



CITY OF DOVER

DOVER CONSERVATION COMMISSION – AGENDA

Meeting Type: Regular Meeting
Meeting Location: 1st Floor Conference Room - 288 Central Avenue Dover NH
Meeting Date: Monday, June 13, 2022
Meeting Time: 5:30 pm

1. CALL TO ORDER AND ROLL CALL
2. CITIZENS' FORUM
3. APPROVAL OF THE PRIOR MEETING MINUTES – May 9, 2022
4. OLD BUSINESS
5. NEW BUSINESS
 - A. City of Dover Conditional Use Permit for Unifil Granite State Gas Transmission (Agent: Wood Environment & Infrastructure Solutions, Inc.) Assessor's Map M, Lot 47C, zoned R-12, located east of Polly Ann Park. Proposal is to construct an above ground station comprising of a pipeline internal inspection tool launcher and receiver, creating approximately 3,175 square feet of permanent wetland impact and 500 square feet of temporary wetland impact.
 - B. NHDES Standard Dredge and Fill Wetlands Permit Application for Peter T. Paul Living Trust (Agent: Ambit Engineering, Inc.) Assessor's Map N, Lot 8-1-4, zoned R-40, located at 56 Saddle Trail Drive. Proposal is to construct a tidal docking structure consisting of a 4' x 95' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float, totaling 380 square feet of permanent impact to the previously developed Tidal Buffer Zone and 570 square feet of permanent impact to tidal wetlands.
 - C. Vote on authorization of an additional \$2,500 from Conservation Fund for an updated survey of River Run Wildlife Management Area.
 - D. Update on City of Dover Stormwater Utility Planning.
6. REPORT FROM THE CHAIR
 - A. Review of Correspondence Received From NH Department of Environmental Services.
7. OTHER BUSINESS
 - A. Update From Committee on Amendments to Wetland Protection District Ordinance.
8. ADJOURNMENT



CITY OF DOVER

DOVER CONSERVATION COMMISSION – MINUTES

Meeting Type: Regular Meeting
Meeting Location: City Council Conference Room - 288 Central Avenue Dover NH
Meeting Date: Monday, May 9, 2022
Meeting Time: 5:30 pm

MEMBERS PRESENT: Bill Hunt (Chair), Jason Aube, Robert Atwood (Secretary), Kristen Murphy (Alternate)

Absent (Excused): Amy Kramer-Perry, Steve Fellows (Vice Chair), Abigail Lyon, Richard Erickson, Bruce Batchelder (Alternate)

Absent (Un-excused):

STAFF PRESENT: Jackson Kaspari – Resilience Coordinator

OTHERS PRESENT: Lindsey Williams (City Council), Bary Gier, Steve Height, Chad Kageleiry

1. CALL TO ORDER AND ROLL CALL

The meeting was convened at 5:30 PM.
Hunt opened the meeting and did a roll call.

2. CITIZENS' FORUM: None

3. APPROVAL OF THE PRIOR MEETING MINUTES – April 11, 2022

Motion: K. Murphy moved to approve the April 11, 2022 minutes, J. Aube seconded. Vote: 3 yes, 1 abstention.

4. OLD BUSINESS: None

5. NEW BUSINESS

- A.** NHDES Standard Dredge and Fill Wetlands Permit Application for Todd Diggins & Krystin Ward. (Agent: Jones & Beach Engineers, Inc.) Assessor's Map 8 Lot 32, zoned R-20, located at 3 Wentworth Terrace. Proposal is to construct a 957 square foot addition creating 3,045 square feet of permanent impact and 1,880 square feet of temporary impacts to the previously developed Tidal Buffer Zone.

Barry Gier was present to explain the application. The Commission endorsed a CUP for this project at the February 14th, 2022 meeting.

J. Aube: What portion of this project triggered the need for a shoreland permit?

B. Gier: There is impact area that falls outside of the Tidal Buffer Zone.

J. Aube: Can you speak to the stormwater management associated with the project?

B. Gier: Use of porous pavers is going to increase the overall impervious surface which will help limit stormwater impacts.

Motion: J. Aube moved to endorse the application, K. Murphy seconded. Vote: 4 yes.



CITY OF DOVER

DOVER CONSERVATION COMMISSION – MINUTES

Meeting Type: Regular Meeting
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Meeting Date: Monday, May 9, 2022
Meeting Time: 5:30 pm

- B.** NHDES Expedited Minimum Impact Wetlands Permit Application and City of Dover Conditional Use Permit for Westfield, LLC. (Agent: Civil Works New England), Assessor's Map G, Lot 2, zoned R-20, located on Littleworth Road. Proposal is to subdivide a 58.91 acre parcel into 3 lots with associated site work for public roadways, grading, stormwater mitigation and utilities, creating 1,231 square feet of wetlands impact and 30,073 square feet of buffer impacts within the Wetland Protection District.

Steve Height was present to represent the applicant.

B. Hunt: Can you clarify the location of this project and how the proposed storage building relates?

S. Height: Littleworth road is located to the west of the plan set.

Height also indicated the location of the storage facility.

J. Aube: Please explain how the wetlands impacts were minimized and avoided.

S. Height: We are only impacting previous farm ditches at locations where culverts will be placed.

J. Aube: Can you speak to the functions and values of the wetlands?

S. Height: When the parcel was a farm, the ditches were in place to provide drainage and are manmade. That is there function but do not hold much ecological value.

C. Kageleiry: The buffer area is so large due to small pockets of wetlands but actual impacts to the wetlands have been minimized.

K. Murphy: Can you comment on the culvert size in comparison to the current drainage flow?

S. Height: Culverts will be sized appropriately to handle drainage.

K. Murphy: Can you speak to the vernal pool assessment? Saw that this was conducted in August which is not when vernal pools are active.

S. Height: Wetlands Scientist was at the site during various times and the assessment was sufficient.

B. Hunt: Will there be stormwater impacts from the surrounding industrial developments?

S. Height: The site will be able to handle the runoff.

K. Murphy: How will sediment and salt be dealt with?

S. Height: No controls in place yet but they will be added with future development on the lots.

Motion: J. Aube moved to endorse the application given the low value of the wetlands and design to minimize impacts, R. Atwood seconded. Vote: 4 yes.



CITY OF DOVER

DOVER CONSERVATION COMMISSION – MINUTES

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C. Appointment of Wetland Mitigation Priority List Subcommittee.

J. Kaspari: We are looking for a subcommittee to help develop a list of priority mitigation projects that applicants can aid with if they are unable to provide on-site mitigation. I understand that the WPO subcommittee has yet to wrap up its work and this may be a nice addition to assist with proposed language within the amendments. Jay has expressed interest but there has been limited interest from other members.

B. Hunt: What is the status of the WPO subcommittee?

J. Kaspari: Donna Benton, indicated that the WPO subcommittee should have at least one more meeting and that she is working on a list of recommendations for near, mid and long-term goals based on staff discussions.

B. Hunt: I'm not sure how a subcommittee will be able to know what the priorities are?

J. Kaspari: You raise an interesting and valid point. It might be best if I hold a meeting with staff from various departments to begin a preliminary list that could then be vetted and expanded upon by the subcommittee. I could also see if a member from the Open Lands Committee is interested in participating as well.

J. Aube: We can use lists that other communities have created to reference.

J. Kaspari: Agreed and the NHDES has some good guidance materials as well that can assist with the process.

Plan is to revisit at future meeting once staff has had a chance to meet and discuss further.

6. REPORT FROM THE CHAIR

A. Review of Correspondence Received from NH Department of Environmental Services

47 Chestnut Street had the Standard Dredge and Fill Permit approved by NHDES and that project will appear before the Planning Board tomorrow night. 173-unit multi-family residential project with restaurant and common/mixed use spaces.



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DOVER CONSERVATION COMMISSION – MINUTES

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7. OTHER BUSINESS

A. Update from Committee on Amendments to Wetland Protection District Ordinance

This was covered in the prior section.

8. ADJOURNMENT

Motion: K. Murphy moved to adjourn the meeting at 6:10 PM. R. Atwood seconded. Vote: 4 yes.

DRAFT



Wood Environment & Infrastructure Solutions, Inc.
100 Apollo Drive, Suite 302
Chelmsford, MA 01824
USA

T: 978-692-9090

www.woodplc.com

June 2, 2022

City of Dover Conservation Commission
288 Central Ave.
Dover, NH 03820

**Re: Conditional Use Permit Application
Proposed Gas Pipeline Inspection Tool Launcher/Receiver
Unitil GSGT Pipeline Corridor East of Polly Ann Park, Dover, NH**

To the Dover Conservation Commission:

On behalf of Unitil Granite State Gas Transmission (Unitil/applicant), Wood Environment & Infrastructure Solutions, Inc. (Wood) submits the attached Conditional Use Permit application and project drawings for the above-referenced project.

On May 12, 2022 the applicant presented the project to the Dover Technical Review Committee (TRC). Comments received at that meeting were incorporated into the plan set. The TRC meeting minutes are attached. In accordance with the Instructions to Applicants to the Dover Planning Board we are submitting three (3) full-size plan sets and twelve (12) reduced-size (11x17) plan sets.

This CUP is being submitted because the project will impact wetlands. The purpose of the project is to construct an above-ground pipeline appurtenant station comprising a pipe internal inspection tool launcher and receiver. This inspection tool facility is necessitated by federal pipeline law and regulation to enable regular internal inspection of the pipeline's integrity for maintenance and public safety. The proposed site was selected based on its location within Unitil's pipeline network (including pipe diameters and proximity to distribution facilities) and geographic constraints including construction access, the width of Unitil's easement, adjacent easements and utilities, topography, and Varney Brook. The project will cause approximately 3,175 square feet of permanent wetland impact and 500 square feet of temporary wetland impact. The Dover Conservation Commission reviewed the NHDES wetlands permit application in April and sent their endorsement to NHDES.

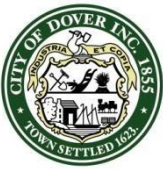
We look forward to presenting this project at your next meeting.

Sincerely,
Wood Environment & Infrastructure Solutions, Inc.

A handwritten signature in black ink, appearing to read "Stephen G. Herzog".

Stephen G. Herzog, PWS
Senior Ecologist, Project Manager

Attachments: CUP Application Form; TRC Meeting Minutes; Issued-for-Permitting Plan Set
Copy: Unitil Granite State Gas Transmission



City of Dover, New Hampshire CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

Office Use Only	Project #: _____	Date Received: _____
	Amount Paid: _____	Time Received: _____

APPLICANT AND OWNER INFORMATION

Name of Applicant: Unitil Granite State Gas Transmission Telephone # (603) 294-5194

Address of Applicant: 325 West Road, Portsmouth NH 03801

E-Mail Address: schummrckr@unitil.com

Name of Property Owner (if different from applicant): _____ Telephone # _____

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # M-47 Lot(s) # C-0

Address of Property: Unitil Right-of-Way east of Polly Ann Park

Zoning District(s) M-12 Overlay District(s) _____

Existing Use of Property: Interstate natural gas transmission pipeline corridor

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

- | | | |
|---|---|--|
| ☐ Conservation District | ☐ RCM Use Overlay District | ☐ Gateway District |
| ☐ Groundwater Protection | ☐ Off-Street Parking and Loading | ☐ Alternative Treatment Center |
| ☒ Wetland Protection District | ☐ Central Business District | ☐ Heritage Residential District |

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

Unitil will construct a pipeline inspection equipment (tool launcher/receiver) station. The site is based on the location within Unitil's pipeline network, and considering adjacent easements and topography. The project will cause approximately 3,175 square feet of permanent wetland impact and 500 square feet temporary wetland impact that will be compensated by an impact mitigation fee paid to NHDES.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status:

Unitil has applied for a wetlands permit (standard dredge and fill, major impact) to NHDES. The application is in review, and will be concurrently reviewed by U.S. Army Corps of Engineers.____

Name of Professional That Prepared Plans: Matt Pelletier, Process Pipeline Services

Address 4 Broad St., Plainville MA 02762 Telephone #: 781-829-0524

Professional License #: _____ E-mail address: MPelletier@processpipeline.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: Robert Schmitt Date: 4/26/22

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: Steph R. Henry Date: 4/26/2022

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Robert Schmitt Date: 4/26/22

CITY OF DOVER CONDITIONAL USE LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	<u>MAILING ADDRESS</u>
M0047C	0	Dover Point Cooperative	44 Polly Ann Park, Dover NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	<u>MAILING ADDRESS</u>
Robert Schummrick	Unitil	325 West Rd., Portsmouth NH 03801

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	<u>MAILING ADDRESS</u>
Mark Wood	Process Pipeline Services	4 Broad St., Plainville MA 02762

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	<u>MAILING ADDRESS</u>

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 1, 2021)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan Review Fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee \$200.00 + \$150.00 x # _____ new lots created = \$ _____
- ☐ LOT LINE ADJUSTMENT Application fee \$200.00 + \$100.00 X # _____ of lots involved = \$ _____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee \$200.00 = \$ _____
- ☐ SITE REVIEW – RESIDENTIAL Application fee \$200.00+ \$100.00 x # _____ per dwelling unit = \$ _____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee \$200.00 + (not to exceed \$10,000)
 - ☐ New construction \$.15 sq. ft. x # _____ sq. ft.= \$ _____
 - ☐ Additions (new floor space) \$.10 per sq. ft. x # _____ sq. ft.= \$ _____
- ☐ MOTEL/HOTEL \$35.00 x # _____ per lodging unit= \$ _____
- ☐ CHANGE OF USE Application fee \$200.00 + (not to exceed \$5,000)
 - ☐ Existing floor spaces \$.10 per sq. ft. x # _____ sq. ft. = \$ _____
- ☐ CONDITIONAL USE PERMIT Application fee \$200.00 x # _____ per Application = \$ _____
- ☐ GRAVEL PIT/ EXCAVATIONS
 - ☐ Application fee \$50.00= \$ _____
 - ☐ Permit fee \$75.00= \$ _____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee \$200.00 = \$ _____
- ☐ REQUEST FOR REZONING Application fee \$200.00 = \$ _____
- ☐ DRIVEWAY WAIVER Application fee \$200.00 = \$ _____

- 2. TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed \$10,000)) Application fee of \$200.00 is N/A if it is part of a Site Review or Subdivision Plan. \$200.00 + \$.07 per sq. ft. x # _____ sq. ft. = \$ _____

SUBTOTAL PLAN REVIEW FEE (A) = \$ _____

AND

- B. Abutter Notification/Mailing Labels** - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
 - ☐ Certified letters fee # _____ of x \$8.00= \$ _____
- ☐ Certified letters fee: # of abutters _____ X \$8.00= \$ _____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X \$1.00= \$ _____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x \$10.00= \$ _____

- C. Foster's newspaper public notice fee \$100.00 x # _____ applications = \$ _____**

SUBTOTAL NOTICE FEE (B & C) = \$ _____

TOTAL INVOICE AMOUNT (A, B & C) = \$ _____

PLAN REVIEW FEE COLLECTED/PAID = \$ _____

BALANCE DUE = \$ _____

The balance due must be paid 28 hours prior to the Planning Board Meeting, to be heard.



Wood Environment & Infrastructure Solutions, Inc.
100 Apollo Drive, Suite 302
Chelmsford, MA 01824
USA

T: 978-692-9090

www.woodplc.com

June 10, 2022

City of Dover Conservation Commission
288 Central Ave.
Dover, NH 03820

**Re: Conditional Use Permit Application – Additional Information
Proposed Gas Pipeline Inspection Tool Launcher/Receiver
Unitil GSGT Pipeline Corridor East of Polly Ann Park, Dover, NH**

To the Dover Conservation Commission:

On behalf of Unitil Granite State Gas Transmission (Unitil/applicant), Wood Environment & Infrastructure Solutions, Inc. submits this additional information in support of the Conditional Use Permit application.

(a) Practicable Alternative: There is no practicable alternative that would have a less adverse impact on the area. Unitil must construct the station to comply with federal requirements for pipeline inspection. The project location is constrained by Unitil's pipeline network and the geography of the local area. The location was selected because the Granite State Gas Transmission pipeline has two different diameter pipes (8-inch and 10-inch) transitioning at this location. Therefore, Unitil must construct two different sized inline inspection (ILI) tools in order to facilitate internal pipeline inspections. The site was selected because there is an existing gas metering facility at this location, which is Unitil's largest pressure regulating station in NH. It supplies gas through Unitil's distribution pipeline network to the cities of Dover, Somersworth, Rollinsford, Madbury, Durham, and Rochester. This location will allow Unitil to supply the existing station at Varney Brook from either the north or the south.

(b) Avoidance: The potential impacts have been avoided to the maximum extent practicable. The station has been situated as close to the access road and hillslope as possible, and also as close to the existing station, while still remaining in Unitil's right-of-way.

(c) Minimization: Any unavoidable impacts have been minimized. No reasonable Alternative to the proposed construction exists which does not impact a wetland or which has less detrimental impact on a wetland. Design, construction and maintenance methods will be prepared by a registered engineer to minimize detrimental impacts to the wetlands and will include restoration of the site as nearly as possible to its original grade. The station has been situated to minimize the need for fill and grading to establish level ground. The proposed construction, as shown on the project plans, represents the least impacting alternative.

(d) Mitigation: If the APPLICANT is required by State rules to prepare a compensatory mitigation plan, the APPLICANT shall provide the Conservation Commission and PLANNING BOARD with one copy each of said plan for their review. The applicant is required to provide compensatory impact mitigation, and will do so in the form of an in lieu fee payment to the State.

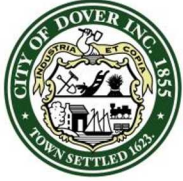
(e) Approval for the wetlands impact has been received from the NHDES Wetlands Bureau. The applicant has held two pre-applications with the NHDES Wetlands Bureau, submitted a standard major impact dredge and fill permit application, and is presently responding to the NHDES request for additional information.

Sincerely,
Wood Environment & Infrastructure Solutions, Inc.

A handwritten signature in black ink, appearing to read "Stephen G. Herzog". The signature is fluid and cursive, with the first name "Stephen" and last name "Herzog" clearly legible.

Stephen G. Herzog, PWS
Senior Ecologist, Project Manager

Copy: Unitil



CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – P22-36

Application Type: ENV-Conditional Use Permit
Applicant(s): Unitil Granite State Gas Transmission
Owner(s): Unitil Granite State Gas Transmission
Location: Gerrish Road (Assessor's Map M, Lot 47-C)
Date: May 12, 2022

INTENT: Unitil will construct a pipeline inspection equipment (tool launcher/receiver) station. The location is based on the location in Unitil's pipeline network, and considering adjacent easements and topography. The project will cause approximately 3,500 square feet of wetlands impact that will be compensated by an impact mitigation fee paid to NHDES.

LOTS/UNITS PROPOSED: 6 Proposed 2 Existing

AGENDA ITEM #: 3

ACREAGE: 20.70± acres (total parcel)

ZONING DISTRICTS: R-12 Med-Density Residential Zoning Districts & Wetlands Protection District

EXISTING LAND USE: Interstate natural gas transmission pipeline corridor easement

SURROUNDING LAND USE: Residential, Mobile Home Park, Stream and Wetlands, Utilities

ZBA ACTION: None

PERMITS REQUIRED:
- NHDES Wetlands;

WAIVERS REQUESTED:

ATTENDANCE:

Members:

Donna Benton, Planning
Natasha Kypfer, Zoning
Reid Amy, Business Development
Jim Maxfield, Fire/Inspection Services
Marn Speidel, Police
Jill Semprini, Engineering

Others:

Ken Mavrogeorge, City Engineer
Michael Asciola, Planning
Stephen G. Herzog, PWS, Wood Environment & Infrastructure Solutions, Inc.
Robert Schummrick, Unitil

PLAN REVIEW:

Planning:

- Add the following to plan set:
 - Owners of Record are:
Name
Street address
Municipality, State, Zip Code

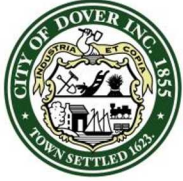
Authorized Signature
 - Title reference for the project parcel(s) is the
Strafford County Registry of Deeds, Book No. ____,
Page No. ____.
 - Wetlands were delineated by
_____, Certified Wetlands
Scientist, Certification Number ____, in accordance
with Chapter 170-27.1 of the Zoning Ordinance, on
_____, 20____.
 - The limits of construction disturbance that are
located in or within the 50 ft. of Conservation and
Wetland Districts shall be staked, flagged and clearly
identified prior any earth disturbing activity occurs.
 - File # P22-36 to all sheets
 - Provide 2" x 2" PB Approval block to cover
 - The following federal and state permits have been
issued for the subject property: (*List permit type, number
and date of issuance.*)
 - Applicant shall complete Land Use Development
Tracking Form, most recently revised version,
utilizing the online Pollution Tracking and
Accounting Pilot Project (PTAPP) portal.
<https://www.unh.edu/unhsc/ptapp>

Police Department:

- Show neighborhood in plan set
- How does maintenance ops access site – through Polly Ann Park
- Remove Fran Torr's name from plan – no longer in ownership

Engineering:

- Show and identify City's easements on the plans.



CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – P22-36

Application Type: ENV-Conditional Use Permit
Applicant(s): Unutil Granite State Gas Transmission
Owner(s): Unutil Granite State Gas Transmission
Location: Gerrish Road (Assessor's Map M, Lot 47-C)
Date: May 12, 2022

- Avoid installation of permanent structures within easements. City to provide easement document to Applicant.
- Show City's identification #s for the sewer manholes. City to provide SMH #s.
- The 21" ACP sewer is gravity and not a force main as indicated in the plans. There is an abandoned 16" force main near the 21" gravity.

Fire/Inspections Services:

- Dispatch to be provided with call back information – add signs with contact info at site

Business Development: None

Next Steps: Revise plans to address identified issues and resubmit for Conservation Commission review and Planning Board CUP.

Adjournment: J. Maxfield moved to adjourn the meeting at 11:32 am. Seconded by M. Speidel. Vote: U/A



Unitil

Granite State Gas Transmission

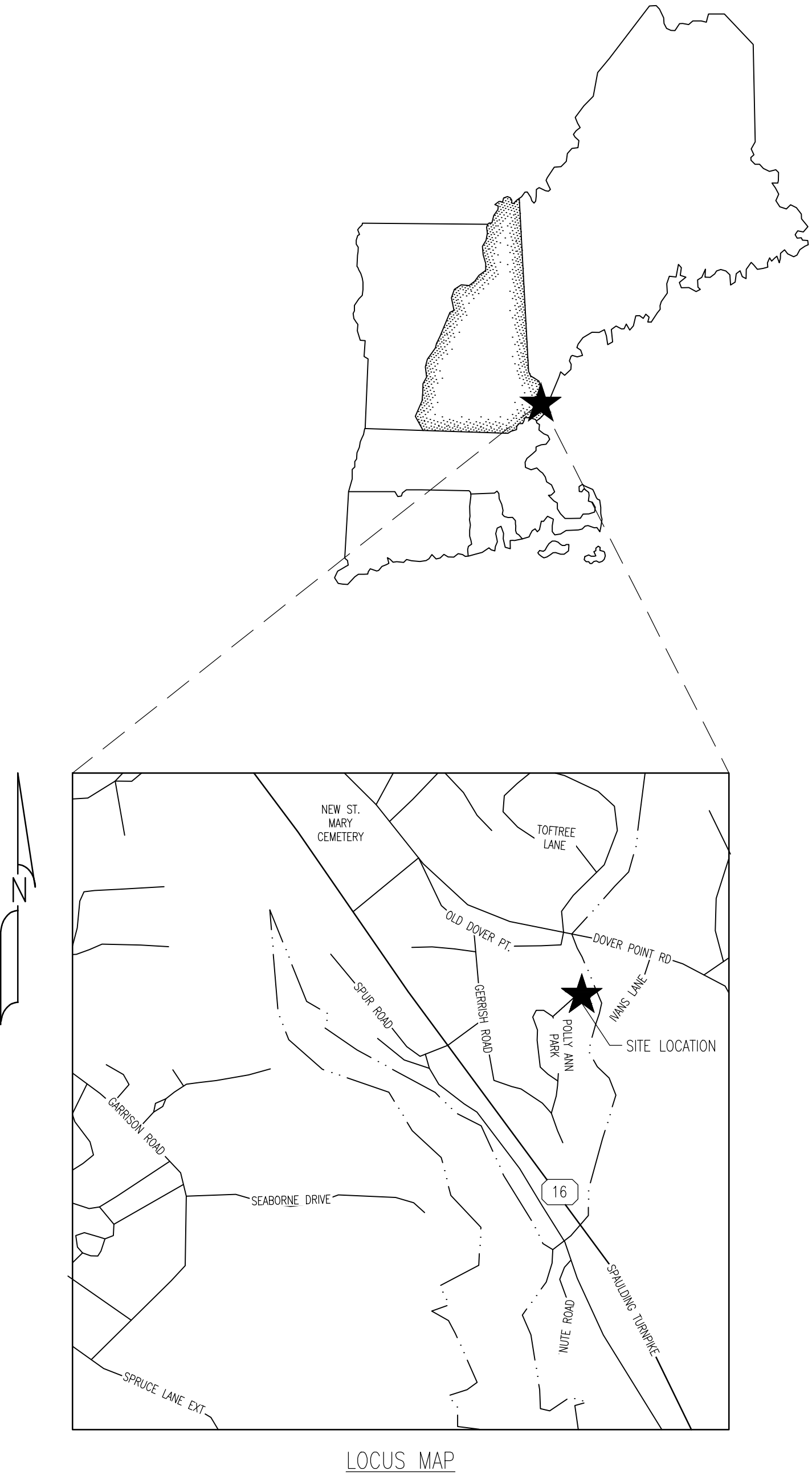
INDEX OF SHEETS		
SHEET	NAME	TITLE
1	T101	COVER SHEET
2	A101	EXISTING CONDITIONS
3	A102	SITE PLAN
4	A103	SITE ACCESS, WORKSPACE, WETLAND IMPACT, AND EROSION CONTROLS
5	A104	SITE PLAN WITH AERIAL IMAGE
6	C101	STANDARD DETAILS – 1 OF 2
7	C102	STANDARD DETAILS – 2 OF 2

VARNEY BROOK RECEIVERS

44 POLLY ANN TRAILER PARK
DOVER, NH 03820
TAX MAP M, LOT 47–C

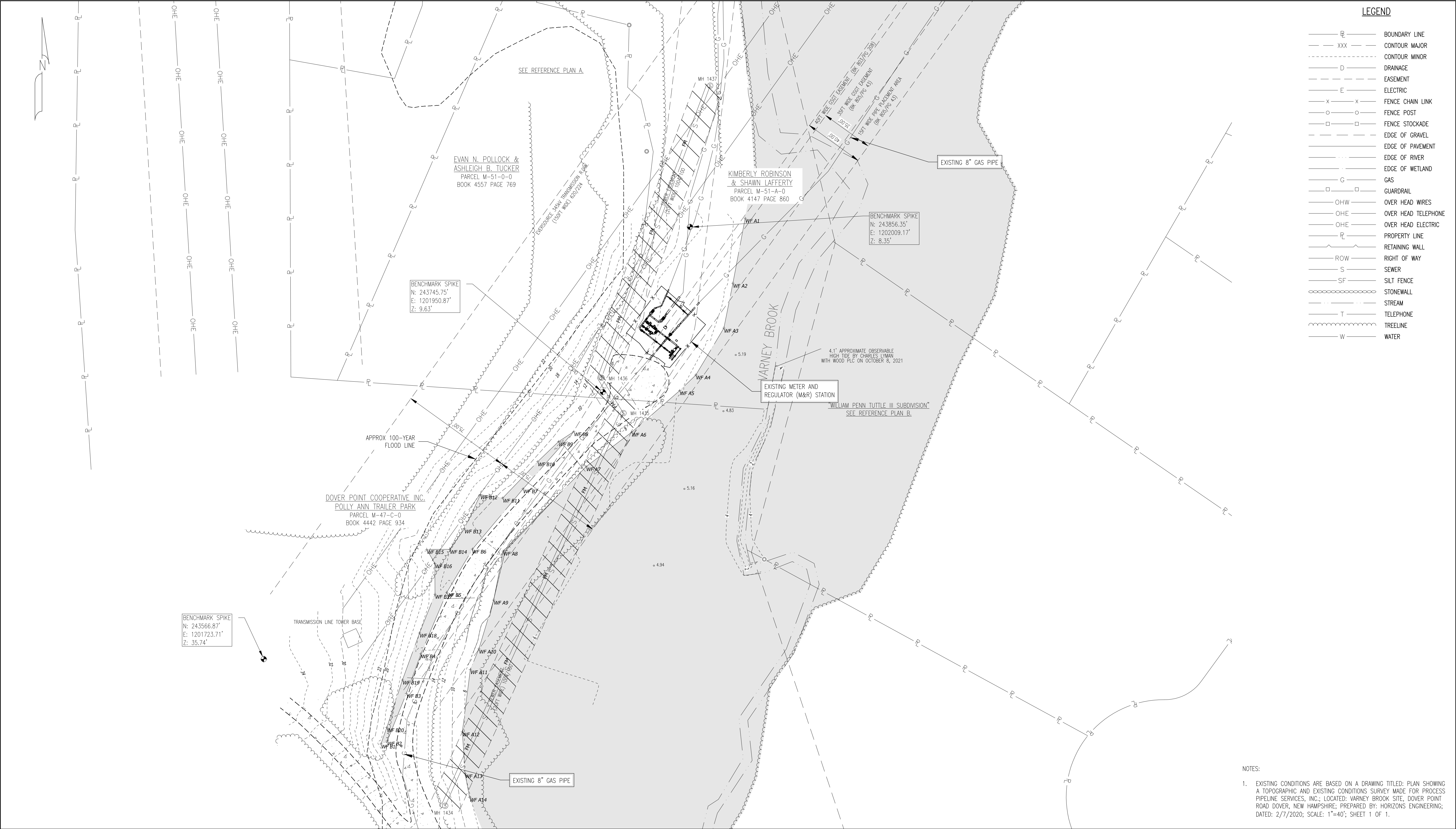
DOVER CITY PLANNING FILE NUMBER P22–36

GSGT EMERGENCY PHONE NUMBER: 1–800–323–4410



OWNER SIGNATURE

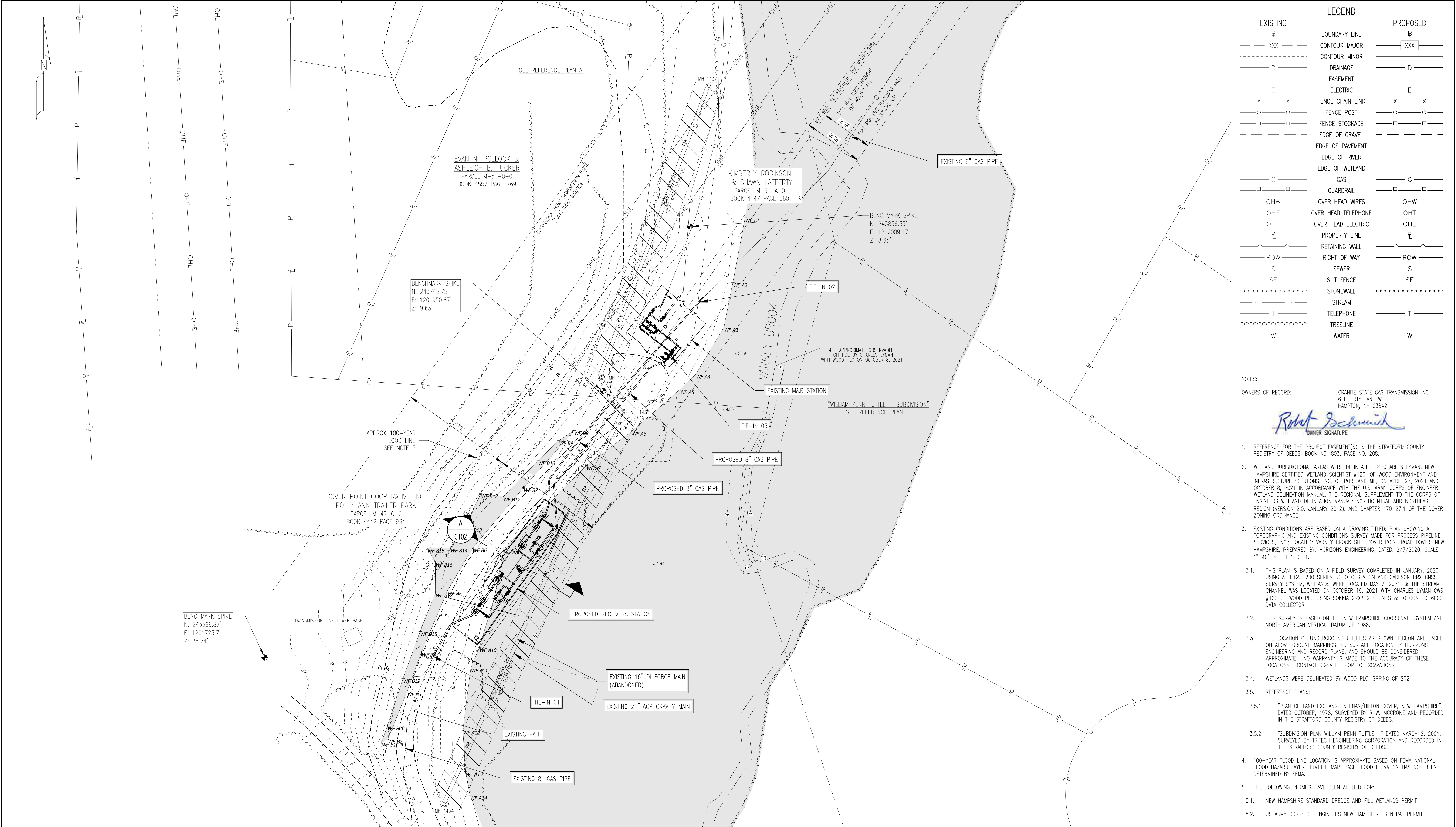
P E R M I T T I N G					
ISSUE STATUS	DATE	REVIEWED	CHECKED	APPROVED	
PRELIMINARY	–				
25% SUBMISSION					
50% SUBMISSION					
75% SUBMISSION					
90% SUBMISSION					
PERMITTING	06/01/22				
ISSUED FOR BID					
ISSUED FOR CONSTRUCTION					
AS CONSTRUCTED					
FILE NAME: 5370_C100.DWG			SIZE	NAME	REV
PLOT DATE: 06/01/2022 5:02 PM			22X34	T101	P
SHEET 1 OF 7					



NOTES:

1. EXISTING CONDITIONS ARE BASED ON A DRAWING TITLED: PLAN SHOWING A TOPOGRAPHIC AND EXISTING CONDITIONS SURVEY MADE FOR PROCESS PIPELINE SERVICES, INC.; LOCATED: VARNEY BROOK SITE, DOVER POINT ROAD DOVER, NEW HAMPSHIRE; PREPARED BY: HORIZONS ENGINEERING; DATED: 2/7/2020; SCALE: 1"=40'; SHEET 1 OF 1.

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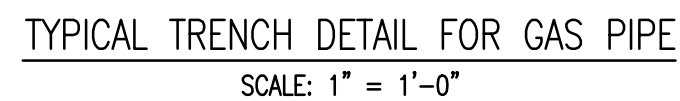
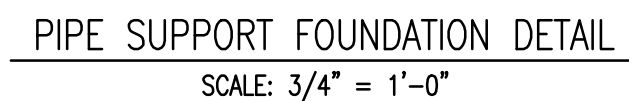
LEGEND	
EXISTING	PROPOSED

SITE LEGEND	
ACCESS AND WORKSPACE	
WORKSPACE	
WETLAND IMPACT	
TEMPORARY WETLAND IMPACT	

- GENERAL EROSION CONTROL NOTES**
1. SOIL DISTURBANCE SHALL BE CONDUCTED IN A MANNER AS TO MINIMIZE EROSION TO ONLY AREAS OF ACTIVE CONSTRUCTION. STABILIZE ALL AREAS THAT HAVE REACHED FINISH GRADE AS SOON AS POSSIBLE.
 2. IF SEDIMENT IS TRANSPORTED OFF-SITE IT IS TO BE MONITORED. CONSTRUCT STABILIZED STONE PAD TO HELP REMOVE SEDIMENT FROM TIRES BEFORE LEAVING SITE.
 3. IF MATERIAL IS STOCKPILED ONSITE IT SHALL BE ENCOMPASSED BY A SEDIMENT CONTROL FENCE. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS, WETLANDS, OR BUFFERS.
 4. IF DEWATERING IS REQUIRED, CONTRACTOR IS TO PREVENT SEDIMENT LADEN WATER FROM EXITING THE PROJECT SITE AND IS TO CREATE A NON EROSION CONVEYANCE OF THE WATER AS REQUIRED. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS.
 5. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED.
 6. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
 7. THE EROSION CONTROL MEASURES INDICATED ON THESE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED.
 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETURNING ALL EXISTING AREAS AFFECTED BY CONSTRUCTION ACTIVITIES TO THE ORIGINAL UNDISTURBED CONDITIONS.

CONTRACTOR IS REQUIRED TO IMPLEMENT ALL APPLICABLE EROSION CONTROL MEASURES IN ACCORDANCE WITH GUIDELINES ESTABLISHED WITHIN THE CURRENT "NH STORMWATER MANUAL, VOL. 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" DATED 10/2008 OR LATER.

				PRJ MANAGER: MARK D. WOOD PRJ ENGINEER: MATT PELLETIER PRJ NAME: VARNEY BROOK RECEIVERS PRJ NUMBER: 5370 PRJ MILESTONE: PERMITTING PRJ PHASE: PERMITTING				CLIENT INFORMATION				DESIGN MANAGER: TIM BICKFORD DESIGN ENGINEER: BOB SCHUMMRICK ACTIVATION ORDER:				REVIEWED BY: CHECKED BY: APPROVED BY:			
SEAL AND SIGNATURE				DESIGNED BY: MPP 06/01/22 DRAFTED BY: MPP 06/01/22 DCM: SMR 06/01/22 APPROVED BY: MDW 06/01/22				Unitil Granite State Gas Transmission				GRAPHIC SCALE 30' 15' 0 30' 60' 90' 1" = 30'-0"				SHEET TITLE SITE ACCESS, WORK SPACE, WETLAND IMPACT, AND EROSION CONTROLS			
												PROJECT NAME VARNEY BROOK RECEIVERS DOVER CITY PLANNING FILE NUMBER P22-36				PROJECT LOCATION 44 POLLY ANN TRAILER PARK DOVER, NH 03820			
REV BY DATE DESCRIPTION				FILE NAME: 5370_C100.DWG PLOT DATE: 06/01/2022 5:02 PM SCALE: 1" = 30'-0"				PROCESS PIPELINE SERVICES 4 Broad Street Plainville, MA 02762 781.829.0524 processpipelineservices.com				SIZE 22X34				NAME A103			
												REV P				SHEET 4 OF 7			

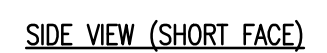


GENERAL NOTES:

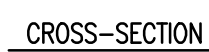
1. ALL GROUT SHALL BE A CEMENTITIOUS BASE NONSHRINK GROUT WITH A ONE DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2. ALL CONCRETE SHALL TEST A MINIMUM OF 3000 PSI AT THE END OF 28 DAYS.
3. ALL REINFORCING SHALL BE ASTM A-615 GRADE 60 DEFORMED BARS.
4. CHAMFER ALL EXPOSED EDGES OF CONCRETE 1" @ 45° TO 6" BELOW FINISHED GRADE.
5. MINIMUM DEPTH BELOW GRADE SHALL BE 4'-0". INCREASE DEPTH TO 6'-0" BELOW GRADE IN COLORADO, MICHIGAN, & WYOMING.
6. E-Z LINE CLAMP AND SHIM BLOCK ASSEMBLY SHALL BE INSTALLED ON ALL CONCRETE SUPPORT.
7. CONTRACTOR TO CONFIRM REQUIRED BOLT PROJECTION PRIOR TO SETTING ANCHOR BOLTS BY PHYSICALLY EXAMINING E-Z LINE MATERIALS AND BY VERIFYING FINAL PIPE LOCATION.



BARREL SUPPORT PIER DETAIL
SCALE: NTS



- NOTES:
1. SIGN SIZE IS 2'x2'.
 2. SIGN TO BE PLACED ON FACILITY FENCING WITH AT LEAST ONE SIGN ON EACH SIDE.



DEWATERING HAYBALE BASIN DETAIL

SCALE: NTS

- NOTES:
1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS.
 2. THE BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
 3. KEEP AS FAR FROM WETLANDS AS PRACTICAL.
 4. CLEAN AND REMOVE AS SOON AS DEWATERING IS COMPLETE.



SCALE: NTS



1. THE GEOTEXTILE FABRIC SHALL BE PLACED IN THE EXCAVATED TRENCH, BACKFILLED, AND COMPACTED TO EXISTING GRADE.
2. THE GEOTEXTILE FABRIC SHALL BE ATTACHED DIRECTLY TO THE UPLAND SIDE OF WOODEN POSTS WITH WIRE STAPLES IN AT LEAST (3) PLACES, OR WITH WOODEN LATHS AND NAILS.
3. A WIRE STAPLE FENCE MAY BE INSTALLED TO WHICH THE GEOTEXTILE FABRIC IS ATTACHED. THE WIRE SHALL BE A MINIMUM OF 14-1/2 GAGE WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6 INCHES. THE GEOTEXTILE FABRIC SHALL BE FOLDED 3 INCHES OVER THE WIRE FENCE TO BE SECURED BY STAPLES.
4. THE GEOTEXTILE FABRIC MAY CONSIST OF EITHER WOVEN OR NON-WOVEN POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE, OR POLYVINYLIDENE CHLORIDE.
5. A DOUBLE ROW OF FENCING IS TO BE INSTALLED ADJACENT TO WETLANDS. FENCE SHALL NOT BE INSTALLED IN THE WETLAND.

REV	BY	DATE		DESCRIPTION

SEAL AND SIGNATURE	PRJ MANAGER: MARK D. WOOD			CLIENT INFORMATION  Unitil Granite State Gas Transmission			
	PRJ ENGINEER: MATT PELLETIER						
	PRJ NAME: VARNEY BROOK RECEIVERS						
	PRJ NUMBER: 5370						
	PRJ MILESTONE: PERMITTING						
	PRJ PHASE: PERMITTING						
	DESIGNED BY:		MPP	06/01/22	DESIGN MANAGER: TIM BICKFORD REVIEWED BY: DESIGN ENGINEER: BOB SCHUMMRICK CHECKED BY: ACTIVATION ORDER: APPROVED BY:		
	DRAFTED BY:		MPP	06/01/22			
	DQCM:		SMR	06/01/22			
	APPROVED BY:		MDW	06/01/22			

P E R M I T T I N G

SHEET TITLE	STANDARD DETAILS SHEET 1 OF 2
PROJECT NAME	VARNEY BROOK RECEIVERS DOVER CITY PLANNING FILE NUMBER P22-36
PROJECT LOCATION	44 POLLY ANN TRAILER PARK DOVER, NH 03820



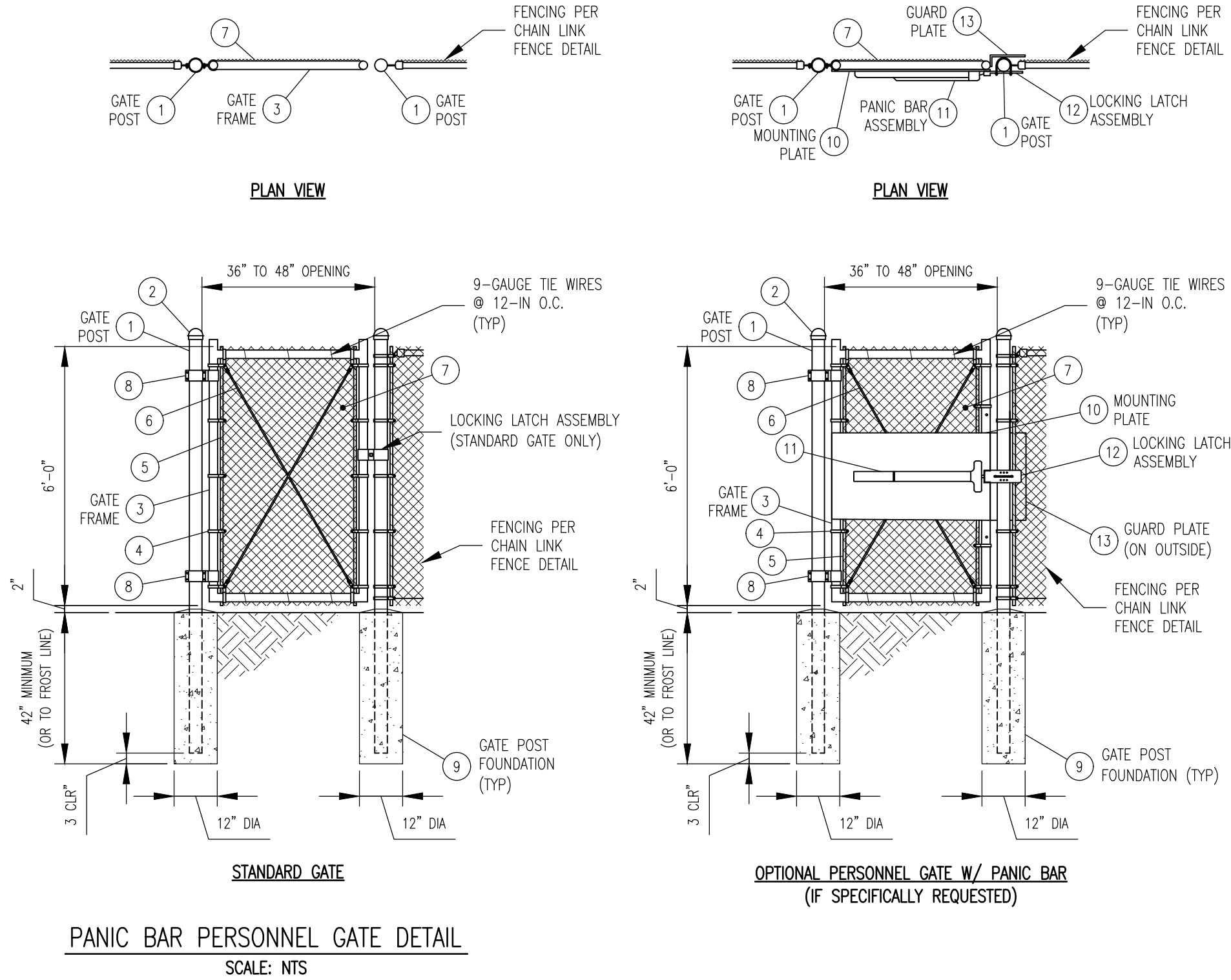
**PROCESS
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4 Broad Street
Plainville, MA 02762
781.829.0524
processpipelineservices.com

FILE NAME: 5370_C100.DWG	SIZE	NAME	REV
PLOT DATE: 06/01/2022 5:02 PM	22X34	C101	P
SHEET 6 OF 7			

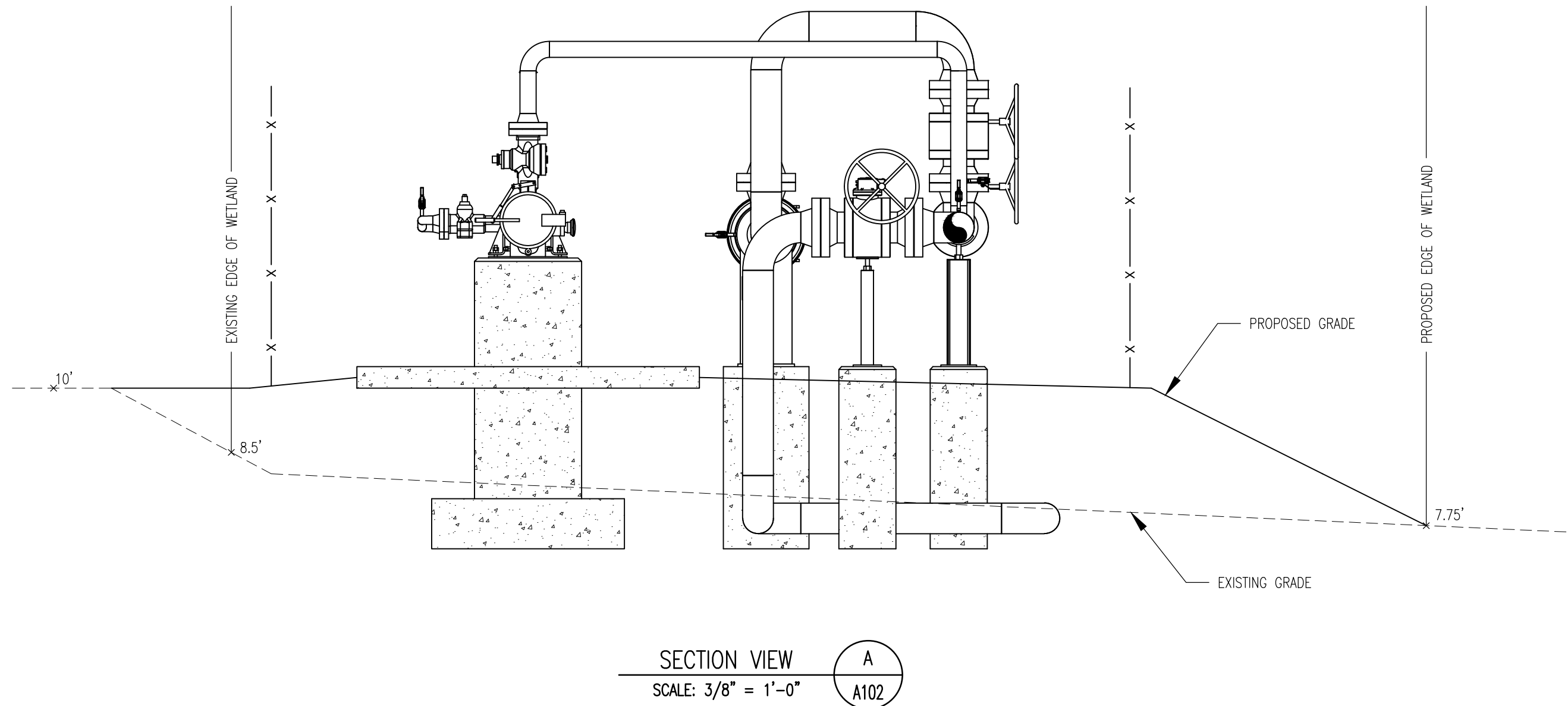
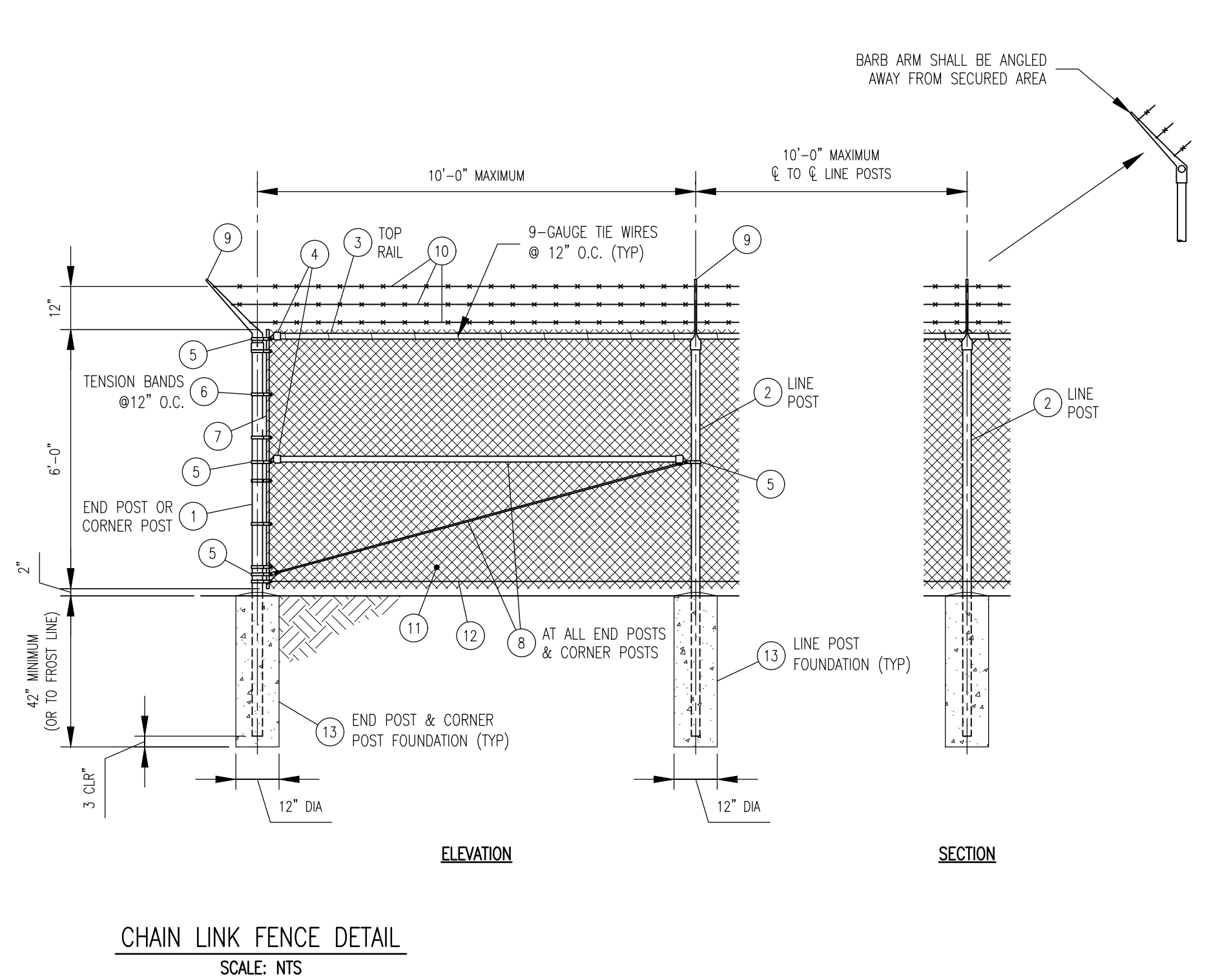
NOTES:

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
2. ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
3. ALL WELDING SHALL CONFORM TO AWS D11.1
4. ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
5. GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
6. CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



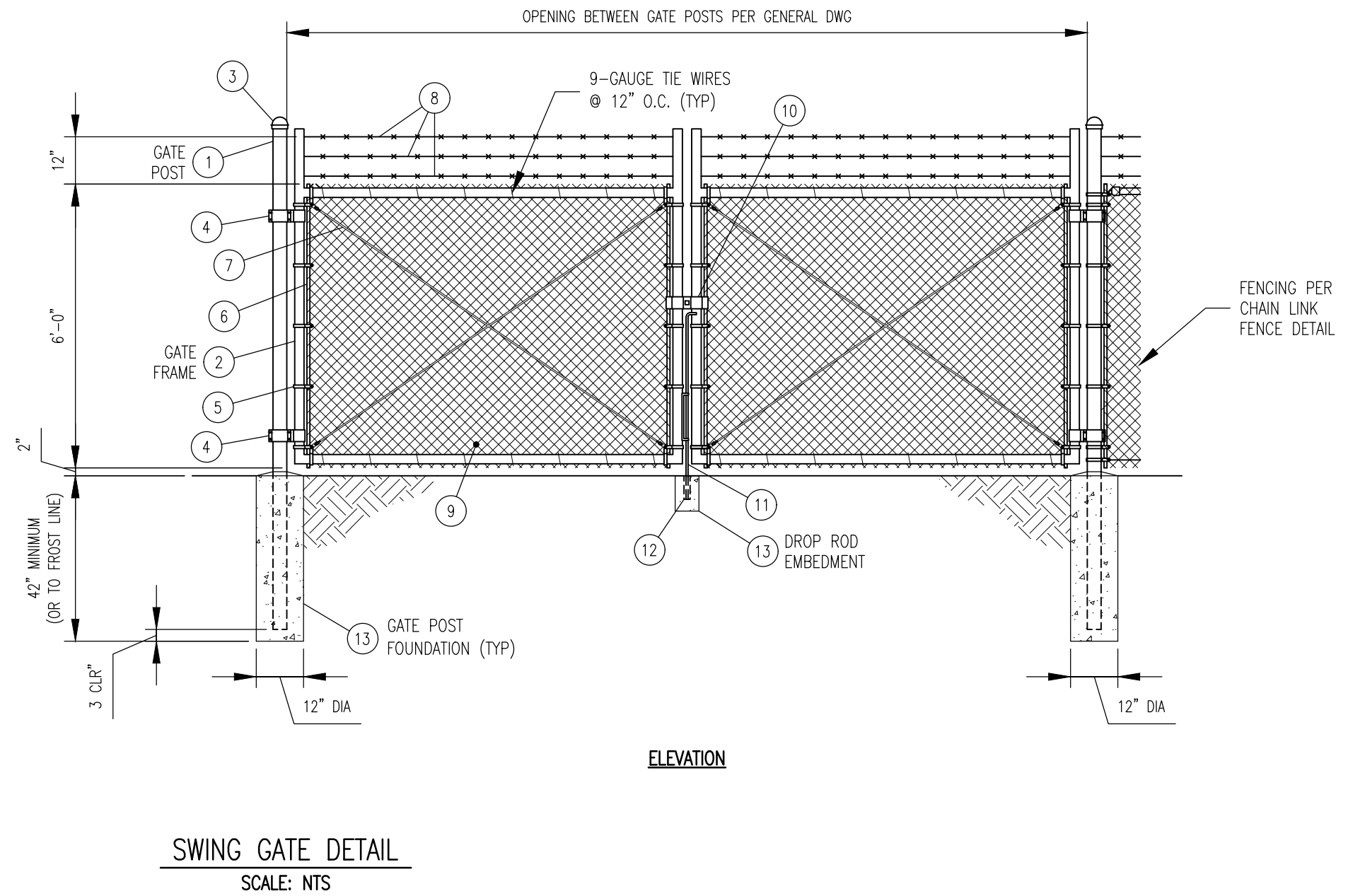
GENERAL NOTES:

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3. ALL WELDING SHALL CONFORM TO AWS D1.1.
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REV	BY	DATE	DESCRIPTION

SEAL AND SIGNATURE	PRJ MANAGER: MARK D. WOOD		
	PRJ ENGINEER: MATT PELLETIER		
	PRJ NAME: VARNEY BROOK RECEIVERS		
	PRJ NUMBER: 5370		
	PRJ MILESTONE: PERMITTING		
	PRJ PHASE: PERMITTING		
	DESIGNED BY:	MPP	06/01/22
	DRAFTED BY:	MPP	06/01/22
	QC/M:	SMR	06/01/22
	APPROVED BY:	MDW	06/01/22

DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:		
DESIGN ENGINEER: BOB SCHUMMRICK	CHECKED BY:		
ACTIVATION ORDER:	APPROVED BY:		

PERMITTING

SHEET TITLE	STANDARD DETAILS SHEET 2 OF 2
PROJECT NAME	VARNEY BROOK RECEIVERS DOVER CITY PLANNING FILE NUMBER P22-36
PROJECT LOCATION	44 POLLY ANN TRAILER PARK DOVER, NH 03820

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4 Broad Street
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AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

25 May 2022

Wetland Inspector
New Hampshire Department of Environmental Services
Wetlands Bureau
29 Hazen Drive / P.O. Box 95
Concord, New Hampshire 03302

Re: NHDES Major Impact Wetland Permit Application
Tax Map N, Lot 8-1-4
56 Saddle Trail Drive
Dover, New Hampshire

Dear Wetland Inspector:

This letter transmits a New Hampshire Department of Environmental Services (NHDES) Major Impact Wetland Permit Application request to construct a tidal docking structure consisting of a 4' x 95' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float totaling 380 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone and 570 sq. ft. of permanent impact to tidal wetlands.

Attached to this application you will find a "NH DES Dock Permit Plan-C2" which depicts the existing lot, jurisdictional areas, abutting parcels, existing structures, proposed work, and permanent impact areas.

Per Env-Wt 306.05, Certified Wetland Scientist Steve Riker from Ambit Engineering, Inc. classified all jurisdictional areas and identified the predominant functions off all relevant resources. The Highest Observable Tide Line marks the reference line for the 100' TBZ, as well the beginning of Tidal Wetland on the attached plan set. Attached to this application is a Wetland Functions and Values Assessment and Coastal Vulnerability Assessment summarizing these functions; as this project is subject to the requirements of Env-Wt 603.04 and Env-Wt 603.05.

The proposed structure will be constructed on piles within the tidal wetland further reducing permanent impacts to the tidal wetland resource. The project will have no impact on the functions and values of the adjacent tidal wetland. The docking structure has been designed to allow the adjacent tidal resource to maintain its current functions and values. The docking structure will not contribute to additional storm water or pollution. It is anticipated that there will be no affect on any fish and wildlife species that currently use the site for food, cover, and/or habitat. The tidal docking structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. The float and gangway will be temporary docking structures and will be removed during winter months as to not interfere with ice floe.

The docking structure has been designed to provide recreational boating access utilizing the natural grade of the dock location. There is no grading of the shoreline required to construct the dock. There will be no construction activity that will disturb the area adjacent to the use. All work will be performed from a crane barge at low tide. The barge floats into position and the piles are driven by the crane equipped with a

vibratory hammer. This method eliminates any contact of construction equipment with the protected resource. Portions of the docking structure are pre-fabricated off site and transported to the site via crane barge.

The construction sequence for the proposed structure are as follows:

- Mobilization of a crane barge, push boat, work skiff, materials and prefabricated components such as the gangway and float to the site via the Cocheco River and Fresh Creek.
- Mobilization of equipment trucks to the site.
- The barge will be positioned alongside the proposed location of the new dock and waterward of any emergent vegetation to minimize impacts.
- Installation of the sub structure will be performed from a crane barge or skiff to reduce the amount of foot traffic in the intertidal area.
- All work will be performed at low tide to minimize sedimentation.
- Piles will be driven by a vibratory hammer eliminating any excavation for installation of the pilings. Piles are driven to refusal.
- Piles are cut and beam caps are installed and the super structure of the pier is built. Materials are lifted from the barge and set into position by the crane.
- Once the pier is complete, the gangway and float are brought into position and installed.

The project represents the alternative with the least adverse impacts to areas and environments while allowing reasonable use of the property.

Per Env-Wt 603.02(b), attached to this application you will find a plan set which depicts the existing lot, jurisdictional areas, all natural resources in the area, abutting parcels, existing structures, and proposed structures. Also included in this application are maps created in accordance with Env-Wt 603.03 and Env-Wt 603.05.

In order to complete the application package for this project, the DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(2) has been evaluated and addressed below.

(2) a. Contains any documented occurrences of protected species or habitat for such species, using the NHB DataCheck tool;

Attached to this application are the results of the NHB review and it was determined that low brackish riverbank marsh has the potential to occur within the project area. Ambit Engineering, Inc. surveyed the property for salt marsh and has depicted the locations on the attached plan set. Ambit Engineering will coordinate with NHB regarding the natural community and comments will be forwarded to NH DES upon receipt.

(2) b. Is a bog;

Utilizing the NH DES WPPT, the subject property is not a bog, nor does it contain any portion of a bog.

- (2) c. Is a floodplain wetland contiguous to a tier 3 or higher watercourse;
Utilizing the NH DES WPPT, the subject property does contain a floodplain wetland contiguous to a tier 3 or higher watercourse.
- (2) d. Does the property contain a designated prime wetlands or a duly established 100-foot buffer; or
The property does not contain a prime wetland or duly established 100 foot buffer.
- (2) e. Does the property contain a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone;
The property does not contain a sand dune. The property does contain a tidal wetland and tidal waters.

The DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(4) and (a)(7) has been evaluated and addressed below.

- (4) a. Is the subject property within LAC jurisdiction;
The property does not fall within an area of LAC jurisdiction.
- (4) b. Does the subject property fall within or contain any areas that are subject to time of year restrictions under Env-Wt 307;
The property does not fall within or contain any areas that are subject to time of year restrictions.
- (7) Does the project have potential to impact impaired waters, class A waters, or outstanding resource waters;
I do not believe the nature of the proposed project has the potential to impact an impaired water.

The DES Wetlands Bureau rules in Chapter Env-Wt 603.02 (e) & (f) have been evaluated and addressed below.

- (e)(1) The project meets the standard conditions in Env-Wt 307;
The project meets the standard conditions in Env-Wt 307 as the proposed docking structure meets the standards of Env-Wq 1000, RSA 483-B and Env-Wq 1400. Sediment and erosion controls will also be used and maintained during the proposed construction ensuring protection of water quality on the site. Since the construction will be conducted during low tide conditions, it is not anticipated that there will be any impacts to fish or shellfish. Under Env-Wt 306.05 (a)(2)a. a NHB review has been performed to ensure there are no impacts to protected species or habitats of such species. The protection of Prime Wetlands or Duly-Established 100 foot buffers does not apply as none exist on or adjacent to the subject lot.
- (e)(2) The project meets the approval criteria in Env-Wt 313.01;
The project meets the approval criteria in Env-Wt 313.01 as the project requires a functional assessment (attached), meets the avoidance and minimization requirements specified in Env-Wt 313.03, does not require compensatory mitigation, meets applicable conditions specified in Env-Wt 307 (above), meets project specific criteria listed in Env-Wt 600 (above), and the project is located entirely within the boundary of the applicants property.
- (f)(1) The project design narrative as described in Env-Wt 603.06;
The project design narrative is provided above.

(f)(2) Design plans that meet the requirements of Env-Wt 603.07;
The design plans meet the above standard.

(f)(3) The water depth supporting information required by Env-Wt 603.08;
The design plans provide water depth information.

(f)(4) A statement regarding impact on navigation and passage required by Env-Wt 603.09.
The Permit Plan Set will be provided to the Pease Development Authority, Division of Ports and Harbors, for formal review and comment by the Harbormaster. That documentation will be provided to NH DES upon receipt.

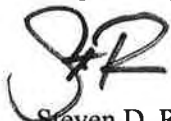
In accordance with New Hampshire Administrative Rule Env-Wt 606.02(a) and 606.06(e), the marine contractor which will be constructing the proposed dock modification utilizes a vibratory hammer to install piles. The vibratory hammer uses vibration to install the pile in the marine sediment, instead of a standard hammer which uses a physical force to drive the pile, and subsequently a much greater noise impact. Using the vibratory hammer is the least impacting alternative to drive piles for dock construction.

The proposed pile locations for the dock are located above the Mean Low Water (MLW) line will be installed at low tide. Installation during "the dry" greatly reduces the amount of noise that is transmitted into the water column, as no water will be present at the pile location.

Lastly, the proposed structure will use CCA (Chromated Copper Arsenate) treated lumber. The proposed piles will be CCA treated 12" diameter southern yellow pine. Attached to this application is a Safety Data Sheet for CCA treated wood. Per the data sheet, toxicity is limited to inhalation of wood dust originating from CCA treated lumber. Additionally, per the Safety Data Sheet, 12. Ecological Information (page 12) "The product is not classified as environmentally hazardous. However, this does exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment." The product is also insoluble in water. The marine contractor that will be constructing the proposed docking structure receives the timber piles and lumber pre-treated. The marine contractor does not treat the lumber, and therefore there is no risk of spilling the treatment chemical in or near resource areas.

Please contact me if you have any questions or concerns regarding this application.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'S. Riker', with a stylized 'S' and 'R'.

Steven D. Riker, CWS
NH Certified Wetland Scientist/Permitting Specialist
Ambit Engineering, Inc.

16 May, 2022

To Whom It May Concern:

**RE: State of New Hampshire DES Wetlands Bureau Standard Dredge and Fill
Application for proposed shoreline stabilization within the previously developed
100' Tidal Buffer Zone and jurisdictional wetlands for Peter T. Paul Living Trust
of 56 Saddle Trail Drive Dover, NH 03820**

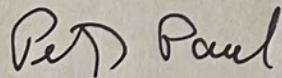
This letter is to inform the City of Dover in accordance with State Law that the
following entities:

Riverside Marine Construction, Inc.
Ambit Engineering, Inc

Are authorized to represent me as my agent in the approval process.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

A handwritten signature in dark ink, appearing to read "Peter T. Paul". The signature is written in a cursive, flowing style.

Peter T. Paul Living Trust
Peter Paul, Trustee
56 Saddle Trail Drive
Dover, NH 03820



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: Peter T. Paul Living Trust

TOWN NAME: Dover

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

A person may request a waiver of 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 but is still in compliance with RSA 482-A. 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 [Waiver Request Form](#).

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))

Please use the [Wetland Permit Planning Tool \(WPPT\)](#), the Natural Heritage Bureau (NHB) [DataCheck Tool](#), the [Aquatic Restoration Mapper](#), or other sources to assist in identifying key features such as: [priority resource areas \(PRAs\)](#), [protected species or habitats](#), coastal areas, designated rivers, or designated prime wetlands.

Has the required planning been completed?	☒ Yes ☐ No
Does the property contain a PRA? If yes, provide the following information:	☒ Yes ☐ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&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.	☐ Yes ☒ No
• Protected species or habitat? - o If yes, species or habitat name(s): low brackish riverbank marsh - o NHB Project ID #: 22-1312	☒ Yes ☐ No
• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☒ Yes ☐ No
• Designated prime wetland or duly-established 100-foot buffer?	☐ Yes ☒ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☒ Yes ☐ No
Is the property within a Designated River corridor? If yes, provide the following information:	☐ Yes ☒ No
• Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year: N/A	

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

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	☐ Yes ☒ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☐ Yes ☒ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): N/A	
SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i)) Provide a brief 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.	
The project proposes the construction of a tidal docking structure consisting of a 4' x 95' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float totaling 380 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone and 570 sq. ft. of permanent impact to tidal wetlands.	
SECTION 3 - PROJECT LOCATION Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.	
ADDRESS: 56 Saddle Trail Drive	
TOWN/CITY: Dover	
TAX MAP/BLOCK/LOT/UNIT: Map N, Lot 8-1-4	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Fresh Creek ☐ N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): X: 1,205,245.2063° North Y: 253,153.7361° West	

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))

If the applicant is a trust or a company, then complete with the trust or company information.

NAME: Peter T. Paul Living Trust

MAILING ADDRESS: 56 Saddle Trail Drive

TOWN/CITY: Dover

STATE: NH

ZIP CODE: 03820

EMAIL ADDRESS: peter.paul@headlands.us

FAX:

PHONE: 415-971-0765

ELECTRONIC COMMUNICATION: By initialing here: , I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))☐ N/A

LAST NAME, FIRST NAME, M.I.: Riker, Steven, D.

COMPANY NAME: Ambit Engineering, Inc.

MAILING ADDRESS: 200 Griffin Road, Unit 3

TOWN/CITY: Portsmouth

STATE: NH

ZIP CODE: 03801

EMAIL ADDRESS: sdr@ambitengineering.com

FAX:

PHONE: 603-430-9282

ELECTRONIC COMMUNICATION: By initialing here *SR*, I hereby authorize NHDES to communicate all matters relative to this application electronically.**SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))**

If the owner is a trust or a company, then complete with the trust or company information.

☐ Same as applicant

NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

EMAIL ADDRESS:

FAX:

PHONE:

ELECTRONIC COMMUNICATION: By initialing here , 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):

Please see attached narrative.

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 you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable). 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						
	Scrub-shrub Wetland						
	Emergent Wetland						
	Wet Meadow						
	Vernal Pool						
	Designated Prime Wetland						
	Duly-established 100-foot Prime Wetland Buffer						
Surface Water	Intermittent / Ephemeral Stream						
	Perennial Stream or River						
	Lake / Pond						
	Docking - Lake / Pond						
	Docking - River						
Banks	Bank - Intermittent Stream						
	Bank - Perennial Stream / River						
	Bank / Shoreline - Lake / Pond						
Tidal	Tidal Waters						
	Tidal Marsh						
	Sand Dune						
	Undeveloped Tidal Buffer Zone (TBZ)						
	Previously-developed TBZ	380					
	Docking - Tidal Water	570					
TOTAL		950					

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):		SF	×	\$0.40 =	\$	
Seasonal docking structure:	490	SF	×	\$2.00 =	\$	980
Permanent docking structure:	460	SF	×	\$4.00 =	\$	1840
Projects proposing shoreline structures (including docks) add \$400 =					\$	400
Total =					\$	3200
The application fee for minor or major impact is the above calculated total or \$400, whichever is greater =						\$

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

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)

Indicate the project classification.

☐ Minimum Impact Project☐ Minor Project☒ Major Project**SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)**

Initial each box below to certify:

Initials:

SR

To the best of the signer's knowledge and belief, all required notifications have been provided.

Initials:

SR

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:

SR

The signer understands that:

- The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:
 1. Deny the application.
 2. Revoke any approval that is granted based on the information.
 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.
- The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.
- 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.

Initials:

SR

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):

PRINT NAME LEGIBLY:

DATE:

SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):

PRINT NAME LEGIBLY:

DATE:

SIGNATURE (AGENT, IF APPLICABLE):

Steven Riker

PRINT NAME LEGIBLY:

Steven D. Riker

DATE:

5/25/2022

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:

TOWN/CITY:

DATE:

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".



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.: Peter T. Paul Living Trust

Applicability: 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 including 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 project proposes the construction of a tidal docking structure consisting of a 4' x 95' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float totaling 380 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone and 570 sq. ft. of permanent impact to tidal wetlands. Since the proposed tidal dock will serve to provide a water dependent function, practicable alternatives along the 360+/-feet of shoreline are reduced due to the presence of saltmarsh and maintaining a 20 foot setback to property lines extended. The proposed structure has been placed to provide the intended function and provide safe navigation to and from the proposed float location. The proposed tidal docking structure will provide recreational boating access to Fresh Creek and the Cocheco River.

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For standard permit projects, provide:

- ☒ A Coastal Functional Assessment (CFA) report (refer to Section 3); and
- ☒ A vulnerability assessment (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 603.04, Env-Wt 311.07, and Env-Wt 313.

A Coastal Functional Assessment and a Coastal Vulnerability Assessment is attached to this application per Env-Wt 603.04. An Avoidance & Minimization Form is attached to this application, and also described in the attached narrative letter per Env-Wt 311.07 and Env-Wt 313.

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 project plan set, specifically the Details-Sheet D1 includes all notes demonstrating compliance with Env-Wt 307 and Env-Wt 313.01.

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.

The completed project will result in a permanent fixed pier, with an attached gangway and associated float. The gangway and float are/will be seasonal structures and will be removed in the non-boating season. Other than removal and re-installation, there is no maintenance or management of the tidal docking structure over its expected life span, which is 50-100 years.

- ☒ 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.

Review and comment by the Pease Development Authority will be provided to NH DES upon receipt.

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 or tidal waters or associated sand dunes, the applicant shall:

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- ☐ 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, crustacea, 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:

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

A Coastal Vulnerability Assessment is attached to this application.

- b. 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;

See attached CVA

- c. 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;

See attached CVA

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

See attached CVA

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

See attached CVA

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

See attached CVA

- g. 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: **N/A**

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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 a line with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from 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; and
 - ☒ 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).

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 3 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), and 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.

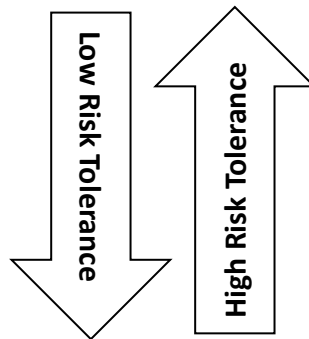
SECTION 10 – GUIDANCE

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.



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 LAST NAME, FIRST NAME, M.I.: Peter T. Paul Living Trust

Attachment A can be used to satisfy some of the additional requirements for minor and major projects regarding avoidance and minimization, as well as functional assessment.

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 PROJECT PROPOSES THE CONSTRUCTION OF A TIDAL DOCKING STRUCTURE CONSISTING OF A 4' X 95' ACCESSWAY, A 4' X 20' FIXED WOOD PIER, A 3' X 30' GANGWAY AND A 10' X 40' FLOAT TOTALING 380 SQ. FT. OF PERMANENT IMPACT TO THE PREVIOUSLY DEVELOPED 100' TIDAL BUFFER ZONE AND 570 SQ. FT. OF PERMANENT IMPACT TO TIDAL WETLANDS. OVERALL STRUCTURE LENGTH WILL BE 90 FEET LOCATED ON 360+/- OF FRONTAGE ALONG FRESH CREEK. SINCE THE PROPOSED TIDAL DOCK WILL SERVE TO PROVIDE A WATER DEPENDENT FUNCTION, PRACTICABLE ALTERNATIVES ALONG THE 360 +/- FEET OF SHORELINE ARE REDUCED DUE TO THE PRESENCE OF SALTMARSH AND MAINTAINING A 20 FOOT SETBACK TO PROPERTY LINES EXTENDED. THE PROPOSED STRUCTURE HAS BEEN LOCATED ALONG THE SUBJECT SHORELINE TO IMPACT THE LEAST AMOUNT SALTMARSH AREA POSSIBLE, DEMONSTRATING THE LEAST IMPACTING ALTERNATIVE.

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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, crustacea, shellfish and wildlife of significant value.

The proposed location represents the least impacting alternative as impacts to salt marshes to construct the proposed dock are located to impact the least amount of square footage over saltmarsh as possible .

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

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

The proposed docking structure will be constructed on piles within the tidal wetland further reducing permanent impacts to the tidal wetland resource. Since the docking structure will be constructed on piles, the structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement.

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.

Per the NHB Review, low brackish riverbank marsh has been identified as a natural community on or near the project site. The proposed dock demonstrates the least impacting alternative in regards to square footage of structure placed over the natural community. Coordination with NHB regards to low brackish riverbank marsh is expected and comments will be forwarded to NH DES upon receipt.

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.

The proposed tidal docking structure has been designed to not impede recreation, public commerce, and navigation. The docking structure does not extend into any federal or local navigation channel.

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.

The project does not propose any impacts to floodplain wetlands as the dock will be constructed on piles therefore providing no significant decrease in flood storage potential.

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.

The project does not propose impacts to riverine forested wetland systems and scrub shrub marsh complexes.

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 wetland resources associated with the project site are not hydrologically connected to a groundwater aquifer or drinking water supply.

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.

The project does not propose any impacts to stream channels.

PART II: FUNCTIONAL ASSESSMENT**REQUIREMENTS**

Ensure that project meets requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

FUNCTIONAL ASSESSMENT METHOD USED:

Wetland functions and values were assessed using the Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach. U.S. Army Corps of Engineers. 1999. The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach. U.S. Army Corps of Engineers. New England Division. 32pp. NAEPP-360-1-30a.

NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: STEVEN D. RIKER, CWS

DATE OF ASSESSMENT: NOVEMBER 23 2021

Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: ☒

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: ☒

Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.



**AVOIDANCE AND MINIMIZATION
WRITTEN NARRATIVE**
Water Division/Land Resources Management
Wetlands Bureau
[Check the Status of your Application](#)



RSA/ Rule: RSA 482-A/ Env-Wt 311.04(j); Env-Wt 311.07; Env-Wt 313.01(a)(1),b; Env-Wt 313.01(c)

APPLICANT LAST NAME, FIRST NAME, M.I.: Peter T. Paul Living Trust

An applicant for a standard permit shall submit with the permit application a written narrative that explains how all impacts to functions and values of all jurisdictional areas have been avoided and minimized to the maximum extent practicable. This attachment can be used to guide this narrative (attach additional pages if needed). Alternatively, the applicant may attach a completed Avoidance and Minimization Checklist (NHDES-W-06-050) to the permit application.

SECTION 1 - WATER ACCESS STRUCTURES (Env-Wt 311.07(b)(1))

Is the primary purpose of the proposed project to construct a water access structure?

Yes. The project proposes to construct a tidal docking structure for recreational boating access.

SECTION 2 - BUILDABLE LOT (Env-Wt 311.07(b)(1))

Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?

No. This is not applicable.

SECTION 3 - AVAILABLE PROPERTY (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 PRA, or both, are any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, that 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?

Since the proposal includes the construction of a tidal docking structure, providing a water dependent function, this is not applicable.

SECTION 4 - ALTERNATIVES (Env-Wt 311.07(b)(3))

Could alternative designs or techniques, such as different layouts, different construction sequencing, or alternative technologies be used to avoid impacts to jurisdictional areas or their functions and values on the subject property or on other property that is reasonably available to the applicant as described in the *Wetlands Best Management Practice Techniques for Avoidance and Minimization*?

The project proposes the construction of a tidal docking structure consisting of a 4' x 95' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float totaling 380 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone and 570 sq. ft. of permanent impact to tidal wetlands. Overall structure length will be 90 feet located on 360+/- of frontage along Fresh Creek. Since the proposed tidal dock will serve to provide a water dependent function, practicable alternatives along the 360+/-feet of shoreline are reduced due to the presence of saltmarsh and maintaining a 20 foot setback to property lines extended.

SECTION 5 - CONFORMANCE WITH Env-Wt 311.10(c) (Env-Wt 311.07(b)(4))

How does the project conform to Env-Wt 311.10(c)? Please note that for a minimum impact project, the applicant may replace this explanation with a certification signed by a certified wetland scientist that the project is located and designed to minimize impacts to wetlands functions and values.

The proposed docking structure will be constructed on piles within the tidal wetland further reducing permanent impacts to the tidal wetland resource. The docking structure has been designed to allow the adjacent tidal resource to maintain its current functions and values. The tidal docking structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. As a result, The project will have no impact on the functions and values of the adjacent tidal wetland. A Wetland Functions and Values Assessment is attached to this application.

Map by NH GRANIT



Legend

- State
- County
- City/Town

Map Scale

1: 25,977

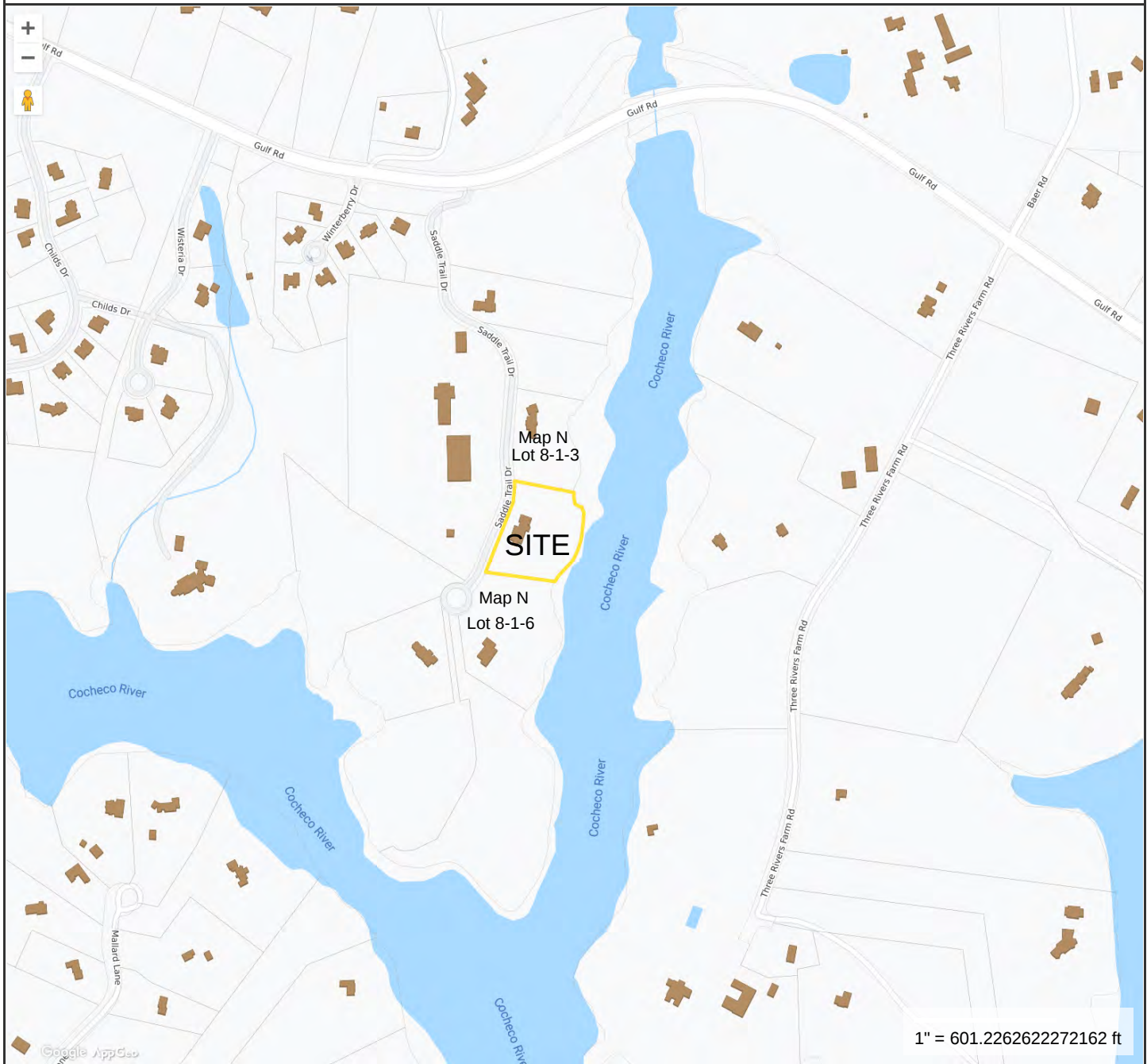
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Map Generated: 4/27/2022



Notes



**Property Information**

Property ID N0008-001004
Location 56 SADDLE TRAIL DR
Owner PAUL PETER T TRUSTEE
Land Use 101

**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 5/3/2021
Data updated Daily

Print map scale is approximate.
Critical layout or measurement
activities should not be done using
this resource.



AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

18 May 2022

Daniel & Carla Meyers Revocable Living Trust
44 Saddle Trail Drive
Dover, NH 03820

RE: New Hampshire Wetland Application for construction of a tidal docking structure for Peter T. Paul Living Trust, 56 Saddle Trail Drive, Dover, NH.

Dear Property Owner,

Under NH RSA 482-A, this letter is to inform you in accordance with State Law that a Wetlands Permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **impact jurisdictional wetlands for the construction of a tidal docking structure**, on behalf of your abutter, **Peter T. Paul Living Trust**.

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that **Peter T. Paul Living Trust** proposes a project that requires construction in the previously developed tidal buffer zone, and jurisdictional wetland areas.

Plans are on file at this office, and once the application is filed, plans that show the proposed project and wetland and other jurisdictional impacts will be available for viewing during normal business hours at the office of the **Dover** clerk, **Dover city offices**, or once received by DES, at the offices of the DES Wetlands Bureau, (8 a.m. to 4 p.m.) (603) 271-2147. It is suggested that you call ahead to the appropriate office to ensure the application is available for review.

Please feel free to call if you have any questions or comments.

Sincerely,

Steven D. Riker
NH Certified Wetland Scientist – Permitting Specialist

CERTIFIED MAIL/Return Receipt Requested



AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

18 May 2022

Lawrence F. & Laura M. Morris
74 Saddle Trail Drive
Dover, NH 03820

RE: New Hampshire Wetland Application for construction of a tidal docking structure for Peter T. Paul Living Trust, 56 Saddle Trail Drive, Dover, NH.

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CERTIFIED MAIL/Return Receipt Requested

Job # 3402.04

[illegible]

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Total Postage and Fees

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MORRIS

Street and Apt. No., or PO Box No.

74 SADDLE TRAIL DRIVE

City, State, ZIP+4®

DOVER, NH 03820

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

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MEYERS

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City, State, ZIP+4®

DOVER, NH 03820

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

Postmark
Here

Site Photograph #1

December 2021



Site Photograph #2

December 2021



Site Photograph #3

December 2021



Site Photograph #4

December 2021



Site Photograph #5

December 2021



Site Photograph #6

April 2022



Site Photograph #7

April 2022



Site Photograph #8

April 2022



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: John Chagnon, Ambit Engineering, Inc.
200 Griffin Road
Unit 3
Portsmouth, NH 03801

From: NHB Review, NH Natural Heritage Bureau

Date: 2022-04-15 (valid until 04-15-2023)

Re: Review by NH Natural Heritage Bureau

Permits: NHDES - Wetland Standard Dredge & Fill - Major, USACE - General Permit

NHB ID: NHB22-1312 **Town:** Dover **Location:** 56 Saddle Trail Drive
Description: The project proposes a tidal docking structure consisting of a 4' x 16' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float secured by 4 helical moorings located along the shoreline of the subject property.

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

Comments **NHB: The proposed project is within an exemplary low brackish riverbank marsh. Please send site plans and photos depicting where work will occur, and the distance from the proposed structure to any wetland and/or aquatic vegetation.**
F&G: No Comments At This Time

Natural Community	State ¹	Federal	Notes
Low brackish riverbank marsh	--	--	

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

Disclaimer: 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.

IMPORTANT: NHFG Consultation

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

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

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

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://wildlife.state.nh.us/wildlife/environmental-review.html>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB Datacheck results letter number and “Fis 1004 consultation request” in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email: Kim Tuttle kim.tuttle@wildlife.nh.gov with a copy to NHFGreview@wildlife.nh.gov, and include the NHB Datacheck results letter number and “review request” in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB22-1312



New Hampshire Natural Heritage Bureau - Community Record

Low brackish riverbank marsh

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank: --

Detailed Description: 2004: Dominant species are *Spartina alterniflora* (smooth cord-grass), *Amaranthus cannabinus* (water hemp), and *Typha angustifolia* (narrow-leaved cattail). Less frequent are *Lemna minor* (lesser duckweed), *Polygonum hydropiper* (water-pepper), *Argentina egedii* (coastal silverweed), *Eleocharis parvula* (small spike-rush), *Ranunculus cymbalaria* (seaside crowfoot), *Lilaeopsis chinensis* (eastern lilaopsis), and *Samolus parviflorus* (false water pimpernel). 1988: Forms a narrow zone along the river, dominated by *Spartina alterniflora* (smooth cord-grass). A few stands of *Typha angustifolia* (narrow-leaved cattail) exist, mostly less than an acre in size. Rare plant species present are *Samolus parviflorus* (false water pimpernel), *Lilaeopsis chinensis* (eastern lilaopsis), and *Eleocharis parvula* (small spike-rush). *Spartina alterniflora* (smooth cord-grass) is dominant. A few stands of *Typha angustifolia* (narrow-leaved cat-tail) exist. Many exotic species are present. The bases of steep, rocky slopes support virtually no emergent vegetation.

General Area: 2004: This low marsh lies adjacent to a sparsely or narrowly vegetated **high brackish tidal riverbank marsh**. The high tidal riverbank is often an unvegetated zone grading into the adjacent upland. Some characteristic species are *Solidago sempervirens* (seaside goldenrod) and *Spartina pectinata* (fresh-water cord-grass). Along most of the riverbank community, moderate residential and commercial development occurs on adjacent lands. High levels of development occur along the west end of the riverbank in downtown Dover. 1988: A narrow zone along the river. Bordered by steep forested slopes and heavily impacted areas.

General Comments: --

Management

Comments: 2004: Several invasive species occur on the higher margins of the riverbank community, especially at the west end nearest downtown Dover. They include *Lythrum salicaria* (purple loosestrife), *Phalaris arundinacea* (reed canary-grass), *Rorippa nasturtium-aquaticum* (true watercress), *Polygonum cuspidatum* (Japanese knotweed), and *Solanum dulcamara* (nightshade). These plants should be monitored. 1988: Guard against future development. Current disturbance includes impacts by rock fill, dams, clearing, and power plant construction.

Location

Survey Site Name: Cocheco River Narrows

Managed By:

County: Strafford

Town(s): Dover

Size: 94.2 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Cocheco River downstream of downtown Dover. 2004: The tidal riverbank marsh extends from downtown Dover (beginning downstream of Washington Street) to the mouth of the Cocheco. For the tidal marsh nearest downtown Dover, park at Henry Law Park. For the tidal marsh 0.75 miles eastward, from Henry Law Avenue, turn north onto a access road to baseball fields. Park in lot for baseball fields and walk NE, across power line corridor, to Cocheco River. 1988: Tidal wetlands and shores along Cocheco River between upper and lower narrows, due east and just downstream of downtown Dover.

Dates documented

First reported:	1988-09-13	Last reported:	2004-09-23
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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.

[Greater Atlantic Regional Office](#)
[Atlantic Highly Migratory Species Management Division](#)

Query Results

Degrees, Minutes, Seconds: Latitude = 43° 11' 30" N, Longitude = 71° 9' 43" W

Decimal Degrees: Latitude = 43.192, Longitude = -70.838

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

*** WARNING ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

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 Eggs	New England	Amendment 14 to the Northeast Multispecies FMP
		Pollock	Juvenile Eggs Larvae	New England	Amendment 14 to the Northeast Multispecies FMP

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	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

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

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

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.

****For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

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****For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

All spatial data is currently available for the Mid-Atlantic and New England councils,

Secretarial EFH,

Bigeye Sand Tiger Shark,

Bigeye Sixgill Shark,

Caribbean Sharpnose Shark,

Galapagos Shark,

Narrowtooth Shark,

Sevengill Shark,

Sixgill Shark,

Smooth Hammerhead Shark,

Smalltail Shark



SAFETY DATA SHEET

1. Identification

Product identifier

CCA Treated Wood

Other means of identification

SDS number

92-KPC

Recommended use

Preservative Treated Wood for various weather protected and exterior uses.

Recommended restrictions

None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name

Koppers Performance Chemicals Inc.

Address

1016 Everee Inn Rd., Griffin, GA 30224

Telephone number

770-233-4200

Contact person

Regulatory Manager, KPC Inc.

Emergency Telephone

CHEMTREC 1-800-424-9300

Number

E-mail

KPCmgrsds@koppers.com

2. Hazard(s) identification

Physical hazards

Not classified.

Health hazards

Carcinogenicity (Inhalation)

Category 1A

OSHA defined hazards

Combustible dust

Label elements



Signal word

Danger

Hazard statement

May cause cancer by inhalation. May form combustible dust concentrations in air.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Wear protective gloves/protective clothing/eye protection/face protection. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.

Response

If exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water fog, foam, carbon dioxide, dry chemical for extinction. Collect spillage.

Storage

Store away from incompatible materials.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5
Wood	N/A	<85

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Components not listed are either non-hazardous or are below reportable limits.

Depending on the additives applied to the treating solution, this wood may also contain <1 % of mold inhibitors, <1% of a non-hazardous oil emulsion, and <% of a colorant.

4. First-aid measures**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals.

Skin contact

Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact

Do not rub eye. Immediately flush eye(s) with plenty of water. Remove any contact lenses and open eyelids wide apart. If irritation persists get medical attention.

Ingestion

Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed

Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Indication of immediate medical attention and special treatment needed

If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures**Suitable extinguishing media**

Water fog. Foam. Carbon dioxide (CO₂). Dry chemical powder. Apply extinguishing media carefully to avoid creating airborne dust.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use only non-sparking tools. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Do not burn preserved wood. Do not use preserved wood as Mulch. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, spark, open flames and other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

Components	Type	Value	Form
Wood Dust (CAS N/A)	PEL	5 mg/m ³	Respirable dust.
		15 mg/m ³	Total fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Trivalent Chromium (CAS 1308-38-9)	PEL	0.5 mg/m ³

ACGIH

Components	Type	Value	Form
Wood Dust (CAS N/A)	TWA	1 mg/m ³	Inhalable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value
Arsenic Pentoxide (CAS 1303-28-2)	TWA	0.01 mg/m ³
Trivalent Chromium (CAS 1308-38-9)	TWA	0.5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Arsenic Pentoxide (CAS 1303-28-2)	Ceiling	0.002 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Copper Oxide (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
Trivalent Chromium (CAS 1308-38-9)	TWA	0.5 mg/m3	
Wood Dust (CAS N/A)	TWA	1 mg/m3	Dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Arsenic Pentoxide (CAS 1303-28-2)	35 µg/l	Inorganic arsenic, plus methylated metabolites, as As	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear dust-resistant safety goggles with side shields where there is danger of eye contact.

Skin protection

Hand protection

When handling wood, wear leather or fabric gloves.

Other

Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH-approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CFR 1910.134, respiratory protection standard).

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

If wood dust contacts the skin, workers should wash the affected areas with soap and water. Clothing contaminated with wood dust should be removed, and provisions should be made for the safe removal of the chemical from the clothing. Persons laundering the clothes should be informed of the hazardous properties of wood dust. A worker who handles wood dust should thoroughly wash hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication. Workers should not eat, drink, use tobacco products, apply cosmetics, or take medication in areas where wood dust is handled, or processed.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Color	Yellow/green.

Odor Wood odor.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Combustible solid.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Highly insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Density	As wood.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Minimize dust generation and accumulation. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

11. Toxicological information**Information on likely routes of exposure**

Inhalation	Wood dust, treated or untreated, is irritating to the nose, throat and lungs. Prolonged or repeated inhalation of wood dusts may cause respiratory irritation, recurrent bronchitis and prolonged colds. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals. Prolonged exposure to wood dusts by inhalation has been reported to be associated with nasal and paranasal cancer.
Skin contact	Handling may cause splinters. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals.
Eye contact	Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting. If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility. Certain species of wood and their dusts may contain natural toxins, which can have adverse effects in humans.

Symptoms related to the physical, chemical and toxicological characteristics

Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust may irritate the eyes.

Respiratory or skin sensitization

ACGIH Sensitization

Wood (CAS N/A)

Dermal sensitization

Respiratory sensitization

Respiratory sensitization

Exposure to wood dusts can result in hypersensitivity,

Skin sensitization

Exposure to wood dust can result in the development of contact dermatitis. The primary irritant dermatitis resulting from skin contact with wood dusts consist of erythema, blistering, and sometimes erosion and secondary infections occur.

Germ cell mutagenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a mutagen by OSHA.

Carcinogenicity

May cause cancer by inhalation.

This classification is based on an increased incidence of nasal and paranasal cancers in people exposed to wood dusts.

IARC Monographs. Overall Evaluation of Carcinogenicity

Arsenic Pentoxide (CAS 1303-28-2)

1 Carcinogenic to humans.

Trivalent Chromium (CAS 1308-38-9)

3 Not classifiable as to carcinogenicity to humans.

Wood (CAS N/A)

1 Carcinogenic to humans.

NTP Report on Carcinogens

Arsenic Pentoxide (CAS 1303-28-2)

Known To Be Human Carcinogen.

Wood Dust (CAS N/A)

Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)

Cancer

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not likely, due to the form of the product.

Chronic effects

Chronic exposure to wood dusts can result in pneumonitis, and coughing, wheezing, fever and the other signs and symptoms associated with chronic bronchitis. Individuals with pre-existing disease in or a history of ailments involving the skin, kidney, liver, respiratory tract, eyes, or nervous system are at a greater than normal risk of developing adverse effects from woodworking operations with this product.

Further information

The effects of industrial exposure to the chrome-copper-arsenic preservative used to treat CCA wood has been evaluated in three independent epidemiology studies. In each case the authors concluded that workers exposed on a daily basis to these preservatives were at no increased risk of death or disease as a result of their exposure.

Recreational exposure to children using CCA treated wood playground equipment has been evaluated. The results of this study indicate that the amount of arsenic transferred from the wood surface to the child is within the normal variation of total arsenic exposure to children and that the maximum risks of skin cancer associated with the exposure approximates the skin cancer risk from the sunlight experienced during play periods. Leaf, stem, and fruit of grape plants grown adjacent to CCA treated wood poles did not take up preservative components from the poles above background levels (limit of detection 0.2 and 0.05 ppm for chrome and arsenic, respectively).

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available on bioaccumulation.

Mobility in soil

The product is insoluble in water.

Mobility in general

The product is not volatile but may be spread by dust-raising handling.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. DO NOT BURN! Ash may be toxic and a hazardous waste; combustion vapors may be toxic. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste P List: Reference

Arsenic Pentoxide (CAS 1303-28-2) P011

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are listed on or exempt from the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2) Cancer
Liver
Skin
Respiratory irritation
Nervous system
Acute toxicity

CERCLA Hazardous Substance List (40 CFR 302.4)

Arsenic Pentoxide (CAS 1303-28-2) LISTED
Copper Oxide (CAS 1317-39-1) LISTED
Trivalent Chromium (CAS 1308-38-9) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Arsenic Pentoxide	1303-28-2	1		100	10000

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

US. New Jersey Worker and Community Right-to-Know Act

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)
Wood Dust (CAS N/A)

US. Pennsylvania Worker and Community Right-to-Know Law

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)
Wood Dust (CAS N/A)

US. Rhode Island RTK

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Wood Dust (CAS N/A)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-April-2015
Revision date 01-June-2015
Version # 02

Further information

HMIS® is a registered trade and service mark of the NPCA.
E - Safety Glasses, Gloves, Dust Respirator

PERCENTAGE OF HAZARDOUS INGREDIENTS COMPONENT %:

0.25 pcf

Arsenic Pentoxide 0.3%, Copper Oxide 0.15%, Chromium Trioxide 0.4%, Wood Dust* 84.28%

0.4 pcf

Arsenic Pentoxide 0.4%, Copper Oxide 0.2%, Chromium Trioxide 0.6%, Wood Dust* 83.98%

0.6 pcf

Arsenic Pentoxide 0.6%, Copper Oxide 0.3%, Chromium Trioxide 0.9%, Wood Dust* 83.47%

1.0 pcf

Arsenic Pentoxide 1.0%, Copper Oxide 0.6%, Chromium Trioxide 1.4%, Wood Dust* 82.45%

2.5 pcf

Arsenic Pentoxide 2.6%, Copper Oxide 1.3%, Chromium Trioxide 3.3%, Wood Dust* 78.88%

* This represents the maximum amount of wood dust that could be generated if the wood was completely machined.

The above percentages are based on the applicable retention, a wood density of 32 pcf., and a moisture content of 15%, the above values may vary due to the variability of treatment and the natural variability of wood.

HMIS® ratings

Health: 1*

Flammability: 1

Physical hazard: 0

Personal protection: E

NFPA ratings



Disclaimer

Koppers Performance Chemicals Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Return to:
Peter T. Paul
21 Cotton Farm Lane
North Hampton, NH 03862

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Book 4956 Page 741

09/22/2021 08:55:34 AM
Page 1 of 2

Catherine A. Berube
Register of Deeds, Strafford County
LCHIP STA186356 25.00
TRANS TAX ST855971 56,250.00

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS: That **Jamieson A. Duston Bree A. Duston, Trustees of the Jamieson A. Duston and Bree A. Duston Revocable Living Trust**, of 56 Saddle Trail Drive, Dover, NH 03820, for consideration paid grant to **Peter T. Paul, Trustee of the Peter T. Paul Living Trust u/d/t May 21, 1997**, of 21 Cotton Farm Lane, North Hampton, NH 03862, with WARRANTY COVENANTS:

A certain tract of land with any buildings thereon, situated in Dover, Strafford County, New Hampshire, being Proposed Lot #4 as shown on a plan entitled "Lot Line Adjustment for Woodwind Farms, LLC, Tax Assessors Map N, Lot 8-1-4, 8-1-5 & 8-1-6, Gulf Road, Dover, New Hampshire, County of Strafford" dated January 28, 2008, prepared by Doucet Survey, Inc., said plan recorded at the Strafford CoWlty Registry of Deeds as Plan 93-68, reference to which can be made for a more particular description of the premises.

Containing 2.4 acres as shown on said Plan.

Meaning and intending to describe and convey the same premises conveyed to Jamieson A. Duston and Bree A. Duston, Trustees of the Jamieson A. Duston and Bree A. Duston Revocable Living Trust, by virtue of a Deed from Jamieson A. Duston and Bree A. Duston, dated June 27, 2018 and recorded at the Strafford County Registry of Deeds in Book 4580, Page 4.

The undersigned Trustees are the Co-Trustees under **Jamieson A. Duston and Bree A. Duston Revocable Living Trust**, created under a certain Declaration of Trust dated September 19, 2017, and thereto have full and absolute power in said Trust Agreement to convey any interest in real estate and improvements thereon, and pledge said property as security, held in said Trust and no purchaser or third party shall be bound to inquire whether the Trustees have said power or is properly exercising said power or to see to the application of any Trust asset paid to the Trustees as a conveyance thereof.

We, the grantors, hereby release all rights of homestead in the above described premises.

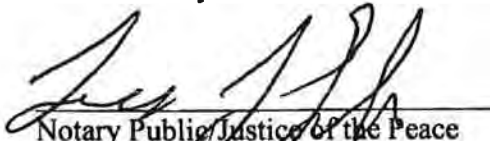
Executed this 20th day of September 2021.


Jamieson A. Duston, Individually and as Trustee of
the Jamieson A. Duston and Bree A. Duston
Revocable Living Trust


Bree A. Duston, Individually and as Trustee of the
Jamieson A. Duston and Bree A. Duston Revocable
Living Trust

State of New Hampshire
County of Strafford

Then personally appeared before me on this 20th day of September 2021, the said Jamieson A. Duston Bree A. Duston, Trustees of the Jamieson A. Duston and Bree A. Duston Revocable Living Trust and acknowledged the foregoing to be their voluntary act and deed.


Notary Public/Justice of the Peace
Commission expiration:

LEO J. GAGNON, JR., Justice of the Peace
State of New Hampshire
My Commission Expires October 31, 2023

Coastal Vulnerability Assessment

Prepared for:

**Peter T. Paul Living Trust
56 Saddle Trail Drive
Dover, New Hampshire 03820**

Prepared By:

**Ambit Engineering, Inc
200 Griffin, Unit 3
Portsmouth, New Hampshire 03801**



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

Introduction

This Coastal Vulnerability Assessment (CVA) is being provided in support of a New Hampshire Department of Environmental Services (NHDES) Wetland Permit Application for the construction of a tidal docking structure at 56 Saddle Trail Drive, Dover, NH (herein referred to as “project site”). The project site is a residential lot located on the eastern side of Saddle Trail Drive and to the west of Fresh Creek with one occupied residential dwelling. The surrounding land use is residential with similar docking structures.

Methods

On November 23 2021, Steven D. Riker, CWS from Ambit Engineering, Inc. conducted a site visit to evaluate coastal characteristics of the project site, as well as the functions and values of the tidal wetland area (see attached Coastal Functions and Values assessment). This CVA was completed utilizing the NH Coastal Flood Risk Science and Technical Advisory Panel (2019). New Hampshire Coastal Flood Risk Summary Part: Guidance for Using Scientific Projections. Report Published by the University of New Hampshire (herein referred to as Guidance Document).

Part 1.1 – Project Type

This project proposes the construction of a tidal docking structure on the residential lot adjacent to Fresh Creek. The purpose for the docking structure is to provide the applicant with recreational boating access to Fresh Creek. For more details regarding construction of the docking structure and construction sequences; please refer to the NH DES Wetlands Bureau Application Letter to the Wetlands Inspector and attached NHDES Permit Plan – C2 and Detail Sheet D1.

Part 1.2 – Project Location

The project location is 56 Saddle Trail Drive, Dover, NH, Tax Map N, Lot 8-1-4 and consists of 2.4 acres of residential upland and 360+/- of shoreline frontage along Fresh Creek. Access to the project site will be from Saddle Trail Drive for the staging of equipment, and Fresh Creek for the staging of the barge to be used for dock and pile installation.

Part 1.3 – Timeline for Desired Useful Life

The desired useful life for this project is considered to be 2100 (50-100 years) due to the fact that it is a docking structure which has a life expectancy of approximately 50-75 years.

2.1 – Project Risk Tolerance

The proposed project is considered to have a high risk tolerance considering that the docking structure has a relatively low cost, is relatively easy to modify, proposes little to no implications on public function and/or safety; and has relatively low sensitivity to inundation, as docks are designed to withstand fluctuating tidal conditions including storm surge.

2.2 – Risk Tolerance of Important Access and Service Areas

The risk tolerance of surrounding access and service areas is not applicable to this project, as the project occurs on a residential, private lot and is intended for private use; primary access of which would be by foot from the residence.

3.1 – Relative Sea Level Rise Scenario (RSLs)

Based on Table 3 in the Guidance Document (see table below), the RSLs for this project (based on the previously determined high risk tolerance) is considered to be on the lower magnitude, and higher probability. The following table depicts the probable sea level rise from 2000 through 2150.

Table 3 from the Guidance Document:

Risk Tolerance	High	Medium	Low	Extremely Low
Example Project	Walking Trail *Docking structure & Stone Revetment	Local Road Culvert	Wastewater Treatment Facility	Hospital
Timeframe	Manage to the following sea level rise (ft*) <i>Compared to the sea level in the year 2000</i>			
	Lower magnitude Higher probability			Higher magnitude Lower probability
2030	0.7	0.9	1.0	1.1
2050	1.3	1.6	2.0	2.3
2100	2.9	3.8	5.3	6.2
2150	4.6	6.4	9.9	11.7

*Added by Ambit Engineering, Inc. based on the application of the Guidance Document towards our project.

3.2 – RSLR Impacts to the Project Evaluation

Please see the attached Figure 1 – Projected SLR's; which depicts the project site and relevant Highest Observable Tide Line (HOTL), MHHW, and the projected SLR's for the year 2100. Relative to surrounding topography and considering the High Risk Tolerance of this project; it is not expected the projected RSLR for this project needs to be a strong consideration. The fixed pier will be constructed at elevation 13.5. The projected sea level rise in year 2100 is 2.9 feet resulting in future HOTL elevation of 12.24 feet. MHW and projected SLR is depicted in the profile view on Details-Sheet D1 in relation to the proposed dock elevation.

3.3 – Other Factors

Other factors were evaluated in conjunction with RSLR including surface water levels, groundwater levels, and current velocities which will increase with sediment erosion and deposition, which will also change. The project's position in the landscape was also considered relative to other infrastructure. The closest surface water to the project site is the adjacent Little Bay, projections of RSLR of which have already been depicted and discussed. There are no current restrictions on the project site or associated with the proposed project. The HOTL associated with the project site is located approximately at elevation 9.34. Considering a 2.9 foot RSLR in the year 2100 resulting in an elevation of 12.24, and the proposed tidal docking structure constructed at elevation 13.5, the structure will function as intended throughout the expected useful life of the residential structure they will serve, simply by the means in which it will be constructed.

4.1 – RSLR and Coastal Storms

Due to the project site location being immediately adjacent to Fresh Creek, it is anticipated that RSLR and storm surge on the proposed project site will be comparable to adjacent properties with similar docking structures. Considering the high risk tolerance of this project, it is not anticipated that this project has a significant level of vulnerability to RSLR and coastal storms given the method in which tidal docks are constructed.

4.2 – Other Factors

Other factors such as surface water levels, groundwater levels, wind and current velocities have been considered. Considering the high risk tolerance of this project, it is not anticipated that this project has a significant level of vulnerability to groundwater levels, wind and current velocities given the method in which tidal docks are constructed.

5.1 – Projected RSL-Induced Groundwater Rise

Based on the Sea-Level Rise Mapper, there is projected groundwater rise associated with RSLR on the project site, however given that the project provides a structure that has a water dependent use, we do not believe groundwater rise should be a strong consideration.

5.2 – Projected Groundwater Depth at the Project Location

Based on knowledge of the site and soil morphology of the site, groundwater depth (Estimated Seasonal High Water Table) is between 30-40” below the soil surface.

6.1 – Best Available Precipitation Estimates

Please see the attached Extreme Precipitation Tables from the Northeast Regional Climate Center.

7.1 – Cumulative Coastal Flood Risk to the Project

Based on the high risk tolerance of this project combined with all other factors including RSLR, coastal storms, RSLR-induced groundwater rise, extreme precipitation and/or freshwater flooding occurring together; this project is not considered to be at high risk from coastal flooding.

7.2 – Possible Actions to Mitigate Coastal Flood Risk

Given the high risk tolerance of the proposed project, it is not anticipated that it is necessary to mitigate for coastal flood risk beyond what has already been incorporated into the design plan for the docking structure. The projected SLR scenario through 2100 is 2.9’ (See profile view on Sheet D1), and the proposed docking structure has been designed to account for this projection.

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	
Location	
Longitude	70.745 degrees West
Latitude	43.071 degrees North
Elevation	0 feet
Date/Time	Tue, 21 Jan 2020 12:37:30 -0500

Precipitation estimates multiplied by 1.15 are listed below:

1-yr: 3.06
2-yr: 3.69
10-yr: 5.59
50-yr: 8.49

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.92	1yr	2.35	2.81	3.22	3.94	4.55	1yr
2yr	0.32	0.50	0.62	0.81	1.02	1.30	2yr	0.88	1.18	1.52	1.94	2.49	3.21	3.57	2yr	2.84	3.43	3.94	4.68	5.33	2yr
5yr	0.37	0.58	0.73	0.98	1.25	1.61	5yr	1.08	1.47	1.89	2.43	3.14	4.07	4.58	5yr	3.60	4.40	5.04	5.94	6.70	5yr
10yr	0.41	0.65	0.82	1.12	1.45	1.89	10yr	1.25	1.73	2.23	2.90	3.75	4.86	5.53	10yr	4.30	5.32	6.09	7.11	7.98	10yr
25yr	0.48	0.76	0.97	1.34	1.78	2.34	25yr	1.54	2.15	2.78	3.64	4.74	6.17	7.10	25yr	5.46	6.83	7.81	9.02	10.05	25yr
50yr	0.54	0.86	1.10	1.54	2.08	2.77	50yr	1.79	2.53	3.30	4.33	5.67	7.38	8.58	50yr	6.54	8.25	9.43	10.81	11.97	50yr
100yr	0.60	0.97	1.25	1.78	2.43	3.27	100yr	2.09	2.99	3.92	5.17	6.77	8.85	10.37	100yr	7.83	9.98	11.39	12.96	14.26	100yr
200yr	0.68	1.11	1.43	2.05	2.84	3.85	200yr	2.45	3.53	4.63	6.14	8.09	10.60	12.54	200yr	9.38	12.06	13.76	15.54	17.00	200yr
500yr	0.80	1.32	1.72	2.50	3.50	4.79	500yr	3.02	4.40	5.79	7.72	10.23	13.47	16.13	500yr	11.92	15.51	17.68	19.77	21.47	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.72	0.88	1yr	0.62	0.86	0.93	1.33	1.69	2.25	2.48	1yr	1.99	2.38	2.87	3.20	3.91	1yr
2yr	0.31	0.49	0.60	0.81	1.00	1.19	2yr	0.86	1.16	1.37	1.82	2.33	3.06	3.45	2yr	2.71	3.32	3.82	4.55	5.09	2yr
5yr	0.35	0.54	0.67	0.92	1.17	1.40	5yr	1.01	1.37	1.61	2.11	2.73	3.78	4.18	5yr	3.35	4.02	4.72	5.53	6.23	5yr
10yr	0.39	0.59	0.73	1.03	1.33	1.60	10yr	1.14	1.56	1.80	2.38	3.05	4.36	4.85	10yr	3.86	4.66	5.43	6.40	7.18	10yr
25yr	0.44	0.67	0.83	1.19	1.56	1.90	25yr	1.35	1.86	2.10	2.75	3.52	4.74	5.87	25yr	4.20	5.64	6.62	7.77	8.66	25yr
50yr	0.48	0.73	0.91	1.31	1.76	2.16	50yr	1.52	2.12	2.34	3.06	3.91	5.36	6.76	50yr	4.75	6.50	7.69	9.01	9.99	50yr
100yr	0.53	0.81	1.01	1.46	2.01	2.46	100yr	1.73	2.41	2.62	3.40	4.32	6.03	7.80	100yr	5.34	7.50	8.92	10.47	11.53	100yr
200yr	0.59	0.89	1.13	1.63	2.27	2.81	200yr	1.96	2.75	2.93	3.76	4.76	6.77	8.99	200yr	5.99	8.64	10.34	12.17	13.33	200yr
500yr	0.68	1.02	1.31	1.90	2.70	3.36	500yr	2.33	3.28	3.41	4.28	5.40	7.89	10.84	500yr	6.99	10.43	12.56	14.89	16.15	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.44	0.54	0.72	0.89	1.09	1yr	0.77	1.06	1.26	1.74	2.20	2.97	3.17	1yr	2.63	3.05	3.58	4.37	5.04	1yr
2yr	0.34	0.52	0.64	0.87	1.07	1.27	2yr	0.92	1.24	1.48	1.96	2.52	3.42	3.71	2yr	3.03	3.57	4.10	4.84	5.62	2yr
5yr	0.40	0.62	0.77	1.05	1.34	1.62	5yr	1.15	1.59	1.89	2.54	3.26	4.34	4.97	5yr	3.84	4.78	5.38	6.39	7.17	5yr
10yr	0.47	0.72	0.89	1.25	1.61	1.98	10yr	1.39	1.94	2.29	3.11	3.97	5.34	6.22	10yr	4.72	5.98	6.84	7.86	8.77	10yr
25yr	0.58	0.88	1.09	1.56	2.05	2.58	25yr	1.77	2.52	2.96	4.08	5.17	7.74	8.37	25yr	6.85	8.05	9.20	10.36	11.43	25yr
50yr	0.67	1.03	1.28	1.84	2.47	3.14	50yr	2.13	3.07	3.61	5.02	6.35	9.69	10.50	50yr	8.57	10.10	11.51	12.76	13.99	50yr
100yr	0.79	1.20	1.50	2.17	2.98	3.83	100yr	2.57	3.74	4.39	6.18	7.81	12.11	13.17	100yr	10.72	12.66	14.41	15.74	17.13	100yr
200yr	0.93	1.40	1.77	2.57	3.58	4.68	200yr	3.09	4.57	5.36	7.61	9.61	15.19	16.53	200yr	13.44	15.89	18.08	19.41	20.97	200yr
500yr	1.16	1.72	2.21	3.21	4.57	6.07	500yr	3.94	5.94	6.96	10.07	12.67	20.50	22.33	500yr	18.14	21.48	24.39	25.60	27.40	500yr

Map by NH GRANIT



Legend

MHHW + 1-ft SLR

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

Coastal 2019 1-foot RGB

Map Scale

1: 3,247

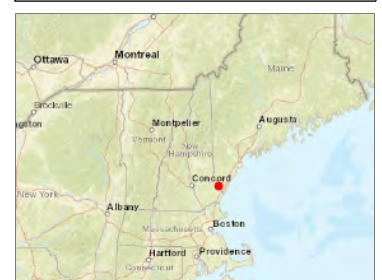
© NH GRANIT, www.granit.unh.edu

Map Generated: 4/28/2022



Notes

1 foot SLR



Map by NH GRANIT



Legend

MHHW + 2-ft SLR

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

Coastal 2019 1-foot RGB

Map Scale

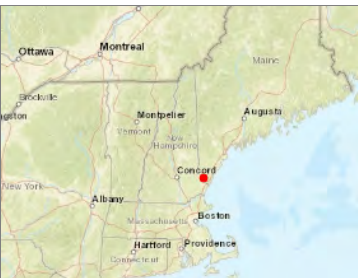
1: 3,247

© NH GRANIT, www.granit.unh.edu
Map Generated: 4/28/2022



Notes

2 foot SLR



Map by NH GRANIT



Legend

MHHW + 4-ft SLR

0 - 2

2 - 4

4 - 6

6 - 8

8 - 10

10 +

Coastal 2019 1-foot RGB

Map Scale

1: 3,247

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Map Generated: 4/28/2022



Notes

4 foot SLR



Map by NH GRANIT



Legend

MHHW + 6-ft SLR

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

Coastal 2019 1-foot RGB

Map Scale

1: 3,247

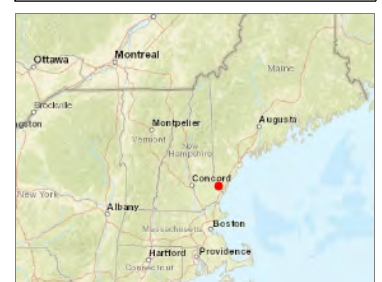
© NH GRANIT, www.granit.unh.edu

Map Generated: 4/28/2022



Notes

6 foot SLR



Map by NH GRANIT



Legend

MHHW + 8-ft SLR

0-2

☒ 2 - 4

4 - 6

6 - 8

8 - 10
10 +

10 +

Coastal 2019 1-foot RGB

1 X: 1205256.26764
Y: 253160.97377

X: 1205256.26764

Y: 253160.97377

Map Scale 

1: 3,247 

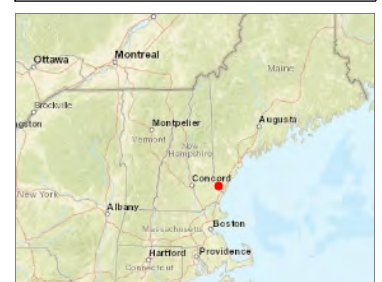
© NH GRANIT, www.granit.unh.edu

Map Generated: 4/28/2022



Notes

8 foot SLR



Wetland Functions and Values Assessment

Prepared for:

**Peter T. Paul Living Trust
56 Saddle Trail Drive
Dover, New Hampshire 03820**

Prepared By:

**Ambit Engineering, Inc
200 Griffin, Unit 3
Portsmouth, New Hampshire 03801**



Date: May 18, 2022

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Appendix C	NH Natural Heritage Bureau Letter

INTRODUCTION

The applicant is proposing the construction of a tidal docking structure at 56 Saddle Trail Drive, Dover, New Hampshire. The project site is identified on Dover Tax Map N as Lot 8-1-4 and is approximately 2.4 acres in size. As currently designed, the proposed project would require impacts to tidal wetlands associated with Fresh Creek.

The purpose of this report is to present the existing functions and values of the tidal wetlands and to assess any impacts the proposed project may have on their ability to continue to perform these functions and values. The tidal wetlands being impacted were assessed with consideration to their association with Little Bay and the larger marine ecosystem and was not limited to the tidal wetlands immediately on-site.

METHODS

DATA COLLECTION

The tidal wetlands associated with this project area were identified and characterized through field survey and review of existing information. Ambit Engineering, Inc. (Ambit) conducted a site visit in November of 2021 to characterize the tidal wetlands and collect the necessary information to complete a functions and values assessment. In addition, Ambit contacted the New Hampshire Natural Heritage Bureau (NHB) regarding existing information of documented rare species or natural communities within the vicinity of the project site.

WETLAND FUNCTIONS AND VALUES ASSESSMENT

Ambit assessed the ability of the tidal wetlands to provide certain functions and values and analyzed the potential affects the proposed project may have on their ability to continue to provide those functions and values. Wetland functions and values were assessed using the *Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach*.¹ This method bases function and value determinations on the presence or absence of specific criteria for each of the 13 wetland functions and values (see definitions below). These criteria are assessed through direct field observations and a review of existing resource maps and databases. As part of the evaluation, the most important functions and values associated with the on-site wetlands are identified. In addition, the ecological integrity of the wetlands is evaluated based on the existing levels of disturbance and the overall significance of the wetlands within the local watershed.

- **Groundwater Interchange (Recharge/Discharge)**

This function considers the potential for the project area wetlands to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

- **Floodwater Alteration (Storage and Desynchronization)**

This function considers the effectiveness of the wetlands in reducing flood damage by attenuating floodwaters for prolonged periods following precipitation and snow melt events.

- **Fish and Shellfish Habitat**

This function considers the effectiveness of seasonally or permanently flooded areas within the subject wetlands for their ability to provide fish and shellfish habitat.

- **Sediment/Toxicant Retention**

This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland to function as a trap for sediments, toxicants, or pathogens, and is generally related to factors such as the type of soils, the density of vegetation, and the position in the landscape.

- **Nutrient Removal/Retention/Transformation**

This wetland function relates to the effectiveness of the wetland to prevent or reduce the adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

¹ U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach*. U.S. Army Corps of Engineers. New England Division. 32pp. NAEPP-360-1-30a.

- **Production Export (Nutrient)**

This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

- **Sediment/Shoreline Stabilization**

This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.

- **Wildlife Habitat**

This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

- **Recreation (Consumptive and Non-Consumptive)**

This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities.

- **Educational/Scientific Value**

This value considers the effectiveness of the wetland as a site for an “outdoor classroom” or as a location for scientific study or research.

- **Uniqueness/Heritage**

This value relates to the effectiveness of the wetland or its associated water bodies to provide certain special values such as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

- **Visual Quality/Aesthetics**

This value relates to the visual and aesthetic qualities of the wetland.

- **Endangered Species Habitat**

This value considers the suitability of the wetland to support threatened or endangered species.

FUNCTIONS AND VALUES ASSESSMENT

Results of the wetland functions and values assessment are presented below. This assessment includes a discussion of potential changes to existing wetland functions and values that may occur as a result of the proposed project:

Groundwater Interchange (Recharge/Discharge)

Because there is no identified sand and gravel aquifer underlying the project area, and the wetlands are not underlain by sands or gravel, it is unlikely that significant groundwater recharge is occurring within the tidal wetlands.

Floodwater Alteration (Storage and Desynchronization)

The tidal wetlands associated with Fresh Creek and the Cocheco River receive floodwaters from the surrounding watershed and connected waterways; therefore, is considered a principal function considering the large size of the combined waterways.

Fish and Shellfish Habitat

The greater tidal wetland does provide fish and shellfish habitat, is associated with Fresh Creek, the Cocheco River and the Piscataqua River; therefore, is considered a principal function.

Sediment/Toxicant Retention

The greater tidal wetland contains dense vegetation and a significant source of sediments or toxicants; therefore, is considered a principal function.

Nutrient Removal/Retention/Transformation

The greater tidal wetland contains dense vegetation and a significant source of sediments or toxicants; therefore, is considered a principal function.

Production Export (Nutrient)

Production export is a wetland function that typically occurs in the form of nutrient or biomass transport via watercourses, foraging by wildlife species, and removal of timber and other natural products. Because the greater tidal wetland provides fish and wildlife habitat, commercial and recreational fisheries opportunities, and nutrients are transferred over several trophic levels in the marine ecosystem, this is considered a principal function.

Sediment/Shoreline Stabilization

Due to the tidal nature and wave action of this wetland; sediment/shoreline stabilization is considered a principal function.

Wildlife Habitat

The greater tidal wetland and Fresh Creek provide a variety of coastal and marine habitats, therefore would be considered a principal function.

Recreation (Consumptive and Non-Consumptive)

The greater tidal wetland and Fresh Creek provides a variety of consumptive and non-consumptive recreational opportunities including hunting, fishing and bird watching; therefore, would be considered a principal function.

Education/Scientific Value

The greater tidal wetland and Fresh Creek are part of a larger marine ecosystem with multiple areas of public access making this a principal value.

Uniqueness/Heritage

The tidal wetland and Fresh Creek are unique to the seacoast area. Additionally, there are pre and post-colonial historical components associated with Fresh Creek, the Cocheco River and the surrounding areas making this a principal value.

Visual Quality/Aesthetics

Fresh Creek provides aesthetically pleasing coastal views that are viewable from surrounding uplands as well as from the water, making this a principal function.

Endangered Species Habitat

An online inquiry with the NHB resulted in the potential for low brackish riverbank marsh to occur near the project area. Ambit Engineering has survey located the salt marsh communities associated with the property and these locations are depicted on the NH DES Wetland Application plan set. This information will be provided to NHB and comment will be provided to NH DES upon receipt.

PROPOSED IMPACTS

This report is accompanying a New Hampshire Department of Environmental Services (NHDES) Major Impact Wetland Permit Application request to construct a tidal docking structure consisting of a 4' x 95' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float totaling 380 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone and 570 sq. ft. of permanent impact to tidal wetlands. Overall structure length will be 90 feet located on 360+/- of frontage along Fresh Creek. Since the proposed tidal dock will serve to provide a water dependent function, practicable alternatives along the 60+/- feet of shoreline are reduced due to the presence of saltmarsh and maintaining a 20 foot setback to property lines extended.

SUMMARY AND CONCLUSIONS

The jurisdictional tidal wetland is part of a large marine system and provides eleven principal functions and values when evaluated as a whole. These functions and values include: floodflow alteration, fish and shellfish habitat, production export, sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, uniqueness/heritage, and visual quality aesthetics. While the entire marine system provides these principal functions and values, the proposed impacts associated with the dock modification will not have any effect on its ability to continue to provide them.

The proposed impacts have been minimized to the greatest extent practicable, while allowing reasonable use of the property. The proposed docking structure will be constructed on piles within the tidal wetland further reducing permanent impacts. The docking structure will not contribute to additional storm water or pollution. It is anticipated that there will be no effect on any fish or wildlife species that currently use the site for food, cover, and/or habitat. The tidal docking structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. The float and gangway will be temporary docking structures and will be removed during winter months as to not interfere with ice floe.

The docking structure has been designed to provide recreational boating access utilizing the natural grade of the dock location. There is no grading of the shoreline required to construct the dock. There will be no construction activity that will disturb the area adjacent to the use. All work will be performed from a crane barge at low tide. A majority of the piles to be driven are above the Mean Low Water line and there is no need for erosion control as there will be no water in this location during pile driving and therefore no temporary disturbance associated with construction. The barge floats into position and the piles are driven by the crane equipped with a vibratory hammer. This method eliminates any contact of construction equipment with the protected resource. Portions of the docking structure are pre-fabricated off site and transported to the site via crane barge.

Based on our assessment of the current functions and values, the proposed modification of the existing tidal docking structure; it is our belief that the proposed project will have no significant impact on the tidal wetlands or greater marine systems ability to continue to provide their functions and values.

APPENDIX A

WETLAND FUNCTION - VALUE EVALUATION FORM

Wetland Function – Value Evaluation Form

Wetland Description: Wetland A is a tidal wetland associated with Fresh Creek.	File number: 3402.04	
	Wetland identifier: Wetland A	
	Latitude: X: 1,205,245.07	Longitude: Y: 253,153
	Preparer(s): Ambit Engineering, Inc.	
	200 Griffin Road	
	Date: November 23, 2021	

Function/Value	Capability Y N		Summary	Principal Yes/No
 Groundwater Recharge/Discharge		X	This wetland does not possess the characteristics needed to provide this function as there are no identified underlying sand or gravel aquifers.	—
 Floodwater Alteration	X		The tidal wetland and Fresh Creek do receive floodwater from the surrounding watershed and connected waterways; therefore, this would be considered a principal function.	Y
 Fish and Shellfish Habitat	X		The tidal wetland and Fresh Creek are part of a larger coastal marine system and provide both fish and shellfish habitat. This is considered a Principal Function.	Y
 Sediment/Toxicant Retention	X		The immediate tidal wetland contains dense vegetation and a source of sediments and toxicants, therefore a principal function.	Y
 Nutrient Removal	X		The immediate tidal wetland contains dense vegetation and a source of nutrients, therefore a principal function.	Y
 Production Export	X		Because the tidal wetland provides fish and wildlife habitat, commercial and recreational fishing opportunities, and nutrients are transferred over several trophic levels in the marine ecosystem, this is considered a principal function.	Y
 Sediment/Shoreline Stabilization	X		Due to the tidal nature and wave action of this wetland; sediment/shoreline stabilization is considered a principal function.	Y
 Wildlife Habitat	X		The greater tidal wetland and Fresh Creek provides a variety of coastal and marine habitat, therefore would be considered a principal function.	Y
 Recreation	X		The adjacent tidal wetland provides a variety of consumptive and non-consumptive recreational opportunities including hunting, fishing and bird watching; therefore, would be considered a principal function.	Y
 Education/Scientific Value	X		The tidal wetland and Fresh Creek are part of a larger marine ecosystem with multiple areas of public access making this a principal value.	Y
 Uniqueness/Heritage	X		The tidal wetland and Fresh Creek are unique to the seacoast area. Additionally, there are pre and post-colonial historical components associated with Fresh Creek, the Cocheco River and the surrounding areas making this a principal value.	Y
 Visual Quality/Aesthetics	X		Fresh Creek provides aesthetically pleasing coastal views that are seeable from surrounding uplands as well as from the water, making this a principal function.	Y
ES Endangered Species Habitat	X		An online inquiry with the NH Natural Heritage Bureau resulted in an occurrence of a sensitive species near the project area. Ambit Engineering will coordinate with NHB and NHF & G and will forward comment to NH DES upon receipt.	—
Other				

Notes:

* Attach list of considerations.

APPENDIX B

PHOTO LOG

Site Photograph #1

December 2021



Site Photograph #2

December 2021



Site Photograph #3

December 2021



Site Photograph #4

December 2021



Site Photograph #5

December 2021



Site Photograph #6

April 2022



Site Photograph #7

April 2022



Site Photograph #8

April 2022



APPENDIX C

NEW HAMPSHIRE NATURAL HERITAGE BUREAU CORRESPONDENCE

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: John Chagnon, Ambit Engineering, Inc.
200 Griffin Road
Unit 3
Portsmouth, NH 03801

From: NHB Review, NH Natural Heritage Bureau

Date: 2022-04-15 (valid until 04-15-2023)

Re: Review by NH Natural Heritage Bureau

Permits: NHDES - Wetland Standard Dredge & Fill - Major, USACE - General Permit

NHB ID: NHB22-1312

Town: Dover

Location: 56 Saddle Trail Drive

Description: The project proposes a tidal docking structure consisting of a 4' x 16' accessway, a 4' x 20' fixed wood pier, a 3' x 30' gangway and a 10' x 40' float secured by 4 helical moorings located along the shoreline of the subject property.

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

Comments NHB: The proposed project is within an exemplary low brackish riverbank marsh. Please send site plans and photos depicting where work will occur, and the distance from the proposed structure to any wetland and/or aquatic vegetation.

F&G: No Comments At This Time

Natural Community	State ¹	Federal	Notes
Low brackish riverbank marsh	--	--	

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

Disclaimer: 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.

IMPORTANT: NHFG Consultation

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

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau NHB DataCheck Results Letter

Please note: portions of this document are confidential.

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

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://wildlife.state.nh.us/wildlife/environmental-review.html>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB Datacheck results letter number and “Fis 1004 consultation request” in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email: Kim Tuttle kim.tuttle@wildlife.nh.gov with a copy to NHFGreview@wildlife.nh.gov, and include the NHB Datacheck results letter number and “review request” in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB22-1312



New Hampshire Natural Heritage Bureau - Community Record

Low brackish riverbank marsh

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank: --

Detailed Description: 2004: Dominant species are *Spartina alterniflora* (smooth cord-grass), *Amaranthus cannabinus* (water hemp), and *Typha angustifolia* (narrow-leaved cattail). Less frequent are *Lemna minor* (lesser duckweed), *Polygonum hydropiper* (water-pepper), *Argentina egedii* (coastal silverweed), *Eleocharis parvula* (small spike-rush), *Ranunculus cymbalaria* (seaside crowfoot), *Lilaeopsis chinensis* (eastern lilaopsis), and *Samolus parviflorus* (false water pimpernel). 1988: Forms a narrow zone along the river, dominated by *Spartina alterniflora* (smooth cord-grass). A few stands of *Typha angustifolia* (narrow-leaved cattail) exist, mostly less than an acre in size. Rare plant species present are *Samolus parviflorus* (false water pimpernel), *Lilaeopsis chinensis* (eastern lilaopsis), and *Eleocharis parvula* (small spike-rush). *Spartina alterniflora* (smooth cord-grass) is dominant. A few stands of *Typha angustifolia* (narrow-leaved cat-tail) exist. Many exotic species are present. The bases of steep, rocky slopes support virtually no emergent vegetation.

General Area: 2004: This low marsh lies adjacent to a sparsely or narrowly vegetated **high brackish tidal riverbank marsh**. The high tidal riverbank is often an unvegetated zone grading into the adjacent upland. Some characteristic species are *Solidago sempervirens* (seaside goldenrod) and *Spartina pectinata* (fresh-water cord-grass). Along most of the riverbank community, moderate residential and commercial development occurs on adjacent lands. High levels of development occur along the west end of the riverbank in downtown Dover. 1988: A narrow zone along the river. Bordered by steep forested slopes and heavily impacted areas.

General Comments: --

Management

Comments: 2004: Several invasive species occur on the higher margins of the riverbank community, especially at the west end nearest downtown Dover. They include *Lythrum salicaria* (purple loosestrife), *Phalaris arundinacea* (reed canary-grass), *Rorippa nasturtium-aquaticum* (true watercress), *Polygonum cuspidatum* (Japanese knotweed), and *Solanum dulcamara* (nightshade). These plants should be monitored. 1988: Guard against future development. Current disturbance includes impacts by rock fill, dams, clearing, and power plant construction.

Location

Survey Site Name: Cocheco River Narrows
Managed By:

County: Strafford

Town(s): Dover

Size: 94.2 acres

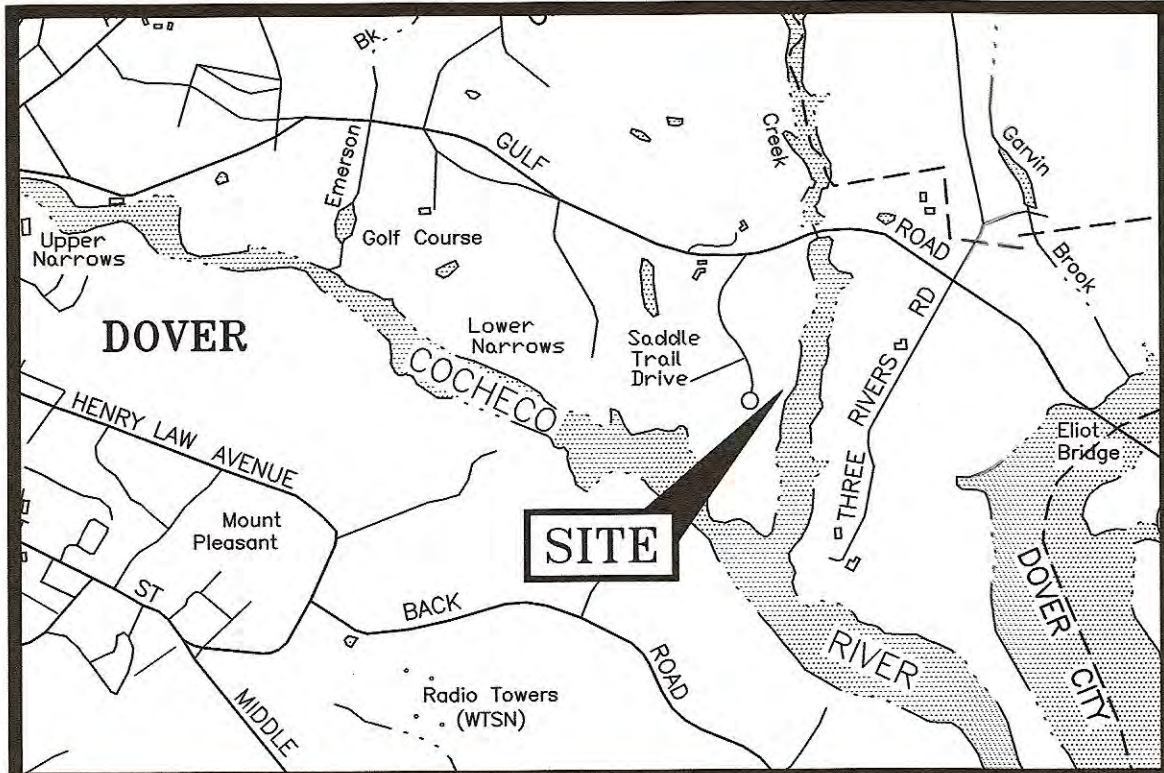
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Cocheco River downstream of downtown Dover. 2004: The tidal riverbank marsh extends from downtown Dover (beginning downstream of Washington Street) to the mouth of the Cocheco. For the tidal marsh nearest downtown Dover, park at Henry Law Park. For the tidal marsh 0.75 miles eastward, from Henry Law Avenue, turn north onto a access road to baseball fields. Park in lot for baseball fields and walk NE, across power line corridor, to Cocheco River. 1988: Tidal wetlands and shores along Cocheco River between upper and lower narrows, due east and just downstream of downtown Dover.

Dates documented

First reported:	1988-09-13	Last reported:	2004-09-23
-----------------	------------	----------------	------------



LOCATION MAP

SCALE 1"=2,000'

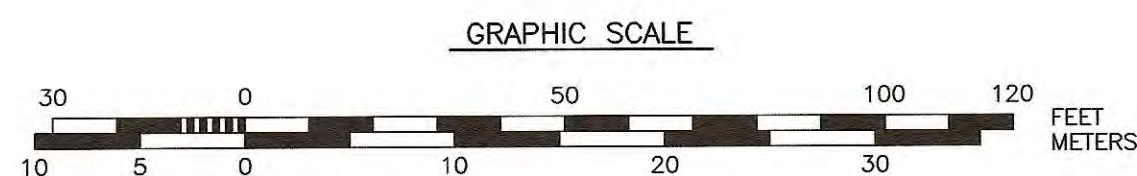
LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
SCRD	STRAFFORD COUNTY REGISTRY OF DEEDS
11/21	MAP 11 / LOT 21
○	RAILROAD SPIKE FOUND
○	IRON ROD/IRON PIPE FOUND
○	DRILL HOLE FOUND
○	STONE/CONCRETE BOUND FOUND
○	RAILROAD SPIKE SET
○	IRON ROD SET
○	DRILL HOLE SET
○	GRANITE BOUND SET
○	BOUNDARY
○	BUILDING SETBACK
○	MEAN HIGH WATER LINE
○	MEAN LOW WATER LINE
○	MEAN LOWER LOW WATER LINE
○	NHDES HIGHEST OBSERVABLE TIDE LINE
○	FRESHWATER WETLAND LINE
○	FRESHWATER WETLAND BUFFER LINE
○	NHDES 50' PRIMARY STRUCTURE SETBACK
○	NHDES 100' TIDAL BUFFER ZONE
○	NHDES 150' NATURAL WOODLAND BUFFER
○	NHDES 250' PROTECTED SHORELAND
○	FEMA SPECIAL FLOOD HAZARD AREA LINE
○	OVERHEAD ELECTRIC/WIRES
○	CONTOUR
○	SPOT ELEVATION
○	EDGE OF PAVEMENT (EP)
○	WOODS / TREE LINE
○	UTILITY POLE (w/ GUY)
○	WELL
○	METER (GAS, WATER, ELECTRIC)
○	EDGE OF WETLAND FLAGGING
○	SWAMP / MARSH
○	ELEVATION
○	EDGE OF PAVEMENT
○	FINISHED FLOOR
○	INVERT
○	TEMPORARY BENCHMARK
○	TYPICAL
○	LANDSCAPED AREA



WETLAND NOTES:

- HIGHEST OBSERVABLE TIDE LINE & WETLAND LINES DELINEATED BY STEVEN D. RIKER, CWS ON 11/23/21 IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
 - U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987), AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHEAST AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
 - FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2, USDA-NRCS, 2018 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, NEWPCC WETLANDS WORK GROUP (2019).
 - NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). USFWS (MAY 1988).
 - CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS-79/31 (1997).
 - "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE" (1997), NEW HAMPSHIRE FISH AND GAME DEPARTMENT.
- WETLANDS & HOTL WERE FIELD LOCATED BY AMBIT ENGINEERING, INC.



PLAN REFERENCES:

- LOT LINE ADJUSTMENT FOR WOODWIND FARMS, LLC, TAX ASSESSORS MAP N, LOTS 8-1-4, 8-1-5 & 8-1-6, GULF ROAD, DOVER, NEW HAMPSHIRE, COUNTY OF STRAFFORD, DATED JAN 28, 2008, PREPARED BY DOUCET SURVEY, INC., SCRD PLAN 93-68
- "OPEN SPACE SUBDIVISION" (WITH COMMERCIAL COMPONENT) FOR WOODWIND FARMS, LLC., TAX ASSESSORS MAP N, LOT 8-1, GULF ROAD, DOVER, NEW HAMPSHIRE, COUNTY OF STRAFFORD, DATED JULY 17, 2007, PREPARED BY DOUCET SURVEY, INC., SCRD PLAN 93-56



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315



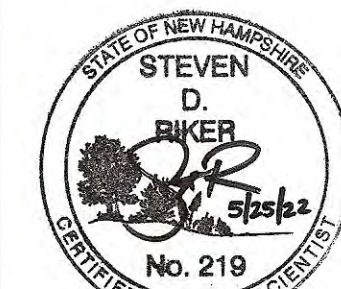
NOTES:

- PARCEL IS SHOWN ON THE CITY OF DOVER ASSESSOR'S MAP N AS LOT 8-1-4.
- OWNER OF RECORD:
PETER T. PAUL LIVING TRUST
21 COTTON FARM LANE
NORTH HAMPTON, NH 03862
4956/741
- PORTIONS OF THE PARCELS ARE IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33017C0330E (ZONE A). EFFECTIVE DATE SEPTEMBER 30, 2015.
- EXISTING LOT AREA:
104,300 S.F. ± (PER REF. PLAN 1)
2.4 ACRES ± (PER REF. PLAN 1)
- PARCEL IS LOCATED IN THE RURAL RESIDENTIAL (R-40) ZONING DISTRICT.
- DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:	40,000 S.F.
FRONTAGE:	150 FEET
SETBACKS:	FRONT 40 FEET SIDE 25 FEET REAR 30 FEET
MAXIMUM STRUCTURE HEIGHT:	35 FEET
MAXIMUM LOT COVERAGE:	10%
- THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON A PORTION OF ASSESSOR'S MAP N LOT 8-1-4 IN THE CITY OF DOVER.
- VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW). MLLW REFERENCED ON NOAA STATION 8420411 DOVER, COCHECO RIVER, NEW HAMPSHIRE, MLLW BEING 3.93 FEET LOWER THAN 0.00 NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN ARE BASED ON REFERENCE PLAN 1 LISTED HEREON. NO DEED RESEARCH OR BOUNDARY DETERMINATION WAS MADE TO CONFIRM OR REFUTE MATTERS SHOWN ON SAID PLANS FOR THE PURPOSES OF THIS PLAN. EASEMENTS, RESERVATIONS, ETC. THAT MAY EXIST ARE NOT SHOWN OR NOTED HEREON.

PROPOSED DOCK
PAUL RESIDENCE
56 SADDLE TRAIL DRIVE
DOVER, N.H.

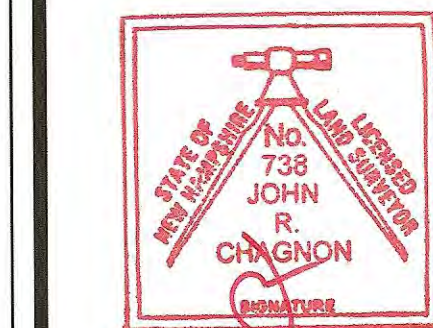
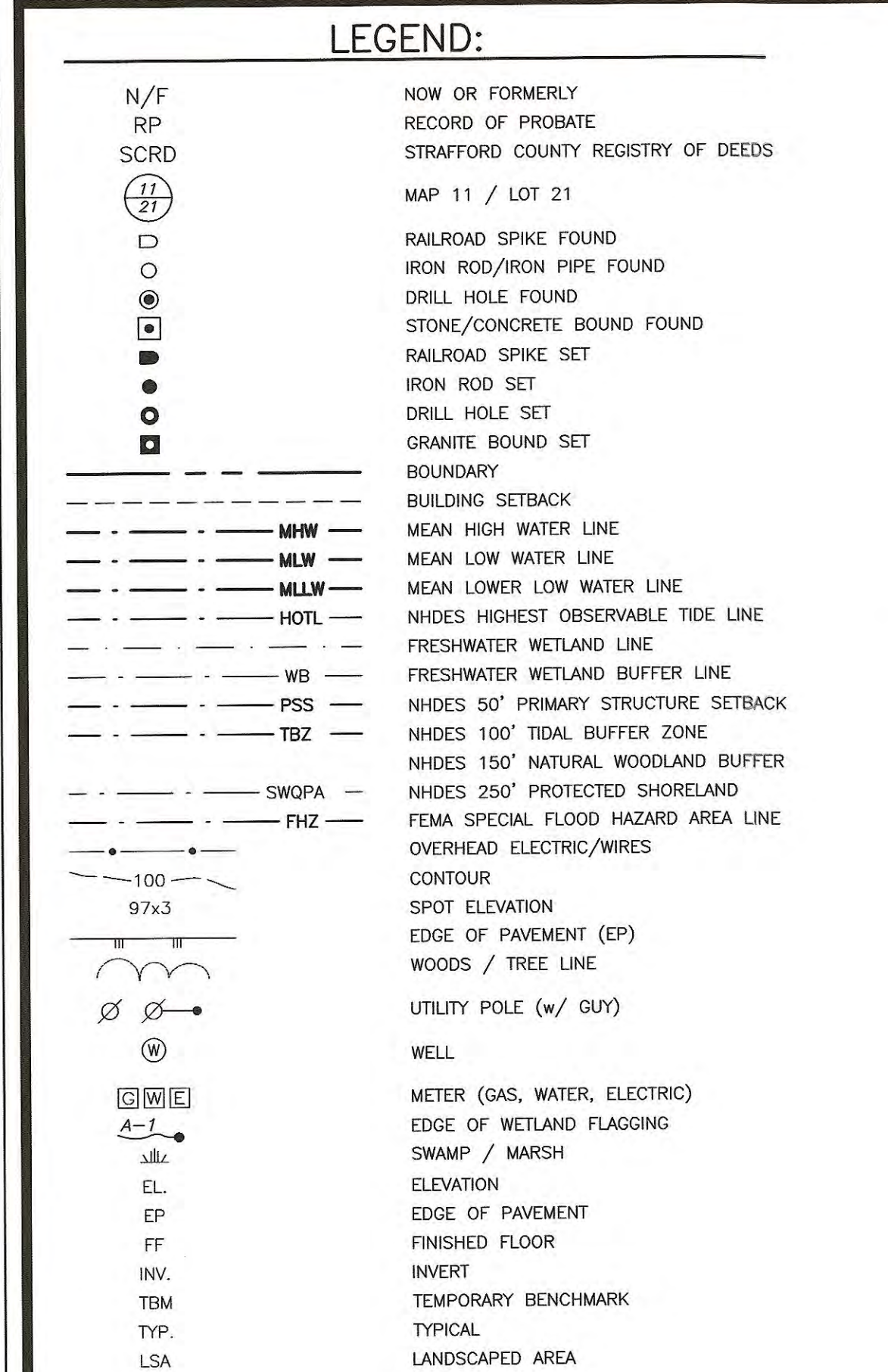
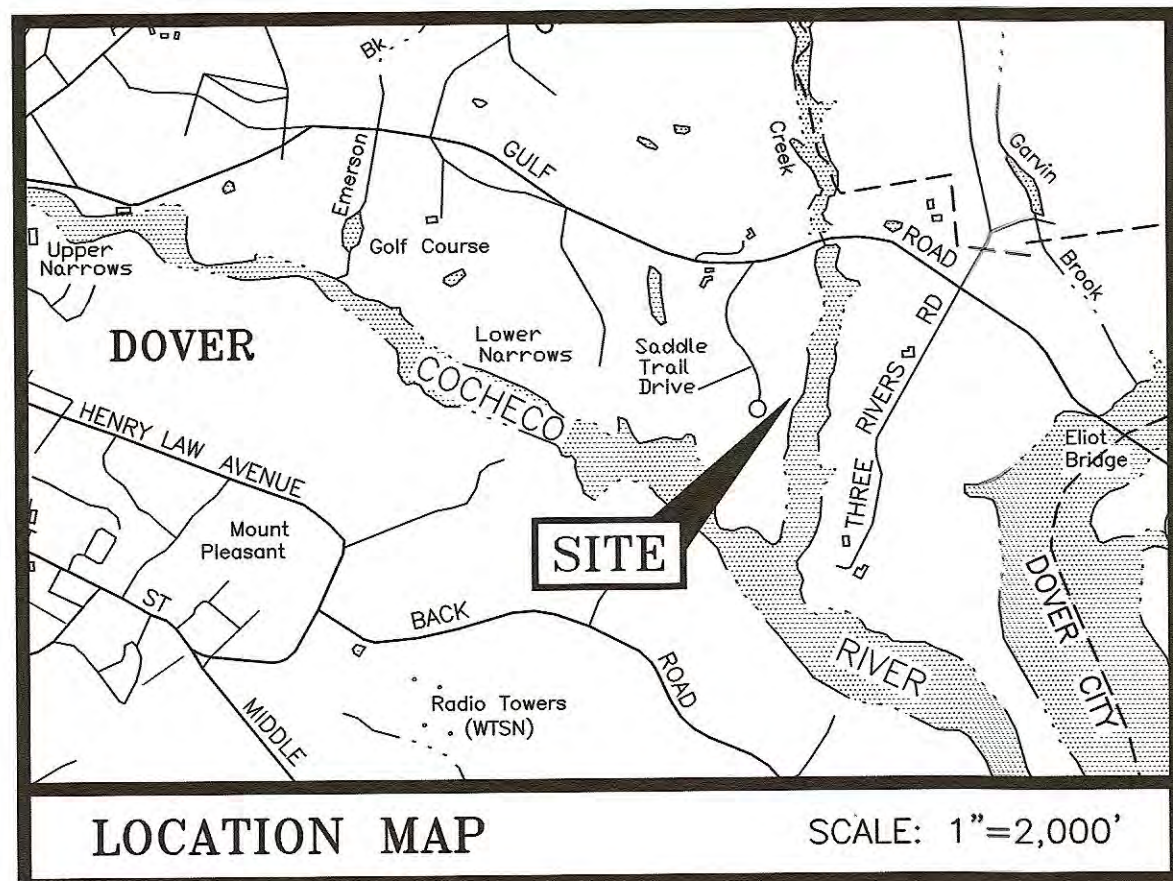
NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	5/24/22
REVISIONS		



SCALE: 1" = 30' APRIL 2022

EXISTING CONDITIONS
PLAN

C1

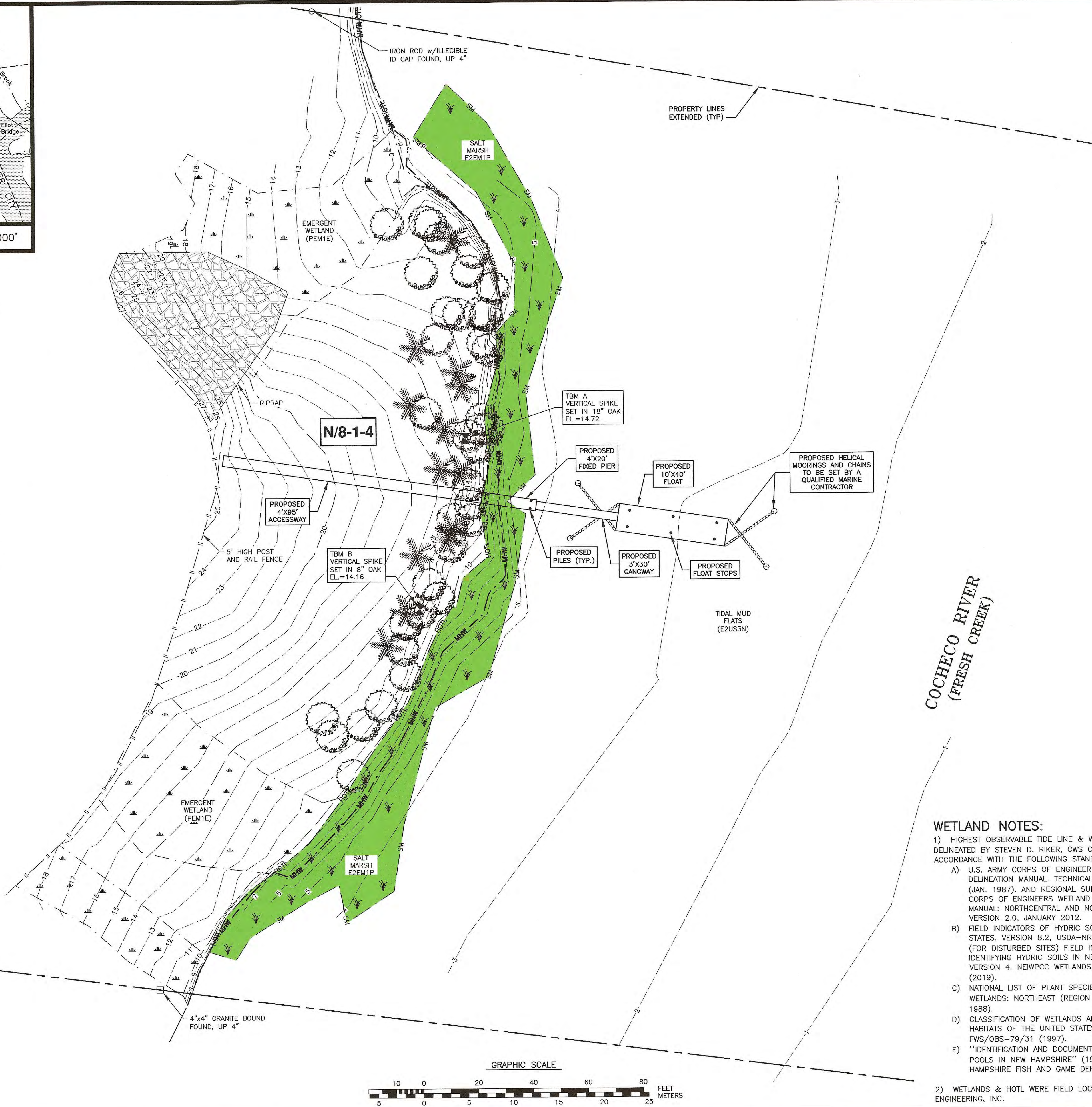


"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

JOHN R. CHAGNON, LLS #738

DATE

5.24.22



WETLAND NOTES:

- HIGHEST OBSERVABLE TIDE LINE & WETLAND LINES DELINEATED BY STEVEN D. RIKER, CWS ON 11/23/21 IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
 - U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987), AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
 - FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2, USDA-NRCS, 2018 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, NEWPCC WETLANDS WORK GROUP (2019).
 - NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). USFWS (MAY 1988).
 - CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFWS MANUAL FWS/OBS-79/31 (1997).
 - "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE" (1997). NEW HAMPSHIRE FISH AND GAME DEPARTMENT.
- WETLANDS & HOTL WERE FIELD LOCATED BY AMBIT ENGINEERING, INC.

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200 Griffin Road - Unit 3
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Tel (603) 430-9282
Fax (603) 430-2315

RIVERSIDE & PICKERING
MARINE CONTRACTORS

NOTES:

- PARCEL IS SHOWN ON THE CITY OF DOVER ASSESSOR'S MAP N AS LOT 8-1-4.
- OWNER OF RECORD:
PETER T. PAUL LIVING TRUST
21 COTTON FARM LANE
NORTH HAMPTON, NH 03862
4956/741
- PORTIONS OF THE PARCELS ARE IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33017C0330E (ZONE A). EFFECTIVE DATE SEPTEMBER 30, 2015.
- EXISTING LOT AREA:
104,300 S.F. ± (PER REF. PLAN 1)
2.4 ACRES ± (PER REF. PLAN 1)
- PARCEL IS LOCATED IN THE RURAL RESIDENTIAL (R-40) ZONING DISTRICT.
- THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED NEW DOCKING STRUCTURE ON ASSESSOR'S MAP N LOT 8-1-4 IN THE CITY OF DOVER.
- VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW). MLLW REFERENCED ON NOAA STATION 8420411 DOVER, COCHECO RIVER, NEW HAMPSHIRE, MLLW BEING 3.93 FEET LOWER THAN 0.00 NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.

PROPOSED DOCK
PAUL RESIDENCE
56 SADDLE TRAIL DRIVE
DOVER, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	5/24/22
REVISIONS		



SCALE: 1" = 20' APRIL 2022

NH DES DOCK
PERMIT PLAN

C2

SEQUENCE OF CONSTRUCTION

- 1) MOBILIZATION OF A CRANE BARGE, PUSH BOAT, WORK SKIFF, MATERIALS AND PREFABRICATED COMPONENTS SUCH AS THE GANGWAY AND FLOAT TO THE SITE VIA APPROVED ACCESS.
- 2) MOBILIZATION OF EQUIPMENT TRUCKS TO THE SITE.
- 3) THE BARGE WILL BE POSITIONED ALONGSIDE THE PROPOSED LOCATION OF THE NEW DOCK AND WATERWARD OF ANY EMERGENT VEGETATION TO MINIMIZE IMPACTS.
- 4) INSTALLATION OF THE SUB STRUCTURE WILL BE PERFORMED FROM A CRANE BARGE OR SKIFF TO REDUCE THE AMOUNT OF FOOT TRAFFIC IN THE INTERTIDAL AREA.
- 5) ALL WORK WILL BE PERFORMED AT LOW TIDE TO MINIMIZE SEDIMENTATION.
- 6) PILINGS WILL BE MECHANICALLY DRIVEN BY A CRANE ELIMINATING ANY EXCAVATION FOR INSTALLATION OF THE PILINGS. PILING ARE DRIVEN TO REFUSAL.
- 7) PILINGS ARE CUT AND BEAM CAPS ARE INSTALLED AND THE SUPER STRUCTURE OF THE PIER IS BUILT. MATERIALS ARE LIFTED FROM THE BARGE AND SET INTO POSITION BY THE CRANE.
- 8) ONCE THE PIER IS COMPLETE, THE GANGWAY AND FLOAT ARE BROUGHT INTO POSITION AND INSTALLED.

DISCHARGES, AVOIDANCE.

MINIMIZATION AND MITIGATION

DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE U.S. AND ANY SECONDARY IMPACTS SHALL BE AVOIDED AND MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. PERMITTEES MAY ONLY FILL THOSE JURISDICTIONAL WETLANDS AND WATERWAYS THAT THE CORP AND NHDES AUTHORIZES TO BE FILLED AND IMPACT THOSE AREAS THAT THE CORPS AND AND NHDES AUTHORIZES AS SECONDARY IMPACTS. IF NOT SPECIFICALLY AUTHORIZED BY USACE AND AND NHDES, ANY UNAUTHORIZED FILL OR SECONDARY IMPACT TO WETLANDS MAY BE CONSIDERED AS A VIOLATION OF THE CWA.

* UNLESS SPECIFICALLY AUTHORIZED USACE AND AND NHDES, NO WORK SHALL DRAIN A WATER OF THE U.S. BY PROVIDING A CONDUIT FOR WATER ON OR BELOW THE SURFACE.

HEAVY EQUIPMENT IN FRESH WATER WETLANDS

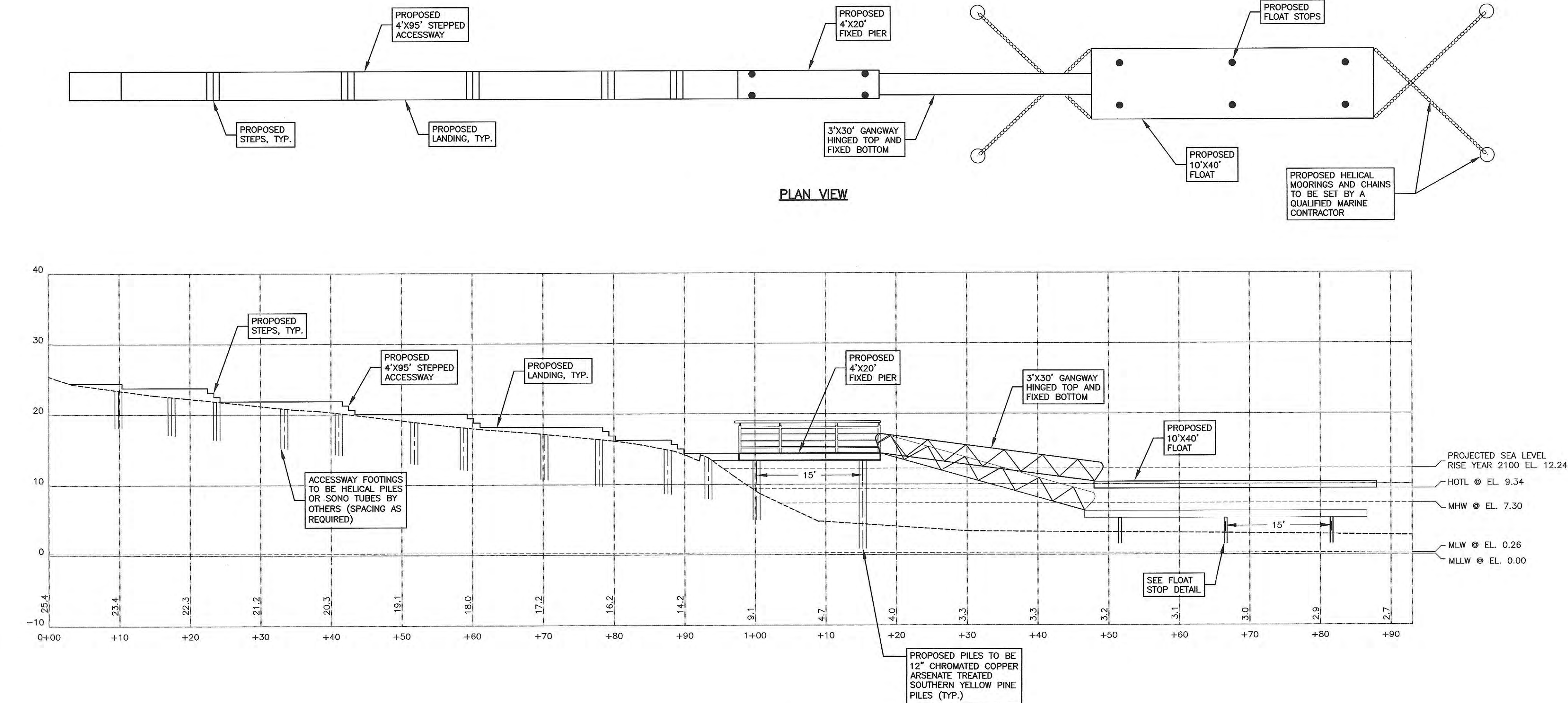
HEAVY EQUIPMENT OTHER THAN FIXED EQUIPMENT (DRILL RIGS, FIXED CRANES, ETC.) WORKING IN WETLANDS SHALL NOT BE STORED, MAINTAINED OR REPAIRED IN WETLANDS, UNLESS IT IS LESS ENVIRONMENTALLY DAMAGING OTHERWISE, AND AS MUCH AS POSSIBLE SHALL NOT BE OPERATED WITHIN THE INTERTIDAL ZONE. WHERE CONSTRUCTION REQUIRES HEAVY EQUIPMENT OPERATION IN WETLANDS, THE EQUIPMENT SHALL EITHER HAVE LOW GROUND PRESSURE (<3 PSI), OR SHALL NOT BE LOCATED DIRECTLY ON WETLAND SOILS AND VEGETATION. IT SHALL BE PLACED ON SWAMP MATS THAT ARE ADEQUATE TO SUPPORT THE EQUIPMENT IN SUCH A WAY AS TO MINIMIZE DISTURBANCE OF WETLAND SOIL AND VEGETATION. SWAMP MATS ARE TO BE PLACED IN THE WETLAND FROM THE UPLAND OR FROM EQUIPMENT POSITIONED ON SWAMP MATS IF WORKING WITHIN A WETLAND. DRAGGING SWAMP MATS INTO POSITION IS PROHIBITED. OTHER SUPPORT STRUCTURES THAT ARE LESS IMPACTING AND ARE CAPABLE OF SAFELY SUPPORTING EQUIPMENT MAY BE USED WITH WRITTEN CORPS AND NHDES AUTHORIZATION. SIMILARLY, NOT USING MATS DURING FROZEN, DRY OR OTHER CONDITIONS MAY BE ALLOWED WITH WRITTEN CORPS AND NHDES AUTHORIZATION. AN ADEQUATE SUPPLY OF SPILL CONTAINMENT EQUIPMENT SHALL BE MAINTAINED ON SITE. CORDUROY ROADS AND SWAMP/CONSTRUCTION MATS ARE CONSIDERED AS FILL WHETHER THEY'RE INSTALLED TEMPORARILY OR PERMANENTLY.

TIME OF YEAR WORK WINDOW AND NOISE RESTRICTIONS

- I. PILES INSTALLED IN-THE-DRY DURING LOW WATER OR IN-WATER BETWEEN NOV. 15TH - MARCH 15TH, OR MUST BE DRILLED AND PINNED TO LEDGE, OR
 - II. VIBRATORY HAMMERS USED TO INSTALL ANY SIZE AND QUANTITY OF WOOD, CONCRETE OR STEEL PILES, OR
 - IV. IMPACT HAMMERS LIMITED TO ONE HAMMER AND <50 PILES INSTALLED/DAY WITH THE FOLLOWING: WOOD PILES OF ANY SIZE, CONCRETE PILES ≤18-INCHES DIAMETER, STEEL PILES 12-INCHES DIAMETER IF THE HAMMER IS ≤3000 LBS. AND A WOOD CUSHION IS USED BETWEEN THE HAMMER AND STEEL PILE.
- FOR II-IV ABOVE:
- I. IN-WATER NOISE LEVELS SHALL NOT >187dB SEL RE L_{pA} OR 206dB PEAK RE L_{pA} AT A DISTANCE >10M FROM THE PILE BEING INSTALLED, AND
 - II. IN-WATER NOISE LEVELS >155dB PEAK RE L_{pA} SHALL NOT EXCEED 12 CONSECUTIVE HOURS ON ANY GIVEN DAY AND A 12 HOUR RECOVERY PERIOD (I.E., IN-WATER NOISE BELOW 155dB PEAK RE L_{pA}) MUST BE PROVIDED BETWEEN WORK DAYS.

WORK SITE RESTORATION

- I. UPON COMPLETION OF CONSTRUCTION, ALL DISTURBED WETLAND AREAS SHALL BE PROPERLY STABILIZED. ANY SEED MIX SHALL CONTAIN ONLY PLANT SPECIES NATIVE TO NEW ENGLAND.
- II. THE INTRODUCTION OR SPREAD OF INVASIVE PLANT SPECIES IN DISTURBED AREAS IS PROHIBITED.
- III. IN AREAS OF AUTHORIZED TEMPORARY DISTURBANCE, IF TREES ARE CUT THEY SHALL BE CUT AT GROUND LEVEL AND NOT UPROOTED IN ORDER TO PREVENT DISRUPTION TO THE WETLAND SOIL STRUCTURE AND TO ALLOW STUMP SPROUTS TO REVEGETATE THE WORK AREA, UNLESS OTHERWISE AUTHORIZED.
- IV. WETLAND AREAS WHERE PERMANENT DISTURBANCE IS NOT AUTHORIZED SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND ELEVATION, WHICH UNDER NO CIRCUMSTANCES SHALL BE HIGHER THAN THE PRE-CONSTRUCTION ELEVATION. ORIGINAL CONDITION MEANS CAREFUL PROTECTION AND/OR REMOVAL OF EXISTING SOIL AND VEGETATION, AND REPLACEMENT BACK TO THE ORIGINAL LOCATION SUCH THAT THE ORIGINAL SOIL LAYERING AND VEGETATION SCHEMES ARE APPROXIMATELY THE SAME, UNLESS AUTHORIZED.



SEDIMENTATION AND EROSION CONTROL

ADEQUATE SEDIMENTATION AND EROSION CONTROL MANAGEMENT MEASURES, PRACTICES AND DEVICES, SUCH AS PHASED CONSTRUCTION, VEGETATED FILTER STRIPS, GEOTEXTILE SILT FENCES, STORMWATER DETENTION AND INFILTRATION SYSTEMS, SEDIMENT DETENTION BASINS, OR OTHER DEVICES SHALL BE INSTALLED AND PROPERLY MAINTAINED TO REDUCE EROSION AND RETAIN SEDIMENT ON-SITE DURING AND AFTER CONSTRUCTION. THEY SHALL BE CAPABLE OF PREVENTING EROSION, OF COLLECTING SEDIMENT, SUSPENDED AND FLOATING MATERIALS, AND OF FILTERING FINE SEDIMENT. THE DISTURBED AREAS SHALL BE STABILIZED AND THESE DEVICES SHALL BE REMOVED UPON COMPLETION OF WORK. THE SEDIMENT COLLECTED BY THESE DEVICES SHALL BE REMOVED AND PLACED AT AN UPLAND LOCATION, IN A MANNER THAT WILL PREVENT ITS LATER EROSION INTO A WATERWAY OR WETLAND. ALL EXPOSED SOIL AND OTHER FILLS SHALL BE PERMANENTLY STABILIZED AT THE EARLIEST PRACTICABLE DATE.

SPAWNING AREAS.

DISCHARGES OF DREDGED OR FILL MATERIAL, AND/OR SUSPENDED SEDIMENT PRODUCING ACTIVITIES IN FISH AND SHELLFISH SPAWNING OR NURSERY AREAS, OR AMPHIBIAN AND MIGRATORY BIRD BREEDING AREAS, DURING SPAWNING OR BREEDING SEASONS SHALL BE AVOIDED. IMPACTS TO THESE AREAS SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE DURING ALL TIMES OF THE YEAR. INFORMATION ON SPAWNING HABITAT FOR SPECIES MANAGED UNDER THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (I.E., EFH FOR SPAWNING ADULTS) CAN BE OBTAINED FROM THE NMFS WEBSITE AT: WWW.NERO.NOAA.GOV/HCD.

STORAGE OF SEASONAL STRUCTURES.

COASTAL STRUCTURES SUCH AS PIER SECTIONS, FLOATS, ETC., THAT ARE REMOVED FROM THE WATERWAY FOR A PORTION OF THE YEAR (OFTEN REFERRED TO AS SEASONAL STRUCTURES) SHALL BE STORED IN AN UPLAND LOCATION, LOCATED ABOVE HIGHEST OBSERVABLE TIDE LINE (HOTL) AND NOT IN TIDAL WETLANDS. THESE SEASONAL STRUCTURES MAY BE STORED ON THE FIXED, PILE-SUPPORTED PORTION OF THE STRUCTURE THAT IS SEAWARD OF HOTL. THIS IS INTENDED TO PREVENT STRUCTURES FROM BEING STORED ON THE MARSH SUBSTRATE AND THE SUBSTRATE SEAWARD OF MHW.

ENVIRONMENTAL FUNCTIONS AND VALUES

THE PERMITTEE SHALL MAKE EVERY REASONABLE EFFORT TO 1) CARRY OUT THE CONSTRUCTION OR OPERATION OF THE WORK AUTHORIZED BY USACE AND NHDES HEREIN IN A MANNER THAT MINIMIZES ADVERSE IMPACTS ON FISH, WILDLIFE AND NATURAL ENVIRONMENTAL VALUES, AND 2) PROHIBIT THE ESTABLISHMENT OR SPREAD OF PLANT SPECIES IDENTIFIED AS NON-NATIVE INVASIVE SPECIES BY ANY FEDERAL OR STATE AGENCY. SEE THE SECTION ON INVASIVE SPECIES AT [HTTP://WWW.NAE.USACE.ARMY.MIL/REGULATORY/](http://WWW.NAE.USACE.ARMY.MIL/REGULATORY/) FOR CONTROL METHODS.

INSPECTIONS

THE PERMITTEE SHALL ALLOW THE CORPS AND NHDES TO MAKE PERIODIC INSPECTIONS AT ANY TIME DEEMED NECESSARY IN ORDER TO ENSURE THAT THE WORK IS BEING OR HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. THE CORPS AND NHDES MAY ALSO REQUIRE POST-CONSTRUCTION ENGINEERING DRAWINGS FOR COMPLETED WORK, AND POST-DREDGING SURVEY DRAWINGS FOR ANY DREDGING WORK.



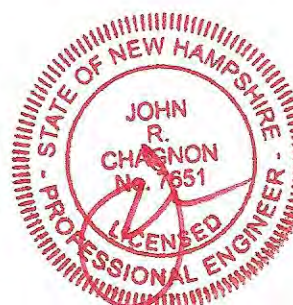
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NOTES:

- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY WITHIN 100 FEET OF UNDERGROUND UTILITIES. THE EXCAVATOR IS RESPONSIBLE TO MAINTAIN MARKS. DIG SAFE TICKETS EXPIRE IN THIRTY DAYS.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).
- 4) VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW). MLLW REFERENCED ON NOAA STATION 8420411 DOVER, COCHECO RIVER, NEW HAMPSHIRE, MLLW BEING 3.93 FEET LOWER THAN 0.00 NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.
- 5) THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES AS SHOWN ARE BASED ON REFERENCE PLAN. NO DEED RESEARCH OR BOUNDARY DETERMINATION WAS MADE TO CONFIRM OR REFUTE MATTERS SHOWN ON SAID PLANS FOR THE PURPOSES OF THIS PLAN. EASEMENTS, RESERVATIONS, ETC. THAT MAY EXIST ARE NOT SHOWN OR NOTED HEREON.

PROPOSED DOCK
PAUL RESIDENCE
56 SADDLE TRAIL DRIVE
DOVER, N.H.

NO.	DESCRIPTION	DATE
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REVISIONS		



SCALE: AS SHOWN APRIL 2022

DOCK
DETAILS

D1