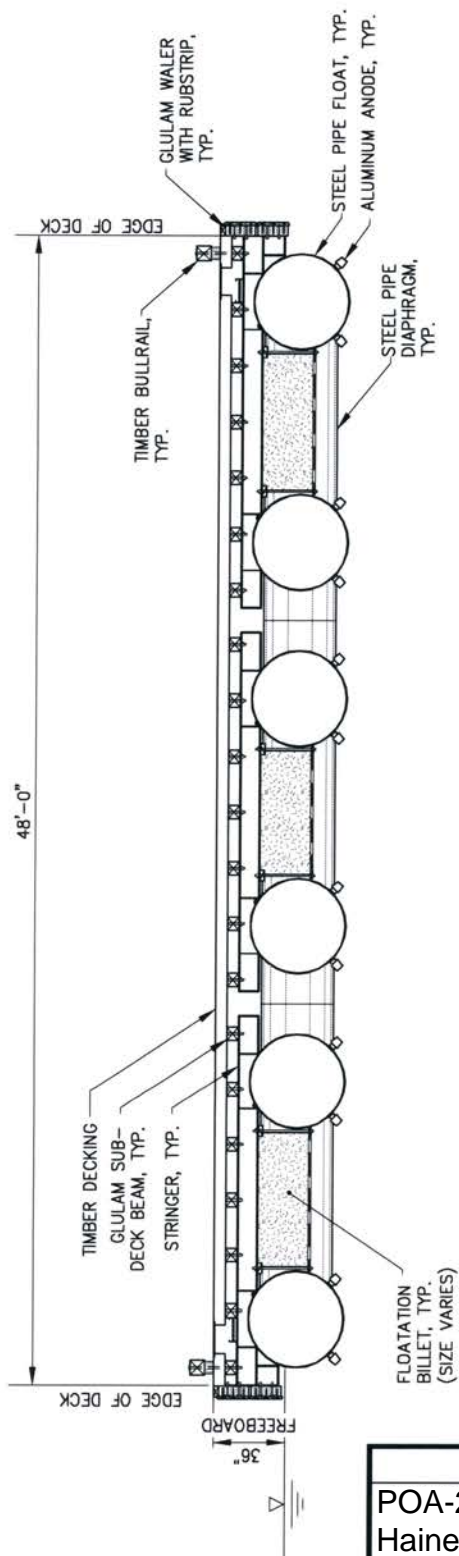
**LAUNCH RAMP EXCAVATION SECTION**

NOT TO SCALE



**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
Haines Borough  
Sheet 10 of 20  
July 30, 2015



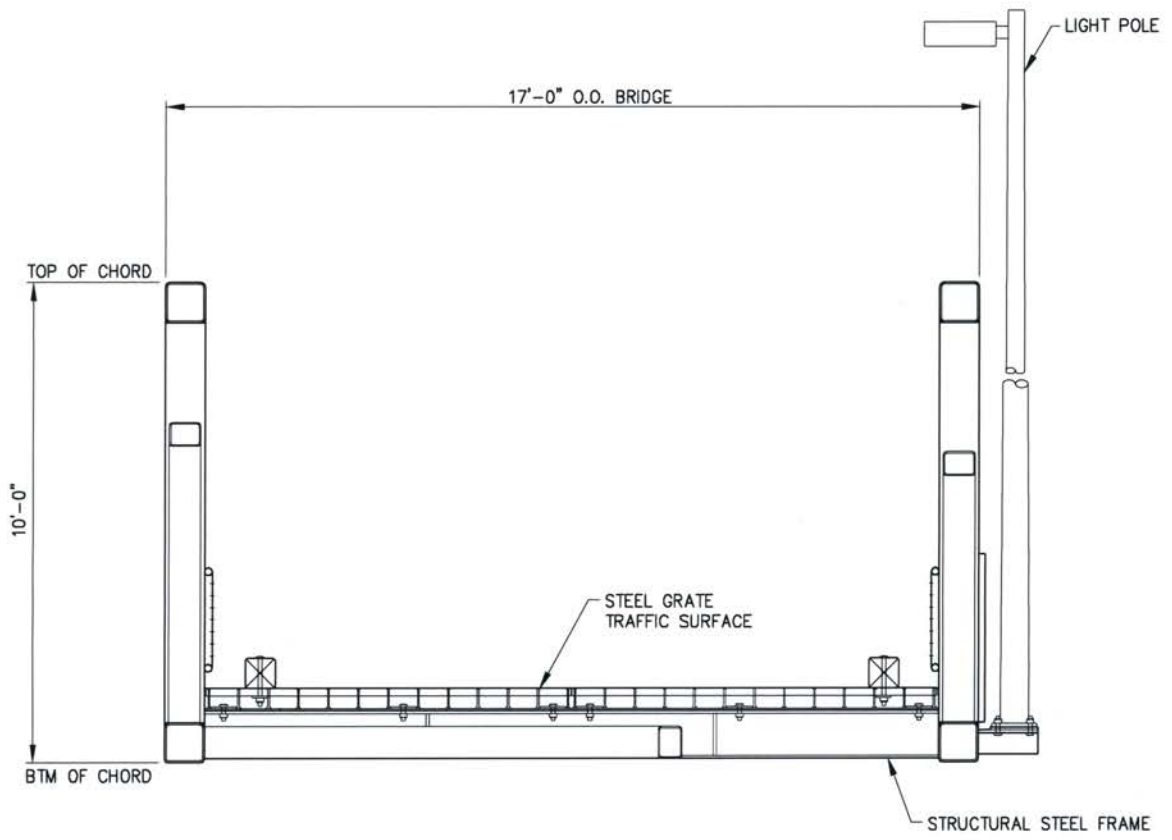
**TYPICAL DRIVE DOWN FLOAT SECTION**

NOT TO SCALE

C  
3

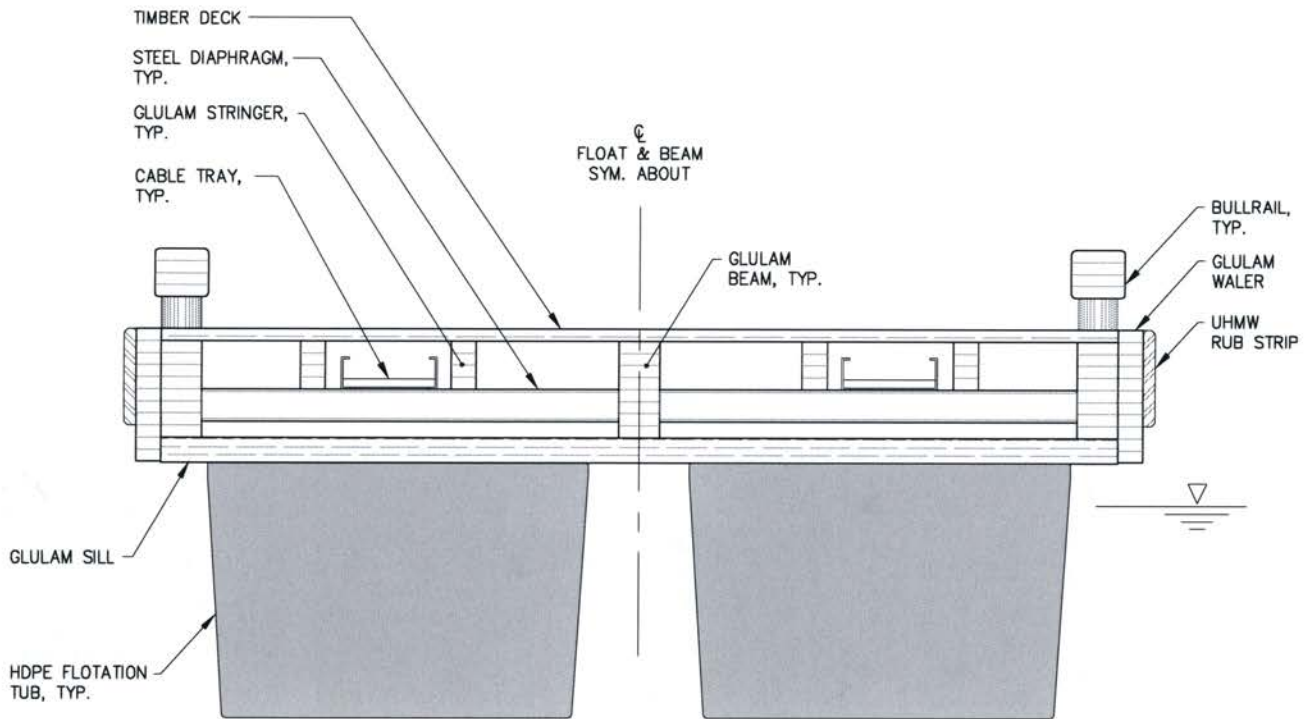
**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 11 of 20  
 July 30, 2015



**D**  
**3** **TYPICAL TRANSFER BRIDGE SECTION**  
 NOT TO SCALE

**PORTAGE COVE HARBOR EXPANSION**  
 POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 12 of 20  
 July 30, 2015

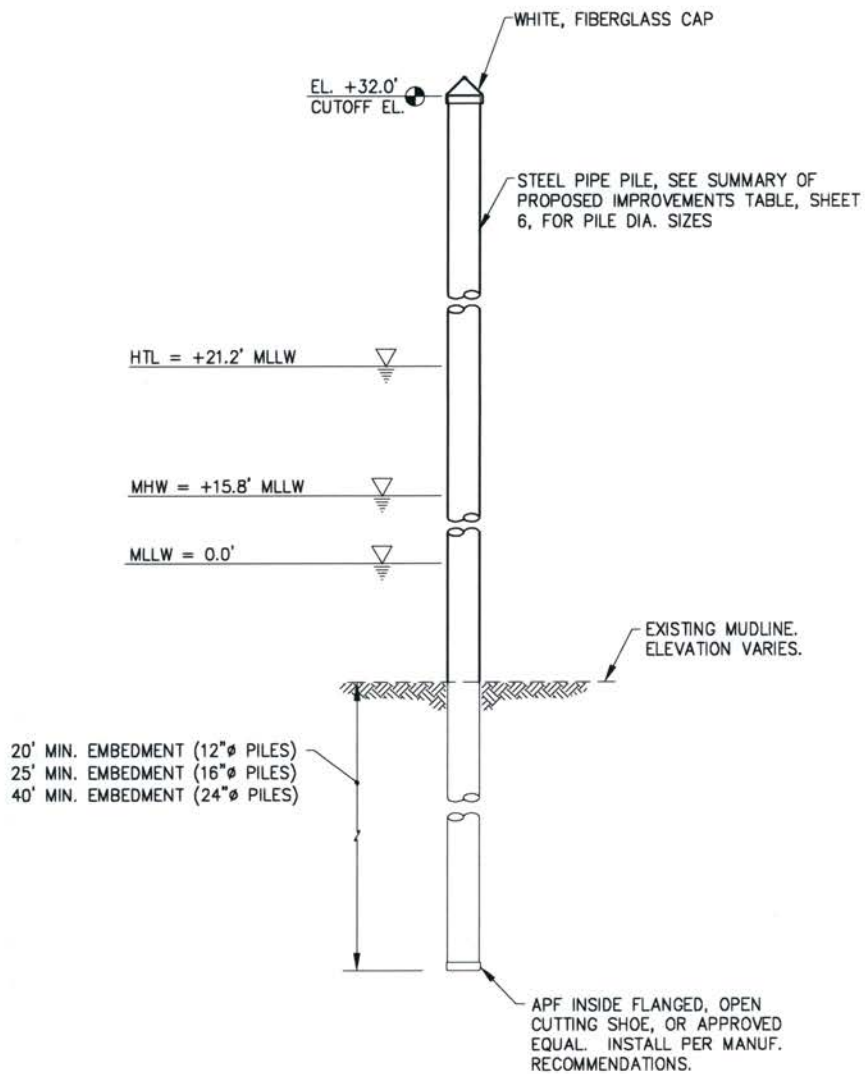


**E**  
**3**

**MOORAGE FLOAT TYPICAL SECTION**  
 (SIZE VARIES)

<p align="center"><b>PORTAGE COVE HARBOR EXPANSION</b></p> <p>           POA-2005-1976, Portage Cove            Haines Borough            Sheet 13 of 20            July 30, 2015         </p>
--



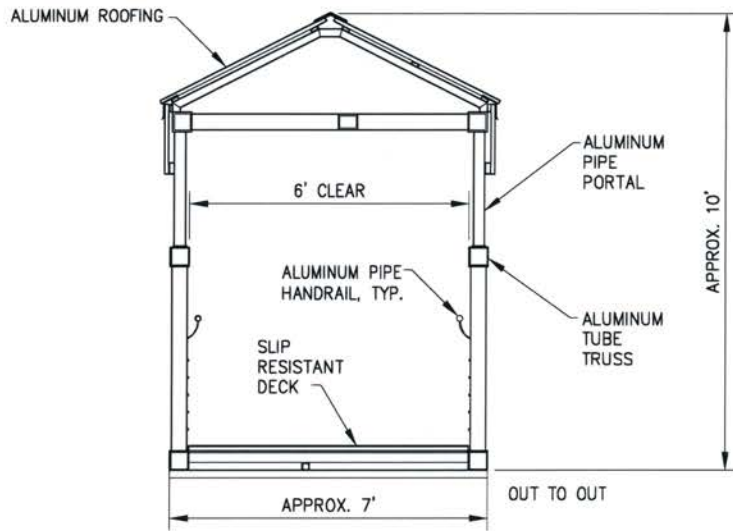


**TYPICAL MOORING PILE DETAIL**

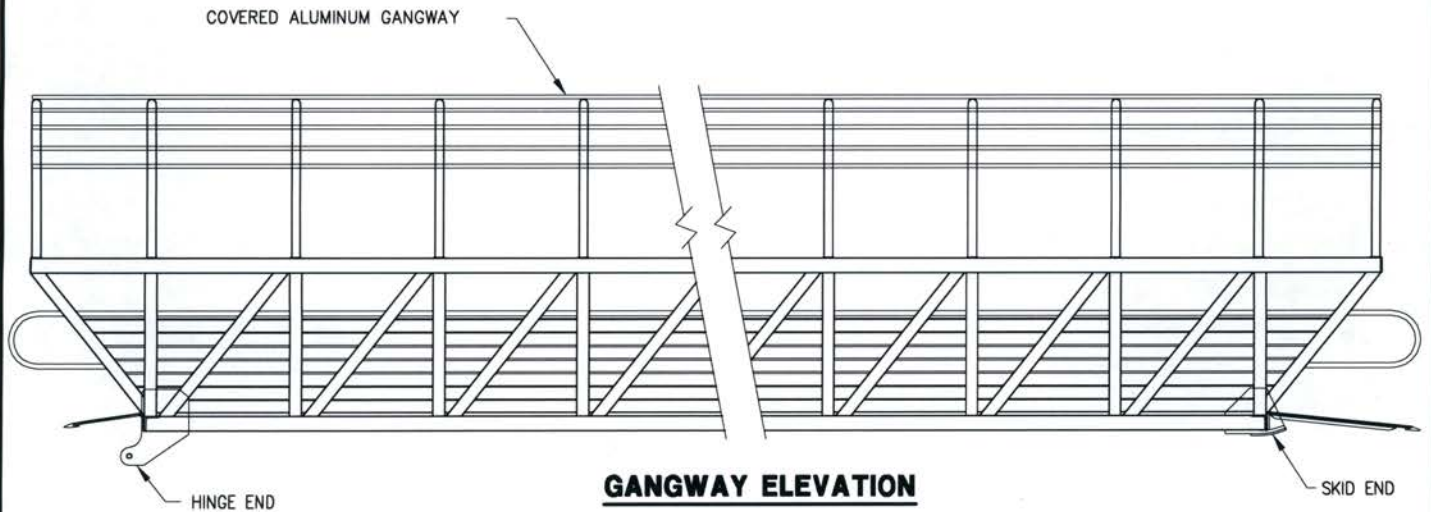
NOT TO SCALE

**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
Haines Borough  
Sheet 14 of 20  
July 30, 2015

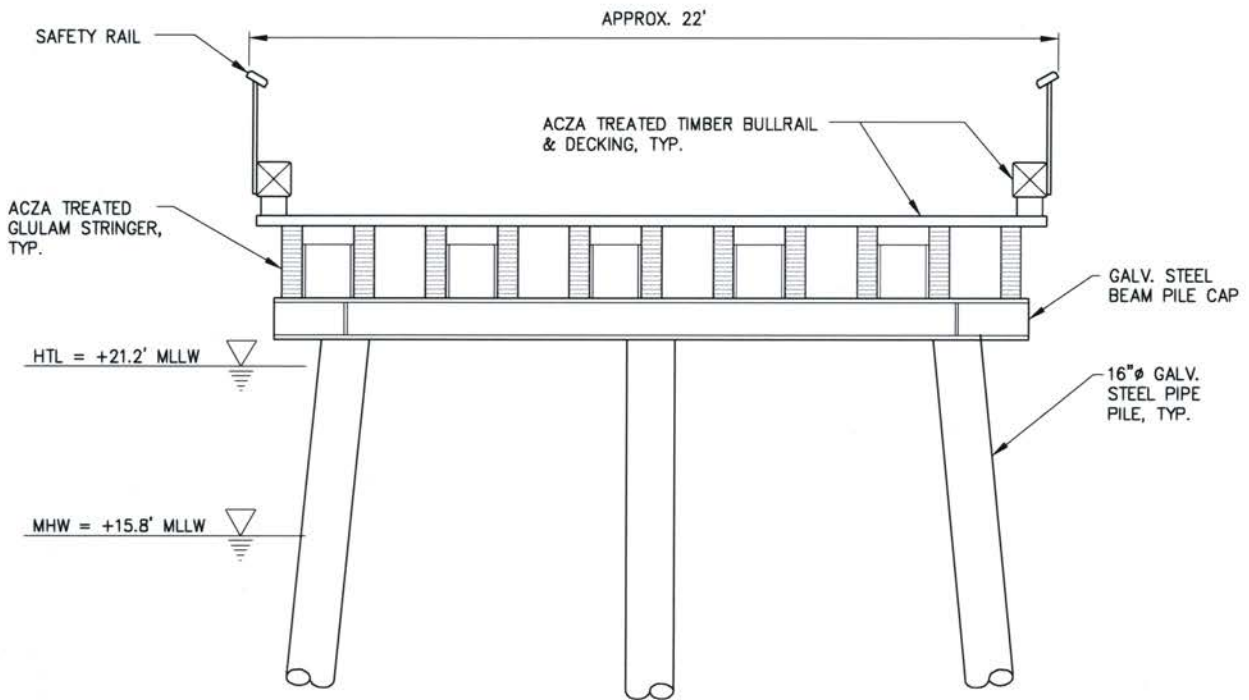


**F**  
**3** **GANGWAY TYPICAL SECTION**



**GANGWAY ELEVATION**

<p align="center"><b>PORTAGE COVE HARBOR EXPANSION</b></p> <p>POA-2005-1976, Portage Cove          Haines Borough          Sheet 15 of 20          July 30, 2015</p>
--



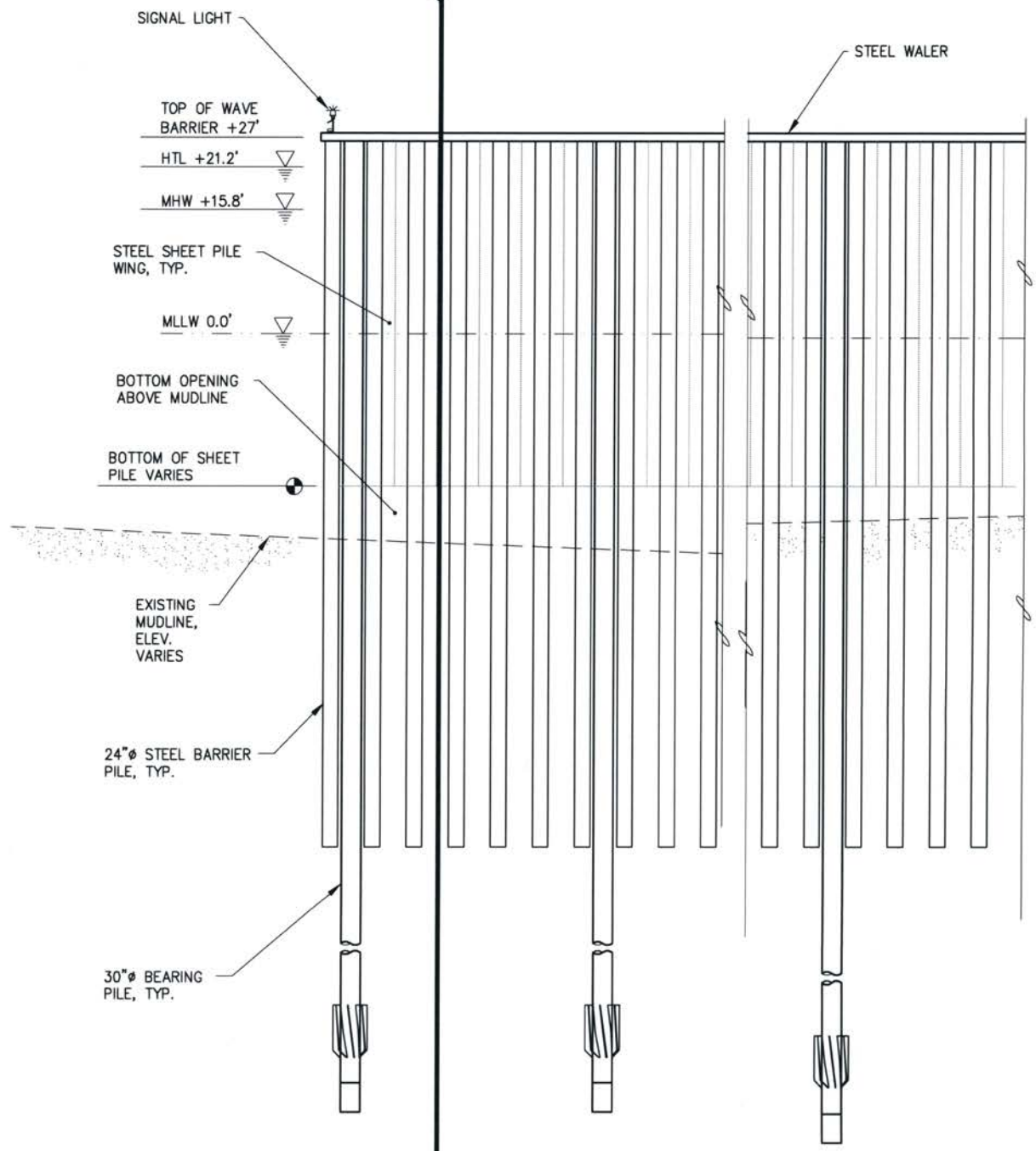
G  
3

**APPROACH DOCK - SECTION**

**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 16 of 20  
 July 30, 2015

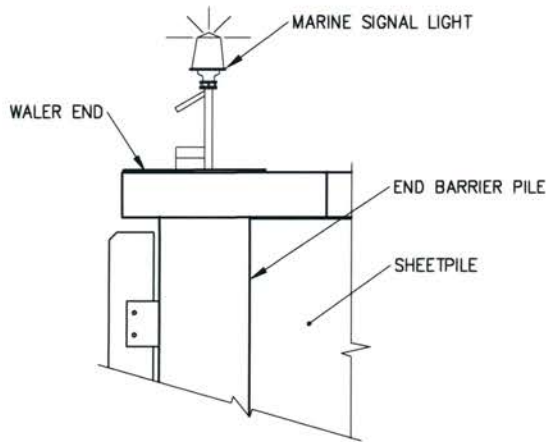
1  
18



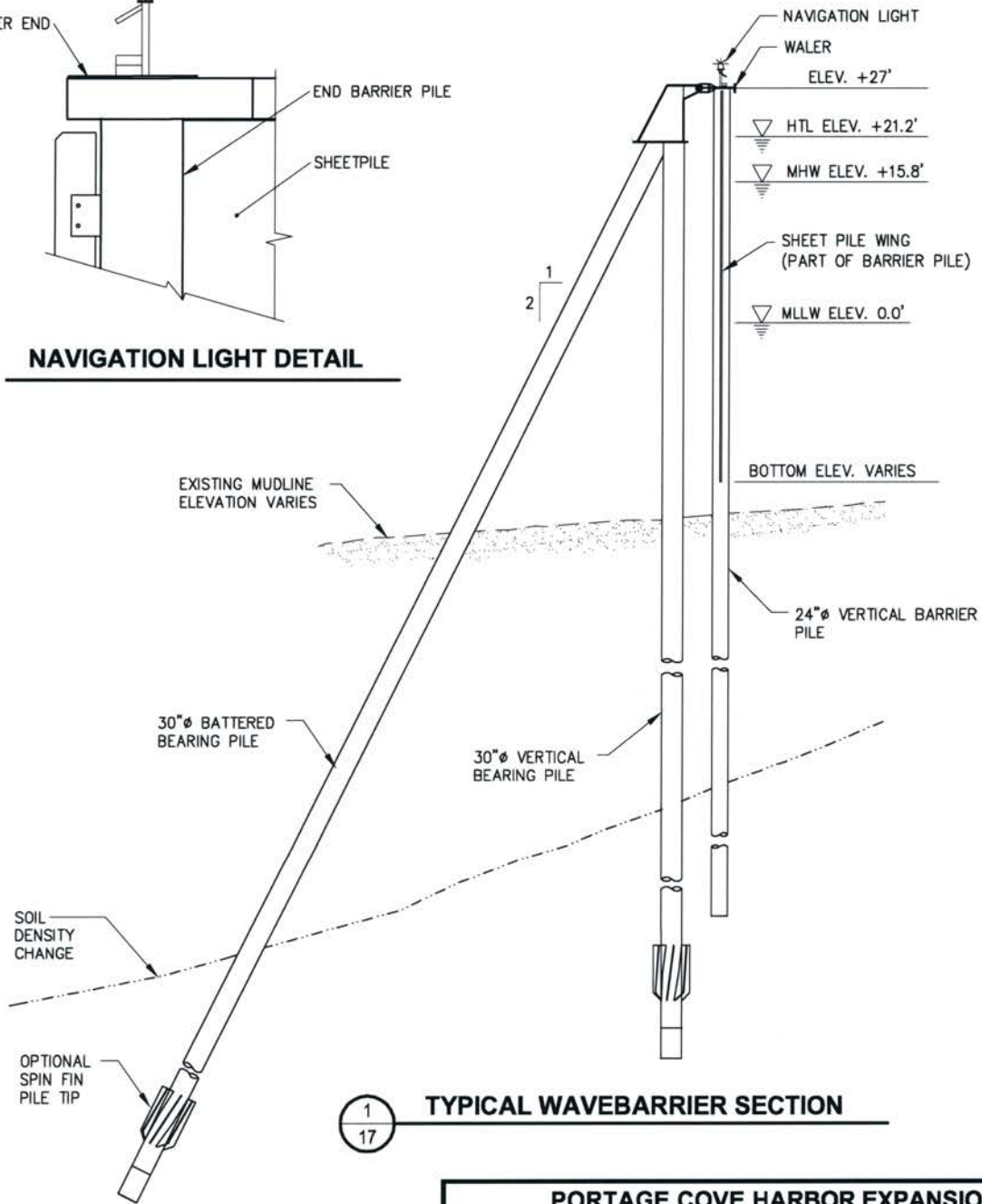
H  
3

**WAVEBARRIER ELEVATION**

**PORTAGE COVE HARBOR EXPANSION**  
POA-2005-1976, Portage Cove  
Haines Borough  
Sheet 17 of 20  
July 30, 2015



**NAVIGATION LIGHT DETAIL**

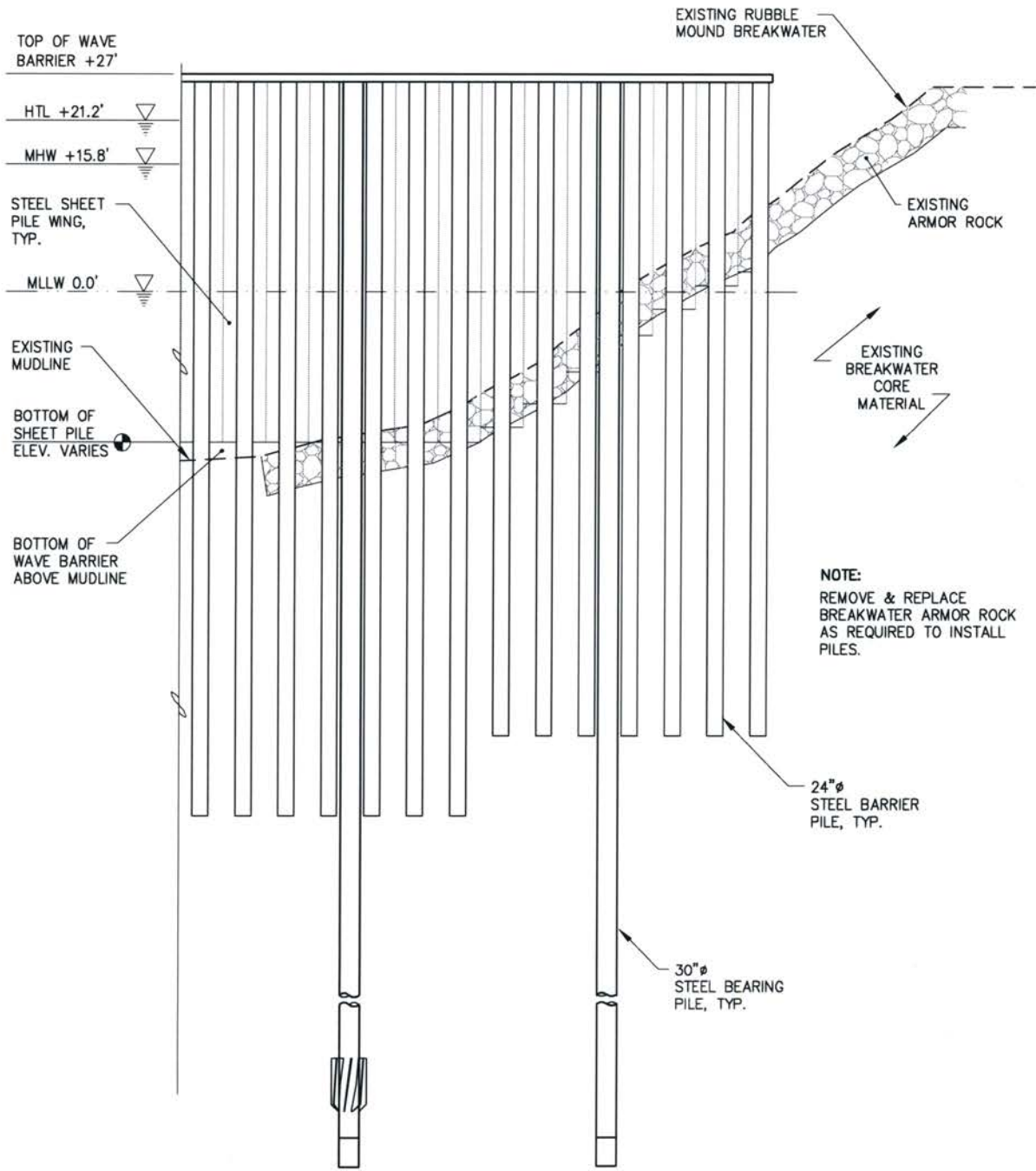


**TYPICAL WAVEBARRIER SECTION**

1  
17

**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 18 of 20  
 July 30, 2015

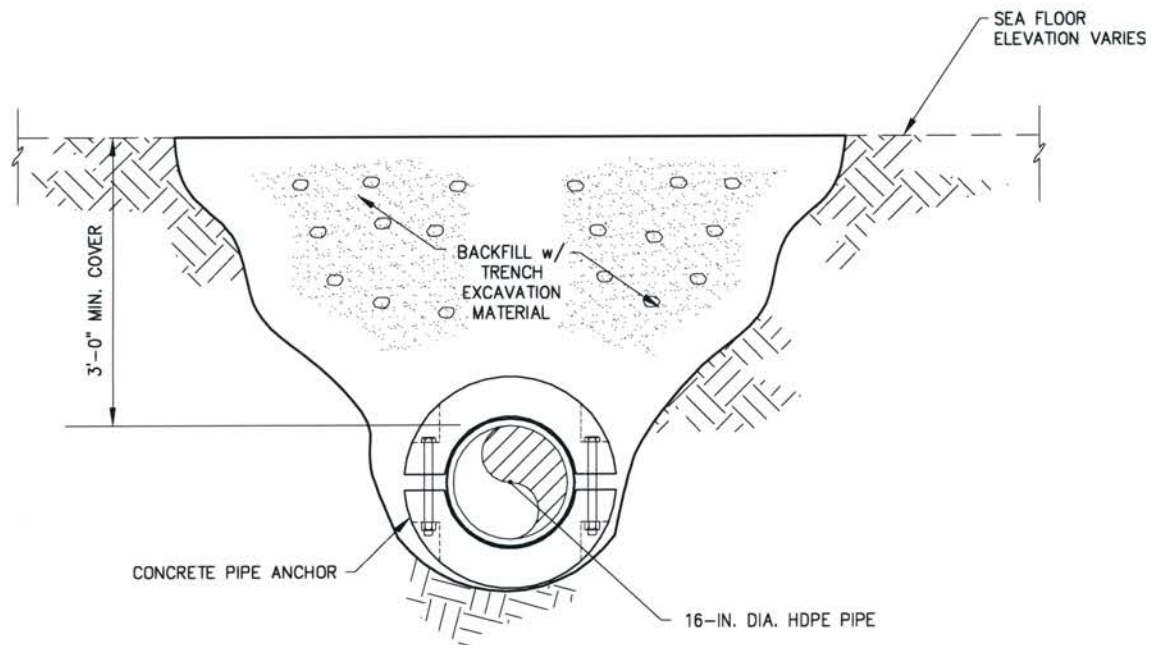


1  
3

**WAVEBARRIER END ELEVATION**

**PORTAGE COVE HARBOR EXPANSION**

POA-2005-1976, Portage Cove  
 Haines Borough  
 Sheet 19 of 20  
 July 30, 2015



**J**  
3

**TYPICAL SEWER OUTFALL LINE SECTION**

---

NOT TO SCALE

<b>PORTAGE COVE HARBOR EXPANSION</b>
POA-2005-1976, Portage Cove Haines Borough Sheet 20 of 20 July 30, 2015