



**Pease Development Authority
Division of Ports and Harbors**

Market Street Marine Terminal

**Functional Replacement Project
Portsmouth, NH**

NHDES Wetlands Permit Application



**NHDOT Project 15731
Federal Project A000(909)**

February 2022

**Market Street Marine Terminal
Functional Replacement Project
15731
A000(909)**

Wetlands Permit Application

Prepared by:



53 Regional Drive • Concord, NH 03301



600 State Street • Portsmouth, NH 03801

February 2022



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The subject project, Portsmouth-Kittery, 15731, consists of the functional replacement of the barge wharf at the Market Street Marine Terminal of the Pease Development Authority. The project was included in the list of projects approved to be permitted under the “old” wetlands rules pursuant to the NHDOT MOA executed on October 15, 2020. The description of the request is attached. Pursuant to Stipulation C of the MOA, NHDOT requested a waiver of the requirement that the permit application needs to be submitted on or before December 31, 2021.

At NHDOT’s request, NHDES has approved a revised submission deadline of **March 1, 2022**.

Christine J. Perron

From: Nyhan, Kevin <Kevin.T.Nyhan@dot.nh.gov>
Sent: Friday, December 17, 2021 2:17 PM
To: Christine J. Perron
Subject: FW: Portsmouth-Kittery 15731, Wetland permit application extension request

FYI.
Kevin

From: Benedict, Karl <Karl.D.Benedict@des.nh.gov>
Sent: Friday, December 17, 2021 1:57 PM
To: Nyhan, Kevin <Kevin.T.Nyhan@dot.nh.gov>
Cc: Johnson, Wendy <Wendy.A.Johnson@dot.nh.gov>; Trowbridge, Philip <Philip.R.Trowbridge@des.nh.gov>; Forst, Darlene <DARLENE.C.FORST@des.nh.gov>; Laurin, Marc <marc.g.laurin@dot.nh.gov>; OSullivan, Andrew <Andrew.M.OSullivan@dot.nh.gov>; Brown, Joshua <Joshua.R.Brown@dot.nh.gov>
Subject: RE: Portsmouth-Kittery 15731, Wetland permit application extension request

Hello Kevin,

Confirming the proposed wetland application submittal date of March 1, 2022 for the Portsmouth-Kittery, 15731 project in accordance with Stipulation C of the October 15, 2020 project list MOA due to the extenuating grant funding timeframes.

Please include a brief narrative of the timeframe extension as required by 305.02(h) with the application so that the agreement becomes part of the public file.

Thank you,

Karl Benedict, Public Works Subsection Supervisor
Land Resources Management
Water Division, NH Department of Environmental Services
29 Hazen Drive, PO Box 95
Concord, NH 03302
Phone: (603) 271-4188
Fax: (603) 271-6588
Email: Karl.Benedict@des.nh.gov



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[Like us on Facebook!](#)

We greatly appreciate your feedback, please take a moment to fill out our [NHDES-LRM customer satisfaction survey](#)

From: Nyhan, Kevin <Kevin.T.Nyhan@dot.nh.gov>
Sent: Friday, December 17, 2021 7:26 AM
To: Benedict, Karl <Karl.D.Benedict@des.nh.gov>
Cc: Johnson, Wendy <Wendy.A.Johnson@dot.nh.gov>; Trowbridge, Philip <Philip.R.Trowbridge@des.nh.gov>; Forst, Darlene <DARLENE.C.FORST@des.nh.gov>; Laurin, Marc <marc.g.laurin@dot.nh.gov>; OSullivan, Andrew

<Andrew.M.OSullivan@dot.nh.gov>; Brown, Joshua <Joshua.R.Brown@dot.nh.gov>

Subject: Portsmouth-Kittery 15731, Wetland permit application extension request

Good Morning Karl,

The subject project: Portsmouth-Kittery, 15731 consists of the functional replacement of the barge wharf at the Market Street Marine Terminal of the Pease Development Authority. It was included in the list of projects approved to be permitted under the "old" wetlands rules pursuant to our MOA executed on October 15, 2020. The description of the request begins on page 9 of 37 (attached). Pursuant to Stipulation C of the MOA, NHDOT is requesting a waiver of the requirement that the permit application needs to be submitted on or before December 31, 2021.

We are requesting, instead, a submission deadline of **March 1, 2022**. There are extenuating circumstances driving this request. NHDOT applied for a grant in July 2020 so that we could possibly expand the project, but that opportunity is contingent upon receiving the grant funds. We were supposed to know the outcome of the grant already. However, we found out on Wednesday of this week that the grant award will not be announced until December 31, 2021. This delay in award is limiting our ability to provide an accurate design/set of impact plans as the funding (and therefore project limits) are still in question and will not be resolved by the submittal deadline of December 31, 2021.

Thank you for consideration of this request. Please let me know if you have questions.

Kevin

**MEMORANDUM OF AGREEMENT
BETWEEN THE DEPARTMENT OF ENVIRONMENTAL SERVICES
AND THE DEPARTMENT OF TRANSPORTATION
REGARDING WETLANDS RULES APPLICABILITY
FOR PROJECTS INITIATED PRIOR TO DECEMBER 15, 2019**

In accordance with Env-Wt 305.02(e), the Department of Environmental Services (NHDES) has reviewed and hereby approves the Department of Transportation (NHDOT) project list for consideration of permitting under administrative rules in effect prior to December 15, 2019, as submitted by NHDOT on September 22, 2020 (Attachment B), subject to the following stipulations.


STIPULATIONS

The NHDOT, with the assistance of NHDES, shall ensure that the following measures are carried out:

- A. In accordance with Env-Wt 305.02(h), NHDOT shall complete and submit the information contained in Attachment A (Copy of Signed Agreement) with each application approved for consideration under this Agreement.
- B. Approval for permitting under rules in effect prior to December 15, 2019 shall be limited to the projects included in Attachment B, provided that any application is received by NHDES no later than December 31, 2021.
- C. On a case-by-case basis, NHDES will entertain NHDOT requests for rules waiver of the December 31, 2021 deadline in compliance with Env-Wt 204 and RSA 482-A.

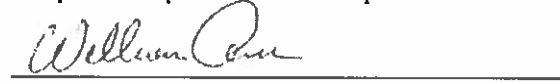
SIGNATURES

New Hampshire Department of Environmental Services

By: 
Thomas E. O'Donovan, Director
Water Resources Division

15 OCT 2020
Date

New Hampshire Department of Transportation

By: 
William J. Cass
Assistant Commissioner

10/5/2020
Date

Attachment A: Env-Wt 305.02(h) Copy of Signed Agreement (on the reverse)

Attachment B: NHDOT List of Excepted Projects, September 22, 2020

Attachment A

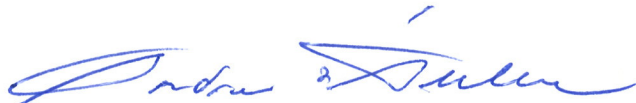
Copy of Signed Agreement (Env-Wt 305.02(h))

When submitting this Agreement with a permit application pursuant to Env-Wt 305.02(h), NHDOT shall complete the information below:

Project #6 - Portsmouth 15731
(Project Identifier/Description from September 22, 2020 Memo)

Reason for Exception (check one):

- Category #1: Fieldwork/Delineation
- Category #2: Emergency Authorization Verification
- Category #3: Project at 60% Design or Greater



NHDOT Wetlands Program Manager (Signature)

12/14/2021
Date

September 22, 2020

NHDOT Projects for processing under rules prior to December 15, 2019

Quick Reference

<u>Project ID</u>	<u>NHDOT Exempted Category*</u>	<u>Anticipated Application</u>
Columbia-Colebrook, 42313	1a	Filed 7/6/2020
Center Harbor-New Hampton, 24579	1a	9/30/2020
Statewide, 41915	1a	Filed 7/22/2020
Deerfield, 42279	1a, 3	12/30/2020
Westmoreland, 41624	1a, 3	Filed 8/31/2020
Walpole, 41624A	1a, 3	10/1/2020
Merrimack, 10136D	1a, 3	4/1/2021
Bedford, 13692C	1a, 3	12/21/2020
Portsmouth, 15731	3	03/31/2021
Gilsum, 2019-01629	2	1/31/2021
Danbury, 2018-01358	2	1/31/2021
Columbia, 2017-03010	2	1/31/2021
Lincoln, 2019-01933	2	1/31/2021
Errol 071/030	1b	10/3/2020
Jefferson 140/097	1b	11/22/2020
Easton 139/148	1b	11/15/2020
Lincoln 261/264	1b	11/7/2020
Rumney 157/063	1b	11/15/2020
Haverhill 070/083	1b	3/31/2021
Boscawen 068/145	1b	12/31/2021
Barrington 075/122	1b	10/11/2020
Westmoreland 113/163	1b	12/31/2021
Westmoreland 159/125	1b	12/31/2021
Bartlett 291/106	1b	12/31/2021
Derry 164/127	1b	5/8/2021
Dublin 176/072	1b	8/21/2021
Wilton 094/162	1b	8/21/2021
Alton 139/222	1b	9/18/2021
Northwood 045/099	1b	6/14/2021
Bridgewater 161/171	1b	8/11/2021
Littleton 059/128	1b	7/28/2021
Orford 121/091	1b	8/8/2021
Berlin 268/120	1b	12/31/2021
Hollis 144/042	1b	12/31/2021
Lebanon 167/106	1b	12/31/2021
Sunapee 122/168	1b	12/31/2021

* Category 1a: Project Development projects at 60% design or more, with data collection complete

Category 1b: Bridge Maintenance projects with data collection complete

Category 2: EAVs

Category 3: Projects at 60% and/or that have applications complete, with additional considerations

NHDOT List of Projects for Consideration Under Env-Wt 305.02 (e)

In accordance with:

Env-Wt 305.02 (e) If NH DOT believes that one or more projects in the planning stages for which an application has not been filed as of the 2019 effective date of this chapter should be subject to the design, approval, and construction criteria in effect prior to the 2019 effective date of this chapter, NH DOT shall submit a list in writing to the department of all such projects, that includes for each project:

- (1) The location of the proposed project;
- (2) A brief description of the project and the purpose of the project, outlining the anticipated scope of work to be performed and whether impacts are expected to be temporary or permanent;
- (3) The anticipated dates on which:
 - a. An application for the project will be filed; and
 - b. The project will be advertised to bid; and
- (4) The specific requirements in the 2019 rules that are not practicable to comply with and for each, the reason(s) why compliance is not practicable.

(f) If NH DOT submits a list pursuant to (e), above, the department shall consult with NH DOT to reach a mutual agreement regarding the design features or other aspects of each project that are not practicable to redesign or otherwise change to meet the requirements of the 2019 rules and so will be subject to the rules in effect prior to the 2019 effective date of this chapter.

(g) For each project submitted by NH DOT, the agreement reached pursuant to (f), above, shall be memorialized in writing signed by authorized officials of the department and NH DOT.

(h) NH DOT shall submit a copy of the signed agreement required by (g), above, with the relevant application so that the agreement becomes part of the public file.

NHDOT has developed a list of projects that fall into three categories for inclusion into a list as detailed above. Category #1 deals with data collection, including wetland delineations and stream crossing assessments. Category #2 deals specifically with Emergency Approvals that were approved by NHDES under the old rule set and follow-up applications were developed accordingly. Category# 3 deals with projects where the designs are complete and the draft applications have been prepared in accordance with the old rules. The list of projects by category number are detailed below;

- **Category #1.** NHDOT has performed a significant amount of work through in house staff and consultant contracts to conduct data collection for delineations and stream crossing assessments for the purpose of project planning and design for wetland permit applications. These delineations were performed with the criteria of the old rules in mind and not taking into account the changes that would apply in accordance with the new wetland rules effective December 15, 2019. As a result, the following rules are not practicable to comply with for the projects listed in the attached spreadsheets entitled “Delineations - Bridge Maintenance” and “Delineations - EM Projects at 60% Design or Greater”. Each spreadsheet details the requirements of Env-Wt 305.02 (e) (1) thru (3) a. and b. The requirement of Env-Wt 305.02 (e) (4) are detailed below as they apply to each project outlined in the attached spreadsheets;

- 311.05(b)(1)
- 311.05(b)(6)
- 311.10 (a-d)
- 903.04(b)(1)& (b)(7)
- 903.04(c)
- 903.04(f)
- 903.04(h)
- 903.04(j)
- 903.05(a-f)
- 904.07(c)(4) –
- 904.10(c)(1)a

In accordance with Env-Wt 305.02 (e) 1 thru 3, see attached spread sheets entitled “Delineations - Bridge Maintenance” and “Delineations- EM Projects at 60% Design or Greater”.

- **Category #2.** NHDOT has responded to four Emergencies that NHDES issued Emergency Approvals for in the form of Emergency Authorization Verifications (EAV’s) under the old rules. These EAV’s were conditioned to include a follow-up permit application to document the work conducted. These applications have been prepared in accordance with the old rules and are close to completion. The emergency projects are listed in the attached spread sheet entitled “EAV’s” which details the requirements of Env-Wt 305.02 (e) (1) thru (3) a. and b.

As a result of the nature of the emergency work performed and the fact the projects have already received approval from NHDES, the NHDOT has identified new rules within Env-Wt 100 thru Env-Wt900 as not practicable to comply with for these projects in accordance with Env-Wt 305.02(e) 4, and is requesting the emergency projects be held to the standards of the rules of which the approval was granted.

- **Category #3.** NHDOT Projects with Draft Permit applications prepared and /or at 60% design completion or greater. The scope of work and budget for the six (6) projects were previously prepared and approved prior to the rule changes and effective date. The draft wetland permit applications were completed or are near completion and /or the designs are at 60% completion or greater. The design of the six (6) projects are near completion and giving consideration of and implementing new design requirements for these projects would result in substantial delays and cost increases. Each project is detailed below for review in accordance with Env-Wt 305.02(e).

Project #1-Westmoreland 41624.

(1) The location of the proposed project; Westmoreland, NH. Project #41624

(2) A brief description of the project and the purpose of the project, outlining the anticipated scope of work to be performed and whether impacts are expected to be temporary or permanent; This project will construct a permanent repair structure modifying the outlet of a granite block arch that has collapsed over the years starting in 2003. As much of the existing granite arch will be utilized in the construction of the reinforced header, walls and floor slab. It is anticipated that work will create both permanent and temporary impacts in order to access and reinforce the historic structure.

(4) The specific requirements in the 2019 rules that are not practicable to comply with and for each, the reason(s) why compliance is not practicable. See Narrative below.

Project #6- Portsmouth, 15731

Pease Development Authority
Market Street Marine Terminal
Barge Wharf Functional Replacement Project

(1) The location of the proposed project; The Pease Development Authority (PDA) Division of Ports and Harbors (DPH) oversees the management, maintenance, operation, and maritime security of the ports, harbors, and navigable tidal rivers of the State of New Hampshire, including the Market Street Marine Terminal. The Market Street Marine Terminal is located along the southern shore of the Piscataqua River in Portsmouth, New Hampshire. The proposed project is located at the main wharf at the terminal.

(2) A brief description of the project and the purpose of the project, outlining the anticipated scope of work to be performed and whether impacts are expected to be temporary or permanent; The proposed project is part of, and necessitated by, the replacement of the Sarah Mildred Long (SML) Bridge carrying US Route 1 Bypass over the Piscataqua River. The Market Street Marine Terminal is adjacent to the SML Bridge. Until recently, the bridge divided the port between the main wharf and the barge wharf. The bridge was recently replaced and a new alignment was selected to better accommodate current and future marine navigation. The new bridge now passes through the western end of the barge wharf. The new alignment required partial demolition of the wharf, blocked access to the boat ramp, and substantially reduced the berthing length along the barge wharf. The Federal Highway Administration (FHWA) is funding the functional replacement of the barge wharf to compensate for impacts caused by the new alignment of the SML Bridge. The purpose of this project is to replace the lost functionality of the barge wharf by incorporating that functionality into the main wharf. With the new bridge alignment, the barge wharf can no longer be used to moor barges and the available laydown area has been reduced.

This project will consist of the following components:

- Construction of a new dock structure approximately 60 x 120 feet to extend the south end of the existing wharf.
- Construction of a new dock structure approximately 145 x 80 feet to extend the north end of the existing wharf.
- Installation of a new fender system along the length of the main wharf.
- Dredging of approximately 55,000 square feet of the river bed adjacent to the north end of the extended wharf.
- Relocation of the floating dock currently located off the north end of the wharf.
- Shoreside alterations, including soil and rock removal, grading, drainage, and paving within an 80,000-square foot area.

Dredge/fill impacts below HOTL total 56,680 SF (1.3 acres) of permanent impacts. The footprint of the new wharf sections will result in shading; this footprint totals 24,750 SF (0.6 acres) and is also considered a permanent impact.

The project will also result in 46,400 DF of permanent impacts to the developed tidal buffer zone.

(3) Anticipated dates on which the application for the project will be filed and when the project will be advertised for bids. It is anticipated that the application for this project will be filed in early 2021 (March 31, 2021). The project will be advertised for bids as soon as final design has been approved and all permits have been obtained, which will likely be late 2020.

(4) The specific requirements in the 2019 rules that are not practicable to comply with and for each, the reason(s) why compliance is not practicable.

Env-Wt 603.04 Coastal Functional Assessment

Env-Wt 603.05 Vulnerability assessment

Env-Wt 603.06 Project design narrative that addresses Env-Wt 307, 311.07, 313.03, 313.01, 603.04, 603.05.

Env-Wt 605.01 Avoidance and Minimization Requirements in Coastal Areas

Env-Wt 606.03 Design Requirements for All Overwater Structures

Env-Wt 606.13 Industrial Tidal Docks and Infrastructure

Env-Wt 607.02 Avoidance and minimization for dredging activities

Env-Wt 607.04 Other application requirements for dredging activities

Env-Wt 607.05 Additional information required for dredging projects

Env-Wt 607.09 Sediment Transport and Disposal

Part Env-Wt 610 Protected Tidal Zone

The scope of work and budget for the wetland permit application was prepared and approved in 2017. A draft wetland permit application was completed in November 2019. To adequately address all of the above requirements, additional budget would be required, which would necessitate approval by Governor and Council and result in substantial delays to the project. Furthermore, design of this project is essentially complete and giving consideration of and possibly implementing new design requirements for overwater structures would result in substantial delays and cost increases.

NHDES Wetlands Permit Application Form



WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management



Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: [RSA 482-A](#)/ [Env-Wt 100-900](#)

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to [Guidance Document A](#) for instructions.

Standard Review (Minimum, Minor or Major Impact) Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required, a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if mitigation is required, please refer to the [Determine if Mitigation is Required Frequently Asked Questions](#).

Mitigation Pre-Application Meeting Date: Month: 8 Day: 21 Year: 2019
 N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: **Market Street Marine Terminal** TOWN/CITY: **Portsmouth**
 TAX MAP: **119** BLOCK: _____ LOT: **5** UNIT: _____
 USGS TOPO MAP WATERBODY NAME: **Piscataqua River** NA STREAM WATERSHED SIZE: **994 sq mi** NA
 LOCATION COORDINATES (If known): **43.084373, -70.761500** Latitude/Longitude UTM State Plane

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The purpose of this project is to replace the lost functionality of the barge wharf by incorporating that functionality into the main wharf. This project will consist of construction of new dock structures to extend the south and north ends of the existing wharf; installation of a new fender system; dredging of approximately 55,000 square feet of the river bed; relocation of a floating dock; and shoreside alterations.

5. SHORELINE FRONTAGE:

N/A This does not have shoreline frontage. SHORELINE FRONTAGE: **1,800'**
 Shoreline Frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line ([Env-Wt 101.89](#)).

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application. To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Webpage](#).

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	tbd _____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	tbd _____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the [Instructions & Required Attachments](#) document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB 21 - 3815

b. This project is within a [Designated River](#) corridor. The project is within ¼ mile of: _____; and date a copy of the application was sent to the [Local River Management Advisory Committee](#): Month: ___ Day: ___ Year: ___
 N/A – This project is not within a Designated River corridor.

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

8. APPLICANT INFORMATION (Desired permit holder)			
LAST NAME, FIRST NAME, M.I.: Marconi, Geno			
TRUST / COMPANY NAME: NH Division of Ports and Harbors		MAILING ADDRESS: 555 Market Street	
TOWN/CITY: Portsmouth		STATE: NH	ZIP CODE: 03801
EMAIL or FAX: g.marconi@peasedev.org		PHONE: 436-8500	
ELECTRONIC COMMUNICATION: By initialing here: _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
9. PROPERTY OWNER INFORMATION (If different than applicant)			
LAST NAME, FIRST NAME, M.I.:			
TRUST / COMPANY NAME:		MAILING ADDRESS:	
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:		PHONE:	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
10. AUTHORIZED AGENT INFORMATION			
LAST NAME, FIRST NAME, M.I.: Perron, Christine		COMPANY NAME: McFarland-Johnson, Inc	
MAILING ADDRESS: 53 Regional Drive			
TOWN/CITY: Concord		STATE: NH	ZIP CODE: 03301
EMAIL or FAX: cperron@mjinc.com		PHONE: 225-2978	
ELECTRONIC COMMUNICATION: By initialing here <u>CJP</u> , I hereby authorize NHDES to communicate all matters relative to this application electronically.			
11. PROPERTY OWNER SIGNATURE:			
See the Instructions & Required Attachments document for clarification of the below statements			
By signing the application, I am certifying that:			
<ol style="list-style-type: none"> I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for National Historic Preservation Act (NHPA) 106 compliance. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate. I understand that the willful submission of falsified or misrepresented information to the NHDES is a criminal act, which may result in legal action. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned mail. 			
 Property Owner Signature		Geno Marconi Print name legibly	/ / Date

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date
--	--------------------	------

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission’s signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will be reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

	Print name legibly	Town/City	Date
--	--------------------	-----------	------

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact.

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

Intermittent Streams: linear footage distance of disturbance is measured along the thread of the channel.

Perennial Streams/ Rivers: the total linear footage distance is calculated by summing the lengths of disturbance to the channel and each bank.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
Forested wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Scrub-shrub wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Emergent wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Wet meadow	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Intermittent stream channel	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Perennial Stream / River channel	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Intermittent stream	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Perennial stream / River	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Tidal water	55,000 / 280 <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Salt marsh	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Sand dune	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland buffer	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Previously-developed upland in TBZ	50,600 <input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Lake / Pond	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - River	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Tidal Water	26,868 <input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Vernal Pool	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
TOTAL	132,468 / 280	/

15. APPLICATION FEE: See the [Instructions & Required Attachments](#) document for further instruction

Minimum Impact Fee or Fee for Non-enforcement related, publicly-funded and supervised restoration projects, regardless of impact classification (see RSA 482-A:3, 1(c)): Flat fee of \$ 400

Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) 105,600 sq. ft. X \$0.40 = \$ 42,240

Temporary (seasonal) docking structure: _____ sq. ft. X \$2.00 = \$

Permanent docking structure: 26,868 sq. ft. X \$4.00 = \$ 107,472

Projects proposing shoreline structures (including docks) add \$400 = \$ 400

Total = \$ 149,712

The Application Fee is the above calculated Total or \$400, whichever is greater = \$ 10,000*cap

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

Resource Agency Meeting Minutes

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: August 21, 2019

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Matt Urban
Sarah Large
Ron Crickard
Andrew O’Sullivan
Brian Wilmont
Wendy Johnson
Dan Prehemo
Wendy Johnson
Kathy Corliss
Marc Laurin
Arin Mills
Dave Silvia

ACOE

Mike Hicks

EPA

Mark Kern

NOAA

Mike Johnson*

NHDES

Lori Sommer
Dale Kierstead
Kristin Duclos
Stephanie Giallongo
Dave Price

NHF&G

Carol Henderson

NH NHB

Amy Lamb

**Consultants/Public
Participants**

Christine Perron
Noah Elwood
Darren Benoit
Greg Cantave

*teleconference in

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH: *(minutes on subsequent pages)*

Finalized the June 19, 2019 and July 17, 2019 Meeting Minutes	2
Londonderry – Stonehenge Road	2
Hanover, #41963 (Br. 026/056).....	2
Grantham, #40768 (Br. 106/116)	2
Barrington, #41988 (Br. 075/122)	3
Gilmanton, #2019-M315-1.....	3
Meredith, #41890	4
Gilsum, #2019-01629	5
Portsmouth, #15731 (A000(909))	5
Lebanon TAP, #41366 (X-A004(617))	8

(When viewing these minutes online, click on a project to zoom to the minutes for that projec

wetland is not 50' wide over most of its length from the beaver dam to the culvert, and the prime wetland boundary's location as shown on permit application's plan has been positioned to account for the width requirement.

*** Added by Kristin Duclos: RSA 482-A:15, I-a became effective on August 17, 2012. The 50-foot width requirement does not apply to prime wetlands designated before that date.*

**No NHB provided –Amy Lamb*

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Gilsum, #2019-01629

No minutes submitted to date.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Portsmouth, #15731 (A000(909))

Christine Perron introduced the project, which involves the functional replacement of the barge wharf at the NH Port Authority Market Street Marine Terminal in Portsmouth to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge. The project has been discussed at past meetings, as well as at a site review in April 2019 at the Port of NH. The purpose of today's discussion is to review permitting and mitigation.

Photos and site plans were reviewed. The project consists of:

- New wharf sections approximately 145 feet to the north and 60 feet to the south of the existing main wharf, requiring a total of 75 piles.
- Sections of sea wall will be necessary along the shore at the two new sections of deck.
- The small floating dock located to the north of the main wharf will be relocated.
- Dredging along the north end of the main wharf within a historically shallow area.
- Shoreside improvements including drainage, grading, and paving.

The status of the environmental review process was provided. Informal consultation on federally listed species was carried out and NOAA concurs with the determination that the project is not likely to adversely affect listed species or critical habitats. An Essential Fish Habitat Assessment was completed and NOAA provided conservation recommendations. Mike Johnson noted that he needed a response from FHWA on the recommendations he provided in order to conclude EFH consultation. Section 106 consultation on historic resources is complete. A NEPA document was prepared and FHWA recently issued concurrence on the NEPA document, signifying that the NEPA process is complete. This allows the project to move into final design and permitting.

Impacts below the Highest Observable Tide Line (HOTL) were reviewed:

Seawalls 1,280 SF

Piles 400 SF

Dredging = 55,000 SF

Dredge/fill impacts below HOTL total 56,680 SF (1.3 acres). The footprint of the new wharf sections will result in shading; this footprint totals 24,750 SF (0.6 acres).

Required permits were reviewed. The project will require a major impact Dredge & Fill permit from NHDES. It has been assumed that an Individual Section 404/Section 10 Permit would be required from the Corps. Mike Hicks asked C. Perron to send him plans via email so that he could discuss the project internally and confirm the need for an Individual Permit. He would also confirm the need for Section 408 approval due to the proximity of the project to the federal navigational channel. He noted that the Section 408 approval process would be separate from the Section 404 process.

If an Individual Permit is required from the Corps, the project will also require an individual Water Quality Certificate and a coastal zone consistency finding. Additional State permits will consist of a Shoreland Permit for impacts between the tidal buffer zone and 250' protected shoreland limit, as well as an Alteration of Terrain permit. Dave Price noted that impacts within the tidal buffer zone would also need to comply with Shoreland requirements.

There has been initial coordination with the US Coast Guard. No permits will be needed from the Coast Guard, but they will be kept informed of the project as it moves forward.

M. Hicks asked where the dredged material would be taken. C. Perron responded that the current plan is to take the material to Cape Arundel, an offshore disposal site.

D. Price asked if the wharf infill project would be included in permit applications. C. Perron explained that the infill is part of a separate project that consists of the rehabilitation of the main wharf and constructing a deck over the small area of open water between the shoreline and the main wharf. That project has funding from a different federal agency and has independent utility from the functional replacement project. The projects are also on different timelines. For these reasons, permitting for the two projects will remain separate.

Impacts requiring mitigation were reviewed. The total area of impact requiring mitigation is as follows:

Seawalls 1,280 SF

Dredging 55,000 SF

Wharf expansions (footprint of new wharf sections less the area of new piles to avoid double counting impacts) = 24,350 SF

A bridge pier from the Sarah Mildred Long bridge remains in the area of the northern wharf extension. The pier will be removed as part of this project. Since the footprint of the pier (525 SF) should not be considered an impact since it's a manmade structure, this area will be removed from the impact totals.

Based on the above impacts, the project will require mitigation for 80,105 SF (1.84 ac) of impact below HOTL.

To determine the monetary value of required mitigation, Lori Sommer confirmed that the impact from dredging should be entered into the ARM fund calculator as square feet of impact to a tidal resource. Remaining impacts will likely be entered as linear feet of impact to the river. Impacts will be reviewed in more detail with Lori to determine the most appropriate way to break out impacts for mitigation.

Proposed mitigation was reviewed. Funding toward the completion of the Cutts Cove living shoreline restoration project is proposed as mitigation for impacts resulting from the functional replacement project. Cutts Cove is located nearly adjacent to the Port of NH. The purpose of the restoration effort is to enhance mudflat habitat and replace an armored shoreline with salt marsh and natural tidal buffer zone that will allow for salt marsh migration as sea levels rise. The shoreline is located along the proposed Portsmouth

Gateway Park, scheduled to be completed this fall. The City of Portsmouth supports providing funding toward completing the restoration project and prefers that the work be completed this spring. The overall project is 800 LF of shoreline; 200 LF has been completed to date using an ARM fund grant.

The following is a summary of the Cutts Cove restoration:

Habitat	Functions & Values	Total proposed project	Completed to date	Remaining
Mudflat	Aquatic habitat	90,000 SF	~60,000 SF	~30,000 SF
Salt marsh	Wildlife habitat, aquatic habitat, sediment trapping	30,840 SF (800 LF)	~10,840 SF (200 LF)	~20,000 SF (600 LF)
TBZ	Wildlife habitat, marsh migration	11,500 SF	~2,300 SF	~9,200 SF

If there is agreement on using Cutts Cove as mitigation, the funding of Cutts Cove would be described in the permit application for the wharf project and the permit would be conditioned on the completion of the portion of the living shoreline project that is funded. The permit would specify this amount of funding would be the “not to exceed” dollar amount for mitigation.

M. Johnson asked if the Cutts Cove restoration completed to date meets mitigation criteria for impacts associated with the Sarah Mildred Long bridge project. C. Perron and L. Sommer clarified that mitigation for the SML project was completed via an in-lieu fee to the ARM Fund. UNH then applied for an ARM grant for Cutts Cove.

L.Sommer noted that funding for the next phase of Cutts Cove would go directly to UNH and would be considered permittee responsible mitigation for the Port of NH project. She stated that completing the restoration would be a great benefit to the area and would result in one of the largest living shoreline restoration efforts in the state. The funding level would be based on the ARM fund payment calculated for proposed impacts, and the permit would specify this amount as the “not to exceed” dollar amount for mitigation.

D. Price noted that the Cutts Cove project already has a permit for the entire 800 LF. UNH will likely need to amend the City of Portsmouth permit received for the park in order to allow for access to complete the shoreline project.

M. Hicks stated that he thought the proposed mitigation was reasonable.

It was noted that Mark Kern was not in attendance to comment on mitigation. C. Perron offered to follow up with Mark via email.

M. Johnson noted that he has no concerns with using Cutts Cove for mitigation for the functional replacement project. He stated that it met all criteria for mitigation, was adjacent to the impacts, the restoration was already underway, and it would result in good ecological outcomes.

D. Price commented that Chris Williams from the Coastal Program was not able to attend the meeting but did want to extend an invitation for the project to be presented again at the next Dredge Task Force meeting. Noah Elwood agreed that this would be beneficial and would follow up with Chris.

**NHB19-1845 Several wildlife species: American Eel, Atlantic Sturgeon, Peregrine Falcon, Shortnose Sturgeon. Requested to contact NH Fish and Game. –Amy Lamb
This project has been previously discussed at the 6/20/2018 and 9/19/2018 Monthly Natural Resource Agency Coordination Meetings.*

Lebanon TAP, #41366 (X-A004(617))

Darren Benoit, DuBois & King, gave an introduction to the project including the project locations and scope of work. There is one 950-foot segment of multi-use path proposed, along Lahaye Drive between Mt Support Road and NH Route 120. This is an important connection between Dartmouth Hitchcock Medical Center (DMHC) and commercial and new residential development east of NH Route 120. Anticipated construction is 2020.

The project is about to conclude the Preliminary Plans. Alternatives included a path on either side of Lahaye Drive mostly within the existing ROW. Due to adjacent wetlands, retaining wall alternatives were also developed to consider the balance between additional project cost and the corresponding potential reduction in wetland impacts. The preferred alternative is the north side of Lahaye Road without the retaining wall. Need for the project included an overall plan for Lebanon's alternative transportation plan showing the importance of this link within the DHMC neighborhood. All alternatives included wetland impacts and potential impacts to bat habitat. Project is NHB18-2003. No concerns were identified.

After the first meeting, D&K was to return with updated impacts and areas. Mitigation opportunities were also explored within the Lebanon region, but a good fit was not determined. Total wetland impacts were 17,221 sf with in lieu fee the likely mitigation.

Comments received:

Need to address erosion control adjacent the wetland. Review thresholds for AOT, CGP permits.

**NHB19-2313; no impacts – Amy Lamb*

This project was previously discussed at a Monthly Natural Resource Agency Coordination Meeting on 8/15/18.

53 Regional Drive
Concord, NH 03313



Tel: (603) 225-2978
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McFARLAND JOHNSON

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MEETING NOTES

PROJECT: Portsmouth 15731
Pease Development Authority
Barge Wharf Functional Replacement Project

DATE OF MEETING: April 2, 2019

LOCATION: NH Port Authority, 555 Market Street, Portsmouth

SUBJECT: Field Review

ATTENDEES:

Project Sponsors

Pease Development Authority Division of Ports & Harbors: Geno Marconi
NHDOT: Wendy Johnson
FHWA: Jamie Sikora

Resource Agencies

Army Corps: Mike Hicks, Richard Kristoff
National Marine Fisheries Service: Mike Johnson
NHDES Wetlands: Stefanie Giallongo, Lori Sommer
NH Fish & Game: Cheri Patterson, Mike Dionne

Consulting Team

Appledore Marine Engineering: Noah Elwood
McFarland Johnson: Christine Perron
Ransom Consulting: Steve Rickerich
Hoyle, Tanner & Assoc: Aaron Lachance

Unable to attend: Dave Price (NHDES Wetlands); Mark Kern (EPA); Zach Jyllka (NOAA)

NOTES ON MEETING:

The project involves the functional replacement of the barge wharf at the NH Port Authority Market Street Marine Terminal in Portsmouth to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge. The Sarah Mildred Long Bridge once bisected the Port, with the main wharf to the east of the bridge and the barge wharf to the west. To accommodate the new bridge alignment, a large portion of the barge wharf was removed. The subject project involves replacing the lost functionality of the barge wharf by constructing replacement wharf sections adjacent to the existing Main Wharf as well as providing shore side alterations to accommodate replacement wharf sections.

The project proposes to provide replacement wharf sections approximately 145 feet to the north and 60 feet to the south of the existing main wharf, requiring a total of 75 new caissons. Sections of sea wall will

PLANNING, ENGINEERING AND CONSTRUCTION ADMINISTRATION CONSULTANTS

An Employee-Owned Company

be necessary along the shore at the two new sections of deck. A hanging fender system will be installed along the entire length of the main wharf to allow the functionality of mooring barges. The small floating dock located to the north of the main wharf will need to be relocated. Dredging is proposed along the north end of the main wharf within a historically shallow area in order to allow ships to use the full length of the wharf. Dredging will remove soil and rock over an area of 55,000 square feet. Shoreside improvements will include the removal of a small knoll that had been under the bridge. This area will be graded and paved.

The project is funded by the Federal Highway Administration (FHWA) and FHWA is the lead federal agency. A draft Biological Assessment (BA) and draft Essential Fish Habitat Assessment (EFHA) have been submitted to NOAA and will also be forwarded to NH Fish & Game. Once fisheries consultation is finalized, a NEPA document will be prepared. Once FHWA approves the NEPA document, the project will move into final design and permitting.

Preliminary impacts were reviewed:

Total permanent direct impact from wharf expansions = 1,720 SF
Total impact from dredging = 55,000 SF
Total direct impacts below HOTL = 56,720 SF (1.3 acres)

Total indirect impact from wharf expansions (shading) = 24,750 SF

It is anticipated that construction will begin the winter of 2020. The dredging will take place between November 15 and March 15. All other in-water work is expected to occur outside of this window.

The following is a summary of key questions and concerns that were discussed prior to, during, and immediately after the site walk:

Design Details

- Mike Johnson asked for more information on the proposed coal tar epoxy that would be applied to the piers. Noah Elwood replied that this was an inert substance commonly applied in marine environments. The epoxy hardens after it is applied and does not leach.
- Linear impacts from sea wall construction and riprap were reviewed with Lori Sommer. It was confirmed that the only area of proposed riprap would be along the south wharf extension where riprap is already located. The proposed work would not expand the footprint of riprap. A detail showing proposed riprap will be provided to DES to clarify this.

Dredging/Blasting

- Disposal is expected to be offshore at the Cape Arundel site. This is under review by the Army Corps.
- Blasting will be necessary to remove approximately 1,000 CY of rock from an area of approximately 10,000 square feet within the dredge area.
 - There was discussion about the confidence level in the amount of rock that will need to be removed and when the blasting would take place. From a fisheries perspective, keeping the Contractor to a tight window of time for blasting is desired, with the preferred window being December/January.

- N. Elwood commented that there is a good density of borings within the dredge area that provide a good understanding of the amount of rock that will be encountered. However, the exact window for blasting is difficult to tighten up at this early stage given the unknowns in permitting schedules, funding, and start of construction. Dredging needs to occur before blasting and is expected to take about 2 months.
- The desired timeframe will be taken into consideration as the project moves forward.
- M. Hicks noted that NHDOT and the Coast Guard should be notified before blasting takes place.
- Blasting Best Management Practices
 - The BA included the use of bubble curtains since these were included in the SML project. However, their effectiveness in this high velocity setting should be discussed with the SML project team before committing to their use for the wharf project.
 - M. Johnson suggested fish monitoring using sonar and scare charges. C. Patterson concurred that this has worked well for previous projects.
 - The project team will get more information on BMPs that worked well for the SML project and follow up with NOAA and NHFG to confirm what will be incorporated into the wharf project.

EFH Assessment

- M. Johnson noted that the project is not located within historic eelgrass beds.
- M. Johnson asked when he should provide comments on the EFH Assessment. It was suggested that his comments should be provided within 30 days.

Shoreside Work/Stormwater Management

- Shoreside work will include grading to direct stormwater to catch basins. The proposed stormwater system is designed to match the existing stormwater treatment devices located on the site. The northern area is graded to direct stormwater to two new catch basins with double inlet grates for collection. The catch basins drain to two new offline 6-foot diameter hydrodynamic vortex separators to provide stormwater treatment before discharging through headwalls into the river. The existing drainage on the barge wharf and surrounding areas will remain.
- Stormwater treatment areas are not proposed given the limited space available and also due to concerns with contaminated soils.
- An Alteration of Terrain Permit will be required for the project.
- The Port is authorized under an EPA Industrial Multi-Sector General Permit. The facility has a robust maintenance program for stormwater structures.

BUILD Project

- The Division of Ports and Harbors was recently awarded a USDOT BUILD grant for the rehabilitation of the main wharf. That project will include decking over the open water area between the main wharf and the shore.
- The lead federal agency for the BUILD project will be the Maritime Administration. The project has independent utility from the functional replacement project.
- Due to the different funding sources and lead federal agencies, the two projects will require separate NEPA and permitting efforts.

Permitting

- M. Hicks noted that Section 408 coordination will be required given the project's proximity to the federal navigational channel. The project team was aware of this.
- Preparation of permit applications is expected to begin this summer.
- It is anticipated that the project will be discussed at least once more at the NHDOT Natural Resource Agency Coordination Meeting. S. Giallongo asked that she and David Price be notified about this meeting. M. Johnson noted that he should be able to call in to the meeting.
- S. Giallongo suggested separating the project into two separate wetland permit applications – one for Tidal Buffer Zone impacts (shoreside work) and one for tidal wetland impacts. Permits for tidal wetland impacts require Governor & Council approval. If a permit amendment is necessary at any point after permit issuance, waiting for G&C approval could delay the entire project if all work is included in one permit. The project team will keep this in mind as permitting gets underway.

Mitigation

- It was agreed that the following impacts would require mitigation. Final impact numbers may change slightly as design details are finalized.
 - Dredging – 55,000 SF of permanent impact
 - Seawalls and piles for wharf extensions and floating dock – 1,720 SF of permanent
 - Shading from wharf extensions and floating dock – 24,750 SF of indirect impact*
*The area of piles (accounted for as permanent impact) needs to be subtracted from this area.
- It was agreed that mitigation would not be required for riprap since it was located within an area that is already riprap.
- Once impacts are finalized, a preliminary in-lieu fee amount will be calculated to assess the level of mitigation that will be required.
- The Cutts Cove living shoreline restoration project was initiated by UNH through an ARM grant and coordination with NHDOT under the SML bridge project. Only 200 feet of the 800 feet was

completed through the grant. It was agreed that the possibility of continuing this effort as mitigation for the wharf impacts should be explored.

- M. Johnson noted that the total area of restoration should be considered to better assess mitigation ratios.
 - Funding mechanisms should be explored with DES, DOT, and FHWA to determine if there are viable options for directly funding the restoration rather than using the ARM fund. The restoration effort is “shovel ready” – permits are in place for the entire 800 feet.
 - L. Sommer agreed to discuss Cutts Cove with UNH to get a better understanding of the budget.
 - L. Sommer will also reach out to the City of Portsmouth to discuss the status of the proposed park. The restoration effort should be completed before the park is completed since the location of the proposed park is the only construction access for the restoration project.
- The Division of Ports and Harbors completed mitigation for a project that was never constructed. This effort should be considered in an overall mitigation package, either for the functional replacement project or a future project.

cc:

Attendees
David Price, NHDES
Mark Kern, EPA
Bob Landry, NHDOT
Zach Jyllka, NOAA
Vanessa Swasey, AME

Submitted by:

Christine Perron
McFarland Johnson, Inc.

Attachment A – 20 Questions



**WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS
Land Resources Management
Wetlands Bureau**



Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project’s design in assessing the impact of the proposed project to areas and environments under the department’s jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The purpose of this project is to replace the lost functionality of the barge wharf that resulted from the realigned Sarah Mildred Long Bridge, by incorporating that functionality into the main wharf. This project is part of, and necessitated by, the recent replacement of the Sarah Mildred Long (SML) Bridge carrying US Route 1 Bypass over the Piscataqua River.

The Market Street Marine Terminal is adjacent to the SML Bridge. Until recently, the bridge divided the port between the main wharf and the barge wharf. The bridge was recently replaced and a new alignment was selected to better accommodate current and future marine navigation. The new alignment required partial demolition of the barge wharf, blocked access to the boat ramp, and substantially reduced the berthing length along the barge wharf. The Federal Highway Administration (FHWA) through NHDOT is funding the functional replacement of the barge wharf to compensate for impacts caused by the new alignment of the SML Bridge.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The project as proposed minimizes impacts to the maximum extent possible while still addressing the purpose and need of the project.

Extension of the main wharf to the south only was considered conceptually to determine if this alternative could reduce the need for dredging. However, a southern shift or extension would increase encroachment on the Federal Navigational Channel in a stretch of the channel between two bridges and on a curve. Further, the the River pilots expressed concerns with the direction of the currents at the southern end of the wharf and the ability to safely moor a vessel. For these reasons, this alternative would create substantial safety concerns and would not meet the purpose and need of the project. Therefore, this alternative was not considered for further study.

3. The type and classification of the wetlands involved.

Surface waters within the project area consist of the Piscataqua River, which is an estuarine river with a Cowardin classification of estuarine subtidal unconsolidated bottom (E1UBL).

The tidal buffer zone within the project area consists of developed land.

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

The Piscataqua River originates northwest of the project area at the confluence of Salmon Falls River and Cocheco River between Dover, New Hampshire and Eliot, Maine and flows primarily in a southeasterly direction between Maine and New Hampshire to its confluence with the Portsmouth Harbor approximately four miles downstream from the Marine Terminal.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

There are no exemplary natural communities or rare habitat types in the project area. The project is located within and adjacent to the Market Street Marine Terminal, and all impacts will be within and adjacent to previously developed areas. This area contains no salt marsh, mud flats, or shellfish habitats.

6. The surface area of the wetlands that will be impacted.

The project will result in 81,868 sq ft of permanent impact to the channel of the river (tidal water) and 50,600 sq ft of impact to previously developed tidal buffer zone.

7. The impact on plants, fish and wildlife including, but not limited to:
 - a. Rare, special concern species;
 - b. State and federally listed threatened and endangered species;
 - c. Species at the extremities of their ranges;
 - d. Migratory fish and wildlife;
 - e. Exemplary natural communities identified by the DRED-NHB; and
 - f. Vernal pools.

Peregrine falcons have nested on the I-95 bridge, north of the project, and on the Memorial Bridge, south of the project. This species has not been documented on the SML Bridge, located adjacent to the Port. NHFG determined that no impacts to this species are anticipated from the proposed project. Adult and sub-adult Atlantic and shortnose sturgeon may use the project area for foraging and are most likely to occur between April and November. With the implementation of minimization measures, including a time of year restriction that limits dredging and blasting activities to November 15 to March 15, it was determined that the proposed project is not likely to adversely affect shortnose sturgeon, Atlantic sturgeon, or Atlantic sturgeon critical habitat. Findings were described in detail in a Biological Assessment and NOAA concurred with the findings. Four species of federally listed sea turtles are found seasonally in the coastal waters of New Hampshire and Maine, including in the vicinity of the Cape Arundel Disposal Site and proposed transit route. Transport of dredged material will be completed by April, before sea turtles would be expected to be present. Further, the disposal site is at a depth that is deeper than what benthic foraging sea turtles would be expected to use. For these reasons, the project is not likely to impact listed sea turtles. According to the National Marine Fisheries Service (NMFS), the Piscataqua River contains EFH for 16 species. Based on habitat characteristics found at the project area, specifically temperatures, salinity, water depth, and substrate, suitable habitat is present for one or more life stages of 14 species. An EFH Assessment was prepared to demonstrate that, although the project will impact EFH, the impacts will not be substantial. This Assessment was submitted to NMFS. The NMFS provided conservation recommendations that will be implemented. There are no exemplary natural communities or vernal pools in the project.

8. The impact of the proposed project on public commerce, navigation and recreation.

The Market Street Marine Terminal is the state's only deep water, public access, general cargo marine terminal. The Terminal also handles special cargo thus providing a unique service for the state and region. With a regional economic impact of approximately \$275 million in 2012, the Market Street Marine Terminal is a driving economic force for the State of New Hampshire and southern coastal Maine communities. The terminals along the Portsmouth Harbor and the Piscataqua River generate between 150 and 250 inbound commercial vessel transits per year. In addition to commercial activity, the port is critical to emergency response capabilities in Portsmouth Harbor. The facility supports fire, security, and terrorist response drills with local and federal law enforcement. If there is an emergency on board a ship, the pilot brings the ship to the Terminal.

Larger ships that were able to access the Port now experience difficulty due to lost functionality of the barge wharf and inadequate berthing depth and length of the main wharf. The proposed project will replace the lost functionality of the former barge wharf and enable the continuation of existing operations.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project is located at the Market Street Marine Terminal, which is located within the waterfront industrial zone in Portsmouth and surrounded by areas zoned as commercial. The proposed work will be consistent with the existing use of the facility and adjacent land use and will not interfere with the existing aesthetic.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project is located at the Market Street Marine Terminal and will not encroach into the river channel more than the existing facility. The proposed work is adjacent to a 6.2-mile federal navigational channel, approximately 35 feet deep (-35 MLLW) and 400 to 600 feet wide, which extends northwesterly from deep water between New Castle and Seavey islands to a turning basin in Newington, NH/Eliot, ME. This channel is maintained by the US Army Corps of Engineers. The proposed work will not interfere with or encroach into the navigational channel. A federal Section 408 permit from the Army Corps will be obtained prior to construction to ensure that the project will not impair the navigational channel for its intended use.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project will not impact abutters.

12. The benefit of a project to the health, safety, and well being of the general public.

The Port is critical to emergency response capabilities in Portsmouth Harbor. The facility supports fire, security, and terrorist response drills with local and federal law enforcement. The proposed project will ensure that these public safety functions can continue.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

Shoreside work will include grading and paving to direct stormwater to catch basins. The proposed stormwater system is designed to match the existing stormwater treatment devices located on the site. The northern area will be graded to direct stormwater to two new catch basins with double inlet grates for collection. The catch basins will drain to two new offline 6-foot diameter hydrodynamic vortex separators to provide stormwater treatment before discharging through headwalls into the Piscataqua River. The existing drainage on the barge wharf and surrounding areas will remain. The southern area will reestablish drainage with two new catch basins directing stormwater into the existing hydrodynamic vortex separator. Stormwater treatment areas are not proposed given the limited space available and also due to concerns with contaminated soils.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

The proposed dredging of 55,000 SF will more than compensate for the 440 SF of area for the proposed piles and 1,280 SF of area for the proposed seawalls that will be installed in the floodplain resulting from the wharf extensions. Therefore, the project is not expected to result in an increase in base flood elevation within the floodplain of the Piscataqua River.

All appropriate sedimentation and erosion control measures will be installed during construction to avoid adverse impacts to the river during the shoreside work.

The proposed dredging and other in-water work will be in accordance with the Water Quality Certification issued for the US Army Corps of Engineers Section 404 Permit to ensure compliance with water quality standards.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

The project is not expected to reflect or redirect currents or wave energy in the Piscataqua River. The tidal range is 9.6 feet upstream at Dover Point to 13.2 feet downstream at Kittery Point. The river typically has flood tide velocities of around 2 knots and ebb flows of about 4 knots. The river is approximately 1,300 feet across at the location of the project.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

All parties would be required to comply with state and federal regulations.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The project is located on along a developed portion of the shoreline and will not impact the overall functions and values of the 12-mile Piscataqua River.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

There are no listed Natural Landmarks in the vicinity of the project.

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

The project is located over 4 miles east of the Great Bay National Wildlife Refuge and Great Bay National Estuarine Research Reserve. The proposed work will have no impact on these areas.

20. The degree to which a project redirects water from one watershed to another.

The project will not redirect water to a different watershed.

Additional comments

Env-Wt 302.04 (c):

(1) - The project will not impact beach or tidal flats. The project is located along a developed portion of the shoreline.

(2) - The project will not change the Piscataqua River's ability to dissipate wave energy or storm surge.

(3) - The project will result in a slight increase in stormwater runoff; however, runoff will not be substantial enough to impact salinity levels and pollutant loading in this 1,300 foot wide, high velocity, estuarine river. The Port is authorized under an EPA Industrial Multi-Sector General Permit. The facility has a robust maintenance program for stormwater structures, which will reduce sedimentation into the river.

irm@des.nh.gov or (603) 271-2147

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**MARKET STREET MARINE TERMINAL (PORT OF NH)
FUNCTIONAL REPLACEMENT PROJECT
PORTSMOUTH 15731**

SUPPLEMENTAL NARRATIVE

Project Setting

The Pease Development Authority (PDA) Division of Ports and Harbors (DPH) oversees the management, maintenance, operation, and maritime security of the ports, harbors, and navigable tidal rivers of the State of New Hampshire. Included in this charge is the Market Street Marine Terminal located on the Piscataqua River. The site is also known as the Port of New Hampshire and is the state's only deep water, public access, general cargo marine terminal.

The Market Street Marine Terminal is located along the southern shore of the Piscataqua River in Portsmouth, New Hampshire. The Piscataqua River is an estuarine river with a Cowardin classification of estuarine subtidal unconsolidated bottom (E1UBL). It originates northwest of the project area at the confluence of Salmon Falls River and Cocheco River between Dover, New Hampshire and Eliot, Maine and flows primarily in a southeasterly direction between Maine and New Hampshire to its confluence with the Portsmouth Harbor approximately four miles downstream from the Marine Terminal. The overall length of the river is approximately 12 miles. The river depths are 24 to 34 feet in the project area. The tidal range is 9.6 feet upstream at Dover Point to 13.2 feet downstream at Kittery Point. The river typically has flood tide velocities of around 2 knots and ebb flows of about 4 knots. The river is approximately 1,300 feet across at the location of the project.

According to the NH Coastal Viewer (2019), the project area is not located within mapped shellfish habitat. The shoreline within the project consists of stone riprap. There is no salt marsh in the project area.

According to the NH Coastal Viewer (2019) eelgrass mapping, eelgrass has occurred in the vicinity of the action area in the past (mapped in 1996), with historic eelgrass beds located approximately 400 feet northwest of the wharf and approximately 1,200 feet to the northeast. However, as part of the SML Bridge replacement project, eelgrass surveys were performed on July 17, 2013 by MaineDOT dive crews in the vicinity of the proposed bridge, located just upstream of the action area. A two square foot patch of eelgrass was found on the Kittery, Maine side of the bridge and sporadic eelgrass shoots were identified on the Portsmouth side. In addition, a second eelgrass survey was completed using a ROV camera on September 11, 2013 in the area of the proposed dredge. This survey found sporadic eelgrass shoots but no collections of plants forming any beds. The 2017 eelgrass mapping does not show any eelgrass beds in or near the action area. Based on the 2017 mapping, the nearest eelgrass bed is located approximately 4,400 feet downstream of the action area along the north side of Pierce Island.

A 6.2-mile federal navigational channel, approximately 35 feet deep (-35 MLLW) and 400 to 600 feet wide, extends northwesterly from deep water between New Castle and Seavey islands to a turning basin in Newington, NH/Eliot, ME. The channel is maintained by the Army Corps of Engineers (ACOE). According to the ACOE, Portsmouth Harbor handles approximately 3.5 million tons of shipping a year for New Hampshire, eastern Vermont, and southern Maine. It is also used by submarines from the Portsmouth Naval Shipyard in Kittery, and is used extensively by a large lobstering fleet, local fishermen, excursion boats to the Isles of Shoals (9 miles offshore), and local and transient boats.

Project Purpose and Need

The proposed project is part of, and necessitated by, the replacement of the Sarah Mildred Long (SML) Bridge carrying US Route 1 Bypass over the Piscataqua River. The Market Street Marine Terminal is adjacent to the SML Bridge. Until recently, the bridge divided the port between the main wharf and the barge wharf. The bridge was recently replaced and a new alignment was selected to better accommodate current and future marine navigation. The new bridge now passes through the western end of the barge wharf. The new alignment required partial demolition of the wharf, blocked access to the boat ramp, and substantially reduced the berthing length along the barge wharf. The Federal Highway Administration (FHWA) through NHDOT is funding the functional replacement of the barge wharf to compensate for impacts caused by the new alignment of the SML Bridge. Functional replacement is a federally authorized method of right of way compensation for public facilities (23 CFR 710.509).

The purpose of this project is to replace the lost functionality of the barge wharf by incorporating that functionality into the main wharf. With the new bridge alignment, the barge wharf can no longer be used to moor barges and the available laydown area has been reduced.

The need for this project is evidenced by the following factors that prevent the main wharf in its current configuration from fully replacing the lost operational capacity of the barge wharf.

1. The new bridge alignment required the partial demolition of the barge wharf, which reduced the berthing length along the barge wharf. This, combined with the proximity of the new bridge structure, prevents the use of the barge wharf for mooring barges.
2. A 75-foot section of the north end of the main wharf is too shallow for some vessels since it has never been dredged to the necessary -35 foot Mean Lower Low Water (MLLW) dredge depth due to its proximity to the former bridge.
3. The existing fender system is not designed to accommodate barges through all tidal ranges. Due to the loss of space at the barge wharf, barges must now use the main wharf and they cannot safely do so during all tide ranges with the current fender system.
4. The new bridge alignment reduced the available laydown area at the barge wharf.

Project Description

This project will consist of the following components:

- Construction of a new dock structure approximately 60 x 120 feet to extend the south end of the existing wharf.
- Construction of a new dock structure approximately 145 x 80 feet to extend the north end of the existing wharf.
- Installation of a new fender system along the length of the main wharf.
- Dredging of approximately 55,000 square feet of the river bed adjacent to the north end of the extended wharf.
- Relocation of the floating dock currently located off the north end of the wharf.
- Shoreside alterations, including soil and rock removal, grading, drainage, and paving within a 80,000-square foot area.

Wharf Extension

The two sections of proposed wharf will consist of concrete filled steel pipe piles with a reinforced concrete deck structure. Sockets will be drilled into bedrock for the pile installation. Steel piles will be

installed in the drilled holes, which will then be filled with concrete. The south extension will require a total of 35 piles, with 40-inch diameter sockets, and the north extension will require a total of 51 piles of the same diameter. The estimated area of direct impacts from the socketed piles is approximately 440 square feet. Socketed piles are the preferred method of pile installation due to the reduced underwater noise impacts.

Sections of seawall will be necessary along the shore at the two new sections of deck. The south extension retaining wall will be approximately 90 feet long. The wall will consist of steel sheet pile with a concrete cap and steel toe pins. The steel sheet pile wall will be driven to bedrock and be approximately 25 feet tall. The north extension retaining wall will be located between the existing steel sheet pile wall and the existing bridge abutment. The wall will be approximately 30 feet long and will be constructed of reinforced concrete with steel toe pins. The concrete will extend to bedrock and the wall will be approximately 18 feet high. The seawall for the north wharf extension will include a 1-foot thick concrete facing on the existing steel sheet pile wall and existing concrete bridge abutment. Seawall construction is expected to occur after March 15 and be approximately 3 months in duration.

Once the piles and abutments are in place, the cast-in-place pile caps and pre-cast deck planks will be installed. The south wharf extension will be approximately 9,600 square feet and the north extension approximately 13,600 square feet.

The existing fender system will be removed and replaced with a system that can accommodate all required uses of the facility. The proposed fender system will extend to -2 feet MLLW and be designed for both barges and larger vessels. The new fender system will be installed along the entire length of the extended wharf. The fender elements will consist of a rubber fender units, with a steel panel and ultra-high molecular weight polyethylene facing.

The deck elevation of the south extension will be +15.1 feet MLLW. This is approximately 1 foot higher than the existing main wharf and barge wharf, which will keep the pile caps out of the water at Mean Higher High Water (MHHW) and accommodate a possible rise in the sea level over the design life of the structure. The north extension deck elevation will be at +14.1 feet MLLW. This elevation will match the adjacent barge wharf and main wharf and provide smooth transitions between the structures, which will all now be connected. A deck elevation of +14.1 feet MLLW at this location will help make facility operations more efficient. Concrete ramps will be constructed between the existing wharf and the extensions.

Dredging

Dredging will occur within a 55,000 square foot area directly adjacent to the proposed northern wharf extension to a depth of -35 feet MLLW. The duration of dredging is anticipated to be approximately 3 months. Within the dredge area, a 10,000 square foot area will require blasting to remove approximately 1,000 cubic yards of rock. Blasting will occur to depths of up to 12 feet. The duration of blasting is anticipated to be approximately 2 to 4 weeks.

A total of approximately 17,000 cubic yards of sediment and rock will be removed from the dredge area, with sediment consisting primarily of sand and gravel. The Contractor will use an excavator or heavy clamshell bucket for removing sediment and debris and the material will be transported by a dredge scow. The preferred disposal site is the Cape Arundel Disposal Site located approximately 2.8 nautical miles southeast of Cape Arundel, Maine. The final determination of the disposal method is governed by the ACOE. The documentation has been submitted and a response from the agency is pending.

During blasting and dredging activities, the partial demolition of the former SML Bridge abutment and Pier 14 will be carried out in the area of the northern wharf extension. These structures are concrete and will be partially removed using a hydraulic breaker or similar equipment to break apart the concrete. Pier 14 will be removed down to 5 feet below mudline. The top of the bridge abutment as well as 1 foot of the exposed facing will also be removed. The remaining abutment will be incorporated into the proposed wharf structure. All concrete debris will be removed and disposed of in uplands.

Dredging, blasting, and the majority of concrete demolition will occur between November 15 and March 15. To minimize or avoid impacts to aquatic species, a blasting plan will be submitted by the Contractor for approval by the National Marine Fisheries Service prior to detonation of explosives. The following measures will be included in the blasting plan and implemented during blasting:

- Stemming and decking of individual charges;
- Staggered detonation of charges in a sequential blasting circuit;
- Blasting during periods of slack tide;
- Use of a fish detecting and startle system to avoid blasting when fish are present or transiting through the area;
- Use of sonar and the presence of a fisheries and marine mammal observer; and
- Prohibiting blasting during the passage of schools of fish or in the presence of marine mammals.

Floating Dock

An existing floating dock is located in the area of the northern wharf extension and will be relocated off the barge wharf. The dock will be 120 feet long and 13 feet wide (1,560 square feet). The floating dock will require seven rock socketed guide piles with 22-inch diameter sockets. The floating dock requires replacement of three concrete float modules with adequately sized internal guide pile assemblies. External guide pile assemblies will be attached to either end of the floating dock. The floating dock configuration will allow for berthing on either side.

Shoreside Work

The shoreside alterations will consist of the removal of approximately 6,000 cubic yards of soil, grading, and paving the area under the former location of the SML Bridge to increase laydown area by approximately 34,000 square feet, improve access to the barge wharf and small boat facilities, and provide shoreside access to the northern wharf extension. Two shoreside bollards will be installed to secure the forward lines of vessels. The existing shoreside bollards will remain in place. All shoreside work will be located above the Highest Observable Tide Line (HOTL) and will not require in-water work. All appropriate sedimentation and erosion control measures, including silt socks, inlet filters, and sediment traps, will be installed during construction to avoid impacts to the river.

Shoreside work will include grading and paving to direct stormwater to catch basins. The proposed stormwater system is designed to match the existing stormwater treatment devices located on the site. The northern area will be graded to direct stormwater to two new catch basins with double inlet grates for collection. The catch basins will drain to two new offline 6-foot diameter hydrodynamic vortex separators to provide stormwater treatment before discharging through headwalls into the Piscataqua River. The existing drainage on the barge wharf and surrounding areas will remain. The southern area will reestablish drainage with two new catch basins directing stormwater into the existing hydrodynamic vortex separator. Stormwater treatment areas are not proposed given the limited space available and also due to concerns with contaminated soils.

Tidal Buffer Zone and Protected Shoreland

The shoreside alterations described above will be located within the 100' tidal buffer zone and 250' protected shoreland of the Piscataqua River. The entire tidal buffer zone and protected shoreland within the project area is developed, consisting of approximately 6.5 acres of the existing Port of NH facility. Within this area, approximately 0.5 acre at the north end of the wharf is not currently paved. This area was located under the former Sarah Mildred Long Bridge and is sparsely vegetated with grass. There are no trees or saplings within the 250' protected shoreland. The grassed area is already used as a work area for the Port. The project proposes to pave this area to create a more suitable work area and to provide access to the northern wharf extension.

Area of the lot within 250' of the reference line (highest observable tide line) = 6.5 acres

Percentage of lot covered by pre-construction impervious area within 250' of the reference line = 97.5%

Percentage of lot to be covered by post-construction impervious area within 250' of the reference line upon completion of the project = 100%

As noted above, stormwater runoff will be collected in catch basins that will outlet into hydrodynamic vortex separators. The Port of NH is authorized under an EPA Industrial Multi-Sector General Permit. The facility has a robust maintenance program for stormwater structures.

Supplemental Project Description

**MARKET STREET MARINE TERMINAL (PORT OF NH)
FUNCTIONAL REPLACEMENT PROJECT
PORTSMOUTH 15731**

SUPPLEMENTAL NARRATIVE

Project Setting

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According to the NH Coastal Viewer (2019), the project area is not located within mapped shellfish habitat. The shoreline within the project consists of stone riprap. There is no salt marsh in the project area.

According to the NH Coastal Viewer (2019) eelgrass mapping, eelgrass has occurred in the vicinity of the action area in the past (mapped in 1996), with historic eelgrass beds located approximately 400 feet northwest of the wharf and approximately 1,200 feet to the northeast. However, as part of the SML Bridge replacement project, eelgrass surveys were performed on July 17, 2013 by MaineDOT dive crews in the vicinity of the proposed bridge, located just upstream of the action area. A two square foot patch of eelgrass was found on the Kittery, Maine side of the bridge and sporadic eelgrass shoots were identified on the Portsmouth side. In addition, a second eelgrass survey was completed using a ROV camera on September 11, 2013 in the area of the proposed dredge. This survey found sporadic eelgrass shoots but no collections of plants forming any beds. The 2017 eelgrass mapping does not show any eelgrass beds in or near the action area. Based on the 2017 mapping, the nearest eelgrass bed is located approximately 4,400 feet downstream of the action area along the north side of Pierce Island.

A 6.2-mile federal navigational channel, approximately 35 feet deep (-35 MLLW) and 400 to 600 feet wide, extends northwesterly from deep water between New Castle and Seavey islands to a turning basin in Newington, NH/Eliot, ME. The channel is maintained by the Army Corps of Engineers (ACOE). According to the ACOE, Portsmouth Harbor handles approximately 3.5 million tons of shipping a year for New Hampshire, eastern Vermont, and southern Maine. It is also used by submarines from the Portsmouth Naval Shipyard in Kittery, and is used extensively by a large lobstering fleet, local fishermen, excursion boats to the Isles of Shoals (9 miles offshore), and local and transient boats.

Project Purpose and Need

The proposed project is part of, and necessitated by, the replacement of the Sarah Mildred Long (SML) Bridge carrying US Route 1 Bypass over the Piscataqua River. The Market Street Marine Terminal is adjacent to the SML Bridge. Until recently, the bridge divided the port between the main wharf and the barge wharf. The bridge was recently replaced and a new alignment was selected to better accommodate current and future marine navigation. The new bridge now passes through the western end of the barge wharf. The new alignment required partial demolition of the wharf, blocked access to the boat ramp, and substantially reduced the berthing length along the barge wharf. The Federal Highway Administration (FHWA) through NHDOT is funding the functional replacement of the barge wharf to compensate for impacts caused by the new alignment of the SML Bridge. Functional replacement is a federally authorized method of right of way compensation for public facilities (23 CFR 710.509).

The purpose of this project is to replace the lost functionality of the barge wharf by incorporating that functionality into the main wharf. With the new bridge alignment, the barge wharf can no longer be used to moor barges and the available laydown area has been reduced.

The need for this project is evidenced by the following factors that prevent the main wharf in its current configuration from fully replacing the lost operational capacity of the barge wharf.

1. The new bridge alignment required the partial demolition of the barge wharf, which reduced the berthing length along the barge wharf. This, combined with the proximity of the new bridge structure, prevents the use of the barge wharf for mooring barges.
2. A 75-foot section of the north end of the main wharf is too shallow for some vessels since it has never been dredged to the necessary -35 foot Mean Lower Low Water (MLLW) dredge depth due to its proximity to the former bridge.
3. The existing fender system is not designed to accommodate barges through all tidal ranges. Due to the loss of space at the barge wharf, barges must now use the main wharf and they cannot safely do so during all tide ranges with the current fender system.
4. The new bridge alignment reduced the available laydown area at the barge wharf.

Project Description

This project will consist of the following components:

- Construction of a new dock structure approximately 60 x 120 feet to extend the south end of the existing wharf.
- Construction of a new dock structure approximately 145 x 80 feet to extend the north end of the existing wharf.
- Installation of a new fender system along the length of the main wharf.
- Dredging of approximately 55,000 square feet of the river bed adjacent to the north end of the extended wharf.
- Relocation of the floating dock currently located off the north end of the wharf.
- Shoreside alterations, including soil and rock removal, grading, drainage, and paving within a 80,000-square foot area.

Wharf Extension

The two sections of proposed wharf will consist of concrete filled steel pipe piles with a reinforced concrete deck structure. Sockets will be drilled into bedrock for the pile installation. Steel piles will be

installed in the drilled holes, which will then be filled with concrete. The south extension will require a total of 35 piles, with 40-inch diameter sockets, and the north extension will require a total of 51 piles of the same diameter. The estimated area of direct impacts from the socketed piles is approximately 440 square feet. Socketed piles are the preferred method of pile installation due to the reduced underwater noise impacts.

Sections of seawall will be necessary along the shore at the two new sections of deck. The south extension retaining wall will be approximately 90 feet long. The wall will consist of steel sheet pile with a concrete cap and steel toe pins. The steel sheet pile wall will be driven to bedrock and be approximately 25 feet tall. The north extension retaining wall will be located between the existing steel sheet pile wall and the existing bridge abutment. The wall will be approximately 30 feet long and will be constructed of reinforced concrete with steel toe pins. The concrete will extend to bedrock and the wall will be approximately 18 feet high. The seawall for the north wharf extension will include a 1-foot thick concrete facing on the existing steel sheet pile wall and existing concrete bridge abutment. Seawall construction is expected to occur after March 15 and be approximately 3 months in duration.

Once the piles and abutments are in place, the cast-in-place pile caps and pre-cast deck planks will be installed. The south wharf extension will be approximately 9,600 square feet and the north extension approximately 13,600 square feet.

The existing fender system will be removed and replaced with a system that can accommodate all required uses of the facility. The proposed fender system will extend to -2 feet MLLW and be designed for both barges and larger vessels. The new fender system will be installed along the entire length of the extended wharf. The fender elements will consist of a rubber fender units, with a steel panel and ultra-high molecular weight polyethylene facing.

The deck elevation of the south extension will be +15.1 feet MLLW. This is approximately 1 foot higher than the existing main wharf and barge wharf, which will keep the pile caps out of the water at Mean Higher High Water (MHHW) and accommodate a possible rise in the sea level over the design life of the structure. The north extension deck elevation will be at +14.1 feet MLLW. This elevation will match the adjacent barge wharf and main wharf and provide smooth transitions between the structures, which will all now be connected. A deck elevation of +14.1 feet MLLW at this location will help make facility operations more efficient. Concrete ramps will be constructed between the existing wharf and the extensions.

Dredging

Dredging will occur within a 55,000 square foot area directly adjacent to the proposed northern wharf extension to a depth of -35 feet MLLW. The duration of dredging is anticipated to be approximately 3 months. Within the dredge area, a 10,000 square foot area will require blasting to remove approximately 1,000 cubic yards of rock. Blasting will occur to depths of up to 12 feet. The duration of blasting is anticipated to be approximately 2 to 4 weeks.

A total of approximately 17,000 cubic yards of sediment and rock will be removed from the dredge area, with sediment consisting primarily of sand and gravel. The Contractor will use an excavator or heavy clamshell bucket for removing sediment and debris and the material will be transported by a dredge scow. The preferred disposal site is the Cape Arundel Disposal Site located approximately 2.8 nautical miles southeast of Cape Arundel, Maine. The final determination of the disposal method is governed by the ACOE. The documentation has been submitted and a response from the agency is pending.

During blasting and dredging activities, the partial demolition of the former SML Bridge abutment and Pier 14 will be carried out in the area of the northern wharf extension. These structures are concrete and will be partially removed using a hydraulic breaker or similar equipment to break apart the concrete. Pier 14 will be removed down to 5 feet below mudline. The top of the bridge abutment as well as 1 foot of the exposed facing will also be removed. The remaining abutment will be incorporated into the proposed wharf structure. All concrete debris will be removed and disposed of in uplands.

Dredging, blasting, and the majority of concrete demolition will occur between November 15 and March 15. To minimize or avoid impacts to aquatic species, a blasting plan will be submitted by the Contractor for approval by the National Marine Fisheries Service prior to detonation of explosives. The following measures will be included in the blasting plan and implemented during blasting:

- Stemming and decking of individual charges;
- Staggered detonation of charges in a sequential blasting circuit;
- Blasting during periods of slack tide;
- Use of a fish detecting and startle system to avoid blasting when fish are present or transiting through the area;
- Use of sonar and the presence of a fisheries and marine mammal observer; and
- Prohibiting blasting during the passage of schools of fish or in the presence of marine mammals.

Floating Dock

An existing floating dock is located in the area of the northern wharf extension and will be relocated off the barge wharf. The dock will be 120 feet long and 13 feet wide (1,560 square feet). The floating dock will require seven rock socketed guide piles with 22-inch diameter sockets. The floating dock requires replacement of three concrete float modules with adequately sized internal guide pile assemblies. External guide pile assemblies will be attached to either end of the floating dock. The floating dock configuration will allow for berthing on either side.

Shoreside Work

The shoreside alterations will consist of the removal of approximately 6,000 cubic yards of soil, grading, and paving the area under the former location of the SML Bridge to increase laydown area by approximately 34,000 square feet, improve access to the barge wharf and small boat facilities, and provide shoreside access to the northern wharf extension. Two shoreside bollards will be installed to secure the forward lines of vessels. The existing shoreside bollards will remain in place. All shoreside work will be located above the Highest Observable Tide Line (HOTL) and will not require in-water work. All appropriate sedimentation and erosion control measures, including silt socks, inlet filters, and sediment traps, will be installed during construction to avoid impacts to the river.

Shoreside work will include grading and paving to direct stormwater to catch basins. The proposed stormwater system is designed to match the existing stormwater treatment devices located on the site. The northern area will be graded to direct stormwater to two new catch basins with double inlet grates for collection. The catch basins will drain to two new offline 6-foot diameter hydrodynamic vortex separators to provide stormwater treatment before discharging through headwalls into the Piscataqua River. The existing drainage on the barge wharf and surrounding areas will remain. The southern area will reestablish drainage with two new catch basins directing stormwater into the existing hydrodynamic vortex separator. Stormwater treatment areas are not proposed given the limited space available and also due to concerns with contaminated soils.

Tidal Buffer Zone and Protected Shoreland

The shoreside alterations described above will be located within the 100' tidal buffer zone and 250' protected shoreland of the Piscataqua River. The entire tidal buffer zone and protected shoreland within the project area is developed, consisting of approximately 6.5 acres of the existing Port of NH facility. Within this area, approximately 0.5 acre at the north end of the wharf is not currently paved. This area was located under the former Sarah Mildred Long Bridge and is sparsely vegetated with grass. There are no trees or saplings within the 250' protected shoreland. The grassed area is already used as a work area for the Port. The project proposes to pave this area to create a more suitable work area and to provide access to the northern wharf extension.

Area of the lot within 250' of the reference line (highest observable tide line) = 6.5 acres

Percentage of lot covered by pre-construction impervious area within 250' of the reference line = 97.5%

Percentage of lot to be covered by post-construction impervious area within 250' of the reference line upon completion of the project = 100%

As noted above, stormwater runoff will be collected in catch basins that will outlet into hydrodynamic vortex separators. The Port of NH is authorized under an EPA Industrial Multi-Sector General Permit. The facility has a robust maintenance program for stormwater structures.

Chapter Env-Wt 400 Shoreline Structures

**MARKET STREET MARINE TERMINAL (PORT OF NH)
FUNCTIONAL REPLACEMENT PROJECT
PORTSMOUTH 15731**

CHAPTER ENV-WT 400 SHORELINE STRUCTURES

**CHAPTER ENV-WT 600 TIDAL WETLANDS, ENV-WT 606.03 DESIGN AND
CONSTRUCTION CRITERIA FOR PIERS, DOCKS, WHARVES, AND FLOATS**

Env-Wt 402.01 Configuration.

The project will extend the existing wharf structure to the north and south, parallel to the shoreline.

Env-Wt 402.03 Dimensions.

The project will be extending the existing permanent wharf in the Piscataqua River. The overall length of the existing wharf is 582 feet and the total length after construction will 787 feet. The Market Street Marine Terminal has over 1,800 feet of frontage along the river.

Env-Wt 402.04 Setbacks.

The wharf extensions will be located at least 20 feet from abutting properties.

Env-Wt 402.06 Permanent Docks.

Env-Wt 606.03 Piers, Docks, Wharves, and Floats Criteria.

The proposed project is located at the Port of NH, a public access, general cargo terminal that accommodates year-round operations for international trade. Vessels that use the waterfront facilities include bulk carries, liners, barges, and passenger vessels.

The Main Wharf is comprised of two concrete and steel structures. The southern 304 feet of wharf (built 1966) consists of a 47 foot wide concrete superstructure supported by steel caissons with a concrete encased steel pile (W section) core. Two access bridges, each approximately 54 feet long by 39 feet wide, connect the wharf to the shore side/backland facilities. The south access bridge was reconstructed in 2014 and the north access bridge is currently not operational. The northern 278 feet of wharf (built 1977) consists of a concrete superstructure supported by steel caissons with a concrete encased steel pile (W section) core and a steel sheet pile bulkhead. The berthing depth along the entire Main Wharf is approximately -35 feet based on MLLW, except along the northernmost 75 feet where it is shallower. The Main Wharf provides berthing for vessels transporting bulk cargo, general cargo, and container cargo as well as supporting special projects.

The two sections of proposed wharf will consist of concrete filled steel pipe piles with a reinforced concrete deck structure. The elevation of the south extension will be raised to 15.1 feet (MLLW datum) to account for anticipated sea level rise and each deck would ramp down to the existing deck. Sockets will be drilled into bedrock for the pile installation. Steel piles will be installed in the drilled holes, which will then be filled with concrete. The south extension will require a total of 35 piles, with a 40" diameter socket, and the

north extension will require a total of 51 piles of the same diameter. The estimated area of direct impacts from the socketed piles is approximately 440 square feet. Socketed piles are the preferred method of pile installation due to the reduced underwater noise impacts. To help prevent corrosion to the steel piles, sacrificial anodes will be installed at each pile. All piles will be coated with a marine grade coating system. Sections of seawall will be necessary along the shore at the two new sections of deck. The south extension retaining wall will be approximately 90 feet long. The wall will consist of a steel sheet pile with a concrete cap and steel toe pins. The steel sheet pile wall will be driven to bedrock and be approximately 25 feet tall. The north extension retaining wall will be located between the existing steel sheet pile wall and the existing bridge abutment. The wall will be approximately 30 feet long and will be constructed of reinforced concrete with steel toe pins. The concrete will extend to bedrock and the wall will be approximately 18 feet high. The seawall for the north wharf extension will include a 1-foot thick concrete facing on the existing steel sheet pile wall and existing concrete bridge abutment.

The main wharf extensions will be designed for 1,000 PSF live load in accordance with UFC 4-152-01, Table 3-2 Vertical Live Loads for Pier and Wharf Decks. A 15% impact factor, in accordance with UFC 4-152-01, is applied to vehicle and equipment loads in the design of the deck system and pile caps. An impact factor is not applied to Mobile Crane Outrigger Float Loads, uniform loads, or for the design of the piles. Wind loading is in accordance with ASCE 7-16. For wind on vessel, the velocity and has been converted to a 30 second gust at a height of 15 feet, which results in a 66 knot wind. Wind on structure was deemed negligible for this structure and therefore not considered. Waves are generally less than 3 feet in this location and determined to not control the design. The current in the Piscataqua River is significant. Based on studies completed by Appledore Marine Engineering, it was determined that the south wharf extension experiences the greatest current force. The max current was determined to be 5 knots at an angle of approximately 20 degrees horizontal to the berthing face.

Due to the design criteria required for the setting and use of the wharf, providing superstructures that do not completely shield the underlying area from direct sunlight is not feasible. Therefore, the entire footprint of the wharf extensions is considered a permanent impact due to habitat shading.

Mitigation Narrative

**MARKET STREET MARINE TERMINAL (PORT OF NH)
FUNCTIONAL REPLACEMENT PROJECT
PORTSMOUTH 15731**

MITIGATION NARRATIVE

Impacts to jurisdictional areas have been minimized to the extent practicable while still accomplishing the purpose and need of the project. The project requires compensatory mitigation for unavoidable permanent impacts to the Piscataqua River associated with replacing the lost functionality of the barge wharf at the Port of NH.

Proposed impacts have been discussed with State and Federal resource agencies at three NHDOT Natural Resource Agency Coordination Meetings (June 20, 2018, September 19, 2018, and August 21, 2019), as well as at a field review on April 2, 2019.

Based on coordination noted above, impacts that will require mitigation are as follows:

Dredging (55,000 sq ft)

North Extension, South Extension, Floating Dock (375 linear feet)

Proposed impacts are located along the southern shore of the Piscataqua River adjacent to existing infrastructure at the Market Street Marine Terminal. Impacts overlap with areas previously impacted by the Sarah Mildred Long Bridge replacement project. The shoreline within the project consists of stone riprap. No salt marsh will be impacted.

Proposed mitigation was discussed at the August 2019 NHDOT Natural Resource Agency Meeting. In addition, NHDES and the City of Portsmouth discussed mitigation in June 2019. Funding toward the completion of the Cutts Cove living shoreline restoration project is proposed as mitigation for impacts resulting from the functional replacement project.

Cutts Cove is located approximately 500 feet to the southwest of the Port of NH. The purpose of the restoration effort is to enhance mudflat habitat and replace an armored shoreline with salt marsh and natural tidal buffer zone that will allow for salt marsh migration as sea levels rise. The shoreline is located along the Portsmouth Gateway Park. The overall project is 800 LF of shoreline; 200 LF has been completed to date using an ARM fund grant.

The following table summarizes the anticipated functions and values provided by the Cutts Cove restoration. Numbers are approximate. A detailed restoration plan is enclosed.

Habitat	Functions & Values	Total proposed project	Completed to date	Remaining to be completed
Mudflat	Aquatic habitat	60,000 SF	60,000 SF	0
Salt marsh	Wildlife habitat, aquatic habitat, sediment trapping	30,840 SF (800 LF)	10,840 SF (200 LF)	24,000 SF (600 LF)
TBZ	Wildlife habitat, marsh migration	6,500 SF	2,300 SF	4,200 SF

The Cutts Cove restoration project is located on the Piscataqua River in close proximity to the proposed impacts at the Port of NH. The restoration effort will create and enhance tidal habitat, provide shoreline protection, and create educational opportunities that can benefit the City of Portsmouth Gateway Park. For these reasons, State and Federal agencies and the City of Portsmouth have stated their support for providing funding toward the completion of the Cutts Cove Living Shoreline restoration project as mitigation for the proposed impacts at the Port of NH.

**MARKET STREET MARINE TERMINAL (PORT OF NH)
FUNCTIONAL REPLACEMENT PROJECT
PORTSMOUTH 15731**

MITIGATION NARRATIVE

Funding the completion of the Cutts Cove restoration plus 5 years of post-construction monitoring will be provided as permittee responsible mitigation in combination with funding provided under NHDES Permit 2021-02950.

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MEETING NOTES

PROJECT: Portsmouth 15731
Pease Development Authority
Main Pier Functional Replacement

DATE OF MEETING: August 21, 2019

LOCATION: NHDOT Bureau of Environment Conference Room

SUBJECT: Natural Resource Agency Coordination Meeting – DRAFT minutes

PROJECT REPRESENTATIVES:

NHDOT: Wendy Johnson, Bob Landry, Marc Laurin
Appledore Marine Engineering: Noah Elwood
McFarland Johnson: Christine Perron

NOTES ON MEETING:

Christine Perron introduced the project, which involves the functional replacement of the barge wharf at the NH Port Authority Market Street Marine Terminal in Portsmouth to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge. The project has been discussed at past meetings, as well as at a site review in April 2019 at the Port of NH. The purpose of today's discussion is to review permitting and mitigation.

Photos and site plans were reviewed. The project consists of:

- New wharf sections approximately 145 feet to the north and 60 feet to the south of the existing main wharf, requiring a total of 75 piles.
- Sections of sea wall will be necessary along the shore at the two new sections of deck.
- The small floating dock located to the north of the main wharf will be relocated.
- Dredging along the north end of the main wharf within a historically shallow area.
- Shoreside improvements including drainage, grading, and paving.

The status of the environmental review process was provided. Informal consultation on federally listed species was carried out and NOAA concurs with the determination that the project is not likely to adversely affect listed species or critical habitats. An Essential Fish Habitat Assessment was completed and NOAA provided conservation recommendations. Mike Johnson noted that he needed a response from FHWA on the recommendations he provided in order to conclude EFH consultation. Section 106 consultation on historic resources is complete. A NEPA document was prepared and FHWA recently issued concurrence on the NEPA document, signifying that the NEPA process is complete. This allows the project to move into final design and permitting.

Impacts below the Highest Observable Tide Line (HOTL) were reviewed:
Seawalls 1,280 SF

Piles 400 SF
Dredging = 55,000 SF

Dredge/fill impacts below HOTL total 56,680 SF (1.3 acres). The footprint of the new wharf sections will result in shading; this footprint totals 24,750 SF (0.6 acres).

Required permits were reviewed. The project will require a major impact Dredge & Fill permit from NHDES. It has been assumed that an Individual Section 404/Section 10 Permit would be required from the Corps. Mike Hicks asked C. Perron to send him plans via email so that he could discuss the project internally and confirm the need for an Individual Permit. He would also confirm the need for Section 408 approval due to the proximity of the project to the federal navigational channel. He noted that the Section 408 approval process would be separate from the Section 404 process.

If an Individual Permit is required from the Corps, the project will also require an individual Water Quality Certificate and a coastal zone consistency finding. Additional State permits will consist of a Shoreland Permit for impacts between the tidal buffer zone and 250' protected shoreland limit, as well as an Alteration of Terrain permit. Dave Price noted that impacts within the tidal buffer zone would also need to comply with Shoreland requirements.

There has been initial coordination with the US Coast Guard. No permits will be needed from the Coast Guard, but they will be kept informed of the project as it moves forward.

M. Hicks asked where the dredged material would be taken. C. Perron responded that the current plan is to take the material to Cape Arundel, an offshore disposal site.

D. Price asked if the wharf infill project would be included in permit applications. C. Perron explained that the infill is part of a separate project that consists of the rehabilitation of the main wharf and constructing a deck over the small area of open water between the shoreline and the main wharf. That project has funding from a different federal agency and has independent utility from the functional replacement project. The projects are also on different timelines. For these reasons, permitting for the two projects will remain separate.

Impacts requiring mitigation were reviewed. The total area of impact requiring mitigation is as follows:
Seawalls 1,280 SF
Dredging 55,000 SF
Wharf expansions (footprint of new wharf sections less the area of new piles to avoid double counting impacts) = 24,350 SF

A bridge pier from the Sarah Mildred Long bridge remains in the area of the northern wharf extension. The pier will be removed as part of this project. Since the footprint of the pier (525 SF) should not be considered an impact since it's a manmade structure, this area will be removed from the impact totals.

Based on the above impacts, the project will require mitigation for 80,105 SF (1.84 ac) of impact below HOTL.

To determine the monetary value of required mitigation, Lori Sommer confirmed that the impact from dredging should be entered into the ARM fund calculator as square feet of impact to a tidal resource. Remaining impacts will likely be entered as linear feet of impact to the river. Impacts will be reviewed in more detail with Lori to determine the most appropriate way to break out impacts for mitigation.

Proposed mitigation was reviewed. Funding toward the completion of the Cutts Cove living shoreline restoration project is proposed as mitigation for impacts resulting from the functional replacement project. Cutts Cove is located nearly adjacent to the Port of NH. The purpose of the restoration effort is to enhance mudflat habitat and replace an armored shoreline with salt marsh and natural tidal buffer zone that will allow for salt marsh migration as sea levels rise. The shoreline is located along the proposed Portsmouth Gateway Park, scheduled to be completed this fall. The City of Portsmouth supports providing funding toward completing the restoration project and prefers that the work be completed this spring. The overall project is 800 LF of shoreline; 200 LF has been completed to date using an ARM fund grant.

The following is a summary of the Cutts Cove restoration:

Habitat	Functions & Values	Total proposed project	Completed to date	Remaining
Mudflat	Aquatic habitat	90,000 SF	~60,000 SF	~30,000 SF
Salt marsh	Wildlife habitat, aquatic habitat, sediment trapping	30,840 SF (800 LF)	~10,840 SF (200 LF)	~20,000 SF (600 LF)
TBZ	Wildlife habitat, marsh migration	11,500 SF	~2,300 SF	~9,200 SF

If there is agreement on using Cutts Cove as mitigation, the funding of Cutts Cove would be described in the permit application for the wharf project and the permit would be conditioned on the completion of the portion of the living shoreline project that is funded. The permit would specify this amount of funding would be the “not to exceed” dollar amount for mitigation.

M. Johnson asked if the Cutts Cove restoration completed to date meets mitigation criteria for impacts associated with the Sarah Mildred Long bridge project. C. Perron and L. Sommer clarified that mitigation for the SML project was completed via an in-lieu fee to the ARM Fund. UNH then applied for an ARM grant for Cutts Cove.

L.Sommer noted that funding for the next phase of Cutts Cove would go directly to UNH and would be considered permittee responsible mitigation for the Port of NH project. She stated that completing the restoration would be a great benefit to the area and would result in one of the largest living shoreline restoration efforts in the state. The funding level would be based on the ARM fund payment calculated for proposed impacts, and the permit would specify this amount as the “not to exceed” dollar amount for mitigation.

D. Price noted that the Cutts Cove project already has a permit for the entire 800 LF. UNH will likely need to amend the City of Portsmouth permit received for the park in order to allow for access to complete the shoreline project.

M. Hicks stated that he thought the proposed mitigation was reasonable.

It was noted that Mark Kern was not in attendance to comment on mitigation. C. Perron offered to follow up with Mark via email.

M. Johnson noted that he has no concerns with using Cutts Cove for mitigation for the functional replacement project. He stated that it met all criteria for mitigation, was adjacent to the impacts, the restoration was already underway, and it would result in good ecological outcomes.

D. Price commented that Chris Williams from the Coastal Program was not able to attend the meeting but did want to extend an invitation for the project to be presented again at the next Dredge Task Force meeting. Noah Elwood agreed that this would be beneficial and would follow up with Chris.

Christine J. Perron

From: Kern, Mark <kern.mark@epa.gov>
Sent: Tuesday, September 3, 2019 3:04 PM
To: Christine J. Perron
Cc: Sommer, Lori
Subject: RE: Portsmouth 15731 - Port of NH functional replacement project

Hi Christine,

Thanks for keeping me in the loop. Yes, the approach seems fair and reasonable to me. I support the approach taken by Lori and others.

Thanks, Mark

From: Christine J. Perron <CPerron@mjinc.com>
Sent: Tuesday, August 27, 2019 8:19 AM
To: Kern, Mark <kern.mark@epa.gov>
Subject: Portsmouth 15731 - Port of NH functional replacement project

Good morning Mark,

We discussed mitigation for the functional replacement project at the Port of NH at last week's resource agency meeting. Draft minutes from the meeting are attached. I'm also attaching an email from Mike Hicks that I received from him after the meeting confirming that the project will require an Individual Permit.

Funding the completion of the Cutts Cove living shoreline restoration project is proposed as mitigation for impacts resulting from the functional replacement project. More details are in the meeting minutes. Do you support moving forward with this? I can send you more information or discuss over the phone if that would be helpful.

To keep the project on schedule, and also to ensure that mitigation can be carried out as proposed, we are planning to start submitting permit applications in late September.

Thanks Mark!
Christine

Christine Perron, CWS
Project Manager • Senior Environmental Analyst
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Mitigation Plan for the BUILD Main Pier Rehabilitation

Phase II Multi-Habitat Restoration at Cutts Cove, Portsmouth, NH

Project Narrative

Project Description

Through a partnership with the City of Portsmouth, NH the PDA-DPH will fund “Phase II” of Cutts Cove that began in 2017 (Phase I). Cutts Cove has a variety of habitats that are absent or poorly functioning. This mitigation plan addresses enhancing the diversity and quality of shoreline salt marsh and tidal buffer habitat. It should be noted the permits for the entire shoreline restoration (approximately 600 feet of shoreline) were acquired in 2016. Only 200 feet of that shoreline was restored in 2017. The permit was to expire in 2021, but was granted a 5-year extension (permit #2016-01460).

Phase II efforts will include additional salt marsh and tidal buffer creation, specifically approximately 24,000 square feet of salt marsh area and 4,200 square feet of tidal buffer zone area. These coastal habitat areas will be created where there is an existing rip rap embankment in Cutts Cove, westward of the salt marsh/tidal buffer restoration completed in 2017.

This mitigation project consists of first removing the existing rip rap, placing that on seaward mudflat, using some of the rip rap for the seaward sill, filling to appropriate elevations (Mean tide to mean high water), and planting. Further details include: coir mattress between sill stone and marsh (to prevent soil piping), coir mattress along the most seaward marsh surface (to prevent erosion), modified (terraced) slopes (to keep the marsh surfaces at slopes less than 4%), and embedded coir logs partially exposed in the salt marsh placed parallel to the shoreline (for inspection and to gain elevation), minor upland grading to direct stormwater flows, and buried boulders to allow continued, seepage from the existing bank.

As background, during the construction of the Market Street Extension many years ago, a wide swath of intertidal mudflat was filled and armored with a wall of rip-rap composed mostly of shale. This armored slope ranges from 10-12 feet (3-3.5 m) in height. The City of Portsmouth was given the land by the NHDOT and the City developed plans to create a City Park as a symbolic gateway to Portsmouth. That Park construction was completed summer 2021. In order to complete the Cutts Cove salt marsh restoration, access is necessary across the new Park, and upon completion of the construction, repairs shall be made to the Park.

Much of the new habitat creation will stem from conversion of the upper portion of the armored shoreline through re-grading (Figure 1), and thus will connect the new tidal salt marsh to the adjacent tidal buffer zone extending from Michael Succi Drive approximately 325 feet eastward toward a pre-existing salt marsh, and additionally removing the rip rap behind the pre-existing salt marsh and creating tidal buffer zone habitat there (approximately 210 feet) [see Figure 2.].

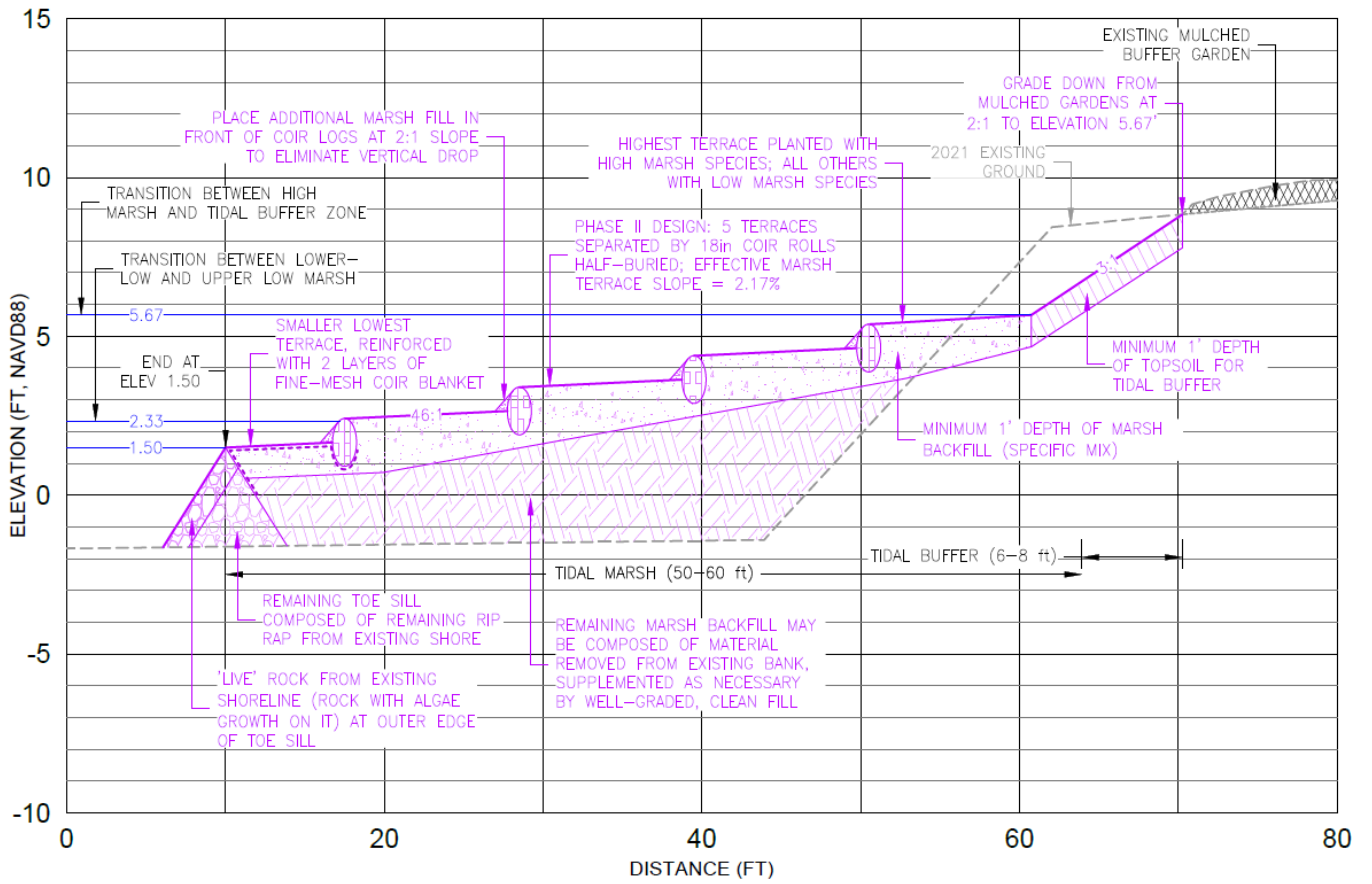


Figure 1. Schematic of re-graded shoreline. Green cross-hatched area is the existing shoreline grade.

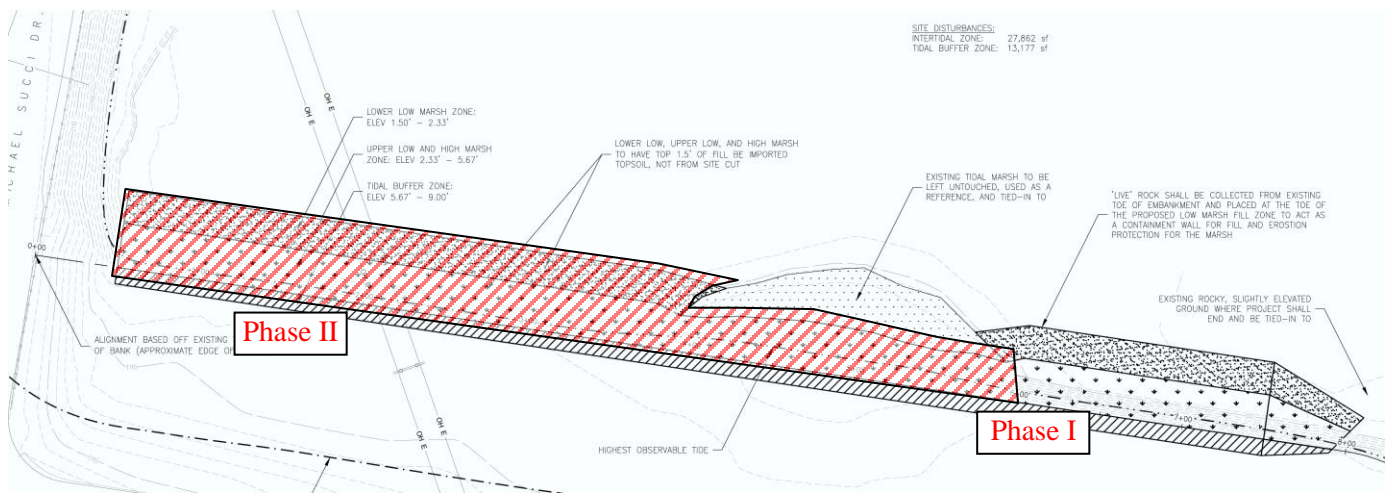


Figure 2. Proposed (Phase II) and Completed (PHASE I) salt marsh and tidal buffer zone restorations at Cutts Cove.

Project Objectives

The Cutts Cove Phase II mitigation project will replace the upper portion of an armored shoreline in Portsmouth with new salt marsh and tidal buffer zone (Figure 2).

Objectives include:

- Removal of 400 linear feet of armoring along the western Cutts Cover shoreline
- Creation of an intertidal salt marsh (24,000 sq ft)
- Improved (created) Tidal Buffer Zone (TBZ; 4,200 sq ft) with functional connections to marsh and upland along 535 feet of artificial shoreline

Because the work is planned on State lands (mudflat) and land dedicated by the City to be a park, the area will be protected from development in perpetuity. Currently the site does not support marsh migration because of the rip-rap wall that extends from the mudflat to several feet above the high tide line.

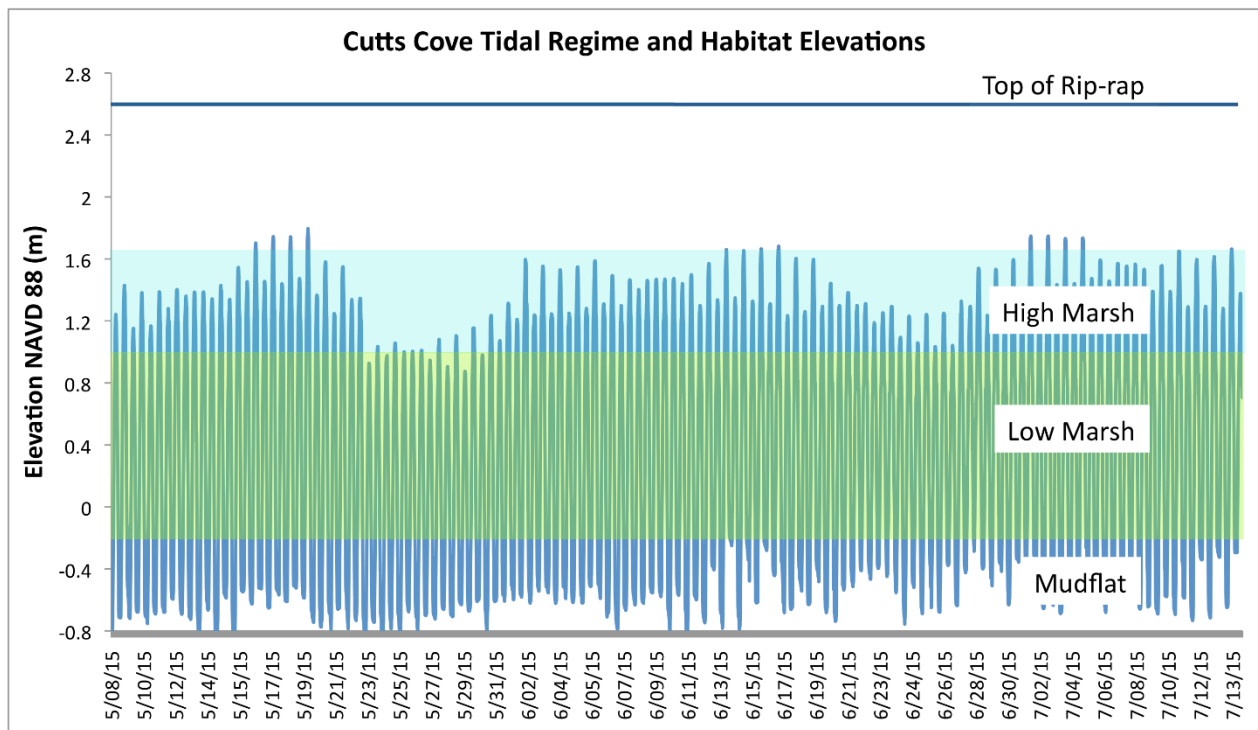


Figure 3. Elevations of existing habitats and top of rip-rap superimposed on the tidal regime at Cutts Cove.

Proposed Results

- Establishment of a rock sill (2.5 – 3.0 feet in height) at the shoreward edge to protect the tidal marsh water edge, and tidal marsh that will protect the shoreline from erosive forces;
- 50% plant survival by year two across 24,000 sq ft of tidal salt marsh habitat;
- Vegetated tidal buffer zone (4,200 sq ft) for future marsh migration;
- Sediments stabilized across all work areas;

Site Construction and Protection

For the shoreline re-grading into high marsh and tidal buffer zone, sediment barriers of appropriate scale will be installed along the lower edge of the project area to reduce sediments moving from the construction zone to the mudflat. A biodegradable, linear, compost-filled sediment barrier will be placed between remaining rip-rap and upland areas to control run-on to the construction area and minimize erosion from this run-on.

The salt marsh is then constructed by moving rip rap onto the mudflats and filling over it. In this way the excavator may track walk over the fill to construct the sill. Then select fill is added to bring the site to grade. Grading is continued through the tidal buffer zone and matched to the finished grades of the City Park.

Salt marsh and tidal buffer zone plants will be obtained from NE Wetland Plants and planted at appropriate elevations at 1-foot centers within four weeks of the completion of construction. No invasive species that could colonize the intertidal zone were found in Cutts Cove, though common reed has been growing at intertidal locations south of Market Street Extension (by the submarine museum) for over 20 years (personal observation, Burdick). The plant species and density for the tidal buffer zone will be developed in conjunction with the landscape plan for the City Gateway Park. Runoff in the high marsh and tidal buffer zone will be reduced by mulching. In addition, coir logs buried in the saltmarsh zone, parallel to the shoreline, are employed to provide more permanent erosion control until plants fully populate the site.

Opportunities to utilize local area students or other local volunteers for planting will be sought. A smaller project on Mill Pond Way in Portsmouth restored a marsh shoreline through removal of construction rubble and re-grading and planting by students (fifth grade) and adult volunteers (Advocates for the North Mill Pond). Survival after one month was 89% for the low marsh and 84% for the high marsh plants (Burdick 2011). Cutts Cove Phase 1 used students and citizen volunteers to complete the planting there.

For the first few months, the site will be inspected weekly for problems with erosion and sediment movement. Evidence of erosion from tides and rainfall will be documented and repaired immediately.

Monitoring will be conducted seasonally and following potentially damaging weather events for five years after construction is completed (five full growing seasons per US Army Corps of Engineers permit requirements). Any shoots of common reed will be identified, and such shoots and rhizomes will be removed and disposed of properly. The tidal buffer zone will be mulched and weeded to remove and control invasive plants. A monitoring contract will be developed with the University of New Hampshire after project completion.

Wetland Functions

Functions of the enhanced mudflat and tidal marshes were discussed previously. Burdick compared the current rip-rap wall to the planned tidal marsh and buffer zone using the Coastal Method. Overall, the differences between the two come from transforming a near vertical rip-rap wall that extends up to three feet above spring high tide with little habitat (Norway rats), aesthetic and educational value to one with a vegetated gentler slope, habitat for fish and birds, improved aesthetic quality and of high educational potential for the life of the project (5 years) and beyond. The Coastal Method did not include mudflat habitat, but we described expected benefits to the habitat earlier.

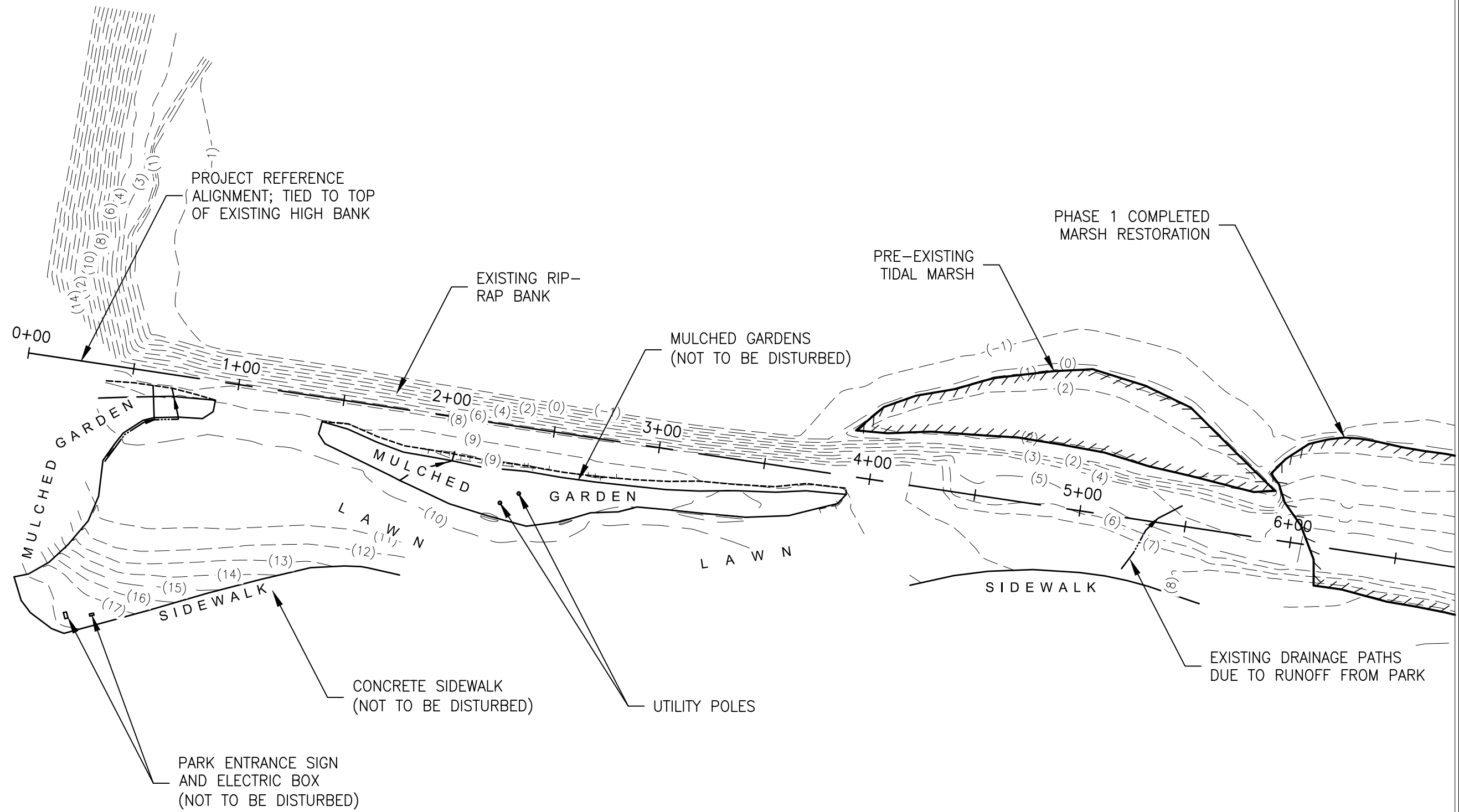
Table 1. Relative functions of rip-rap compared to marsh shorelines.

Function	Average Functional Index	
	Rip-rap Shoreline	Restored Tidal Marsh
1a. Ecological Integrity of wetland	0.53	0.75
1b. Ecological Integrity of surroundings	0.33	0.33
2. Shoreline anchoring	0.10	0.50
3. Storm Surge protection	0.10	0.10
4. Habitat	0.27	0.42
5. Water Quality maintenance	0.37	0.50
6. Recreation potential	0.44	0.75
7. Aesthetic quality	0.27	0.48
8. Education potential	0.35	0.73
9. Noteworthiness	0.28	0.64

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- Weiss, H.M., 1995. Marine animals of southern New England and New York: Identification keys to common nearshore and shallow water macrofauna. Bulletin, vol. 115. State Geological and Natural History Survey of Connecticut. Department of Environmental Protection.

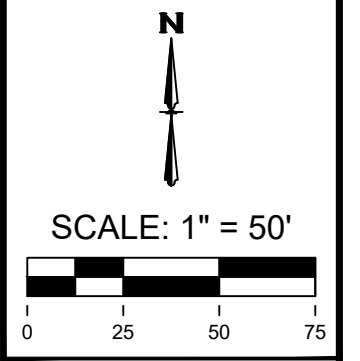
PRELIMINARY, NOT FOR CONSTRUCTION



DESIGNED BY:	JCB, TPB
DRAWN BY:	JCB
CHECKED BY:	TPB
DATE:	01 FEB 2022

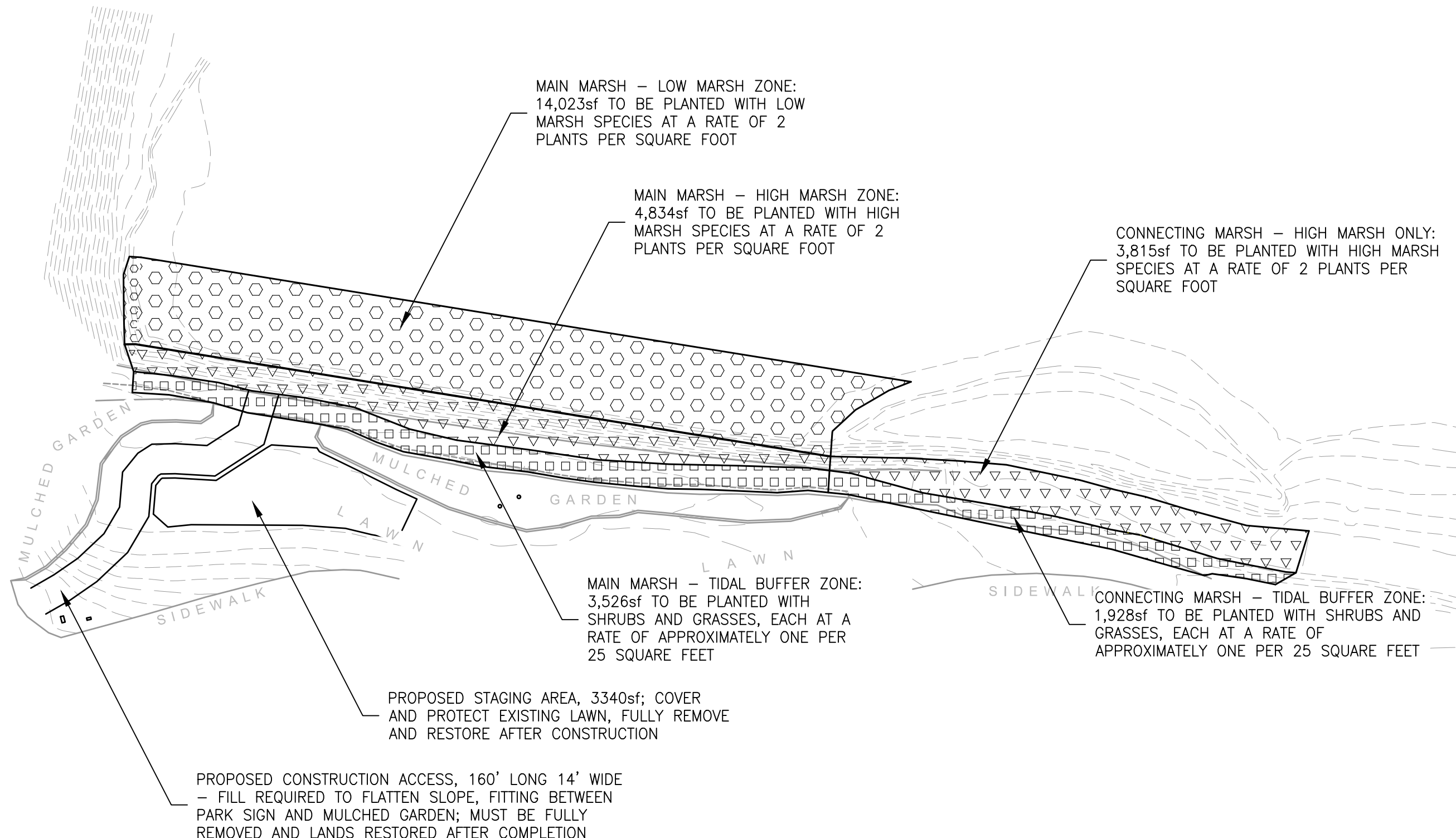


SHEET TITLE:	EXISTING SITE OVERVIEW
SHEET SET:	CONSTRUCTION BID PLAN SHEETS
PROJECT NAME:	CUTTIS COVE TIDAL RESTORATION PHASE II
PROJECT LOCATION:	CUTTIS COVE, PORTSMOUTH, NH



SHEET ID:	X-OVIEW
SHEET NUMBER:	01 OF 08

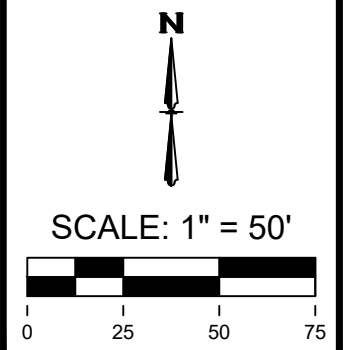
PRELIMINARY, NOT FOR CONSTRUCTION



DESIGNED BY: JCB, TPB
 DRAWN BY: JCB
 CHECKED BY: TPB
 DATE: 01 FEB 2022

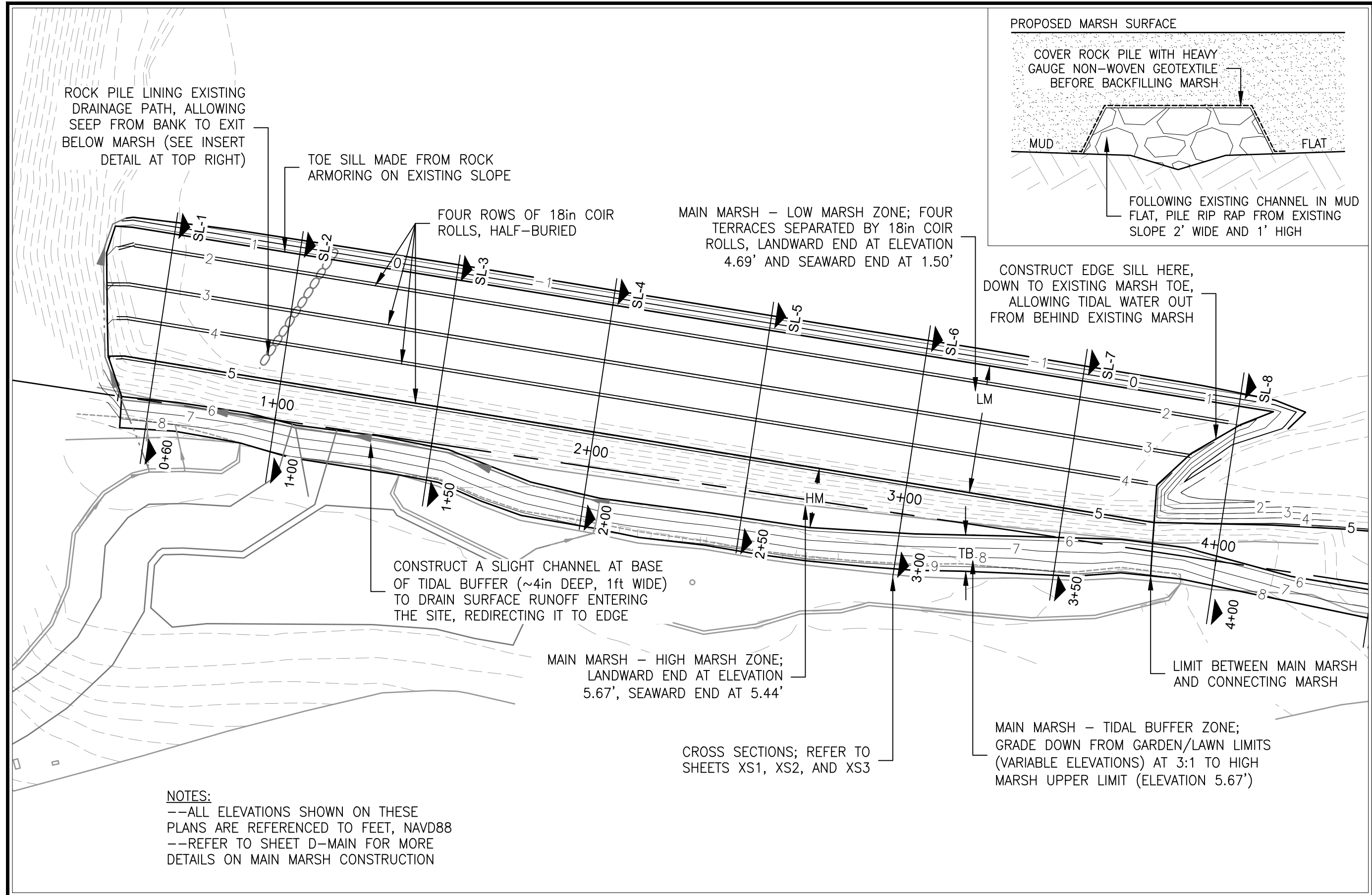


SHEET TITLE: PHASE II DESIGN OVERVIEW
 SHEET SET: CONSTRUCTION BID PLAN SHEETS
 PROJECT NAME: CUTTS COVE TIDAL RESTORATION PHASE II
 PROJECT LOCATION: CUTTS COVE, PORTSMOUTH, NH



SHEET ID: P-OVIEW
 SHEET NUMBER: 02 OF 08

PRELIMINARY, NOT FOR CONSTRUCTION



DESIGNED BY:	JCB, TPB
DRAWN BY:	JCB
CHECKED BY:	TPB
DATE:	01 FEB 2022

SHEET TITLE: MAIN MARSH DESIGN

SHEET SET: CONSTRUCTION BID PLAN SHEETS

PROJECT NAME: CUTTS COVE TIDAL RESTORATION PHASE II

PROJECT LOCATION: CUTTS COVE, PORTSMOUTH, NH

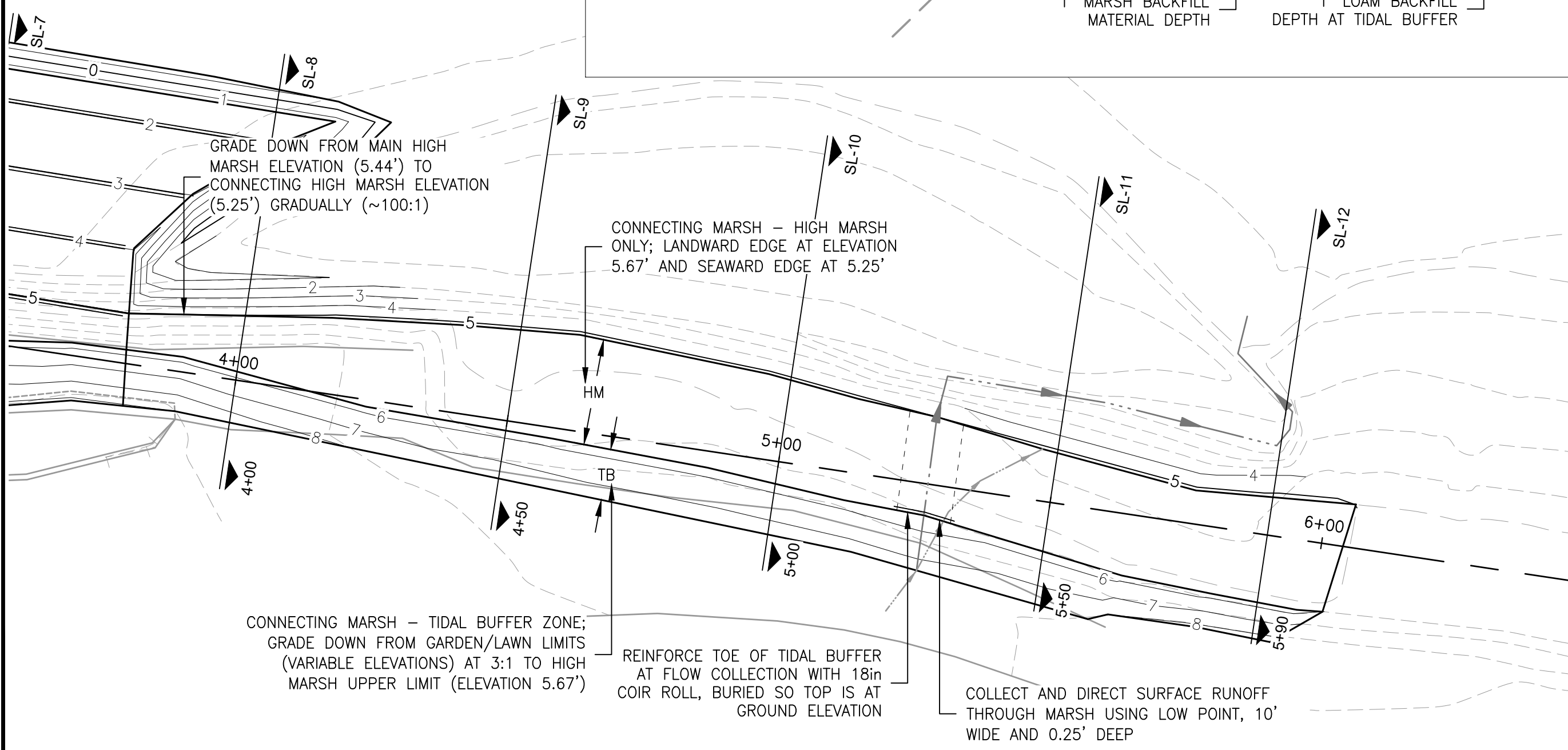
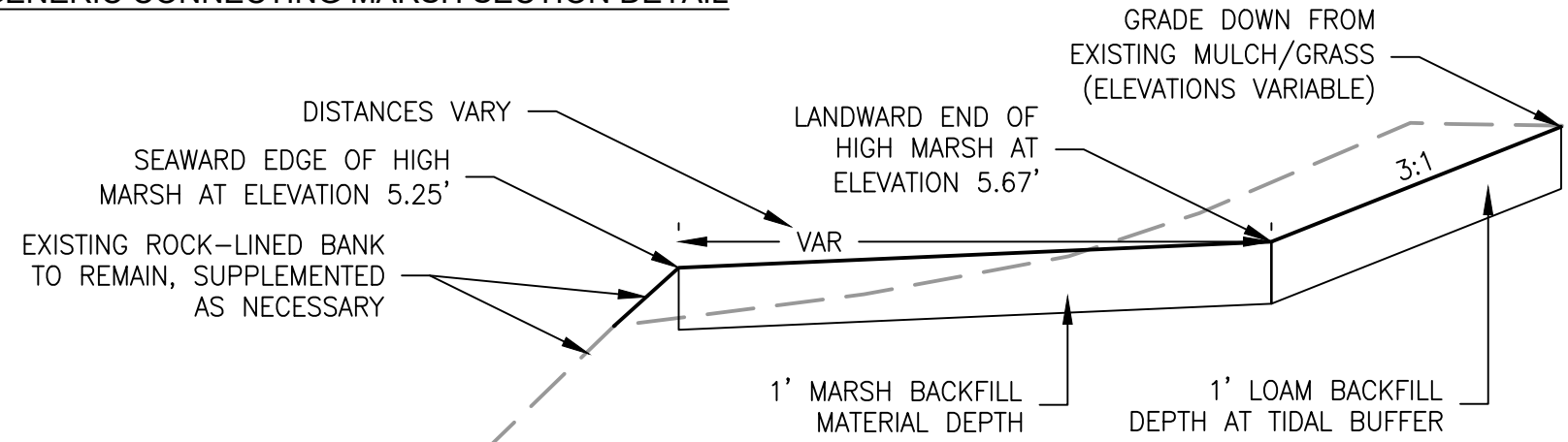
SCALE: 1" = 30'

SHEET ID: MAIN

SHEET NUMBER: 03 OF 08

PRELIMINARY, NOT FOR CONSTRUCTION

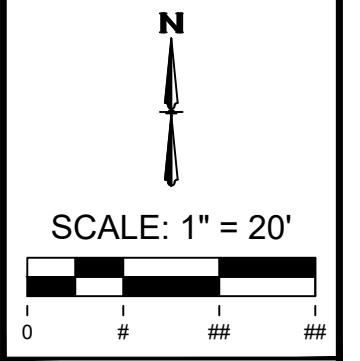
GENERIC CONNECTING MARSH SECTION DETAIL



DESIGNED BY:	JCB, TPB
DRAWN BY:	JCB
CHECKED BY:	TPB
DATE:	01 FEB 2022



SHEET TITLE:	CONNECTING MARSH DESIGN
SHEET SET:	CONSTRUCTION BID PLAN SHEETS
PROJECT NAME:	CUTTIS COVE TIDAL RESTORATION PHASE II
PROJECT LOCATION:	CUTTIS COVE, PORTSMOUTH, NH



SHEET ID:	CNCT
SHEET NUMBER:	04 OF 08

PRELIMINARY, NOT FOR CONSTRUCTION

DESIGNED BY: JCB, TPB
 DRAWN BY: JCB
 CHECKED BY: TPB
 DATE: 01 FEB 2022

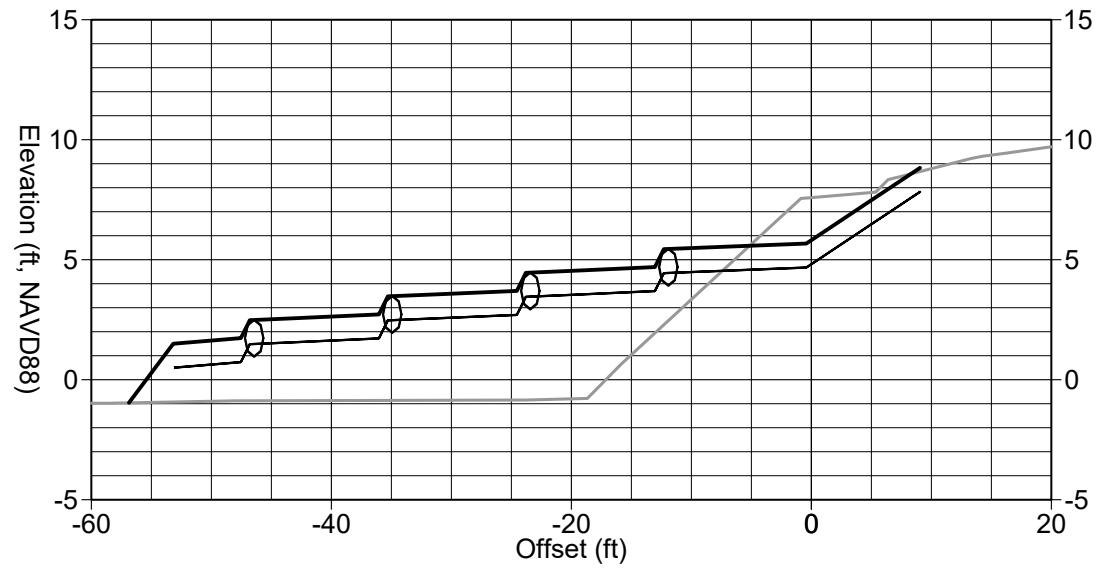


SHEET TITLE: CROSS SECTION SHEET 1
 SHEET SET: CONSTRUCTION BID PLAN SHEETS
 PROJECT NAME: CUTTS COVE TIDAL RESTORATION PHASE II
 PROJECT LOCATION: CUTTS COVE, PORTSMOUTH, NH

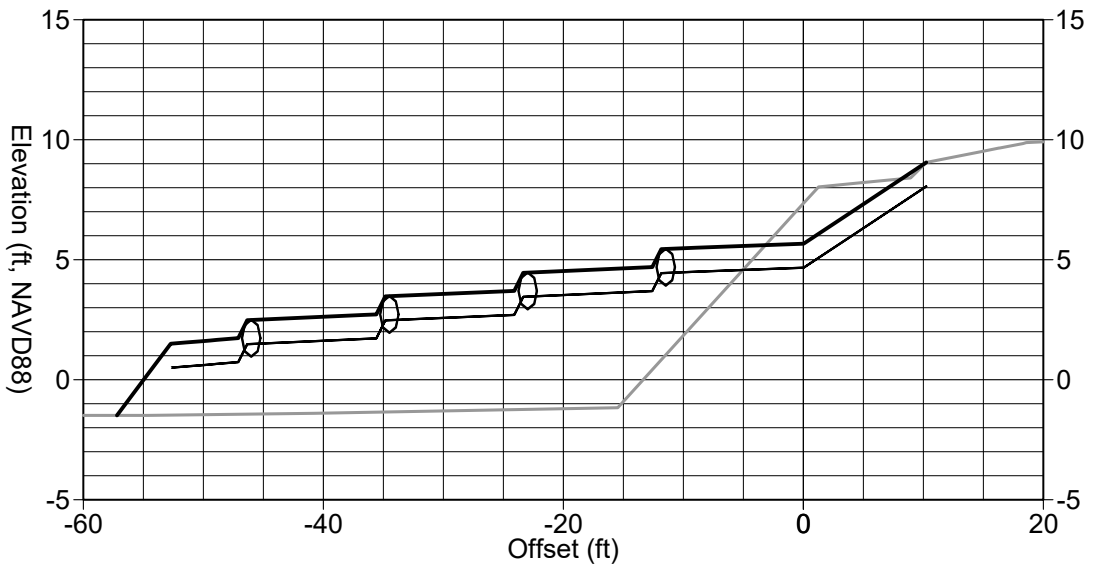
2:1 VERTICAL EXAGGERATION
 SCALE: 1" = 16'

SHEET ID: XS1
 SHEET NUMBER: 05 OF 08

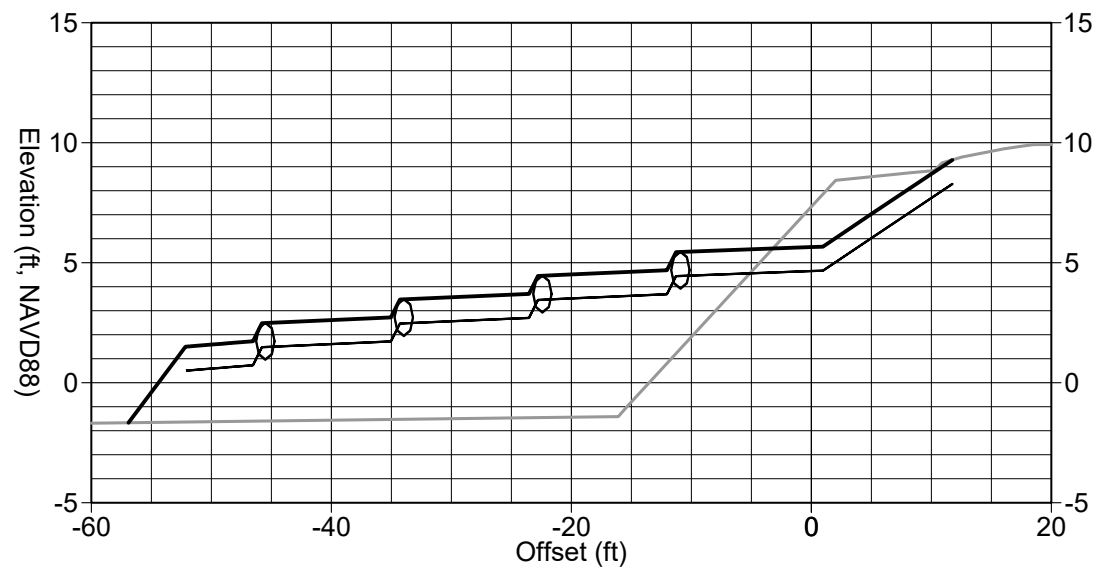
SL-1 0+60.00



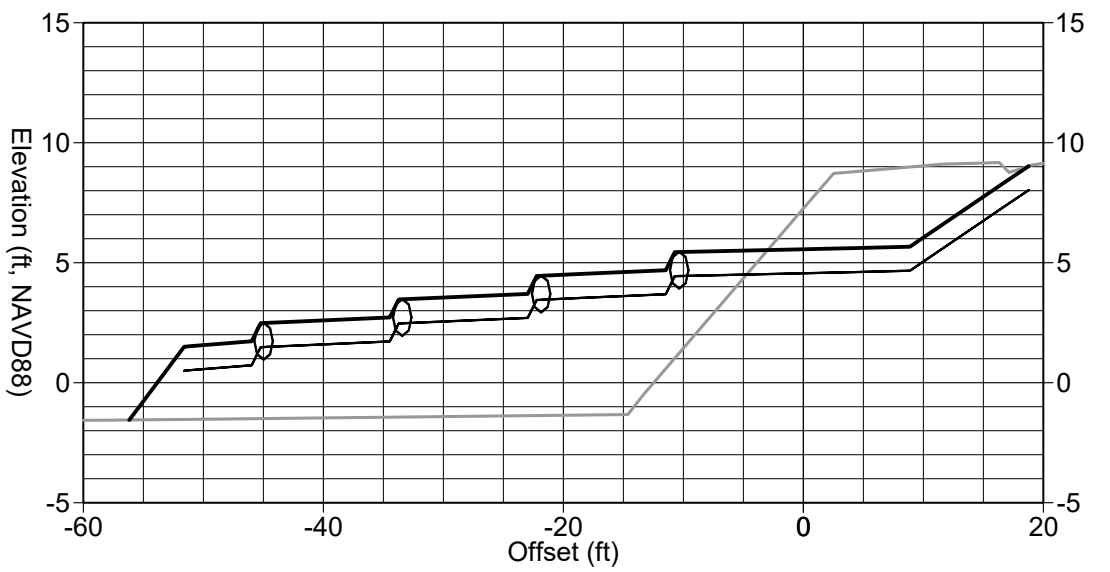
SL-2 1+00.00



SL-3 1+50.00



SL-4 2+00.00



PRELIMINARY, NOT FOR CONSTRUCTION

DESIGNED BY: JCB, TPB
 DRAWN BY: JCB
 CHECKED BY: TPB
 DATE: 01 FEB 2022

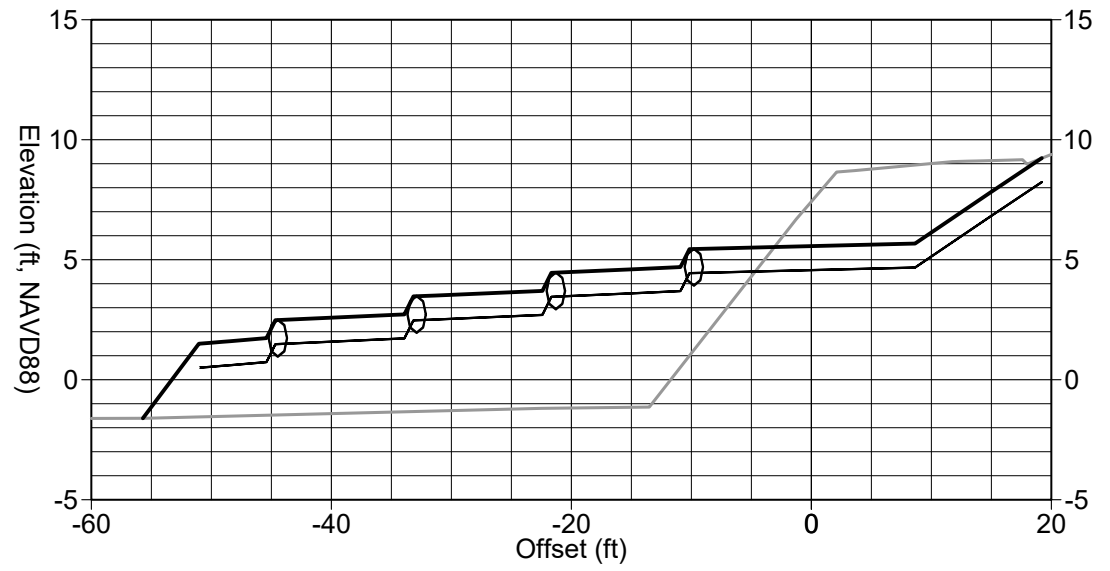


SHEET TITLE: CROSS SECTION SHEET 2
 SHEET SET: CONSTRUCTION BID PLAN SHEETS
 PROJECT NAME: CUTTS COVE TIDAL RESTORATION PHASE II
 PROJECT LOCATION: CUTTS COVE, PORTSMOUTH, NH

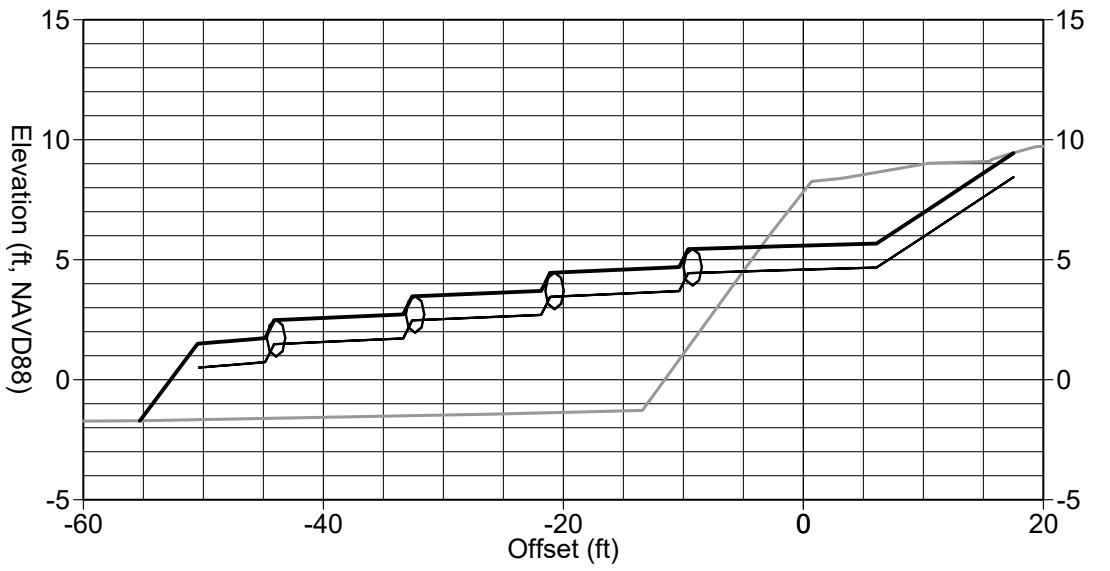
2:1 VERTICAL EXAGGERATION
 SCALE: 1" = 16'

SHEET ID: XS2
 SHEET NUMBER: 06 OF 08

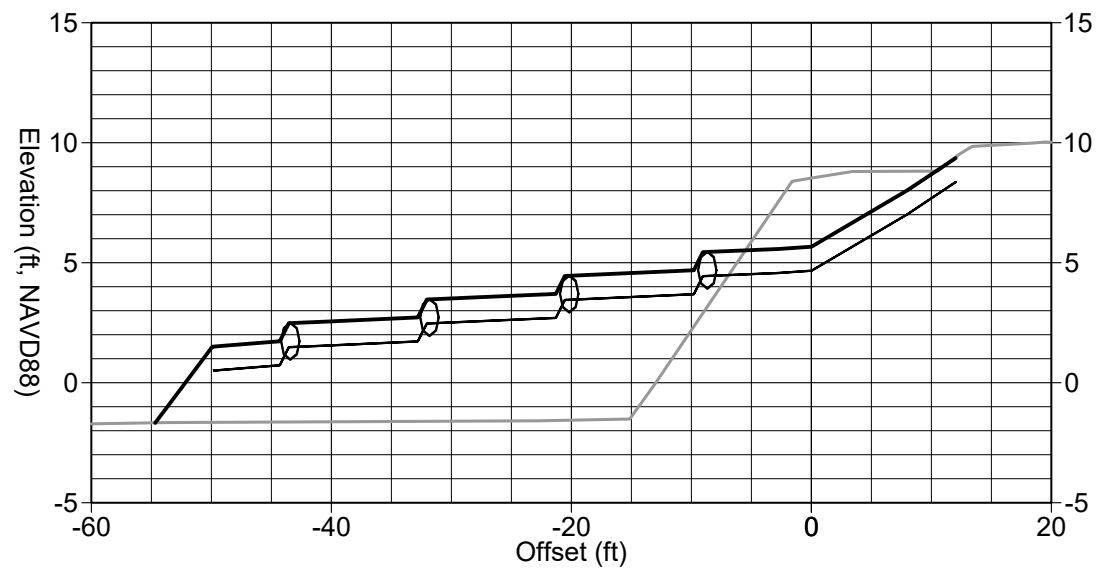
SL-5 2+50.00



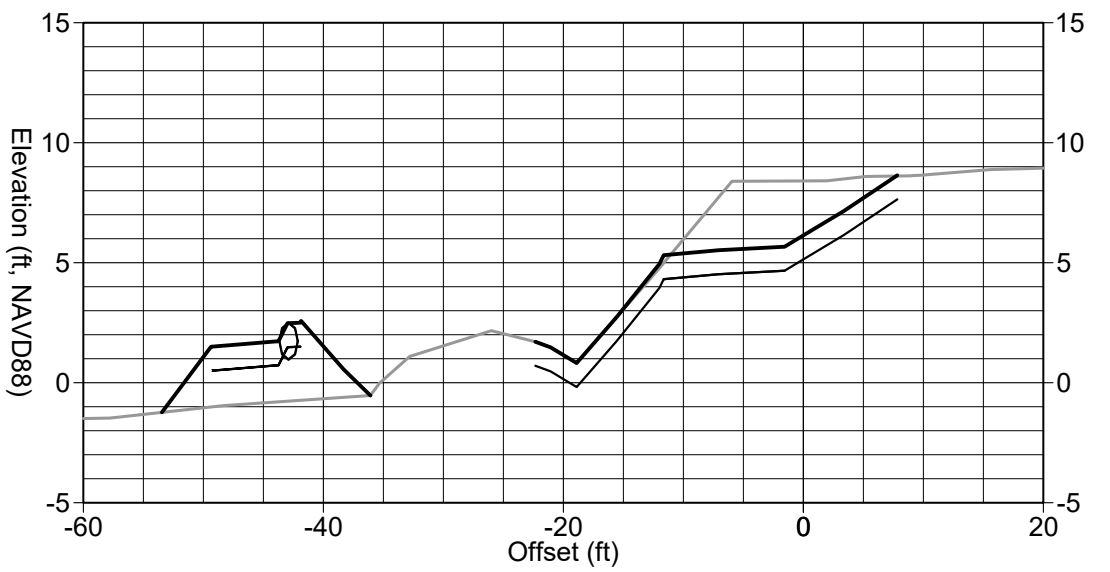
SL-6 3+00.00



SL-7 3+50.00



SL-8 4+00.00



PRELIMINARY, NOT FOR CONSTRUCTION

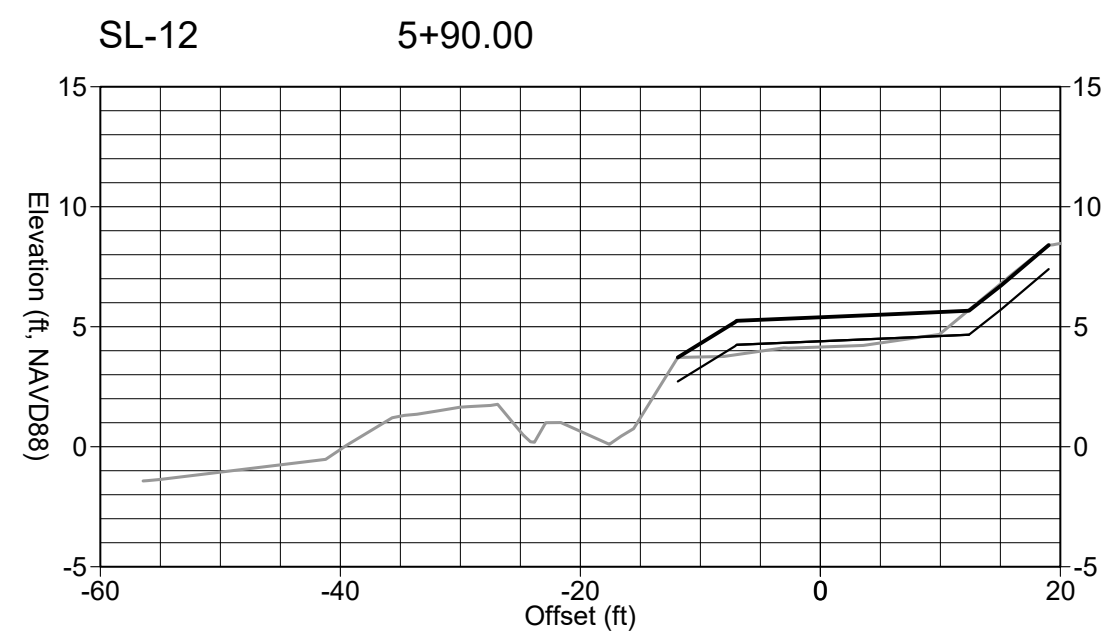
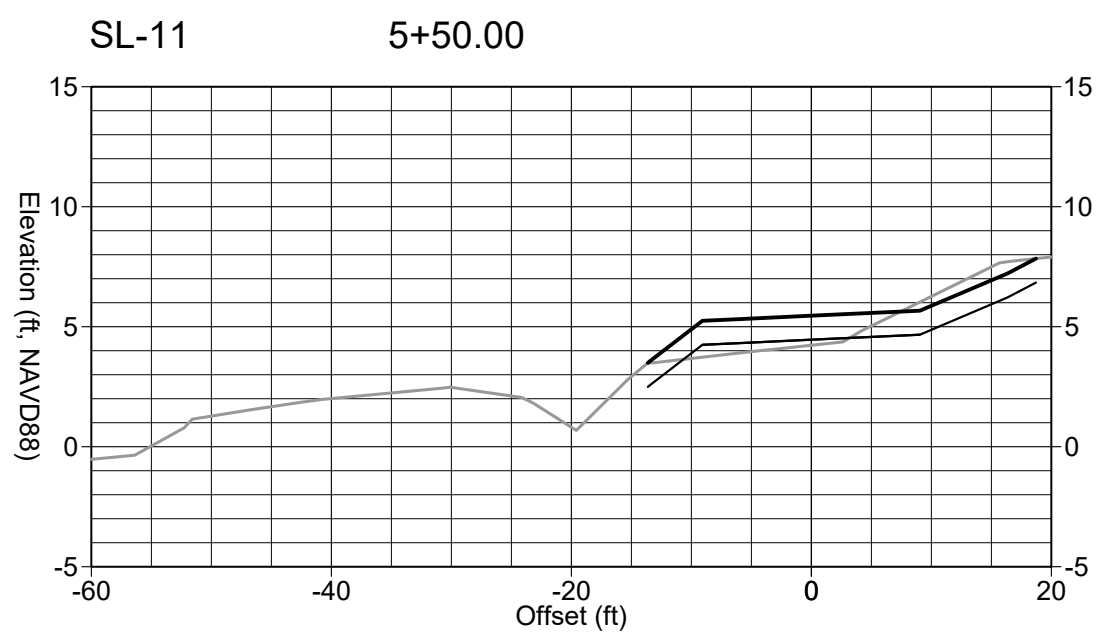
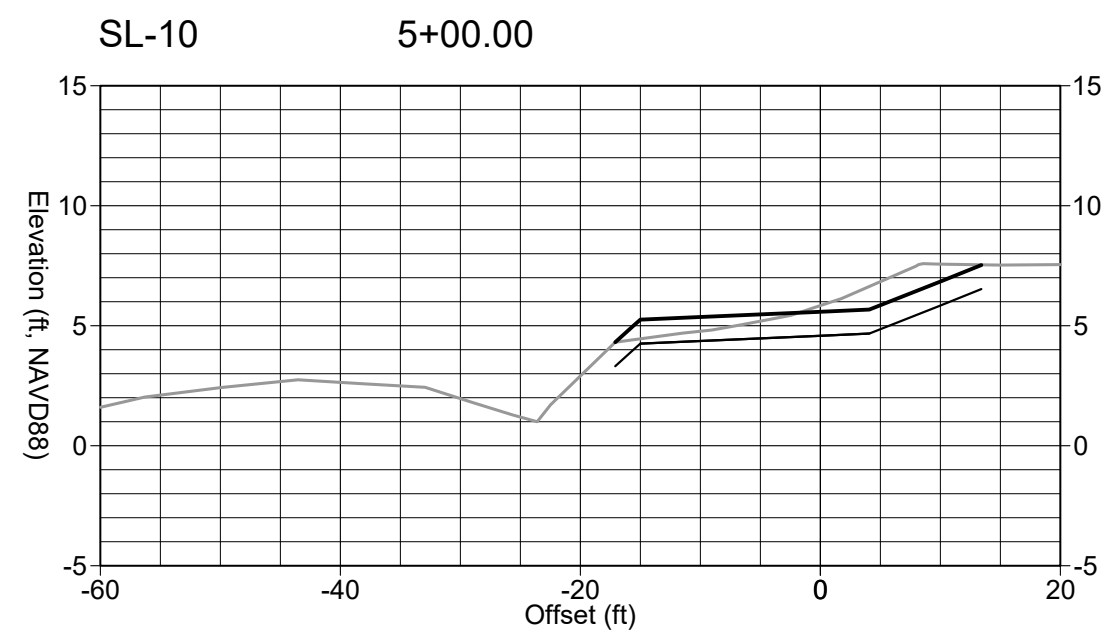
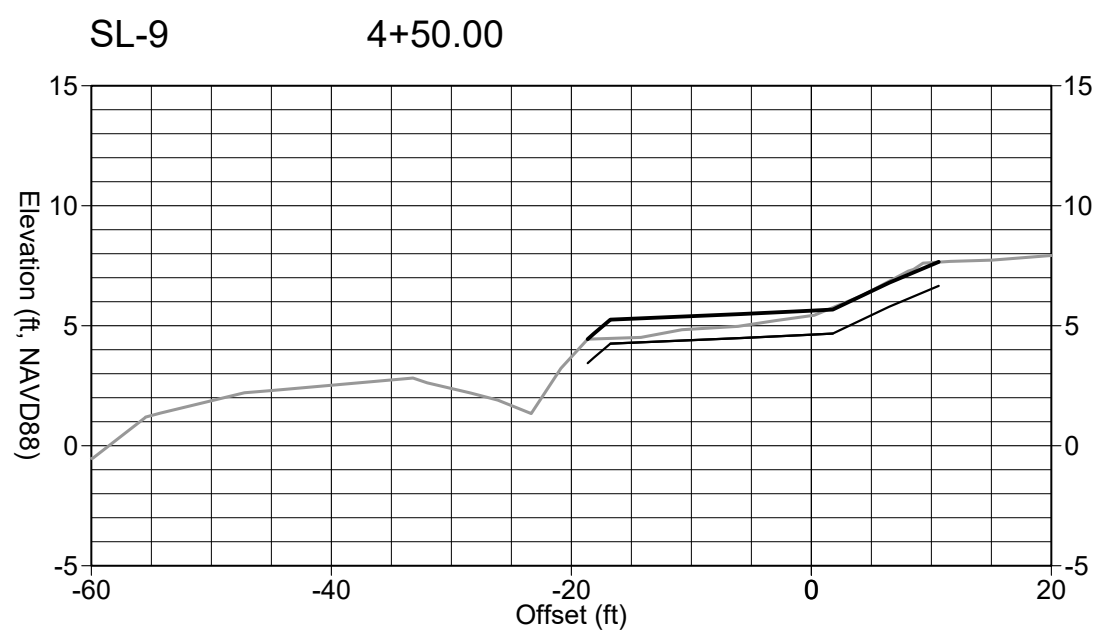
DESIGNED BY: JCB, TPB
 DRAWN BY: JCB
 CHECKED BY: TPB
 DATE: 01 FEB 2022



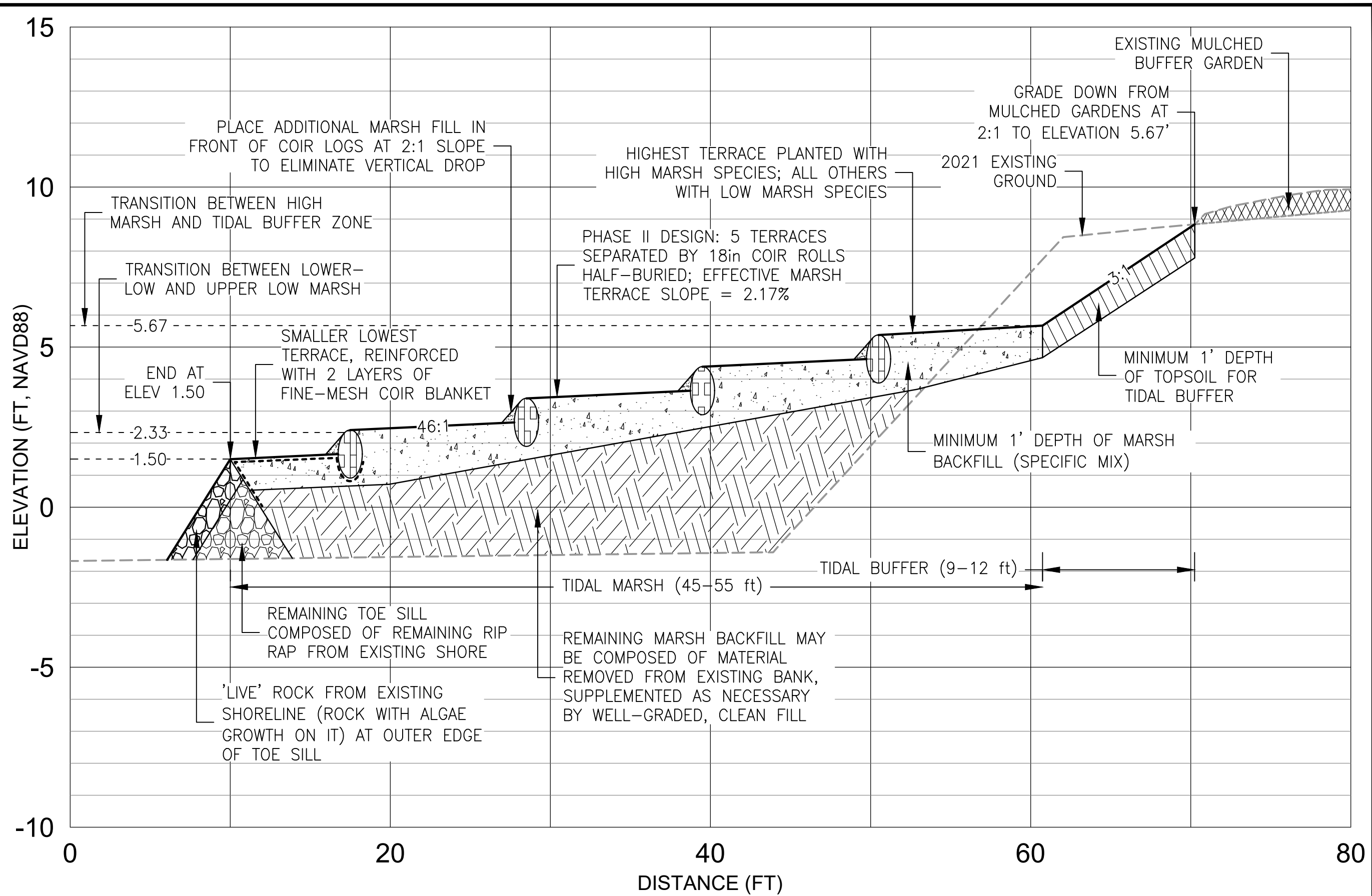
SHEET TITLE: **CROSS SECTION SHEET 3**
 SHEET SET: **CONSTRUCTION BID PLAN SHEETS**
 PROJECT NAME: **CUTTIS COVE TIDAL RESTORATION PHASE II**
 PROJECT LOCATION: **CUTTIS COVE, PORTSMOUTH, NH**

2:1 VERTICAL EXAGGERATION
 SCALE: 1" = 16'

SHEET ID: **XS3**
 SHEET NUMBER: **07 OF 08**



PRELIMINARY, NOT FOR CONSTRUCTION



DESIGNED BY:	JCB, TPB
DRAWN BY:	JCB
CHECKED BY:	TPB
DATE:	01 FEB 2022

SHEET TITLE:	MAIN MARSH SECTION DETAIL
SHEET SET:	CONSTRUCTION BID PLAN SHEETS
PROJECT NAME:	CUTTS COVE TIDAL RESTORATION PHASE II
PROJECT LOCATION:	CUTTS COVE, PORTSMOUTH, NH

VERTICAL SCALE: 1" = 3'

HORIZONTAL SCALE: 1" = 6'

SHEET ID:	PHASE II
SHEET NUMBER:	08 OF 08

NH Natural Heritage Bureau Review Memo

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Christine Perron, McFarland Johnson
53 Regional Drive
Concord, NH 03301

From: NHB Review, NH Natural Heritage Bureau
Date: 12/14/2021 (valid until 12/14/2022)

Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Alteration of Terrain Permit, NHDES - Shoreland Standard Dredge & Fill - Major, USACE - General Permit, USEPA - Stormwater Pollution Prevention

NHB ID: NHB21-3815

Town: Portsmouth

Location: Market Street

Description: This DataCheck request is to update NHB19-1845. This project will consist of the following components: 1) Construction of a new dock structure approximately 60 x 120 feet to extend the south end of the existing wharf; 2) Construction of a new dock structure approximately 145 x 80 feet to extend the north end of the existing wharf; 3) Installation of a new fender system along the length of the main wharf; 4) Dredging of approximately 55,000 square feet of the river bed adjacent to the north end of the extended wharf; 4) Shoreline alterations, including soil and rock removal, grading, drainage, and paving within a 80,000-square foot area. Dredging, blasting, and the majority of concrete demolition will occur between November 15 and March 15. A blasting plan will be prepared by the contractor.

cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments

NHB: No Comments At This Time
F&G: Please submit AoT-related documents for NHFG review, AoT review inquiries or wildlife biologist questions to NHFGreview@wildlife.nh.gov. If project related: Include the NHB datacheck results letter number (i.e. NHB21-3815) in the email subject line at a minimum. Not including this number will affect our response time and delays of our review. Please include the NHB number in the title of the assessment along with a date (year, month, day).

Vertebrate species	State ¹	Federal	Notes
Atlantic Sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	T	T	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).
Shortnose Sturgeon (<i>Acipenser brevirostrum</i>)	E	E	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

Maps and NHB record pages are confidential and should be redacted from public documents.

¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "-,-" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NHF&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

NH Fish & Game Correspondence

Christine J. Perron

From: Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>
Sent: Thursday, June 13, 2019 1:53 PM
To: Christine J. Perron
Subject: RE: NHB18-1674 - Portsmouth, Barge wharf functional replacement project

Hello Christine,

The NHBG Nongame and Endangered Wildlife Program has reviewed NHB18-1674 for proposed extension of the main wharf at the Port of NH to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge in Portsmouth. The NHB database check identified the state threatened peregrine falcon nesting at the Memorial Bridge to the north and I-95 bridge to the south. We do not expect impacts to the state threatened peregrine falcon as a result of the proposed work as there are no new nests in the near vicinity to the work.

Regards,

Kim Tuttle
Wildlife Biologist
NH Fish and Game
11 Hazen Drive
Concord, NH 03301
603-271-6544

From: Christine J. Perron [mailto:CPerron@mjinc.com]
Sent: Monday, June 10, 2019 2:50 PM
To: Tuttle, Kim
Subject: NHB18-1674 - Portsmouth, Barge wharf functional replacement project

ATTENTION: This email has originated from outside of the organization. Do not open attachments or click on links unless you recognize the sender and know the content is safe.

Hi Kim,

I am completing the environmental review for the subject project, which involves the extension of the main wharf at the Port of NH to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge. I am working with Cheri Patterson and NOAA on Atlantic and shortnose sturgeon. I'm writing to you for input on the peregrine falcon records on the Memorial Bridge to the north and I-95 bridge to the south.

The project will consist of the following components:

- Construction of a new dock structure approximately 60 x 120 feet at the south end of the existing main wharf.
- Construction of a new dock structure approximately 145 x 80 feet at the north end of the existing main wharf.
- Modification of the fender system along the length of the wharf.
- Shoreside alterations, including soil and rock removal, grading, drainage, and paving within a 70,000-square foot area.
- Dredging approximately 55,000 square feet of the river bed adjacent to the north end of the extended wharf.
- Relocation of the floating dock located to the north of the main wharf.

Photos of the site are attached, along with an aerial view showing the location of proposed activities. Let me know if you need additional information to determine if the proposed project could cause concerns with Peregrine falcons.

Thanks,
Christine

Christine Perron, CWS

Project Manager • Senior Environmental Analyst

McFarland Johnson

53 Regional Drive • Concord, NH 03301

OFFICE: 603-225-2978 ext. 1280

www.mjinc.com

Army Corps Secondary Impacts Checklist



**US Army Corps
of Engineers**®
New England District

**New Hampshire General Permits (GPs)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)**

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to “work” include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	x	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	x	
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www2.des.state.nh.us/nhb_datacheck/ . The book Natural Community Systems of New Hampshire also contains specific information about the natural communities found in NH.		x
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	n/a	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		x
2.5 The overall project site is more than 40 acres?		x
2.6 What is the area of the previously filled wetlands?	unknown	
2.7 What is the area of the proposed fill in wetlands?	1,720 sq ft	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	unknown	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www2.des.state.nh.us/nhb_datacheck/ USFWS IPAC website: https://ecos.fws.gov/ipac/location/index	x	

3.2 Would work occur in any area identified as either “Highest Ranked Habitat in N.H.” or “Highest Ranked Habitat in Ecological Region”? (These areas are colored magenta and green, respectively, on NH Fish and Game’s map, “2010 Highest Ranked Wildlife Habitat by Ecological Condition.”) Map information can be found at: <ul style="list-style-type: none"> • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html. 		X
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 21?	n/a	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	n/a	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

Section 106 Effect memo

Section 106 Cultural Resources Effect Memo
(Project NOT directly managed by NHDOT)

Project Town: **Portsmouth**

Date: 2/20/2019

State No.: 15731 *RPR 9871*

Federal No. (as applicable): N/A

Lead Federal Agency: **Federal Highway Administration**

Submitted by: **Christine Perron, McFarland Johnson, Inc.**

Email address: **cperron@mjinc.com**

(Project Manager/Sponsor)

Pursuant to the Request for Project Review signed on 8/6/2018, and for the purpose of compliance with the regulations of National Historic Preservation Act and the Advisory Council on Historic Preservation's *procedures for the Protection of Historic Properties* (36 CFR 800), and NH RSA 227-C the NH Division of Historical Resources and, when applicable, the NH Division of the Federal Highway Administration or the US Army Corps of Engineers have coordinated the identification and evaluation of cultural resources relative to:

The functional replacement of the barge wharf at the Market Street Marine Terminal (Port of New Hampshire) to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge.

This project is an addition to the Sarah Mildred Long Bridge replacement project, which resulted in an adverse effect determination for the overall project. Functional replacement is a federally authorized method of right of way compensation for public facilities (23 CFR 710.509). The functional replacement project will consist of the following components:

- **Construction of a new dock structure approximately 60 x 120 feet at the south end of the existing main wharf.**
- **Construction of a new dock structure approximately 145 x 80 feet at the north end of the existing main wharf.**
- **Modification of the fender system along the length of the expanded main wharf.**
- **Shoreside improvements, including soil and rock removal, grading, drainage, and paving within a 70,000-square foot area.**
- **Dredging approximately 55,000 square feet of the river bed adjacent to the north end of the extended main wharf.**
- **Relocation of the floating dock located to the north of the main wharf.**

Several previous archaeological studies have been conducted, including a Phase IA Archaeological Sensitivity Assessment and Phase IB Intensive Archaeological Investigation conducted for the New Hampshire side of the Sarah Mildred Long Bridge (Marlatt 2013), and several previous archaeological investigations completed for the Maine-New Hampshire Connections Study (Marlatt 2009, 2010). The functional replacement project will include shoreside improvements within the archaeologically sensitive location identified as Area 3. Archaeological monitoring will be required during construction activities in this area.

Please describe all public outreach efforts (see 36 CFR 800.2-3) that have been done to-date. Identify Consulting Parties and include any public feedback (if applicable, attached pages if necessary):

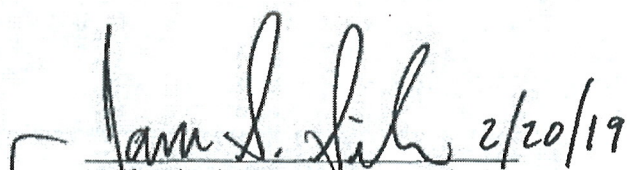
Impacts to the Port of New Hampshire were reviewed at public meetings and with the Pease Development Authority as part of the Sarah Mildred Long Bridge Replacement project.

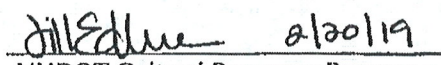
Based on a review of the project, as presented to date, it has been determined that:


Section 106 Effect Determination	<input type="checkbox"/> No Historic or Archaeological Properties will be Affected
	<input checked="" type="checkbox"/> There will be No Adverse Effect on Historic or Archaeological Properties
	<input type="checkbox"/> There will be an Adverse Effect on Historic or Archaeological Properties or Resources
	Additional comments, please explain <i>why</i> the undertaking has resulted in the above effect: At DHR's request, archaeological monitoring will be conducted during construction of shoreside improvements in the archaeologically sensitive location known as "Area 3."

In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

Section 4(f) (in the completed by FHWA)	There Will Be:	<input checked="" type="checkbox"/> No 4(f);	<input type="checkbox"/> Programmatic 4(f);	<input type="checkbox"/> Full 4 (f); or
	<input type="checkbox"/> A finding of <i>de minimis</i> 4(f) impact as stated: In addition, with NHDHR concurrence of no adverse effect for the above undertaking, and in accordance with 23 CFR 774.3, FHWA intends to, and by signature below, does make a finding of <i>de minimis</i> impact. NHDHR's signature represents concurrence with both the no adverse effect determination and the <i>de minimis</i> findings. Parties to the Section 106 process have been consulted and their concerns have been taken into account. Therefore, the requirements of Section 4(f) have been satisfied.			

 2/20/19
 Lead Federal Agency (date)
 Federal Highway Administration

 2/20/19
 NHDOT Cultural Resources Program

The NH State Historic Preservation Officer concurs with these findings:  DSHPD
 NH Division of Historical Resources 3/4/19

cc: FHWA NHDHR ACOE (← as applicable)

USFWS Official Species List



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

In Reply Refer To:
Consultation Code: 05E1NE00-2018-SLI-1957
Event Code: 05E1NE00-2022-E-02684
Project Name: Barge Wharf Functional Replacement

December 09, 2021

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

<http://>

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2018-SLI-1957

Event Code: Some(05E1NE00-2022-E-02684)

Project Name: Barge Wharf Functional Replacement

Project Type:

Project Description: The Federal Highway Administration is funding the functional replacement of the barge wharf at the Market Street Marine Terminal to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge. The SML Bridge once bisected the Port, with the main wharf to the east of the bridge and the barge wharf to the west. To accommodate the new bridge alignment, a large portion of the barge wharf was removed. The subject project involves replacing the lost functionality of the barge wharf by incorporating that functionality into the main wharf, which will involve extending each end of the main wharf, dredging, installing a new fender system, relocating an existing floating dock system, and providing shoreside alterations.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.08363415386275,-70.76085878499441,14z>



Counties: Rockingham County, New Hampshire

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Roseate Tern <i>Sterna dougallii dougallii</i> Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS Northern Long-Eared Bat Correspondence



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

IPaC Record Locator: 735-17417722

July 12, 2019

Subject: Consistency letter for the 'Barge Wharf Functional Replacement' project (TAILS 05E1NE00-2018-R-1957) under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **Barge Wharf Functional Replacement** (Proposed Action) may rely on the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action will have no effect on the endangered Indiana bat (*Myotis sodalis*) or the threatened Northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, **no consultation is required for these two species.**

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency for the Proposed Action accordingly.

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

Barge Wharf Functional Replacement

Description

The Federal Highway Administration is funding the functional replacement of the barge wharf at the Market Street Marine Terminal to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge. The SML Bridge once bisected the Port, with the main wharf to the east of the bridge and the barge wharf to the west. To accommodate the new bridge alignment, a large portion of the barge wharf was removed. The subject project involves replacing the lost functionality of the barge wharf by incorporating that functionality into the main wharf, which will involve extending each end of the main wharf, dredging, installing a new fender system, relocating an existing floating dock system, and providing shoreside alterations.

Determination Key Result

Based on the information you provided, you have determined that the Proposed Action will have no effect on the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for these two species.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

No

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

No

9. Does the project include maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

No

10. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

11. Does the project include slash pile burning?

No

12. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

No

13. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

Yes

14. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the structure? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

No

15. Will the project involve the use of **temporary** lighting *during* the active season?

No

16. Will the project install new or replace existing **permanent** lighting?

No

17. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage, rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

18. Will the project raise the road profile **above the tree canopy**?

No

19. Is the location of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the project action area not within suitable Indiana bat and/or NLEB summer habitat and is outside of 0.5 miles of a hibernaculum.

20. Is the structure removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the structure is more than 1,000 feet from the nearest suitable habitat and is therefore considered unsuitable for use by bats

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on March 16, 2018. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

NOAA Section 7 Consultation Species List

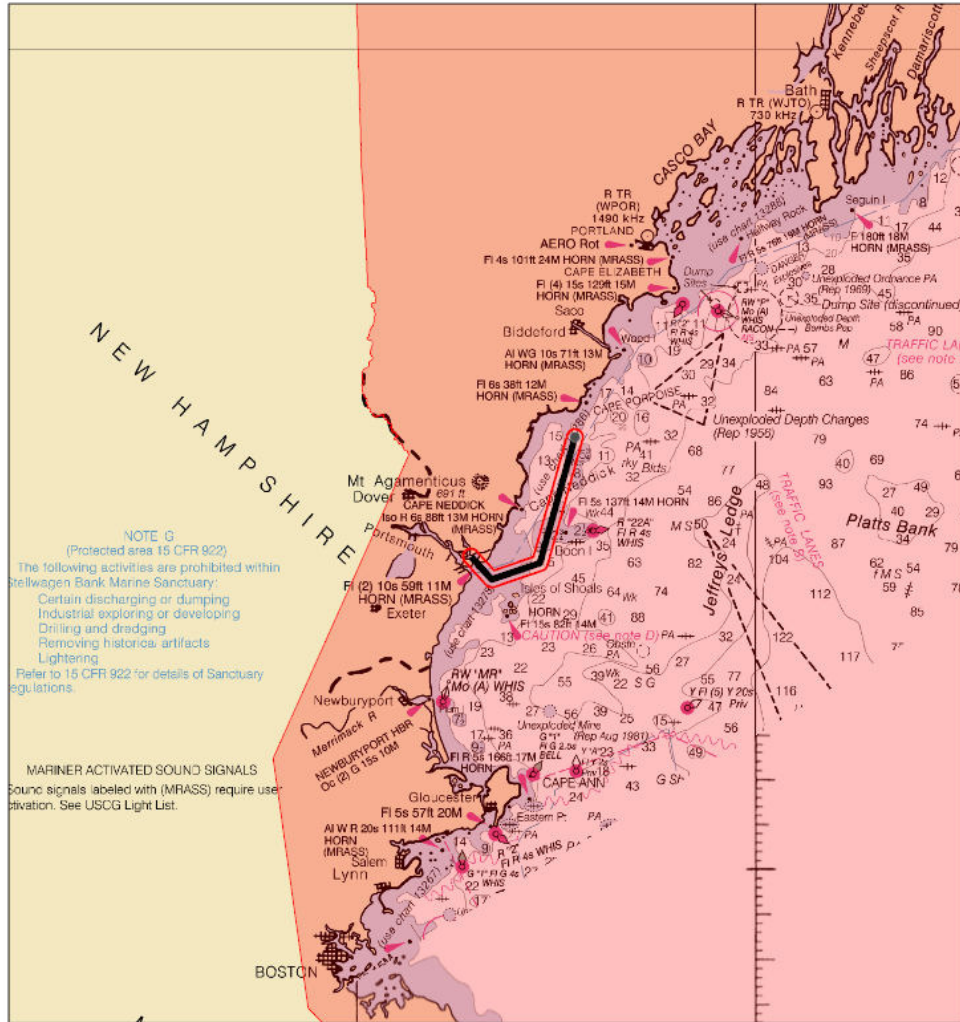


Drawn Action Area & overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 36,358.66 acres

May 14 2019 11:32:54 Eastern Daylight Time



NOTE G
(Protected area 15 CFR 922)
The following activities are prohibited within Stellwagen Bank Marine Sanctuary:
Certain discharging or dumping
Industrial exploring or developing
Drilling and dredging
Removing historical artifacts
Lighting
Refer to 15 CFR 922 for details of Sanctuary regulations.

MARINER ACTIVATED SOUND SIGNALS
Sound signals labeled with (MRASS) require use activation. See USCG Light List.



Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	4	70,076.14	N/A
Shortnose Sturgeon	1	33,011.77	N/A
Atlantic Salmon	2	70,060.29	N/A
Sea Turtles	4	139,617.08	N/A
Atlantic Large Whales	4	101,926.24	N/A
In or Near Critical Habitat	2	27,068.27	N/A

Atlantic Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone
1	ANS_C50_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	N/A
2	ANS_C50_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	N/A
3	ANS_Z50_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	N/A
4	ANS_Z50_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	N/A

#	From	Until	From (2)	Until (2)	Area(acres)
1	01/01	12/31	N/A	N/A	33,011.77
2	01/01	12/31	N/A	N/A	33,011.77
3	01/01	12/31	N/A	N/A	2,026.30
4	01/01	12/31	N/A	N/A	2,026.30

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone
1	SNS_C50_ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	N/A

#	From	Until	From (2)	Until (2)	Area(acres)
1	04/01	11/30	N/A	N/A	33,011.77

Atlantic Salmon

#	Feature ID	Species	Life Stage	Behavior	Zone
1	SAL_SOD_ADU_MAF	Atlantic salmon	Adults	Migrating & Foraging	Marine Waters
2	SAL_SOD_SMO_MAF	Atlantic salmon	Smolts (Juveniles)	Migrating & Foraging	Marine Waters

#	From	Until	From (2)	Until (2)	Area(acres)
1	01/01	12/31	N/A	N/A	35,030.14
2	01/01	12/31	N/A	N/A	35,030.14

Sea Turtles

#	Feature ID	Species	Life Stage	Behavior	Zone
1	LTR_STN_AJV_MAF	Leatherback sea turtle	Adults and juveniles	Migrating & Foraging	Maine to Massachusetts (N of Cape Cod)
2	LOG_STN_AJV_MAF	Loggerhead sea turtle	Adults and juveniles	Migrating & Foraging	Maine to Massachusetts (N of Cape Cod)
3	KMP_STN_AJV_MAF	Kemp's ridley sea turtle	Adults and juveniles	Migrating & Foraging	Maine to Massachusetts (N of Cape Cod)
4	GRN_STN_AJV_MAF	Green sea turtle	Adults and juveniles	Migrating & Foraging	Maine to Massachusetts (N of Cape Cod)

#	From	Until	From (2)	Until (2)	Area(aces)
1	6/1	11/30	No Data	No Data	34,904.27
2	6/1	11/30	No Data	No Data	34,904.27
3	6/1	11/30	No Data	No Data	34,904.27
4	6/1	11/30	No Data	No Data	34,904.27

Atlantic Large Whales

#	Feature ID	Species	Life Stage	Behavior	Zone
1	RIT_WRN_AJV_FOR	North Atlantic right whale	Adults and juveniles	Foraging	Northeast (ME to Cape Cod, MA)
2	RIT_WRN_AJV_WIN	North Atlantic right whale	Adults and juveniles	Overwintering	Northeast (ME to Cape Cod, MA)
3	FIN_WFN_AJV_WIN	Fin whale	Adults and juveniles	Overwintering	Northeast (ME to Cape Cod, MA)
4	FIN_WFN_AJV_FOR	Fin whale	Adults and juveniles	Foraging	Northeast (ME to Cape Cod, MA)

#	From	Until	From (2)	Until (2)	Area(aces)
1	1/1	12/31	No Data	No Data	25,481.56
2	11/1	1/31	No Data	No Data	25,481.56
3	11/1	3/31	No Data	No Data	25,481.56
4	1/1	12/31	No Data	No Data	25,481.56

In or Near Critical Habitat

#	Species	In or near Critical Habitat Unit	Area(aces)
1	North Atlantic Right Whale	Critical Habitat Unit 1: Feeding Area	25,479.25
2	Atlantic Sturgeon	Gulf of Maine Unit 4: Piscataqua River	1,589.02

DISCLAIMER: Use of this App does NOT replace the Endangered Species Act (ESA) Section 7 consultation process; it is a first step in determining if a proposed Federal action overlaps with listed species or critical habitat presence. Because the data provided through this App are updated regularly, reporting results must include the date they were generated. The report outputs (map/tables) depend on the options picked by the user, including the shape and size of the action area drawn, the layers marked as visible or selectable, and the buffer distance specified when using the "Draw your Action Area" function. Area calculations represent the size of overlap between the user-drawn Area of Interest (with buffer) and the specified S7 Consultation Area. Summary table areas represent the sum of these overlapping areas for each species group.

NOAA Section 7 Concurrence Letter



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

Jamison S. Sikora
Federal Highway Administration
U.S. Department of Transportation
New Hampshire Division
53 Pleasant Street, Suite 2200
Concord, NH 03301

JUN 14 2019

**Re: Pease Development Authority, Port of NH Functional Replacement Project
Portsmouth 15731, Piscataqua River**

Dear Mr. Sikora:

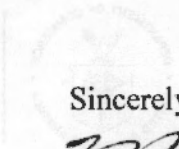
We have completed our consultation under section 7 of the Endangered Species Act (ESA) in response to your email received on June 11, 2019, regarding the above-referenced proposed project. We reviewed your consultation request document and related materials. Based on our knowledge, expertise, and your materials, we concur with your conclusion that the proposed action is not likely to adversely affect any National Marine Fisheries Service ESA-listed species or designated critical habitat. Therefore, no further consultation pursuant to section 7 of the ESA is required.

While we agree with your rationale for your not likely to adversely affect determination, one clarification is necessary as described here. In your effects analysis for water quality, you conclude the analysis for whales by saying that the effects on sturgeon will be insignificant. Based on the information that you provided (the turbidity plume will be temporary and whales will have ample space in the Atlantic Ocean to swim around the plume to avoid it), turbidity effects on whales will be too small to be meaningfully measured or detected, and are insignificant.

Reinitiation of consultation is required and shall be requested by the lead federal agency or by us, where discretionary federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; or, (c) If a new species is listed or critical habitat designated that may be affected by the identified action. No take is anticipated or exempted. If there is any incidental take of a listed species, reinitiation would be required. Should you have any questions about this correspondence please contact Edith Carson-Supino at (978) 282-8490 or by email (Edith.Carson-Supino@noaa.gov). For questions related to Essential Fish Habitat, please contact Mike Johnson with our Habitat Conservation Division at (978)-281-9130 or at mike.r.johnson@noaa.gov.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREAT LAKES REGIONAL FISHERIES OFFICE
22 Grand Republic Drive
Crown Point, IN 46032-5272



Sincerely,

Michael J. Asaro, PhD
Acting Assistant Regional Administrator
for Protected Resources

JUN 1 2019

ec: Johnson, NMFS/HCD; Perron, McFarland Johnson
ECO: GARFO-2019-01025
File Code: H:\Section 7 Team\Section 7\Non-Fisheries\FHWA_State DOTs\Informals\NH DOT\FHWA
Portsmouth Wharf Replacement

While we agree with your rationale for your not to adversely affect downstream...
action is not likely to adversely affect any functional marine fisheries service...
species or designated critical habitat...
of the ESA is required.

Removal of consultation is required and shall be requested by the lead...
us where disapproval is required or consent or control over the action has been...
authorized by law and...
listed species or critical habitat...
consultation...
If a new species is listed or critical habitat designated that may be affected by the...
action, the take is anticipated or occurred, if there is any incidental take of a listed species...
consultation will be required. Should you have any questions about this correspondence...

CAPITOL BLDG

NOAA EFH Concurrence Letter

Christine J. Perron

From: Mike R Johnson - NOAA Federal <mike.r.johnson@noaa.gov>
Sent: Thursday, August 22, 2019 11:10 AM
To: Sikora, Jamie (FHWA)
Cc: Christine J. Perron; Vanessa Swasey; Noah Elwood (Appledore); Marc Laurin; Patterson, Cheri; Mike Dionne; Wendy Johnson; Edith Carson; Zachary Jylkka - NOAA Affiliate
Subject: Re: Pease Development Authority - Main wharf functional replacement project - BA, EFHA

Jamie,

Thank you for the response to our EFH conservation recommendations. Your response fulfills the requirements of the Magnuson-Stevens Act.

Thanks,

Mike

On Thu, Aug 22, 2019 at 9:13 AM Sikora, Jamie (FHWA) <Jamie.Sikora@dot.gov> wrote:

Good Morning Mike,

Thank you for providing conservation recommendations for this project and for participating in the NHDOT Natural Resource Agency meeting to discuss mitigation.

FHWA has reviewed your conservation recommendations with the project team and we are providing the following responses:

1. **Blasting plan:** Providing the blasting plan to you for review at least 1.5 months prior to blasting could be problematic with the construction schedule. We would like to recommend that NMFS be provided a copy of the blasting plan a minimum of 21 days prior to blasting.
2. **Measures to minimize fish kills during blasting:** As listed in your recommendations, we agree to a) require the use of a small, mobile vessel for the fish detection and startle system; sonar; and fisheries and marine mammal observer; b) require the preparation of a plan to enumerate, collect, ID, and report on any fish kills that occur during blasting. This report will be sent to NMFS as soon as possible after each day of blasting (and no more than 7 days). If fish kills exceed 100 fish, approximately, NMFS will be notified within 24 hours and before the next scheduled blasting so that alternative measures can be assessed to reduce future fish kills, as necessary.

3. Time of year restriction: All efforts will be made to adhere to a work window from November 15 to February 15 for underwater blasting, and to conduct in water work in December and January to the extent possible.

4. Mitigation: As discussed at the August 21st resource agency meeting, mitigation will be provided for impacts resulting from the wharf extensions and dredging. Everyone in attendance at this meeting agreed that funding the Cutts Cove living shoreline project could be used as permittee responsible mitigation.

I appreciate the reminder yesterday that we still needed to close out the EFH consultation process. Please advise as to whether the responses are considered sufficient or whether you might have any further questions or need clarification.

Jamie

Jamison S. Sikora

NH Division Environmental Program Manager

Federal Highway Administration

53 Pleasant Street, Suite 2200

Concord, NH 03301

Jamie.sikora@dot.gov

(603) 410-4870

From: Mike R Johnson - NOAA Federal [mailto:mike.r.johnson@noaa.gov]

Sent: Friday, June 28, 2019 1:45 PM

To: Christine J. Perron <CPerron@mjinc.com>; Sikora, Jamie (FHWA) <Jamie.Sikora@dot.gov>

Cc: Vanessa Swasey <VSwasey@appledoremachine.com>; Noah Elwood (Appledore) <NElwood@appledoremachine.com>; Marc Laurin <marc.laurin@dot.nh.gov>; Patterson, Cheri <Cheri.Patterson@wildlife.nh.gov>; Mike Dionne <MICHAEL.DIONNE@wildlife.nh.gov>; Wendy Johnson <Wendy.Johnson@dot.nh.gov>; Edith Carson <edith.carson-supino@noaa.gov>; Zachary Jylkka - NOAA Affiliate <zachary.jylkka@noaa.gov>

Subject: Re: Pease Development Authority - Main wharf functional replacement project - BA, EFHA

Christine,

I have copied Jamie Sikora on this response, even though I didn't see anyone from FHWA on your original email. As you know, our EFH consultation is with the federal action agency. If Jamie is not the lead project manager, I will leave it to one of you to forward it to the proper person.

These are NMFS' EFH conservation recommendations. These recommendations are intended to protect spawning, egg, and larvae habitat for winter flounder, as well as diadromous fish that use the Piscataqua River for migrating to spawning habitat in the watershed.

Blasting Plan: The assessment indicates the contractor will provide a copy of the blasting plan prior to detonation. I am recommending the FHWA provide us with a copy as soon as possible, but not less than 1.5 months prior to blasting to allow time for us to review and provide comments.

Also, the assessment indicates the use of a fish detecting and startle system, and sonar to avoid blasting when fish are present, and the presence of a fisheries and marine mammal observer. I am recommending these systems be mounting on a small, mobile vessel, rather than on the "blast barge". This allows them to activate these systems up until a few minutes prior to detonation. A "blast barge" is typically towed off site at least 30 minutes or more before the blast, allowing fish to move back into the area. The Corps has implemented this BMP into their blasting plans as it was found to reduce fish kills.

Lastly, as we did for the SML Bridge project, I am recommending a plan to enumerate, collect, ID, and report on any fish kills that occur during blasting be developed. This report should be sent to us as soon as possible after each day of blasting (and no more than 7 days). In the meantime, if there are significant fish kills (~> 100 fish), we should be notified within 24 hours and before the next scheduled blasting so that alternative measures may be assessed to reduce future fish kills, as necessary. These measures were implemented in the SML Bridge project.

Time-of-year restriction of March 15-November 15: While we concur with this TOY restriction for overall in-water work that produces turbidity and noise, we have some further restrictions to provide. For underwater blasting, we recommend a work window from Nov. 15 to Feb. 15 to protect winter flounder spawning and rainbow smelt. For all other turbidity and noise producing activities, a work window from Nov. 15-March 15 is acceptable but we request that all efforts be made to conduct the work in December and January to the extent possible. Avoiding the work in the latter half of November will protect other diadromous species that may be using this section of the river.

Compensatory Mitigation: To offset the permanent loss of 1,720 sf of habitat from the proposed piles for the wharf extensions and floating dock, as well as shading impacts to approximately 25,000 sf from the proposed wharf, we recommend compensatory mitigation be provided via the NH ILF program.

If you have any questions, please let me know. However, please be aware that I will be on vacation beginning this afternoon (6/28) through July 5. I will be available to answer any questions the week of July 8.

US Coast Guard Correspondence

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
United States Coast Guard
Sector Northern New England

259 High Street
So. Portland, ME 04106
Staff Symbol: spw
Phone: (207) 347-5003
Fax: (207) 347-5024

16670
11 Jul 2019

Ms. Vanessa Swasey
Appledore Marine Engineering, LLC
600 State Street, Suite E
Portsmouth, New Hampshire 03801

Ms. Swasey,

This letter is in response to your July 09, 2019 email regarding the project involving the replacement of facilities at the Pease Development Authority (PDA) Market Street Marine Terminal, Portsmouth, NH. Per the email, you requested acknowledgment that our office is aware of the project and would review the project as the design progresses.

I acknowledge we are aware of the project and the work plan as provided. Additionally, we will review the design documents as they are completed.

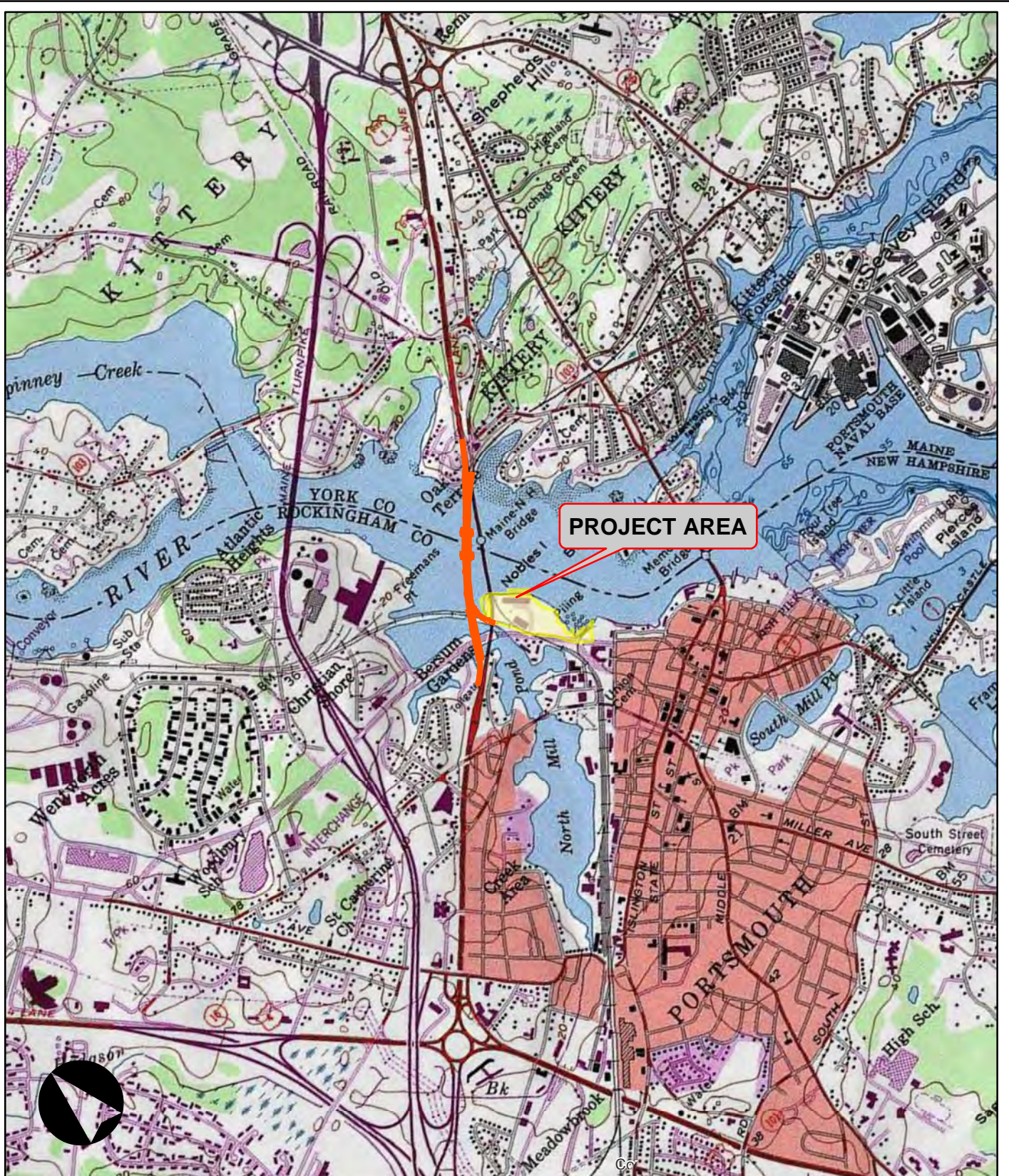
If you have any additional questions, please contact me at Thomas.F.Watts@uscg.mil or (207) 347-5003.

Sincerely,

A handwritten signature in black ink, appearing to read "T. F. Watts", written over a horizontal line.

T. F. Watts
Chief, U.S. Coast Guard
Waterways Management Division
Sector Northern New England

Location Map



- New Bridge and Rail Alignment
- Market Street Marine Terminal

PEASE DEVELOPMENT AUTHORITY
 MAIN PIER FUNCTIONAL REPLACEMENT





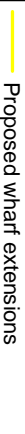
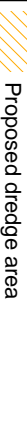
LOCATION MAP

SCALE : 1 inch = 2,000 feet	DATE : JUNE 2018	FIGURE : 1
--------------------------------	---------------------	---------------

Aerial View



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

-  New bridge and trail alignment
-  Proposed shoreline improvements
-  Tax Parcels
-  Floating dock
-  Proposed wharf extensions
-  Proposed dredge area



PEASE DEVELOPMENT AUTHORITY		
MAIN PIER FUNCTIONAL REPLACEMENT		
Aerial View		
SCALE: 1 inch = 200 feet	DATE: SEPTEMBER 2019	FIGURE: 2
 McFarland Johnson		

Construction Sequence

**MARKET STREET MARINE TERMINAL (PORT OF NH)
FUNCTIONAL REPLACEMENT PROJECT
PORTSMOUTH 15731**

Construction Sequence

The total duration of construction is anticipated to be approximately 18 months. The construction start date is not yet known, and final construction sequencing will be determined by the Contractor. The following is an outline of the likely construction sequence. This sequence may vary slightly depending on the selected contractor. Work along the shoreline will be completed during lower tides when possible.

- Provide blasting plan to the US Army Corps of Engineers, National Marine Fisheries Service, NH Fish & Game, NHDOT, and NHDES at least 21 days prior to anticipated start of blasting.
- Complete dredging and blasting between November 15 and March 15. The duration of dredging is anticipated to be approximately 3 months. The duration of blasting is anticipated to be approximately 2 to 4 weeks. All material from dredging and blasting will be loaded on a dredge scow and transported to the Cape Arundel Disposal Site located approximately 2.8 nautical miles southeast of Cape Arundel, Maine.
- Remove Pier 14 and bridge abutment to limits depicted on plans. Remove concrete debris from water.
- Remove existing floating dock; cut existing guide piles 5 feet below the river bottom
- Drill sockets for piles for wharf extensions and floating dock
- Install piles; fill with concrete
- Install steel sheet pile wall with concrete cap at south extension
- Install reinforcing steel and build forms for north extension concrete retaining wall
- Cast north extension retaining wall and strip forms
- Install cast-in-place pile caps and pre-cast deck planks
- Remove existing fender system
- Install new fender system
- Install floating dock
- Install silt socks, inlet filters, and sediment traps for shoreside work
- Construct temporary sedimentation traps
- Complete shoreside construction (drainage, grading, paving). All work will be carried out according to the Self-Implementing Plan and Materials Management Plan for the proper management of materials generated from each category of impacted soils.
- Remove all erosion and sediment control measures

Wetland Impact & Erosion Control Plans

PEASE DEVELOPMENT AUTHORITY

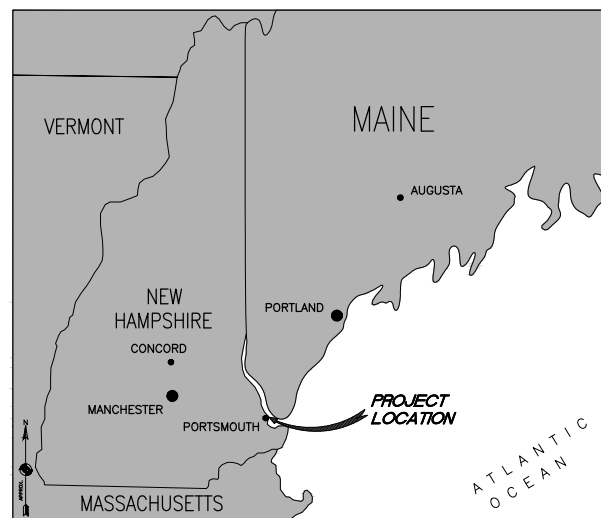
Division of Ports and Harbors

Portsmouth, New Hampshire

MARKET STREET MARINE TERMINAL

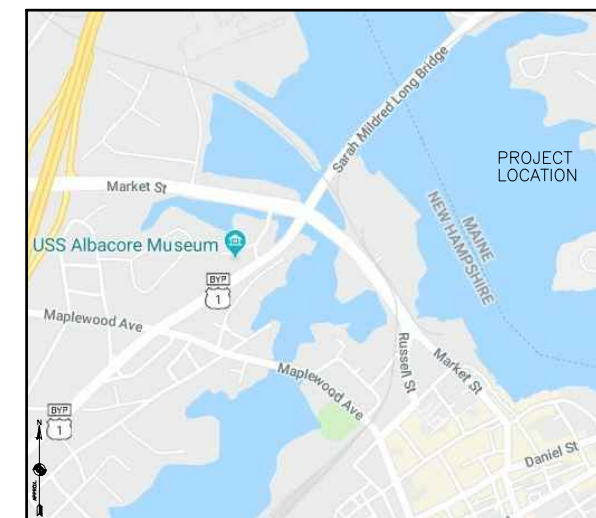
MAIN PIER IMPACT PLANS

DECEMBER 2021



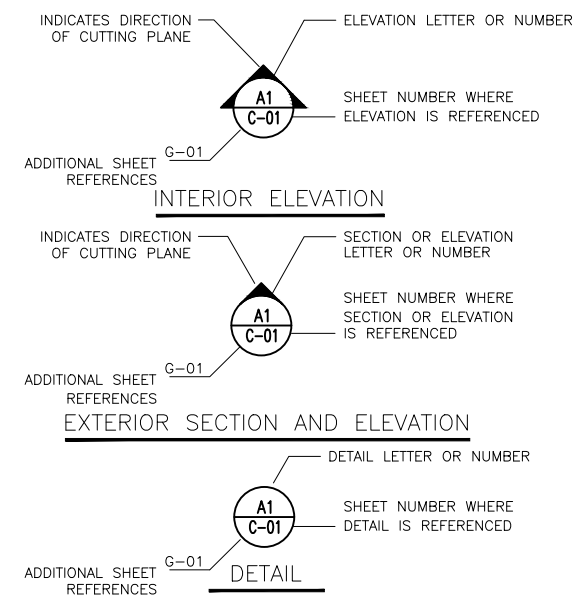
VICINITY MAP
N.T.S.

LIST OF DRAWINGS		
NUMBER	NAME	TITLE
<u>GENERAL</u>		
1	G-001	TITLE SHEET
2	G-002	GENERAL NOTES
3	G-003	SITE PHOTOS - 01
4	G-004	SITE PHOTOS - 02
5	G-005	SITE PHOTOS - 03
<u>CIVIL</u>		
6	C-101	WETLAND IMPACT PLAN
7	C-102	GENERAL SECTIONS
8	C-103	DREDGING PLAN
<u>STRUCTURAL</u>		
9	S-101	PILE PLAN
10	S-102	PILE SECTION AND DETAILS
11	S-103	FRAMING PLAN



LOCATION MAP
N.T.S.

ELEVATION, SECTION OR DETAIL SYMBOLS



REVISION	DATE	DESCRIPTION	BY

603.766.1870
inquiry@applecoremarine.com

Applecore Marine Engineering, LLC

600 State St, Suite E
Portsmouth New Hampshire 03801

DATE: _____
TITLE: _____
DRAWN BY: _____

PEASE DEVELOPMENT AUTHORITY
DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH
MARKET STREET MARINE TERMINAL
PORTSMOUTH, NH

MAIN PIER IMPACT PLANS

TITLE SHEET

PROJECT No.:	5213
CAD DWG FILE:	5213_001_G-001.dwg
DESIGNED BY:	SND
DRAWN BY:	KMV
CHECKED BY:	XXX
SCALE:	AS SHOWN

G-001

SHEET 1 OF 11

REFERENCES AND STANDARDS:

1. AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 2014 (ACI 318-14)
2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, 14TH EDITION, 2011 (AISC-11)
3. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, 2016 (ASCE 7-16)
4. ASCE SEISMIC DESIGN OF PIERS & WHARVES, 2014 (ASCE 61-14)
5. DEPARTMENT OF DEFENSE UNIFIED FACILITIES CRITERIA (UFC) DESIGN: PIERS AND WHARVES, 2017 (UFC 4-152-01)

DESIGN CRITERIA:

THE STRUCTURE HAS BEEN DESIGNED AND ANALYZED FOR THE FOLLOWING LOADS:

DEAD LOAD: ACTUAL WEIGHT OF THE STRUCTURE

LIVE LOAD:

1. VEHICLE AND EQUIPMENT
 - a. 1,000 PSF UNIFORM LIVE LOAD
 - b. 140-TON MOBILE CRANE
 - c. 20-TON FORKLIFT
 - d. 33-TON STRADDLE CARRIER
 - e. HL-93 AASHTO DESIGN VEHICLE / DESIGN TANDEM
2. DESIGN VESSEL
 - a. 750 FOOT LOA
 - b. 35 FOOT DRAFT
 - c. 63,000 TON DISPLACEMENT
3. MOORING FITTINGS
 - a. 100 TON BOLLARD
 - b. 42" CLEAT (25 TON)

GENERAL NOTES:

1. THE DRAWINGS AND SPECIFICATIONS FORM A PART OF THE CONTRACT DOCUMENTS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE. A COPY OF THE DRAWINGS AND SPECIFICATIONS MUST BE KEPT ONSITE AT ALL TIMES DURING THE PROJECT.
2. COORDINATE ALL WORK WITH FACILITY PERSONNEL AND PORT OPERATIONS ON A DAILY BASIS. THE CONSTRUCTION WORK SHALL NOT INTERFERE WITH ONGOING OPERATIONS. SCHEDULE AND COORDINATE ALL WORK, INCLUDING ALLOWABLE WORK WINDOWS, WITH THE OWNER. MAINTAIN THE WORK SITE TO THE SATISFACTION OF THE OWNER.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY. DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING ALL PHASES OF CONSTRUCTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE OWNER'S PROPERTY AFTER COMPLETION OF THE PROJECT. ALL PROPOSED STAGING AREAS SHALL BE COORDINATED WITH THE OWNER BEFORE STARTING WORK. TEMPORARY CONSTRUCTION STAGING/STORAGE AREA SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION UPON COMPLETION OF THE PROJECT.
4. DIMENSIONS AND DETAILS OF THE EXISTING CONSTRUCTION ARE FROM LIMITED ARCHIVE DRAWINGS AND FIELD INVESTIGATIONS. CHECK AND VERIFY ALL DIMENSIONS AND DETAILS OF THE EXISTING CONSTRUCTION PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.
5. EXISTING CONDITIONS ARE INTENDED TO PROVIDE GENERAL OVERVIEW OF STRUCTURES BUT DO NOT INCLUDE ALL APPURTENANCES AND CONDITIONS.
6. METHODS OF DEMOLITION, CONSTRUCTION, AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.

SURVEY CONTROL NOTES:

1. MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS.
2. HORIZONTAL DATUM BASED ON NAD 1983, NEW HAMPSHIRE STATE PLANE (CONUS) ZONE-NH 2800.
3. ELEVATIONS ARE IN FEET BASED ON MEAN LOWER LOW WATER (MLLW) PROJECT DATUM. TIDAL ELEVATIONS ARE BASED ON THE 1983-2001 TIDAL EPOCH AND NOAA TIDE STATION 8419870 SEAVEY ISLAND, MAINE.
4. TOPOGRAPHIC SURVEY PERFORMED BY DOUCET SURVEY. IN MAY AND JULY 2018 USING VARIOUS SURVEY METHODS. FEATURES SHOWN CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS EXISTING AT THAT TIME.
5. HYDROGRAPHIC SURVEY PERFORMED BY CLE ENGINEERING INC. IN APRIL 2018 USING VARIOUS SURVEY METHODS. FEATURES SHOWN CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS EXISTING AT THAT TIME.

UTILITIES NOTES:

1. THE EXACT SIZE & LOCATION OF ALL EXISTING UTILITIES IMPACTED BY THE WORK SHALL BE FIELD VERIFIED PRIOR TO START OF CONSTRUCTION. NOTIFY "DIG SAFE" (1-888-344-7233) AT LEAST 14 CALENDAR DAYS PRIOR TO COMMENCEMENT OF GROUND PENETRATING ACTIVITY.
2. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE OWNER AT THE CONTRACTORS EXPENSE. NOTIFY THE OWNER A MINIMUM OF 5 DAYS IN ADVANCE OF ANY OUTAGES.

ENVIRONMENTAL CONTROL NOTES:

1. THIS PROJECT REQUIRES THE IMPLEMENTATION OF A BEST MANAGEMENT PRACTICES PLAN (BMP) DURING ALL CONSTRUCTION WORK TO PREVENT/MINIMIZE ENVIRONMENTAL IMPACTS DURING THE CONSTRUCTION ACTIVITY.
2. ENVIRONMENTAL CONTROLS SHALL CONFORM TO ALL STATE, LOCAL, AND FEDERAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT NOT BE LIMITED TO MEASURES TO CONTROL TURBIDITY, PH, AND DUST.
3. A COPY OF THE PERMIT SHALL BE POSTED ON SITE DURING CONSTRUCTION IN A PROMINENT LOCATION VISIBLE TO INSPECTING PERSONNEL.
4. THE CONTRACTOR SHALL USE NETS, TARPS, WORK PLATFORMS, OR OTHER APPROVED EQUIVALENT MEANS TO PREVENT DEBRIS FROM FALLING INTO THE COVE. THE CONTRACTOR SHALL REMOVE DEBRIS THAT HAS FALLEN INTO THE COVE, AND IS NOTIFIED THAT UNDERWATER INSPECTIONS MAY BE REQUIRED AND CONDUCTED TO ENSURE THAT ALL DEMOLITION AND CONSTRUCTION DEBRIS HAS BEEN REMOVED PRIOR TO DEMOBILIZING.
5. STORAGE, FUELING AND LUBRICATION OF EQUIPMENT AND MOTOR VEHICLES SHALL BE CONDUCTED IN A MANNER THAT AFFORDS THE MAXIMUM PROTECTION AGAINST SPILL AND EVAPORATION. FUEL, LUBRICANTS AND OIL SHALL BE MANAGED AND STORED IN ACCORDANCE WITH ALL FEDERAL, STATE, REGIONAL, AND LOCAL LAWS AND REGULATIONS. THERE SHALL BE NO STORAGE OF FUEL ON THE PROJECT SITE. FUEL MUST BE BROUGHT TO THE PROJECT SITE AS NEEDED. EQUIPMENT OPERATION, ACTIVITIES, OR PROCESSES PERFORMED BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH ALL FEDERAL AND STATE AIR EMISSION AND PERFORMANCE LAWS AND STANDARDS.
6. ALL PILE DRIVING SHALL OCCUR DURING DAYLIGHT HOURS AND SHALL FOLLOW ALL RESTRICTIONS REQUIRED BY THE APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

ABBREVIATIONS

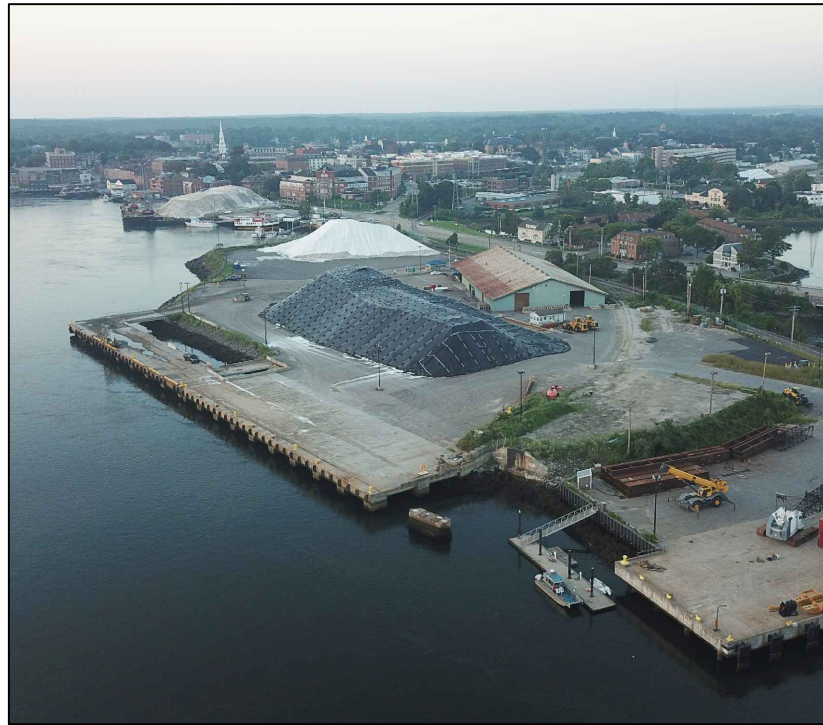
APPROX	APPROXIMATE
∅	DIAMETER
℄	BASELINE
EA	EACH
EL	ELEVATION IN FEET
EQ	EQUAL(LY)
HOTL	HIGHEST OBSERVABLE TIDE LINE
IN	INCH(S)
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
NAVD88	NATIONAL VERTICAL DATUM 1988
NTS	NOT TO SCALE
OC	ON CENTER
PSF	POUNDS PER SQUARE FOOT
SQ	SQUARE
SSP	STEEL SHEET PILE
TYP	TYPICAL

603.766.1970
inquiry@appleadoremarine.com
Appleadore Marine Engineering, LLC
600 State St, Suite E
Portsmouth New Hampshire 03801
SUBMITTED BY: _____ DATE: _____

PEASE DEVELOPMENT AUTHORITY
DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH
MARKET STREET MARINE TERMINAL
MAIN PIER IMPACT PLANS
GENERAL NOTES

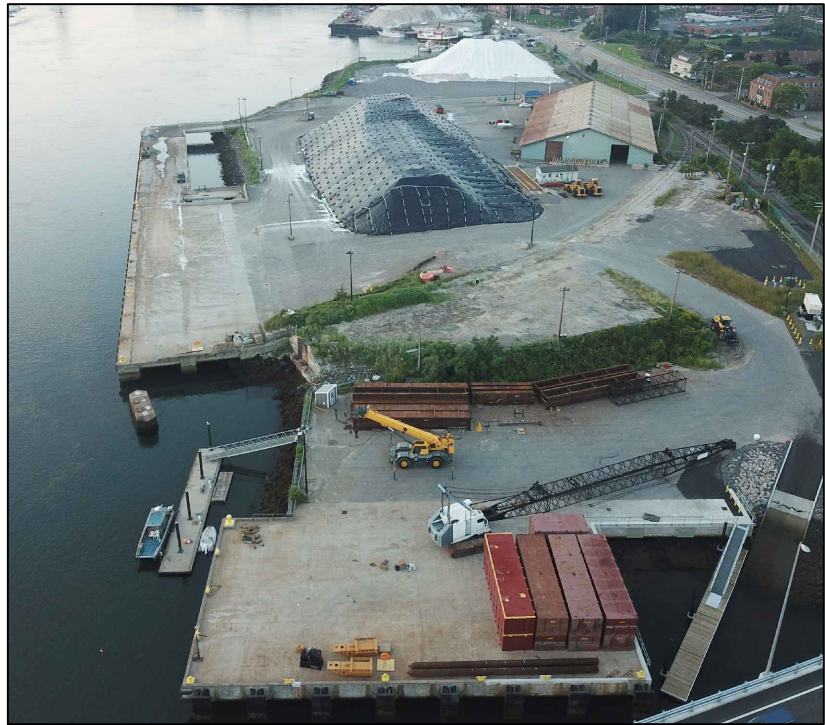
PROJECT No.: 5213
CAD DWG FILE: 5213_001_G-001.dwg
DESIGNED BY: SNID
DRAWN BY: KMW
CHECKED BY: XXX
SCALE: AS SHOWN

G-002
SHEET 2 OF 11



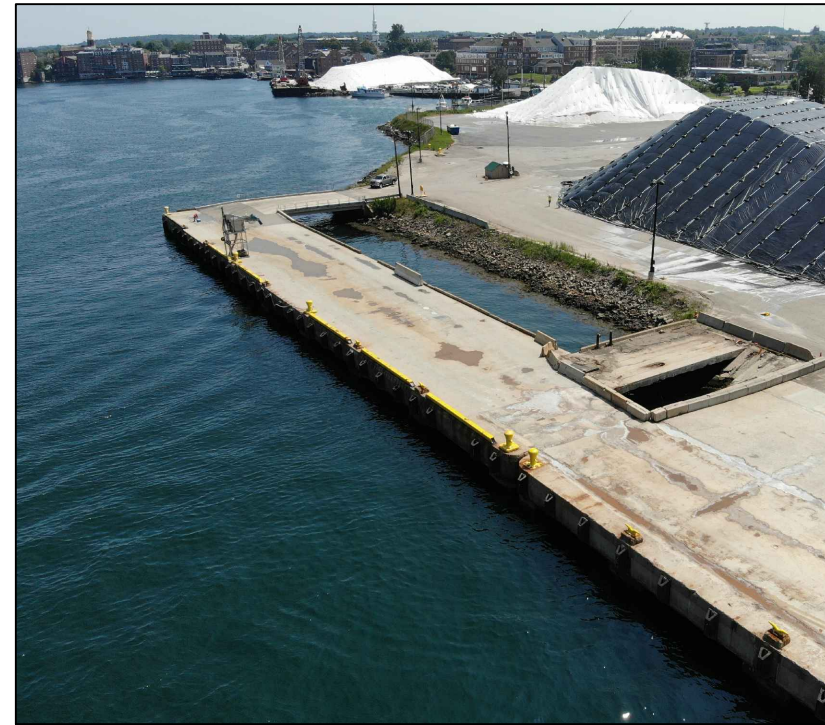
OVERALL SITE
LOOKING SOUTH

C1



OVERALL SITE
LOOKING SOUTHEAST

C3



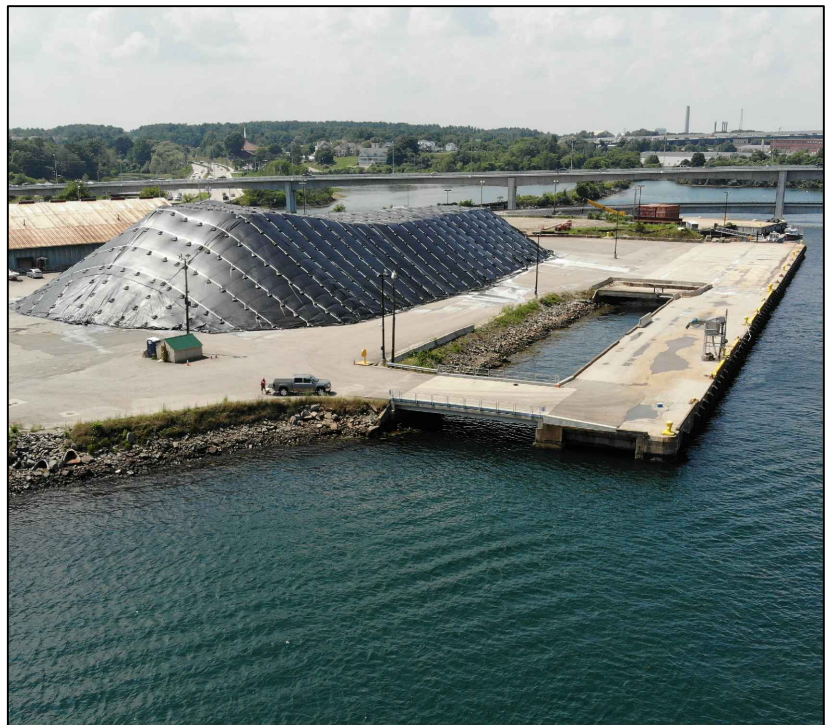
MAIN WHARF (1964 VINTAGE)
LOOKING SOUTHEAST

C4



MAIN WHARF (1977 VINTAGE)
LOOKING WEST

A1



SOUTH WHARF EXTENSION LOCATION
LOOKING WEST

A3



NORTH WHARF EXTENSION LOCATION
LOOKING SOUTH

A4

REVISION	DATE	DESCRIPTION	BY

603.786.1870
inquiry@appledoremarine.com
Appledore Marine Engineering, LLC
600 State St., Suite E
Portsmouth New Hampshire 03801
SUBMITTED BY: _____ DATE: _____

(SEAL)

PEASE DEVELOPMENT AUTHORITY
DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH
MARKET STREET MARINE TERMINAL
MAIN PIER IMPACT PLANS
SITE PHOTOS - 01

PROJECT No.: 5213
CAD DWG FILE: 5213_02_G-003.dwg
DESIGNED BY: SMD
DRAWN BY: KMW
CHECKED BY: XXX
SCALE: AS SHOWN

G-003

SHEET 3 OF 11

1

2

3

4

5

D

C

B

A



NORTH WHARF EXTENSION LOCATION
LOOKING SOUTHWEST (C1)



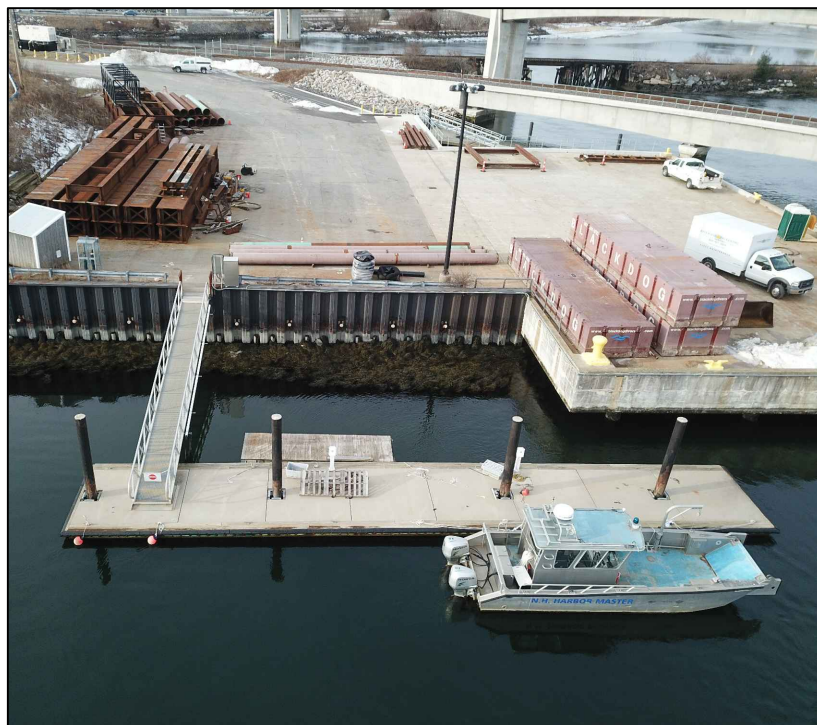
BRIDGE PIER 14
LOOKING SOUTHWEST (C3)



BRIDGE ABUTMENT 13
LOOKING SOUTHWEST (C4)



BARGE WHARF BULKHEAD
LOOKING WEST (A1)



FLOATING DOCK
LOOKING SOUTHWEST (A3)



FLOATING DOCK - NEW LOCATION
LOOKING SOUTHWEST (A4)

1

2

3

4

5

REVISION	DATE	DESCRIPTION	BY

603.766.1870
inquiry@appledoremarine.com
Appledore Marine Engineering, LLC
600 State St., Suite E
Portsmouth New Hampshire 03801
SUBMITTED BY: _____ DATE: _____

(SEAL)

PEASE DEVELOPMENT AUTHORITY
DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH
MARKET STREET MARINE TERMINAL, PORTSMOUTH, NH
MAIN PIER IMPACT PLANS
SITE PHOTOS - 02

PROJECT No.: 5213
CAD DWG FILE: 5213_02_G-003.dwg
DESIGNED BY: SMD
DRAWN BY: KMW
CHECKED BY: XXX
SCALE: AS SHOWN

G-004

SHEET 4 OF 11



MAIN WHARF - END SECTION
LOOKING NORTHWEST

C1



MAIN WHARF - SOUTH ACCESS BRIDGE
LOOKING SOUTHWEST

C3



MAIN WHARF - BRIDGE ABUTMENT
LOOKING WEST

C4



SOUTH WHARF EXTENSION REVETMENT
LOOKING WEST

A1



MAIN WHARF - FENDER SYSTEM
LOOKING SOUTHWEST

A3



BARGE WHARF - FENDER SYSTEM
LOOKING SOUTH

A4

<p>603.766.1870 inquiry@appledoremarine.com</p> <p>Appledore Marine Engineering, LLC 600 State St., Suite E Portsmouth New Hampshire 03801</p> <p>DATE: _____</p>		<p>REVISION</p> <p>DATE</p> <p>DESCRIPTION</p> <p>BY</p>	
<p>PEASE DEVELOPMENT AUTHORITY DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH MARKET STREET MARINE TERMINAL PORTSMOUTH, NH</p> <p>MAIN PIER IMPACT PLANS</p> <p>SITE PHOTOS - 03</p>		<p>PROJECT No.: 5213</p> <p>CAD DWG FILE: 5213_02_G-003.dwg</p> <p>DESIGNED BY: SIND</p> <p>DRAWN BY: KMW</p> <p>CHECKED BY: XXX</p> <p>SCALE: AS SHOWN</p>	
<p>G-005</p>		<p>SHEET 5 OF 11</p>	

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C

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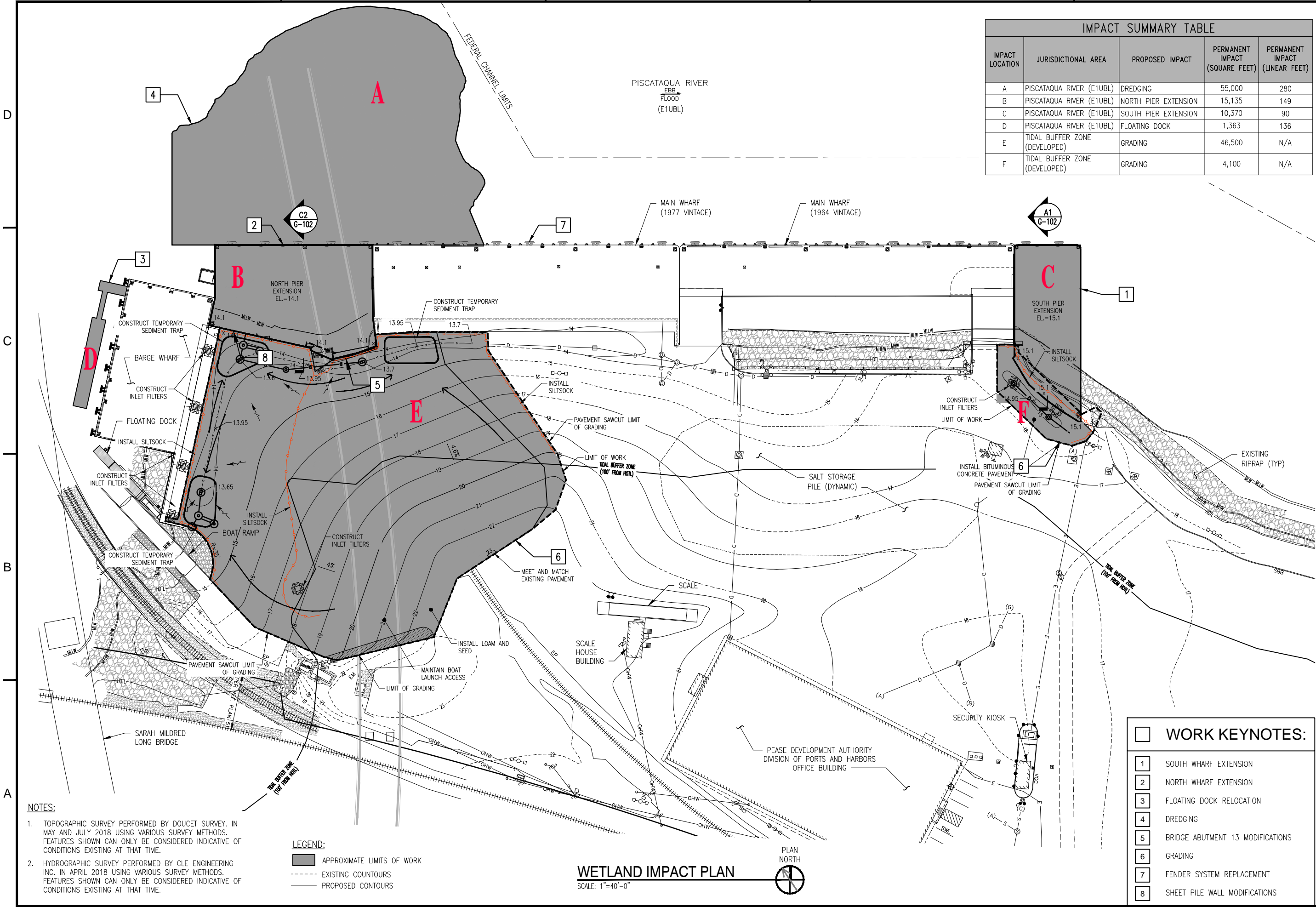
D

C

B

A

IMPACT SUMMARY TABLE				
IMPACT LOCATION	JURISDICTIONAL AREA	PROPOSED IMPACT	PERMANENT IMPACT (SQ. FEET)	PERMANENT IMPACT (LINEAR FEET)
A	PISCATAQUA RIVER (E1UBL)	DREDGING	55,000	280
B	PISCATAQUA RIVER (E1UBL)	NORTH PIER EXTENSION	15,135	149
C	PISCATAQUA RIVER (E1UBL)	SOUTH PIER EXTENSION	10,370	90
D	PISCATAQUA RIVER (E1UBL)	FLOATING DOCK	1,363	136
E	TIDAL BUFFER ZONE (DEVELOPED)	GRADING	46,500	N/A
F	TIDAL BUFFER ZONE (DEVELOPED)	GRADING	4,100	N/A



- NOTES:**
1. TOPOGRAPHIC SURVEY PERFORMED BY DOUCET SURVEY. IN MAY AND JULY 2018 USING VARIOUS SURVEY METHODS. FEATURES SHOWN CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS EXISTING AT THAT TIME.
 2. HYDROGRAPHIC SURVEY PERFORMED BY CLE ENGINEERING INC. IN APRIL 2018 USING VARIOUS SURVEY METHODS. FEATURES SHOWN CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS EXISTING AT THAT TIME.

- LEGEND:**
- APPROXIMATE LIMITS OF WORK
 - - - EXISTING CONTOURS
 - PROPOSED CONTOURS

WETLAND IMPACT PLAN

SCALE: 1"=40'-0"



- WORK KEYNOTES:**
- 1 SOUTH WHARF EXTENSION
 - 2 NORTH WHARF EXTENSION
 - 3 FLOATING DOCK RELOCATION
 - 4 DREDGING
 - 5 BRIDGE ABUTMENT 13 MODIFICATIONS
 - 6 GRADING
 - 7 FENDER SYSTEM REPLACEMENT
 - 8 SHEET PILE WALL MODIFICATIONS

603.766.1870
inquiry@applecoremarine.com
Applecore Marine Engineering, LLC
800 State St, Suite E
Portsmouth New Hampshire 03801

PEASE DEVELOPMENT AUTHORITY
DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH
MARKET STREET MARINE TERMINAL
MAIN PIER IMPACT PLANS
WETLAND IMPACT PLAN

PROJECT No.: 5213
CAD DWG FILE: 5213_03_C-101.dwg
DESIGNED BY: SMD
DRAWN BY: DLM
CHECKED BY: XXX
SCALE: AS SHOWN

C-101
SHEET 6 OF 11

REVISION	DATE	DESCRIPTION	BY

1

2

3

4

5

D

C

B

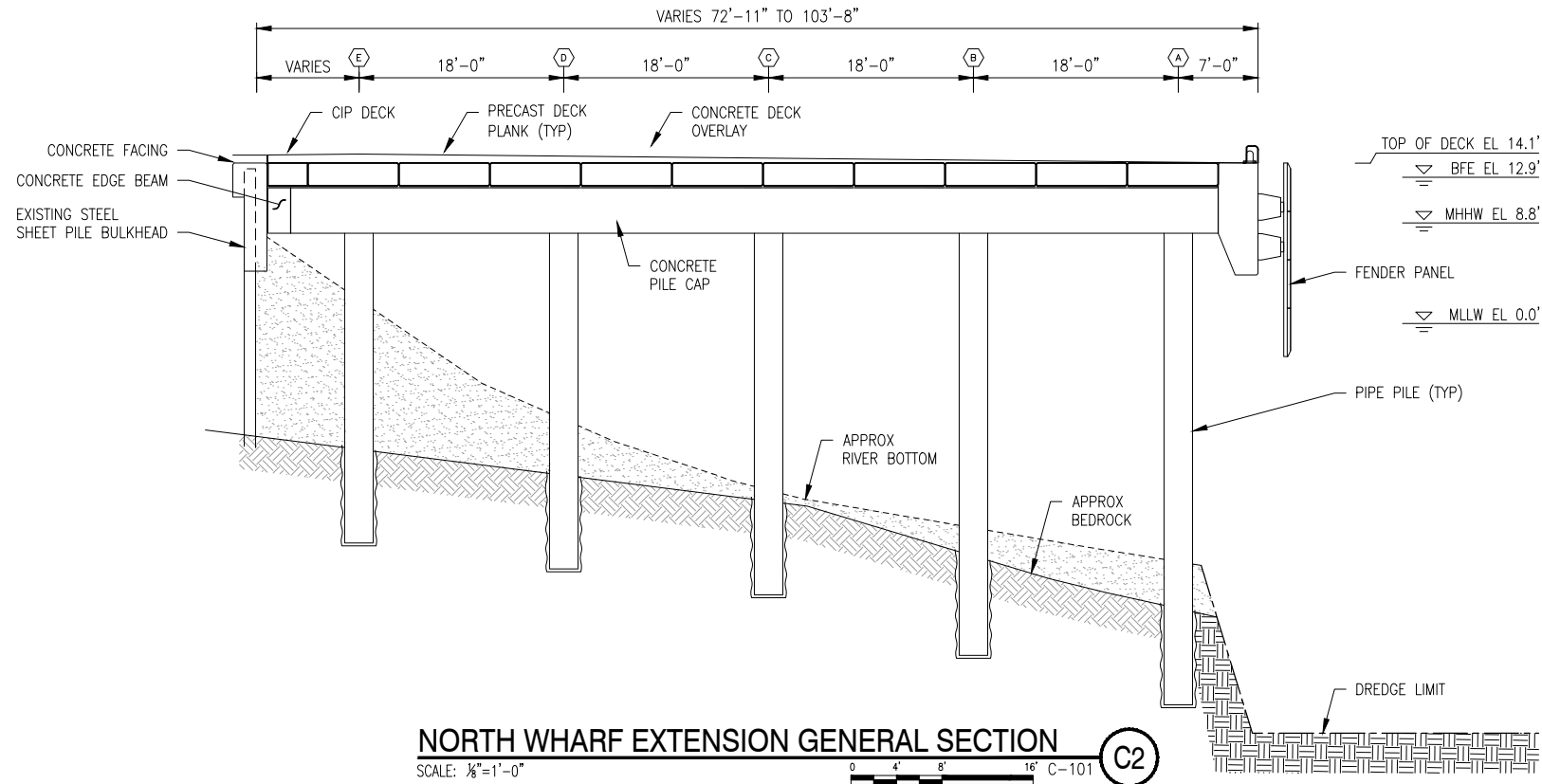
A

D

C

B

A

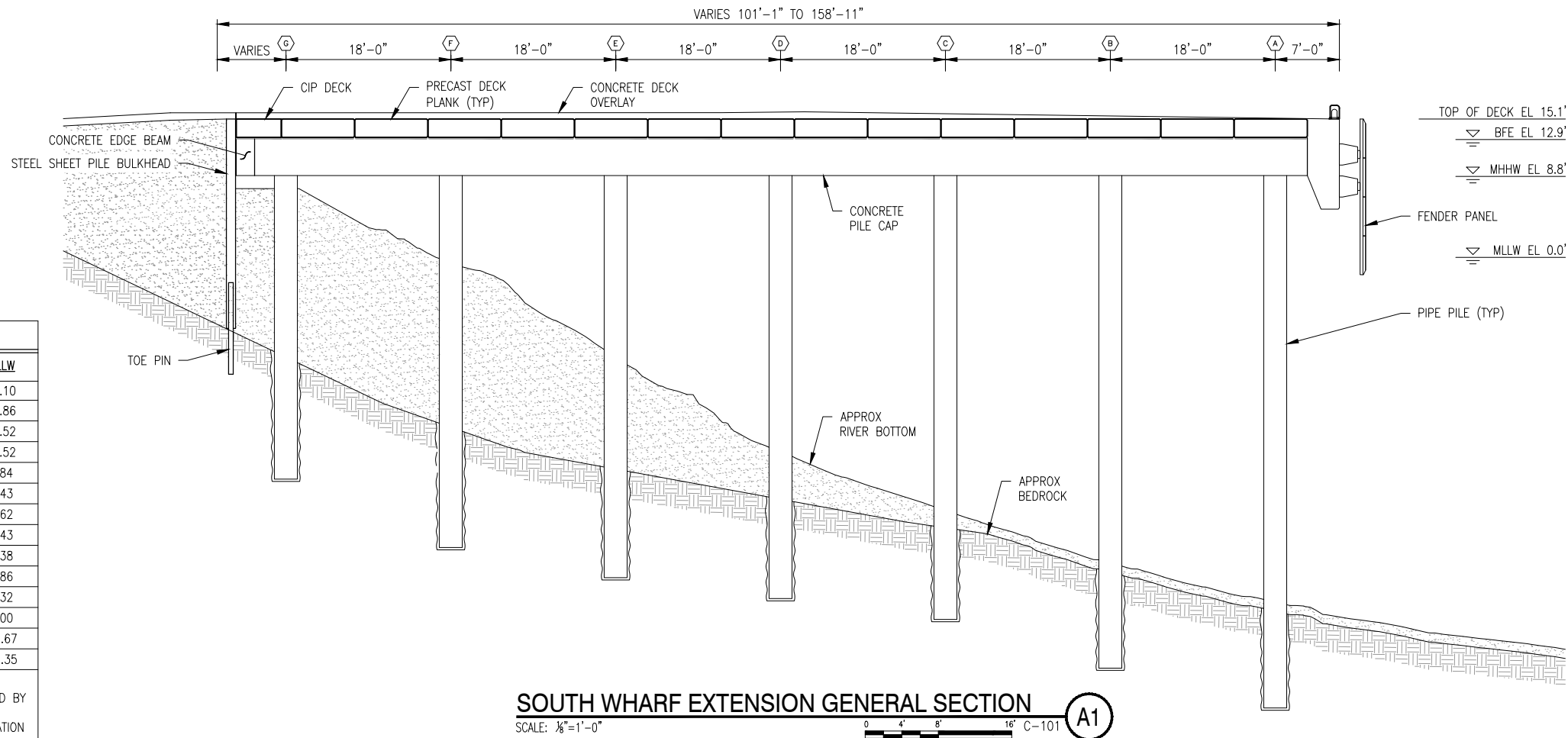


NORTH WHARF EXTENSION GENERAL SECTION

SCALE: 1/8"=1'-0"

0 4' 8' 16' C-101

C2



SOUTH WHARF EXTENSION GENERAL SECTION

SCALE: 1/8"=1'-0"

0 4' 8' 16' C-101

A1

ELEVATION REFERENCE TABLE

REFERENCE	MLLW
DECK ELEVATION	15.10
BASE FLOOD ELEVATION (BFE)	12.86
HIGHEST OBSERVED TIDE (02/07/1978)	12.52
HIGHEST ASTRONOMICAL TIDE (HAT) (06/15/1995)	10.52
MEAN HIGHER HIGH WATER (MHHW)	8.84
MEAN HIGH WATER (MHW)	8.43
NORTH AMERICAN VERTICAL DATUM (NAVD88)	4.62
MEAN SEA LEVEL (MSL)	4.43
MEAN TIDE LEVEL (MTL)	4.38
NATIONAL GEODETIC VERTICAL DATUM (NGVD29)	3.86
MEAN LOW WATER (MLW)	0.32
MEAN LOWER LOW WATER (MLLW)	0.00
LOWEST ASTRONOMICAL TIDE (LAT)	-1.67
LOWEST OBSERVED WATER LEVEL (11/30/1955)	-3.35

THE LOCAL TIDAL DATUM INFORMATION AND THE RELATIONSHIP BETWEEN LOCAL TIDE AND NAVD88 IS BASED ON DATA PUBLISHED BY THE U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEANIC SERVICE FOR STATION "SEAVEY ISLAND, PORTSMOUTH HARBOR", STATION ID: 8419870, TIDAL EPOCH 1983-2001.

603.766.1870
inquiry@appledoremarine.com

Appledore Marine Engineering, LLC

600 State St, Suite E
Portsmouth New Hampshire 03801

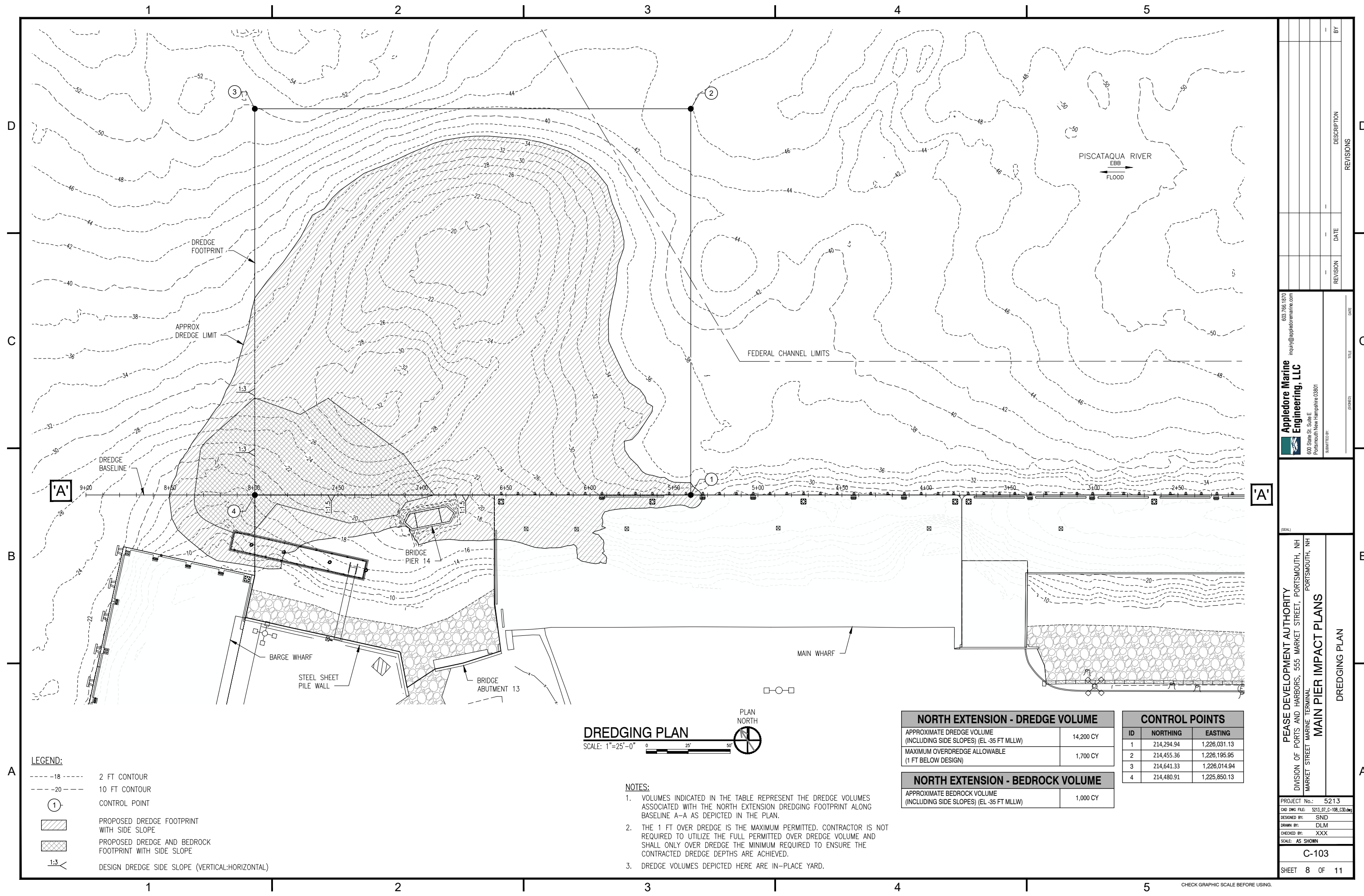
PEASE DEVELOPMENT AUTHORITY
DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH
MARKET STREET MARINE TERMINAL PORTSMOUTH, NH

MAIN PIER IMPACT PLANS

PROJECT No.: 5213
CAD DWG FILE: 5213_10_S-101.dwg
DESIGNED BY: SND
DRAWN BY: KMV
CHECKED BY: XXX
SCALE: AS SHOWN

C-102
SHEET 7 OF 11

CHECK GRAPHIC SCALE BEFORE USING.



DREDGING PLAN

SCALE: 1"=25'-0"



LEGEND:

	2 FT CONTOUR
	10 FT CONTOUR
	CONTROL POINT
	PROPOSED DREDGE FOOTPRINT WITH SIDE SLOPE
	PROPOSED DREDGE AND BEDROCK FOOTPRINT WITH SIDE SLOPE
	DESIGN DREDGE SIDE SLOPE (VERTICAL:HORIZONTAL)

- NOTES:**
- VOLUMES INDICATED IN THE TABLE REPRESENT THE DREDGE VOLUMES ASSOCIATED WITH THE NORTH EXTENSION DREDGING FOOTPRINT ALONG BASELINE A-A AS DEPICTED IN THE PLAN.
 - THE 1 FT OVER DREDGE IS THE MAXIMUM PERMITTED. CONTRACTOR IS NOT REQUIRED TO UTILIZE THE FULL PERMITTED OVER DREDGE VOLUME AND SHALL ONLY OVER DREDGE THE MINIMUM REQUIRED TO ENSURE THE CONTRACTED DREDGE DEPTHS ARE ACHIEVED.
 - DREDGE VOLUMES DEPICTED HERE ARE IN-PLACE YARD.

NORTH EXTENSION - DREDGE VOLUME

APPROXIMATE DREDGE VOLUME (INCLUDING SIDE SLOPES) (EL -35 FT MLLW)	14,200 CY
MAXIMUM OVERDREDGE ALLOWABLE (1 FT BELOW DESIGN)	1,700 CY

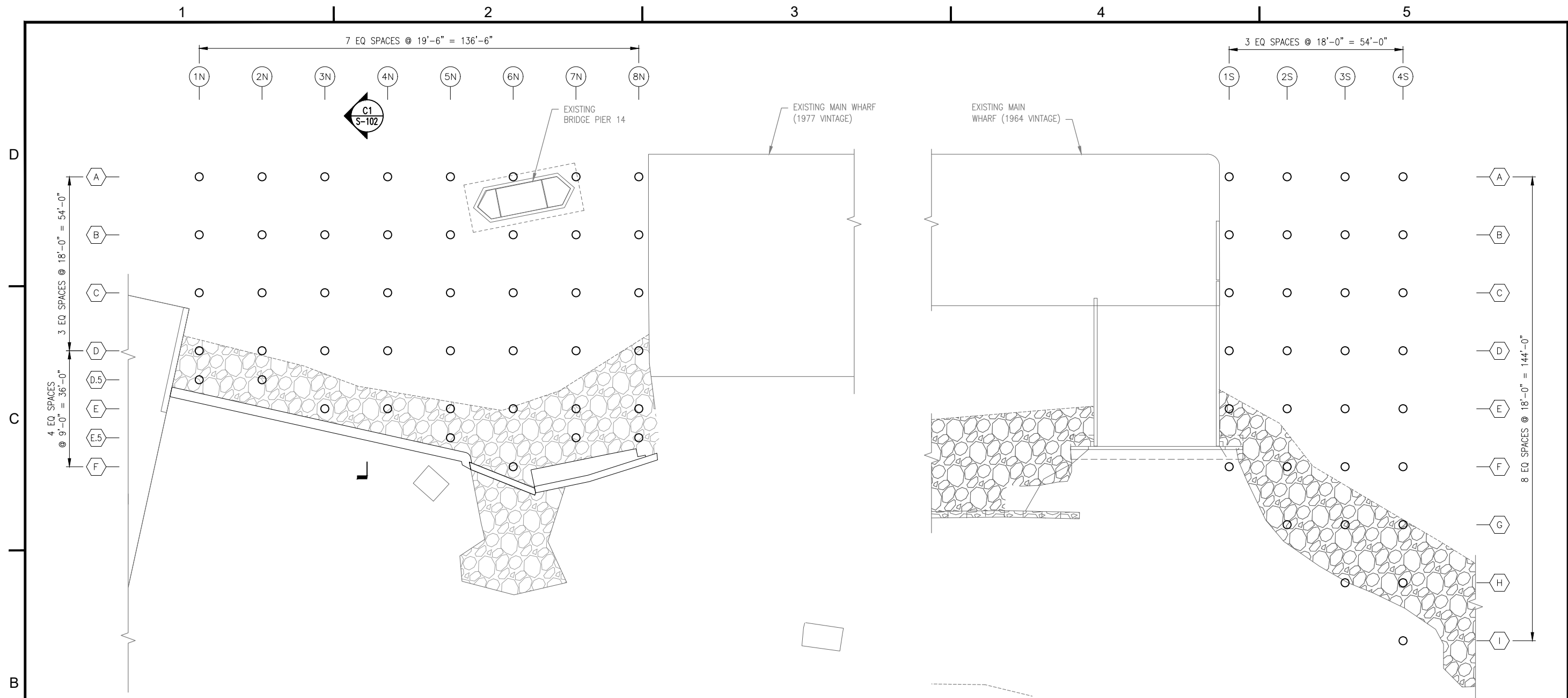
NORTH EXTENSION - BEDROCK VOLUME

APPROXIMATE BEDROCK VOLUME (INCLUDING SIDE SLOPES) (EL -35 FT MLLW)	1,000 CY
---	----------

CONTROL POINTS

ID	NORTHING	EASTING
1	214,294.94	1,226,031.13
2	214,455.36	1,226,195.95
3	214,641.33	1,226,014.94
4	214,480.91	1,225,850.13

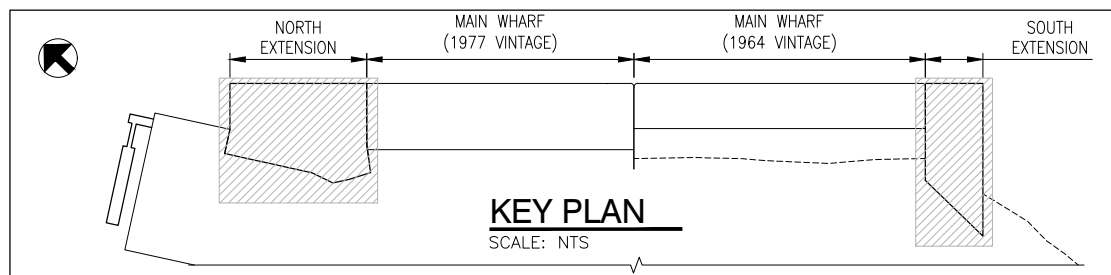
<p>Appledore Marine Engineering, LLC 600 State St., Suite E Portsmouth New Hampshire 03801 603.786.1970 inquiry@appledoremarine.com</p>	
<p>PEASE DEVELOPMENT AUTHORITY DIVISION OF PORTS AND HARBORS, 555 MARKET STREET, PORTSMOUTH, NH MARKET STREET MARINE TERMINAL PORTSMOUTH, NH</p>	<p>MAIN PIER IMPACT PLANS DREDGING PLAN</p>
<p>PROJECT No.: 5213 CAD DWG FILE: S213_07_0-108_C30.dwg DESIGNED BY: SND DRAWN BY: DLM CHECKED BY: XXXX SCALE: AS SHOWN</p>	
<p>C-103</p>	
<p>SHEET 8 OF 11</p>	



NORTH WHARF EXTENSION PILE PLAN
 SCALE: 1/16" = 1'-0"

SOUTH WHARF EXTENSION PILE PLAN
 SCALE: 1/16" = 1'-0"

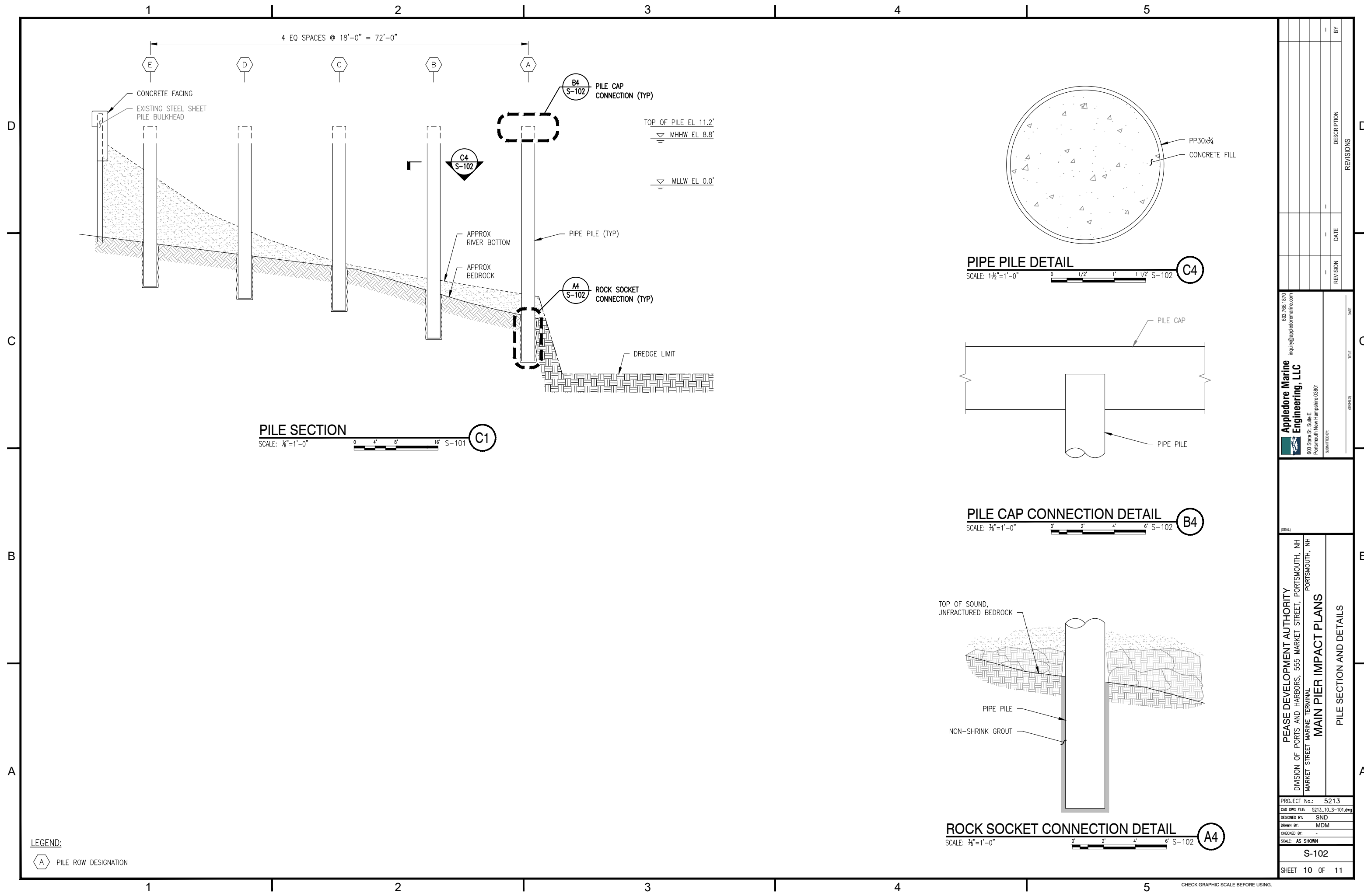
- LEGEND:**
- ① PILE BENT DESIGNATION
 - ⬡ PILE ROW DESIGNATION
 - CONCRETE-FILLED STEEL PIPE PILE



KEY PLAN
 SCALE: NTS

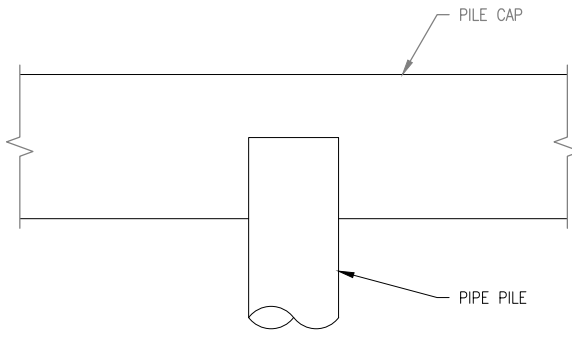
<p>603.766.1870 inquiry@appledoremarine.com Appledore Marine Engineering, LLC 600 State St, Suite E Portsmouth New Hampshire 03801</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISION	DATE	DESCRIPTION	BY				
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<p>MAIN PIER IMPACT PLANS</p>									
<p>PILE PLAN</p>									
<p>PROJECT No.: 5213 CAD DWG FILE: 5213_10_S-101.dwg DESIGNED BY: SND DRAWN BY: MDM CHECKED BY: - SCALE: AS SHOWN</p>									
<p>S-101</p>									
<p>SHEET 9 OF 11</p>									

CHECK GRAPHIC SCALE BEFORE USING.

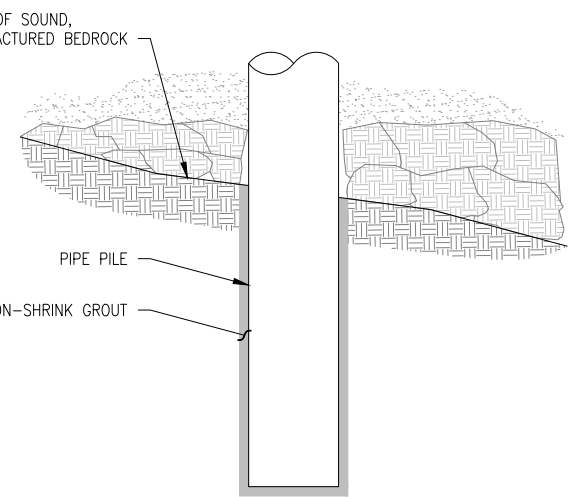


PILE SECTION
SCALE: 1/8"=1'-0"

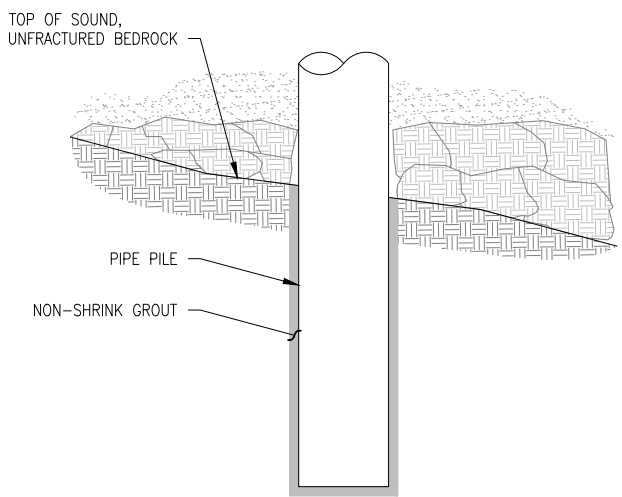
PIPE PILE DETAIL
SCALE: 1 1/2"=1'-0"



PILE CAP CONNECTION DETAIL
SCALE: 3/8"=1'-0"



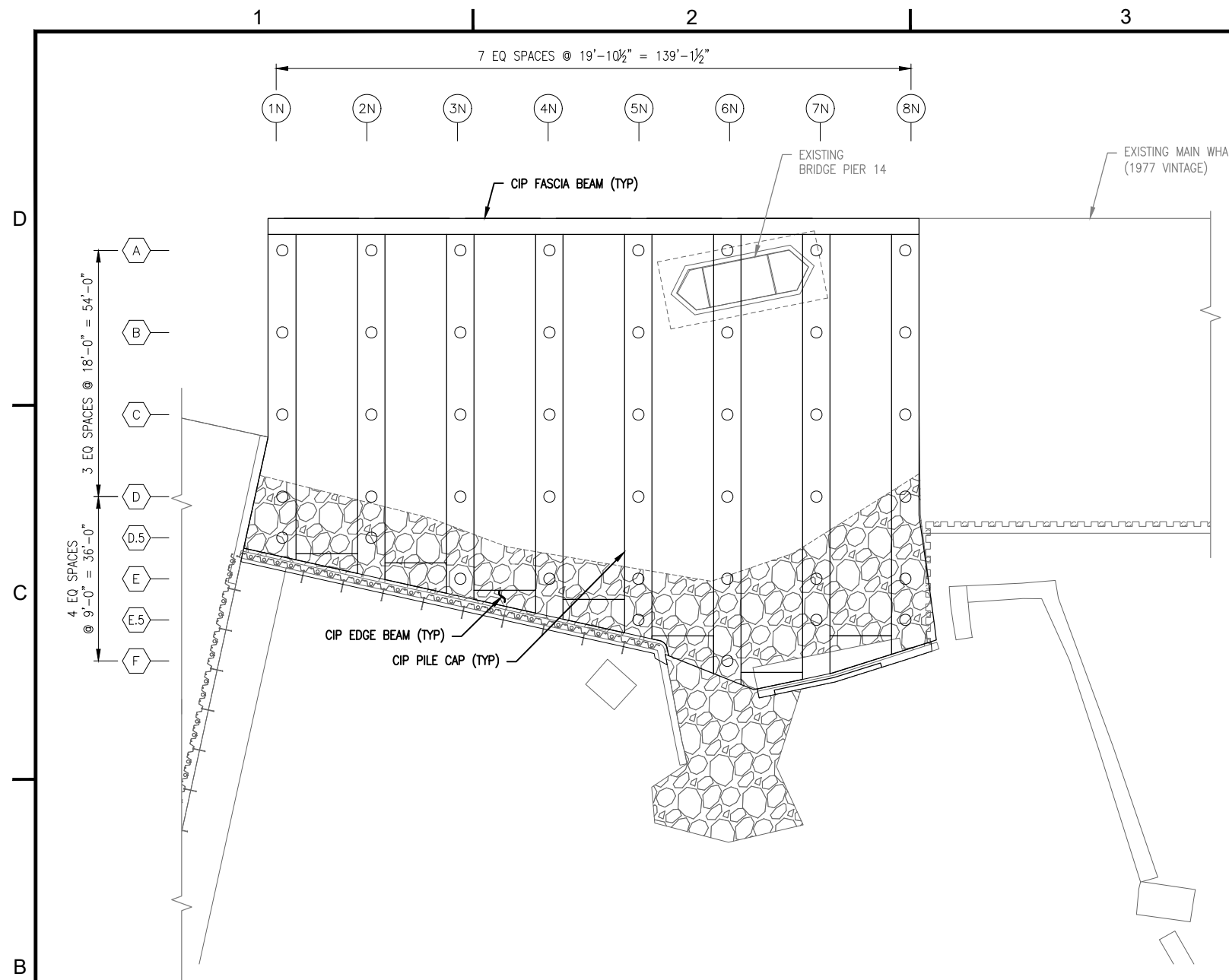
ROCK SOCKET CONNECTION DETAIL
SCALE: 3/8"=1'-0"



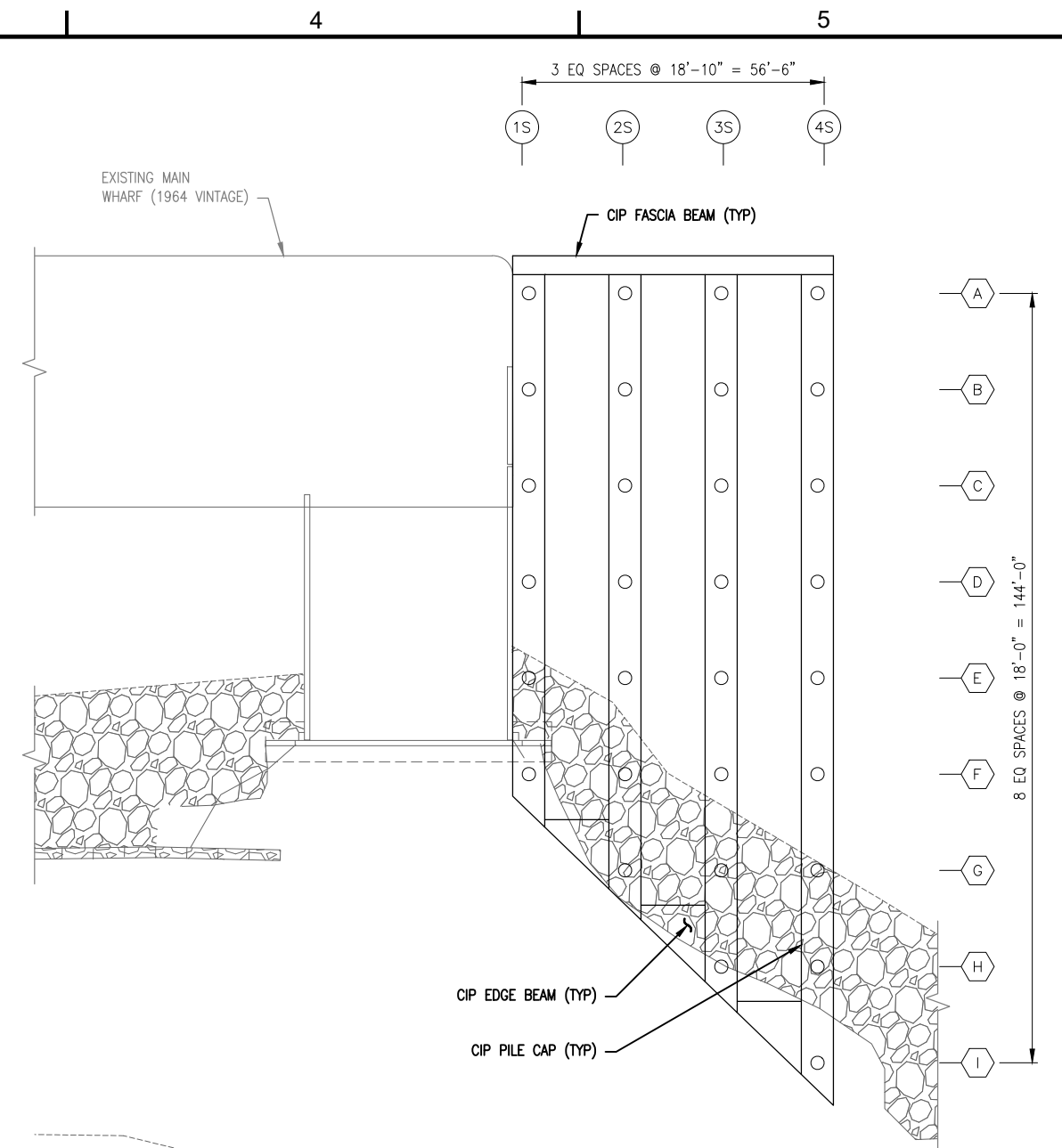
LEGEND:
A PILE ROW DESIGNATION

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Appledore Marine Engineering, LLC	TITLE
600 State St, Suite E Portsmouth New Hampshire 03801	REVISION
DATE	DESCRIPTION
BY	
PILE SECTION AND DETAILS	
PROJECT No.: 5213	
CAD DWG FILE: 5213_10_S-101.dwg	
DESIGNED BY: SND	
DRAWN BY: MDM	
CHECKED BY: -	
SCALE: AS SHOWN	
S-102	
SHEET 10 OF 11	

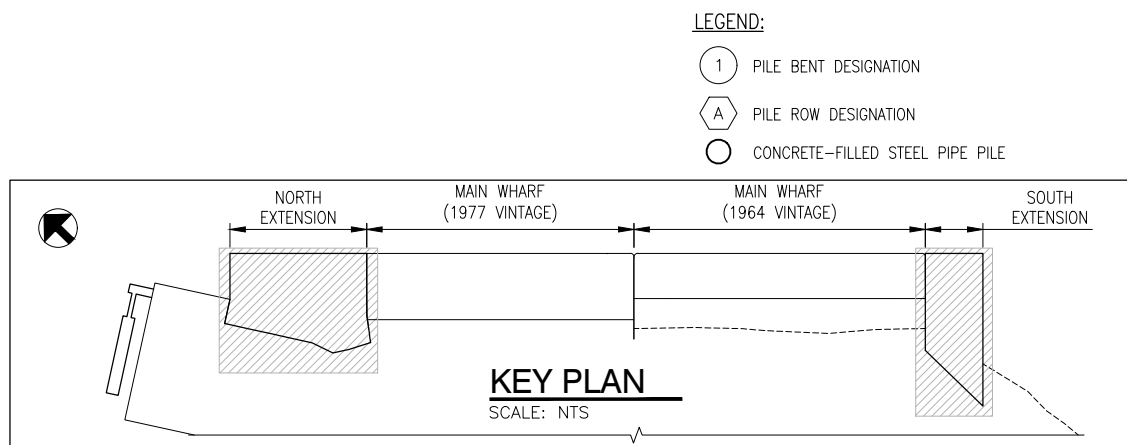
CHECK GRAPHIC SCALE BEFORE USING.



NORTH WHARF EXTENSION PILE PLAN
 SCALE: 1/16" = 1'-0"
 PLAN NORTH



SOUTH WHARF EXTENSION PILE PLAN
 SCALE: 1/16" = 1'-0"
 PLAN NORTH



KEY PLAN
 SCALE: NTS

- LEGEND:**
- ① PILE BENT DESIGNATION
 - Ⓐ PILE ROW DESIGNATION
 - CONCRETE-FILLED STEEL PIPE PILE

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<p>MAIN PIER IMPACT PLANS</p>									
<p>FRAMING PLAN</p>									
<p>PROJECT No.: 5213 CAD DWG FILE: 5213_10_S-101.dwg DESIGNED BY: SND DRAWN BY: MDM CHECKED BY: - SCALE: AS SHOWN</p>									
<p>S-103</p>									
<p>SHEET 11 OF 11</p>									

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