

Please see the 20 May 2011  
DMMP suitability determination for  
the sediment characterization data  
associated with this project.

MEMORANDUM FOR RECORD

April 10, 2015

**SUBJECT:** DREDGE PRISM MODIFICATION AND VOLUME REVISION FOR NAVAL AIR STATION (NAS) WHIDBEY ISLAND FUEL PIER (NWS-2013-245), ISLAND COUNTY, WASHINGTON, FOR UNCONFINED OPEN-WATER DISPOSAL AT THE PORT GARDNER NON-DISPERSIVE DISPOSAL SITE.

1. This memorandum amends the 20 May 2011 suitability determination and reflects the consensus decision on the part of the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington Departments of Ecology and Natural Resources, and the Environmental Protection Agency) regarding a volume increase from 25,000 cubic yards (cy) to 38,500 cy for the NAS Whidbey Island Fuel Pier (see Figure 1 for a vicinity map), stemming from a modification of the dredge prism.
2. Subsequent to the 20 May 2011 suitability determination (DMMP, 2011), the Navy made revisions to the project design in 2012 and requested a volume increase from 25,000 cy to 35,000 cy. The DMMP agencies evaluated the revised dredge prism and determined that the sediment samples collected for the 2011 suitability determination were representative of the revised design. A memorandum documenting that evaluation was signed by the DMMP agencies in May 2012 (Attachment 1).

In March 2015 the Navy submitted a final design to the DMMP agencies for review. The final design included three key changes: a) the sheetpile wall that had been included at the face of the fuel pier in the 2012 design was removed; b) the toe of the side slope of the dredge prism was pulled away from the face of the fuel pier by approximately 35 feet; c) the overdredge depth was increased from 1 foot to 2 feet. The 2012 design is shown in Figure 2. The final design is shown in Figure 3.

In calculating the dredge volume associated with the final design the Navy included a 10% contingency factor to ensure that the permitted volume would be adequate to cover the actual dredged volume. With the contingency included, the volume associated with the final design is 38,500 cy.

3. The DMMP agencies reviewed the 2015 design modifications vis-à-vis the 2011 suitability determination and the 2012 design-revision memorandum and concluded that additional sampling and testing would not be required for the following reasons:
  - The dredged material footprint is essentially the same as in the 2012 design.
  - The toe of the dredge prism side slope has been pulled away from the face of the fuel pier such that the top of the side slope daylights at the face of the pier. Based on this design change and the lack of steep-sloped sediment under the pier, the Navy predicts that sloughing of material from under the pier will not occur during dredging. While there is no evidence that the sediment under the pier has any higher level of contaminants than the sediment in the rest

of the dredge prism, in the event the under-pier sediment were more contaminated, the final design minimizes the potential for under-pier material to slough and be dredged and disposed at the Port Gardner site.

- The additional material included in the volume estimate is from an increase in the overdredge depth, plus application of a 10% contingency factor. The 2012 design revision memorandum documented that most of the deeper material is native. Therefore, the additional foot of overdepth included in the final design is mainly native material, in which levels of contamination are anticipated to be lower than in the overlying maintenance-dredged material.

- In a moderate-ranked area, surface material requires one sample for each 4,000 cubic yards and one dredged material management unit (DMMU) for each 16,000 cubic yards. There were a total of nine samples and three DMMUs, which are nominally enough to cover 36,000 cubic yards and 48,000 cubic yards respectively. The number of DMMUs is adequate to cover the final design volume of 38,500 cubic yards. The number of samples is one short of the required number. However, given the native composition of the additional volume, the DMMP agencies determined that the samples collected for the 2011 suitability determination adequately represent the revised dredge prism.

4. As indicated in previous documentation, dioxin testing was not conducted for this project. Therefore, open-water disposal of dredged material from this project is restricted to a DMMP non-dispersive site. The Navy has elected to transport the material to the Port Gardner site for disposal.
5. In May 2014, due to construction delays, the Navy requested an extension of the recency period for the suitability determination to the end of February 2017. The DMMP agencies granted this extension in June 2014 (DMMP, 2014).
6. In summary, based on the evaluation of the modified project, the DMMP agencies have concluded that **all 38,500 cubic yards are suitable** for open-water disposal at the Port Gardner non-dispersive disposal site. This determination is valid until the end of February 2017.

This suitability determination addendum does *not* constitute final agency approval of the project. During the public comment period that follows a public notice, the resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

*A pre-dredge meeting with DNR, Ecology and the Corps of Engineers is required. A dredging quality control plan must be developed and submitted to the Regulatory Branch of the Seattle District Corps of Engineers at least 7 days prior to the pre-dredge meeting. A DNR site-use authorization must also be acquired.*

7. References:

DMMP, 2011. *Determination Regarding the Suitability of Proposed Dredged Material from Naval Air Station (NAS) Whidbey Island Fuel Pier, Island County, for Unconfined Open-Water Disposal at a DMMP Non-Dispersive Site*. Prepared by the Army Corps of Engineers for the DMMP agencies, May 20, 2011; corrected December 6, 2011.

DMMP, 2012. *Dredge Prism Modification and Volume Revision for Naval Air Station (NAS) Whidbey Island Fuel Pier (NWS-2011-1028), Island County, Washington, for Unconfined Open-Water Disposal at a DMMP Non-Dispersive Disposal Site*. Prepared by the Army Corps of Engineers for the DMMP agencies, May 10, 2012.

DMMP, 2014. *DMMP Recency Extension for the Naval Air Station (NAS) Whidbey Island P-1405 Fuel Pier (NWS-2011-1028)*. Prepared by the Army Corps of Engineers for the DMMP agencies, June 25, 2014.

8. Agency Signatures.

signed copy on file in DMMO - Seattle District office

Concur:

\_\_\_\_\_  
Date                      David Fox, P.E. - Seattle District Corps of Engineers

\_\_\_\_\_  
Date                      Justine Barton - Environmental Protection Agency

\_\_\_\_\_  
Date                      Laura Inouye, Ph.D. - Washington Department of Ecology

\_\_\_\_\_  
Date                      Celia Barton - Washington Department of Natural Resources

Copies furnished:

- Laura Inouye –Ecology
- Justine Barton – EPA
- Celia Barton – DNR
- Brian Hooper – Seattle District Regulatory
- Michael Bianchi – NAVFAC NW

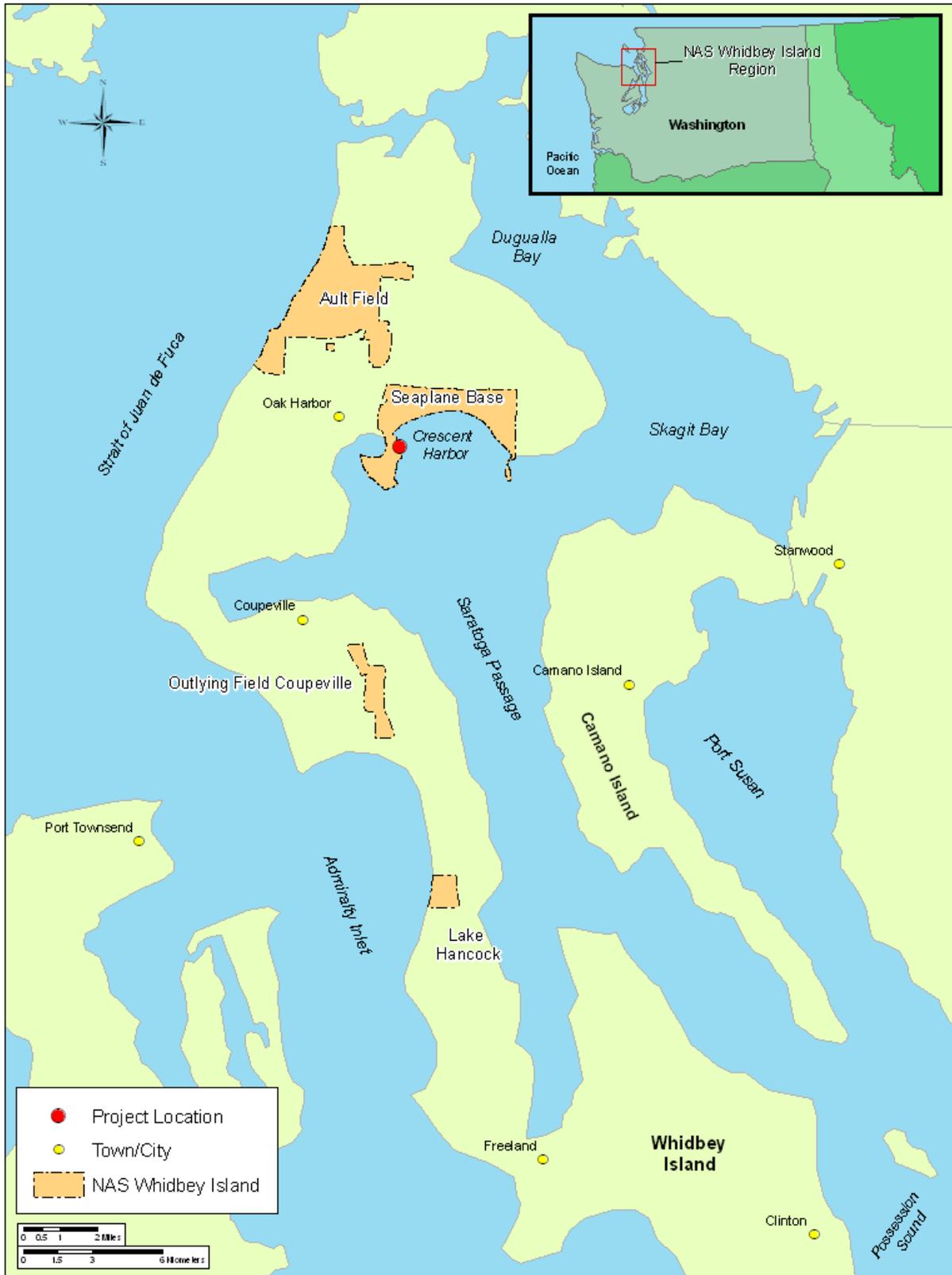
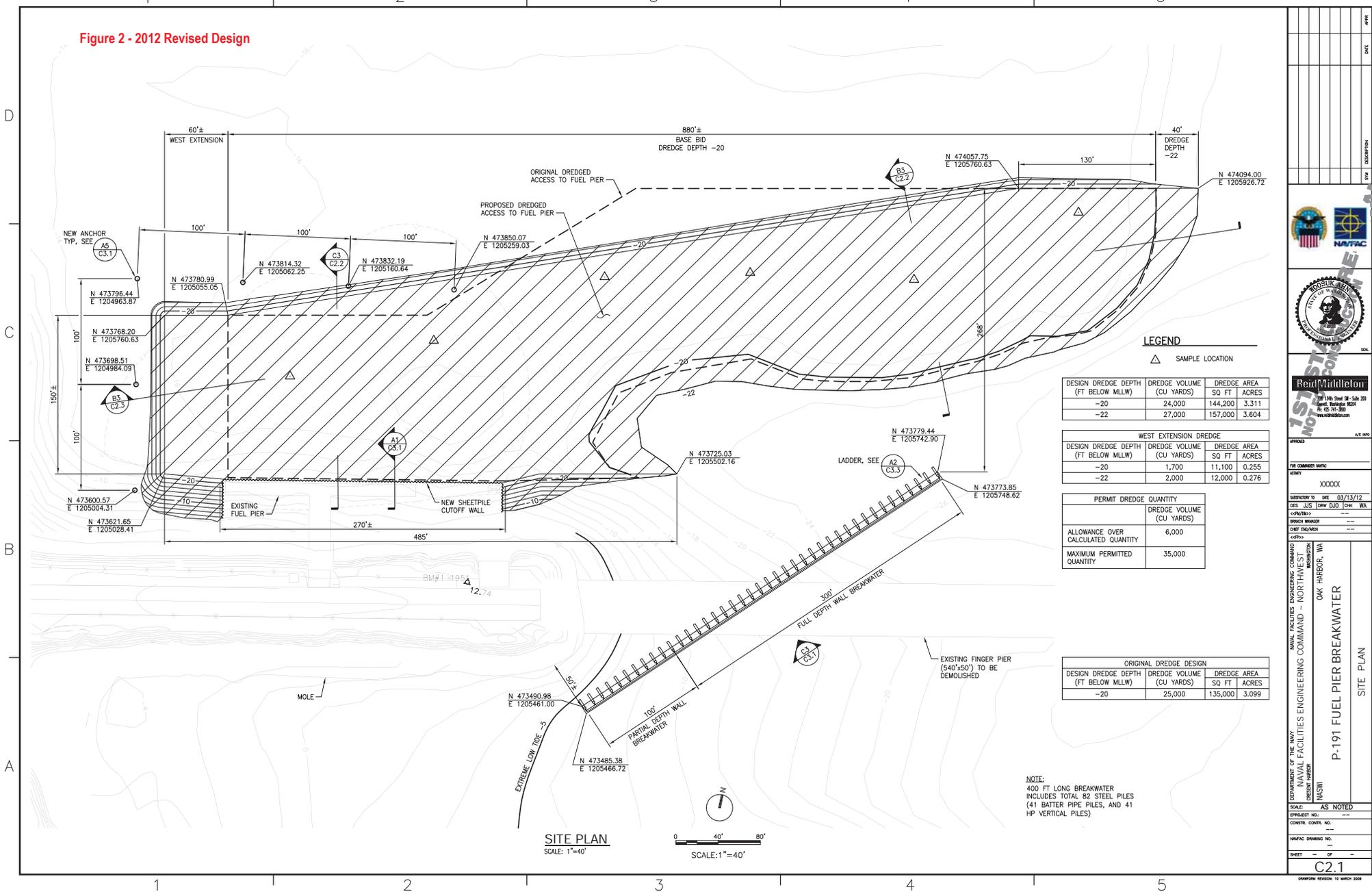


Figure 1. Project Location, NAS Whidbey

Figure 2 - 2012 Revised Design



**LEGEND**

△ SAMPLE LOCATION

DESIGN DREDGE DEPTH (FT BELOW MLLW)	DREDGE VOLUME (CU YARDS)	DREDGE AREA (SQ FT)	ACRES
-20	24,000	144,200	3.311
-22	27,000	157,000	3.604

WEST EXTENSION DREDGE			
DESIGN DREDGE DEPTH (FT BELOW MLLW)	DREDGE VOLUME (CU YARDS)	DREDGE AREA (SQ FT)	ACRES
-20	1,700	11,100	0.255
-22	2,000	12,000	0.276

PERMIT DREDGE QUANTITY	
DREDGE VOLUME (CU YARDS)	35,000
ALLOWANCE OVER CALCULATED QUANTITY	6,000
MAXIMUM PERMITTED QUANTITY	35,000

ORIGINAL DREDGE DESIGN			
DESIGN DREDGE DEPTH (FT BELOW MLLW)	DREDGE VOLUME (CU YARDS)	DREDGE AREA (SQ FT)	ACRES
-20	25,000	135,000	3.099

NOTE:  
400 FT LONG BREAKWATER  
INCLUDES TOTAL 82 STEEL PILES  
(41 BATTER PIPE PILES, AND 41  
HP VERTICAL PILES)

NO.	DATE	DESCRIPTION



APPROVED: \_\_\_\_\_  
FOR COMMANDER: \_\_\_\_\_  
DATE: \_\_\_\_\_

PROJECT NO.: XXXXX  
SHEET NO.: 15 OF 20  
DATE: 03/13/12  
DRAWN BY: JAW/JAW  
CHECKED BY: JAW/JAW  
IN CHARGE: JAW/JAW

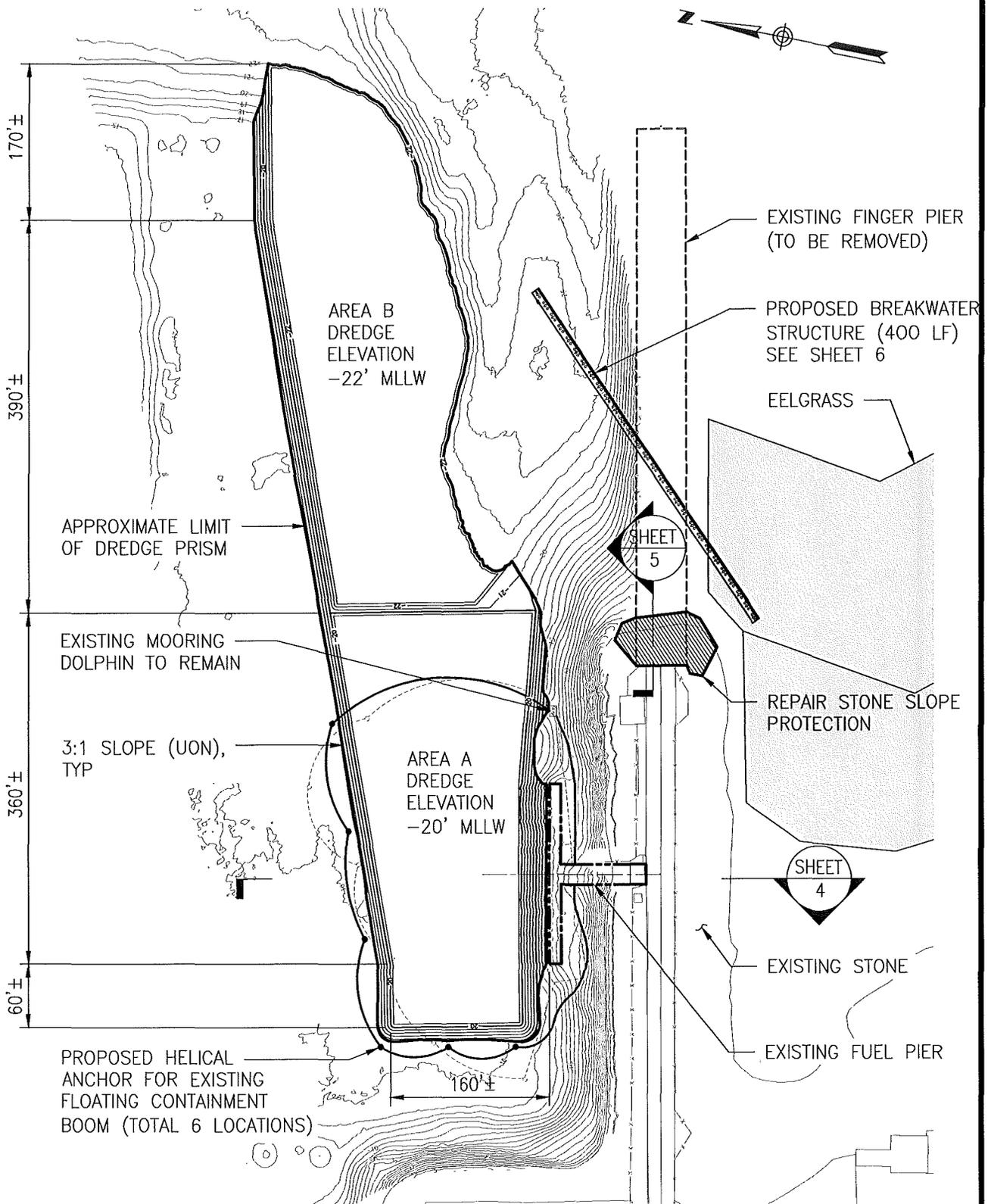
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND - NORTHWEST  
OAK HARBOR, WA  
P-191 FUEL PIER BREAKWATER  
SITE PLAN

SCALE: AS NOTED  
CONTR. CONTROL NO.: ---  
NAVFAC DRAWING NO.: ---  
SHEET: 15 OF 20

140' 80' 0' 140'

SCALE: 1"=140'

Figure 3 - 2015 Final Design



PROPOSED SITE PLAN

PURPOSE: REPLACE BREAKWATER & INCREASE BERTH DEPTH

- ADJACENT PROPERTY OWNERS:
1. US NAVY
  2. CITY OF OAK HARBOR

APPLICANT: NAVAL FACILITIES ENGINEERING COMMAND NORTHWEST

USACE REF #: **NWS-2013-245**  
 LOCATION: NAS WHIDBEY ISLAND  
 ADDRESS: 3730 N. CHARLES PORTER AVE., OAK HARBOR, WA.

PROPOSED: REPLACE BREAKWATER & DREDGING

IN: NAS WHIDBEY ISLAND DATUM: MLLW = 0.0'  
 SEC: 1 T: 32N R: 1E  
 COUNTY: ISLAND STATE: WA  
 SHEET: 3 OF 8 DATE: MAR 2015

## Attachment 1

CENWS-OD-TS-DMMO

MEMORANDUM FOR RECORD

May 10, 2012

**SUBJECT:** DREDGE PRISM MODIFICATION AND VOLUME REVISION FOR NAVAL AIR STATION (NAS) WHIDBEY ISLAND FUEL PIER (NWS-2011-1028), ISLAND COUNTY, WASHINGTON, FOR UNCONFINED OPEN-WATER DISPOSAL AT A DMMP NON-DISPERSIVE DISPOSAL SITE.

1. This memorandum amends the 20 May 2011 suitability determination and reflects the consensus decision on the part of the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington Departments of Ecology and Natural Resources, and the Environmental Protection Agency) regarding a modification of the dredge prism and a resulting volume increase from 25,000 cubic yards (cy) to 35,000 cy for the NAS Whidbey Island Fuel Pier (see Figure 1 for a vicinity map).
2. Subsequent to the 20 May 2011 suitability determination, the Navy made revisions to the project design. Figure 2 shows the footprint of the original dredging plan and the six sampling stations used in the DMMP characterization of the project. Figure 3 shows the modified design. For reference, Figure 3 also includes the footprint of the original design and the six DMMP sampling stations. As can be seen, the modified design includes minor changes in the footprint of the project, plus a 60-foot extension on the west end of the project. The design depth may also change. The original design depth was -20 feet MLLW (plus 1-foot of overdredge depth), but the Navy would like to include a bid option for an additional two feet of dredging for a revised design depth of -22 feet (plus 1-foot of overdepth). To cover this contingency the Navy has requested a volume increase to a maximum of 35,000 cy.
3. The DMMP agencies reviewed the design modifications vis-à-vis the data collected for the original suitability determination and concluded that additional sampling and testing would not be required for the following reasons:
  - The sampling stations used in the 2011 DMMP characterization fall within the footprint of the modified project and provide adequate spatial representation of the modified project.
  - There were no DMMP screening-level exceedances in the 2011 DMMP characterization and most chemicals of concern were undetected at low reporting limits. There is no reason to believe that the additional material included in the modified dredge prism contains chemicals of concern at toxic concentrations.
  - Stiff inorganic clay (i.e. native material) was encountered at stations DMMP-1, 2, 3 and 4. This prevented z-samples from being collected at DMMP-1, 2 and 3; only a 0.6 ft z-sample could be collected at DMMP-4. The z-samples collected at DMMP-5 and 6 were silty sand, but these two sampling locations are the farthest removed from the fuel pier. Therefore, most of the deeper material in the modified -22-foot project is native material.

- In a moderate-ranked area, surface material requires one sample for each 4,000 cubic yards and one dredged material management unit (DMMU) for each 16,000 cubic yards. There were a total of nine samples and three DMMUs, which are nominally enough to cover 36,000 cubic yards and 48,000 cubic yards respectively. This is adequate to cover the maximum proposed volume of 35,000 cubic yards.

- While the revised dredging boundaries now include the sideslopes on either end of the sheetpile wall at the face of the fuel pier, the volume to be dredged from these sideslopes is estimated to be only 358 cy, approximately 1 percent of the total volume. The sheetpile wall will be in place prior to dredging, thereby preventing underpier material from sloughing into the area being dredged.

4. As indicated in the December 6, 2011 correction of the suitability determination, in the absence of dioxin testing data, open-water disposal of dredged material from this project is restricted to a DMMP non-dispersive site.
5. In summary, based on the evaluation of the modified project, the DMMP agencies conclude that **all 35,000 cubic yards are suitable** for open-water disposal at a non-dispersive disposal site.

This suitability determination addendum does *not* constitute final agency approval of the project. During the public comment period that follows a public notice, the resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

*A pre-dredge meeting with DNR, Ecology and the Corps of Engineers is required. A dredging quality control plan must be developed and submitted to the Regulatory Branch of the Seattle District Corps of Engineers at least 7 days prior to the pre-dredge meeting. A DNR site-use authorization must also be acquired.*

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7. Agency Signatures.

The signed document is on file in the Dredged Material Management Office.

Concur:

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Date David Fox, P.E. - Seattle District Corps of Engineers

\_\_\_\_\_  
Date Justine Barton - Environmental Protection Agency

\_\_\_\_\_  
Date Laura Inouye, Ph.D. - Washington Department of Ecology

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Catherine Blackwell – Seattle District Regulatory  
Mark Wicklein – Navy

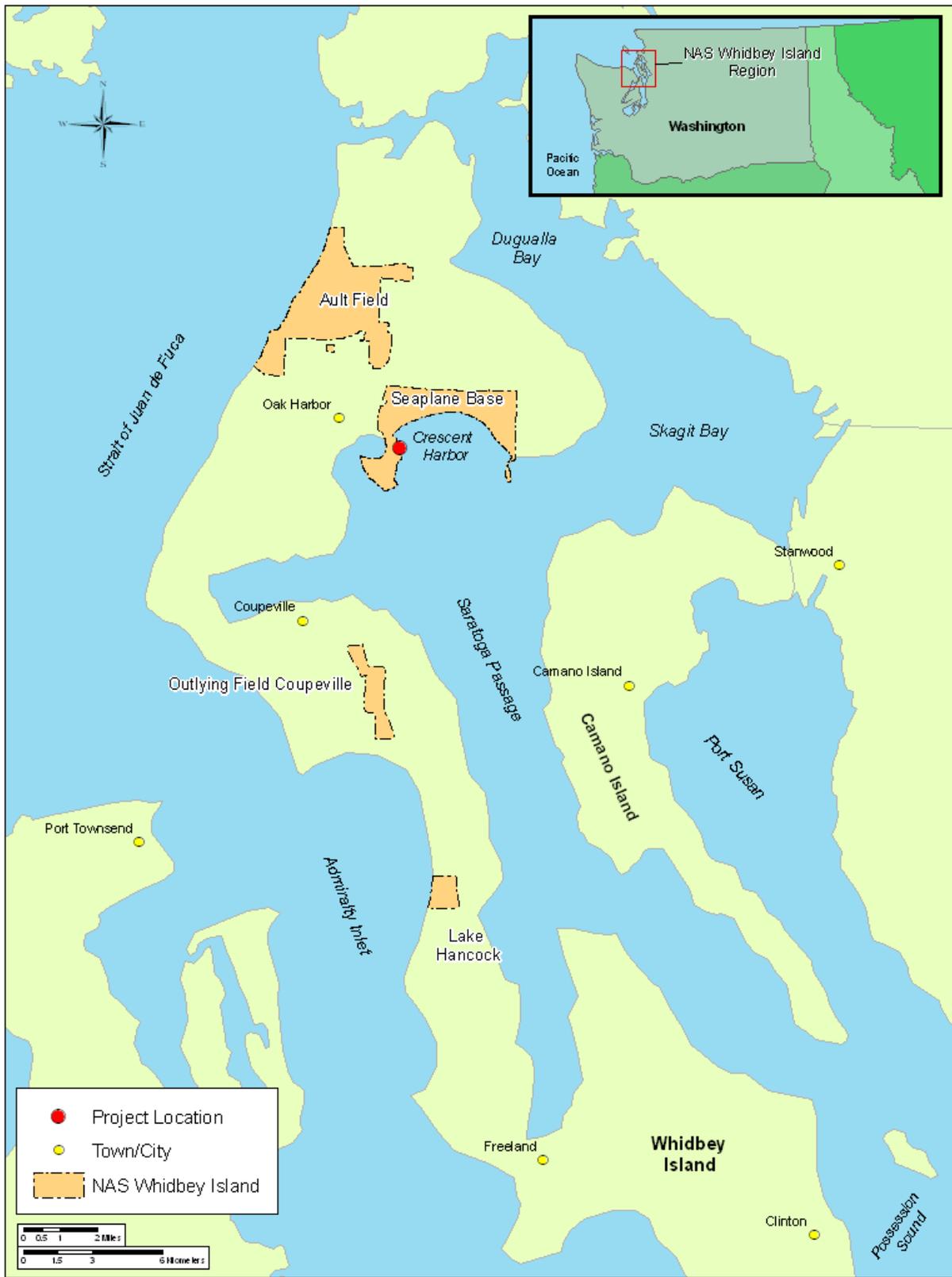


Figure 1. Project Location, NAS Whidbey

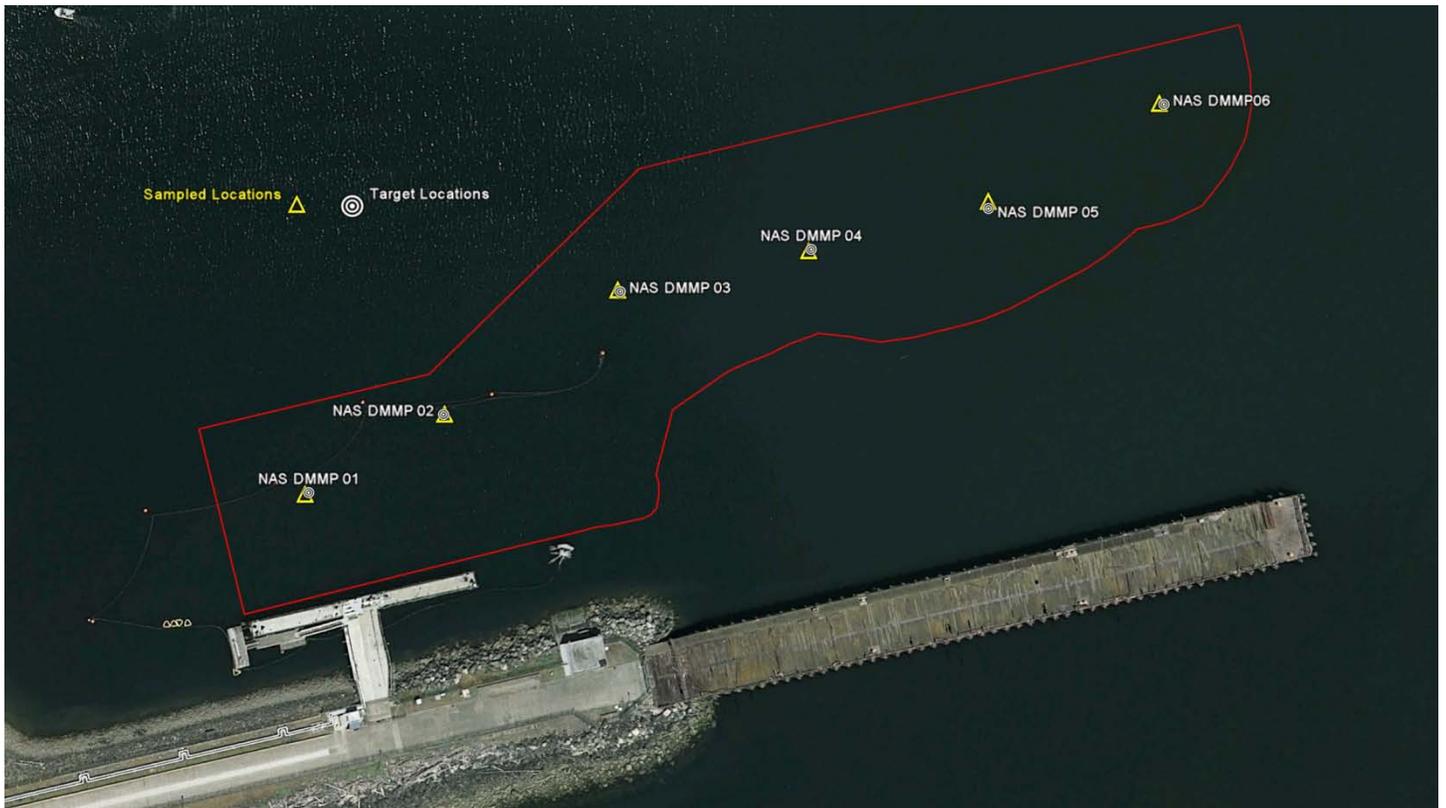
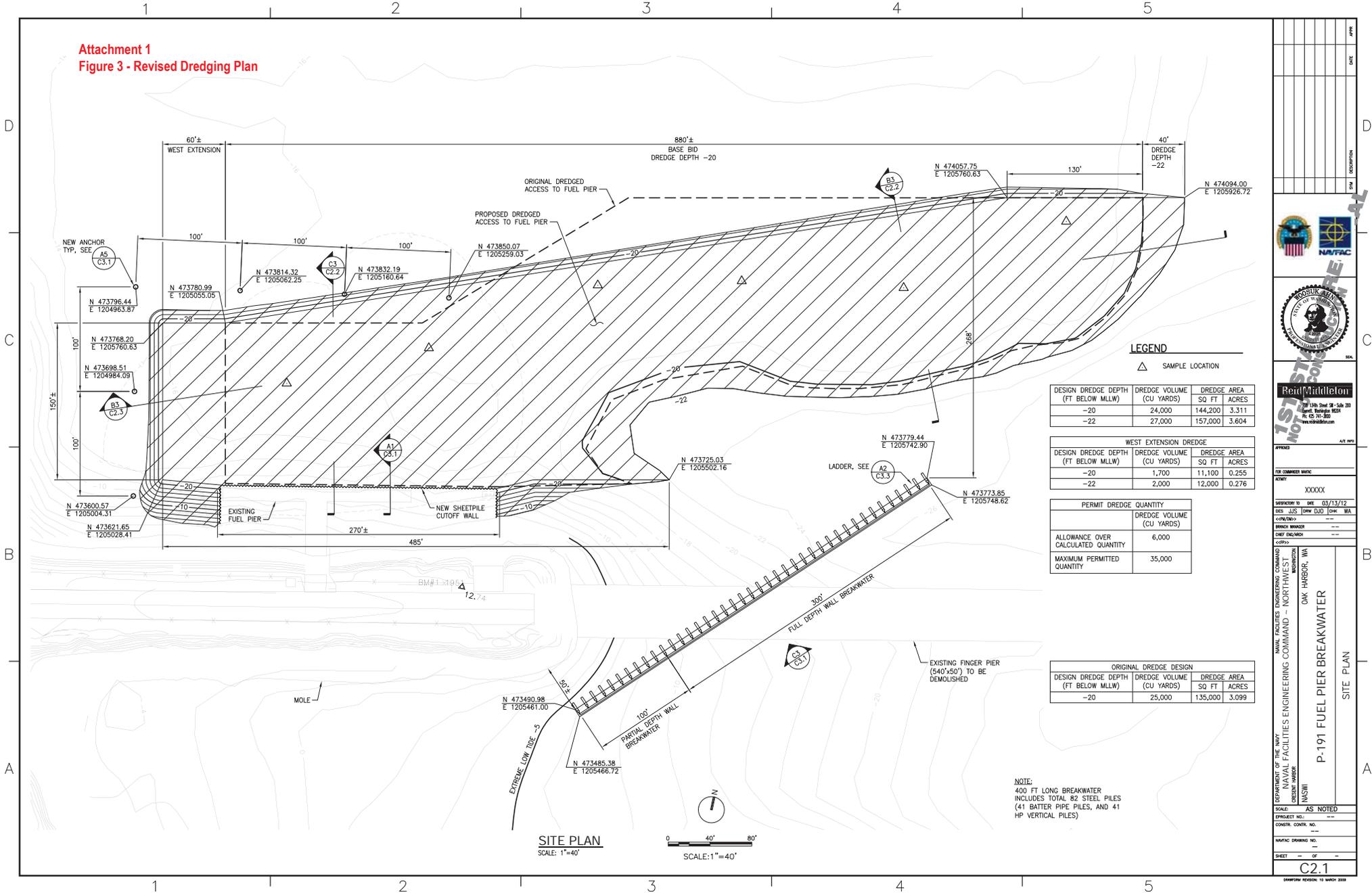


Figure 2 – Original Footprint and Sample Locations, NAS Whidbey Fuel Pier

Attachment 1  
Figure 3 - Revised Dredging Plan



**LEGEND**

△ SAMPLE LOCATION

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DATE	
DESCRIPTION	
SCALE	
<b>Ronald Middleton</b> Professional Engineer License No. 28,346-201 State of Washington P.E. No. 31,300 www.rmiddleton.com	
APPROVED	XXXXX
FOR COMMANDER USE	
DATE	03/13/12
DESIGNED BY	AS
CHECKED BY	AS
PROJECT MANAGER	
DESIGNED BY	
CHECKED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND - NORTHWEST OAK HARBOR, WA INCH	
<b>P-191 FUEL PIER BREAKWATER</b> SITE PLAN	
SCALE	AS NOTED
CONTR. CONTROL NO.	
NAVFAC DRAWING NO.	
SHEET	
<b>C2.1</b> <small>ISSUANCE REVISION: 15 MARCH 2010</small>	