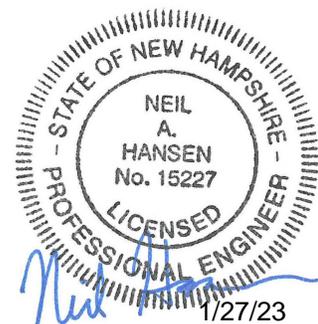
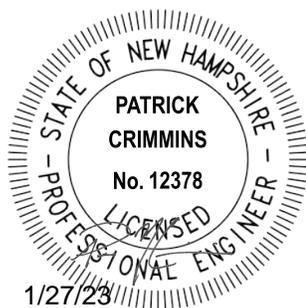


Granite State Minerals  
227 Market Street  
Portsmouth, New Hampshire

# Wetland Impact Permit Application

Granite State Minerals

January 27, 2023





E5027-002  
January 27, 2023

State of New Hampshire  
DES Wetlands Bureau  
29 Hazen Drive  
PO Box 95  
Concord, New Hampshire 03302

Re: **Wetland Application – Standard Major Impact  
Granite State Minerals, Portsmouth, NH**

Dear Wetland Inspector:

On behalf of Granite State Minerals, we are pleased to submit the following information to relative to a Wetland Application for the above referenced project:

- One (1) original copy of the Wetland Application – Major Impact dated January 27, 2023; and,
- One (1) check made payable to Treasurer-State of NH in the amount of \$2,670 for the application fee

The proposed project is located on a 2.80-acre lot at 227 Market Street in Portsmouth, New Hampshire. The site consists of a seaport/bulk terminal. The site is used for the transportation of dry bulk such as road salt, as well as the berthing of vessels, and the re-supply of ship stores. The cargo marshalled and stored on-site prior to transport consists of road salt.

The stormwater management upgrades are being constructed as part of the facility's stormwater management program under the EPA Multi-Sector General Permit (MSGP). The permit requires regular sampling of stormwater discharges and a stormwater plan to keep levels of certain analytes below benchmark limits established by the permit. The stormwater management system is designed to decrease concentrations of metals and other analytes in stormwater discharges to the river, consistent with MSGP requirements. It will also facilitate capture of cleaner and more accurate stormwater samples by providing an access point to grab samples from within a manhole rather than from the surface of the pavement.

Ground disturbing activities include the construction of two bollard moorings, a Contech stormwater filtration vault, drain manhole, and construction of pavement and asphalt curbing. The locations of all ground disturbing areas are located within the previously developed tidal buffer zone and tidal waters. The first of the two moorings is located on the northwestern end of the site and the second is located closer to the center of the site at the top of the existing stone revetment in an existing paved area. All drainage and stormwater treatment improvements are located near the second mooring near the center of the site. The drainage structures are located in an existing paved area with the outlet pipe to the Piscataqua River being located through the existing stone revetment within tidal waters. An asphalt curb is being constructed at the northeastern end of the site with the intent to direct storm water flow to the proposed catchbasin. No existing buildings are being disturbed as part of this project and no additional impervious area is being added.



We trust the enclosed information addresses the requirements for a Wetland Application – Standard Major Impact. If you have any questions or require any additional information, please contact me at 603-294-9213 or NAHansen@TigheBond.com.

Sincerely,  
**TIGHE & BOND, INC.**



Neil A. Hansen, PE  
Project Manager



Patrick M. Crimmins, PE  
Vice President

Enclosures

Cc: Granite State Minerals (via e-mail)  
New Hampshire Port Authority (via e-mail)

J:\E\E5027 Eastern Minerals\001 - Granite State Minerals\Report\_Evaluation\Applications\NHDES\Wetlands\E5027-001-Wetland Cover Letter.docx

**Cover Letter**

**Section 1 Wetland Permit Application - Standard Review (Major Impact)**

**Section 2 Owner & Applicant Letters of Authorization**

**Section 3 Minor and Major Impacts – Attachment A**

**Section 4 Functional Assessment Worksheet**

**Section 5 Avoidance and Minimization Checklist**

**Section 6 Coastal Resource Worksheet**

**Section 7 Documentation from DRED Natural Heritage Bureau (NHB) & United States Fish and Wildlife Service**

**Section 8 New Hampshire PGP: Appendix B - Corps Secondary Impact Checklist**

**Section 9 U.S. Geological Survey Topographic Map**

**Section 10 Photographs of Tidal Buffer Zone**

**Section 11 City of Portsmouth Tax Map**

**Section 12 Abutter Information**

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12.2	Abutter List .....	12-1
12.3	Abutter Certified Mail Receipts .....	12-1

**Section 13 Site Plan**

**Section 14 Mooring Improvement Plan**

**Section 15 Copy of Application Fee Check**



# **Section 1 Wetland Permit Application - Standard Review (Major Impact)**





# STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division/Land Resources Management  
Wetlands Bureau  
[Check the Status of your Application](#)



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

**APPLICANT'S NAME:** Granite State Minerals

**TOWN NAME:** Portsmouth

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

A person may request a waiver to the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III (b). For more information, please consult the [request form](#).

<b>SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))</b>	
Please use the <a href="#">Wetland Permit Planning Tool (WPPT)</a> , the Natural Heritage Bureau (NHB) <a href="#">DataCheck Tool</a> , the <a href="#">Aquatic Restoration Mapper</a> , or other sources to assist in identifying key features such as: <a href="#">priority resource areas (PRAs)</a> , <a href="#">protected species or habitats</a> , coastal areas, designated rivers, or designated prime wetlands.	
Has the required planning been completed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the property contain a PRA? If yes, provide the following information:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> <li>• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&amp;G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04). <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></li> <li>• Protected species or habitat?                             <ul style="list-style-type: none"> <li>○ If yes, species or habitat name(s): Atlantic Sturgeon, Shortnose Sturgeon <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span></li> <li>○ NHB Project ID #: 22-0347</li> </ul> </li> <li>• Bog? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></li> <li>• Floodplain wetland contiguous to a tier 3 or higher watercourse? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span></li> <li>• Designated prime wetland or duly-established 100-foot buffer? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></li> <li>• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span></li> </ul>	
Is the property within a Designated River corridor? If yes, provide the following information:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> <li>• Name of Local River Management Advisory Committee (LAC): <input style="width: 50px;" type="text"/></li> <li>• A copy of the application was sent to the LAC on Month: <input style="width: 30px;" type="text"/> Day: <input style="width: 30px;" type="text"/> Year: <input style="width: 30px;" type="text"/></li> </ul>	

[irm@des.nh.gov](mailto: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](http://www.des.nh.gov)

For dredging projects, is the subject property contaminated? • If yes, list contaminant: [REDACTED]	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For stream crossing projects, provide watershed size (se Wetland Permit Planning Tool or Stream Stats): [REDACTED]	
<b>SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))</b>	
Provide a <b>brief</b> description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.	
<p>The proposed project will provide necessary upgrades to the terminal including the replacement of two undersized bollard moorings and the construction of stormwater management upgrades. The stormwater management upgrades are being constructed as part of the facility's stormwater management program under the EPA Multi-Sector General Permit (MSGP). The permit requires regular sampling of stormwater discharges and a stormwater plan to keep levels of certain analytes below benchmark limits established by the permit. The stormwater management system is designed to decrease concentrations of metals and other analytes in stormwater discharges to the river, consistent with MSGP requirements. It will also facilitate capture of cleaner and more accurate stormwater samples by providing an access point to grab samples from within a manhole rather than from the surface of the pavement.</p>	
<b>SECTION 3 - PROJECT LOCATION</b>	
Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.	
ADDRESS: 227 & 555 Market Street	
TOWN/CITY: Portsmouth, NH	
TAX MAP/BLOCK/LOT/UNIT: Map 119, Lots 5 & 6	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Piscataqua River <input type="checkbox"/> N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places):	
	43.08028° North
	70.75944° West

<b>SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))</b>		
If the applicant is a trust or a company, then complete with the trust or company information.		
NAME: Granite State Minerals		
MAILING ADDRESS: 227 Market Street		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: jmcnamee@easternminerals.com		
FAX: [REDACTED]	PHONE: 978.764.2303	
ELECTRONIC COMMUNICATION: By initialing here: JM, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
<b>SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))</b>		
<input type="checkbox"/> N/A		
LAST NAME, FIRST NAME, M.I.: Neil A. Hansen		
COMPANY NAME: Tighe & Bond, Inc.		
MAILING ADDRESS: 177 Corporate Drive		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: nahansen@tighebond.com		
FAX: [REDACTED]	PHONE: 603.294.9213	
ELECTRONIC COMMUNICATION: By initialing here NAH, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
<b>SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))</b>		
If the owner is a trust or a company, then complete with the trust or company information.		
<input type="checkbox"/> Same as applicant		
NAME: SEE ATTACHED LIST OF OWNERS		
MAILING ADDRESS: [REDACTED]		
TOWN/CITY: [REDACTED]	STATE: [REDACTED]	ZIP CODE: [REDACTED]
EMAIL ADDRESS: [REDACTED]		
FAX: [REDACTED]	PHONE: [REDACTED]	
ELECTRONIC COMMUNICATION: By initialing here NAH, I hereby authorize NHDES to communicate all matters relative to this application electronically.		

**SECTION 7 - RESOURCE-SPECIFIC CRITERIA ESTABLISHED IN Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, OR Env-Wt 900 HAVE BEEN MET (Env-Wt 313.01(a)(3))**

Describe how the resource-specific criteria have been met for each chapter listed above (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters):  
The proposed project will provide necessary upgrades to the terminal including the replacement of two undersized bollard moorings and the construction of stormwater management upgrades. The proposed project will have no adverse impact on public commerce, navigation or recreation. The proposed project will have a positive effect on stormwater discharge to the Piscataqua River. There will be no impact on abutting owners. This project proposes the minimum area to be impacted. This project has been designed to avoid resource areas and minimize adverse impacts as it is located within an existing paved area and stone revetment. No impacts to wetlands; all impacts occur in previously disturbed tidal buffer.

**SECTION 8 - AVOIDANCE AND MINIMIZATION**

Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a))\* . Any project with unavoidable jurisdictional impacts must then be minimized as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#) and the [Wetlands Permitting: Avoidance, Minimization and Mitigation Fact Sheet](#). For minor or major projects, a functional assessment of all wetlands on the project site is required (Env-Wt 311.03(b)(10))\* .

Please refer to the application checklist to ensure that you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable). You can use the [Avoidance and Minimization Checklist](#), the [Avoidance and Minimization Narrative](#), or your own avoidance and minimization narrative.

*\*See Env-Wt 311.03(b)(6) and Env-Wt 311.03(b)(10) for shoreline structure exemptions.*

**SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02)**

If unavoidable jurisdictional impacts require mitigation, a mitigation pre-application meeting must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.

Mitigation Pre-Application Meeting Date: Month:  Day:  Year:

N/A - Mitigation is not required

**SECTION 10 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c)**

Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable:  I confirm submittal.

N/A – Compensatory mitigation is not required

**SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))**

For each jurisdictional area that will be/has been impacted, provide square feet (SF) and, if applicable, linear feet (LF) of impact, and note whether the impact is after-the-fact (ATF; i.e., work was started or completed without a permit).

For intermittent and ephemeral streams, the linear footage of impact is measured along the thread of the channel. *Please note, installation of a stream crossing in an ephemeral stream may be undertaken without a permit per Rule Env-Wt 309.02(d), however other dredge or fill impacts should be included below.*

For perennial streams/ivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

Permanent impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).

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

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Scrub-shrub Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Emergent Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Wet Meadow			<input type="checkbox"/>			<input type="checkbox"/>
	Vernal Pool			<input type="checkbox"/>			<input type="checkbox"/>
	Designated Prime Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Duly-established 100-foot Prime Wetland Buffer			<input type="checkbox"/>			<input type="checkbox"/>
Surface Water	Intermittent / Ephemeral Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Perennial Stream or River			<input type="checkbox"/>			<input type="checkbox"/>
	Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - River			<input type="checkbox"/>			<input type="checkbox"/>
Banks	Bank - Intermittent Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Bank - Perennial Stream / River			<input type="checkbox"/>			<input type="checkbox"/>
	Bank / Shoreline - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
Tidal	Tidal Waters			<input type="checkbox"/>	75		<input type="checkbox"/>
	Tidal Marsh			<input type="checkbox"/>			<input type="checkbox"/>
	Sand Dune			<input type="checkbox"/>			<input type="checkbox"/>
	Undeveloped Tidal Buffer Zone (TBZ)			<input type="checkbox"/>			<input type="checkbox"/>
	Previously-developed TBZ			<input type="checkbox"/>	6600		<input type="checkbox"/>
	Docking - Tidal Water			<input type="checkbox"/>			<input type="checkbox"/>
<b>TOTAL</b>					<b>6675</b>		

**SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)**

**MINIMUM IMPACT FEE:** Flat fee of \$400.

**NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION:** Flat fee of \$400 (refer to RSA 482-A:3, 1(c) for restrictions).

**MINOR OR MAJOR IMPACT FEE:** Calculate using the table below:

Permanent and temporary (non-docking): 6,675 SF × \$0.40 = \$ 2,670

Seasonal docking structure: SF × \$2.00 = \$

Permanent docking structure: SF × \$4.00 = \$

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

Total = \$ 2,670

**The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$ 2,670**

[irm@des.nh.gov](mailto: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](http://www.des.nh.gov)

**SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)**  
 Indicate the project classification.

<input type="checkbox"/> Minimum Impact Project	<input type="checkbox"/> Minor Project	<input checked="" type="checkbox"/> Major Project
---	--	---

**SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)**

Initial each box below to certify:

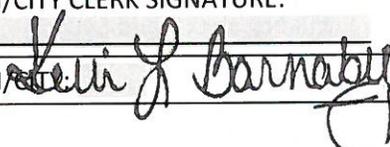
Initials:   	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials:   	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
Initials:   	The signer understands that: <ul style="list-style-type: none"> <li>• The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:                         <ol style="list-style-type: none"> <li>1. Deny the application.</li> <li>2. Revoke any approval that is granted based on the information.</li> <li>3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1.</li> </ol> </li> <li>• The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.</li> <li>• The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.</li> </ul>
Initials:   	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

**SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)**

SIGNATURE (OWNER): <u>See Owner's/Agent Letter of Authorization</u>	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE): 	PRINT NAME LEGIBLY: Neil A. Hansen	DATE: 1/27/23

**SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))**

As required by RSA 482-A:3, I(a),(1), 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.

TOWN/CITY CLERK SIGNATURE: 	PRINT NAME LEGIBLY: Kelli L. Barnaby
TOWN/CITY: Portsmouth	DATE: 1/27/2023

**DIRECTIONS FOR TOWN/CITY CLERK:**

Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. 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.
3. 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.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

**DIRECTIONS FOR APPLICANT:**

Submit the 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 at the address at the bottom of this page. Make check or money order payable to "Treasurer – State of NH".



**List of Owners**

**227 Market Street**

Tax Map 119, Lot 6  
Jaqueline Mahoney  
227 Market Street LLC  
27 Austin Street  
Portsmouth, NH 03801

**315 Market Street**

Tax Map 119, Lot 5  
Geno Marconi  
NH State Port Authority  
555 Market Street  
Portsmouth, NH 03801



## **Section 2**

# **Owner & Applicant Letters of Authorization**



**Owner's Letter of Authorization**

This letter is to authorize Granite State Minerals Inc. (Applicant) to represent the interest of 227 Market Street, LLC (owner) in any and all permitting matters involving the City of Portsmouth and/or the State of New Hampshire in connection with (i) the mooring improvement project as shown on the Appledore Marine Engineering, LLC, Mooring Improvements plans dated June 4, 2019, and (ii) the stormwater improvement project as shown on the Tighe & Bond Proposed Stormwater Improvements plans dated March 8, 2022 (the "Projects") at 227 Market Street, LLC's property located at 227 Market Street, Portsmouth New Hampshire identified as Tax Map 119 Lot 6. This authorization shall relate to those activities that are required for local, state and federal permitting for the above project and include any required signatures for those applications. This authorization will be valid until and terminate on December 31, 2023 and will not be valid in the event of any material change to the projects, which will require further authorization.

  
\_\_\_\_\_  
Signature

Sean Mahoney, as Power of  
Attorney for Jaqueline Mahoney,  
Manager of 227 Market Street LLC

\_\_\_\_\_  
Print Name

4/27/2022  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Witness

Patricia Kelly  
\_\_\_\_\_  
Print Name

4/27/2022  
\_\_\_\_\_  
Date



**Owner's/Agent Letter of Authorization**

This letter is to authorize Tighe & Bond, Inc. (Civil Engineer), to represent and submit on behalf of Granite State Minerals (Applicant), applications and materials in all site design and permitting matters for the proposed project at 227 Market Street in Portsmouth, New Hampshire. These projects include (i) the mooring improvement project as shown on the Appledore Marine Engineering, LLC, Mooring Improvements plans dated June 4, 2019, and (ii) the stormwater improvement project as shown on the Tighe & Bond Proposed Stormwater Improvements plans dated December 29, 2022 (the "Projects") at 227 Market Street, LLC's property located at 227 Market Street, Portsmouth New Hampshire identified as Tax Map 119 Lot 6. This authorization shall relate to those activities that are required for local, state and federal permitting for the above project and include any required signatures for those applications. This authorization will be valid until and terminate on December 31, 2023 and will not be valid in the event of any material change to the projects, which will require further authorization.

Shelagh E. Mahoney  
Signature

Shelagh E. Mahoney  
Print Name

1/12/2023  
Date

Teresa Kelly  
Witness

Teresa Kelly  
Print Name

1/12/2023  
Date



LICENSE AGREEMENT

BETWEEN

PEASE DEVELOPMENT AUTHORITY - DIVISION OF PORTS AND HARBORS

AND

GRANITE STATE MINERALS, INC.

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EXHIBITS TO LICENSE

Exhibit

- |     |  |
|-----|--|
| “A” | PLAN OF LICENSE AREA                       |
| “B” | PLAN OF BOLLARD                            |
| “C” | LIST OF ENVIRONMENTAL LAWS AND REGULATIONS |

## LICENSE

THIS LICENSE AGREEMENT ("License") is made by and between the PEASE DEVELOPMENT AUTHORITY - DIVISION OF PORTS AND HARBORS ("PDA-DPH") 55 International Drive, Portsmouth, New Hampshire 03801 and GRANITE STATE MINERALS, INC., c/o Eastern Salt Company, Inc., 134 Middle St., Suite 210, Lowell, MA 01852 ("GSM" or "Licensee") (PDA-DPH and GSM may be referred to jointly as the "Parties").

## RECITALS

A. PDA-DPH is an agency of the State of New Hampshire established pursuant to RSA ch. 12-G, "Pease Development Authority," and is authorized to enter into this License pursuant to the provisions contained therein, subject to the approval of the Governor and Executive Council. PDA-DPH operates the Market Street Marine Terminal at 555 Market Street, Portsmouth, NH 03801.

B. GSM is a corporation duly organized and existing under the laws of the State of New Hampshire and is registered to do business in New Hampshire. GSM leases property at 227 Market Street, Portsmouth, NH 03801.

NOW, THEREFORE, in consideration of the covenants herein contained and other valuable consideration, the receipt of which is hereby acknowledged, PDA-DPH and GSM hereby agree as follows:

ARTICLE 1. LICENSE AREA

1.1. Description of License Area. PDA-DPH, for and in consideration of the covenants herein specified to be performed by GSM, hereby grants to GSM a non-exclusive license to use the 324 square foot area (18' x 18') specifically shown on the plan attached hereto and incorporated herein as Exhibit A, solely for the construction, installation, use, and maintenance of a bollard for the mooring of marine vessels docked at GSM's leased facility at 227 Market Street, Portsmouth, New Hampshire ("License Area" or "Licensed Premises"), consistent with the Plan of Bollard attached hereto and incorporated herein as Exhibit B.

1.2. All of the rights granted GSM to the areas and/or facilities described in Section 1.1 shall be subject to the additional restrictions set forth in Article 9 and other pertinent provisions of this License.

## ARTICLE 2. CONDITION OF LICENSE AREA

2.1. GSM acknowledges that it has inspected the License Area, including any improvements and other facilities thereon, as of the date of execution of this License and that it has determined that the said License Area is in apparent good and tenable condition and appropriate for the use intended under this License. GSM accepts said License Area in its present condition and without any representation or warranty by PDA-DPH as to its condition or as to the use or occupancy which may be made thereof and without obligation on the part of PDA-DPH to make any alterations, repairs or additions to said License Area that has not been fully set forth in this License. Further, PDA-DPH shall not be responsible for any latent or other defect not known by PDA-DPH or change of condition in said License Area, and the rent and fees hereunder shall in no event be withheld or diminished on account of any such defect nor any such change in their condition, nor, except as provided herein, for any damage occurring thereto. Except as specifically set forth in this License, GSM at its sole cost and expense, shall do all work necessary to prepare the Licensed Premises for its intended use.

### ARTICLE 3. TERM COMMENCEMENT AND EXPIRATION

3.1. This License shall be effective upon execution and shall continue for a term commencing September 1, 2022 (“Term Commencement Date”) and expiring at end of day on August 31, 2040 (“Base Term”), unless terminated earlier in accordance with the provisions of this License. Notwithstanding the foregoing, should GSM’s leasehold interest in the property at 227 Market Street, Portsmouth, NH 03801 terminate, or otherwise end, during the Base Term, this License shall automatically terminate as of the same date.

3.2. Unless the context clearly indicates otherwise when used in this License the phrase “term of this License” shall mean the Base Term plus any duly exercised allowable extensions thereof.

ARTICLE 4. (RESERVED)

## ARTICLE 5. IMPOSITIONS

5.1. During the Term of this License, GSM shall pay when due, all taxes, charges, excises, license and permit fees, assessments, and other governmental charges, general and special, ordinary and extraordinary, unforeseen, as well as foreseen, of any kind and nature whatsoever, which during the term of this License are assessed or imposed upon GSM or become due and payable by GSM with respect to its operations on the Licensed Premises, or imposed on any personal property, equipment or other facility used in GSM's operations on the Licensed Premises (all of which taxes, charges, excises, fees, assessments and other governmental charges are hereinafter collectively referred to as "Impositions"). If, by law, any such Imposition is payable, or may at the option of GSM be paid in installments, GSM may pay the same together with any accrued interest on the unpaid balance of such Imposition in installments as the same respectively become due and before any fine, penalty, interest or cost may be added thereto for the nonpayment of any such installment and interest. Any Imposition relating to a fiscal period of the taxing authority a part of which period is included prior to the commencement of the term of this License, shall be prorated as between PDA-DPH and GSM so that GSM shall pay only the portion thereof attributable to any period during the Term.

Notwithstanding the preceding paragraph, the Parties acknowledge that PDA-DPH shall have no right to assess any rentals, charges, fees or other obligations in PDA-DPH's proprietary capacity (as distinct from its governmental capacity) against GSM other than as specified or allowed in other sections of this License.

5.2. GSM covenants to furnish to PDA-DPH within fourteen (14) days of receipt of a written request from PDA-DPH, official receipts of the appropriate taxing authority, or other proof satisfactory to PDA-DPH, evidencing the payment thereof.

ARTICLE 6. SURRENDER OF LICENSE AREA

6.1. On the expiration or termination of this License, GSM shall surrender to PDA-DPH the License Area, including title to and ownership of the bollard and any other improvements thereon, free of all materials, in good order, condition and repair, reasonable wear and tear excepted. GSM's obligation under this Article 6 and the related provisions of Article 9 shall survive the expiration or termination of this License. Once installed, the bollard shall not be removed without the written permission of PDA-DPH.

## ARTICLE 7. INSURANCE

7.1. Insurance. During the term of this License, GSM, its subcontractors and agents shall at their expense carry and maintain:

(1) Commercial general liability insurance, including operating liability insurance against claims for personal injury, bodily injury, death or property damage, occurring upon, in or about the License Area and other portions of the PDA-DPH utilized by GSM including, without limitation, any improvements thereon and the common areas, sidewalks, streets, parking areas and passageways, such insurance to afford immediate minimum protection at the time of the Term Commencement Date, and at all times during the Term, to a limit of not less than four (\$4,000,000.00) million dollars per occurrence with respect to damage to property and four (\$4,000,000.00) million dollars per occurrence with respect to personal injury or death to any one or more persons and with no deductible or such deductible amount as may be approved by PDA-DPH. Such insurance shall also include coverage against liability for bodily injury or property damage arising out of or related to GSM's operations in connection with this License or on behalf of GSM, or any other person or organization, or involving any owned, non-owned, leased or hired automotive equipment in connection with GSM's activities at the PDA-DPH.

(2) Workers' compensation and employer's liability insurance in an amount and form which meets all applicable requirements of the labor laws of the State of New Hampshire, as amended from time to time, and which specifically covers the persons and risks involved in this License.

(3) Longshore and Harbor Workers' Compensation Act insurance coverage for all maritime employment related activities in connection with the rights granted under this License.

(4) Automobile liability insurance in amounts approved from time to time by PDA-DPH, but not less than One Million Dollars (\$1,000,000) combined single limit for owned, hired and non-owned automobiles.

7.2. All policies of insurance required to be carried under this Article shall be effected under valid and enforceable policies, in such forms and amounts as may, from time to time, be required under this License, issued by insurers of recognized responsibility. The policies of insurance required in Section 7.1 shall be for the mutual benefit of PDA-DPH, the State of New Hampshire and GSM with PDA-DPH and State of New Hampshire named as an additional insureds under the commercial general liability and automobile liability insurance policies. Upon the execution of this License (and thereafter not less than fifteen (15) days prior to the expiration date of each policy required pursuant to this Article), GSM shall provide PDA-DPH with certificates of insurance setting forth requisite coverages and coverage amounts for each policy required pursuant to Section 7.1. The certificates of insurance shall bear a notation evidencing payment of premiums or shall

be accompanied by other evidence reasonably satisfactory to PDA-DPH of such payment. The requirement to produce certificates of insurance shall be in lieu of producing copies of the underlying insurance policies. In the event reasonable business necessity requires the production of any policy of insurance GSM agrees to allow PDA-DPH, within five (5) business days of its written request to GSM, to review such policies during normal business hours at a location designated by PDA-DPH.

7.3. All policies or certificates issued by the respective insurers shall provide that any losses shall be payable notwithstanding any act or failure to act or negligence of PDA-DPH, the State of New Hampshire or any other person, provide that the insurer shall have no right of subrogation against PDA-DPH or the State of New Hampshire, provide that the policies shall not be canceled without first providing PDA-DPH with thirty (30) days advance written notice, except in cases involving the non-payment of a premium, in which case ten (10) days shall be acceptable, a provision that any liability insurance coverage required to be carried shall be primary and non-contributing with respect to any insurance, self-insured or otherwise, carried by PDA and be reasonably satisfactory to the PDA-DPH in all other respects. In no circumstances will the Licensee be entitled to assign to any third party rights of action which licensee may have against PDA-DPH.

ARTICLE 8. PDA-DPH'S RIGHT TO PERFORM GSM'S COVENANTS AND RIGHT OF USE

8.1. If GSM shall at any time fail to pay when due any Imposition or other charge or to pay for or maintain any of the insurance policies required under Article 7, or to make any other payment or perform any other act on GSM's part required by this License, then PDA-DPH, after ten (10) days' written notice to GSM (or, in case of any emergency, without notice, or with such notice as may be reasonable under the circumstances) and without waiving or releasing GSM from any obligation of GSM hereunder, may (but shall not be required to):

- (i) pay such Imposition or other charge, or
- (ii) pay for and maintain such insurance policies, or
- (iii) make such other payment on GSM's part to be made under this License, or
- (iv) perform such other act on GSM's part to be performed as provided in this License following reasonable notice to GSM and an opportunity to cure, and may enter upon the License Area for such purpose and take all such action as may be deemed or appropriate by PDA-DPH to correct such failure of GSM.

8.2. All sums so paid by PDA-DPH and all reasonable costs and expenses incurred by PDA-DPH in connection with the performance of any such act (together with interest thereon at the rate specified in Section 26.1 from the respective date(s) of PDA-DPH's making of each such payment or incurring of each cost or expenses) shall constitute additional rent payable by GSM under this License and shall be paid by GSM to PDA-DPH on demand.

8.3. PDA-DPH shall have the right to utilize the bollard for mooring marine vessels in emergency situations without interference to GSM.

ARTICLE 9. USE OF LICENSE AREA - OBLIGATIONS IN CONNECTION WITH SUCH USE

9.1. The License Area is solely for the construction, installation, use, and maintenance of a bollard, at GSM's sole expense, for the mooring of marine vessels docked at GSM's leased facility 227 Market Street, Portsmouth, New Hampshire, consistent with the Plan of Bollard attached hereto and incorporated herein as Exhibit B. All bollard design and construction plans shall be reviewed and approved by the PDA-DPH prior to construction, who may at its discretion retain an outside marine engineering firm, at GSM's expense, to conduct said review. Once installed/constructed, GSM shall regularly inspect the bollard to ensure it is functioning consistent with its design and intended use, and shall regularly maintain the bollard, including but not limited to regular cleaning and painting to protect the bollard from the marine environment. No less than at least once every five (5) years, GSM shall have the bollard inspected by a licensed marine engineer to ensure proper functionality and provide a written inspection report to PDA-DPH. GSM shall maintain and repair as necessary the security fence and signage between the bollard and the parking lot to its west in accordance with 33 CFR and applicable United States Coast Guard regulations.

Subject expressly to approval by the PDA Board of Directors, PDA-DPH may authorize GSM to conduct any uses not expressly authorized under this License subject to the execution of an appropriate agreement which shall include a provision requiring the payment of established fees and charges that may be applicable to any such additional uses consented to by PDA-DPH. GSM is prohibited from any use of the License Area not specifically granted in this Section 9.1.

GSM warrants that it holds, or will hold prior to undertaking activities permitted under this License, all certificates, permits, licenses or other entitlement required by federal, state or local laws in order to allow GSM to conduct the permitted uses hereunder, and that the same are, and will be, kept current, valid and complete. GSM further warrants that it shall at all times abide by and conform with all terms of the same and that it shall give immediate notice to PDA-DPH of any additions, renewals, amendments, suspensions or revocations. In the use and occupation of the License Area and the conduct of such business thereon, GSM, at its sole cost and expense, shall promptly comply with all present and future laws, ordinances, orders, rules, regulations and requirements of all federal, state and municipal governments, courts, departments, commissions and boards, any national, state or local Board of Fire Underwriters, or any other body exercising functions similar to those of any of the foregoing.

9.2. GSM, its employees, contractors, subcontractors, agents, servants and invitees shall comply with all federal, state and local laws, rules and regulations which apply to the conduct of the uses contemplated herein. GSM, its employees, agents, contractors, subcontractors or assigns shall also comply with any rules and regulations promulgated by PDA-DPH for operation of the PDA-DPH as the same may be from time to time established or amended. Responsibility for compliance with all federal, state and local laws required by this Article rests exclusively with GSM. PDA-DPH assumes no enforcement or supervisory responsibility except with respect to

matters committed to its jurisdiction and authority. At all times, GSM will remain in compliance with the Maritime Transportation Security Act (MTSA) and the Marine Terminal Security Plan.

9.3. Notwithstanding any other provision of this License, the rights of GSM herein shall be subordinate to PDA-DPH's rights to manage the PDA-DPH property and other common areas and access, which rights shall include, without limitation, the right to impose rules and regulations or issue management directives relating to use of the PDA-DPH property and the right to add, delete, alter or otherwise modify the designation and use of all property of the PDA-DPH.

## ARTICLE 10. RIGHT OF PDA-DPH TO INSPECT AND REPAIR

10.1. GSM will permit PDA-DPH and its authorized agents and representatives to enter the License Area at all reasonable times and upon reasonable notice for the purpose of: (i) inspecting the same; and (ii) making any necessary repairs and performing any other work that may be necessary as determined in PDA-DPH's discretion.

10.2. Although not obligated to do so, PDA-DPH may undertake construction, repair or other activities related to the operation, maintenance and repair of the PDA-DPH property, including the Licensed Premises, which will require temporary accommodation by GSM. GSM agrees to accommodate PDA-DPH in such matters, so long as GSM is given a reasonable notice and opportunity to coordinate with PDA-DPH and so long as no such activity by PDA-DPH shall interfere with the active docking/loading of a ship in port or results in the payment of any fee or security for extension of the storage period as a result of such activity, even though GSM's own activities may be inconvenienced or partially impaired, and GSM agrees that no liability shall attach to PDA-DPH, its members, employees or agents by reason of such inconvenience or impairment, unless such activities of PDA-DPH hereunder are performed in a negligent manner.

## ARTICLE 11. GENERAL INDEMNIFICATION

11.1. In addition to any other obligation of GSM under this License to indemnify, defend and hold harmless PDA-DPH, GSM agrees to indemnify, defend and hold harmless PDA-DPH against and from any and all claims, judgments, damages, penalties, fines, assessments, costs and expenses, liabilities and losses (including, without limitation, diminution in value of the PDA-DPH, damages for the loss or restriction on the use of the PDA-DPH, sums paid in settlement of claims, attorneys' fees, consultants' fees and experts' fees) (collectively, "Losses") resulting or arising during the term of this License:

1. from any condition of the PDA-DPH resulting from GSM's occupancy of the PDA-DPH property or exercise of any of its rights under this License;
2. from any breach or default on the part of GSM in the performance of any covenant or agreement on the part of GSM to be performed pursuant to the terms of this License, or from any act or omission of GSM, or any of its agents, contractors, servants, employees, sublessees, licensees or invitees; or
3. from any accident, injury, death or damage whatsoever caused to any person by or arising from the acts or omissions of GSM occurring during the term of this License, on or about the License Area or any portion of the PDA-DPH property.

Notwithstanding the preceding provisions of this Section 11.1, GSM shall be under no obligation to indemnify PDA-DPH to the extent such matters included in this Section (i) were in existence prior to the effective date of this Agreement, or (ii) arise out of the gross negligence or willful misconduct of PDA-DPH, its officers, agents, contractors, servants, invitees or employees. GSM shall be under no obligation to indemnify PDA-DPH for any claim for diminution in value of the PDA-DPH resulting from GSM's occupancy of the PDA-DPH or exercise of any rights as contemplated herein.

In the event that any action or proceeding is brought against PDA-DPH, that is GSM's responsibility pursuant to this Section 11.1, GSM, upon notice from PDA-DPH, covenants to resist or defend such action or proceeding with counsel acceptable to PDA-DPH, as its interests may require.

11.2. The term "Person" as used in this Article and Article 19 shall include individuals, corporations, partnerships, governmental units and any other legal entity entitled to bring a claim, action or other demand or proceeding on its own behalf or on behalf of any other entity.

## ARTICLE 12. ALTERATIONS

12.1. GSM shall not place or construct any improvements, changes, structures, alterations or additions (cumulatively referred to in this Article as “Alterations”) in, to or upon the License Area or at any other area of the PDA-DPH, not including the bollard permitted under Article 1.1 (see Exhibit B), without PDA-DPH’s prior written consent, which consent shall be at PDA-DPH’s sole and exclusive discretion.

## ARTICLE 13. DESTRUCTION AND RESTORATION

13.1. In the event any portion of the License Area shall be damaged by fire or other casualty to such an extent as to preclude GSM from conducting its operations at the License Area, or to reduce the total level of utilization for its operations by a factor greater than fifty percent (50%), as determined solely and reasonably by an independent recognized expert in related operations, acceptable to the Parties, GSM shall have the election to terminate this License.

13.2. In the event GSM elects to terminate this License as allowed in Section 13.1, it shall provide written notice of such termination to PDA-DPH within thirty (30) days following the occurrence of such damage or destruction, which termination shall be effective on the thirtieth day following the date of receipt of such notice.

13.3. Except as otherwise expressly provided in this Article, no destruction of, or damage to the License Area, or other improvements or facilities located on the PDA-DPH by fire or any other cause shall permit GSM to surrender this License or shall relieve GSM from its obligations to pay the rent and fees payable under this License or from any of its other obligations under this License, and GSM waives any rights now or hereafter conferred upon it by statute or otherwise to quit or surrender this License or any suspension, diminution, abatement or reduction of rent or fees on account of any such destruction or damage other than as allowed under this Article.

## ARTICLE 14. DEFAULT BY PDA-DPH

14.1. The occurrence of the following events shall constitute a default and breach of this License by PDA-DPH (“Event of PDA-DPH Default”):

The failure by PDA-DPH to observe or perform any covenant required to be observed or performed by it where such failure continues for thirty (30) working days after written notice thereof by GSM to PDA-DPH, provided that if the default is such that the same cannot reasonably be cured within such 30-day period, PDA-DPH shall not be deemed to be in default if it shall have commenced the cure and thereafter diligently prosecutes the same to completion. Notwithstanding the foregoing, GSM shall not owe any amounts hereunder, during the period beginning with such failure and continuing until it has been cured, if such default materially affects GSM’s ability to operate its business on the Licensed Premises, and, furthermore, GSM shall have the right to terminate this License if such condition continues for more than 30 days.

14.2. If an Event of PDA-DPH Default occurs, GSM may elect among any of the following remedies:

1. termination of this License by written notice to PDA-DPH;
2. a rental abatement based on the degree of inability to use the License Area for its intended use caused by PDA-DPH’s default which abatement will be calculated from the date the Premises becomes unusable in whole or in part;
3. subject to available legal and factual defenses,
  - a decree or order of a court of competent jurisdiction compelling specific performance by PDA-DPH of its obligations under the License; or
  - a decree or order by a court of competent jurisdiction restraining or enjoining the breach by PDA-DPH of any of its obligations under the License.

14.3. No delay or omission of GSM to exercise any right or remedy shall be construed as a waiver of any such right or remedy or of any default by PDA-DPH.

## ARTICLE 15. DEFAULT BY GSM

15.1. The occurrence of any of the following events shall constitute a default and breach of this License by GSM (“Event of GSM Default”):

A. The failure by GSM to pay when due any payment required to be made by GSM to PDA-DPH hereunder where such failure continues for seven (7) working days after written notice thereof by PDA-DPH to GSM.

B. The abandonment or vacation of the License Area by GSM while in breach or default of any provision of this License or that lasts for seven (7) days or more.

C. The failure by GSM to observe and perform any other material provision of this License (including without limitation compliance with federal, state and local laws and regulations) to be observed or performed by GSM, where such failure continues for seven (7) working days after written notice thereof by PDA-DPH to GSM; provided that if the nature of such default is such that the same cannot reasonably be cured within such seven-day period, GSM shall not be deemed to be in default if GSM shall within such period commence such cure and thereafter diligently prosecutes the same to completion and provided further, that if the nature of any breach creates, in PDA-DPH’s sole determination, danger of injury to persons or property, GSM shall cure such breach as expeditiously as feasible following receipt of notice from PDA-DPH.

E. The making by GSM of any general assignment for the benefit of creditors; the filing by or against GSM of a petition to have GSM adjudged a bankrupt or of a petition for reorganization or arrangement under any law relating to bankruptcy where possession is not restored to GSM within thirty (30) days; or the attachment, execution or other judicial seizure of substantially all of GSM’s assets located at the PDA-DPH or of GSM’s interest in this License, where such seizure is not discharged within thirty (30) days.

F. The failure of GSM to carry and provide proof of the required insurance coverages under this License.

G. The occurrence of a breach and failure of GSM to cure within the specified time under any other agreement to which GSM and PDA-DPH are parties.

15.2. If an Event of GSM Default occurs, PDA-DPH may elect among any one or more of the following remedies, without limiting any other remedies available to PDA-DPH:

1. subject to available legal and factual defenses,
  - a decree or order of a court of competent jurisdiction compelling specific performance by GSM of its obligations under the License;

- a decree or order by a court of competent jurisdiction restraining or enjoining the breach by GSM of any of its obligations under the License; and

2. to the extent allowed by law, the right to undertake to cure GSM's default, in which event GSM shall pay PDA-DPH the reasonable costs incurred in such undertaking. Except for emergency conditions, PDA-DPH shall provide GSM with five (5) business days prior written notice of its intent to exercise the right to undertake to cure GSM's default. In the event GSM commences to cure such default within this five (5) day period and diligently prosecutes the same to completion, PDA-DPH shall refrain from exercising the right to undertake its own cure of GSM's default.

In exercising any right to cure under this Section, PDA-DPH may enter upon the License Area for such purpose and take all such action as may be deemed or appropriate by PDA-DPH to correct such failure of GSM.

Nothing herein shall imply any duty upon the part of PDA-DPH to do any such corrective action and performance thereof by PDA-DPH shall not constitute a waiver of GSM's default in failing to perform the same. PDA-DPH may during the progress of such work keep and store in or on the License Area all necessary materials, tools, supplies and equipment. PDA-DPH shall not be liable for inconvenience, annoyance, disturbance, loss of business or other damage of GSM by reason of making such repairs or the performance of any such work, on or account of bringing materials, tools, supplies or equipment into or through the License Area during the course thereof and the obligations of GSM under this License shall not be affected thereby.

3. termination of this License by the provision of written notice to GSM.

In the event that PDA-DPH shall elect to so terminate this License, then PDA-DPH may recover from GSM:

- (i) Any unpaid fees up to the effective date of termination; plus
- (ii) Any other amount necessary to compensate PDA-DPH for all the damages directly and proximately caused by GSM's default of its obligations under this License; plus
- (iii) PDA-DPH shall provide GSM with notice of any damage claims sought to be asserted by PDA-DPH under this section within sixty (60) days of the effective date of termination and will assert such claim within one hundred and twenty (120) days of such notice.

15.3. The various rights and remedies reserved to PDA-DPH, including those not specifically described under this License, shall be cumulative, and, except as otherwise provided by New Hampshire statutory law in force and effect at the time of the execution of this License, PDA-DPH may pursue any or all of such rights and remedies, whether at the same time or otherwise.

15.4. No delay or omission of PDA-DPH to exercise any right or remedy shall be construed as a waiver of any such right or remedy or of any default by GSM.

15.5. Notwithstanding any other provision of this License, in the event the breach by GSM in the reasonable opinion of PDA-DPH affects or is likely to affect the efficient operation of the PDA-DPH or give rise to public safety concerns, in addition to any other remedy it may have under this Lease, PDA-DPH shall also be entitled (but shall not be obligated) to take whatever actions is deemed necessary by PDA-DPH to abate or cure such situation and GSM shall reimburse PDA-DPH for all costs incurred by PDA-DPH in taking such action.

15.6. [RESERVED].

## ARTICLE 16. PROHIBITION AGAINST TRANSFERS - BANKRUPTCY

16.1. GSM shall not have the right to delegate any of its responsibilities or obligations, to assign any of its rights, to mortgage or otherwise transfer any of its rights or interests under this License or to mortgage any portion of the License Area, or to sublease the License Area.

16.2. If a petition is filed by or against GSM for relief under Title 11 of the United States Code, as amended (the "Bankruptcy Code"), and GSM (including for purposes of this Section GSM's successor in bankruptcy, whether a trustee or GSM as debtor-in-possession) assumes and proposes to assign, or proposes to assume and assign, this License pursuant to the provisions of the Bankruptcy Code to any person or entity who has made a bona fide offer to accept an assignment of this License, then notice of the proposed assignment setting forth (a) the name and address of the proposed assignee, (b) all of the terms and conditions of the offer and proposed assignment, and (c) the adequate assurance to be furnished by the proposed assignee of its future performance under the License, shall be given to PDA-DPH by GSM no later than twenty (20) days (or such other period of time as the court may allow) after GSM has made or received such offer, but in no event later than thirty (30) days (or such other period of time as the court may allow) prior to the date on which GSM applies to a court of competent jurisdiction for authority and approval to enter into the proposed assignment. Any person or entity to which this License is assigned pursuant to the provisions of the Bankruptcy Code shall be deemed, without further act or documentation, to have assumed all of GSM's obligations arising under this License on and after the date of such assignment. Any such assignee shall, upon demand, execute and deliver to PDA-DPH an instrument confirming such assumption. No provision of this License shall be deemed a waiver of PDA-DPH's rights or remedies under the Bankruptcy Code to oppose any assumption and/or assignment of this License, to require a timely performance of GSM's obligations under this License, or to regain possession of the Premises if this License has neither been assumed nor rejected within sixty (60) days after the date of the order for relief or within such additional time as a court of competent jurisdiction may have fixed. Notwithstanding anything in this License to the contrary, all amounts payable by GSM to or on behalf of PDA-DPH under this License, whether or not expressly denominated as rent, shall constitute rent for the purposes of Section 502(b)(6) of the Bankruptcy Code.

ARTICLE 17. NOTICES

Whenever PDA-DPH or GSM shall desire to give or serve upon the other any notice, demand, request or other communication with respect to this License or with respect to the License Area each such notice, demand, request or other communication shall be in writing and shall not be effective for any purpose unless same shall be given or served by personal delivery to the party or parties to whom such notice, demand, request or other communication is directed or by mailing the same to such party or parties by certified mail, postage prepaid, return receipt requested, addressed as follows:

If to PDA-DPH: Pease Development Authority  
55 International Drive  
Portsmouth, NH 03801  
Attention: Executive Director

With a copy to: Division of Ports and Harbors  
555 Market Street  
Portsmouth, NH 03801  
Attention: Director, Division of Ports and Harbors

If to GSM: Granite State Minerals, Inc.  
c/o Eastern Salt Company, Inc.  
134 Middle Street, Suite 210  
Lowell, MA 01852  
Attention: Shelagh Mahoney, President

or at such other address or addresses as PDA-DPH or GSM may from time to time designate by notice given by certified mail.

Every notice, demand, request or communication hereunder sent by mail shall be deemed to have been given or served as of the second business day following the date of such mailing.

ARTICLE 18. (RESERVED)

## ARTICLE 19. ENVIRONMENTAL PROTECTION

19.1. GSM and any assignee of GSM shall comply with all federal, state, and local laws, regulations, and standards that are or may become applicable to GSM's or sublessee's or assignee's activities at the PDA-DPH, including the License Area, including but not limited to, the applicable environmental laws and regulations identified in Exhibit C, as amended from time to time.

19.2. GSM and any assignee of GSM shall be solely responsible for obtaining at their cost and expense any environmental permits required for their operations under this License or any sublease or assignment, independent of any existing PDA-DPH permits. GSM shall review and update, as necessary, but no less than quarterly, its control procedures and best management practices to assure compliance with all environmental regulations.

19.3. GSM shall indemnify, defend and hold harmless PDA-DPH against and from all claims, judgments, damages, penalties, fines, costs and expenses, liabilities and losses (including, without limitation, diminution in value of the Premises, damages for the loss or restriction on the use of the Premises, and sums paid in settlement of claims, attorneys' fees, consultants' fees and experts' fees), resulting or arising from discharges, emissions, spills, releases, storage or disposal of any substance or matter, or any other action by GSM, giving rise to PDA-DPH liability, civil or criminal, or responsibility under federal, state or local environmental laws.

Subject to the preceding paragraph, this indemnification of PDA-DPH by GSM includes, without limitation, any and all claims, judgment, damages, penalties, fines, costs and expenses, liabilities and losses incurred by PDA-DPH in connection with any investigation of site conditions, or any remedial or removal action or other site restoration work required by any federal, state or local governmental unit or other person for or pertaining to any discharges, emissions, spills, releases, storage or disposal of Hazardous Substances arising or resulting from any act or omission of GSM at the PDA-DPH, including the License Area after the date GSM takes possession of the Premises under this Agreement.

The provisions of this Section shall survive the expiration or termination of the License, and GSM's obligations hereunder shall apply whenever PDA-DPH incurs costs or liabilities for GSM's actions of the types described in this Article.

19.4. As used in this License, the term "Hazardous Substances" means any hazardous or toxic substance, material or waste oil or petroleum product which is or becomes regulated by any local governmental authority, the State of New Hampshire or the United States Government. The term "Hazardous Substances" includes, without limitation, any material or substance which is (i) defined as a "hazardous waste," under New Hampshire RSA ch. 147-A, (ii) defined as a "hazardous substance" under New Hampshire RSA ch. 147-B, (iii) oil, gasoline or other petroleum product, (iv) asbestos, (v) listed under or defined as hazardous substance pursuant to Part Hc. P 1905 ("Hazardous Waste Rules") of the New Hampshire Code of Administrative Rules, (vi) designated as a "hazardous substance" pursuant to Section 311 of the Federal Water Pollution Control Act

(33 U.S.C. '1317, (vii) defined as a "hazardous waste" pursuant to Section 1004 of the Federal Resource Conservation and Recovery Act, 42 U.S.C. '6901 et seq. (42 U.S.C. '6903), or (viii) defined as a "hazardous substance" pursuant to Section 101 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. '9601 et seq. (42 U.S.C. '9601) and (ix) so defined in the regulations adopted and publications promulgated pursuant to any of such laws, or as such laws or regulations may be further amended, modified or supplemented (collectively "Hazardous Substance Laws").

As used in this License, the terms "release" and "storage" shall have the meanings provided in RSA 147-B:2, as amended, and the term "disposal" shall have the meaning provided in RSA 147-A:2.

19.5. PDA-DPH's rights under this License specifically include the right for PDA-DPH to inspect the License Area and improvements thereon for compliance with environmental, safety, and occupational health laws and regulations, whether or not PDA-DPH is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections and shall be made in accordance with Article 12.

19.6. GSM, and any assignee of GSM whose operations utilize Hazardous Substances, shall have a completed and approved plan for responding to Hazardous Substances spills prior to commencement of operations on the License Area. Such plan shall be independent of, but not inconsistent with, any plan or other standard of PDA-DPH applicable to the PDA-DPH and except for initial fire response and/or spill containment, shall not rely on use of the PDA-DPH or PDA-DPH personnel or equipment. Should PDA-DPH provide any personnel or equipment, whether for initial fire response and/or spill containment or otherwise, on request of GSM, or because GSM was not, in the opinion of PDA-DPH, conducting timely cleanup actions, GSM agrees to reimburse PDA-DPH for its costs.

19.7. Unless GSM provides sufficient evidence to the contrary of its actual date of entering or taking possession of the Licensed Premises, the date set forth in Article 3 shall be construed as the date on which GSM enters or takes possession of the Licensed Premises.

ARTICLE 20. (RESERVED)

## ARTICLE 21. MISCELLANEOUS

21.1. All sums which may from time to time become due and payable by GSM to PDA-DPH under any of the provisions of this License shall be made payable to the "Pease Development Authority - Division of Ports and Harbors" and forwarded by GSM direct to PDA-DPH's Executive Director at the address specified in Article 17. All such rent and other sums if not paid on the due date or the date by which payment is due after notice shall bear interest from and after the due date thereof at the rate of eighteen percent (18%) per annum; provided, however, that such interest shall in no event exceed the maximum rate permitted by law.

21.2. In all cases the language in all parts of this License shall be construed simply, according to its fair meaning and not strictly for or against PDA-DPH or GSM.

21.3. The word titles underlying the Article designations contained herein are inserted solely for convenience and under no circumstances are they or any of them to be treated or construed as any part of this instrument.

21.4. If GSM should remain in possession of the License Area after the expiration or termination of this License and without executing a new license, then such holding over shall be on the same terms and conditions as this License, provided, however, that the rates for each of the fees or other charges due to PDA-DPH shall increase by two hundred percent (200%) and PDA-DPH shall have a right to cure GSM's holdover by removal of the bollard at the sole cost and expense of GSM and in accordance with the provisions of this License.

21.5. Each individual executing this License on behalf of GSM represents and warrants that he or she is duly authorized to execute and deliver this License on behalf of said corporation, and that this License is binding upon said corporation in accordance with its terms.

21.6. This License covers in full each and every agreement of every kind or nature whatsoever between the Parties hereto concerning the License Area and other rights at the PDA-DPH and all preliminary negotiations and agreements of every kind or nature whatsoever with respect to the License Area and other rights at the PDA-DPH; and no other person, firm or corporation has at any time had any authority from PDA-DPH or GSM to make any representations or promises on behalf of PDA-DPH or GSM, and PDA-DPH and GSM expressly agree that if any such representations or promises have been made by PDA-DPH or GSM or others, PDA-DPH and GSM hereby waive all right to rely thereon. No verbal agreement or implied covenant shall be held to vary the provisions hereof, any statute, law, or custom to the contrary notwithstanding. No provision of this License may be amended or added to except by an agreement in writing signed by the parties hereto or their respective successors in interest. GSM and PDA-DPH acknowledge that they have read this Section and understand it to be a waiver of any right to rely on any representations or agreements not expressly set forth in this License.

21.7. Subject to the provisions hereof, this License shall be binding upon and shall inure to the benefit of the Parties hereto and their respective successors and assigns, and wherever a reference in this License is made to either of the Parties hereto such reference shall be deemed to include, wherever applicable, also a reference to the successors and assigns of such party, as if in every case so expressed.

21.8. Nothing contained in this License shall be deemed or construed by the Parties hereto or by any third person to create the relationship of principal and agent or of partnership or of joint venture or of any association between PDA-DPH and GSM, and neither the method of computation of rent nor any other provision contained in this License nor any acts of the Parties hereto shall be deemed to create any relationship between PDA-DPH and GSM other than the relationship of Licensor and Licensee.

21.9. Each party hereto warrants to the other that it has no dealings with any real estate broker or agent in connection with the negotiation of this License.

21.10. This License shall be construed and enforced in accordance with the laws of the State of New Hampshire.

21.11. Any actions or proceedings with respect to any matters arising under or growing out of this License shall be instituted and prosecuted only in courts located in the State of New Hampshire. Nothing contained in this Article or any other provision of this License shall be deemed to constitute a waiver of the sovereign immunity of the State of New Hampshire, to the State of New Hampshire, provided, however, that PDA-DPH agrees to waive immunity for contractual claims under this License to the extent allowed under NHRSA 491:8, as the same may be amended.

21.12. This instrument may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

21.13. GSM shall faithfully observe and comply with such rules and regulations as PDA-DPH may adopt for the operation of the PDA-DPH, which rules and regulations are reasonable and nondiscriminatory as well as all modifications thereof and additions thereto. PDA-DPH shall not be responsible to GSM for the violation or nonperformance by any other tenant of PDA-DPH of any of such Rules and Regulations.

21.14. All obligations of GSM or PDA-DPH to indemnify, defend and hold harmless PDA-DPH or GSM, respectively, and to make any monetary payment to PDA-DPH or GSM, shall survive the termination or expiration of this License.

EXECUTION

IN WITNESS WHEREOF, PDA-DPH and GSM have executed this License effective as of the \_\_\_\_\_ day of \_\_\_\_\_, 2022.

**GRANITE STATE MINERALS, INC.**

By: Shelagh E. Mahoney

Print/Type Name: Shelagh E. Mahoney

Title: President

**PEASE DEVELOPMENT AUTHORITY**

By: Paul E. Brean

Paul E. Brean

Title: Executive Director

Approved as to form, substance, and execution:

**OFFICE OF THE ATTORNEY GENERAL**

By: Jill Perlow 5/9/22

Jill A. Perlow

Title: Associate Attorney General

GOVERNOR AND COUNCIL:

**JUN 01 2022**

[Signature]

Secretary of State

ACKNOWLEDGMENT

STATE OF NEW HAMPSHIRE  
COUNTY OF ROCKINGHAM

On this 22 day of April, 2022 before me, KAREN GIRARD MURPHY, a Notary Public in and for said County and State, personally appeared Shelagh E. Mahoney, personally known to me (or proved to me on the basis of satisfactory evidence) to be the PRESIDENT of **GRANITE STATE MINERALS, INC.**, a corporation formed pursuant to the laws of the State of Hampshire and registered to do business in New Hampshire, and on oath stated that he was authorized to execute this instrument and acknowledged it to be his free and voluntary act for the uses and purposes set forth herein.

Karen Girard Murphy  
Notary Public in and for said County and State  
Printed Name: **KAREN GIRARD MURPHY**  
My Commission Expires: **Notary Public**  
 **Commonwealth of Massachusetts**  
**My Commission Expires**  
**February 14, 2025**

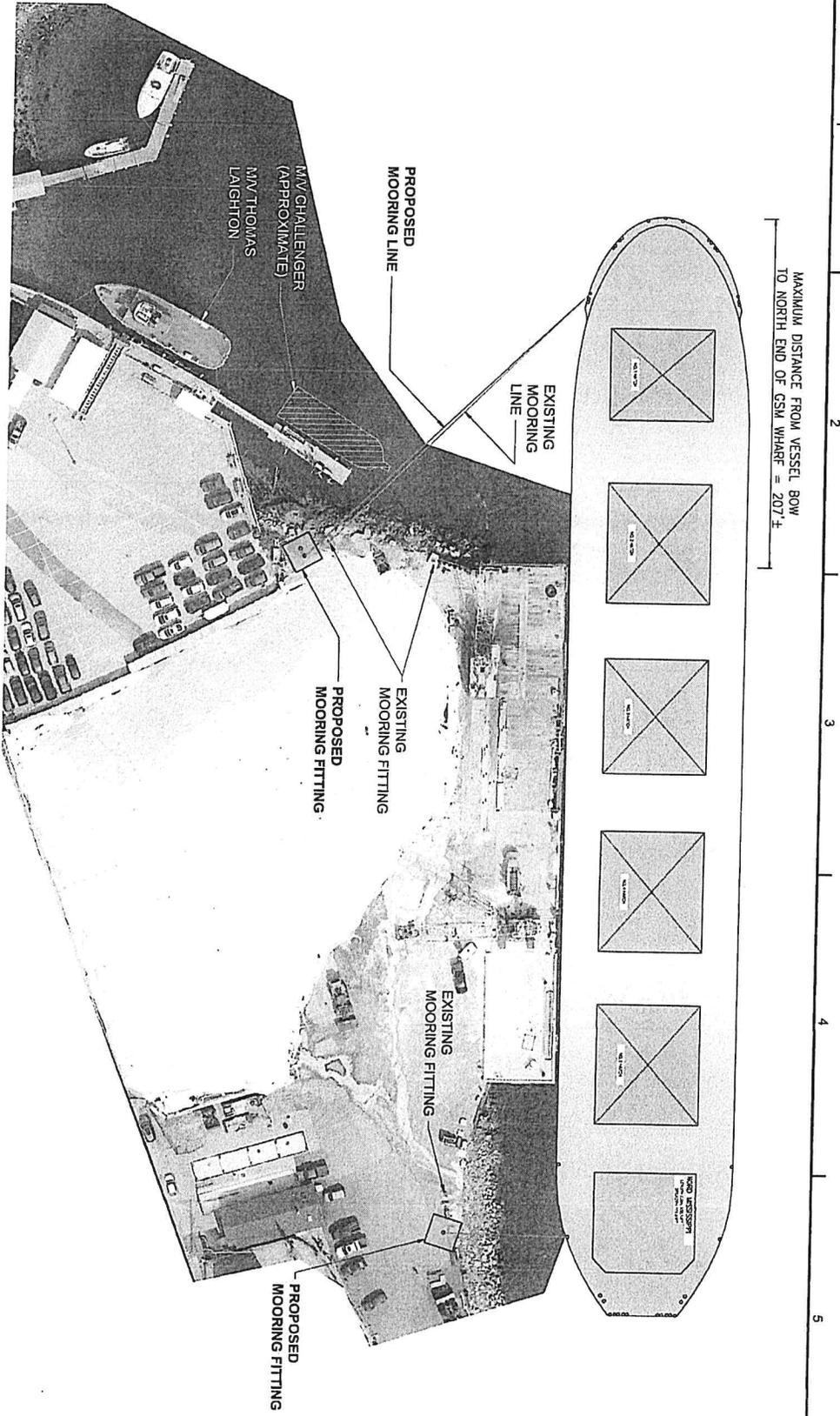
STATE OF NEW HAMPSHIRE  
COUNTY OF ROCKINGHAM

On this 2<sup>nd</sup> day of May, 2022 before me, Raeline A. O'Neil, a Notary Public in and for said County and State, personally appeared **Paul E. Brean**, personally known to me (or proved to me on the basis of satisfactory evidence) to be the Executive Director of the **PEASE DEVELOPMENT AUTHORITY**, and on oath stated that he was authorized to execute this instrument and acknowledged it to be his free and voluntary act for the uses and purposes set forth herein.

Raeline A. O'Neil  
Notary Public in and for said County and State  
Printed Name: Raeline A. O'Neil  
My Commission Expires: **Justice of the Peace/Notary Public**  
**Expiration: October 11, 2022**

EXHIBIT "A"

PLAN OF LICENSE AREA



MOORING FITTING PLAN  
 SCALE: 1"=30'-0"  
 PLAN NORTH

PROJECT NO. 2512 GRANITE STATE MINERALS PORTSMOUTH, NEW HAMPSHIRE	APPLICATOR <b>Applodoro Marica Engineering, LLC</b> 600 State St. Suite E Portsmouth, New Hampshire 03801		DATE: 02/17/19 1001@applodoromarc.com													
	PROJECT NAME <b>MOORING IMPROVEMENTS</b>		SHEET NO. <b>1 OF 1</b>													
MOORING FITTING PLAN		<table border="1"> <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> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISION	DATE	DESCRIPTION	BY								
REVISION	DATE	DESCRIPTION	BY													

EXHIBIT "B"  
PLAN OF BOLLARD

**NOTES:**

1. THE WORK AND THIS PLAN HAVE BEEN PREPARED BY THE CONSULTANTS AND ENGINEERS AND ARE NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF THE CONSULTANTS AND ENGINEERS.
2. THE CONSULTANTS AND ENGINEERS HAVE CONDUCTED A VISUAL INSPECTION OF THE PROPERTY AND HAVE FOUND THAT THE INFORMATION PROVIDED TO THEM IS TRUE AND CORRECT.
3. THE CONSULTANTS AND ENGINEERS HAVE CONDUCTED A VISUAL INSPECTION OF THE PROPERTY AND HAVE FOUND THAT THE INFORMATION PROVIDED TO THEM IS TRUE AND CORRECT.
4. THE CONSULTANTS AND ENGINEERS HAVE CONDUCTED A VISUAL INSPECTION OF THE PROPERTY AND HAVE FOUND THAT THE INFORMATION PROVIDED TO THEM IS TRUE AND CORRECT.
5. THE CONSULTANTS AND ENGINEERS HAVE CONDUCTED A VISUAL INSPECTION OF THE PROPERTY AND HAVE FOUND THAT THE INFORMATION PROVIDED TO THEM IS TRUE AND CORRECT.

**LEGEND:**

- EXISTING AND PROPOSED STATE ROAD COMPONENTS**
- 1. STATE ROAD
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  - 100. STATE ROAD RIGHT OF WAY BOUNDARY

**NOTES:**

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**REVISIONS**

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
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**CONSULTANTS**

NO.	DATE	DESCRIPTION
1		
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**BOUNDARY PLAN OF LAND OF THE DAVID F. MAHONEY MARITAL TRUST OF 1999**

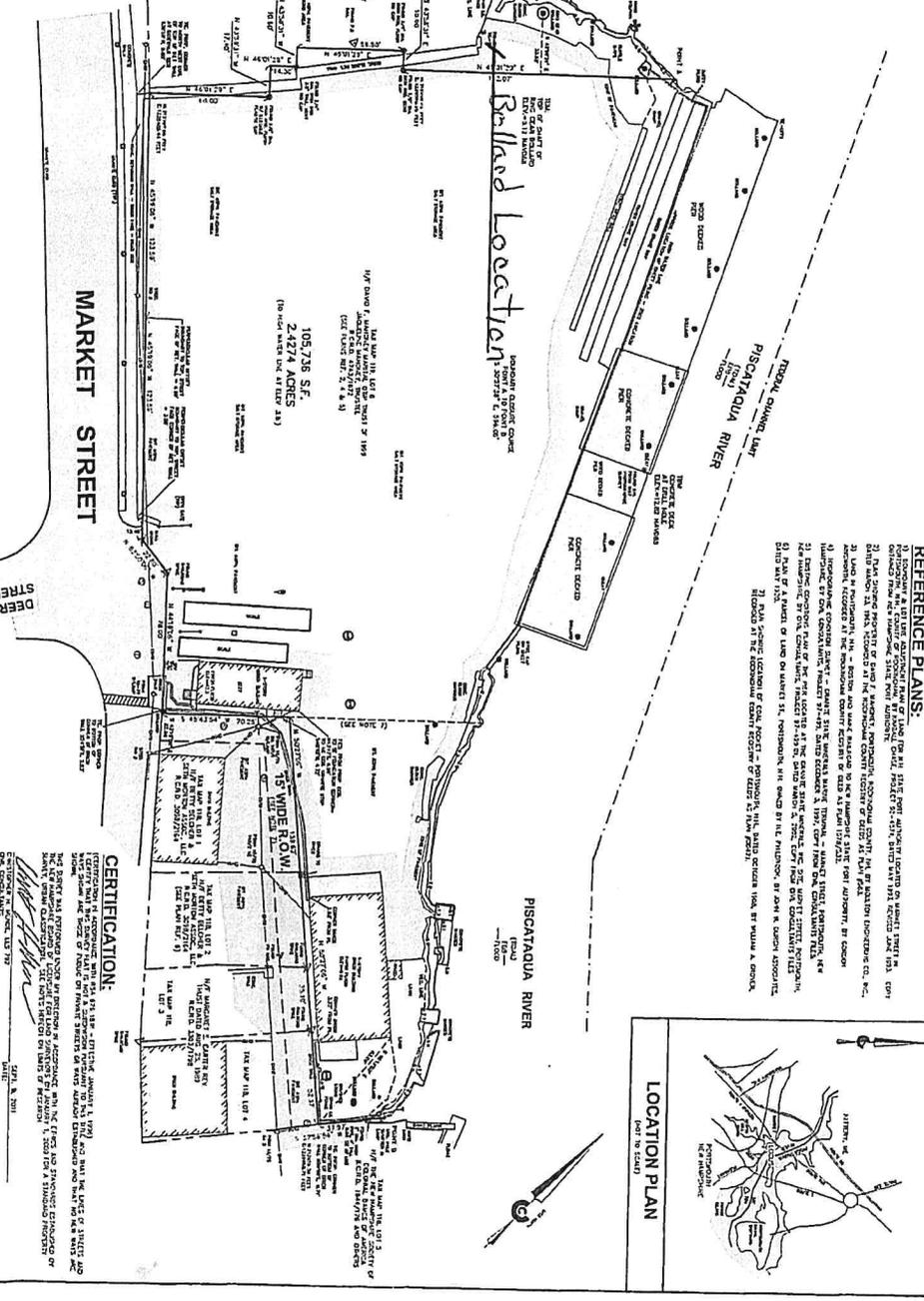
PREPARED FOR GRANITE STATE MINERALS, INC.

227 MARKET STREET, PORTSMOUTH, ROCKINGHAM COUNTY, NEW HAMPSHIRE 03801

**TAX MAP 119, LOT 08**

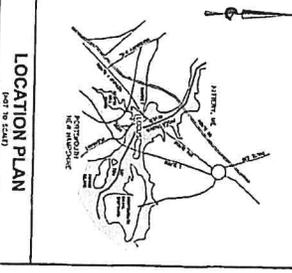
**B1**

DEPT 1 011  
PROJECT # 97-459.02



**REFERENCE PLANS:**

1. GRANITE STATE MINERALS, INC. - 227 MARKET STREET, PORTSMOUTH, NEW HAMPSHIRE 03801.
2. GRANITE STATE MINERALS, INC. - 227 MARKET STREET, PORTSMOUTH, NEW HAMPSHIRE 03801.
3. GRANITE STATE MINERALS, INC. - 227 MARKET STREET, PORTSMOUTH, NEW HAMPSHIRE 03801.
4. GRANITE STATE MINERALS, INC. - 227 MARKET STREET, PORTSMOUTH, NEW HAMPSHIRE 03801.
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9. GRANITE STATE MINERALS, INC. - 227 MARKET STREET, PORTSMOUTH, NEW HAMPSHIRE 03801.
10. GRANITE STATE MINERALS, INC. - 227 MARKET STREET, PORTSMOUTH, NEW HAMPSHIRE 03801.



**CERTIFICATION:**

I, the undersigned, being a duly licensed Professional Engineer in the State of New Hampshire, do hereby certify that the above is a true and correct copy of the original plan as filed in my office on this day of \_\_\_\_\_, 2001.

\_\_\_\_\_  
Professional Engineer

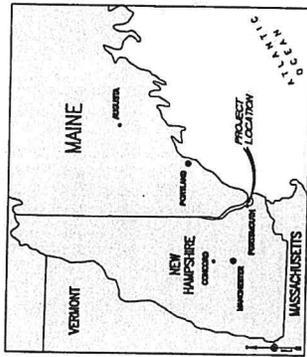
# GRANITE STATE MINERALS

## Portsmouth, New Hampshire

# PORTSMOUTH WHARF

## MOORING IMPROVEMENTS

JUNE 2019



**CONTRACT DRAWING LIST**

SHEET NO.	DRAWING TITLE
<b>GENERAL</b>	
C-001	1 OF 5
C-002	2 OF 5
C-101	3 OF 5
C-102	4 OF 5
C-103	5 OF 5
<b>STRUCTURAL</b>	
S-101	1 OF 5
S-102	2 OF 5
S-103	3 OF 5
S-104	4 OF 5
S-105	5 OF 5

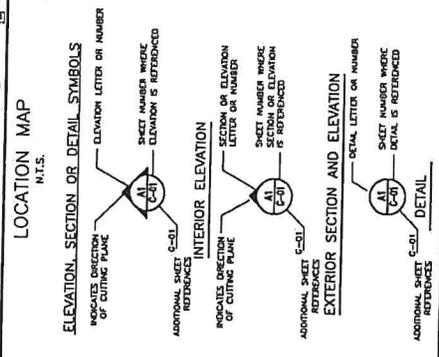
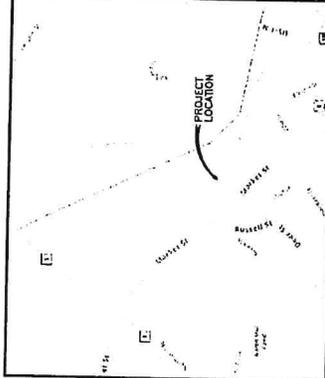
### ABBREVIATIONS

SYMBOL	APPROX.	DESCRIPTION
Ø	DIAMETER	
Ø	BUSLINE	
EA	EACH	
EL	ELEVATION IN FEET	
EQ	EQUALLY	
IN	INCHES	
LOW	LOW WATER	
HIGH	HIGH WATER	
MIN	MINIMUM	
MAX	MAXIMUM	
MEAN	MEAN LOW WATER	
MEAN	MEAN HIGH WATER	
MPH	MILES PER HOUR	
NAVD83	NATIONAL VERTICAL DATUM 1983	
N.T.S.	NOT TO SCALE	
ON CENTER	ON CENTER	
PK	POINT KNOWN	
PSF	POUNDS PER SQUARE FOOT	
SQ	SQUARE	
SSP	STEEL SHEET PILE	
148	TOP & BOTTOM	
TRP	TRYPICAL	
VF	VERTICAL FIELD	

**TIDE DATAS:** (1982-2001 TIDE DATA)  
 ESTIMATED 100-YEAR TIDE ELEVATION (STILLWATER)  
 HIGHEST OBSERVED WATER LEVEL (WOWL) (02/07/1978)  
 MEAN HIGHER HIGH WATER (MHHW)  
 MEAN HIGHER WATER (MHW)  
 MEAN WATER LEVEL (MWL)  
 MEAN LOWER WATER (MLW)  
 LOWEST OBSERVED WATER LEVEL (LOWL) (11/29/1952)  
 -1.3'

**NOTE:**  
 KESSEL, WASHINGTON PRODUCTS KESSEL, WACKS, WHICH OWN ATTIC CONSTRUCTION.

**REFERENCE:**  
 (1982-2001 TIDE DATA) PORTSMOUTH COAST GUARD, PORTSMOUTH, NEW HAMPSHIRE. (1982-2001 TIDE DATA) PORTSMOUTH COAST GUARD, PORTSMOUTH, NEW HAMPSHIRE. AND TIDE DATA MAY DIFFER FROM ACTUAL SITE CONDITIONS.



**GRANITE STATE MINERALS**  
 PORTSMOUTH, NEW HAMPSHIRE

**MOORING IMPROVEMENTS**  
 PORTSMOUTH, NEW HAMPSHIRE

**TITLE SHEET**

**REVISIONS**

NO.	DATE	DESCRIPTION
1	6/1/2019	PROJECT START

**APPLICATOR'S MARKS**  
 Applied Minerals Engineering, LLC  
 100 State St. Suite 2  
 Portsmouth, New Hampshire 03801  
 Project: Mooring Improvements 2001

**DATE** 6/1/2019

**SCALE** AS SHOWN

**SHEET** 1 OF 9

**PROJECT NO.** G-001



EXHIBIT "C"  
LIST OF ENVIRONMENTAL LAWS AND REGULATIONS

- Air Quality:
- (a) Clean Air Act & Amendments, 42 U.S.C. 7401-7642
  - (b) 40 CFR Parts 50-52, 61, 62, 65-67, 81
  - (c) RSA ch. 125-C, Air Pollution Control, and rules adopted thereunder
  - (d) RSA ch. 125-H, Air Toxic Control Act, and rules adopted thereunder
- Hazardous Materials:
- (a) Hazardous Materials Transportation Act, 49 U.S.C. 1801-1813, and Department of Transportation Regulations thereunder
  - (b) Emergency Planning and Community Right-To-Know Act, 42 U.S.C. 11001-11050
  - (c) 49 CFR Parts 100-179
  - (d) 40 CFR Part 302
  - (e) RSA ch. 277-A, Toxic Substances in the Workplace, and rules adopted thereunder
- Hazardous Waste:
- (a) Resource Conservation and Recovery Act (RCRA) of 1976 and RCRA Amendments of 1984, 42 U.S.C. 6901-6991i
  - (b) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. 9601-9675
  - (c) 40 CFR Parts 260-271, 300, 302
  - (d) RSA ch. 147-A, Hazardous Waste Management and rules adopted thereunder
- Water Quality:
- (a) Federal Water Pollution Control Act (Clean Water Act) and Amendments, 33 U.S.C. 1251-1387
  - (b) Safe Drinking Water Act, as amended, 42 U.S.C. 300f-300j-26
  - (c) 40 CFR Title 100-143, 401 and 403
  - (d) RSA ch. 146-A, Oil Spillage in Public Waters, and rules adopted thereunder
  - (e) RSA ch. 485, New Hampshire Safe Drinking Water Act, and rules adopted thereunder
  - (f) RSA ch. 485-A, Pollution and Waste Disposal, and rules adopted thereunder

**Certificate of Authority**

*Granite State Minerals, Inc.*

**Corporate Resolution**

I, Donna G. Capillo, **hereby certify** that I am duly elected Clerk/Secretary of  
*(Name)*

Granite State Minerals, Inc.. I hereby certify the following is a true copy of a  
*(Name of Corporation or LLC)*

vote taken at a meeting of the Board of Directors/shareholders, duly called and held on March  
*(Month)*

15, 2022 at which a quorum of the Directors/shareholders were present and voting.  
*(Day) (Year)*

**VOTED:** That Shelagh E. Mahoney (may list more than one person) is duly authorized to  
*(Name and Title)*

enter into contracts or agreements on behalf of Granite State Minerals, Inc.  
with *(Name of Corporation or LLC)*

the State of New Hampshire and any of its agencies or departments and further is authorized to execute any documents which may in his/her judgment be desirable or necessary to effect the purpose of this vote.

**I hereby certify** that said vote has not been amended or repealed and remains in full force and effect as of the date of the contract to which this certificate is attached. I further certify that it is understood that the State of New Hampshire will rely on this certificate as evidence that the person(s) listed above currently occupy the position(s) indicated and that they have full authority to bind the corporation. To the extent that there are any limits on the authority of any listed individual to bind the corporation in contracts with the State of New Hampshire, all such limitations are expressly stated herein.

**DATED:** March 15, 2022

**ATTEST:** Donna G. Capillo, Asst. Secretary  
*(Name and Title)*

# State of New Hampshire

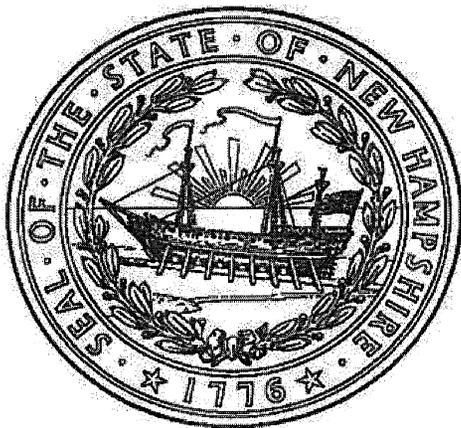
## Department of State

### CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that GRANITE STATE MINERALS, INC. is a New Hampshire Profit Corporation registered to transact business in New Hampshire on October 23, 1959. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **15631**

Certificate Number: **0005749679**



IN TESTIMONY WHEREOF,

I hereto set my hand and cause to be affixed  
the Seal of the State of New Hampshire,  
this 5th day of April A.D. 2022.

A handwritten signature in cursive script, appearing to read "William M. Gardner".

William M. Gardner  
Secretary of State



RECEIVED AUG 23 2021

EASTMIN-01

CWOODSIDE

# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
8/17/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> License # 1780862 <b>HUB International New England</b> 300 Ballardvale Street Wilmington, MA 01887	<b>CONTACT NAME:</b> NEE House Account	
	<b>PHONE (A/C, No, Ext):</b>	<b>FAX (A/C, No):</b>
<b>E-MAIL ADDRESS:</b> nee@hubinternational.com		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A:</b> Travelers Property Casualty Company of America		<b>25674</b>
<b>INSURER B:</b> The Phoenix Insurance Company		<b>25623</b>
<b>INSURER C:</b> Pennsylvania Manufacturers' Association Insurance Company		<b>12262</b>
<b>INSURER D:</b> American Longshore Mutual Assn		
<b>INSURER E:</b>		
<b>INSURER F:</b>		

**INSURED**

Eastern Salt Co., Inc. et al  
 134 Middle Street  
 Lowell, MA 01852

### COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	X		ZOL-61M64165-21	8/15/2021	8/15/2022	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$ 1,000,000
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			BA-3N649994-21-43-G	8/15/2021	8/15/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ 20,000 BODILY INJURY (Per accident) \$ 40,000 PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 25,000			ZOB-41M63081-21-ND	8/15/2021	8/15/2022	EACH OCCURRENCE \$ 15,000,000 AGGREGATE \$ 15,000,000 \$
C	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	202101-09-00-71-2Y	7/1/2021	7/1/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	<input checked="" type="checkbox"/> USL&H			ALMA01789-04	7/1/2021	7/1/2024	EL \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

NAMED INSUREDS (Continued):  
 Eastern Minerals, Inc.  
 Atlantic Salt Company, Inc.  
 Regal Estates, LLC  
 Shepagen, Inc.  
 Rock Chapel Marine, LLC  
 Seagull Auto Salvage, Inc.  
 SEE ATTACHED ACORD 101

### CERTIFICATE HOLDER

### CANCELLATION

Pease Development Authority  
 Division of Ports & Harbors and the State of NH  
 55 International Drive  
 Portsmouth, NH 03801

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



AGENCY CUSTOMER ID: EASTMIN-01

CWOODSIDE

LOC #: 1

## ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY HUB International New England		License # 1780862	NAMED INSURED Eastern Salt Co., Inc. et.al 134 Middle Street Lowell, MA 01852
POLICY NUMBER SEE PAGE 1			
CARRIER SEE PAGE 1	NAIC CODE SEE P 1	EFFECTIVE DATE: SEE PAGE 1	

## ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,  
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:  
Mahoney Marine Terminal, LLC  
Creekside Parking, Inc.  
Granite State Minerals, Inc.  
Oceanport, LLC  
OSLO Shipping, LLC  
201 Rover Street, LLC  
Rollins Farm River Terminal, LLC  
257 Chelsea Creek, LLC  
15 Kill Van Kull, LLC

Pease Development Authority Division of Ports & Harbors and the State of NH are additional insured on a primary & non contributory basis on the General Liability as required by written contract. Waiver of Subrogation applies in favor of the additional insured in regards to the General Liability policy as required by executed contract prior to the loss/claim.

# **Section 3**

## **Minor and Major Impacts – Attachment A**





STANDARD DREDGE AND FILL  
WETLANDS PERMIT APPLICATION  
ATTACHMENT A: MINOR AND MAJOR PROJECTS



Water Division/Land Resources Management  
Wetlands Bureau

[Check the Status of your Application](#)

**RSA/ Rule:** RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

**APPLICANT'S NAME:** Granite State Minerals

**TOWN NAME:** Portsmouth

Attachment A is required for *all minor and major projects*, and must be completed *in addition* to the [Avoidance and Minimization Narrative](#) or [Checklist](#) that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

**PART I: AVOIDANCE AND MINIMIZATION**

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#).

**SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))**

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

THE ALTERNATIVE PROPOSED IS THE LEAST IMPACTFUL AS THE ENTIRETY OF THE PROPOSED DISTURBANCE IS LOCATED WITHIN PREVIOUSLY DISTURBED TIDAL BUFFER ZONE. A MINIMAL AREA BELOW THE MEAN HIGH WATER LINE WILL BE DISTURBED FOR THE CONSTRUCTION OF THE OUTFALL TO THE RIVER. THIS AREA HAS ALSO BEEN PREVIOUSLY DISTURBED FOR THE CONSTRUCTION OF THE STONE REVETMENT.

THE PROPOSED PROJECT WILL PROVIDE NECESSARY UPGRADES TO THE TERMINAL INCLUDING THE REPLACEMENT OF TWO UNDERSIZED BOLLARD MOORINGS AND THE CONSTRUCTION OF STORMWATER MANAGEMENT UPGRADES. THE STORMWATER MANAGEMENT UPGRADES ARE BEING CONSTRUCTED AS PART OF THE FACILITY'S STORMWATER MANAGEMENT PROGRAM UNDER THE EPA MULTI-SECTOR GENERAL PERMIT (MSGP). THE PERMIT REQUIRES REGULAR SAMPLING OF STORMWATER DISCHARGES AND A STORMWATER PLAN TO KEEP LEVELS OF CERTAIN ANALYTES BELOW BENCHMARK LIMITS ESTABLISHED BY THE PERMIT. THE STORMWATER MANAGEMENT SYSTEM IS DESIGNED TO DECREASE CONCENTRATIONS OF METALS AND OTHER ANALYTES IN STORMWATER DISCHARGES TO THE RIVER, CONSISTENT WITH MSGP REQUIREMENTS. IT WILL ALSO FACILITATE CAPTURE OF CLEANER AND MORE ACCURATE STORMWATER SAMPLES BY PROVIDING AN ACCESS POINT TO GRAB SAMPLES FROM WITHIN A MANHOLE RATHER THAN FROM THE SURFACE OF THE PAVEMENT.

[lrn@des.nh.gov](mailto: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](http://www.des.nh.gov)

**SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))**

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

Tidal harbor, not applicable

**SECTION I.III - HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))**

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

Tidal harbor, not applicable

**SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))**

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

Proposed areas to be disturbed for this project are within a previously developed tidal buffer zone. A minimal area below the Mean High Water line will be disturbed for the construction of the outfall to the river. There will be no impact on plants or fish and wildlife due to the proposed project. A NHB review was conducted which was also review by the NH Fish and Game Marine Division for a potential impact to the Atlantic and Shortnose Sturgeon. The determination was made that proposed work will not negatively impact the surrounding natural community. The NHB and Marine Division responses are attached.

**SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))**

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

There will be no impact on public commerce, navigation, and recreation as a result of the proposed project. The proposed project will not result in a change of use of the property.

**SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))**

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

Tidal harbor, not applicable

**SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB – MARSH COMPLEXES (Env-Wt 313.03(b)(7))**

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

Tidal harbor, not applicable

**SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))**

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

The proposed project will not impact the quantity or quality of surface and groundwater as it does not increase impervious coverage.

**SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))**

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

Tidal harbor, not applicable

**SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))**

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

No construction over surface waters is proposed.

**SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))**

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

No docking structures are proposed

**SECTION I.XII - SHORELINE STRUCTURES – ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))**

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

No abutting properties will be impacted by this project

**SECTION I.XIII - SHORELINE STRUCTURES – COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))**

Describe how the structures have been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.

Proposed project will have no impact to public's right to navigation, passage, and use of the resource for commerce and recreation

**SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))**

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

No aquatic vegetation or wildlife will be impacted by the proposed project

**SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))**

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

No vegetation will be removed for the proposed project

<b>PART II: FUNCTIONAL ASSESSMENT</b>	
<b>REQUIREMENTS</b>	Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
	<p><b>FUNCTIONAL ASSESSMENT METHOD USED:</b>                      Tighe &amp; Bond reviewed and assessed 800+/- linear feet of tidal buffer along the Piscataqua River. The review was limited to the property boundaries of the seaport/bulk terminal referenced above. Due to the extensive nature of the on-site disturbance (see attached photographs), a site visit was deemed unnecessary and was not conducted as part of this assessment. Functions and values were assessed remotely utilizing site photographs provided by others throughout the 100-foot tidal buffer [REDACTED]</p>
	<b>NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT:</b> JEREMY DEGLER (NH CWS #301)
	<b>DATE OF ASSESSMENT:</b> 07/23/2019
	<p>Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:  <input checked="" type="checkbox"/></p>
	<p>For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:  <input checked="" type="checkbox"/></p> <p>Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.</p>



# **Section 4**

## **Functional Assessment Worksheet**



## Introduction

The purpose of this coastal assessment is to characterize the portion of the Piscataqua River and its associated 100-foot tidal buffer within the vicinity of a 2.80-acre lot located at 227 Market Street in Portsmouth, New Hampshire. The site lies adjacent to the river and consists of a seaport/bulk terminal that is used for the transportation of dry bulk (such as road salt), the berthing of vessels, and the re-supply of ship stores. The proposed project consists of stormwater management upgrades and the replacement of two existing bollard moorings to support the existing use of the site. The stormwater management upgrades are being constructed under an EPA Multi-Sector General Permit. The following sections describe the 14 functions and values as they apply to the proposed project. For the sake of brevity, several functions and values may be combined into one section (e.g. flood storage and shoreline anchoring).

## Methods

Tighe & Bond reviewed and assessed 800+/- linear feet of tidal buffer along the Piscataqua River. The review was limited to the property boundaries of the seaport/bulk terminal referenced above. Due to the extensive nature of the on-site disturbance (see attached photographs), a site visit was deemed unnecessary and was not conducted as part of this assessment. Functions and values were assessed remotely utilizing site photographs provided by others throughout the 100-foot tidal buffer zone of the proposed project. Assessment criteria were adapted from *The Highway Methodology Workbook Supplement - Wetland Functions and Values: A Descriptive Approach*, NAEPP-360-1-30a, US Army Corps of Engineers, New England Division, September 1999.

## Ecological Integrity

Ecological Integrity relates to how much the river and its tidal buffer have retained their native biotic and abiotic features and how these may have been degraded by human influences. The Ecological Integrity within the vicinity of the proposed project has been largely compromised due to the development of the upland buffer, the presence of large stockpiles of road salt, water quality degradation, and filling along the shoreline.

## Wildlife, Finfish, and Shellfish Habitat

The Wildlife, Finfish, and Shellfish Habitat functions are the suitability of the site to support wildlife. The Piscataqua River provides habitat for a wide variety of finfish and shellfish habitat, including Atlantic surgeon (federal and state listed as threatened) and shortnose sturgeon (federally and state listed as endangered). The project area is also within the range of the northern long-eared bat (federally listed as threatened), but no bat habitat exists within the property.

## Flood Storage and Shoreline Anchoring

Flood Storage and Shoreline Anchoring refer to the ability of the Piscataqua River's tidal buffer to reduce flood damage via water retention and to reduce streambank/ shoreline erosion. They add to the stability of the ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas. Riprap slopes are being effectively used to prevent erosion and damage along the bank of the Piscataqua River within the project area, but any flood storage is very minimal due to the topography of the site and the prevalence of impervious surfaces.

**Groundwater Recharge/Discharge**

Groundwater Recharge/Discharge refers to the potential for an area to serve as a recharge and/or discharge area for groundwater. It refers to the fundamental interaction with aquifers, regardless of the size or importance. The project area consists of almost entirely impervious surfaces, which prevent groundwater recharge. Furthermore, it is likely that the Piscataqua River is substantially more influenced by tidal forces than by groundwater at this point in its reach.

**Nutrient/Sediment Trapping**

Nutrient and Sediment Trapping refers to the ability of the river and its tidal buffer to act as a trap for nutrients and sediment in runoff water from surrounding uplands or contiguous wetlands and the ability to process these nutrients into other forms or trophic levels, thereby preventing degradation of water quality. The project area consists of almost entirely impervious surfaces draining into the river which are not trapping runoff and the associated nutrients, sediments, and toxicants.

**Educational, Recreational, and Commercial Potential**

Educational Potential consists of the ability of the river and its tidal buffer to serve as an outdoor classroom. Recreational and Commercial Potential is the suitability to support activities such as hiking, boating, hunting, bird watching, and shellfish harvesting. The Piscataqua River has the potential for educational and/or recreational boat use, though there is no safe public access to the Piscataqua River near the project site. In addition to being private property, the project site has dangerous construction debris and steep banks to the river, further diminishing the educational and recreational potential of the property. The site is currently in commercial use as a seaport/bulk terminal.

**Production Export**

Production Export refers to the ability of the river and its tidal buffer to produce food or usable products for humans or other living organisms. While the Piscataqua River provides a suitable means of export for materials produced elsewhere, no actual production occurs anywhere within the project area.

**Aesthetic Quality and Noteworthiness**

Aesthetic Quality refers to the ability of the area to provide interesting views and natural vistas. Noteworthiness includes important qualities not identified in previous functions, such as historic sites or unique natural features. The areas surrounding the Piscataqua River are highly developed commercial and residential areas. There are many public areas away from the project site that offer wide vistas and aesthetically pleasing views. At the project site however, there are no publicly available viewing areas and the property is covered in large piles of road salt and equipment.

**Summary**

The portion of the Piscataqua River and its associated 100-foot tidal buffer within the vicinity of the project area is entirely developed and is heavily disturbed. The primary coastal function within the river is finfish habitat (including several threatened/endangered species). Shoreline anchoring from the riprap is also present but is not a natural function of the river or tidal buffer. Other functions/values of the larger Piscataqua River exist but are not possible at the project area due to a complete lack of public access, lack of habitat, the impervious surfaces and topography of the site, and/or the presence of the bulk terminal and road salt piles.

# Photographic Log

**Client:** Granite State Minerals

**Job Number:** E5027-001

**Site:** 227 Market Street, Portsmouth, New Hampshire

<b>Photograph No.:</b> 1	<b>Date:</b> 07/23/2019	<b>Direction Taken:</b> Southeast
<b>Description:</b> Overview of the southern shoreline portion of the property located at 227 Market Street. Note the steeply anchored riprap slopes that are reducing shoreline erosion.		
		

<b>Photograph No.:</b> 2	<b>Date:</b> 07/23/2019	<b>Direction Taken:</b> Northwest
<b>Description:</b> Overview of the northern shoreline portion of the property located at 227 Market Street. Note the seaport/bulk terminal (blue arrow) and the large piles of road salt (red arrow).		
		



# WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET

Water Division/Land Resource Management  
Wetlands Bureau



[Check the Status of your Application](#)

**RSA/Rule:** RSA 482-A / Env-Wt 311.03(b)(10); Env-Wt 311.10

**APPLICANT LAST NAME, FIRST NAME, M.I.:** Granite State Minerals

As required by Env-Wt 311.03(b)(10), an application for a standard permit for minor and major projects must include a functional assessment of all wetlands on the project site as specified in Env-Wt 311.10. This worksheet will help you compile data for the functional assessment needed to meet federal (US Army Corps of Engineers (USACE); if applicable) and NHDES requirements. Additional requirements are needed for projects in tidal area; please refer to the Coastal Area Worksheet for more information.

Both a desktop review and a field examination are needed to accurately determine surrounding land use, hydrology, hydroperiod, hydric soils, vegetation, structural complexity of wetland classes, hydrologic connections between wetlands or stream systems or wetland complex, position in the landscape, and physical characteristics of wetlands and associated surface waters. The results of the evaluation are to be used to select the location of the proposed project having the least impact to wetland functions and values (Env-Wt 311.10). This worksheet can be used in conjunction with the Written Narrative (NHDES-W-06-089) or Avoidance and Minimization Checklist (NHDES-W-06-050) to address Env-Wt 313.03 (Avoidance and Minimization). If more than one wetland/ stream resource is identified, multiple worksheets can be attached with the application. All wetland, vernal pools, and stream identification (ID) numbers are to be displayed and located on the wetlands delineation of the subject property.

<b>SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)</b>	
ADJACENT LAND USE: <u>Commercial Development</u>	
CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet): <u>130</u>	
<b>SECTION 2 - DELINEATION (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)</b>	
CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: <u>Jeremy Degler (NH CWS #301)</u>	
DATE(S) OF SITE VISIT(S): <u>07/23/2019</u>	DELINEATION PER ENV-WT 406 COMPLETED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
CONFIRM THAT THE EVALUATION IS BASED ON:	
<input checked="" type="checkbox"/> Office and <input checked="" type="checkbox"/> Field examination.	Site photos taken by others were reviewed by a CWS.
METHOD USED FOR FUNCTIONAL ASSESSMENT (check one and fill in field if "other"):	
<input checked="" type="checkbox"/> USACE Highway Methodology. <input type="checkbox"/> Other scientifically supported method (enter name/ title): <span style="background-color: #cccccc; padding: 2px 20px;"> </span>	

[irm@des.nh.gov](mailto: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](http://www.des.nh.gov)

<b>SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)</b>	
WETLAND ID: 100-Foot Tidal Buffer Zone	LOCATION: (LAT/ LONG) 43.080178/-70.759226
WETLAND AREA: N/A	DOMINANT WETLAND SYSTEMS PRESENT: N/A
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND? N/A	COWARDIN CLASS: N/A
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No if not, where does the wetland lie in the drainage basin? [REDACTED]	IS THE WETLAND PART OF: <input type="checkbox"/> A wildlife corridor or <input type="checkbox"/> A habitat island? IS THE WETLAND HUMAN-MADE? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
IS THE WETLAND IN A 100-YEAR FLOODPLAIN? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ARE VERNAL POOLS PRESENT? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If yes, complete the Vernal Pool Table)
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
PROPOSED WETLAND IMPACT TYPE: N/A	PROPOSED WETLAND IMPACT AREA: N/A
<b>SECTION 4 - WETLANDS FUNCTIONS AND VALUES* (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)</b>	
<p>The following table can be used to compile data on wetlands functions and values. The reference numbers indicated in the "Functions/ Values" column refer to the following functions and values:</p> <ol style="list-style-type: none"> <li>1. Ecological Integrity (from RSA 482-A:2, XI)</li> <li>2. Educational Potential (from USACE Highway Methodology: Educational/Scientific Value)</li> <li>3. Fish &amp; Aquatic Life Habitat (from USACE Highway Methodology: Fish &amp; Shellfish Habitat)</li> <li>4. Flood Storage (from USACE Highway Methodology: Floodflow Alteration)</li> <li>5. Groundwater Recharge (from USACE Highway Methodology: Groundwater Recharge/Discharge)</li> <li>6. Noteworthiness (from USACE Highway Methodology: Threatened or Endangered Species Habitat)</li> <li>7. Nutrient Trapping/Retention &amp; Transformation (from USACE Highway Methodology: Nutrient removal)</li> <li>8. Production Export (Nutrient) (from USACE Highway Methodology)</li> <li>9. Scenic Quality (from USACE Highway Methodology: Visual Quality/Aesthetics)</li> <li>10. Sediment Trapping (from USACE Highway Methodology: Sediment /Toxicant Retention)</li> <li>11. Shoreline Anchoring (from USACE Highway Methodology: Sediment/Shoreline Stabilization)</li> <li>12. Uniqueness/Heritage (from USACE Highway Methodology)</li> <li>13. Wetland-based Recreation (from USACE Highway Methodology: Recreation)</li> <li>14. Wetland-dependent Wildlife Habitat (from USACE Highway Methodology: Wildlife Habitat)</li> </ol> <p>First, determine if a wetland is suitable for particular function and value ("Suitability" column) and indicate the rationale behind your determination ("Rationale" column). Please use the rationale reference numbers listed in Appendix A of USACE <i>The Highway Methodology Workbook Supplement</i>. Second, indicate which functions and values are principal (Principal Function/value?" column). As described in <i>The Highway Methodology Workbook Supplement</i>, "functions and values can be principal if they are an important physical component of a wetland ecosystem (function only) and/or are considered of special value to society, from a local, regional, and/or national perspective". "Important Notes" are to include characteristics the evaluator used to determine the principal function and value of the wetland.</p>	

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FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NHDES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Ecological Integrity has been impacted by surrounding land use, the salt piles, and human activity.
2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9, 11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No educational potential exists within the project area.
3	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3, 4, 5, 6, 7, 10, 11, 14, 16, 17	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Piscataqua River lies adjacent to the property and supports fish/shellfish populations.
4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4, 10, 11, 13	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Riprap is being used effectively to prevent erosion and damage, but flood storage is minimal.
5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2, 7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Property is almost entirely impervious surface.
6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	USFWS, NHDES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within the range of northern long-eared bat, shortnose sturgeon, and Atlantic sturgeon. No habitat.
7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Impervious surfaces are not trapping runoff and associated nutrients.
8	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No production occurs within the project area.
9	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2, 9	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The scenic quality at the project area is poor.
10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1, 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Impervious surfaces are not trapping runoff and associated sediments/toxicants.
11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1, 3, 4, 8, 9, 10, 11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Riprap is being used effectively in shoreline anchoring.
12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1, 2, 8, 14, 22	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The project area is not unique and does not provide cultural/heritage opportunities.
13	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2, 8, 9, 12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No recreation potential exists within the project area.
14	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No wildlife habitat exists within the project area.

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**SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10)**

Delineations of vernal pools shall be based on the characteristics listed in the definition of “vernal pool” in Env-Wt 104.44. To assist in the delineation, individuals may use either of the following references:

- *Identifying and Documenting Vernal Pools in New Hampshire 3<sup>rd</sup> Ed.*, 2016, published by NHF&G; or
- The USACE *Vernal Pool Assessment* draft guidance dated 9-10-2013 and form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

All vernal pool ID numbers are to be displayed and located on the wetland delineation of the subject property.

“Important Notes” are to include documented reproductive and wildlife values, landscape context, and relationship to other vernal pools/wetlands.

Note: For projects seeking federal approval from the USACE, please attach a completed copy of The USACE “Vernal Pool Assessment” form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDARY INDICATORS PRESENT (LIST)	LENGTH OF HYDROPERIOD	IMPORTANT NOTES
1	N/A	N/A	N/A	N/A	No vernal pools are located within the project area.
2					
3					
4					
5					
6					
7					
8					

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SECTION 6 - STREAM RESOURCES SUMMARY				
DESCRIPTION OF STREAM: Piscataqua River			STREAM TYPE (ROSGEN): F (channel material unknown)	
HAVE FISHERIES BEEN DOCUMENTED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			DOES THE STREAM SYSTEM APPEAR STABLE? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
OTHER KEY ON-SITE FUNCTIONS OF NOTE: N/A				
The following table can be used to compile data on stream resources. "Important Notes" are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference number are defined in Section 4.				
FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NHDES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Ecological Integrity has been impacted by surrounding land use and human activity.
2	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9, 11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Educational potential exists on the Piscataqua River, but not within the project area.
3	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3, 4, 5, 6, 7, 10, 11, 14, 16, 17	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Piscataqua River supports both fish and shellfish populations.
4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4, 10, 11, 13	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Riprap is being used effectively to prevent erosion/damage, but flood storage is minimal.
5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2, 7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Piscataqua River is likely not driven by groundwater at this point in its reach.
6	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NHDES	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Shortnose sturgeon and Atlantic sturgeon have both been observed within the area.
7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Impervious surfaces are not trapping runoff and associated nutrients.
8	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No production occurs within the project area.
9	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2, 6, 9	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Scenic quality on the Piscataqua River can be high, but not within the project area.
10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1, 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Impervious surfaces are not trapping runoff and associated sediments/toxicants.
11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1, 3, 4, 8, 9, 10, 11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Riprap is being used effectively in shoreline anchoring.
12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The project area is not unique and does not provide cultural/heritage opportunities.

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13	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2, 8, 9, 12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Recreation potential exists within the Piscataqua River, but not within the project area.
14	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No wildlife habitat exists within the project area.

**SECTION 7 - ATTACHMENTS (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)**

- Wildlife and vegetation diversity/abundance list.
- Photograph of wetland attached.
- Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.
- For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04 (please refer to the Coastal Area Worksheet for more information)

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# **Section 5**

## **Avoidance and Minimization Checklist**





**AVOIDANCE AND MINIMIZATION CHECKLIST**  
 Water Division/Land Resources Management  
 Wetlands Bureau



[Check the Status of your Application](#)

**RSA/Rule:** RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, complete only Sections 1, 2, and 4 only (or the applicable sections in [Attachment A: Minor and Major Projects \(NHDES-W-06-013\)](#)).

“A/M BMPs” stands for [Wetlands Best Management Practice Techniques for Avoidance and Minimization](#) dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).

“Practicable” means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION		
APPLICANT LAST NAME, FIRST NAME, M.I.: Granite State Minerals		
PROJECT STREET ADDRESS: 227 & 315 Market Street	PROJECT TOWN: Portsmouth	
TAX MAP/LOT NUMBER: 119 / 5 & 6		
SECTION 2 - PRIMARY PURPOSE OF THE PROJECT		
Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>If you answered “no” to this question, describe the purpose of the “non-access” project type you have proposed. The proposed project will provide necessary upgrades to the terminal including the replacement of two undersized bollard moorings and the construction of stormwater management upgrades. The stormwater management upgrades are being constructed as part of the facility’s stormwater management program under the EPA Multi-Sector General Permit (MSGP).</p>		

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<b>SECTION 3 - AVOIDANCE &amp; MINIMIZATION PROJECT DESIGN TECHNIQUES</b>		
Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.		
Env-Wt 311.07(b)(2)	For any project that proposes permanent impacts of more than one acre or that proposes permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select a location, and design for the proposed project that has the least impact to wetland functions.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impact to wetland functions is unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A

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A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism passage and wildlife passage.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
<b>SECTION 4 - NON-TIDAL SHORELINE STRUCTURES</b>		
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe docking on the frontage.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A



# **Section 6**

## **Coastal Resource Worksheet**





**COASTAL RESOURCE WORKSHEET**  
 Water Division/Land Resources Management  
 Wetlands Bureau



[Check the Status of your Application](#)

**RSA/Rule:** RSA 482-A/ Env-Wt 600

**APPLICANT LAST NAME, FIRST NAME, M.I.:** Granite State Minerals

This worksheet may be used to present the information required for projects in coastal areas, in addition to the information required for Lower-Scrutiny Approvals, Expedited Permits, and Standard Permits under Env-Wt 603.01.

Please refer to Env-Wt 605.03 for impacts requiring compensatory mitigation.

**SECTION 1 - REQUIRED INFORMATION (Env-Wt 603.02; Env-Wt 603.06; Env-Wt 603.09)**

The following information is required for projects in coastal areas.

Describe the purpose of the proposed project, including the overall goal of the project, the core project purpose consisting of a concise description of the facilities and work that could impact jurisdictional areas, and the intended project outcome. Specifically identify all natural resource assets in the area proposed to be impacted and include maps created through a data screening in accordance with Env-Wt 603.03 (refer to Section 2) and Env-Wt 603.04 (refer to Section 3) as attachments.

**The proposed project will provide necessary upgrades to the terminal including the replacement of two undersized bollard moorings and the construction of stormwater management upgrades. The stormwater management upgrades are being constructed as part of the facility’s stormwater management program under the EPA Multi-Sector General Permit (MSGP). The permit requires regular sampling of stormwater discharges and a stormwater plan to keep levels of certain analytes below benchmark limits established by the permit. The stormwater management system is designed to decrease concentrations of metals and other analytes in stormwater discharges to the river, consistent with MSGP requirements. It will also facilitate capture of cleaner and more accurate stormwater samples by providing an access point to grab samples from within a manhole rather than from the surface of the pavement.**

**There are no natural resource assets that are proposed to be impacted as the entirety of the proposed disturbance is located within previously disturbed tidal buffer zone. A minimal area below the mean high water line will be disturbed for the construction of the outfall to the river. This area has also been previously disturbed for the construction of the stone revetment.**

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For standard permit projects, provide:

- A Coastal Functional Assessment (CFA) report in accordance with Env-Wt 603.04 (refer to Section 3).
- A vulnerability assessment in accordance with Env-Wt 603.05 (refer to Section 4).

Explain all recommended methods and other considerations to protect the natural resource assets during and as a result of project construction in accordance with Env-Wt 311.07, Env-Wt 313, and Env-Wt 603.04.

**There is no practicable alternative that would have a less adverse impact on the area and environments under the department's jurisdiction as all impacts are within previously disturbed tidal buffer and tidal areas. There are no tidal marshes and non-tidal marshes within the project area. There are no hydrologic connections between adjacent wetlands or stream systems with the project area. There are no wetlands and other areas of jurisdiction under RSA 482-A, including, vernal pools, documented fisheries, and habitat and reproduction areas for species of concern within the project area. Coordination with NH F&G confirms that there will be no impact to protected species. The project does not obstruct public commerce, navigation, or recreation. The project does not impact floodplain wetlands that provide flood storage. There are no natural riverine forested wetland systems and scrub-shrub marsh complexes of high ecological integrity within the project area. The project does not impact wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels. The project does not impact stream channels and the ability of such channels to handle runoff of waters.**

Provide a narrative showing how the project meets the standard conditions in Env-Wt 307 and the approval criteria in Env-Wt 313.01.

**The proposed project does not negatively impact water quality. The stormwater management upgrades are being constructed as part of the facility's stormwater management program under the EPA Multi-Sector General Permit (MSGP). The permit requires regular sampling of stormwater discharges and a stormwater plan to keep levels of certain analytes below benchmark limits established by the permit. The stormwater management system is designed to decrease concentrations of metals and other analytes in stormwater discharges to the river, consistent with MSGP requirements. It will also facilitate capture of cleaner and more accurate stormwater samples by providing an access point to grab samples from within a manhole rather than from the surface of the pavement.**

**Coordination with NH F&G confirms that there will be no impact to protected species.**

Provide a project design narrative that includes the following:

- A discussion of how the proposed project:
  - Uses best management practices and standard conditions in Env-Wt 307;
  - Meets all avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
  - Meets approval criteria in Env-Wt 313.01;
  - Meets evaluation criteria in Env-Wt 313.01(c);
  - Meets CFA requirements in Env-Wt 603.04; and
  - Considers sea-level rise and potential flooding evaluated pursuant to Env-Wt 603.05;
- A construction sequence, erosion/siltation control methods to be used, and a dewatering plan; and
- A discussion of how the completed project will be maintained and managed.

**This site will be covered under an EPA Multi-Sector General Permit which includes a Stormwater Pollution Prevention Plan which has maintenance and stormwater testing procedures for the project site.**

**The stormwater management upgrades are being constructed as part of the facility's stormwater management program under the EPA Multi-Sector General Permit (MSGP). The MSGP includes a Stormwater Pollution Prevention Plan which requires regular sampling of stormwater discharges and maintenance of the facility and stormwater management system**

- Provide design plans that meet the requirements of Env-Wt 603.07 (refer to Section 5);
- Provide water depth supporting information required by Env-Wt 603.08 (refer to Section 6); and
- For any major project that proposes to construct a structure in tidal waters/wetlands or to extend an existing structure seaward, provide a statement from the Pease Development Authority Division of Ports and Harbors (DP&H) chief harbormaster, or designee, for the subject location relative to the proposed structure's impact on navigation. If the proposed structure might impede existing public passage along the subject shoreline on foot or by non-motorized watercraft, the applicant shall explain how the impediments have been minimized to the greatest extent practicable.

**The proposed outlet pipe does not extend farther seaward than the existing stone revetment and has no impact on navigation.**

**SECTION 2 - DATA SCREENING (Env-Wt 603.03, in addition to Env-Wt 306.05)**

Please use the Wetland Permit Planning Tool, or any other database or source, to indicate the presence of:

- Existing salt marsh and salt marsh migration pathways;
- Eelgrass beds;
- Documented shellfish sites;
- Projected sea-level rise; and
- 100-year floodplain.

Conduct data screening as described to identify documented essential fish habitat, and tides and currents that may be impacted by the proposed project, by using the following links:

- [National Oceanic and Atmospheric Administration \(NOAA\) Tides & Currents](#); and
- [NOAA Essential Fish Habitat Mapper](#).
- Verify or correct the information collected from the data screenings by conducting an on-site assessment of the subject property in accordance with Env-Wt 406 and Env-Wt 603.04.

**SECTION 3 - COASTAL FUNCTIONAL ASSESSMENT/ AVOIDANCE AND MINIMIZATION (Env-Wt 603.04; Env-Wt 605.01; Env-Wt 605.02; Env-Wt 605.03)**

Projects in coastal areas shall:

- Not impair the navigation, recreation, or commerce of the general public; and
- Minimize alterations in prevailing currents.

An applicant for a permit for work in or adjacent to tidal waters/wetlands or the tidal buffer zone shall demonstrate that the following have been avoided or minimized as required by Env-Wt 313.04:

- Adverse impacts to beach or tidal flat sediment replenishment;
- Adverse impacts to the movement of sediments along a shore;
- Adverse impacts on a tidal wetland's ability to dissipate wave energy and storm surge; and
- Adverse impacts of project runoff on salinity levels in tidal environments.

For standard permit applications submitted for minor or major projects:

- Attach a CFA based on the data screening information and on-site evaluation required by Env-Wt 603.03. The CFA for tidal wetlands or tidal waters shall be:
  - Performed by a qualified coastal professional; and
  - Completed using one of the following methods:
    - a. The US Army Corps of Engineers (USACE) Highway Methodology Workbook, dated 1993, together with the USACE New England District *Highway Methodology Workbook Supplement*, dated 1999; or
    - b. An alternative scientifically-supported method with cited reference and the reasons for the alternative method substantiated.

For any project that would impact tidal wetlands, tidal waters, or associated sand dunes, the applicant shall:

- Use the results of the CFA to select the location of the proposed project having the least impact to tidal wetlands, tidal waters, or associated sand dunes;
- Design the proposed project to have the least impact to tidal wetlands, tidal waters, or associated sand dunes;
- Where impact to wetland and other coastal resource functions is unavoidable, limit the project impacts to the least valuable functions, avoiding and minimizing impact to the highest and most valuable functions; and
- Include on-site minimization measures and construction management practices to protect coastal resource areas.

Projects in coastal areas shall use results of this CFA to:

- Minimize adverse impacts to finfish, shellfish, crustacean, and wildlife;
- Minimize disturbances to groundwater and surface water flow;
- Avoid impacts that could adversely affect fish habitat, wildlife habitat, or both; and
- Avoid impacts that might cause erosion to shoreline properties.

**SECTION 4 - VULNERABILITY ASSESSMENT (Env-Wt 603.05)**

Refer to the New Hampshire Coastal Flood Risk Summary Part 1: Science and New Hampshire Coastal Flood Risk Summary Part II: Guidance for Using Scientific Projections or other best available science to:

Determine the time period over which the project is designed to serve.

Approximately 50 years before repair/replacement

Identify the project's relative risk tolerance to flooding and potential damage or loss likely to result from flooding to buildings, infrastructure, salt marshes, sand dunes and other valuable coastal resource areas.

High tolerance. The project is proposing the construction of mooring bollards and subsurface drainage structures that would not be impacted by flooding.

Reference the projected sea-level rise (SLR) scenario that most closely matches the end of the project design life and the project's tolerance to risk or loss.

NH Coastal Flood Risk Summary Part II, Step 3 Table A: Sea level rise for High Risk Tolerance is 2.1 feet (10.1 feet) by 2072.

Identify areas of the proposed project site subject to flooding from SLR.

The current 100 year floodplain (Zone AE) base flood elevation is 8.0 feet and including the projected SLR will be 10.1 feet. The additional project area below this elevation includes some additional paved areas not associated with the proposed work.

Identify areas currently located within the 100-year floodplain and subject to coastal flood risk.

The proposed drainage structures and mooring bollards are within the existing FEMA 100-year flood level and is already subject to flooding.

Describe how the project design will consider and address the selected SLR scenario within the project design life, including in the design plans.

In coordination with to the project's high tolerance classification, the work associated with this project is not sensitive to the indicated SLR scenario.

Where there are conflicts between the project's purpose and the vulnerability assessment results, schedule a pre-application meeting with the department to evaluate design alternatives, engineering approaches, and use of the best available science.

Pre-application meeting date held:

**SECTION 5 - DESIGN PLANS (Env-Wt 603.07, in addition to Env-Wt 311)**

Submit design plans for the project in both plan and elevation views that clearly depict and identify all required elements.

The plan view shall depict the following:

- The engineering scale used, which shall be no larger than one inch equals 50 feet;
- The location of tidal datum lines depicted as lines with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from [https://tidesandcurrents.noaa.gov/datum\\_options.html](https://tidesandcurrents.noaa.gov/datum_options.html), as described in Section 6.
- An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;
- The location of all special aquatic sites at or within 100 feet of the subject property;
- Existing bank contours;
- The name and license number, if applicable, of each individual responsible for the plan, including:
  - a. The agent for tidal docking structures who determined elevations represented on plans; and
  - b. The qualified coastal professional who completed the CFA report and located the identified resources on the plan;
- The location and dimensions of all existing and proposed structures and landscape features on the property;
- Tidal datum(s) with associated elevations noted, based on NAVD 88; and
- Location of all special aquatic sites within 100-feet of the property.

The elevation view shall depict the following:

- The nature and slope of the shoreline;
- The location and dimensions of all proposed structures, including permanent piers, pilings, float stop structures, ramps, floats, and dolphins; and
- Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured. Refer to Section 6 for more instructions regarding water depth supporting information.

See specific design and plan requirements for certain types of coastal projects:

- Overwater structures (Env-Wt 606).
- Tidal shoreline stabilization (Env-Wt 609).
- Dredging activities (Env-Wt 607).
- Protected tidal zone (Env-Wt 610).
- Tidal beach maintenance (Env-Wt 608).
- Sand Dunes (Env-Wt 611).

[irm@des.nh.gov](mailto: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](http://www.des.nh.gov)

**SECTION 6 - WATER DEPTH SUPPORTING INFORMATION REQUIRED (Env-Wt 603.08)**

Using current predicted NOAA tidal datum for the location, and tying field measurements to NAVD 88, field observations of at least three tide events, including at least one minus tide event, shall be located to document the range of the tide in the proposed location showing the following levels:

- Mean lower low water;
- Mean low water;
- Mean high water;
- Mean tide level;
- Mean higher high water;
- Highest observable tide line; and
- Predicted sea-level rise as identified in the vulnerability assessment in Env-Wt 603.05.

The following data shall be presented in the application project narrative to support how water depths were determined:

- The date, time of day, and weather conditions when water depths were recorded; and
- The name and license number of the licensed land surveyor who conducted the field measurements.

For tidal stream crossing projects, provide:

- Water depth information to show how the tier 4 stream crossing is designed to meet Env-Wt 904.07(c) and (d).

For repair, rehabilitation or replacement of tier 4 stream crossings:

- Demonstrate how the requirements of Env-Wt 904.09 are met.

**SECTION 7 - GENERAL CRITERIA FOR TIDAL BEACHES, TIDAL SHORELINE, AND SAND DUNES (Env-Wt 604.01)**

Any person proposing a project in or on a tidal beach, tidal shoreline, or sand dune, or any combination thereof, shall evaluate the proposed project based on:

- The standard conditions in Env-Wt 307;
- The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- The approval criteria in Env-Wt 313.01;
- The evaluation criteria in Env-Wt 313.05;
- The project specific criteria in Env-Wt 600;
- The CFA required by Env-Wt 603.04; and
- The vulnerability assessment required by Env-Wt 603.05.

New permanent impacts to sand dunes that provide coastal storm surge protection for protected species or habitat shall not be allowed except:

- To protect public safety; and
- Only if constructed by a state agency, coastal resiliency project, or for a federal homeland security project.

Projects in or on a tidal beach, tidal shoreline, or sand dune shall support integrated shoreline management that:

- Optimizes the natural function of the shoreline, including protection or restoration of habitat, water quality, and self-sustaining stability to flooding and storm surge; and
- Protects upland infrastructure from coastal hazards with a preference for living shorelines over hardened shoreline practices.

**SECTION 8 - GENERAL CRITERIA FOR TIDAL BUFFER ZONES (Env-Wt 604.02)**

The 100-foot statutory limit on the extent of the tidal buffer zone shall be measured horizontally. Any person proposing a project in or on an undeveloped tidal buffer zone shall evaluate the proposed project based on:

- The standard conditions in Env-Wt 307;
- The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- The approval criteria in Env-Wt 313.01;
- The evaluation criteria in Env-Wt 313.05;
- The project specific criteria in Env-Wt 600;
- The CFA required by Env-Wt 603.04; and
- The vulnerability assessment required by Env-Wt 603.05.

Projects in or on a tidal buffer zone shall preserve the self-sustaining ability of the buffer area to:

- Provide habitat values;
- Protect tidal environments from potential sources of pollution;
- Provide stability of the coastal shoreline; and
- Maintain existing buffers intact where the lot has disturbed area defined under RSA 483-B:4, IV.

**SECTION 9 - GENERAL CRITERIA FOR TIDAL WATERS/WETLANDS (Env-Wt 604.03)**

Except as allowed under Env-Wt 606, permanent new impacts to tidal wetlands shall be allowed only to protect public safety or homeland security. Evaluation of impacts to tidal wetlands and tidal waters shall be based on:

- The standard conditions in Env-Wt 307;
- The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- The approval criteria in Env-Wt 313.01;
- The evaluation criteria in Env-Wt 313.05;
- The project specific criteria in Env-Wt 600;
- The CFA required by Env-Wt 603.04; and
- The vulnerability assessment required by Env-Wt 603.05.

Projects in tidal surface waters or tidal wetlands shall:

- Optimize the natural function of the tidal wetland, including protection or restoration of habitat, water quality, and self-sustaining stability to storm surge;
- Be designed with a preference for living shorelines over hardened stabilization practices; and
- Be limited to public infrastructure or restoration projects that are in the interest of the general public, including a road, a bridge, energy infrastructure, or a project that addresses predicted sea-level rise and coastal flood risk.

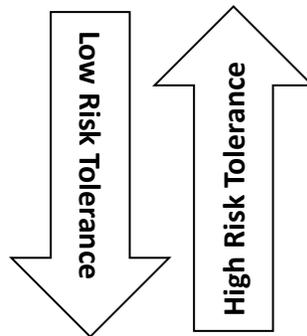
**SECTION 10 – GUIDANCE**

Your application must follow the New Hampshire Coastal Risk and Hazards Commission’s Guiding Principles or other best available science. Below are some of these guidance principles:

- Incorporate science-based coastal flood risk projections into planning;
- Apply risk tolerance\* to assessment, planning, design, and construction;
- Protect natural resources and public access;
- Create a bold vision, start immediately, and respond incrementally and opportunistically as projected coastal flood risks increase over time; and
- Consider the full suite of actions including effectiveness and consequences of actions.

\*Risk tolerance is a project’s willingness to accept a higher or lower probability of flooding impacts. The diagram below gives examples of project with lower and higher risk tolerance:

Critical infrastructures, historic sites, essential ecosystems, and high value assets typically have lower risk tolerance, and thus should be planned, designed, and constructed using higher coastal flood risk projections.



Sheds, pathways, and small docks typically have higher risk tolerance and thus may be planned, designed, and constructed using less protective coastal flood risk projections.

**STEP 3 TABLE A. RECOMMENDED DECADAL RSLR ESTIMATES (IN FEET ABOVE 2000 LEVELS) BASED ON RCP 4.5, PROJECT TIMEFRAME, AND TOLERANCE FOR FLOOD RISK.**

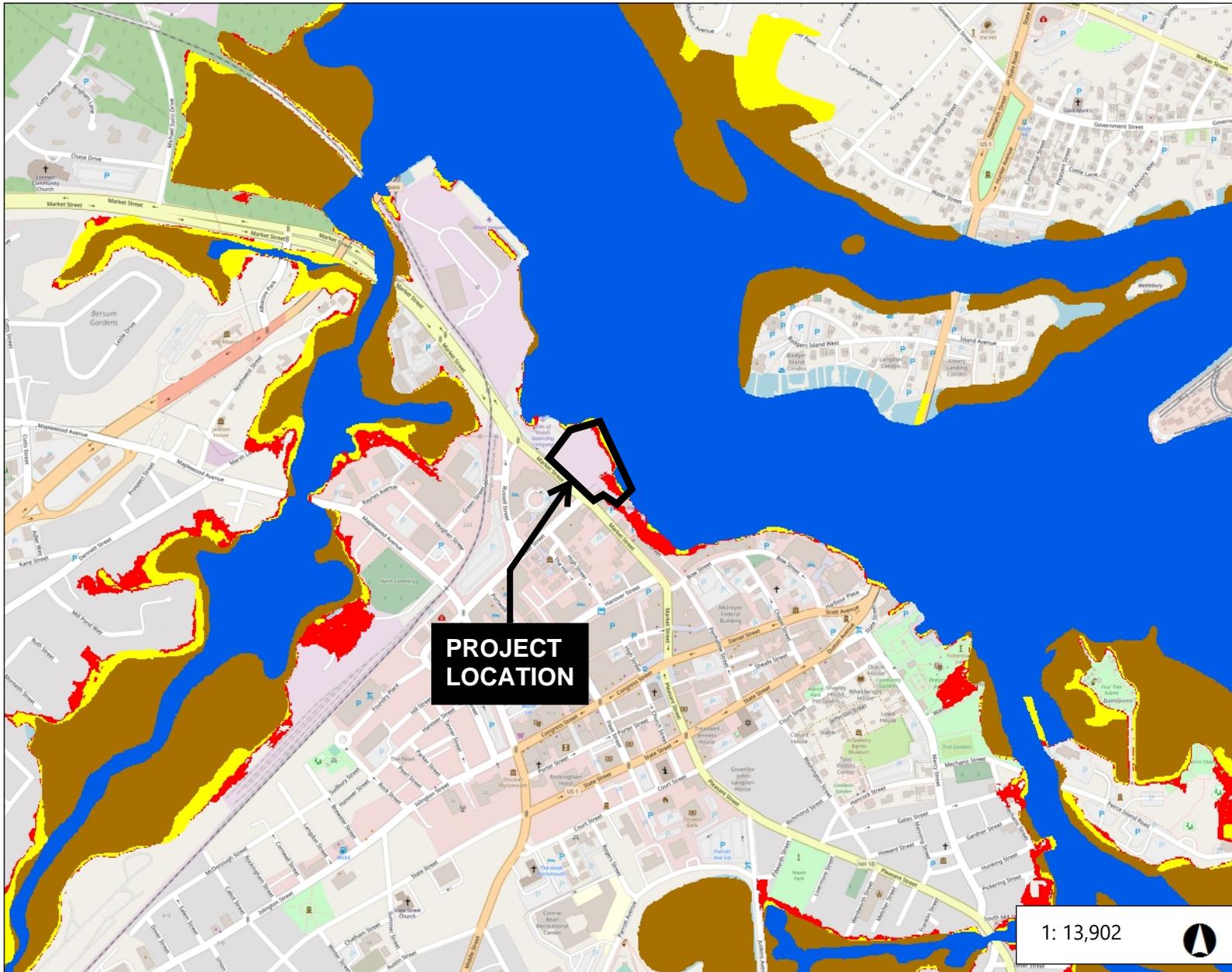
TIMEFRAME	HIGH TOLERANCE FOR FLOOD RISK	MEDIUM TOLERANCE FOR FLOOD RISK	LOW TOLERANCE FOR FLOOD RISK	VERY LOW TOLERANCE FOR FLOOD RISK
	Plan for the following RSLR estimate (ft)* compared to sea level in the year 2000			
	Lower magnitude, Higher probability			Higher magnitude, Lower probability
2030	0.7	0.9	1.0	1.1
2040	1.0	1.2	1.5	1.6
2050	1.3	1.6	2.0	2.3
2060	1.6	2.1	2.6	3.0
2070	2.0	2.5	3.3	3.7
2080	2.3	3.0	3.9	4.5
2090	2.6	3.4	4.6	5.3
2100	2.9	3.8	5.3	6.2
2110	3.3	4.4	6.1	7.3
2120	3.6	4.9	7.0	8.3
2130	3.9	5.4	7.9	9.3
2140	4.3	5.9	8.9	10.5
2150	4.6	6.4	9.9	11.7

**2072 = 2.1**



\*The colors (blue, red, purple, green) in Step 3 Table A correspond with the colors of the graph depicted in Figure 2 (see also Figure 4.5 in *Part I: Science*<sup>17</sup>). The RSLR estimates for High tolerance for flood risk projects correspond with K14, upper end of “likely” estimates for RCP4.5 (83% chance RSLR will not exceed this value). The RSLR estimates for Medium tolerance for flood risk projects correspond with K14, 1-in-20 chance estimates for RCP 4.5. The RSLR estimates for Low tolerance for flood risk projects correspond with K14, 1-in-100 chance estimates for RCP 4.5. The RSLR estimates for Very Low tolerance for flood risk projects correspond with K14, 1-in-200 chance estimates for RCP4.5. For K14, 1-in-1000 chance estimates, see Table 4.2 in *Part I: Science*.<sup>17</sup> Note that while the Bayesian probabilities associated with RSLR projections are useful, they have some limitations as described in Box 4.3 in *Part I: Science*.<sup>17</sup>





**Legend**

**Predicted Marsh Migration 2022**

- Freshwater wetland
- Tidal wetland
- Transitional salt marsh
- Salt marsh
- Mud flat
- Inland open water
- Tidal water

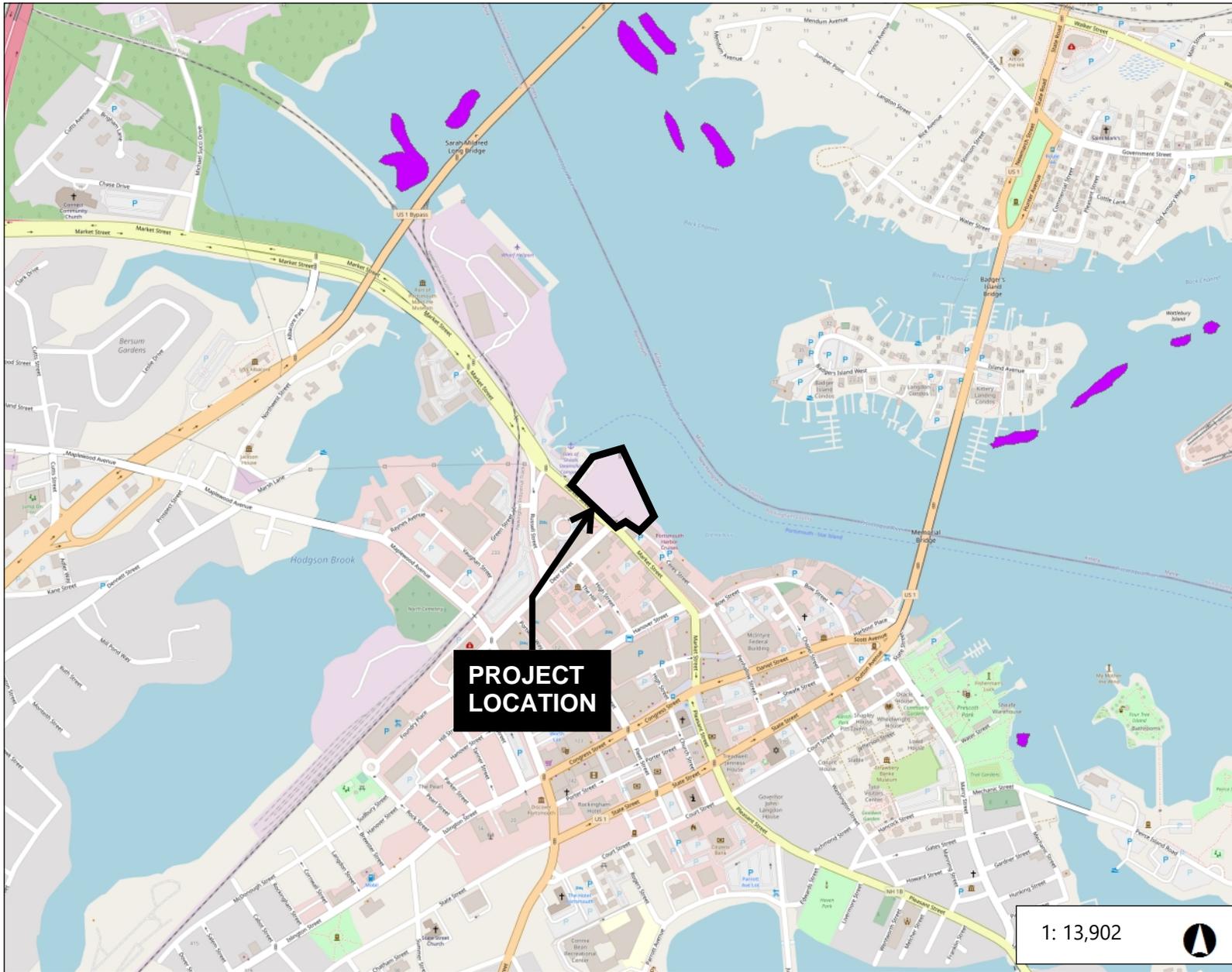
**PROJECT LOCATION**

1: 13,902



**Notes**





Legend

-  Eelgrass 2017
-  Eelgrass 2016
-  Eelgrass 2006
-  Eelgrass 1996
-  Eelgrass 1986

1: 13,902



0.4 0 0.22 0.4 Miles

Notes





Legend

- Oyster Restoration Sites
- Aquaculture Sites - 2015

1: 13,902



Notes





Legend

MHW + 2-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Notes

0.4 0 0.22 0.4 Miles

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
© Latitude Geographics Group Ltd.

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION



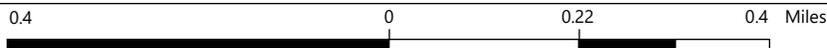


**Legend**

**FEMA Floodplains**

- 1 pct. Annual Chance Flood Hazard
- Floodway
- 0.2 pct. Annual Chance Flood Hazard
- Area of Undetermined Flood Hazard
- Area Protected by Levee

1: 13,902



Notes





Station Info Tides/Water Levels Meteorological Obs. (/met.html?id=8419870) Phys. Oceanography (/physocean.html?id=8419870)  
PORTS® (/ports/ports.html?id=8419870) OFS (/ofs/ofs\_station.html?stname=Seavey Island&ofs=gom&stnid=8419870&subdomain=0)

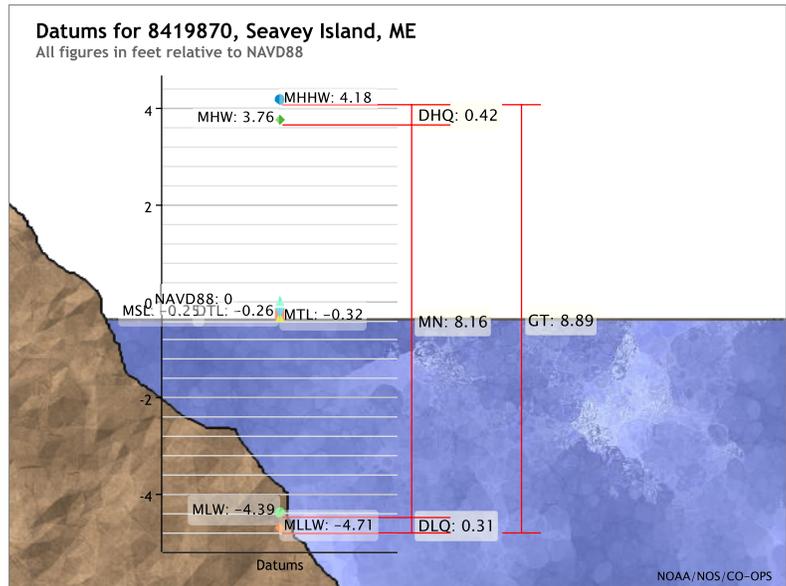
## Datums for 8419870, Seavey Island ME

**NOTICE:** All data values are relative to the NAVD88.

### Elevations on NAVD88

**Station:** 8419870, Seavey Island, ME  
**T.M.:** 0  
**Epoch:** 1983-2001  
**Status:** Accepted (Dec 6 2021)  
**Units:** Feet  
**Control Station:** 8418150 Portland, ME  
**Datum:** NAVD88

Datum	Value	Description
MHHW (/datum_options.html#MHHW)	4.18	Mean Higher-High Water
MHW (/datum_options.html#MHW)	3.76	Mean High Water
MTL (/datum_options.html#MTL)	-0.32	Mean Tide Level
MSL (/datum_options.html#MSL)	-0.25	Mean Sea Level
DTL (/datum_options.html#DTL)	-0.26	Mean Diurnal Tide Level
MLW (/datum_options.html#MLW)	-4.39	Mean Low Water
MLLW (/datum_options.html#MLLW)	-4.71	Mean Lower-Low Water
NAVD88 (/datum_options.html)	0.00	North American Vertical Datum of 1988
STND (/datum_options.html#STND)	-6.98	Station Datum
GT (/datum_options.html#GT)	8.89	Great Diurnal Range
MN (/datum_options.html#MN)	8.16	Mean Range of Tide
DHQ (/datum_options.html#DHQ)	0.42	Mean Diurnal High Water Inequality
DLQ (/datum_options.html#DLQ)	0.31	Mean Diurnal Low Water Inequality
HWI (/datum_options.html#HWI)	3.92	Greenwich High Water Interval (in hours)
LWI (/datum_options.html#LWI)	10.04	Greenwich Low Water Interval (in hours)
Max Tide (/datum_options.html#MAXTIDE)	7.89	Highest Observed Tide
Max Tide Date & Time (/datum_options.html#MAXTIDEDT)	02/07/1978 10:42	Highest Observed Tide Date & Time
Min Tide (/datum_options.html#MINTIDE)	-7.98	Lowest Observed Tide
Min Tide Date & Time (/datum_options.html#MINTIDEDT)	11/30/1955 00:00	Lowest Observed Tide Date & Time
HAT (/datum_options.html#HAT)	5.87	Highest Astronomical Tide
HAT Date & Time	11/15/2016 16:18	HAT Date and Time



Showing datums for

Datum:

Data Units:  Feet  Meters

Epoch:  Present (1983-2001)  Superseded (1960-1978)

Datum	Value	Description
LAT (/datum_options.html#LAT)	-6.51	Lowest Astronomical Tide
LAT Date & Time	01/14/2036 23:00	LAT Date and Time

#### Tidal Datum Analysis Periods

07/01/2020 - 06/30/2021

Show nearby stations

#### Products available at 8419870 Seavey Island, ME

##### TIDES/WATER LEVELS

[Water Levels \(/waterlevels.html?id=8419870\)](/waterlevels.html?id=8419870)

[NOAA Tide Predictions \(/noaatidepredictions.html?id=8419870\)](/noaatidepredictions.html?id=8419870)

[Harmonic Constituents \(/harcon.html?id=8419870\)](/harcon.html?id=8419870)

[Sea Level Trends \(/siltrends/siltrends\\_station.shtml?id=8419870\)](/siltrends/siltrends_station.shtml?id=8419870)

[Datums \(/datums.html?id=8419870\)](/datums.html?id=8419870)

[Bench Mark Sheets \(/benchmarks.html?id=8419870\)](/benchmarks.html?id=8419870)

[Extreme Water Levels \(/est/est\\_station.shtml?stnid=8419870\)](/est/est_station.shtml?stnid=8419870)

[Reports \(/reports.html?id=8419870\)](/reports.html?id=8419870)

##### METEOROLOGICAL/OTHER

[Meteorological Observations \(/met.html?id=8419870\)](/met.html?id=8419870)

[Water Temp/Conductivity](#)

##### PORTS®

[Portsmouth PORTS® \(/ports/index.html?port=pm\)](/ports/index.html?port=pm)

[PORTS® product page for Seavey Island \(/ports/ports.html?id=8419870\)](/ports/ports.html?id=8419870)

##### OPERATIONAL FORECAST SYSTEMS

[Gulf of Maine \(/ofs/gomofs/gomofs.html\)](/ofs/gomofs/gomofs.html)

[OFS product page for Seavey Island](#)

##### INFORMATION

[Station Home Page \(/stationhome.html?id=8419870\)](/stationhome.html?id=8419870)

[Data Inventory \(/inventory.html?id=8419870\)](/inventory.html?id=8419870)

[Measurement Specifications \(/measure.html\)](/measure.html)

#### Website Owner: Center for Operational Oceanographic Products and Services

National Oceanic and Atmospheric Administration (<http://www.noaa.gov>) • National Ocean Service (<http://oceanservice.noaa.gov>) • Privacy Policy (</privacy.html>) • Disclaimer (</disclaimers.html>) • Take Our Survey (</survey.html>) • Freedom of Information Act (<https://www.noaa.gov/foia-freedom-of-information-act>) • Contact Us (</contact.html>)

## EFH Mapper Report

### EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

### Query Results

Degrees, Minutes, Seconds: Latitude = , Longitude =  
 Decimal Degrees: Latitude = , Longitude =

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

### EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Atlantic Sea Scallop	ALL	New England	Amendment 14 to the Atlantic Sea Scallop FMP
		Atlantic Wolffish	ALL	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs Juvenile Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Little Skate	Juvenile Adult	New England	Amendment 2 to the Northeast Skate Complex FMP
		Atlantic Herring	Juvenile Adult Larvae	New England	Amendment 3 to the Atlantic Herring FMP
		Atlantic Cod	Larvae Adult Eggs	New England	Amendment 14 to the Northeast Multispecies FMP
		Pollock	Juvenile Eggs Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Windowpane Flounder	Adult Larvae Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Smooth Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		White Hake	Adult Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Thorny Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Bluefin Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Mackerel	Eggs Larvae Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Bluefish	Adult Juvenile	Mid-Atlantic	Bluefish
		Atlantic Butterfish	Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11

### Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

### HAPCs

Link	Data Caveats	HAPC Name	Management Council
		Inshore 20m Juvenile Cod	New England

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.



# **Section 7 Documentation from DRED Natural Heritage Bureau (NHB) & United States Fish and Wildlife Service**



# 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:** Alex Sellar, Tighe and Bond Engineers  
177 Corporate Drive  
Portsmouth, NH 03801

**From:** NHB Review, NH Natural Heritage Bureau  
**Date:** 2/11/2022 (valid until 02/11/2023)  
**Re:** Review by NH Natural Heritage Bureau  
**Permits:** NHDES - Wetland Standard Dredge & Fill - Major

**NHB ID:** NHB22-0347      **Town:** Portsmouth      **Location:** 227 Market Street  
**Description:** The proposed project consists of stormwater management upgrades and the replacement of two existing bollard moorings to support the existing use of the site.

**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 make sure and provide proposed job timing with the information that is required for review.**

**As of February 3, 2022, New Hampshire Fish and Game requirements for environmental review consultation have changed. To review the new rules, please go to <https://www.wildlife.state.nh.us/legislative/proposed-rules.html>. All requests for consultation and submittals should be sent via email to [NHFGreview@wildlife.nh.gov](mailto:NHFGreview@wildlife.nh.gov) or can be sent by mail. The NHB datacheck results letter number needs to be included in the email subject line.**

**The requirements for consultation (Fis 1004) shall not apply to the following: statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule. Consultation requests for these projects can be sent directly to [kim.tuttle@wildlife.nh.gov](mailto:kim.tuttle@wildlife.nh.gov).**

<b>Vertebrate species</b>	<b>State<sup>1</sup></b>	<b>Federal</b>	<b>Notes</b>
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).

## 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.

<sup>1</sup>Codes: "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.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB22-0347







## Alexander Sellar

---

**From:** Tuttle, Kim <Kim.A.Tuttle@wildlife.nh.gov>  
**Sent:** Monday, February 28, 2022 10:38 AM  
**To:** Alexander Sellar; FGC: NHFG review  
**Cc:** Neil A. Hansen  
**Subject:** RE: NHB22-0347 227 Market Street Portsmouth  
**Attachments:** F&G Correspondence.pdf

[ Caution - External Sender ]

Hello Alex,

As there have been no changes to the design since our previous correspondences for the proposed project stormwater management upgrades and the replacement of two existing bollard moorings to support the existing use of the site at 227 Market St. Portsmouth, the NHFG Nongame and Endangered Wildlife Program does not expect impacts to Atlantic and shortnose sturgeon as a result of the proposed activities.

Thanks,

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

---

**From:** Alexander Sellar <ASellar@TigheBond.com>  
**Sent:** Friday, February 18, 2022 2:28 PM  
**To:** Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>; FGC: NHFG review <NHFGReview@wildlife.nh.gov>  
**Cc:** Neil A. Hansen <NAHansen@tighebond.com>  
**Subject:** NHB22-0347

**EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.**

---

Hi Kim,

I wanted to reach out directly to you in regards to the attached NHB review for a proposed project at 227 Market Street in Portsmouth. This project had several years of delays but again we reach out to you for a third time in preparation of a submission next month. There have been no changes to the design since your previous reviews and I have attached our previous correspondence for your reference. Would you require any additional information for this project to complete your review?

Please let me know if you have any questions.

Thank you,  
Alex

**Alexander Sellar, PE**

Project Engineer



o. 603 433 8818 | m. 603 507 0587

---

177 Corporate Drive, Portsmouth, NH, 03801

w: [tighebond.com](http://tighebond.com) | [halvorsondesign.com](http://halvorsondesign.com)



# CONFIDENTIAL – NH Dept. of Environmental Services review

## Memo



NH NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

**To:** Neil Hansen, Tighe & Bond  
177 Corporate Drive  
Portsmouth, NH 03801

**From:** Amy Lamb, NH Natural Heritage Bureau  
**Date:** 8/4/2020 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau

NHB File ID: NHB20-2243

Town: Portsmouth

Location: Tax Maps: Map 119, Lot 6

Description: This project consists of stormwater management upgrades to the existing Granite State Minerals Terminal to comply with EPA's Multi-Sector General Permit. The existing site is 100% impervious. This project had a previous NHB review which has expired, NHB19-2156

**cc:** Kim Tuttle

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

**Comments: Please continue to coordinate with the NH Fish & Game Department and the US Fish & Wildlife Service.**

### Vertebrate species

	State <sup>1</sup>	Federal	Notes
Atlantic Sturgeon ( <i>Acipenser 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).

<sup>1</sup>Codes: "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.

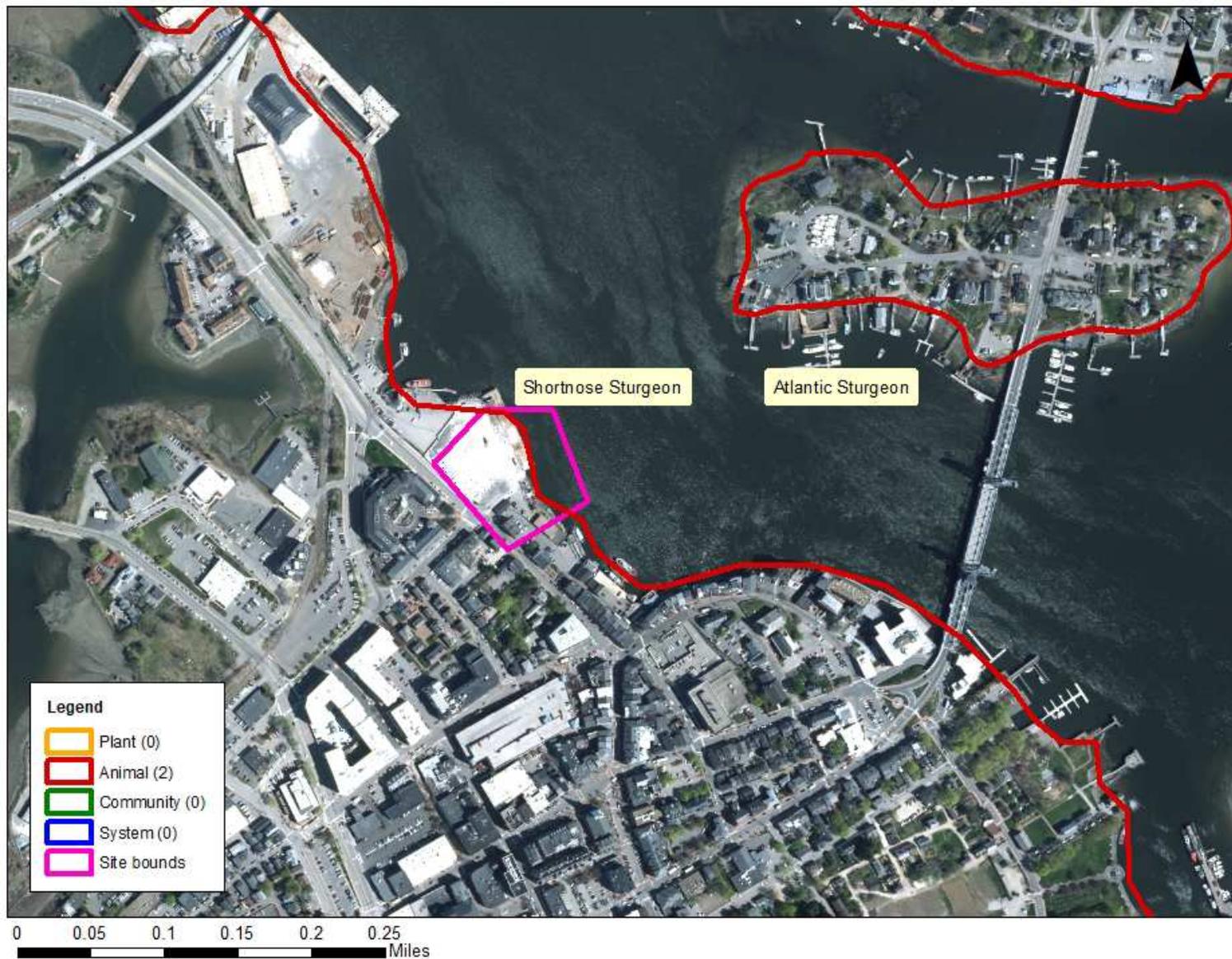
Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

---

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.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB20-2243





## New Hampshire Natural Heritage Bureau - Animal Record

### Shortnose Sturgeon (*Acipenser brevirostrum*)

**Legal Status**

Federal: Listed Endangered  
 State: Listed Endangered

**Conservation Status**

Global: Rare or uncommon  
 State: Critically imperiled due to rarity or vulnerability

**Description at this Location**

Conservation Rank: Not ranked  
 Comments on Rank: --

Detailed Description: 2016: 2 individuals, 1 female and 1 sex unknown, detected in Portsmouth Harbor and the lower Piscataqua River.<br />2015: 3 females and 2 other individuals, sex unknown detected in Portsmouth Harbor.<br />2014: 1 female detected moving from Portsmouth Harbor up the Piscataqua River to the mouth of the Cocheco River.<br />2012: 1 female detected in Little Bay.<br />2011: 1 female detected in Little Bay.<br />2010: 1 female detected in Little Bay.  
 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.

General Area:  
 General Comments: --  
 Management --  
 Comments:

**Location**

Survey Site Name: Piscataqua River  
 Managed By:

County:  
 Town(s): Out-Of-State  
 Size: 7749.3 acres Elevation:

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

**Dates documented**

First reported: 2010-11-03 Last reported: 2016-10-20

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.

## Neil A. Hansen

---

**From:** Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>  
**Sent:** Wednesday, August 5, 2020 10:43 AM  
**To:** Neil A. Hansen  
**Cc:** Dionne, Michael  
**Subject:** NHB20-2243 stormwater management upgrades to the existing Granite State Minerals Terminal Portsmouth

Hello Neil,

As the project has not changed since the original NHFG review below (previously NHB19-2156), the NHFG Nongame and Endangered Species Program does not expect impacts to the following species identified on NHB20-2243:  
Atlantic Sturgeon (*Acipenser oxyrinchus*) T T  
Shortnose Sturgeon (*Acipenser brevirostrum*) E E  
1Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern

Thanks,

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

-----Original Message-----

**From:** Dionne, Michael <Michael.Dionne@wildlife.nh.gov>  
**Sent:** Tuesday, August 6, 2019 1:48 PM  
**To:** Neil A. Hansen <NAHansen@tighebond.com>; Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>  
**Cc:** Giallongo, Stefanie <Stefanie.Giallongo@des.nh.gov>; Patterson, Cheri <Cheri.Patterson@wildlife.nh.gov>  
**Subject:** NHB19-2156 Granite State Minerals terminal Piscataqua River Portsmouth

[ Caution - External Sender ]

Hi Neil,

The NH Fish and Game Marine Division has reviewed NHB19-2156 for the proposed work at the Granite State Minerals terminal on the Piscataqua River. The proposed work includes stormwater management upgrades to the facility including a new outfall into the river, the replacement of two existing bollard moorings at the terminal and repaving the yard. The Marine Division feels that the proposed work will not negatively impact the surrounding natural community and appreciate the efforts of Granite State Minerals to improve the current stormwater management.

Mike Dionne

Marine Biologist

NH Fish and Game Department

225 Main St. Durham, NH 03824

(603) 868-1095, [michael.dionne@wildlife.nh.gov](mailto:michael.dionne@wildlife.nh.gov)

---

**From:** Neil A. Hansen <[NAHansen@tighebond.com](mailto:NAHansen@tighebond.com)>  
**Sent:** Wednesday, August 5, 2020 10:31 AM  
**To:** Tuttle, Kim <[Kim.Tuttle@wildlife.nh.gov](mailto:Kim.Tuttle@wildlife.nh.gov)>  
**Subject:** RE: NHB review: NHB20-2243

**EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.**

---

Kim,

The NHB review with potential impacts (attached) for a project at 227 Market Street in Portsmouth the same project at the Granite State Minerals terminal that you reviewed a year ago (e-mails attached). We had some delays getting the permit application submitted to NHDES. We are now preparing to submit by the end of the month. There have been no changes to the design since your previous review.

Please let me know if you need any additional information from me to complete your review of this project.

Thank You, Neil

**Neil A. Hansen, PE** | Project Engineer  
**Tighe & Bond** | 177 Corporate Dr. | Portsmouth, NH 03801 | 603.294.9213

---

**From:** Lamb, Amy <[Amy.Lamb@dncr.nh.gov](mailto:Amy.Lamb@dncr.nh.gov)>  
**Sent:** Wednesday, August 5, 2020 10:04 AM  
**To:** Neil A. Hansen <[NAHansen@tighebond.com](mailto:NAHansen@tighebond.com)>  
**Cc:** Tuttle, Kim <[Kim.Tuttle@wildlife.nh.gov](mailto:Kim.Tuttle@wildlife.nh.gov)>  
**Subject:** NHB review: NHB20-2243

[ Caution - External Sender ]

Attached, please find the review we have completed. If your review memo includes potential impacts to plants or natural communities please contact me for further information. If your project had potential impacts to wildlife, please contact NH Fish and Game at the phone number listed on the review.

Best,  
Amy

Amy Lamb  
Ecological Information Specialist

NH Natural Heritage Bureau  
DNCR - Forests & Lands

# CONFIDENTIAL – NH Dept. of Environmental Services review

## Memo



NH NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

**To:** Neil Hansen, Tighe & Bond  
177 Corporate Drive  
Portsmouth, NH 03801

**From:** Amy Lamb, NH Natural Heritage Bureau

**Date:** 7/15/2019 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau

NHB File ID: NHB19-2156

Town: Portsmouth

Location: Tax Maps: Map 119, Lot 6

Description: This project consists of stormwater management upgrades to the existing Granite State Minerals Terminal to comply with EPA's Multi-Sector General Permit. The existing site is 100% impervious.

cc: Kim Tuttle

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

**Comments: Contac the NH Fish & Game Department and US Fish & Wildlife Service.**

Vertebrate species	State <sup>1</sup>	Federal	Notes
Atlantic Sturgeon ( <i>Acipenser 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).

<sup>1</sup>Codes: "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.

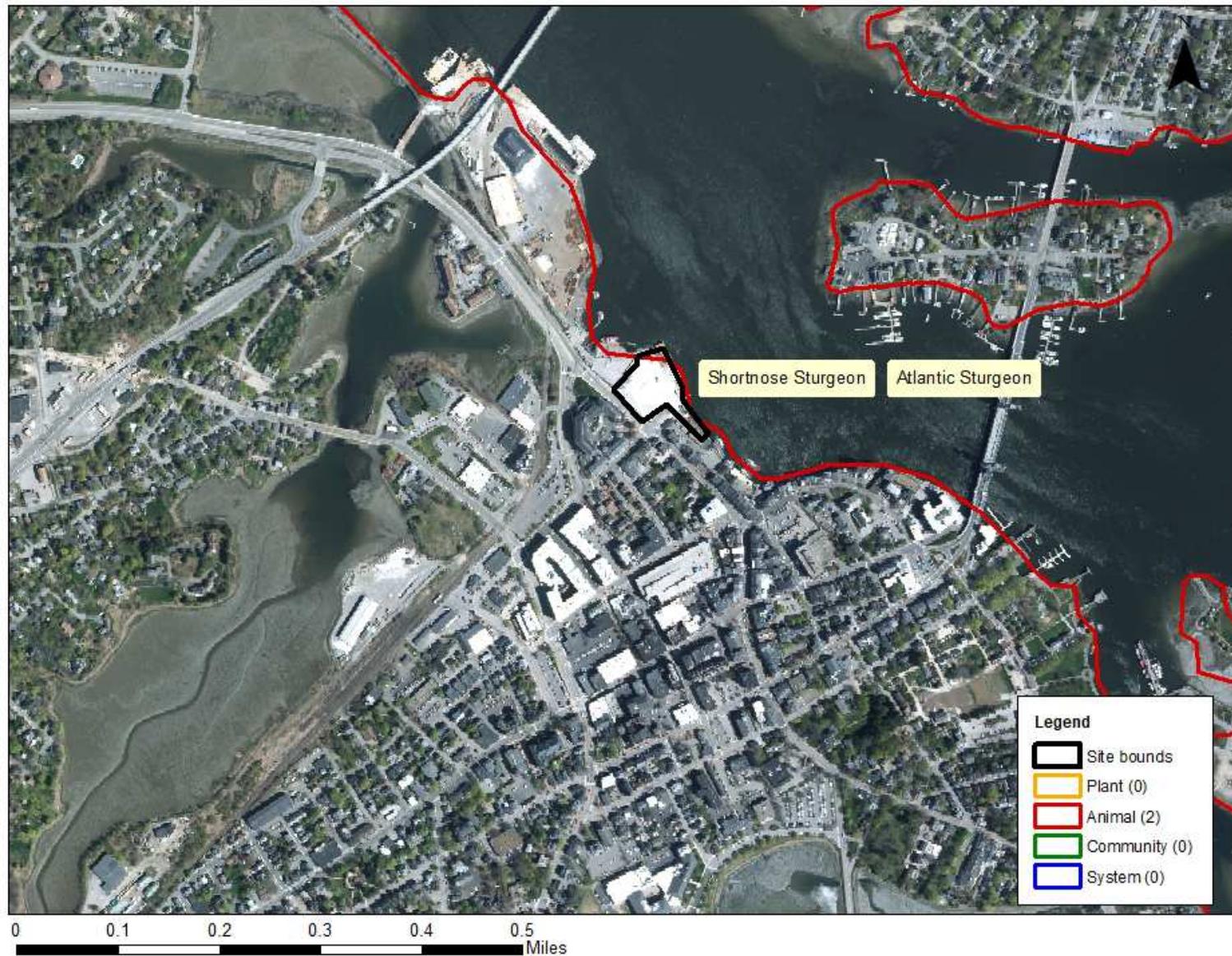
Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

---

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.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB19-2156



## New Hampshire Natural Heritage Bureau - Animal Record

### Atlantic Sturgeon (*Acipenser oxyrinchus*)

**Legal Status**

Federal: Listed Threatened  
 State: Listed Threatened

**Conservation Status**

Global: Rare or uncommon  
 State: Critically imperiled due to rarity or vulnerability

**Description at this Location**

Conservation Rank: Not ranked  
 Comments on Rank:

Detailed Description: 2016: 1 individual, sex unknown, detected in the lower Piscataquog River.<br />2015: 1 individual, sex unknown, detected in Portsmouth Harbor.<br />2012: 1 individual, sex unknown, detected in Little Bay.

General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataquog River.

General Comments:

Management

Comments:

**Location**

Survey Site Name: Piscataquog River

Managed By:

County: Rockingham

Town(s): Newington

Size: 7749.3 acres

Elevation:

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataquog River.

**Dates documented**

First reported: 2012-06-02

Last reported: 2016-05-27

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.



**From:** [Tuttle, Kim](#)  
**To:** [Dionne, Michael](#); [Patterson, Cheri](#)  
**Cc:** [Neil A. Hansen](#)  
**Subject:** RE: NHB19-2156 Granite State Minerals Terminal  
**Date:** Tuesday, August 06, 2019 8:28:29 AM

---

Cheri and Mike,

Have you had a chance to look at this one yet?

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

---

**From:** Neil A. Hansen [mailto:[NAHansen@tighebond.com](mailto:NAHansen@tighebond.com)]  
**Sent:** Monday, August 5, 2019 8:11 AM  
**To:** Tuttle, Kim  
**Subject:** RE: NHB19-2156 Granite State Minerals Terminal

**EXTERNAL:** Do not open attachments or click on links unless you recognize and trust the sender.

---

Kim,

Just checking in to see if there is any update on this review.

Thanks, Neil

**Neil A. Hansen, PE** | Project Engineer  
**Tighe & Bond** | 177 Corporate Dr. | Portsmouth, NH 03801 | 603.294.9213

---

**From:** Tuttle, Kim <[Kim.Tuttle@wildlife.nh.gov](mailto:Kim.Tuttle@wildlife.nh.gov)>  
**Sent:** Tuesday, July 16, 2019 1:36 PM  
**To:** Neil A. Hansen <[NAHansen@tighebond.com](mailto:NAHansen@tighebond.com)>  
**Subject:** NHB19-2156 Granite State Minerals Terminal

Neil,

I sent this one down to our Marine Division since the two sturgeon species may require some additional review since they are also federally listed. The Marine Program Supervisor is out until the end of the month so you may not hear from us for a couple of weeks. Please send a reminder email at that time if you have not heard from us by then.

Regards,

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

---

**From:** Neil A. Hansen [<mailto:NAHansen@tigebond.com>]  
**Sent:** Tuesday, July 16, 2019 1:24 PM  
**To:** Tuttle, Kim  
**Subject:** RE: NHB review: NHB19-2156

**EXTERNAL:** Do not open attachments or click on links unless you recognize and trust the sender.

Kim,

I received a NHB review with potential impacts (attached) for a project at 227 Market Street in Portsmouth. The project is at the Granite State Minerals terminal on the Piscataqua River. The project includes stormwater management upgrades to the facility including a new outfall into the river, the replacement of two existing bollard moorings at the terminal and repaving the yard. I have attached the plan for use with your review. The existing terminal consists of a paved storage yard used for salt storage and an office building and garage. The limit of work is in existing paved areas and the new outfall will be located in an existing rip rap bank.

Please let me know if you need any additional information from me to complete your review of this project.

Thank You, Neil

**Neil A. Hansen, PE** | Project Engineer  
**Tighe & Bond** | 177 Corporate Dr. | Portsmouth, NH 03801 | 603.294.9213

---

**From:** Lamb, Amy <[Amy.Lamb@dncr.nh.gov](mailto:Amy.Lamb@dncr.nh.gov)>  
**Sent:** Monday, July 15, 2019 4:15 PM  
**To:** Neil A. Hansen <[NAHansen@tigebond.com](mailto:NAHansen@tigebond.com)>  
**Cc:** Tuttle, Kim <[Kim.Tuttle@wildlife.nh.gov](mailto:Kim.Tuttle@wildlife.nh.gov)>  
**Subject:** NHB review: NHB19-2156

[ Caution - External Sender ]

Attached, please find the review we have completed. If your review memo includes potential

impacts to plants or natural communities please contact me for further information. If your project had potential impacts to wildlife, please contact NH Fish and Game at the phone number listed on the review.

Best,  
Amy

Amy Lamb  
Ecological Information Specialist

NH Natural Heritage Bureau  
DNCR - Forests & Lands  
172 Pembroke Rd  
Concord, NH 03301  
603-271-2834

## Neil A. Hansen

---

**From:** Dionne, Michael <Michael.Dionne@wildlife.nh.gov>  
**Sent:** Tuesday, August 06, 2019 1:48 PM  
**To:** Neil A. Hansen; Tuttle, Kim  
**Cc:** Giallongo, Stefanie; Patterson, Cheri  
**Subject:** NHB19-2156 Granite State Minerals terminal Piscataqua River Portsmouth

[ Caution - External Sender ]

Hi Neil,

The NH Fish and Game Marine Division has reviewed NHB19-2156 for the proposed work at the Granite State Minerals terminal on the Piscataqua River. The proposed work includes stormwater management upgrades to the facility including a new outfall into the river, the replacement of two existing bollard moorings at the terminal and repaving the yard. The Marine Division feels that the proposed work will not negatively impact the surrounding natural community and appreciate the efforts of Granite State Minerals to improve the current stormwater management.

Mike Dionne

Marine Biologist

NH Fish and Game Department

225 Main St. Durham, NH 03824

(603) 868-1095, michael.dionne@wildlife.nh.gov

NH Fish and Game...connecting you to life outdoors

[https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.wildnh.com&c=E,1,oAiVbuuw59z52uaVEci9ZqECBEwLrwTr8U2vk1RRmqAPbCtUyx88LjEm9kliJnaBklrvszaNaIp2RQHCGMIETZGm8BthtcX4O9sWCK1uh9ivwA,,&typo=1<https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.wildnh.com%2f&c=E,1,TJXwVKVm3IaxSIAFpp1KjyHhTAOxxa1yvsymO\\_V0u-2mEzfoPHZEG793zguLRllyKRt4PVtsUBuBfcXqtdlh69vnyPbrrNFjOiaDiJZ-2j4HZKim&typo=1>,>](https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.wildnh.com&c=E,1,oAiVbuuw59z52uaVEci9ZqECBEwLrwTr8U2vk1RRmqAPbCtUyx88LjEm9kliJnaBklrvszaNaIp2RQHCGMIETZGm8BthtcX4O9sWCK1uh9ivwA,,&typo=1<https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.wildnh.com%2f&c=E,1,TJXwVKVm3IaxSIAFpp1KjyHhTAOxxa1yvsymO_V0u-2mEzfoPHZEG793zguLRllyKRt4PVtsUBuBfcXqtdlh69vnyPbrrNFjOiaDiJZ-2j4HZKim&typo=1>,>)  
[www.facebook.com/nhfishandgame](http://www.facebook.com/nhfishandgame)<<http://www.facebook.com/nhfishandgame#!/nhfishandgame>>

Did you know? New Hampshire Fish and Game has been conserving New Hampshire's wildlife and their habitats since 1865.

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources  
State Historic Preservation Office  
Attention: Review & Compliance  
19 Pillsbury Street, Concord, NH 03301-3570

**RECEIVED**  
JUL 19 2019

DHR Use Only

R&C # 10879 M1  
Log In Date 7 / 19 / 19  
Response Date 7 / 23 / 19  
Sent Date 7 / 24 / 19

## Request for Project Review by the New Hampshire Division of Historical Resources

- This is a new submittal  
 This is additional information relating to DHR Review & Compliance (R&C) #: 10879

### GENERAL PROJECT INFORMATION

Project Title Granite State Minerals

Project Location 227 Market Street

City/Town Portsmouth Tax Map 119 Lot # 6

NH State Plane - Feet Geographic Coordinates: Easting 1226750 Northing 212710 ✓  
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact (if applicable) EPA  
(Agency providing funds, licenses, or permits)  
Permit Type and Permit or Job Reference # MSCP

State Agency and Contact (if applicable) NHDES  
Permit Type and Permit or Job Reference # Wetlands

### APPLICANT INFORMATION

Applicant Name Eastern Minerals c/o Joe McNamee

Mailing Address 227 Market Street Phone Number 978.764.2303

City Portsmouth State NH Zip 03801 Email jmnamee@easternminerals.com

### CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Neil Hansen/Tighe & Bond, Inc.

Mailing Address 177 Corporate Drive Phone Number 6034338818

City Portsmouth State NH Zip 03801 Email nahansen@tighebond.com

*This form is updated periodically. Please download the current form at [www.nh.gov/nhdhr/review](http://www.nh.gov/nhdhr/review). Please refer to the Request for Project Review Instructions for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: [www.nh.gov/nhdhr/review](http://www.nh.gov/nhdhr/review) or contact the R&C Specialist at [marika.labash@dncr.nh.gov](mailto:marika.labash@dncr.nh.gov) or 603.271.3558.*

**PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION**

Project Boundaries and Description

- Attach the Project Mapping **using EMMIT or relevant portion of a 7.5' USGS Map.** (See RPR Instructions and R&C FAQs for guidance.)
- Attach a detailed narrative description of the proposed project.
- Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) (Informative photo captions are requested.)
- A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1.** (Blank table forms are available on the DHR website.)  
EMMIT or in-house records search conducted on 12/4/2018.

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area?  Yes  No  
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s):

- Photographs of **each** resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity?  Yes  No  
If yes, submit all of the following information:

- Description of current and previous land use and disturbances.
- Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

**Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.**

**DHR Comment/Finding Recommendation** *This Space for Division of Historical Resources Use Only*

- Insufficient information to initiate review.**  Additional information is needed in order to complete review.
- No Potential to cause Effects  No Historic Properties Affected  No Adverse Effect  Adverse Effect

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.*

Authorized Signature: Naki Melli ASHPD Date: 7/23/19



## 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:  
Project code: 2022-0000824  
Project Name: Granite State Minerals

January 31, 2022

Subject: Consistency letter for the 'Granite State Minerals' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Alexander Sellar:

The U.S. Fish and Wildlife Service (Service) received on January 31, 2022 your effects determination for the 'Granite State Minerals' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause “take”<sup>[1]</sup> of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action’s effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Roseate Tern *Sterna dougallii dougallii* Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

---

## Action Description

You provided to IPaC the following name and description for the subject Action.

### 1. Name

Granite State Minerals

### 2. Description

The following description was provided for the project 'Granite State Minerals':

This project consists of constructing stormwater management upgrades to the Granite State Minerals Terminal for comply with the EPA's Multi-Sector General Permit

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.0799968,-70.7590106459304,14z>



## Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

### Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

---

## Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

## Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

*No*

2. Will your activity purposefully **Take** northern long-eared bats?

*No*

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

**Automatically answered**

*No*

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at [www.fws.gov/midwest/angered/mammals/nleb/nhisites.html](http://www.fws.gov/midwest/angered/mammals/nleb/nhisites.html).

*Yes*

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

*No*

6. Will the action involve Tree Removal?

*No*

---

## Project Questionnaire

**If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.**

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

**If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.**

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

**If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.**

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

**If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.**

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

---



## 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:  
Project Code: 2022-0000824  
Project Name: Granite State Minerals

January 31, 2022

Subject: 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](http://www.fws.gov/windenergy/eagle_guidance.html))

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

Project Code: 2022-0000824

Event Code: None

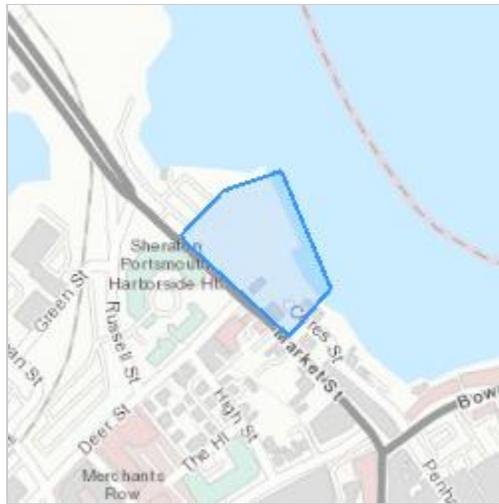
Project Name: Granite State Minerals

Project Type: Drainage Project

Project Description: This project consists of constructing stormwater management upgrades to the Granite State Minerals Terminal for comply with the EPA's Multi-Sector General Permit

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.0799968,-70.7590106459304,14z>



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 Fisheries<sup>1</sup>, 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: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	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: <a href="https://ecos.fws.gov/ecp/species/2083">https://ecos.fws.gov/ecp/species/2083</a>	Endangered

### Critical habitats

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

---



# **Section 8 New Hampshire PGP: Appendix B - Corps Secondary Impact Checklist**





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

## Appendix B

### **Regional General Permits (GPs) Required Information and Corps Secondary Impacts Checklist**

In order for the Corps of Engineers to properly evaluate your application, applicants must submit the following information along with the New Hampshire DES Wetlands Bureau application or permit notification forms. Some projects may require more information. For a more comprehensive checklist, go to [www.nae.usace.army.mil/regulatory](http://www.nae.usace.army.mil/regulatory), “Forms/Publications” and then “Application and Plan Guideline Checklist.” Check with the Corps at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the State of New Hampshire DES Wetlands Bureau application and Permit by Notification forms.

#### **All Projects:**

- Corps application form ([ENG Form 4345](#)) as appropriate.
- Photographs of wetland/waterway to be impacted.
- Purpose of the project.
- Legible, reproducible black and white (no color) plans no larger than 11”x17” with bar scale. Provide locus map and plan views of the entire property.
- Typical cross-section views of all wetland and waterway fill areas and wetland replication areas.
- In navigable waters, show mean low water (MLW) and mean high water (MHW) elevations. Show the high tide line (HTL) elevations when fill is involved. In other waters, show ordinary high water (OHW) elevation.
- On each plan, show the following for the project:
- Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. Don’t use local datum. In coastal waters this may be mean higher high water (MHHW), mean high water (MHW), mean low water (MLW), mean lower low water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983-2001.
- Horizontal state plane coordinates in U.S. survey feet based on the Traverse Mercator Grid system for the State of New Hampshire (Zone 2800) NAD 83.
- Show project limits with existing and proposed conditions.
- Limits of any Federal Navigation Project in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the Federal Navigation Project;
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the ordinary high water in inland waters and below the high tide line in coastal waters.
- Delineation of all waterways and wetlands on the project site,;
- Use Federal delineation methods and include Corps wetland delineation data sheets. See GC 2 and [www.nero.noaa.gov/hcd](http://www.nero.noaa.gov/hcd) for eelgrass survey guidance.
- GP 3, Moorings, contains eelgrass survey requirements for the placement of moorings.
- For activities involving discharges of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact the Corps for guidance.



**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 <a href="http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm">http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm</a> 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 <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> . The book <a href="#">Natural Community Systems of New Hampshire</a> 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	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?	N/A	
2.7 What is the area of the proposed fill in wetlands?	N/A	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	N/A	
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: <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> USFWS IPAC website: <a href="https://ecos.fws.gov/ipac/location/index">https://ecos.fws.gov/ipac/location/index</a>	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"> <li>• PDF: <a href="http://www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm">www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul>		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	N/A
<b>4. Flooding/Floodplain Values</b>	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	N/A
<b>5. Historic/Archaeological Resources</b>		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) 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	

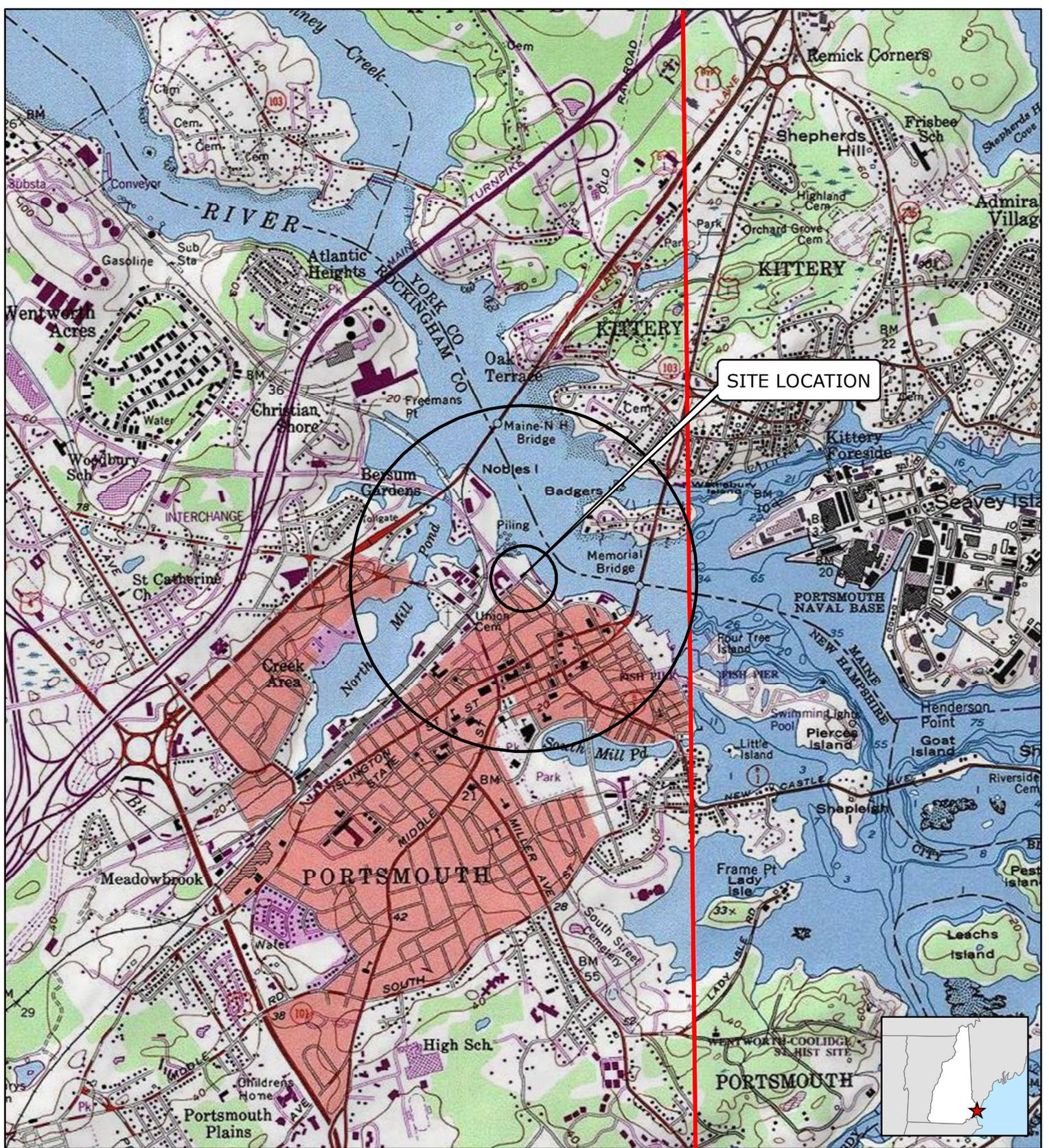
\*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

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



# **Section 9 U.S. Geological Survey Topographic Map**





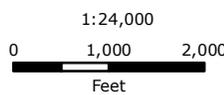
**FIGURE 1  
SITE LOCUS MAP**

Eastern Minerals  
Market Street  
Portsmouth, NH

December 2018

**Tighe & Bond**  
Engineers | Environmental Specialists

Based on USGS Topographic Map for  
Portsmouth, New Hampshire. Revised 1956.  
Circles indicate 500-foot and half-mile radii

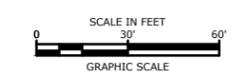
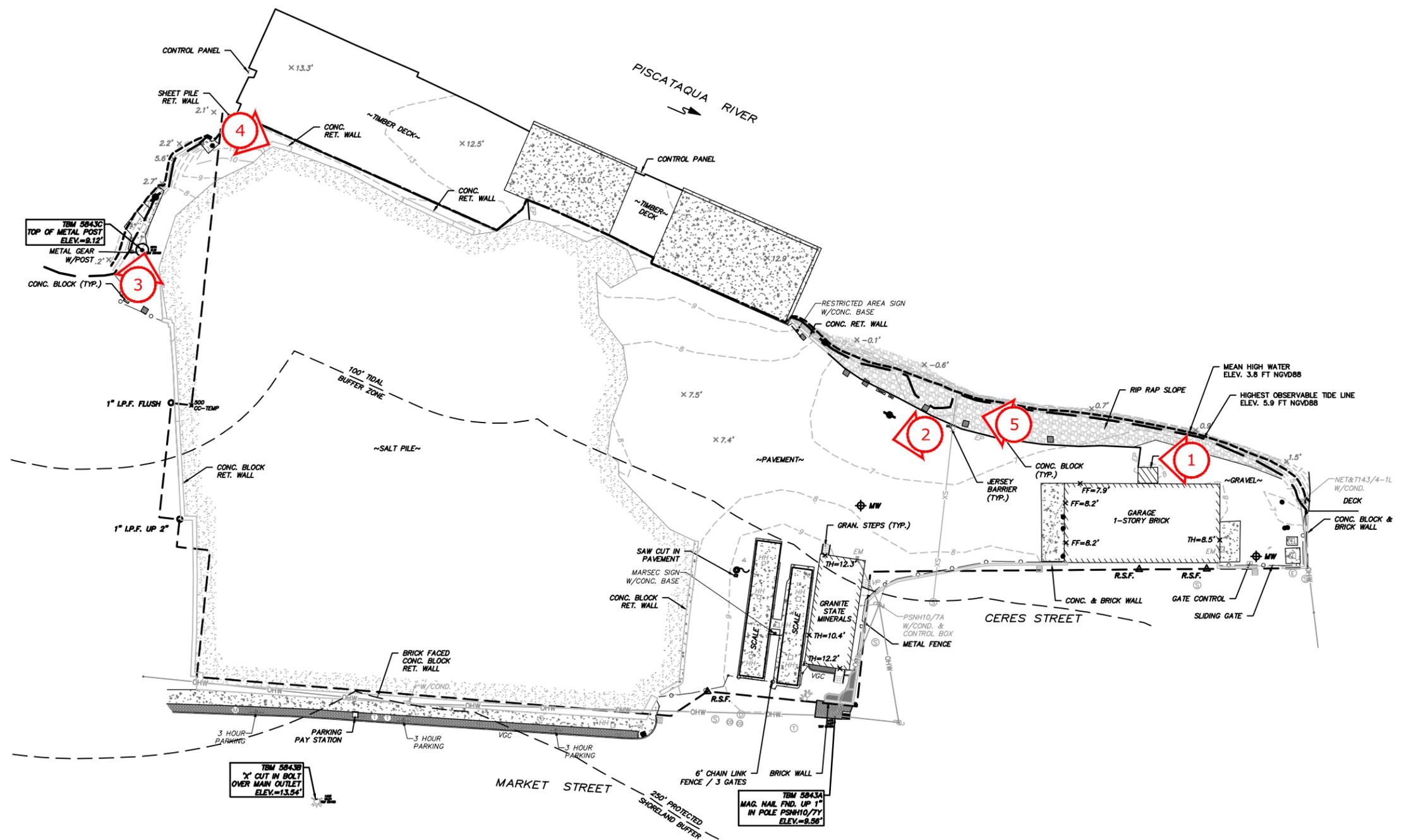




# **Section 10**

## **Photographs of Tidal Buffer Zone**





## Proposed Stormwater Improvements

Eastern Minerals

Portsmouth,  
New Hampshire

MARK	DATE	DESCRIPTION
PROJECT NO:	E-5027-001	
DATE:	July 1, 2019	
FILE:	E-5027-001-C-DSGN.dwg	
DRAWN BY:	NAH	
CHECKED:	PMC	
APPROVED:	BLM	

PHOTO LOCATION PLAN

SCALE: AS SHOWN

PHOTO

Last Save Date: August 14, 2019 10:54 AM By: NAHANSEN  
 Plot Date: Wednesday, August 14, 2019 Plotted By: Neil A. Hansen  
 P&E File Location: E:\5027 Eastern Minerals\501 - Granite State Minerals\Drawings - Figures\AutoCAD\Xref\E-5027-001-C-DSGN.dwg Layout Tab: PHOTO





Photo 1: Next to the existing garage looking northwest towards the existing stone revetment. (12/7/2018)



Photo 2: In front of the stone revetment looking northwest across the site at the salt pile (12/7/2018)



Photo 3: At the northwestern corner of the site looking east at the existing mooring (12/7/2018)



Photo 4: At the northern end of the site looking south towards the existing pier (12/7/2018)



Photo 5: Looking north towards the existing pier and the location of the proposed stormwater outfall (7/23/2019)



# **Section 11**

## **City of Portsmouth Tax Map**





TAX MAP 119 LOT 5  
NH STATE PORT AUTHORITY  
555 MARKET STREET  
PORTSMOUTH, NH 03801

TAX MAP 119 LOT 6  
227 MARKET STREET LLC  
27 AUSTIN ST  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 5986 PAGE 658

6  
2.800 ac

TAX MAP 118 LOT 1  
409 FRANKLIN PIERCE HIGHWAY LLC  
PO BOX 399  
NOTTINGHAM, NH 03290  
R.C.R.D. BOOK 6229 PAGE 1271

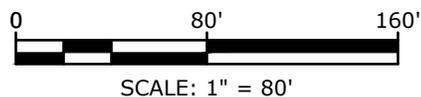
TAX MAP 118 LOT 2  
409 FRANKLIN PIERCE HIGHWAY LLC  
PO BOX 399  
NOTTINGHAM, NH 03290  
R.C.R.D. BOOK 6229 PAGE 1271

TAX MAP 118 LOT 4  
EPORT PROPERTIES 1 LLC  
PO BOX 847  
PORTSMOUTH, NH 03802  
R.C.R.D. BOOK 5258 PAGE 0415

TAX MAP 118 LOT 5  
NATIONAL SOC OF COLONIAL DAMES  
C/O RAY GUERIN  
55 CERES ST  
PORTSMOUTH, NH 03801  
R.C.R.D. BOOK 1944 PAGE 0176

**NOTE:**

1. TAX MAP UNDERLAY FROM CITY OF PORTSMOUTH 2020 URBAN TAX MAPS.
2. ABUTTER/PROPERTY OWNER INFORMATION REFERENCED FROM CITY OF PORTSMOUTH GIS DYNAMIC MAPPING TOOL.



PROPOSED STORMWATER IMPROVEMENTS  
PORTSMOUTH, NH

SITE TAX MAP

REFERENCE:  
TAX MAP 119

DATE: 02/02/2022

SCALE: AS SHOWN

FIGURE: 1

**Tighe & Bond**  
Engineers | Environmental Specialists



## **Section 12 Abutter Information**

### **12.1 Abutter Notice**

### **12.2 Abutter List**

### **12.3 Abutter Certified Mail Receipts**



**Abutters List**  
Proposed Site Improvements  
227 Market Street  
Portsmouth, New Hampshire

**ABUTTERS**

409 Franklin Pierce Highway LLC  
PO Box 399  
Nottingham, NH 03290

**MAP #**

118  
118

**LOT #**

1  
2

Eport Properties 1 LLC  
PO Box 847  
Portsmouth, NH 03802

118

4

National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

118

5

**OWNERS**

NH State Port Authority  
555 Market Street  
Portsmouth, NH 03801

119

5

227 Market Street, LLC  
27 Austin Street  
Portsmouth, NH 03801

119

6

**APPLICANT**

Granite State Minerals  
c/o Joe McNamee  
227 Market Street  
Portsmouth, NH 03801

**ENGINEER**

Tighe & Bond, Inc.  
177 Corporate Drive  
Portsmouth, NH 03801



**PUBLIC NOTICE**  
**NOTICE OF INTENT TO FILE**

Please take notice that Granite State Minerals, applicant, is intending to file a Wetland Application – Standard Major Impact with the New Hampshire Department of Environmental Services for proposed site improvements at 227 Market Street in Portsmouth, New Hampshire.

The proposed project consists of stormwater management upgrades, the replacement of two existing bollard moorings to support the existing use of the site and repaving the northwestern side of the yard. The stormwater management upgrades are being constructed as part of the facility's stormwater management program under the EPA Multi-Sector General Permit (MSGP).

The proposed project is located within the 100 FT upland tidal buffer zone (TBZ) and tidal waters for the Piscataqua River. The TBZ is previously developed and currently consists of 100% impervious area (paved yard & stone revetment). The tidal waters to be disturbed is also impervious and consists of an existing stone revetment.

There will be temporary impacts within the TBZ and tidal waters as part of the project. The temporary impacts due to construction related activities will be 6,675 SF. The proposed condition will result in no increase of impervious surface in the tidal buffer zone or tidal waters.

Plans and details of this application are on file, for your review, at the City of Portsmouth Clerk's Office, 1 Junkins Avenue, Portsmouth, New Hampshire (8:00am - 4:30pm) or at the NHDES Wetlands Bureau, 29 Hazen Drive, Concord, New Hampshire (8:00am - 4:00pm).





Firm Mailing Book For Accountable Mail

Name and Address of Sender

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- Adult Signature Restricted Delivery
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- Certified Mail Restricted Delivery
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- Insured Mail
- Priority Mail
- Priority Mail Express
- Registered Mail
- Return Receipt for Merchandise
- Signature Confirmation
- Signature Confirmation Restricted Delivery

Affix Stamp Here  
(for additional copies of this receipt)  
Postmark with Date of Receipt.

**\$5.250**  
US POSTAGE  
FIRST-CLASS  
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FROM 03801

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Advantys

USPS Tracking/Article Number

Addressee (Name, Street, City, State, & ZIP Code™)

Postage (Extra Service) Fee

Handling Charge

Actual Value if Registered

Insured Value

Due Sender if COD

ASR Fee

ASRD Fee

RD Fee

RR Fee

SC Fee

SCRD Fee

SH Fee

1.

118-1 & 118-2  
409 Franklin Pierce Highway LLC  
PO Box 399  
Nottingham, NH 03290

**E-5027-002**  
**FORWARDED ON BEHALF OF C. KRZCUIK**

2.

118-4  
Eport Properties 1 LLC  
PO Box 847  
Portsmouth, NH 03802

**3 TOTAL**  
**5 x \$0.60 = \$1.80**  
**5 x \$1.75 = \$5.25**

3.

118-5  
National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

**TOTAL: \$7.05**

4.

118-5  
National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

5.

118-5  
National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

6.

118-5  
National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

7.

118-5  
National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

8.

118-5  
National Society of Colonial Dames  
c/o Ray Guerin  
55 Ceres Street  
Portsmouth, NH 03801

Total Number of Pieces Listed by Sender

Total Number of Pieces Received at Post Office

Postmaster, Per (Name of receiving employee)

2023 JAN 2 AM



# **Section 13 Site Plan**

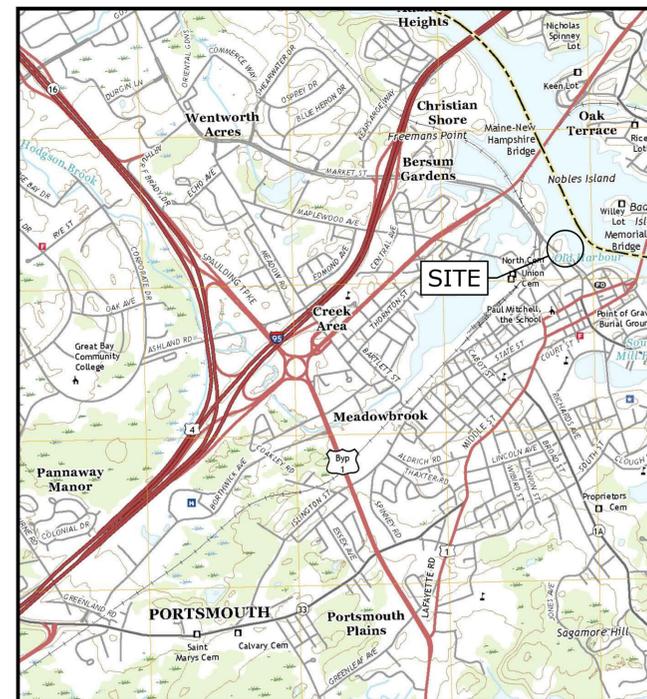
Site Plans Bound Separately



# PROPOSED SITE IMPROVEMENTS

## 227 MARKET STREET PORTSMOUTH, NEW HAMPSHIRE PROJECT NO: E5027-001 DECEMBER 29, 2022

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	12/29/2022
C-101	EXISTING CONDITIONS AND DEMOLITION PLAN	12/29/2022
C-102	SITE, GRADING, DRAINAGE, AND EROSION CONTROL PLAN	12/29/2022
C-501	EROSION CONTROL NOTES AND DETAILS SHEET	12/29/2022
C-502	DETAILS SHEET	12/29/2022
C-503	DETAILS SHEET	12/29/2022



LOCATION MAP  
SCALE: 1" = 2,000'

PREPARED BY:

**Tighe & Bond**

177 CORPORATE DRIVE  
PORTSMOUTH, NEW HAMPSHIRE 03801  
603-433-8818

OWNERS:

227 MARKET STREET, LLC  
27 AUSTIN STREET  
PORTSMOUTH, NEW HAMPSHIRE 03801

NH PORT AUTHORITY

555 MARKET STREET  
PORTSMOUTH, NEW HAMPSHIRE 03801

SURVEY CONSULTANT:

DOUCET SURVEY, INC.

102 KENT PLACE  
NEWMARKET, NEW HAMPSHIRE 03110  
603-659-6560

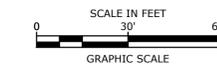
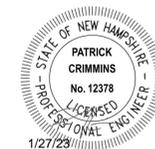
APPLICANT:

GRANITE STATE MINERALS  
227 MARKET STREET  
PORTSMOUTH, NEW HAMPSHIRE 03801



**WETLAND PERMIT APPLICATION  
COMPLETE SET 6 SHEETS**





**Proposed Site Improvements**

Granite State Minerals

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
PROJECT NO:	E-5027-001	
DATE:	December 29, 2022	
FILE:	E-5027-001-C-DSGN.dwg	
DRAWN BY:	AFS/CJK	
CHECKED:	NAH	
APPROVED:	PMC	

**EXISTING CONDITIONS & DEMOLITION PLAN**

SCALE: AS SHOWN

**C-101**

**LEGEND**

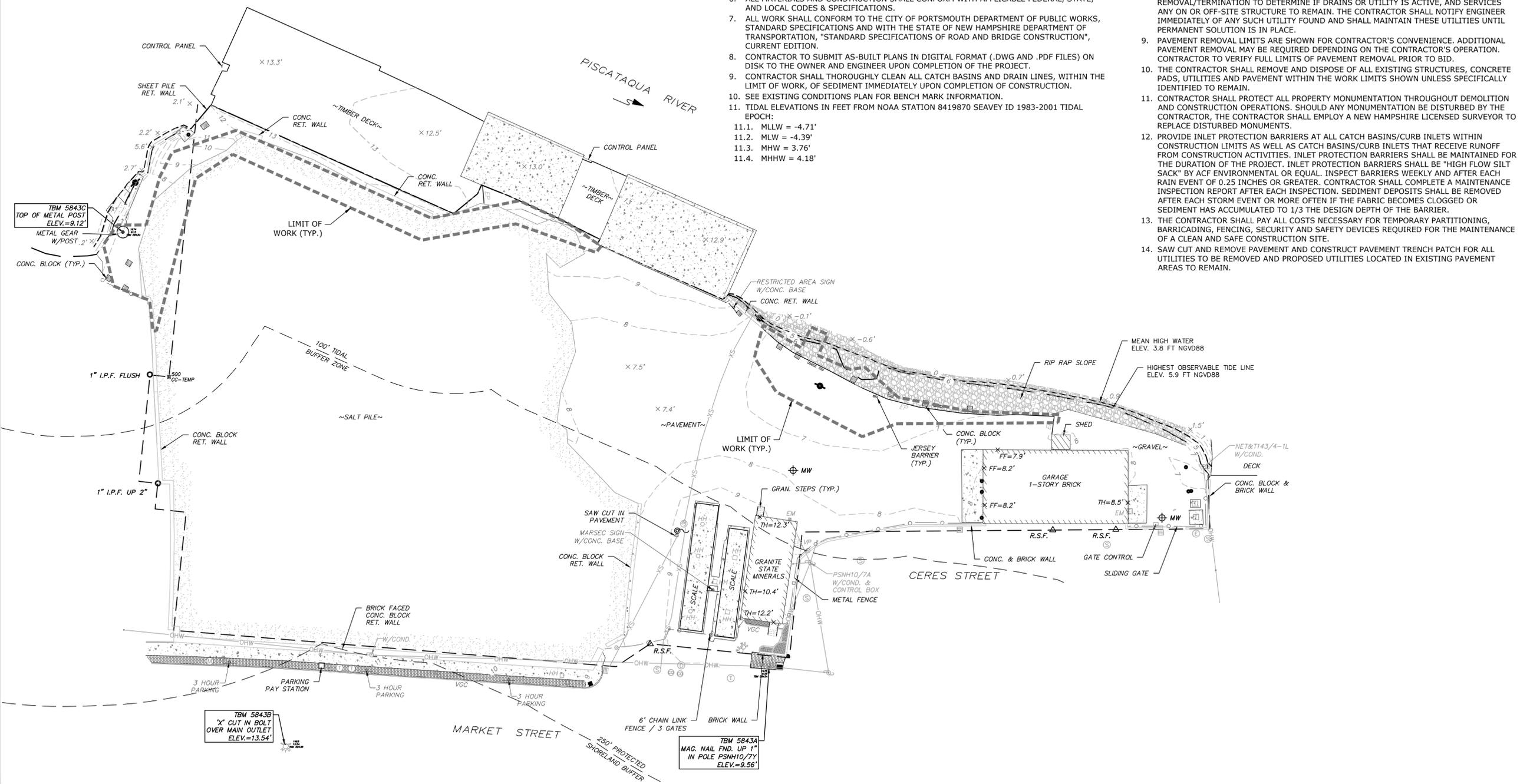
- APPROXIMATE LIMIT OF PROPOSED SAW CUT
- ▬ LIMIT OF WORK
- TBR TO BE REMOVED
- BLDG BUILDING
- TYP TYPICAL
- COORD COORDINATE

**GENERAL NOTES:**

- THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
- THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES AND COMPLY WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR AND COMPLY WITH ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
- ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
- CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
- SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.
- TIDAL ELEVATIONS IN FEET FROM NOAA STATION 8419870 SEAVEY ID 1983-2001 TIDAL EPOCH:
  - 11.1. MLLW = -4.71'
  - 11.2. MLW = -4.39'
  - 11.3. MHW = 3.76'
  - 11.4. MHHW = 4.18'

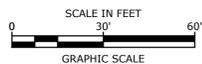
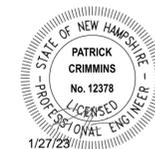
**DEMOLITION NOTES:**

- EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
- ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
- COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
- ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
- UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY AND CITY OF PORTSMOUTH STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
- PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN.
- CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
- PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
- THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
- SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.



Last Save Date: December 16, 2022 11:08 AM By: CKRZCUIK  
 Plot Date: Thursday, December 29, 2022 Plotted By: Colter Krzcuik  
 P&E File Location: J:\E-5027 Eastern Minerals\001 - Granite State Minerals\Drawings - Granite State Minerals\AutoCAD\Xref\E-5027-001-C-DSGN.dwg Layout Tab: C-101





**LEGEND**

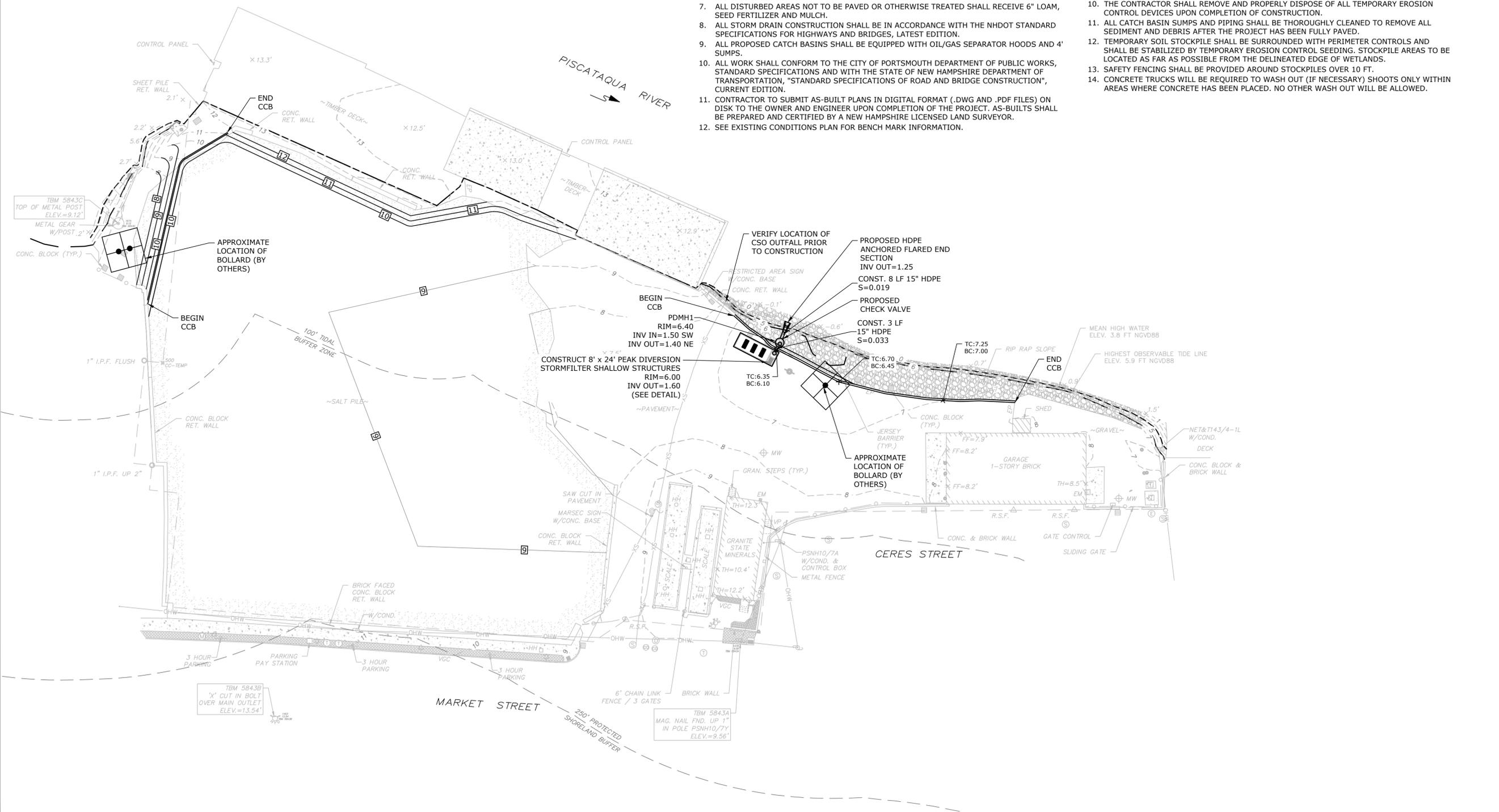
- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
- PROPOSED CATCHBASIN
- PROPOSED DOUBLE GRATE CATCHBASIN
- PROPOSED DRAIN MANHOLE
- BLDG BUILDING
- TYP TYPICAL
- COORD COORDINATE

**GRADING AND DRAINAGE NOTES:**

1. COMPACTION REQUIREMENTS:  
 BELOW PAVED OR CONCRETE AREAS 95%  
 TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95%  
 BELOW LOAM AND SEED AREAS 90%  
 \* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
4. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
5. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
6. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
7. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
8. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
9. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
10. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
11. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
12. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

**EROSION CONTROL NOTES:**

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON "EROSION CONTROL NOTES & DETAILS SHEET".
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
5. INSPECT INLET PROTECTION AND PERIMETER EROSION CONTROL MEASURES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH PERIMETER CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOTS ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.



**Proposed Site Improvements**

Granite State Minerals

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION

SITE, GRADING, DRAINAGE & EROSION CONTROL PLAN

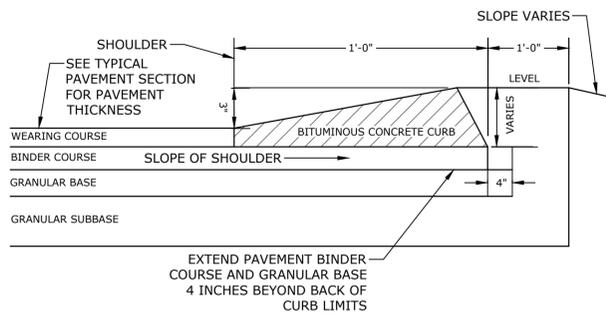
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 Plot Date: Thursday, December 29, 2022 Plotted By: Colter Krzucik  
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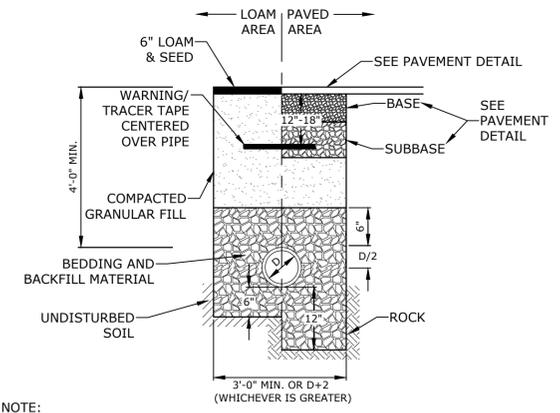






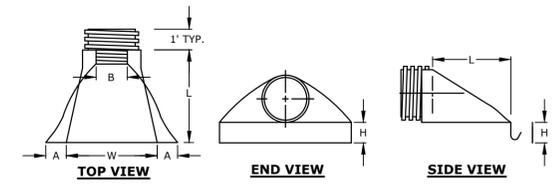


**CAPE COD BERM**  
NO SCALE



**NOTE:**  
 1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.  
 2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.  
 3. DRAIN LINE SHALL BE INSULATED WHERE THERE IS LESS THAN 6' OF COVER IN PAVED AREAS AND LESS THAN 4' OF COVER IN NON-PAVED AREAS.

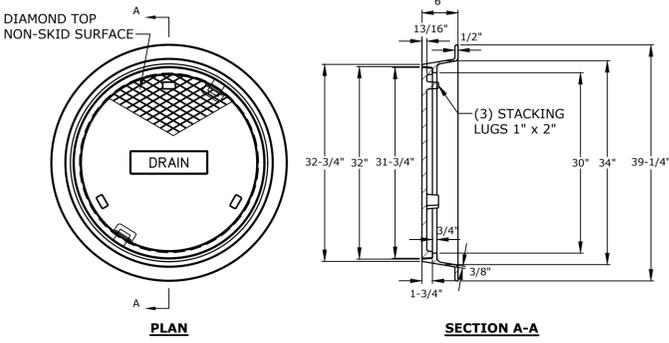
**STORM DRAIN TRENCH**  
NO SCALE



PIPE Ø	DIMENSION (INCHES)					
	PART NO.	A(1±)	B MAX	H(1±)	L(1/2±)	W(2±)
24"	2410 NP	7.5	18	6.5	36	45

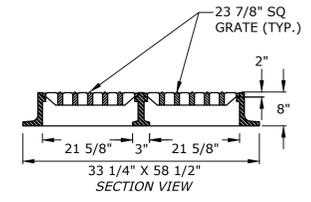
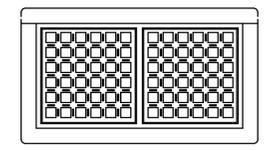
**NOTE:**  
 1. ANCHOR FLARED END SECTION TO GRADE TO PREVENT FLOTATION.

**HDPE END SECTION**  
NO SCALE



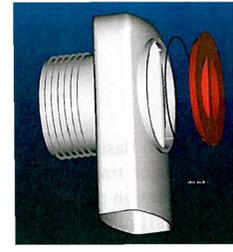
**NOTES:**  
 1. ALL DIMENSIONS ARE NOMINAL.  
 2. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:  
 A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.  
 B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.  
 C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.  
 3. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN THE CENTER OF THE COVER.

**DRAIN MANHOLE FRAME & COVER**  
NO SCALE



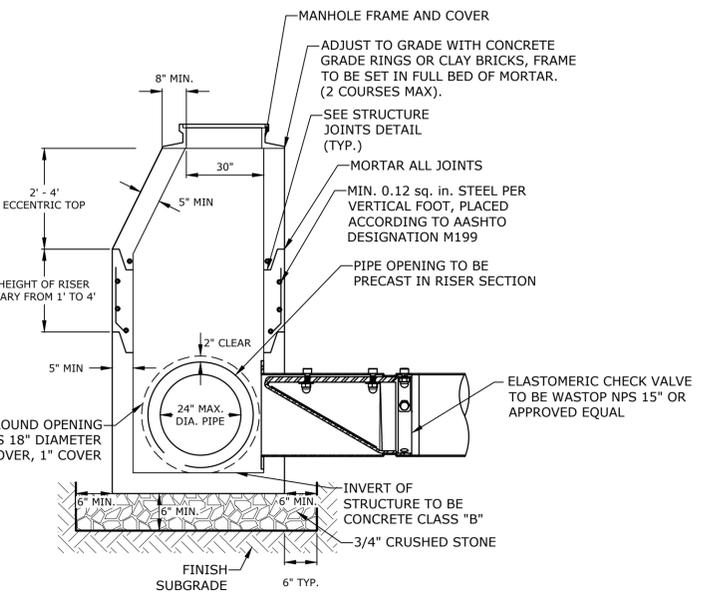
**NOTES:**  
 1. FRAME AND GRATES SHALL BE NEENAH FOUNDRY OR APPROVED EQUAL.  
 2. FRAME AND GRATES SHALL BE HEAVY DUTY AND RATED FOR H-20 LOADING.

**DOUBLE CATCHBASIN FRAME & GRATE**  
NO SCALE



**NOTES:**  
 1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)  
 2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.  
 3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

**"ELIMINATOR" OIL FLOATING DEBRIS TRAP**  
NO SCALE



**NOTES:**  
 1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.  
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.  
 3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.  
 4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.  
 5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)  
 6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.  
 7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.  
 8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.  
 9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.  
 10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

DIAMETER	WALL THICKNESS (MIN.)	FLOOR THICKNESS (MIN.)
4'	5"	6"

**4' DIAMETER DRAIN MANHOLE WITH CHECK VALVE**  
NO SCALE

**Proposed Site Improvements**

Granite State Minerals

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO: E-5027-001  
 DATE: December 29, 2022  
 FILE: E-5027-001-C-DTLS.dwg  
 DRAWN BY: AFS/CJK  
 CHECKED: NAH  
 APPROVED: PMC

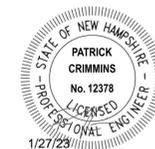
**DETAILS SHEET**

SCALE: AS SHOWN

**C-502**

Last Save Date: December 29, 2022 3:32 PM BY: CKRZCUIK  
 Plot Date: Friday, January 20, 2023 Plotted By: Noah Wilcox  
 P&E File Location: P:\E-5027 Eastern Minerals\001 - Granite State Minerals\Drawings - Figures\AutoCAD\Xref\E-5027-001-C-DTLS.dwg Layout: Tab: C-502



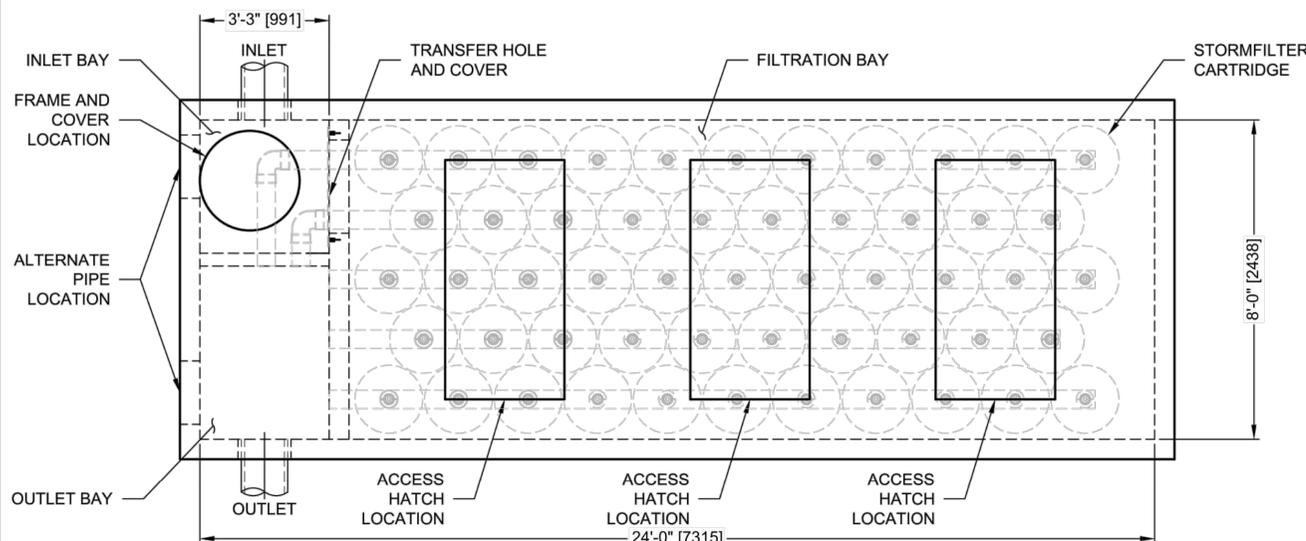


**STORMFILTER DESIGN NOTES**

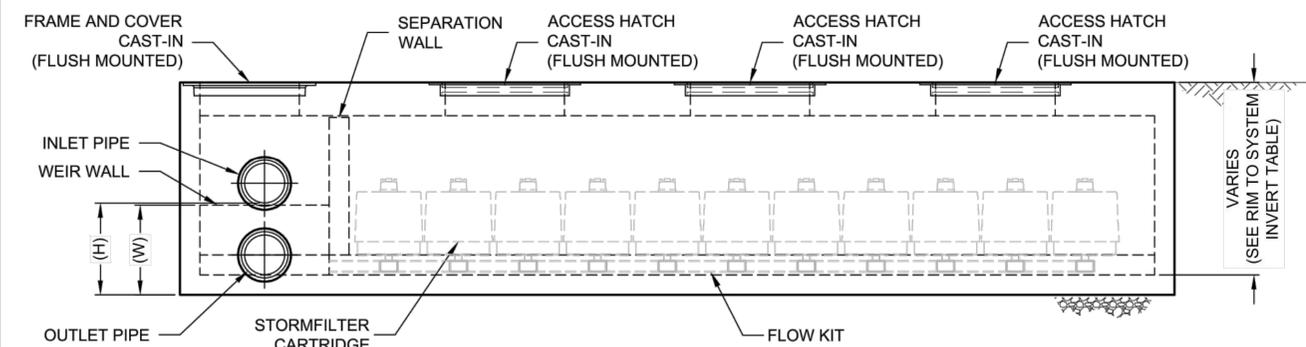
- STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD
- A 8' x 24' [2438 x 7315] PEAK DIVERSION STYLE STORMFILTER IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (52) AND IS AVAILABLE IN A LEFT INLET (AS SHOWN) OR A RIGHT INLET CONFIGURATION
- ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS NOTED OTHERWISE

CARTRIDGE SIZE (in. [mm])	27 [686]			18 [457]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H) (ft. [mm])	3.05 [930]			2.3 [701]			1.8 [549]		
HEIGHT OF WEIR (W) (ft. [mm])	3.00 [914]			2.25 [686]			1.75 [533]		
SPECIFIC FLOW RATE (gpm/sf [L/s/m <sup>2</sup> ])	2 [1.36]	1.67* [1.13]*	1 [0.68]	2 [1.36]	1.67* [1.13]*	1 [0.68]	2 [1.36]	1.67* [1.13]*	1 [0.68]
CARTRIDGE FLOW RATE (gpm [L/s])	22.5 [1.42]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.47]	10 [0.63]	8.35 [0.53]	5 [0.32]

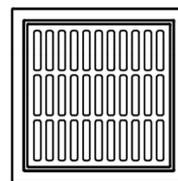
\* 1.67 gpm/sf [1.13 L/s/m<sup>2</sup>] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY



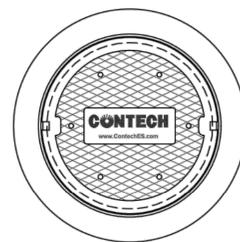
**PLAN VIEW**



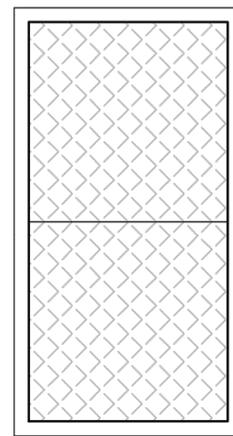
**ELEVATION**



**FRAME AND GRATE**  
(24" SQUARE)  
(NOT TO SCALE)



**FRAME AND COVER**  
(30" ROUND)  
(NOT TO SCALE)



**ACCESS HATCH**  
(36" x 72")  
(NOT TO SCALE)

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	
WATER QUALITY FLOW RATE (cfs [L/s])	
PEAK FLOW RATE (cfs [L/s])	
RETURN PERIOD OF PEAK FLOW (yrs)	
CARTRIDGE FLOW RATE	
CARTRIDGE SIZE (27, 18, LOW DROP (LD))	
MEDIA TYPE (PERLITE, ZPG, PSORB)	
NUMBER OF CARTRIDGES REQUIRED	
FILTER BAY RIM ELEVATION	
PIPE DATA:	
INLET PIPE 1	
INLET PIPE 2	
OUTLET PIPE	

PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			

NOTES/SPECIAL REQUIREMENTS:

RIM TO SYSTEM INVERT		
CARTRIDGE SIZE	MIN. HEIGHT	MAX. HEIGHT
LOW DROP / 18"	3'-8"	4'-10"
27"	4'-4"	4'-10"

**PERFORMANCE SPECIFICATION**

FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES.** FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **38 SECONDS.** SPECIFIC FLOW RATE SHALL BE **2 GPM/SF (MAXIMUM).** SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM).**

**GENERAL NOTES**

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. [www.ContechES.com](http://www.ContechES.com)
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0'-0", AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.

**INSTALLATION NOTES**

- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
- C. CONTRACTOR TO ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
- E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- F. CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.

**CONTECH**  
ENGINEERED SOLUTIONS LLC  
[www.ContechES.com](http://www.ContechES.com)  
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-338-1122 513-645-7000 513-645-7993 FAX

SFPD0824-S  
8' x 24' PEAK DIVERSION STORMFILTER  
SHALLOW STANDARD DETAIL

**Proposed Site Improvements**

Granite State Minerals

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION

DETAILS SHEET

SCALE: AS SHOWN

C-503

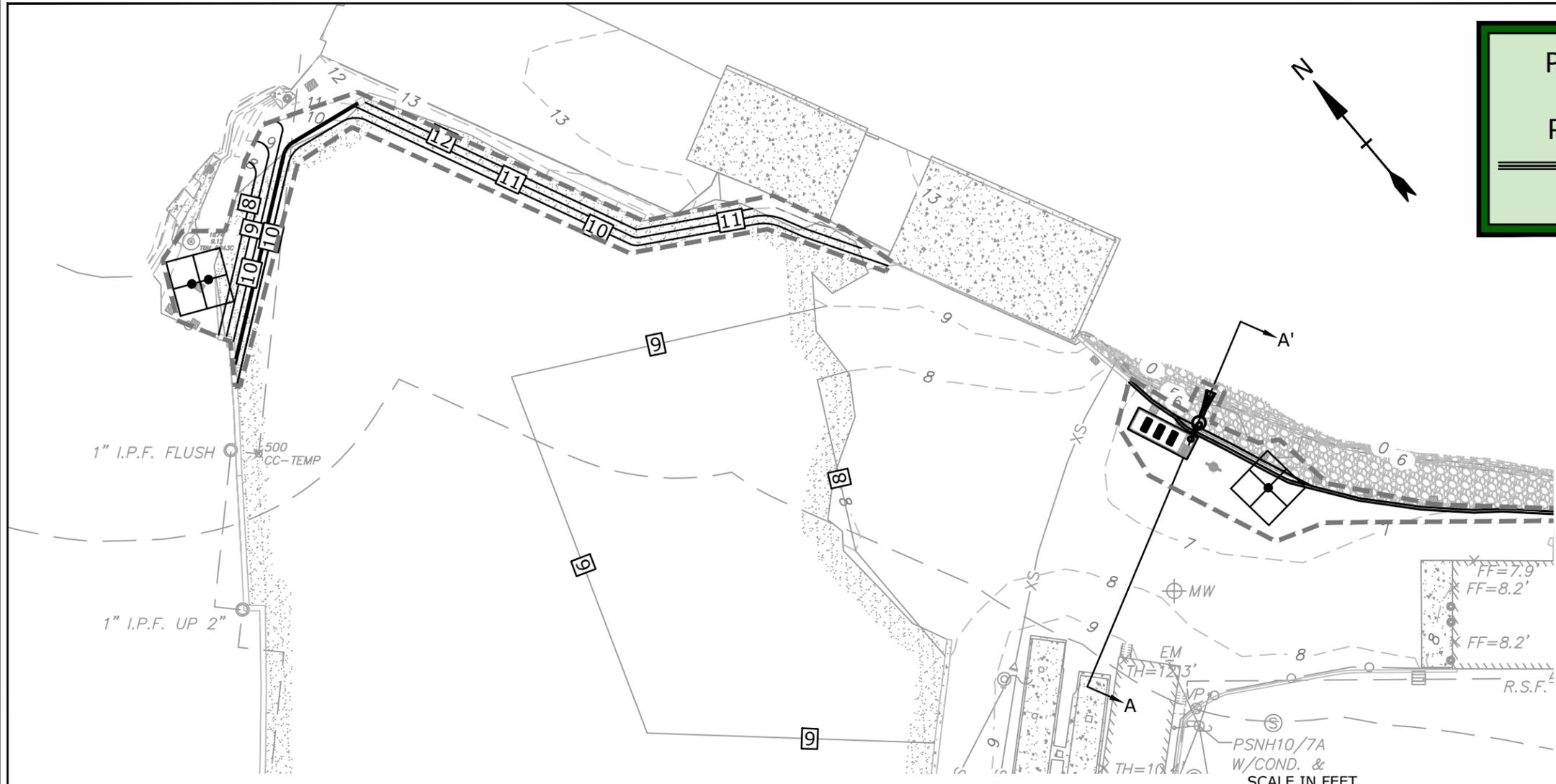
The Stormwater Management  
**StormFilter®**  
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,629; 5,524,576; 5,707,527; 5,985,157; 6,027,639; 6,649,048; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

Last Save Date: March 7, 2022 3:06 PM By: CKZCUIK  
Plot Date: Thursday, December 29, 2022 Plotted By: Colter Krzouk  
P&E File Location: J:\Projects\2022\Eastern Minerals\001 - Granite State Minerals\Drawings\Figures\AutoCAD\Xref\E-5027-001-C-DTLS.dwg Layout: Tab: C-503

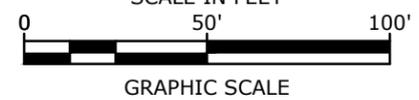


PROPOSED SITE IMPROVEMENTS  
 GRANITE STATE MINERALS  
 PORTSMOUTH, NEW HAMPSHIRE

ELEVATION VIEW



PLAN VIEW  
 50 SCALE



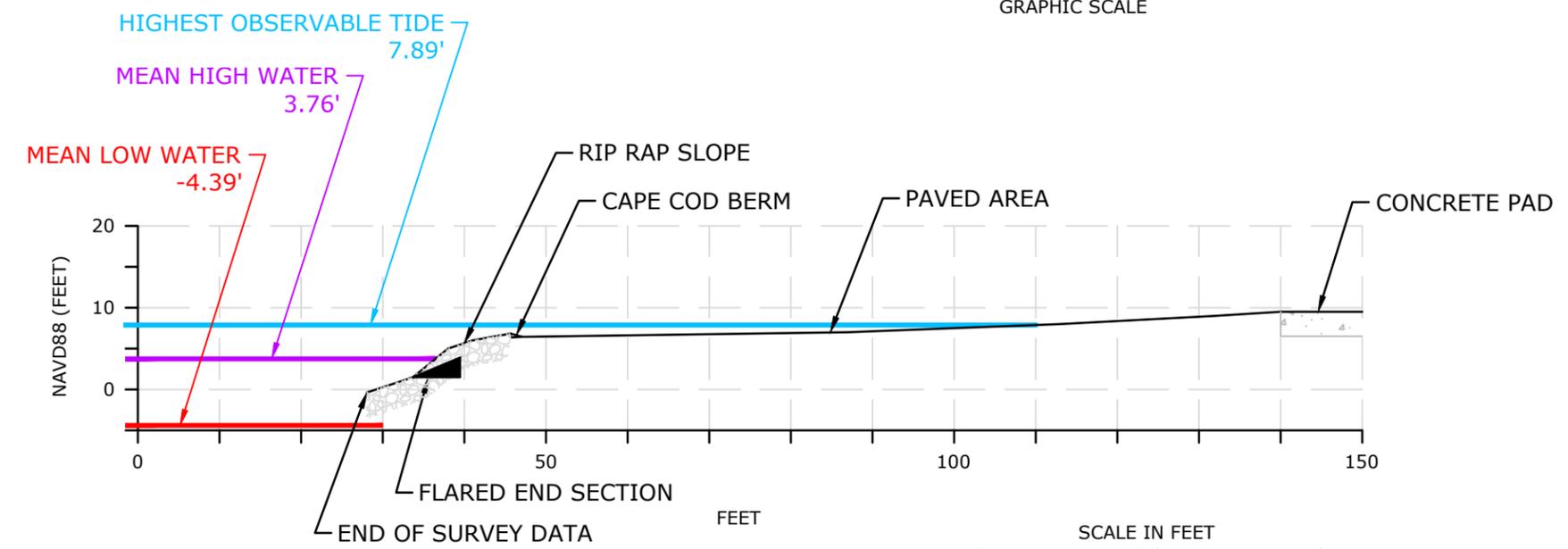
TIDAL DATUM (FEET)

	NAVD88
HOTL:	7.89 <sup>2</sup>
MHHW:	4.18
MHW:	3.76
MTL:	-0.32
MLW:	-4.39
MLLW:	-4.71

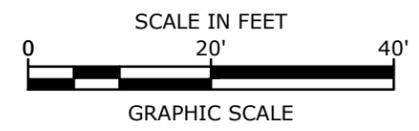
PREDICTED SLR - 2.1 FEET

NOTES:

- UNLESS OTHERWISE NOTED, DATUMS ARE FROM NOAA STATION 8419870 AT SEAVEY ISLAND, MAINE.
- FIELD LOCATING THE HIGHEST OBSERVABLE TIDE LINE (HOTL) WAS NOT CONDUCTED, DUE TO THE EXTENSIVE NATURE OF THE ON-SITE DISTURBANCE. THE HOTL REPORTED IS THE MAX TIDE PROVIDED BY THE NOAA TIDES & CURRENT DATA FOR THE ADJACENT STATION.



SECTION A'-A  
 20 SCALE



December 29, 2022  
 E-5027-001-C-DSGN.dwg

Last Save Date: December 16, 2022, 11:08 AM By: CKRZCJUK  
 Plot Date: Thursday, December 29, 2022, Plotted By: Colter Krzciuk  
 TSS File Location: J:\E\5027 Eastern Minerals\001 - Granite State Minerals Drawings\Figures\AutoCAD\Xref\E-5027-001-C-DSGN.dwg Layout: Tab: ELEVATION



# **Section 14**

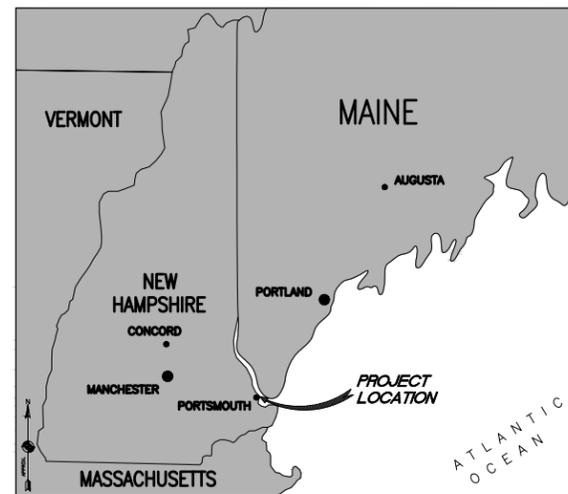
## **Mooring Improvement Plan**



# GRANITE STATE MINERALS Portsmouth, New Hampshire

## PORTSMOUTH WHARF MOORING IMPROVEMENTS

JUNE 2019



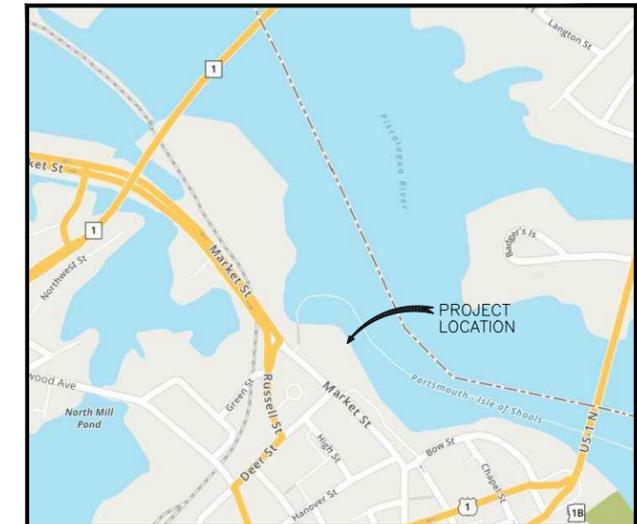
VICINITY MAP  
N.T.S.

### CONTRACT DRAWING LIST

SHT	SHT NO.	DRAWING TITLE
<b>GENERAL</b>		
G-001	1 OF 9	TITLE SHEET
G-002	2 OF 9	GENERAL NOTES
G-101	3 OF 9	PROJECT WORK OVERVIEW
G-102	4 OF 9	LOCATION PLAN
G-601	5 OF 9	BORING LOGS
<b>STRUCTURAL</b>		
S-101	6 OF 9	MOORING FITTING B1 PLAN & SECTIONS
S-102	7 OF 9	MOORING FITTING B1 DETAILS
S-103	8 OF 9	MOORING FITTING B2 PLAN & SECTIONS
S-104	9 OF 9	MOORING FITTING B2 DETAILS

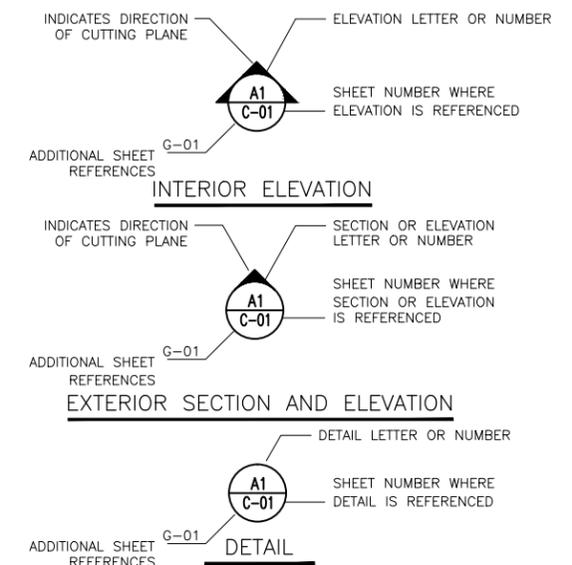
### ABBREVIATIONS

APPROX	APPROXIMATE
∅	DIAMETER
ℓ	BASELINE
EA	EACH
EL	ELEVATION IN FEET
EQ	EQUAL(Y)
IN	INCH(S)
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MPH	MILES PER HOUR
NAVD88	NATIONAL VERTICAL DATUM 1988
NTS	NOT TO SCALE
OC	ON CENTER
PK	POINT KNOWN
PSF	POUNDS PER SQUARE FOOT
SQ	SQUARE
SSP	STEEL SHEET PILE
T&B	TOP & BOTTOM
TYP	TYPICAL
VIF	VERIFY IN FIELD



LOCATION MAP  
N.T.S.

### ELEVATION, SECTION OR DETAIL SYMBOLS



**TIDAL DATUMS:** (1983-2001 TIDAL EPOCH)

ESTIMATED 100-YEAR FLOOD ELEVATION (STILLWATER)	12.76'
HIGHEST OBSERVED WATER LEVEL (HOWL) (02/07/1978)	12.52'
MEAN HIGHER HIGH WATER (MHHW)	8.84'
MEAN HIGHER WATER (MHW)	8.43'
NORTH AMERICAN VERTICAL DATUM (NAVD88)	4.62'
MEAN LOW WATER (MLW)	0.32'
MEAN LOWER LOW WATER (MLLW)	0.00'
LOWEST OBSERVED WATER LEVEL (LOWL) (11/30/1955)	-3.35'

**NOTE:**  
VESSEL NAVIGATION PRODUCES VESSEL WAKES, WHICH CAN AFFECT CONSTRUCTION.

**REFERENCE:**  
NOAA/NOS STATION #8419870 SEAVEY ISLAND, PORTSMOUTH HARBOR, NH (1983-2001 TIDAL EPOCH) (STATION IS APPROXIMATELY 1 MILE FROM SITE AND TIDAL DATA MAY DEVIATE FROM ACTUAL SITE CONDITIONS).

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6/4/2019  
PRESIDENT

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NOAA  
No 10534  
LICENSED PROFESSIONAL ENGINEER

GRANITE STATE MINERALS  
PORTSMOUTH, NEW HAMPSHIRE

PORTSMOUTH WHARF  
MOORING IMPROVEMENTS

TITLE SHEET

PROJECT No.: 5242  
CAD DWG FILE: 01\_5242 Design.dwg  
DESIGNED BY: LAH  
DRAWN BY: LAH  
CHECKED BY: NJE  
SCALE: AS SHOWN

G-001

SHEET 1 OF 9



**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:**

1. LOCATION B1: ONE MOORING FITTING OF 125 TON CAPACITY  
LOCATION B2: TWO MOORING FITTINGS OF 75 TON CAPACITY EACH
2. SPECIFICATIONS AND REFERENCES:
  - a. AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318)
  - b. STEEL CONSTRUCTION MANUAL, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), 14TH EDITION
  - c. OIL COMPANIES INTERNATIONAL MARINE FORUM, MOORING EQUIPMENT GUIDELINES, FOURTH EDITION, (OCIMF MEG 4)

**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 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.

**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. 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.
2. 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.
3. ALL PILE DRIVING SHALL OCCUR DURING DAYLIGHT HOURS AND SHALL FOLLOW ALL RESTRICTIONS REQUIRED BY THE APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

**STEEL NOTES:**

1. ALL STRUCTURAL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) STEEL CONSTRUCTION MANUAL.
2. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1 AND D3.6M. ELECTRODES SHALL BE E70XX LOW HYDROGEN IN ACCORDANCE WITH AWS SPECIFICATIONS.
3. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL BE ASTM A572, GRADE 50, OR ASTM A992, UNLESS OTHERWISE INDICATED.
4. ALL STRUCTURAL STEEL SHALL BE COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

**CONCRETE NOTES:**

1. ALL CONCRETE CONSTRUCTION AND DETAILING SHALL CONFORM TO THE LATEST EDITION OF ACI 318.
2. CONCRETE SHALL CONFORM TO NHDOT CLASS AA, WITH A MAXIMUM WATER TO CEMENT RATIO OF 0.400 AND WITH A 5,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
3. EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER.
4. CONCRETE SHALL BE MOIST CURED FOR A PERIOD OF 7 DAYS AND CHEMICALLY CURED FOR A PERIOD OF 14 DAYS, (21 DAYS TOTAL). CURING SHALL BEGIN IMMEDIATELY AFTER FINISHING.
5. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 IN ACCORDANCE WITH THE SPECIFICATIONS.
6. MAINTAIN 3" OF CLEAR COVER TO ALL REINFORCING STEEL, UNLESS OTHERWISE NOTED.
7. ALL REINFORCING STEEL SHALL BE UNCOATED AND FULLY SUPPORTED ON APPROVED PLASTIC CHAIRS AND BARS.
8. ALL HOOKS SHALL BE STANDARD 90 OR 180 DEGREE HOOKS.
9. ALL FORMWORK FOR CONCRETE SHALL BE LEFT IN PLACE FOR A PERIOD OF NOT LESS THAN SEVEN FULL DAYS AFTER CONCRETE PLACEMENT.
10. CONTRACTOR SHALL SUBMIT DETAILED REINFORCING DRAWINGS INCLUDING BAR AND BENDING SCHEDULES TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO DELIVERY OF ANY REINFORCING STEEL.
11. SPLICING OF REINFORCING STEEL OVER 20 FEET IS PERMITTED. STAGGER SPLICES ONE SPLICE LENGTH MINIMUM. NO MORE THAN 50 PERCENT OF THE REINFORCING STEEL SHALL BE SPLICED AT ANY LOCATION. PROVIDE SPLICE LENGTHS OF

BAR SIZE	SPLICE LENGTH
4	27"
5	33"
6	40"
7	73"
8	83"
9	94"

**STEEL PILE NOTES:**

1. STEEL MOORING DOLPHIN PILES SHALL BE UNCOATED AND HAVE THE FOLLOWING DESIGN CAPACITIES (WITH ULTIMATE CAPACITY INCLUDING A FACTOR OF SAFETY = 2.0)
- | BATTER PILES | SIZE          | DESIGN CAPACITY | ULTIMATE CAPACITY |
|--------------|---------------|-----------------|-------------------|
|              | PP12.75X0.500 | 225 TON         | 450 TON           |
2. PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK AS DEFINED IN THE SPECIFICATIONS. ESTIMATED PILE LENGTHS ARE PROVIDED IN THE SPECIFICATIONS.
  3. STEEL PIPE PILES SHALL BE IN ACCORDANCE WITH ASTM A252 GRADE 3 (SEAMLESS OR STRAIGHT SEAM).
  4. ANY PORTION OF PILE CRACKED, DEFORMED OR OTHERWISE DAMAGED BY PILE INSTALLATION SHALL BE REPLACED.
  5. PILES SHALL BE DRIVEN WITH AN OPEN END CUTTING SHOE.
  6. CONTRACTOR SHALL PROVIDE SUFFICIENT FALSEWORK DURING PILE DRIVING OPERATION AND MAY BE REMOVED AFTER WELD TESTING HAS BEEN COMPLETED AND APPROVED.

**MOORING HARDWARE NOTES:**

1. ALL FITTINGS SHALL BE CAST STEEL ASTM A-27, GRADE 65-35 AND COATED IN ACCORDANCE WITH THE SPECIFICATIONS.
2. ALL BOLT POCKETS SHALL BE FILLED WITH POLYURETHANE SEALANT.
3. GROUT FOR ANNULUS AND GROUT BED SHALL BE NON-SHRINK, NON-METALLIC HIGH PERFORMANCE CEMENTITIOUS GROUT HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7,500 PSI. GROUT SHALL CONFORM TO ASTM C-1107, GRADE C.
4. MOORING HARDWARE SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

**PRESTRESSED ROCK ANCHOR NOTES:**

1. ROCK ANCHOR CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE POST TENSIONING INSTITUTION (PTI) MANUAL.
2. THE BONDED LENGTH FOR EACH ANCHOR SHALL BE PROPOSED BY THE CONTRACTOR AND VERIFIED BY TESTING, BUT SHALL NOT BE LESS THAN 30 FEET AT LOCATION B1 AND 25 FEET AT LOCATION B2. EACH ANCHOR SHALL BE INSTALLED AND SUCCESSFULLY PROOF-TESTED AS SPECIFIED HEREIN TO A LOAD OF 133% OF THE DESIGN LOAD TO CONFIRM ADEQUACY OF THE CONTRACTOR PROPOSED BOND LENGTH.
3. ROCK ANCHORS SHALL BE 2 1/4 INCH NOMINAL DIAMETER AT LOCATION B1 AND 1 3/4 INCH NOMINAL DIAMETER AT LOCATION B2, THREADED RODS OF HOT-ROLLED AND PROOF STRESSED ALLOY STEEL CONFORMING TO ASTM A722, GRADE 150, WITH AN EFFECTIVE CROSS-SECTIONAL AREA OF 4.08 SQUARE INCHES AT LOCATION B1 AND 2.58 SQUARE INCHES AT LOCATION B2, AS MANUFACTURED BY DYWIDAG SYSTEMS INTERNATIONAL OR APPROVED EQUIVALENT.
4. ANCHOR INSTALLATION: ROCK ANCHORS SHALL BE INSTALLED THROUGH PRE-DRILLED HOLES WITH A MINIMUM DIAMETER OF 8 INCHES AT LOCATION B1 AND A MINIMUM DIAMETER OF 6 INCHES AT LOCATION B2. THE HOLE SHALL BE DRILLED TO A DEPTH OF 12 INCHES BEYOND THE END OF THE ANCHOR-TENDON. THE ANCHORS SHALL BE POSITIONED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. TYPICAL INSTALLATION DETAILS ARE SHOWN ON THE DRAWINGS.
5. INITIAL LIFT-OFF READINGS: AFTER TRANSFERRING THE LOAD TO THE STRESSING ANCHOR AND PRIOR TO REMOVING THE JACK, A LIFT-OFF READING SHALL BE MADE. THE LOAD DETERMINED FROM THE LIFT OFF READING SHALL BE WITHIN FIVE (5) PERCENT OF THE SPECIFIED LOCK-OFF (DESIGN) LOAD.
6. PROOF TESTING: EVERY ANCHOR SHALL BE PROOF-TESTED TO 133 PERCENT OF DESIGN LOAD TO CONFIRM ADEQUACY OF THE CONTRACTOR'S PROPOSED BOND LENGTH. DESIGN LOADS FOR ALL ANCHORS ARE SHOWN ON THE DRAWINGS. PROOF-TESTING CAN BE CARRIED OUT A MINIMUM OF THREE (3) FULL DAYS AFTER ANCHOR GROUTING IS COMPLETE PER ANCHOR MANUFACTURER RECOMMENDATIONS.
7. THE FIRST ANCHOR INSTALLED SHALL BE TESTED TO CONFIRM THE ADEQUACY OF THE CONTRACTOR'S PROPOSED BOND LENGTH PRIOR TO THE INSTALLATION OF THE REMAINING ANCHORS.
8. LIFT-OFF TESTING WILL BE ACCOMPLISHED IN ACCORDANCE WITH ANCHOR MANUFACTURERS RECOMMENDATIONS AND/OR AS SPECIFIED BY THE ENGINEER.
9. VOIDS AND CRACKS IN THE BEDROCK CAN BE EXPECTED. THESE VOIDS AND CRACKS CAN INTERFERE WITH PROPER ANCHOR INSTALLATION AND DRILL HOLES MAY REQUIRE PRESSURE GROUT AND REDRILLING PRIOR TO GROUTING OF THE THREADED BAR INTO BEDROCK.
10. CONTRACTOR MUST KEEP AND SUBMIT DETAILED RECORDS OF ACTUAL STRESS AND BOND LENGTHS TO ENSURE PROPER TEST RESULTS.

**QUALITY CONTROL:**

1. CONTRACTOR SHALL SUBMIT DATA ON QUALIFICATIONS OF PROPOSED CONCRETE TESTING AGENCY AND TECHNICIANS FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK.
2. WORK ON CONCRETE UNDER THIS CONTRACT SHALL BE PERFORMED BY AN ACI CONCRETE FIELD TESTING TECHNICIAN GRADE 1 OR GRADE 2 QUALIFIED IN ACCORDANCE WITH ACI SP-299 OR EQUIVALENT. EQUIVALENT CERTIFICATION PROGRAMS SHALL INCLUDE REQUIREMENTS FOR WRITTEN AND PERFORMANCE EXAMINATIONS AS STIPULATED IN ACI SP-299.
3. TESTING AGENCIES THAT PERFORM TESTING SERVICES ON REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF ASTM E 329.
4. TESTING AGENCIES THAT PERFORM TESTING SERVICES ON CONCRETE MATERIALS SHALL MEET THE REQUIREMENTS OF ASTM C 1077.
5. CONTRACTOR SHALL PROVIDE A DETAILED REPORT OF MATERIALS AND METHODS USED, TEST RESULTS, AND THE FIELD TEST STRENGTH (FCR) FOR MARINE CONCRETE REQUIRED TO MEET DURABILITY REQUIREMENTS.
6. CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE ANCHOR SYSTEM PERFORMANCE AND PROOF TESTING REPORTS. THE REPORTS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, TEST PERSONNEL CREDENTIALS, A DESCRIPTION OF THE TEST PROCEDURES, TESTING EQUIPMENT USED, PERFORMANCE AND PROOF TEST RESULTS WHICH INCLUDE PLOTS OF MOVEMENT VERSUS LOAD FOR EACH INCREMENT, CREEP MEASUREMENTS, FAILURE LOCATIONS, AND FIELD MODIFICATIONS TO THE DESIGN AND INSTALLATION METHODS.
7. CONTRACTOR SHALL PROOF TEST ALL ANCHORS IN ACCORDANCE WITH PTI MANUAL. PLOT ANCHOR MOVEMENT AS A FUNCTION OF THE LOAD. THE TEST ACCEPTANCE SHALL BE BASED ON CREEP MOVEMENT AND LOCK-OFF LOAD IN ACCORDANCE WITH THE PTI MANUAL.
8. WHEN AN ANCHOR FAILS, THE CONTRACTOR SHALL MODIFY THE DESIGN AND/OR THE CONSTRUCTION PROCEDURES. THESE MODIFICATIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, INSTALLATION OF ADDITIONAL ANCHORS, REDUCING THE ANCHOR DESIGN LOAD BY INCREASING THE ANCHOR LENGTH OR CHANGING THE ANCHOR TYPE. ANY MODIFICATION OF DESIGN OR CONSTRUCTION PROCEDURES SHALL BE AT NO CHANGE IN THE CONTRACT PRICE AND SHALL BE APPROVED BY THE OWNER.
9. THE ANCHORS SHALL BE LOCKED OFF AT THE DESIGN LOAD AND SHALL BE IN ACCORDANCE WITH THE PTI MANUAL.

REVISION	DATE	DESCRIPTION	BY

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inquiry@appliedmarine.com

**Applied Marine Engineering, LLC**

600 State St, Suite E  
Portsmouth New Hampshire 03801

6/4/2019  
PRESIDENT

6/4/2019



GRANITE STATE MINERALS  
PORTSMOUTH, NEW HAMPSHIRE

PORTSMOUTH, NEW HAMPSHIRE  
WHARF

**MOORING IMPROVEMENTS**

**GENERAL NOTES**

PROJECT No.:	5242
CAD DWG FILE:	01_5242 Design.dwg
DESIGNED BY:	LAH
DRAWN BY:	LAH
CHECKED BY:	NJE
SCALE:	AS SHOWN

G-002

SHEET 2 OF 9





MOORING FITTING B2 FOUNDATION

MOORING FITTING B1 FOUNDATION

BOLLARD (TYP)

LEGEND:  
 BX  APPROXIMATE GEOTECHNICAL EXPLORATION BORING LOCATION

PROJECT WORK OVERVIEW  
 SCALE: 1"=20'-0"  
 0 10' 20' 40'



REVISION	DATE	DESCRIPTION	BY

603.766.1870  
 inquiry@appleboremarine.com  
**Applebore Marine Engineering, LLC**  
 600 State St, Suite E  
 Portsmouth New Hampshire 03801  
 SUBMITTED BY: *Black & Wood*  
 TITLE: PRESIDENT  
 DATE: 6/4/2019



GRANITE STATE MINERALS  
 PORTSMOUTH, NEW HAMPSHIRE  
 PORTSMOUTH WHARF  
**MOORING IMPROVEMENTS**  
**PROJECT WORK OVERVIEW**

PROJECT No.: 5242  
 CAD DWG FILE: 02\_5242\_G101.dwg  
 DESIGNED BY: LAH  
 DRAWN BY: LAH  
 CHECKED BY: NJE  
 SCALE: AS SHOWN

G-101  
 SHEET 3 OF 9









### BORING LOG

**BORING NO.:** B-1  
**SHEET:** 1 of 1  
**PROJECT NO.:** 19-0173  
**DATE START:** 4/8/2019  
**DATE FINISH:** 4/9/2018

**CLIENT:** Appledore Marine Engineering, Inc.  
**PROJECT:** Granite State Minerals  
**LOCATION:** 227 Market Street, Portsmouth, New Hampshire

**Drilling Information**  
**LOCATION:** See Exploration Location Plan **ELEVATION (FT):** 7' +/- **TOTAL DEPTH (FT):** 41.0 **LOGGED BY:** Antonio Santiago  
**DRILLING CO.:** Geosearch, Inc. **DRILLER:** Shawn Preston **DRILLING METHOD:** Hollow Stem Augers  
**RIG TYPE:** Truck Mounted CME 85 **AUGER ID/OD:** 4 1/4 in / 7 5/8 in **SAMPLER:** Standard Split-Spoon  
**HAMMER TYPE:** Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A/N/A **CORE BARREL:** N/A / 2  
**HAMMER EFFICIENCY FACTOR:** **HAMMER DROP (inch):** 30  
**WATER LEVEL DEPTHS (ft):** Water level appears to fluctuate with the tide.

**GENERAL NOTES:**  
**KEY TO NOTES AND SYMBOLS:** Water Level:  At time of Drilling,  At Completion of Drilling,  After Drilling  
 D = Split Spoon Sample, U = Thin Walled Tube Sample, R = Rock Core Sample, V = Field Vane Shear  
 Pen. = Penetration Length, Rec. = Recovery Length, bpf = Blows per Foot, mpf = Minute per Foot  
 WOR = Weight of Rods, WOH = Weight of Hammer, RQD = Rock Quality Designation, Ø = Friction Angle (Estimated), PID = Photoionization Detector, S<sub>v</sub> = Field Vane Shear Strength, kips/sq.ft., q<sub>u</sub> = Unconfined Compressive Strength, kips/sq.ft., N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION				Graphic Log	Sample Description & Classification	H <sub>2</sub> O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)				
			1D	0.3-1.6	15/6	14-7-50/3"		0.3 1.8	4 inches of Asphalt Pavement Medium dense, brown gravelly SAND some silt (Fill) Loose to medium dense, dark gray GRAVEL some sand trace silt with frequent cobbles (Fill)	
	5		2D	4-6	24/4	6-6-5-7				
	10		3D	9-11	24/3	4-3-2-7				
	15		4D	14-16	24/2	16-6-8-8				
	20		5D	20-22	24/0	10-7-15-23				
	25		6D	25-26.3	15/4	25-48-50/3"		25.0	Very dense, gray gravelly SAND some silt	
	30		7D	30-32	24/6	2-1-2-2		29.0	Loose, dark gray, gravelly SAND some silt with shell pieces and organics	
	35		8D	35-35.2	2/2	20/2"		35.0	Very hard, slightly weathered, extremely fractured to sound, gray, fine-grained, METASEDIMENTARY SCHIST; with joints very close to moderately close from horizontal to vertical. (RQD = 54%)	
	40		1R	36-41	60	54				

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

**BORING NO.:** B-1



### BORING LOG

**CLIENT:** Appledore Marine Engineering, Inc.  
**PROJECT:** Granite State Minerals  
**LOCATION:** 227 Market Street, Portsmouth, New Hampshire

**BORING NO.:** B-2  
**SHEET:** 1 of 1  
**PROJECT NO.:** 19-0173  
**DATE START:** 4/9/2019  
**DATE FINISH:** 4/9/2018

**Drilling Information**  
**LOCATION:** See Exploration Location Plan **ELEVATION (FT):** 8' +/- **TOTAL DEPTH (FT):** 12.0 **LOGGED BY:** Antonio Santiago  
**DRILLING CO.:** Geosearch, Inc. **DRILLER:** Shawn Preston **DRILLING METHOD:** Hollow Stem Augers  
**RIG TYPE:** Truck Mounted CME 85 **AUGER ID/OD:** 4 1/4 in / 7 5/8 in **SAMPLER:** Standard Split-Spoon  
**HAMMER TYPE:** Automatic **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A/N/A **CORE BARREL:** N/A / 2  
**HAMMER EFFICIENCY FACTOR:** **HAMMER DROP (inch):** 30  
**WATER LEVEL DEPTHS (ft):** No free water observed.

**GENERAL NOTES:**  
**KEY TO NOTES AND SYMBOLS:** Water Level:  At time of Drilling,  At Completion of Drilling,  After Drilling  
 D = Split Spoon Sample, U = Thin Walled Tube Sample, R = Rock Core Sample, V = Field Vane Shear  
 Pen. = Penetration Length, Rec. = Recovery Length, bpf = Blows per Foot, mpf = Minute per Foot  
 WOR = Weight of Rods, WOH = Weight of Hammer, RQD = Rock Quality Designation, Ø = Friction Angle (Estimated), PID = Photoionization Detector, S<sub>v</sub> = Field Vane Shear Strength, kips/sq.ft., q<sub>u</sub> = Unconfined Compressive Strength, kips/sq.ft., N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION				Graphic Log	Sample Description & Classification	H <sub>2</sub> O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)				
			1D	0.3-2.3	24/18	8-7-6-15		0.3	4 inches of Asphalt Pavement Medium dense, brown gravelly SAND some silt (Fill)	
	5		2D	5-6.2	14/4	4-2-50/2"		5.0	Medium dense, dark brown gravelly SAND some silt with frequent cobbles	
	10		1R	7-12	60/60	69		7.0	Very hard, very slightly weathered, moderately fractured to sound, gray, medium-grained, METASEDIMENTARY SCHIST; with joints close to moderately close from horizontal to shallow. (RQD = 69%)	

Bottom of Exploration at 12.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

**BORING NO.:** B-2

603.766.1870  
 inquiry@appledoremarine.com  
**Appledore Marine Engineering, LLC**  
 600 State St, Suite E  
 Portsmouth New Hampshire 03801  
 SUBMITTED BY: *Antonio Santiago*  
 TITLE: PRESIDENT  
 DATE: 6/4/2019



**GRANITE STATE MINERALS**  
 PORTSMOUTH, NEW HAMPSHIRE  
**MOORING IMPROVEMENTS**  
 PORTSMOUTH WHARF  
**BORING LOGS**

PROJECT No.: 5242  
 CAD DWG FILE: 01\_5242 Design.dwg  
 DESIGNED BY: LAH  
 DRAWN BY: LAH  
 CHECKED BY: NJE  
 SCALE: AS SHOWN  
**G-601**  
 SHEET 5 OF 9

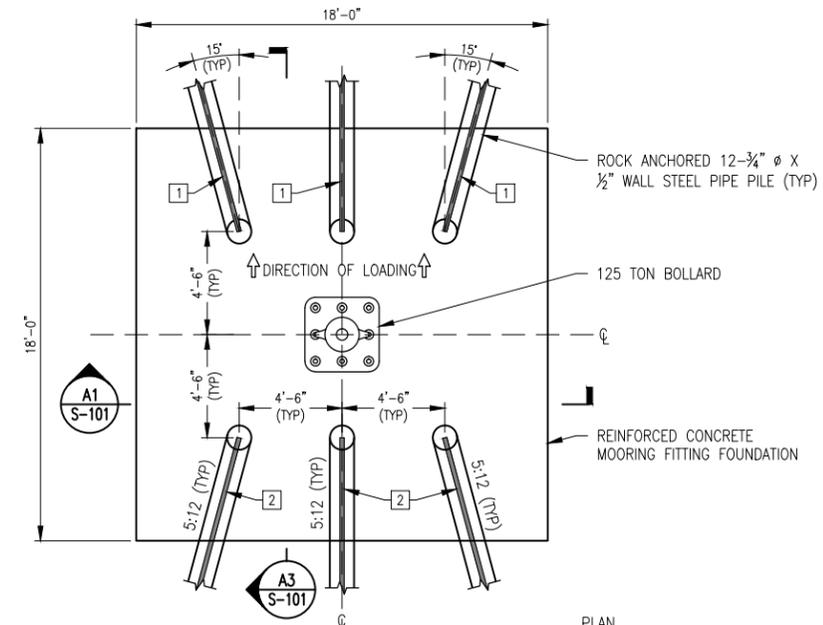


D

C

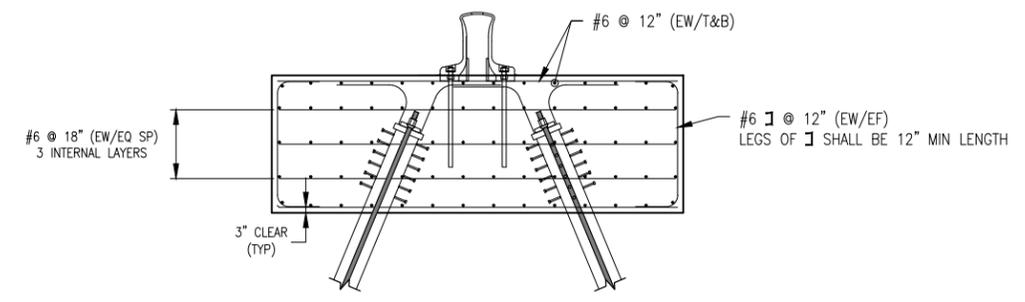
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A

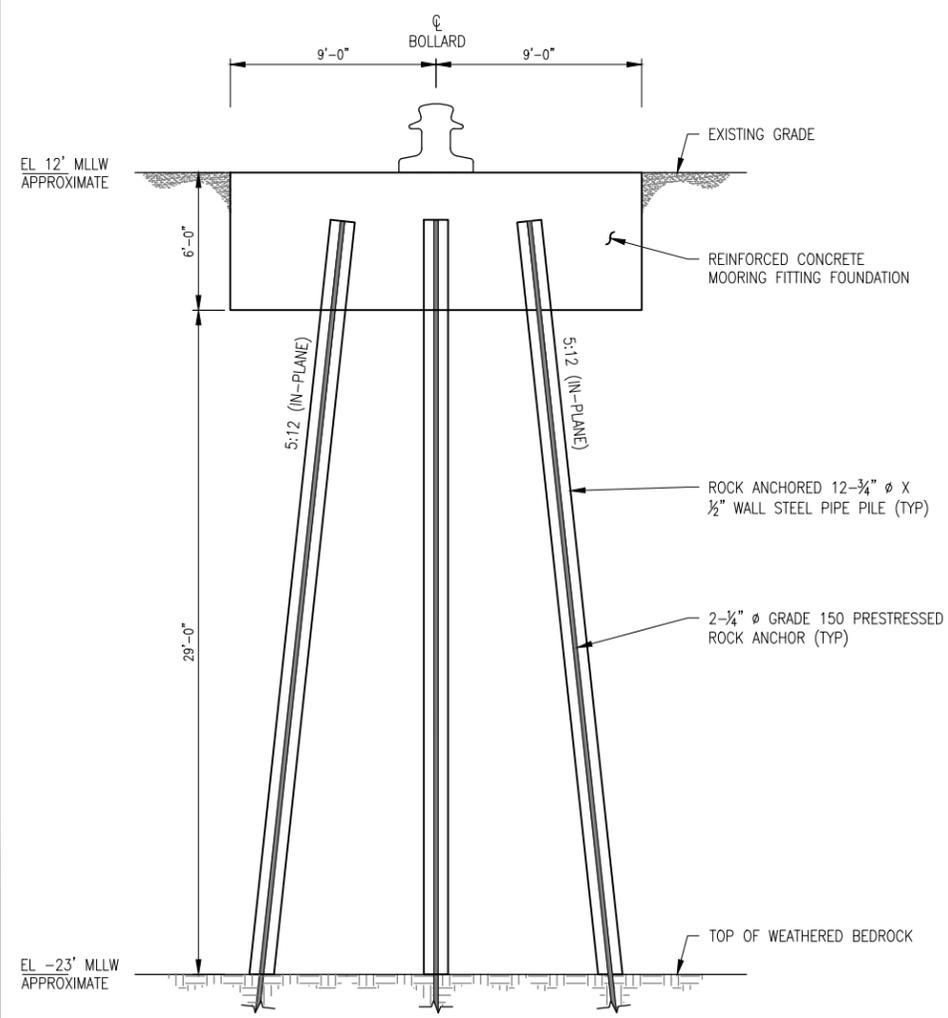


**MOORING FOUNDATION ANCHOR PLAN**  
SCALE: 1/4"=1'-0"  
PLAN NORTH

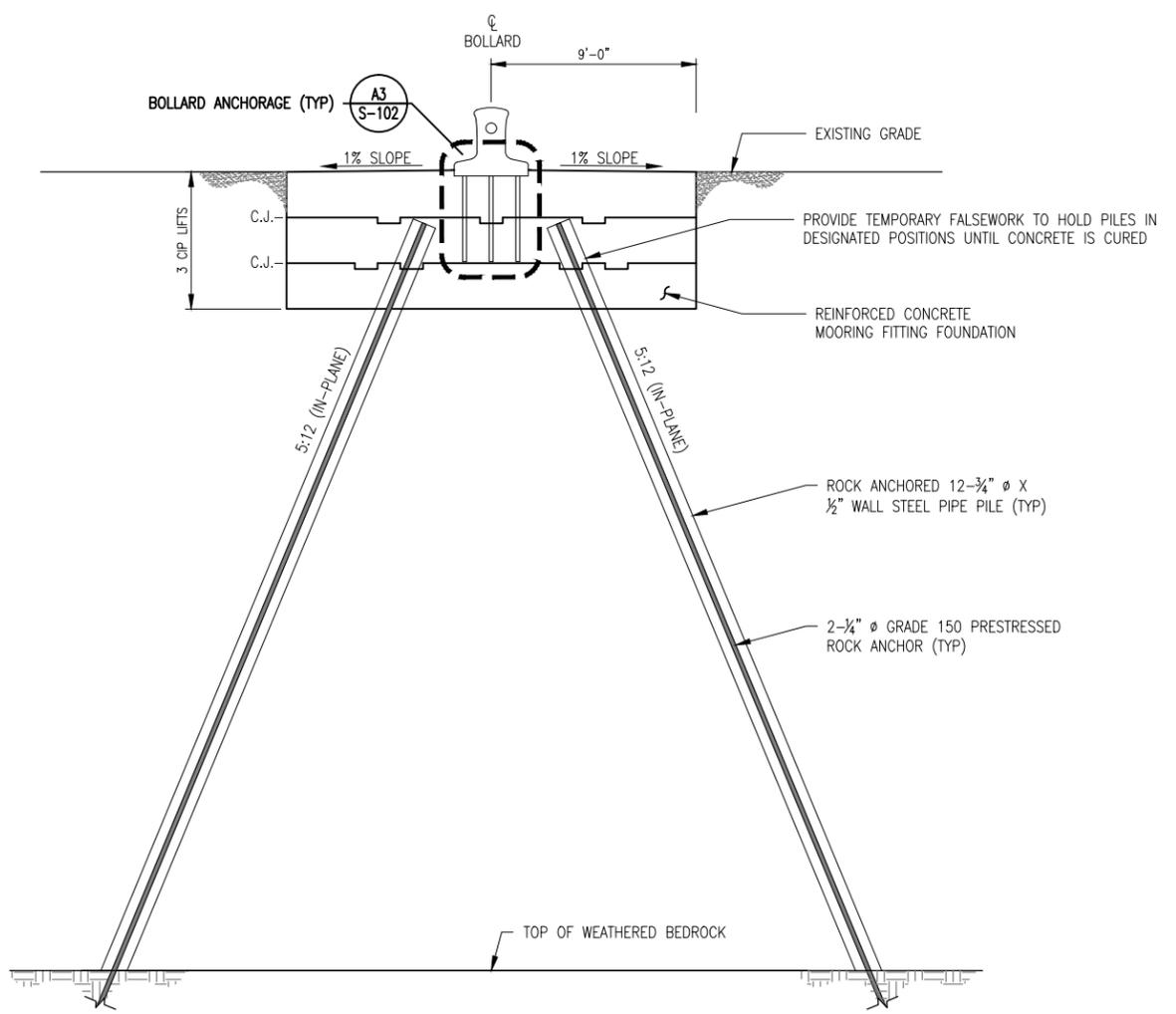
- LEGEND:**
- 1 2-1/4" Ø GRADE 150 PRESTRESSED ROCK ANCHOR WITH 100 KIP LOCK OFF DESIGN LOAD.
  - 2 2-1/4" Ø GRADE 150 PRESTRESSED ROCK ANCHOR WITH 368 KIP LOCK OFF DESIGN LOAD.



**MOORING FOUNDATION REINFORCEMENT SECTION**  
SCALE: 1/4"=1'-0"  
C3



**MOORING FOUNDATION SECTION 1**  
SCALE: 1/4"=1'-0"  
A1



**MOORING FOUNDATION SECTION 2**  
SCALE: 1/4"=1'-0"  
A3

REVISION	DATE	DESCRIPTION	BY

603.766.1870  
inquiry@appleblanemarine.com

**Appleblane Marine Engineering, LLC**  
600 State St, Suite E  
Portsmouth New Hampshire 03801

6/4/2019  
PRESIDENT



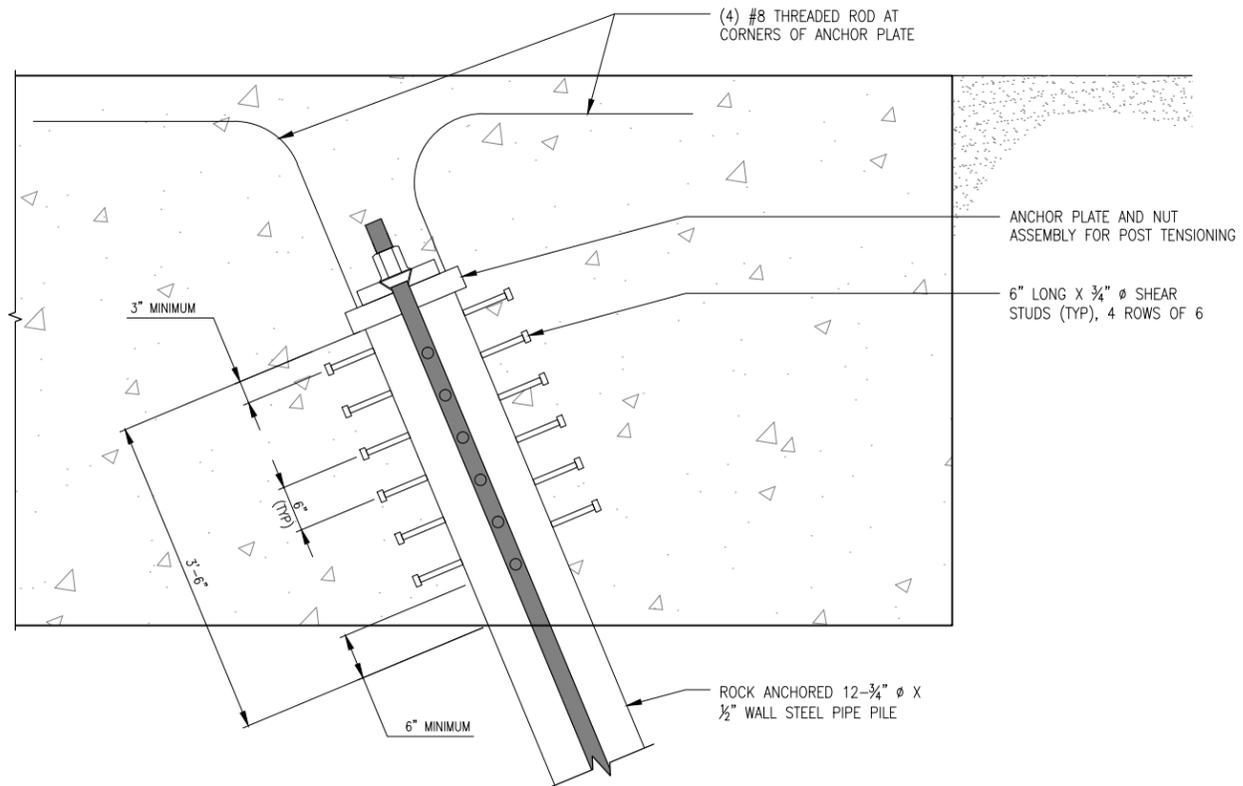
GRANITE STATE MINERALS  
PORTSMOUTH, NEW HAMPSHIRE

PORTSMOUTH, NEW HAMPSHIRE  
WHARF  
**MOORING IMPROVEMENTS**

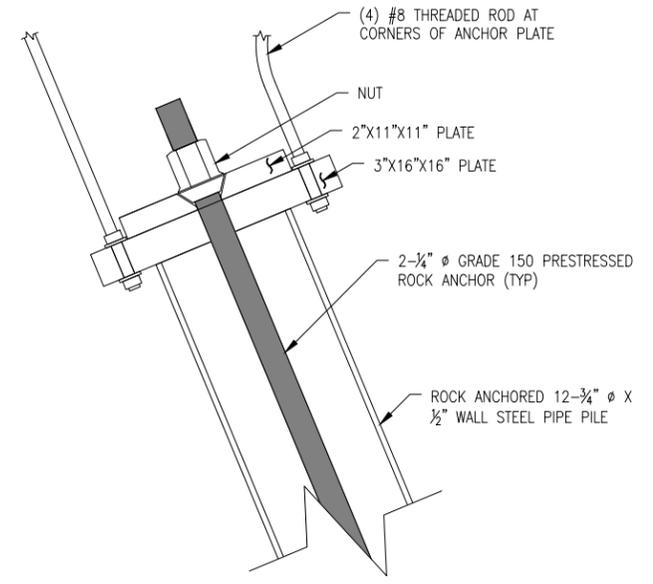
PORTSMOUTH WHARF  
**MOORING FITTING B1 PLAN & SECTIONS**

PROJECT No.:	5242
CAD DWG FILE:	01_5242 Design.dwg
DESIGNED BY:	LAH
DRAWN BY:	LAH
CHECKED BY:	NJE
SCALE:	AS SHOWN

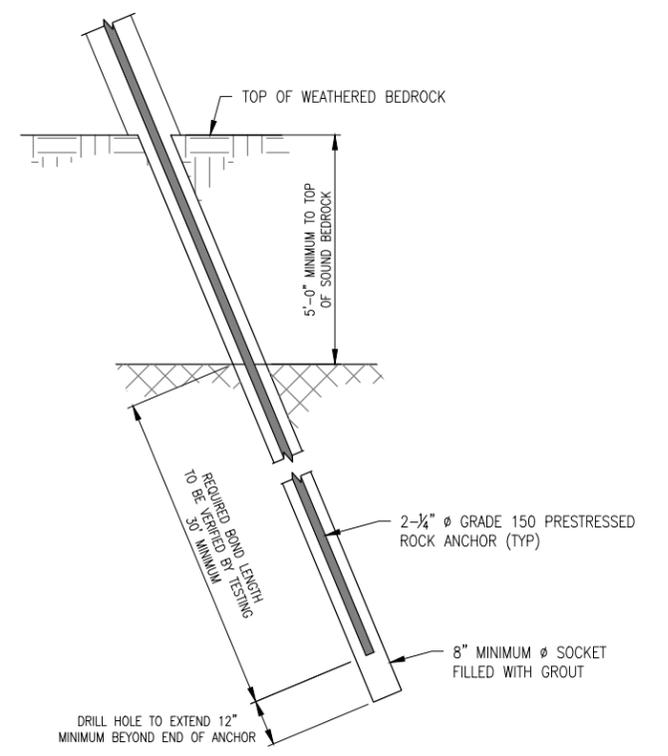




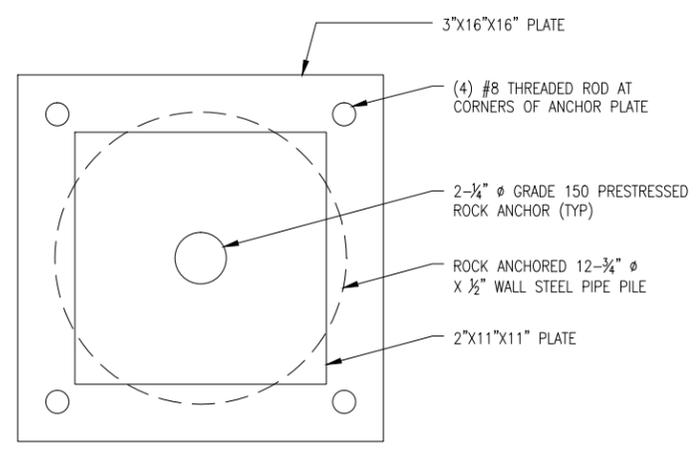
**PILE TOP REINFORCEMENT DETAIL**  
 SCALE: 1/2"=1'-0"  
 0 1' 2' 4' S-102 **C1**



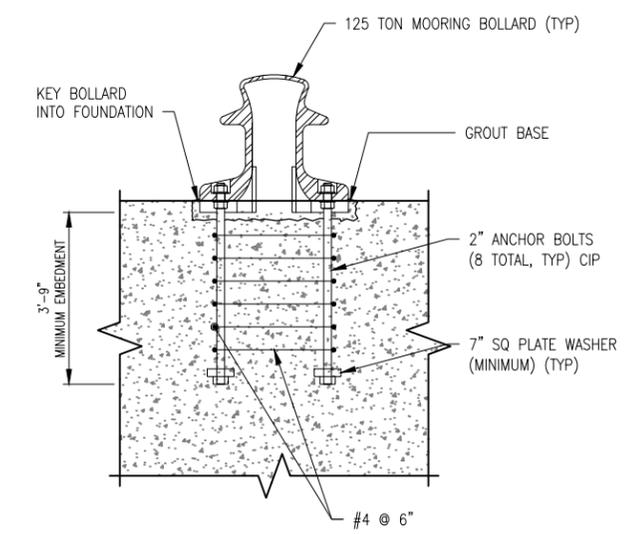
**PILE TOP CONNECTION DETAIL**  
 SCALE: 1 1/2"=1'-0"  
 0 1/2' 1' 1 1/2' S-102 **C3**



**ROCK ANCHOR SOCKET DETAIL**  
 SCALE: 1/2"=1'-0"  
 0 1' 2' 4' S-102 **A1**

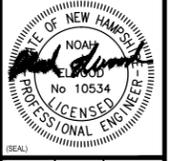


**PILE TOP PLATE DETAIL**  
 SCALE: 3"=1'-0"  
 0 3' 6' 9' S-102 **C5**



**BOLLARD ANCHORAGE DETAIL**  
 SCALE: 1/2"=1'-0"  
 0 1' 2' 4' S-102 **A3**

603.766.1870  
 inquiry@appliedmarine.com  
**Applied Marine Engineering, LLC**  
 600 State St, Suite E  
 Portsmouth New Hampshire 03801  
 SUBMITTED BY: *Bob Almond*  
 TITLE: PRESIDENT  
 DATE: 6/4/2019

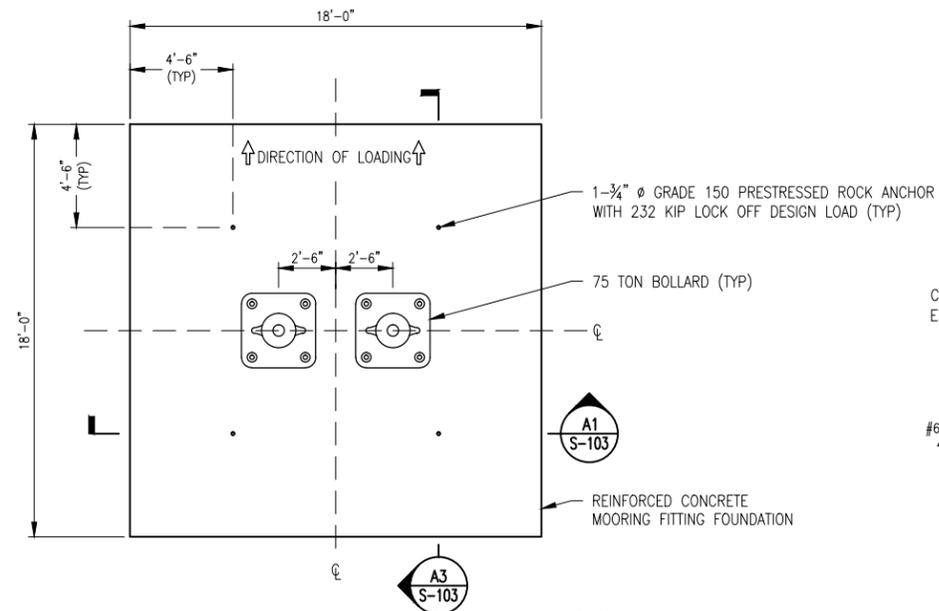


GRANITE STATE MINERALS  
 PORTSMOUTH, NEW HAMPSHIRE  
**MOORING IMPROVEMENTS**  
 PORTSMOUTH WHARF  
**MOORING FITTING B1 DETAILS**

PROJECT No.: 5242  
 CAD DWG FILE: 01\_5242 Design.dwg  
 DESIGNED BY: LAH  
 DRAWN BY: LAH  
 CHECKED BY: NJE  
 SCALE: AS SHOWN

S-102  
 SHEET 7 OF 9

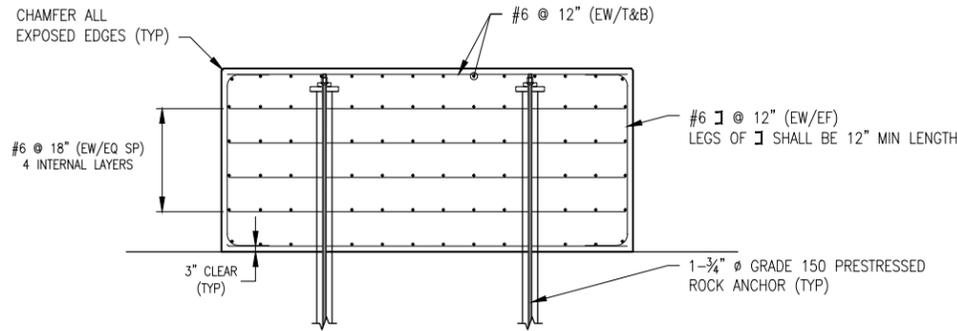




**MOORING FOUNDATION ANCHOR PLAN**

SCALE: 1/4"=1'-0"

0 2' 4' 8' S-103

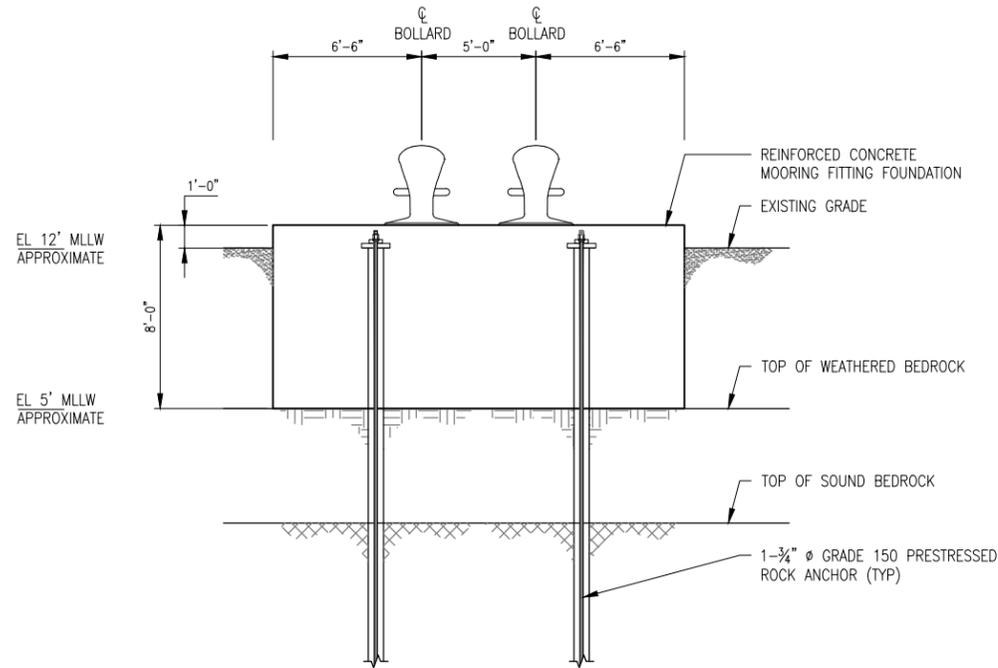


**MOORING FOUNDATION REINFORCEMENT SECTION**

SCALE: 1/4"=1'-0"

0 2' 4' 8' S-103

C3

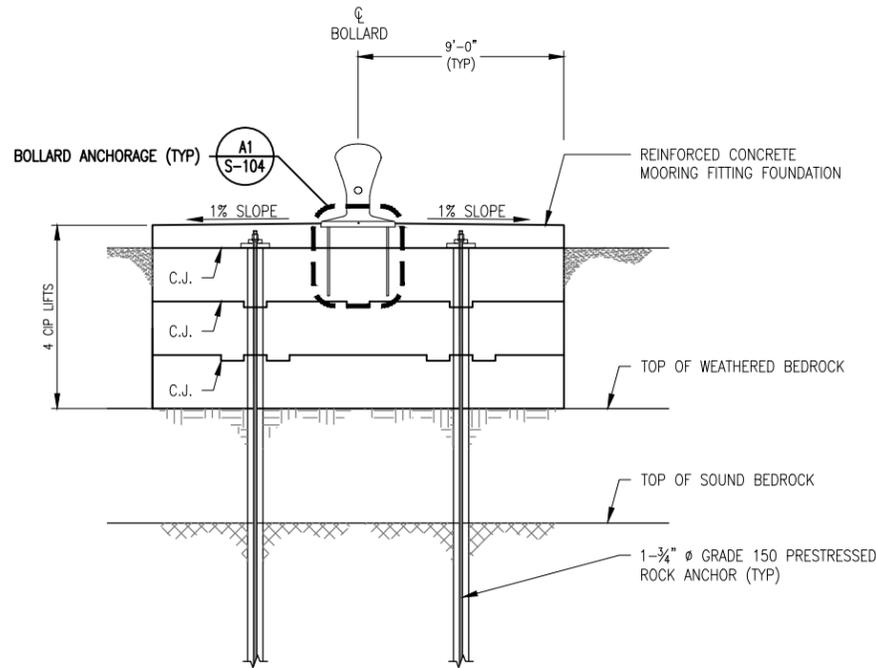


**MOORING FOUNDATION SECTION 1**

SCALE: 1/4"=1'-0"

0 2' 4' 8' S-103

A1



**MOORING FOUNDATION SECTION 2**

SCALE: 1/4"=1'-0"

0 2' 4' 8' S-103

A3

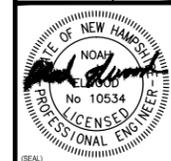
REVISION	DATE	DESCRIPTION	BY

603.766.1870  
inquiry@applebarnet.com

**Applebarnet Engineering, LLC**

600 State St, Suite E  
Portsmouth New Hampshire 03801

6/4/2019  
PRESIDENT



GRANITE STATE MINERALS  
PORTSMOUTH, NEW HAMPSHIRE

PORTSMOUTH, NEW HAMPSHIRE  
MOORING IMPROVEMENTS

PORTSMOUTH WHARF  
MOORING FITTING B2 PLAN & SECTIONS

PROJECT No.:	5242
CAD DWG FILE:	01_5242 Design.dwg
DESIGNED BY:	LAH
DRAWN BY:	LAH
CHECKED BY:	NJE
SCALE:	AS SHOWN

S-103  
SHEET 8 OF 9



1

2

3

4

5

D

C

B

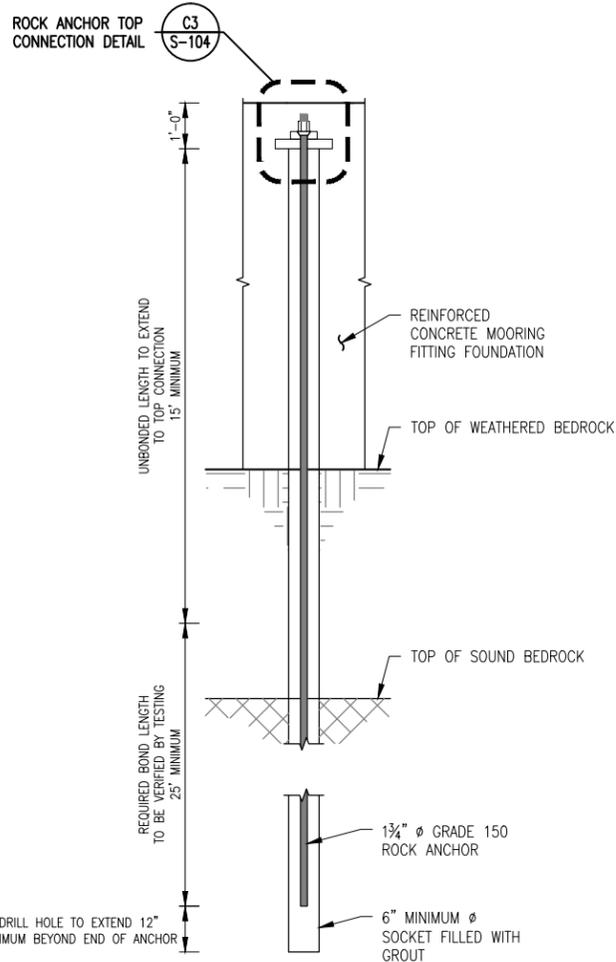
A

D

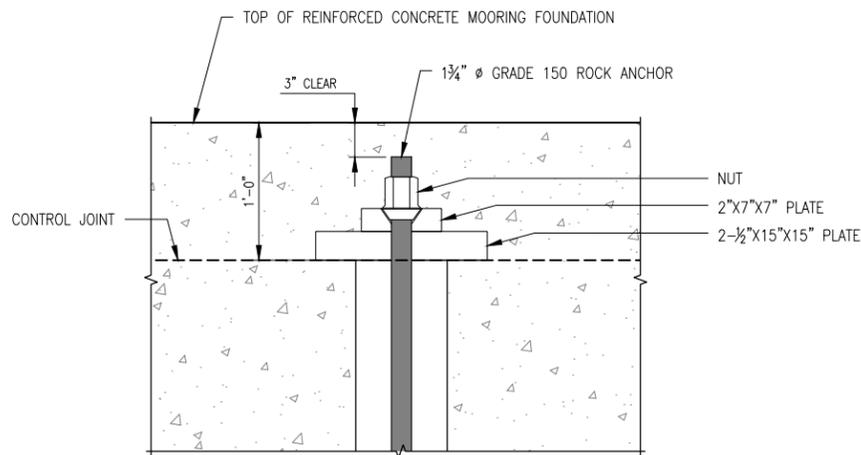
C

B

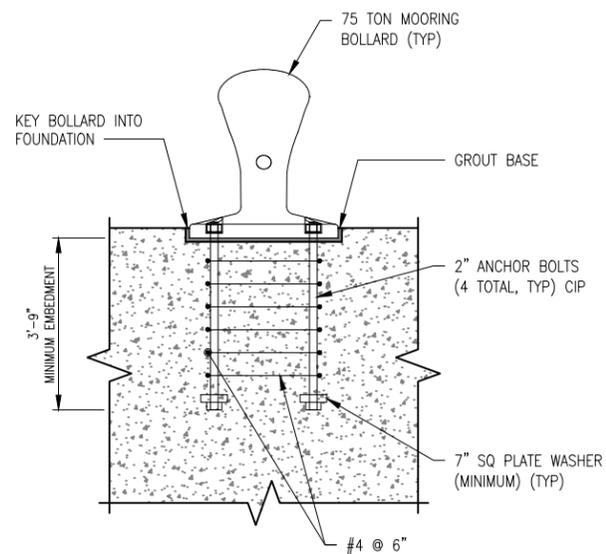
A



**ROCK ANCHOR SOCKET DETAIL** (C1)  
 SCALE: 1/2"=1'-0" 0 1' 2' 4' S-104



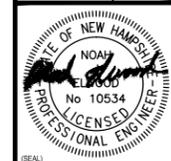
**ROCK ANCHOR TOP CONNECTION DETAIL** (C3)  
 SCALE: 1 1/2"=1'-0" 0 1/2' 1' 1 1/2' S-104



**BOLLARD ANCHORAGE DETAIL** (A1)  
 SCALE: 1/2"=1'-0" 0 1' 2' 4' S-104

REVISION	DATE	DESCRIPTION	BY

603.766.1870  
 inquiry@appliedmarine.com  
**Applied Marine Engineering, LLC**  
 600 State St, Suite E  
 Portsmouth New Hampshire 03801  
 SUBMITTED BY: *Bob Alford*  
 TITLE: PRESIDENT  
 DATE: 6/4/2019



GRANITE STATE MINERALS  
 PORTSMOUTH, NEW HAMPSHIRE  
 PORTSMOUTH WHARF  
**MOORING IMPROVEMENTS**  
**MOORING FITTING B2 DETAIL**

PROJECT No.:	5242
CAD DWG FILE:	01_5242 Design.dwg
DESIGNED BY:	LAH
DRAWN BY:	LAH
CHECKED BY:	NJE
SCALE:	AS SHOWN



# **Section 15**

## **Copy of Application Fee Check**



GRANITE STATE MINERALS, INC.  
227 MARKET STREET  
PORTSMOUTH, NH 03801



54-49  
114

022562

DATE  
1/19/2023

AMOUNT  
\$2,670.00

Two Thousand Six Hundred Seventy Dollars and 00 Cents

PAY  
TO THE  
ORDER  
OF

TREASURER - STATE OF NH

*Shelagh E. Mahoney*  
\_\_\_\_\_  
AUTHORIZED SIGNATURE MP

⑈0 2 2 5 6 2⑈ ⑆0 1 1 4 0 0 4 9 5⑆ 0 0 0 0 4 6 1 2 1 4 0 6⑈

GRANITE STATE MINERALS, INC.

022562

TREASURER	TREASURER - STATE OF NH	011134	1/19/2023	022562		
<u>Document Number</u>	<u>Date</u>	<u>Outstanding Amt.</u>	<u>Net Paid Amount</u>	<u>Discount</u>	<u>Net Check Amount</u>	
APP STORMWATER 2023	1/19/2023	\$2,670.00	\$2,670.00	\$0.00	\$2,670.00	

\$2,670.00      \$2,670.00      \$0.00      \$2,670.00